

GENERAL NOTES

1. CONTRACT DOCUMENTS
THESE GENERAL NOTES ARE INTENDED TO DIRECT THE CONTRACTOR TO CERTAIN KEY ASPECTS OF THIS PROJECT. DETAILED INFORMATION CONCERNING THE SCOPE OF WORK, CONSTRUCTION SEQUENCE, TECHNICAL SPECIFICATIONS, AND OTHER MATTERS ARE CONTAINED IN THE PROJECT MANUAL.

2. ACCURACY OF MAPS, INFORMATION, AND RECORD DRAWINGS
THE FEATURES SHOWN ON THE DRAWINGS (SEWERS, MANHOLES, ROADS, STRUCTURES, PROPERTY LINES, ADDRESSES, ETC.) ARE FROM THE OWNER'S GEOGRAPHIC INFORMATION SYSTEM (GIS) AND ARE TO BE CONSIDERED APPROXIMATE LOCATIONS. UNLESS STATED OTHERWISE, GROUND SURVEYS HAVE NOT BEEN PERFORMED ALONG THE SEWERS BEING REPAIRED. REHABILITATION RECOMMENDATIONS HAVE BEEN BASED ON AVAILABLE CCTV INFORMATION. ALL MAIN LINE PIPE SEGMENTS HAVE BEEN CCTV'D. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCY BETWEEN SURFACE CONDITIONS AND ACTUAL FIELD CONDITIONS. CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL SUBSURFACE UTILITIES. CHANGES OR DEVIATIONS FROM THE CONFIGURATION, CONNECTIVITY, DIMENSIONS, DEPTHS, AND OTHER INFORMATION PERTINENT TO THE SEWERS IN THE PROJECT AREA WILL BE REPORTED TO THE ENGINEER, AND RECORDED BY THE CONTRACTOR IN THE AS-BUILT DRAWINGS THAT ARE REQUIRED AS PART OF THIS CONTRACT.

3. SCOPE OF WORK AND WORK AREAS
THIS CONTRACT WILL BE USED TO REHABILITATE THE SEWERS IN THE PROJECT AREAS AS SHOWN IN THIS PLAN SET. SCOPE OF WORK IS DEFINED BY THE TABLES OF SEWER LINE DATA SHOWN ON EACH SHEET. EACH WORK AREA INCLUDES THE SEWERS AND MANHOLES SHOWN ON THE DRAWINGS WITHIN THE PROJECT AREA BOUNDARY AND ON THE TABLES. ANY OTHER SEWERS AND MANHOLES WITHIN THE WORK AREA THAT ARE NOT SHOWN ON THE DRAWINGS AND ARE DISCOVERED IN THE FIELD SHALL BE REPORTED TO THE ENGINEER.

4. SERVICE LATERAL REPLACEMENT
SERVICE LATERALS THAT CONNECT TO THE MAIN SEWER AND SERVICE LATERALS THAT CONNECT TO EXISTING MANHOLES SHALL BE REPLACED. THE SERVICE REPLACEMENT WORK IS DEFINED IN THE TABLES ON EACH SHEET OF THE DRAWING SET. FOR THE LATERALS CONNECTING TO THE MAIN SEWER, THE TABLES SHOW THE LATERAL LOCATIONS RELATIVE TO THE START MH (MAY OR MAY NOT BE THE UPSTREAM MANHOLE) AND THE LATERAL POSITION THAT IT CONNECTS TO THE MAIN SEWER (CLOCK POSITION, OR LEFT, RIGHT, OR TOP). THE OWNER WILL TELEVIEW THE SEWERS TO ASSIST WITH LOCATING THE SERVICE LATERALS IF DISCREPANCIES WITH THE ACTUAL LOCATIONS AND THOSE LISTED IN THE TABLES ARE IDENTIFIED BY THE CONTRACTOR.

FOR THE LATERALS CONNECTING TO MANHOLES, THE TABLE SHOWS THE MANHOLE NUMBER/LOCATION OF LATERAL CONNECTION AND THE APPROXIMATE DEPTH OF THE MANHOLE WHICH MAY OR MAY NOT BE THE LATERAL DEPTH. LATERAL LOCATION WITHIN MH'S SHALL BE DEFINED BY THE CLOCK POSITION OF THE LATERAL TO BE REHABILITATED IN RELATION TO THE OUTFLOW PIPE BEING AT SIX O'CLOCK.

UNLESS STATED OTHERWISE, ALL LATERALS CONNECTING TO THE MAIN SEWER WILL BE REPLACED BY INSTALLING A NEW DUCTILE IRON TEE CONNECTION PER STANDARD DETAIL 3, SHEET D-1. TEES MANUFACTURED BY HARCO ARE AN APPROVED EQUAL TO THE DUCTILE IRON TEES SPECIFIED. THE HARCO TEES SHALL HAVE INTERIOR AND EXTERIOR COATINGS PER THE TECHNICAL SPECIFICATIONS. THE APPROPRIATE HARCO TEE SHALL BE PROVIDED FOR THE SPECIFIC PIPE MATERIALS CONNECTING TO THE TEE. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS DETAILING THE SPECIFIC TEE BEING PROPOSED BY PRODUCT NUMBER. NEW PVC TEES MAY BE SPECIFIED ON THE TABLE IF THE EXISTING SEWER MAIN IS PVC.

THE NEW SERVICE LATERALS SHALL BE LAID IN THE SAME TRENCH AS THE EXISTING LATERALS BUT THE CONFIGURATION SHALL BE IMPROVED IF POSSIBLE TO MINIMIZE THE NUMBER OF FITTINGS AND BENDS IN THE LATERAL AND IMPROVE SLOPE CONDITIONS (FOR ELIMINATION OF FLAT GRADES). THE EXISTING LATERALS MAY BE 4 OR 6 INCHES IN DIAMETER. THE NEW LATERALS SHALL BE 6 INCHES IN DIAMETER AND SHALL BE EXTENDED TO THE OWNERS 25-FOOT SEWER R/W UNLESS OTHERWISE DIRECTED BY THE ENGINEER OR OWNER. THE NEW 6" LATERALS SHALL BE RECONNECTED TO THE EXISTING 4" OR 6" LATERAL AT THE TERMINATION POINT OF THE NEW LATERAL WITH AN APPROPRIATE COUPLING PER THE STANDARD DETAILS.

ALL REPLACEMENT SERVICE LATERALS SHALL INCLUDE A NEW CLEAN OUT AS SHOWN IN DETAIL No. 7.

THE OWNER WILL TELEVIEW THE MAIN SEWER AND INSPECT THE LATERAL CONNECTIONS FOR ALL REPAIRS. THE OWNER WILL ALSO TELEVIEW ALL NEW LATERALS CONNECTING TO MANHOLES. ANY PROBLEMS/DEFECTS IDENTIFIED FROM THE TELEVISION INSPECTIONS SHALL BE REPAIRED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER AND OWNER AT NO ADDITIONAL COST WITHIN 14. DAYS OR PAYMENT MAY BE WITHHELD.

5. DUCTILE IRON PIPE
DIP SHALL BE USED AS CALLED FOR ON THE REHABILITATION TABLES AND/OR WHEN THE DEPTH OF THE REPAIR IS LESS THAN 3 FEET (MAIN)/5 FEET (SERVICE) OR MORE THAN 18 FEET. DEPTH SHALL BE MEASURED IN THE FIELD AND WILL BE FROM THE GROUND ELEVATION TO THE CROWN OF THE PIPE AT THE REPAIR.

6. POINT REPAIRS TO SEWER MAINS
POINT REPAIRS WILL BE PERFORMED UNDER THIS CONTRACT TO REPAIR MAJOR SEWER DEFECTS. THE REQUIRED POINT REPAIRS ARE SHOWN IN THE REHABILITATION TABLES ON EACH SHEET. THE TABLES SHOW THE POINT REPAIR LOCATIONS FROM THE START MH (MAY OR MAY NOT BE THE UPSTREAM MANHOLE). POINT REPAIRS SHALL BE EXTENDED IN THE FIELD TO CONNECT TO SOLID PIPE AND/OR TO FURTHER REPAIR THE SEWER DEFECTS AS APPROVED BY THE ENGINEER. PRIOR APPROVAL TO EXTEND THE POINT REPAIR MUST BE GIVEN BY THE ENGINEER OR THE CONTRACTOR WILL NOT BE PAID FOR THE EXTENDED POINT REPAIR LENGTH. POINT REPAIRS SHALL BE PERFORMED IN ACCORDANCE WITH STANDARD DETAIL 5, ON SHEET D-1.

7. CONSTRUCTION SEQUENCE
THE CONTRACTOR SHALL SUBMIT A CONSTRUCTION SCHEDULE TO THE ENGINEER THAT COMPLIES WITH ALL SCHEDULING REQUIREMENTS AS SPECIFIED IN THE CONTRACT DOCUMENTS AND TECHNICAL SPECIFICATIONS. THE SCHEDULE SHALL DETAIL THE SEQUENCE AND DURATION OF WORK FOR THE PROJECT. THE ENGINEER WILL REVIEW THE SCHEDULE AND MODIFY AS NEEDED TO ACCOUNT FOR UTILITY MAINTENANCE & OPERATIONS ACTIVITIES AND TO ENSURE THAT ALL REQUIRED TEMPORARY AND PERMANENT EASEMENTS HAVE BEEN ACQUIRED.

CONTRACTOR SHALL FOLLOW THE REQUIREMENTS OF THE ABOVE PARAGRAPH UNLESS SPECIFICALLY PERMITTED BY THE ENGINEER TO MODIFY THE CONSTRUCTION SCHEDULE.

8. ACCESS TO WORK
THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACCESSING ALL SEWERS AND SERVICE LATERALS TO PERFORM THE SPECIFIED WORK. ALL COSTS ASSOCIATED WITH ACCESSING THE SEWERS AND LATERALS SHALL BE INCLUDED IN THE VARIOUS UNIT PRICES BID - NO SEPARATE PAYMENT WILL BE MADE.

THE SEWERS AND SERVICE LATERALS ARE LOCATED IN ROADS AND IN PARKING LOTS WITH FENCES AND OTHER MOVEABLE OBJECTS, OUTBUILDINGS, STRUCTURES, ETC. ALONG THE SEWER. IN ADDITION, THERE MAY BE EXISTING UNDERGROUND UTILITIES ALONG THE SEWER IN THE ROADS AND PARKING LOTS INCLUDING CABLE, TELEPHONE, AND ELECTRIC THAT MUST BE ACCOMMODATED.

THE CONTRACTOR SHALL DISCUSS ALL WORK WITH PROPERTY OWNERS IMPACTED BY THE WORK AND SHALL NEGOTIATE ACCESS THROUGH YARDS AS NECESSARY. THE CONTRACTOR SHALL REMOVE AND RE-INSTALL FENCES AND MOVE AND REPLACE MOVEABLE OBJECTS TO INSTALL THE NEW SEWERS AND SERVICE LATERALS. THE OWNER, ENGINEER, AND CONTRACTOR WILL DISCUSS MOVING STRUCTURES/OUTBUILDINGS WITH PROPERTY OWNERS AS NECESSARY. ALL EXISTING UTILITIES MUST BE ACCOMMODATED.

ALL COSTS ASSOCIATED WITH THIS WORK SHALL BE INCLUDED IN THE VARIOUS UNIT PRICES BID.

ABBREVIATIONS

- APPROX. APPROXIMATELY
CIPP. CURED-IN-PLACE PIPE
CL. CENTER LINE
CL FENCE. CHAIN LINK FENCE
CONC. CONCRETE
CY. CUBIC YARDS
DHEC. SC DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL
DIP. DUCTILE IRON PIPE
IE. INVERT ELEVATION
EOP. EDGE OF PAVEMENT
EL. ELEVATION
ESMT. EASEMENT
EX. EXIST. EXISTING
IN. INCH
FT. FOOT
INV. INVERT
LF. LINEAR FOOTAGE
MH. MANHOLE
MSSD. METRO. METROPOLITAN SEWER SUBDISTRICT (MSSD)
NTS. NOT TO SCALE
OWNER. METROPOLITAN SEWER SUBDISTRICT (MSSD)
PR. POINT REPAIR
PVC. POLYVINYL CHLORIDE
RCP. REINFORCED CONCRETE PIPE
REWA. RENEWABLE WATER
R/W. RIGHT OF WAY
ROW. RIGHT OF WAY
SD. STORM DRAIN
SERV. SERVICE LATERAL
SF. SQUARE FOOT
SPEC. SPECIFICATIONS
SS. SANITARY SEWER
VCP. EXISTING VITRIFIED CLAY PIPE



PROJECT KEY
SCALE: 1"=400'

9. TREE REMOVAL
OWNER IS RESPONSIBLE FOR CLEARING EASEMENTS OF TREES PRIOR TO CONSTRUCTION.

10. EROSION CONTROL
THE CONTRACTOR SHALL PROTECT AGAINST SOIL EROSION TO NEARBY STREAMS, DITCHES, STORM DRAINS, ETC. AT ALL TIMES. CONTRACTOR SHALL PROVIDE EROSION CONTROL MEASURES (SUCH AS SILT FENCE, TEMPORARY CONSTRUCTION ENTRANCES, ETC.) AS NECESSARY. NO ADDITIONAL PAYMENT WILL BE MADE FOR NECESSARY EROSION CONTROL DEVICES. THE COSTS SHALL BE INCLUDED IN THE VARIOUS UNIT PRICES BID. IF EROSION CONTROL MEASURES ARE REQUIRED BY DHEC DUE TO THE ACTION OR PROCESSES OF THE CONTRACTOR, ALL COSTS SHALL BE BORNE BY THE CONTRACTOR AND AT NO ADDITIONAL COST TO THE OWNER.

11. EXCAVATIONS
THE CONTRACTOR WILL BE REQUIRED TO SHEET, SHORE, AND DO ALL THAT IS NECESSARY TO COMPLY WITH OSHA SHORING REGULATIONS. THE CONTRACTOR SHALL DO WHAT IS NECESSARY TO KEEP THE EXCAVATION DRY AND TO MAINTAIN THE SUITABLE WORKING CONDITIONS FOR THE SEWER REHABILITATION OPERATIONS.

ALL EXCAVATIONS SHALL BE COVERED WHEN NOT IN USE. WHEN IN THE STREET, ALL EXCAVATIONS SHALL BE COVERED WITH STEEL TRAFFIC PLATES. THE PLATES SHALL BE SURROUNDED BY BITUMINOUS PATCH, AND FASTENED TO THE PAVEMENT AS APPROVED BY THE ENGINEER. WHEN REQUIRED BY THE ENGINEER, THE PLATES SHALL BE RECESSED INTO THE PAVEMENT WHERE THE TOP OF THE PAVEMENT IS FLUSH WITH THE TOP OF THE PLATES. IT MAY BE NECESSARY TO SURROUND THE PIT WITH CONCRETE BARRIERS IF ADEQUATE PROTECTION OF THE PUBLIC CAN NOT BE MAINTAINED BY USE OF STEEL TRAFFIC PLATES. EXCAVATIONS OUTSIDE THE STREET MAY BE COVERED WITH 3/4-INCH PLYWOOD, IF APPROVED BY THE ENGINEER. ALL EXCAVATIONS SHALL BE PROTECTED FROM PEDESTRIANS WITH HEAVY DUTY ORANGE PROTECTIVE FENCING SURROUNDING THE PIT AND REFLECTIVE DRUMS AT EACH CORNER. LIGHTS ON THE DRUMS AND LIGHTED BARRICADES SHALL BE REQUIRED, IF DIRECTED BY THE ENGINEER. NO ADDITIONAL PAYMENT SHALL BE MADE FOR COSTS ASSOCIATED WITH PROTECTION OF EXCAVATION PITS.

12. MAINTENANCE OF FLOW IN EXISTING SEWERS
THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING THE FLOW IN THE SEWERS DURING THE PERFORMANCE OF THE WORK SO THAT THE WORK WILL BE INSTALLED IN ACCORDANCE WITH THE SPECIFICATIONS AND SO THAT NO SANITARY SEWER OVERFLOWS RESULT. THE CONTRACTOR WILL BE REQUIRED TO SUBMIT, FOR REVIEW BY THE ENGINEER, A DETAILED PLAN FOR MAINTAINING SEWER FLOWS DURING THE PERFORMANCE OF THE WORK. THE PLAN SHALL INCLUDE A PROVISION FOR BYPASS PUMPING. WHEN PUMPING IS UTILIZED, THE CONTRACTOR WILL BE REQUIRED TO KEEP ON SITE AN IDENTICAL BACKUP PUMP AND POWER SYSTEM IN THE EVENT THE SYSTEM IN PLACE FAILS. PAYMENT FOR BYPASS PUMPING SHALL BE INCLUDED WITH THE INDIVIDUAL UNIT PRICES IN THE BID. ANY FINES FROM SANITARY SEWER OVERFLOWS THAT ARE IMPOSED ON THE OWNER AS A RESULT OF WORK PERFORMED BY THE CONTRACTORS WORK SHALL BE PAID BY THE CONTRACTOR.

13. LOCATING OF EXISTING UNDERGROUND UTILITIES
THE CONTRACTOR SHALL CONTACT THE LOCAL UTILITIES LOCATING COMPANY AT 1-888-721-7877 AND THE LOCAL UTILITY COMPANIES TO LOCATE EXISTING UTILITIES IN THE AREA PRIOR TO ANY EXCAVATION. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO LOCATE AND ACCOMMODATE ALL EXISTING UTILITIES WHETHER SHOWN OR NOT. THE CONTRACTOR SHALL DETERMINE ACTUAL LOCATIONS AND DEPTHS OF ALL UTILITIES PRIOR TO PERFORMING ANY WORK AND SHALL REPORT ANY CONFLICTS WITH THE NEW SEWER AND SERVICE LATERAL INSTALLATIONS TO THE ENGINEER/OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING UTILITIES DURING THE WORK AND SHALL REPAIR ANY DAMAGE TO THE SATISFACTION OF THE UTILITY OWNER AND SHALL PAY ALL BILLS ASSOCIATED WITH THE REPAIRS.

14. WORK HOURS
ALL WORK WILL BE PERFORMED BETWEEN THE HOURS OF 7:00 AM THROUGH 6:00 PM MONDAY THROUGH FRIDAY PER TECHNICAL SPECIFICATION SECTION 01140. WEEKEND WORK MAY BE PERMITTED IF REQUESTED BY THE CONTRACTOR AT LEAST 48 HOURS PRIOR AND APPROVED BY THE ENGINEER. THE START TIME INDICATED ABOVE INDICATES THE TIME WHEN THE CONTRACTOR MAY BEGIN TO IMPLEMENT TRAFFIC CONTROL MEASURES. THE END TIME IS THAT TIME WHEN ALL WORK IS COMPLETE, INCLUDING SERVICE LATERAL REINSTATEMENTS AND CLEANUP WORK, AND ALL TRAFFIC CONTROL MEASURES HAVE BEEN REMOVED SO THAT VEHICLE AND PEDESTRIAN TRAFFIC CAN PROCEED SAFELY AND UNHINDERED BY ANY ELEMENT OF THE WORK.

15. TRAFFIC CONTROL
THE CONTRACTOR SHALL SUBMIT A DETAILED TRAFFIC CONTROL PLAN FOR PERFORMING ALL PHASES OF THE WORK TWO WEEKS BEFORE PERFORMING ANY WORK. THE TRAFFIC CONTROL PLAN SHALL BE SPECIFIC TO EACH WORK AREA AND STREET OR ROAD WITHIN THE WORK AREA. A GENERIC PLAN WILL NOT BE ACCEPTED. THE TRAFFIC CONTROL PLAN WILL BE MODIFIED IN THE FIELD AS NECESSARY TO ACCOMMODATE UNFORESEEN CONDITIONS AND SAFETY ISSUES. NO WORK SHALL BEGIN UNTIL AFTER THE TRAFFIC CONTROL PLAN HAS BEEN REVIEWED AND APPROVED. TRAFFIC CONTROL MEASURES SUCH AS LIGHTED WARNING SIGNS, FLAGMEN, AND BARRICADES WILL BE REQUIRED, IN ACCORDANCE WITH SCDOT'S MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD, 2009 EDITION)

16. CLEANUP WORK
THE CONTRACTOR SHALL CLEAN UP THE WORK SITE EACH DAY PER THE TECHNICAL SPECIFICATIONS.

17. DETAILS
REFER TO THE STANDARD DETAILS ON SHEETS D-1 AND D-2 WHETHER SPECIFICALLY REFERENCED OR NOT. REFER TO THE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

18. FINAL INSPECTION
AFTER ALL WORK IS COMPLETED, THE ENGINEER WILL INSPECT THE WORK AND GENERATE A PUNCHLIST OF ITEMS THAT NEED TO BE REPAIRED/ADDRESSED. THE CONTRACTOR SHALL REPAIR ALL PUNCHLIST ITEMS TO THE SATISFACTION OF THE ENGINEER AND OWNER. THE PUNCHLIST MUST BE COMPLETED BY THE SPECIFIED CONTRACT COMPLETION TIME. THE ENGINEER MAY DEVELOP PRELIMINARY PUNCHLISTS AS THE WORK PROGRESSES. FINAL PAYMENT WILL NOT BE MADE UNTIL ALL PUNCHLIST ITEMS ARE REPAIRED.

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SOUTH GREENVILLE POINT REPAIR PROJECT
GENERAL NOTES, ABBREVIATIONS, LEGEND, AND PROJECT LOCATION MAP

PROJECT:
SHEET TITLE:

Table with 4 columns: MARK, DATE, DESCRIPTION. It is currently empty.

Apprvd.
Date: 01-29-2018
Chkd: JLD
Drwn: MBL
Scale: 1"=400'
Project Number: 16-4005
Sheet: C-2

Professional Engineer Seal for Jason Lam, License No. 20838, State of South Carolina. Includes a signature and the date 01/29/2018.

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Order Plans