

GENERAL NOTES

- CONTRACTOR SHALL VISIT THE SITE TO DETERMINE EXISTING CONDITIONS PRIOR TO SUBMITTING BID.
- THE EXISTING PAVEMENTS, ACCESS ROADS, AND HAUL ROUTES MAY NOT BE CAPABLE OF SUPPORTING CERTAIN TYPES OF CONSTRUCTION EQUIPMENT. PRIOR TO BIDDING, THE CONTRACTOR SHALL FULLY SATISFY ITSELF AS TO THE ABILITY OF THE EXISTING PAVEMENTS TO SATISFACTORILY SUSTAIN THE TYPE OF EQUIPMENT HE PLANS TO USE. CONTRACTOR SHALL SIZE THE EQUIPMENT USED FOR CONSTRUCTION ACCORDINGLY. ANY DAMAGE TO EXISTING PAVEMENT CAUSED BY HAULING OR ANY OTHER CONSTRUCTION ACTIVITY EXCLUDING SPECIFIED REPAIR WORK, SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
- THE CONTRACTOR SHALL OBTAIN ALL PERMITS NECESSARY FOR THE HAULING OF MATERIAL AND EQUIPMENT AND PERFORMANCE OF THEIR CONSTRUCTION SERVICES FOR ITS PROJECT.
- THE CONTRACTOR SHALL ABIDE BY ALL THE RULES AND REGULATIONS PERTAINING TO ITS WORK AS SET FORTH BY LOCAL, STATE, AND FEDERAL ENVIRONMENTAL LAWS. IF A HAZARDOUS, OR REGULATED MATERIAL IS SPILLED, IT MUST BE PROMPTLY REPORTED AND CLEANED UP BY THE CONTRACTOR AT ITS EXPENSE.
- EXISTING EASEMENTS TO OTHER PROPERTIES SHALL BE MAINTAINED AT ALL TIMES.
- CONTRACTOR SHALL CALL 811 UTILITY LOCATE SERVICE AT LEAST 72 HOURS PRIOR TO START OF ANY CONSTRUCTION ACTIVITY.
- VIBRATION AND SETTLEMENT MONITORING SHALL BE PERFORMED IN ACCORDANCE WITH SCDOT GEOTECHNICAL DESIGN MANUAL CHAPTER 24 "CONSTRUCTION SUPPORT". LEVEL 2 MONITORING IN ACCORDANCE WITH SECTION 24.5, INCLUDING PRE- AND POST-CONDITION SURVEY, SHALL BE PERFORMED USING EQUIPMENT MEETING THE REQUIREMENTS OF SECTION 24.6. A MONITORING PLAN SHALL BE ESTABLISHED IN ACCORDANCE WITH SECTION 24.7 AND EXECUTED IN ACCORDANCE WITH SECTION 24.8 AND OTHER RELEVANT SECTIONS OF ITS DOCUMENT. MONITORING PLAN SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND COMMENT PRIOR TO IMPLEMENTATION.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION AND IDENTIFICATION OF ALL EXISTING UTILITIES AND UNDERGROUND PIPELINES IN THE CONSTRUCTION AREA. ANY DAMAGE TO EXISTING UTILITIES OR UNDERGROUND PIPELINES ON OR OFF PROPERTY SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. ALL REPAIR WORK SHALL MEET THE APPROVAL OF THE OWNERS OF THE DAMAGED UTILITY. NO REIMBURSEMENT WILL BE ALLOWED FOR UTILITY/PIPE REPAIR OR REPLACEMENT.
- APPROVED CUTS IN ASPHALT OR CONCRETE PAVEMENT SHALL BE MADE USING A PAVEMENT SAW, AND SHALL BE PATCHED TO MATCH THE EXISTING SURFACE IN A MANNER APPROVED BY THE ENGINEER.
- ALL CONSTRUCTION TRAFFIC SHALL ENTER AND EXIT THE PROJECT AREA THROUGH THE INDICATED CONSTRUCTION ENTRANCES.
- THE LIMITS OF CONSTRUCTION NOTED ON THIS SHEET DEFINE THE LIMITS OF FULL RESPONSIBILITY OF THE CONTRACTOR FOR ITS PROJECT. FULL RESPONSIBILITY INCLUDES:
 - ALL SITE DISTURBANCE AND RESTORATION
 - ALL EROSION CONTROL MEASURES – INSTALLATION, MAINTENANCE, AND REMOVAL
 - ALL CONSTRUCTION AS IDENTIFIED IN THE CONSTRUCTION DOCUMENTS
- ALL CONSTRUCTION, STAGING, AND ACCESS FOR ITS PROJECT SHALL OCCUR WITHIN THE DESIGNATED CONSTRUCTION LIMITS. ANY OFFSITE STAGING AREAS ARE THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN, PERMIT AND MAINTAIN.
- THE CONTRACTOR SHALL BE RESPONSIBLE, AT NO ADDITIONAL COST TO THE OWNER, FOR ANY DAMAGE BY ITS WORKFORCE TO ANY AREAS OUTSIDE OF THE DESIGNATED CONSTRUCTION LIMITS.
- THE CONTRACTOR WILL BE RESPONSIBLE FOR THE STORAGE AND SECURITY OF ITS MATERIAL AND EQUIPMENT AND SHALL ERECT STORAGE FACILITIES AND FENCING AS NECESSARY.
- THE CONTRACTOR WILL BE RESPONSIBLE FOR THE CLEANUP AND DISPOSAL OF ALL TRASH AND DEBRIS CREATED BY ITS WORK OR PERSONNEL. ALL TRASH AND DEBRIS MUST BE DISPOSED OF OFFSITE.
- ALL NON-PAVED AREAS OUTSIDE LIMITS OF CONSTRUCTION AND DESIGNATED STAGING AREA THAT ARE DISTURBED BY THE CONTRACTOR'S WORK, HAUL ROADS, ETC. SHALL BE RE-SEDED AND RESTORED TO ORIGINAL CONDITION BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER AT NO ADDITIONAL COST TO THE OWNER.
- IN THE EVENT THE CONTRACTOR SERVICES ITS EQUIPMENT ON THE PROJECT SITE PROPERTY, ALL OIL AND FLUIDS REMOVED FROM THE EQUIPMENT MUST BE COLLECTED AND DISPOSED OF IN ACCORDANCE WITH THE LOCAL, STATE, AND FEDERAL ENVIRONMENTAL LAWS. IF A HAZARDOUS, OR REGULATED MATERIAL IS SPILLED, IT MUST BE PROMPTLY REPORTED TO APPROPRIATE ENTITY AND CLEANED UP BY THE CONTRACTOR AT ITS EXPENSE.
- CONTRACTOR TO UTILIZE ONLY SHOWN ACCESS POINTS TO ENTER TEMPORARY AND PERMANENT EASEMENT ACCESS.
- CONTRACTOR TO DOCUMENT CONDITION OF ALL EXISTING PAVEMENT UTILIZED FOR ACCESS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- CONTRACTOR TO REPAIR AND REPLACE IN KIND ANY DAMAGES TO SITE ACCESS ROADS, INCLUDING SURFACE REPLACEMENT AND SUBGRADE REPAIRS WHERE DEEMED NECESSARY BY ENGINEER.

STAKING GENERAL NOTES

- ALL SURVEY INFORMATION IS BASED ON STATE PLANE COORDINATES AND USGS 1983 HORIZONTAL DATUM AND 1988 VERTICAL DATUM.
- STAKING INFORMATION SHOWN IS TO ASSIST CONTRACTOR IN PROPERLY PRICING ITS BID FOR ITS PROJECT. ACTUAL CAD FILE INFORMATION WILL BE SUPPLIED TO THE SELECTED CONTRACTOR PRIOR TO CONSTRUCTION TO ASSIST IN CONSTRUCTION STAKING.
- CONSTRUCTION STAKE-OUT SHALL BE PERFORMED BY CONTRACTOR. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ALL MEASUREMENTS THAT MAY BE REQUIRED TO LAY OUT THE CONSTRUCTION. THE COST OF STAKING WILL NOT BE PAID FOR DIRECTLY AND WILL BE INCLUDED IN THE UNIT PRICES FOR THE VARIOUS ITEMS OF WORK.

DEMOLITION GENERAL NOTES

- THE EXISTING INFORMATION AND CONDITION STATUS PROVIDED IN THESE PLANS IS SOLELY TO ASSIST THE CONTRACTOR IN ASSESSING THE NATURE AND EXTENT OF CONDITIONS WHICH MAY BE ENCOUNTERED DURING THE COURSE OF WORK. ALL CONTRACTORS ARE DIRECTED, PRIOR TO BIDDING, TO CONDUCT WHATEVER

INVESTIGATIONS THEY MAY DEEM NECESSARY TO ARRIVE AT THEIR OWN CONCLUSION REGARDING THE ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED, AND UPON WHICH THEIR BIDS WILL BE BASED.

- EXISTING UTILITIES SHOWN ARE TAKEN FROM FIELD SURVEYS, AND UTILITY LOCATION SERVICE FIELD MARKED LOCATIONS. HOWEVER, THESE LOCATIONS ARE NOT TO BE CONSIDERED ALL-INCLUSIVE. THE CONTRACTOR SHALL VERIFY EXACT LOCATION, CHARACTER AND NATURE OF ALL EXISTING AND PROPOSED UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
- THE CONTRACTOR SHALL MAKE EXPLORATORY EXCAVATIONS AT ALL INTERSECTIONS OF PROPOSED WORK AND EXISTING UTILITIES. THE EXPLORATORY EXCAVATIONS SHALL BE MADE AT LEAST FORTY-EIGHT (48) HOURS IN ADVANCE OF THE WORK. IF THERE IS A POTENTIAL CONFLICT, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY. INFORMATION ON THE CONFLICT SHALL BE FURNISHED BY THE CONTRACTOR AND SHALL INCLUDE LOCATIONS, ELEVATIONS, UTILITY TYPE, MATERIAL AND SIZE.
- THE CONTRACTOR IS RESPONSIBLE FOR UNCOVERING AND SUPPORTING EXISTING UTILITIES. CARE SHALL BE TAKEN SO AS NOT TO INTERRUPT SERVICE DURING CONSTRUCTION EXCEPT UPON APPROVAL OF THE ENGINEER AND THE UTILITY OWNER AND WITH PROPER TENANT NOTIFICATION.
- REMOVE ALL EXISTING TREES WITHIN THE PERMANENT EASEMENT.

MATERIAL NOTES

- DUCTILE IRON PIPE SHALL BE DESIGNED IN ACCORDANCE WITH THE LATEST REVISION OF ANSIAWWA C150/A21.50 FOR A PRESSURE CLASS OF 250 PSI OR AS NOTED ON THE CONSTRUCTION DRAWINGS. ALL BEDDING SHALL BE TYPE 2 PER THE DETAILS FOR ALL PIPE WITH 18" OR LESS OF COVER. BEDDING FOR PIPE WITH MORE THAN 18" OF COVER WILL REQUIRE TYPE 4 BEDDING.
- DUCTILE IRON PIPE SHALL BE MANUFACTURED IN ACCORDANCE WITH THE LATEST REVISION OF ANSIAWWA C151/A21.51. EACH PIPE SHALL BE SUBJECTED TO A HYDROSTATIC PRESSURE TEST OF AT LEAST 500 PSI AT THE POINT OF MANUFACTURE.
- PIPE SHALL HAVE STANDARD COATING ON THE EXTERIOR. PIPE SHALL ALSO HAVE A CERAMIC EPOXY LINING ON THE INTERIOR IN ACCORDANCE WITH ASTM A716, LATEST EDITION, INDURON PROTECTO 401 OR APPROVED EQUAL.
- THE CLASS OR NOMINAL THICKNESS, NET WEIGHT WITHOUT LINING, AND CASTING PERIOD SHALL BE CLEARLY MARKED ON EACH LENGTH OF PIPE. ADDITIONALLY, THE MANUFACTURER'S MARK, COUNTRY WHERE CAST, YEAR IN WHICH THE PIPE WAS PRODUCED, AND THE LETTERS "DI" OR "DUCTILE" SHALL BE CAST OR STAMPED ON THE PIPE.
- ALL PIPE SHALL BE FURNISHED WITH PUSH-ON TYPE JOINTS, SUCH AS TYTON® OR FASTITE®. JOINTS SHALL BE IN ACCORDANCE WITH ANSIAWWA C111/A21.11, OF LATEST REVISION, AND BE FURNISHED COMPLETE WITH ALL NECESSARY ACCESSORIES. PIPE TO BE LOADED IN CASING WILL REQUIRE FIELD-LOK GASKET OR APPROVED EQUAL.
- ALL MANHOLES SHALL BE LINED WITH AN EPOXY LINER, RAVEN 405 (OR APPROVED EQUAL) 200 MILS MINIMUM THICKNESS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ALL MATERIALS TO YORK COUNTY ENGINEERING FOR REVIEW AND COMMENT PRIOR TO CONSTRUCTION.

CONSTRUCTION NOTES

- SEWER SYSTEMS SHALL BE CONSTRUCTED IN GENERAL ACCORDANCE WITH ALL YORK COUNTY AND SCDHEC REGULATIONS. CONTRACTOR SHALL REFERENCE YORK COUNTY SEWER STANDARDS, TESTING STANDARDS, AND PROJECT SPECIFICATIONS.
- SEWER CONSTRUCTION ON ITS SITE IS AUTHORIZED BY PERMITS ISSUED BY THE SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (SCDHEC). THE WORK IS SUBJECT TO INSPECTION AT ALL TIMES BY REPRESENTATIVES OF SCDHEC, YORK COUNTY, AND THE ENGINEER OF RECORD. THE PERMITS REQUIRE CERTIFICATION OF COMPLETION BY THE ENGINEER OF THE SEWER SYSTEM PRIOR TO THE ISSUANCE OF FINAL OPERATION APPROVAL BY SCDHEC.
- CONTRACTOR SHALL CONDUCT A PRE-CONSTRUCTION CONFERENCE ON SITE WITH THE ENGINEER OF RECORD, YORK COUNTY MS4, AND OTHER INTERESTED PARTIES PRIOR TO BEGINNING OF CONSTRUCTION.
- CONNECTION TO ANY EXISTING LINES SHALL BE MADE BY THE CONTRACTOR IN THE PRESENCE OF YORK COUNTY INSPECTION PERSONNEL. PLUG NEW CONNECTIONS UNTIL CONSTRUCTION AND TESTING HAVE BEEN COMPLETED, INSPECTED BY THE ENGINEER OF RECORD AND YORK COUNTY, ACCEPTED BY SCHDEC, AND FINAL CONNECTION IS AUTHORIZED.
- MAINTAIN A MINIMUM 18 INCH VERTICAL SEPARATION BETWEEN STORM AND SANITARY SEWER AT CROSSINGS.
- PRIOR TO BEGINNING CONSTRUCTION OF SEWER INFRASTRUCTURE, COPIES OF THE SCDHEC PERMITS TO CONSTRUCT WILL BE PROVIDED TO CONTRACTOR BY THE YORK COUNTY ENGINEERING DEPARTMENT.
- ALL SEWER MANHOLES SHALL BE PRE-CAST CONCRETE WITH INTEGRALLY CAST WATERTIGHT CONNECTIONS.
- ALL SEWER MANHOLES RIMS NOT IN PAVED AREAS SHALL BE A MINIMUM OF TWO (2) FEET ABOVE FINISHED GRADE.
- MANHOLES INDICATED ON THE DRAWINGS THAT ARE LOCATED WITHIN THE 100-YEAR FLOODPLAIN SHALL HAVE MANHOLE COVERS BOLTED TO THE PRE-CAST MANHOLE FRAMES.

SEWER LINE TESTING AND INSPECTION NOTES

- NOTIFY THE ENGINEER OF RECORD AND YORK COUNTY AT LEAST 48 HOURS BEFORE STARTING CONSTRUCTION OF SEWER FACILITIES. THE ENGINEER SHALL PERIODICALLY INSPECT THE PROGRESS OF INSTALLATION AND SHALL COMPLETE A FINAL SEWER INSPECTION. THE ENGINEER OF RECORD AND YORK COUNTY SHALL WITNESS LOW PRESSURE AIR TESTING AND MANDREL TESTING OF THE SEWER SYSTEM. THE CONTRACTOR SHALL FURNISH, SECURE, AND PROVIDE ALL NECESSARY TESTING MATERIALS, EQUIPMENT, PROCEDURES AND CERTIFIED LABORATORY TEST RESULTS FOR USE WITH ENGINEERS FINAL CERTIFICATION OF COMPLETION.
- TEST SANITARY SEWER LINES FOR DEFLECTION WITH A 5% MANDREL NOT LESS THAN 30 DAYS AFTER COMPLETION OF BACKFILL. PERFORM LOW PRESSURE AIR TESTING IN ACCORDANCE WITH ASTM C-828 AND C924 ON ALL SEWER MAINS.

- TRENCH BACKFILL AND COMPACTION TESTING SHALL BE PERFORMED BY A CERTIFIED SOILS LABORATORY FOR ALL BACKFILLED AREAS. BACKFILL MATERIAL FROM THE BOTTOM OF THE TRENCH TO WITHIN SIX (6) INCHES OF THE SUBGRADE SHALL HAVE A MINIMUM DRY DENSITY OF 95% AS DEFINED BY THE STANDARD PROCTOR TEST. ALL MATERIAL WITHIN THE TOP 6 INCHES OF THE SUBGRADE LEVEL SHALL HAVE AN IN PLACE DENSITY OF 98%.
- THE CONTRACTOR SHALL SUPPLY THE ENGINEER WITH SEWER AS-BUILTS (LOCATION, ELEVATION, LENGTH, AND SLOPE) PREPARED BY A REGISTERED LAND SURVEYOR SUITABLE FOR PREPARATION OF FINAL RECORD DRAWINGS.

TEMPORARY AND PERMANENT SEEDING NOTES

- ALL DISTURBED AREAS SHALL BE PERMANENTLY GRASSED PER THE SCDHEC BMP MANUAL.
- ALL DISTURBED AREAS WITH NO ACTIVITY FOR MORE THAN 14 DAYS SHALL BE TEMPORARILY GRASSED PER THE SCDHEC BMP MANUAL.
- THE CONTRACTOR SHALL INCLUDE IN ITS CONTRACT PRICE TO THE OWNER ALL COSTS NECESSARY TO PERMANENTLY GRASS THE SITE MEETING THE DEFINITION OF "STABILIZED" AS DEFINED BY THE NPDES GENERAL PERMIT (100% COVERAGE AND 70% DENSITY) OR AS MAY BE REQUIRED BY THE LOCAL ISSUING AUTHORITY IF STRICTER. IT IS THE CONTRACTOR'S RESPONSIBILITY TO KNOW THESE REQUIREMENTS AND ESTIMATE THE COST TO MEET THESE REQUIREMENTS.
- ALL TOPSOIL STRIPPED FROM THE SITE SHALL BE PRESERVED AND SPREAD OVER AREAS TO BE GRASSED TO A UNIFORM DEPTH SUCH THAT USE ALL NATIVE TOPSOIL IS UTILIZED.

Temporary Seeding - Upstate

| Species | lbs./ac | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|------------------------------------|---------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Browntop Millet (Alone) | 40 | | | | | | | | | | | | |
| Browntop Millet (Mix) | 10 | | | | | | | | | | | | |
| Rye Grain (Alone) | 56 | | | | | | | | | | | | |
| Rye Grain (Mix) | 10 | | | | | | | | | | | | |
| Rye Grass (Alone) | 50 | | | | | | | | | | | | |
| Rye Grass (Mix) | 8 | | | | | | | | | | | | |
| For Steep Slopes/Cut Slopes | | | | | | | | | | | | | |
| Weeping Lovegrass (Alone) | 4 | | | | | | | | | | | | |
| Weeping Lovegrass (Mix) | 2 | | | | | | | | | | | | |

Permanent Seeding - Upstate

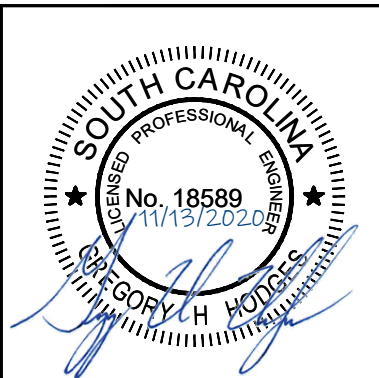
| Species | Lbs/Ac | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|--|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Bahia Grass (Alone) | 40 | | | | | | | | | | | | |
| Bahia Grass (Mix) | 30 | | | | | | | | | | | | |
| Bermuda Grass (hulled) (Alone) | 8-12 | | | | | | | | | | | | |
| Bermuda Grass (hulled) (Mix) | 4-6 | | | | | | | | | | | | |
| Fescue, Tall (KY31) Alone | 40 | | | | | | | | | | | | |
| Fescue, Tall (KY31) mix | 20 | | | | | | | | | | | | |
| Sericea Lespedeza (Scarified) Alone or Mix (inoculate with EL Inoculant) | 40 | | | | | | | | | | | | |
| Ladino Clover (mix only) Inoculate with AB Inoculant | 2 | | | | | | | | | | | | |
| For Steep Slopes/Cut Slopes | | | | | | | | | | | | | |
| Weeping Lovegrass (Alone) | 4 | | | | | | | | | | | | |
| Weeping Lovegrass (Mix) | 2 | | | | | | | | | | | | |
| Crownvetch (Mix) (Inoculate with Type M Inoculant) | 8-10 | | | | | | | | | | | | |



YORK COUNTY
ROCK HILL, SOUTH CAROLINA

Michael Baker

INTERNATIONAL
Michael Baker International
700 Huger Street
Columbia, South Carolina 29201



Designer: GHH
Checked by: KTC
Technician: MTW
Project Number: 166622

| REVISIONS | | | |
|-----------|-----------------------------------|------------|-----|
| No. | Description | Date | By |
| A | ISSUED FOR 30% REVIEW | NOV. 2018 | KTC |
| B | ISSUED FOR 60% REVIEW | MARCH 2019 | KTC |
| C | ISSUED FOR PERMITS | MAY 2019 | KTC |
| D | ISSUED FOR PERMIT REVIEW COMMENTS | AUG. 2019 | KTC |
| E | ISSUED FOR BIDS | JAN. 2020 | KTC |
| F | REVISED PER EASEMENT AGREEMENT | SEPT. 2020 | KTC |
| G | RE-ISSUED FOR BIDS | NOV. 2020 | KTC |

Project Name:
NEW HERITAGE GRAVITY SEWER PHASE 2

Drawing Name:
GENERAL NOTES

Municipality Project Number:
Date: **NOVEMBER 2020** Division: **WATER/WASTEWATER**
Scale: Sheet Number:
Drawing Number:
C1.2