BIG DAM SWAMP RECYCLE CENTER

DESIGN DRAWINGS

LOCATION MAP

PROJECT CONTACTS

GEORGETOWN COUNTY	
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Phone:	(843) 545-3325
DEPT:	STORMWATER ADMINISTRATOR
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ADDRESS:	1918 CHURCH STREET GEORGETOWN, SC 29440
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Surveyor	
NAME:	PLS, INC
CONTACT:	GREG CUNNINGHAM, PLS

UTILITY COMPANIES	
NAME:	GCWSD
CONTACT:	TOMMY KENNEDY
ADDRESS:	PO BOX 2730 PAWLEYS ISLAND, SC 29585
PHONE:	(843) 237-9719
Name:	SANTEE ELECTRIC COOP.
PHONE:	(843) 546-4521
NAME:	TIME WARNER CABLE
CONTACT:	DAN HELMICK
PHONE:	(843) 913-7994
NAME:	FRONTIER COMMUNICATION
CONTACT:	ROBERT HELMS
PHONE:	(843) 655-7994

CAUTION

PALMETTO UTILITY LOCATION SERVICE

3 DAYS BEFORE DIGGING CALL
TOLL FREE 1-800-922-0983

A ONE CALL SYSTEM FOR COMMUNITY AND JOB SAFETY.

THE UTILITIES SHOWN ARE SHOWN FOR THE CONTRACTOR'S CONVENIENCE ONLY. THERE MAY BE OTHER UTILITIES NOT SHOWN ON THESE PLANS. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE LOCATIONS SHOWN AND IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATIONS OF ALL UTILITIES WITHIN THE LIMITS OF THE WORK. ALL DAMAGE MADE TO EXISTING UTILITIES BY THE CONTRACTOR SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

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KNOW WHAT'S BELOW.
CALL BEFORE YOU DIG.

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GEORGETOWN COUNTY, SOUTH CAROLINA

Georgetown County
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Phone: (843) 545-3524 Fax: (843) 545-3005
Internet: www.georgetowncountysc.org

ACCREDITED AGENCY APWA

GEORGETOWN COUNTY ENGINEERING DEPARTMENT PROFESSIONAL ENGINEER No. 18699 REGISTERED STATE OF SOUTH CAROLINA

6/18/2021

NO.	DATE	DESCRIPTION
1	05/20/2021	DESIGN DRAWINGS
2	06/18/2021	CONSTRUCTION DRAWINGS REV. 1

PROJECT:
BIG DAM SWAMP RECYCLE CENTER
GEORGETOWN COUNTY, SOUTH CAROLINA

SCALE: N.T.S.

DESIGNED BY: ASB

DRAWN BY: MPM

DATE: 06/18/2021

COVER SHEET

SHEET NO: C-00

GENERAL NOTES

1. TOPOGRAPHIC AND BOUNDARY SURVEY BY GTC PUBLIC WORKS, 2226 BROWNS FERRY ROAD, GEORGETOWN SC 29442. (843) 545-3438
2. THE CONTRACTOR SHALL VERIFY THE LOCATION AND INVERT ELEVATION OF ALL UNDERGROUND UTILITIES BEFORE ANY CONSTRUCTION HAS BEGUN. CALL UTILITY COMPANIES BEFORE EXCAVATION TO LOCATE ALL BURIED CABLES AND UNDERGROUND UTILITIES.
3. THE CONTRACTOR SHALL MAKE ALL NECESSARY SITE VISITS AND INSPECTIONS TO FAMILIARIZE HIM/HERSELF WITH THE PROJECT AND MAKE ANY INVESTIGATIONS WHICH ARE APPROPRIATE TO CONFIRM THE SOILS/GEOTECHNICAL INFORMATION, TOPOGRAPHIC INFORMATION, WETLANDS, UTILITIES, ETC. TO BE ABLE TO PREPARE HIS/HER BID FOR CONSTRUCTING THE PROJECT IN ACCORDANCE WITH THE DRAWINGS AND INFORMATION PROVIDED FOR BIDDING. THE CONTRACTOR SHOULD IMMEDIATELY NOTIFY THE ENGINEERS FOR A REVIEW IF ANY DISCREPANCIES ARE DISCOVERED AT THE SITE OR ON THE DRAWINGS.
4. ALL REFERENCE TO SPECIFICATIONS FOR HIGHWAY CONSTRUCTION OR MATERIALS ARE MADE FROM SOUTH CAROLINA HIGHWAY DEPARTMENT'S STANDARD SPECIFICATIONS, LATEST EDITION.
5. A COMPLETE SET OF APPROVED DRAWINGS MUST BE MAINTAINED ON SITE AT ALL TIMES THAT THE CONTRACTOR IS PERFORMING WORK.
6. CONTRACTOR SHALL PROTECT ALL TREES THAT ARE TO REMAIN AS MARKED IN THE FIELD BY OWNERS REPRESENTATIVE.
7. THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND WILL NOT BE LIMITED TO NORMAL WORKING HOURS. THE DUTY OF THE ENGINEER TO CONDUCT CONSTRUCTION REVIEW OF THE CONTRACTOR'S PERFORMANCE IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES, IN, ON, OR NEAR THE CONSTRUCTION SITE. THE CONTRACTOR WILL BE RESPONSIBLE FOR PROVIDING AND MAINTAINING ALL BARRICADES, WARNING SIGNS, FLASHING LIGHTS, AND TRAFFIC CONTROL DEVICES DURING CONSTRUCTION. THE CONTRACTOR IS TO COMPLY WITH ALL OSHA REGULATIONS, REQUIREMENTS, AND SAFETY MEETING REQUIREMENTS.
8. THE CONTRACTOR SHALL REMOVE ALL TREES AND VEGETATION THAT INTERFERE WITH NEW CONSTRUCTION. REMOVE DEBRIS FROM SITE IN ACCORDANCE WITH LOCAL LAWS. THE CONTRACTOR SHALL PROTECT ALL TREES THAT ARE TO REMAIN.
9. WITHIN ALL NOTES, THE TERM CONTRACTOR SHALL MEAN THE GENERAL CONTRACTOR AND ANY SUBCONTRACTOR OR VENDOR PERFORMING CONSTRUCTION ON THE SITE.
10. THE CONTRACTOR SHALL COMPLY WITH ALL RULES AND REGULATIONS OF FEDERAL, STATE, COUNTY AND LOCAL MUNICIPALITIES.
11. GENERAL CONTRACTOR SHALL VERIFY THAT ALL NECESSARY PERMITS FOR CONSTRUCTION HAVE BEEN OBTAINED PRIOR TO THE START OF THE PROJECT.
12. ANY CONSTRUCTION TRAILERS USED ON-SITE BY THE CONTRACTOR (IF NECESSARY) SHALL BE PERMITTED THROUGH LOCAL GOVERNING AGENCY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ACQUIRE ALL NECESSARY PERMITS. CONTRACTOR MAY UTILIZE EXISTING STRUCTURE AT TEMPORARY CONSTRUCTION ENTRANCE AND WILL BE RESPONSIBLE FOR ALL NECESSARY PERMITS AND UTILITY CONNECTION.
13. THE CONTRACTOR SHALL REFERENCE THE GEOTECHNICAL REPORT AVAILABLE FROM THE OWNER AND COMPLY WITH ALL REPORT RECOMMENDATIONS. IF A CONFLICT ARISES BETWEEN ONE DOCUMENTS AND GEOTECHNICAL REPORT, THE MORE STRINGENT SHALL GOVERN.
14. CONTRATCOR SHALL SCARIFY AND REMOVE ALL EXISTING ASPHALT PAVEMENT WHERE NECESSARY BEFORE PLACING FILL.
15. THE GRADING CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE AWAY FROM HOUSES AT ALL TIMES. CONTRACTOR SHALL BRING TO THE ATTENTION OF THE ENGINEER ANY AREAS THAT MAY NOT DRAIN PROPERLY DURING CONSTRUCTION.
16. GRADING CONTRACTOR SHALL INCLUDE IN COST ALL CUT/FILL NECESSARY FOR EARTHWORK BALANCE. CONTRACTOR SHALL INCLUDE IN COST ALL WETTING/DRYING OF SOILS NECESSARY TO ACHIEVE COMPACTION PER SPECIFICATIONS.
17. THE SEQUENCE OF WORK SHALL CONFORM TO THE EROSION CONTROL NARRATIVE.
18. SEDIMENT CONTROLS DURING CONSTRUCTION SHALL COMPLY WITH ALL LOCAL AND STATE CODES AND REGULATIONS. AFTER ALL SITEWORK IS COMPLETED AND GRASSING ESTABLISHED, THE GRADING CONTRACTOR SHALL REMOVE ALL SILT FROM THE SITE AND LEGALLY DISPOSE OF ALL SILT OFF-SITE AT NO ADDITIONAL COST TO THE OWNER.
19. THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE WHEN INSTRUCTIONS FROM REGULATORY AGENCIES ARE RECEIVED AND DO NOT COMPLY WITH INSTRUCTIONS AS DIRECTED BY THE OWNER'S REPRESENTATIVE.
20. THE CONTRACTOR SHALL CAREFULLY STUDY AND COMPARE THE CONSTRUCTION DOCUMENTS AND SHALL AT ONCE REPORT TO THE ENGINEER ANY INCONSISTENCIES OR OMISSIONS DISCOVERED. THE CONTRACTOR SHALL TAKE FIELD MEASUREMENTS TO VERIFY THAT ALL LOCATIONS ARE CORRECT PRIOR TO COMMENCING CONSTRUCTION.
21. THE CONTRACTOR SHALL NOT PERFORM ANY WORK ON ANY UTILITIES OR IN ANY PUBLIC RIGHT-OF-WAYS UNTIL HE/SHE HAS OBTAINED COPIES OF ALL NECESSARY ENCROACHMENT AND CONSTRUCTION PERMITS.
22. THE CONTRACTOR SHALL VERIFY BENCH MARK LOCATION AND ELEVATION WITH SURVEYOR BEFORE BEGINNING CONSTRUCTION.
23. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL EASEMENTS ON THE SITE BEFORE PROCEEDING WITH CONSTRUCTION.
24. IN THE CASE OF A CONFLICT WITH THE GEORGETOWN COUNTY STANDARD SPECIFICATIONS, THE COUNTY SPECS SHALL GOVERN. THE CONTRACTOR IS RESPONSIBLE FOR CLARIFYING ANY CONFLICTS OR AMBIGUITIES.
25. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR POSTING ALL REQUIRED BONDS THAT GENERAL CONTRACTORS ARE ALLOWED TO POST.
26. FLOOD PLAINS, FLOODWAYS, NOR WETLANDS SHALL BE DISTURBED AS PART OF THIS PROJECT.
27. ANY CONCRETE DRIVEWAY, WALKWAY, OR CURB THAT IS NOT SHOWN, DIRECTED, OR MARKED OUT BY THE ENGINEER TO BE REPLACED, BUT IS REMOVED, MISALIGNED OR DAMAGED AS A RESULT OF THE CONTRACTOR'S CONSTRUCTION SHALL BE REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE COUNTY.
28. SELECTIVE CLEARING AREAS SHALL REMAIN UNDISTURBED UNTIL APPROVED FOR CLEARING BY THE LANDSCAPE ARCHITECT TO ALLOW FOR POSSIBLE PRESERVATION OF EXISTING SPECIMEN TREES WHICH MAY BE SAVED.
29. THESE GENERAL NOTES SHALL APPLY FOR THE ENTIRE PROJECT
30. THE REQUIREMENTS OF GEORGETOWN COUNTY WATER & SEWER DISTRICT (GCW&SD) STANDARD SPECIFICATIONS AND STANDARD DETAILS SHALL GOVERN ALL UTILITIES WORK. WHERE A CONFLICT EXISTS IN THE REQUIREMENTS OF A REFERENCED MATERIAL OR INSTALLATION STANDARD, THE REQUIREMENTS OF GEORGETOWN COUNTY WATER & SEWER DISTRICT (GCW&SD) SHALL PREVAIL. WHERE THE REQUIREMENTS OF A STATE OR LOCAL AGENCY HAVING JURISDICTION ARE MORE STRINGENT THOSE REQUIREMENTS SHALL PREVAIL.
31. NO PORTION OF THE WORK SHALL BE ACCOMPLISHED UNTIL THE APPROPRIATE PERMITS AND APPROVALS FOR THAT WORK HAVE BEEN OBTAINED. THE CONTRACTOR SHALL HAVE COPIES OF ALL PERMITS AND THEY SHALL BE RETAINED AT THE PROJECT SITE AT ALL TIMES FOR INSPECTION BY THE OWNER'S REPRESENTATIVE.
32. ANY DISCREPANCIES ON THE DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE COMMENCING WORK. NO FIELD CHANGES OR DEVIATIONS FROM DESIGN TO BE MADE WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
33. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE EXACT LOCATION AND EXISTENCE OF ALL UNDERGROUND UTILITIES. LOCATION OF UTILITIES ON THE PLAN, WHETHER FULLY AND CORRECTLY LOCATED OR OMITTED, WILL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OR LIABILITY FOR DAMAGE TO UTILITIES CAUSED BY HIS CONSTRUCTION EFFORT. THE CONTRACTOR WILL BE RESPONSIBLE FOR CONTACTING LOCAL AGENCIES FOR ASSISTANCE IN LOCATING THEIR UTILITIES. THE CONTRACTOR MUST FULLY COMPLY WITH THE SOUTH CAROLINA UNDERGROUND UTILITIES DAMAGE PREVENTION ACT, GENERAL STATUS 58-35, SECTIONS 20 THROUGH 120.
34. THE CONTRACTOR SHALL BE RESPONSIBLE TO FURNISH ALL MATERIAL AND LABOR TO CONSTRUCT THE FACILITY AS SHOWN AND DESCRIBED AND IN CONFORMANCE WITH GEORGETOWN COUNTY SPECIFICATIONS AND REQUIREMENTS. HE SHALL VISIT THE SITE PRIOR TO BIDDING TO DETERMINE EXISTING CONDITIONS.
35. *A SIGN OR OTHER NOTICE WILL BE POSTED CONSPICUOUSLY NEAR THE MAIN ENTRANCE OF THE CONSTRUCTION SITE INDICATING THE LOCATION OF THE SWPPP. THE COPY OF THE SWPPP IS REQUIRED TO BE KEPT ON-SITE OR LOCALLY AVAILABLE MUST BE MADE AVAILABLE, IN ITS ENTIRETY.*
TO DHEC OR THE EPA STAFF FOR REVIEW AND COPYING AT THE TIME OF AN ON-SITE INSPECTION

SCDHEC STANDARD NOTES

1. IF NECESSARY, SLOPES, WHICH EXCEED EIGHT (8) VERTICAL FEET SHOULD BE STABILIZED WITH SYNTHETIC OR VEGETATIVE MATS, IN ADDITION TO HYDROSEEDING. IT MAY BE NECESSARY TO INSTALL TEMPORARY SLOPE DRAINS DURING CONSTRUCTION. TEMPORARY BERMS MAY BE NEEDED UNTIL THE SLOPE IS BROUGHT TO GRADE
2. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN FOURTEEN (14) DAYS AFTER WORK HAS CEASED, EXCEPT AS STATED BELOW.
   - WHERE STABILIZATION BY THE 14TH DAY IS PRECLUDED BY SNOW COVER OR FROZEN GROUND CONDITIONS STABILIZATION MEASURES MUST BE INITIATED AS SOON AS PRACTICABLE.
   - WHERE CONSTRUCTION ACTIVITY ON A PORTION OF THE SITE IS TEMPORARILY CEASED, AND EARTH-DISTURBING ACTIVITIES WILL BE RESUMED WITHIN 14 DAYS, TEMPORARY STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED ON THAT PORTION OF THE SITE.
3. ALL SEDIMENT AND EROSION CONTROL DEVICES SHALL BE INSPECTED ONCE EVERY CALENDAR WEEK. IF PERIODIC INSPECTION OR OTHER INFORMATION INDICATES THAT A BMP HAS BEEN INAPPROPRIATELY OR INCORRECTLY INSTALLED, THE PERMITTEE MUST ADDRESS THE NECESSARY REPLACEMENT OR MODIFICATION REQUIRED TO CORRECT THE BMP WITHIN 48 HOURS OF IDENTIFICATION
4. PROVIDE SILT FENCE AND/OR OTHER CONTROL DEVICES, AS MAY BE REQUIRED, TO CONTROL SOIL EROSION DURING UTILITY CONSTRUCTION. ALL DISTURBED AREAS SHALL BE CLEANED, GRADED, AND STABILIZED WITH GRASSING IMMEDIATELY AFTER THE UTILITY INSTALLATION. FILL, COVER, AND TEMPORARY SEEDING AT THE END OF EACH DAY ARE RECOMMENDED. IF WATER IS ENCOUNTERED WHILE TRENCHING, THE WATER SHOULD BE FILTERED TO REMOVE ANY SEDIMENTS BEFORE BEING PUMPED BACK INTO ANY WATERS OF THE STATE.
5. ALL EROSION CONTROL DEVICES SHALL BE PROPERLY MAINTAINED DURING ALL PHASES OF CONSTRUCTION UNTIL THE COMPLETION OF ALL CONSTRUCTION ACTIVITIES AND ALL DISTURBED AREAS HAVE BEEN STABILIZED. ADDITIONAL CONTROL DEVICES MAY BE REQUIRED DURING CONSTRUCTION IN ORDER TO CONTROL EROSION AND/OR OFFSITE SEDIMENTATION. ALL TEMPORARY CONTROL DEVICES SHALL BE REMOVED ONCE CONSTRUCTION IS COMPLETE AND THE SITE IS STABILIZED.
6. THE CONTRACTOR MUST TAKE NECESSARY ACTION TO MINIMIZE THE TRACKING OF MUD ONTO PAVED ROADWAY(S) FROM CONSTRUCTION AREAS AND THE GENERATION OF DUST. THE CONTRACTOR SHALL DAILY REMOVE MUD/SOIL FROM PAVEMENT, AS MAY BE REQUIRED.
7. RESIDENTIAL SUBDIVISIONS REQUIRE EROSION CONTROL FEATURES FOR INFRASTRUCTURE AS WELL AS FOR INDIVIDUAL LOT CONSTRUCTION. INDIVIDUAL PROPERTY OWNERS SHALL FOLLOW THESE PLANS DURING CONSTRUCTION OR OBTAIN APPROVAL OF AN INDIVIDUAL PLAN IN ACCORDANCE WITH S.C REG. 72-300 ET SEQ, AND SCR100000.
8. TEMPORARY DIVERSION BERMS AND/OR DITCHES WILL BE PROVIDED AS NEEDED DURING CONSTRUCTION TO PROTECT WORK AREAS FROM UP SLOPE RUNOFF AND/OR TO DIVERT SEDIMENT-LADEN WATER TO APPROPRIATE TRAPS OR STABLE OUTLETS.
9. ALL WATERS OF THE STATE (WoS), INCLUDING WETLANDS, ARE TO BE FLAGGED OR OTHERWISE CLEARLY MARKED IN THE FIELD. A DOUBLE ROW OF SILT FENCE IS TO BE INSTALLED IN ALL AREAS WHERE A 50-FOOT BUFFER CAN'T BE MAINTAINED BETWEEN THE DISTURBED AREA AND ALL WoS. A 10-FOOT BUFFER SHOULD BE MAINTAINED BETWEEN THE LAST ROW OF SILT FENCE AND ALL WoS.
10. LITTER, CONSTRUCTION DEBRIS, OILS, FUELS, AND BUILDING PRODUCTS WITH SIGNIFICANT POTENTIAL FOR IMPACT (SUCH AS STOCKPILES OF FRESHLY TREATED LUMBER) AND CONSTRUCTION CHEMICALS THAT COULD BE EXPOSED TO STORM WATER MUST BE PREVENTED FROM BECOMING A POLLUTANT SOURCE IN STORM WATER DISCHARGES.
11. A COPY OF THE SWPPP, INSPECTIONS RECORDS, AND RAINFALL DATA MUST BE RETAINED AT THE CONSTRUCTION SITE OR A NEARBY LOCATION EASILY ACCESSIBLE DURING NORMAL BUSINESS HOURS, FROM THE DATE OF COMMENCEMENT OF CONSTRUCTION ACTIVITIES TO THE DATE THAT FINAL STABILIZATION IS REACHED.
12. INITIATE STABILIZATION MEASURES ON ANY EXPOSED STEEP SLOPE (3H:1V OR GREATER) WHERE LAND-DISTURBING ACTIVITIES HAVE PERMANENTLY OR TEMPORARILY CEASED, AND WILL NOT RESUME FOR A PERIOD OF 7 CALENDAR DAYS.
13. MINIMIZE SOIL COMPACTION AND, UNLESS INFEASIBLE, PRESERVE TOPSOIL.
14. MINIMIZE THE DISCHARGE OF POLLUTANTS FROM EQUIPMENT AND VEHICLE WASHING, WHEEL WASH WATER, AND OTHER WASH WATERS. WASH WATERS MUST BE TREATED IN A SEDIMENT BASIN OR ALTERNATIVE CONTROL THAT PROVIDES EQUIVALENT OR BETTER TREATMENT PRIOR TO DISCHARGE;
15. MINIMIZE THE DISCHARGE OF POLLUTANTS FROM DEWATERING OF TRENCHES AND EXCAVATED AREAS. THESE DISCHARGES ARE TO BE ROUTED THROUGH APPROPRIATE BMP's (SEDIMENT BASIN, FILTER BAG, ETC.).
16. THE FOLLOWING DISCHARGES FROM SITES ARE PROHIBITED:
   - WASTEWATER FROM WASHOUT OF CONCRETE, UNLESS MANAGED BY AN APPROPRIATE CONTROL
   - WASTEWATER FROM WASHOUT AND CLEANOUT OF STUCCO, PAINT, FORM RELEASE OILS, CURING COMPOUNDS AND OTHER CONSTRUCTION MATERIALS;
   - FUELS, OILS, OR OTHER POLLUTANTS USED IN VEHICLE AND EQUIPMENT OPERATION AND MAINTENANCE; AND
   - SOAPS OR SOLVENTS USED IN VEHICLE AND EQUIPMENT WASHING.
17. AFTER CONSTRUCTION ACTIVITIES BEGIN, INSPECTIONS MUST BE CONDUCTED AT A MINIMUM OF AT LEAST ONCE EVERY CALENDAR WEEK AND MUST BE CONDUCTED UNTIL FINAL STABILIZATION IS REACHED ON ALL AREAS OF THE CONSTRUCTION SITE.
18. IF EXISTING BMP's NEED TO BE MODIFIED OR IF ADDITIONAL BMP's ARE NECESSARY TO COMPLY WITH THE REQUIREMENTS OF THIS PERMIT AND / OR SC's WATER QUALITY STANDARDS, IMPLEMENTATION MUST BE COMPLETED BEFORE THE NEXT STORM EVENT WHENEVER PRACTICABLE. IF IMPLEMENTATION BEFORE THE NEXT STORM EVENT IS IMPRACTICABLE, THE SITUATION MUST BE DOCUMENTED IN THE SWPPP AND ALTERNATIVE BMP's MUST BE IMPLEMENTED AS SOON AS REASONABLY POSSIBLE.
19. A PRE-CONSTRUCTION CONFERENCE MUST BE HELD FOR EACH CONSTRUCTION SITE WITH AN APPROVED ON-SITE SWPPP PRIOR TO THE IMPLEMENTATION OF CONSTRUCTION ACTIVITIES. FOR NON-LINEAR PROJECTS THAT DISTURB 10 ACRES OR MORE THIS CONFERENCE MUST BE HELD ON-SITE UNLESS THE DEPARTMENT HAS APPROVED OTHERWISE.

TEMPORARY SEEDING

SPECIES	*RATES PER ACRE*	*PLANTING DATES*	*REMARKS*
BROWN TOP MILLET	*40 LBS.*	*4/1-7/15*	*137,000 SEED PER POUND QUICK DENSE COVER*
RYEGRASS (ALONE)	*50 LBS.*	*9/01-11/15*	*227,000 SEED PER POUND DO NOT USE IN MIXTURES*
WHEAT (ALONE)	*180 LBS.*	*10/01-12/15*	*15,000 SEEDS PER POUND WINTERHARDY*
OATS (ALONE)	*128 LBS.*	*9/15-11/15*	*13,000 SEEDS PER POUND USE IN PRODUCTIVE SOILS*

NOTE:
USE 10-10-10 FERTILIZER FOR TEMPORARY GRASSING AT 500 LBS/AC,
STRAW MULCH SHALL BE APPLIED AT A RATE OF 2 TONS/ACRE.

PERMANENT SEEDING

SPECIES	*RATES PER ACRE*	*PLANTING DATES*	*REMARKS*
ANNUAL RYE GRASS	*15 LBS.*	*8/15-2/28*	*QUICK COVER;*
COMMON BERMUDA GRASS (UNHULLED)	*40 LBS.*	*8/15-2/28*	*PLANT WITH TALL FESCUE*
TALL FESCUE	*80 LBS.*	*8/15-2/28*	*MIX WITH PERENNIAL LESPEDEZAS;*

NOTE:
USE 10-10-10 FERTILIZER FOR PERMANENT GRASSING AT 1000 LBS/AC,
STRAW MULCH SHALL BE APPLIED AT A RATE OF 2 TONS/ACRES.

GRASSING NOTES

1. AREAS TO BE GRASSED SHALL BE DEFINED AS ALL AREAS OF SITE WITHIN THE GRADING LIMITS AND NOT OCCUPIED BY PAVING, CRUSHED STONE SURFACING OR STRUCTURES. GRASSING SHALL INCLUDE FINAL SHAPING, LIMING, FERTILIZING AND SEEDING .
2. LIME SHALL BE AGRICULTURAL GRADE, GROUND LIMESTONE. GROUND LIMESTONE SHALL CONTAIN NOT LESS THAN 88% OF CALCIUM CARBONATE CONTENT EQUIVALENT AND SHALL BE SUCH A FINENESS THAT 90% WILL PASS THROUGH A NO. 10 SIEVE AND NOT LESS THAN 50% THROUGH A NO. 50 SIEVE.
3. FERTILIZER SHALL BE GRADE 10-10-10 COMPLETE FERTILIZER OF UNIFORM COMPOSITION, FREE-FLOWING AND SUITABLE FOR APPLICATION WITH EQUIPMENT, DELIVERED TO SITE IN BAGS LABELED WITH MANUFACTURER'S GUARANTEED ANALYSIS, AND SHALL CONFORM TO ALL STATE AND FEDERAL REGULATIONS. FERTILIZER SHALL BE DISTRIBUTED UNIFORMLY AT A RATE OF 1000LBS. PER ACRE AND SHALL BE INCORPORATED INTO SOIL TO A DEPTH OF AT LEAST 2" BY DISKING AND HARROWING.
4. SEEDS SHALL BE MIXTURE AS APPROVED BY THE ENGINEER AND SHALL MEET REQUIREMENTS OF SEED LAWS OF THE STATE AND THE U.S. DEPARTMENT OF AGRICULTURE RULES AND REGULATIONS UNDER FEDERAL SEED ACT IN EFFECT ON DATE BIDS ARE RECEIVED. SEED SHALL BE DELIVERED IN STANDARD CONTAINERS. SEED WHICH HAS BECOME WET, MOLDY OR DAMAGED IN TRANSIT OR STORAGE WILL NOT BE ACCEPTABLE.
5. MULCH SHALL CONSIST OF SMALL GRAIN STRAW OF GOOD QUALITY, CLEAN, FREE OF NOXIOUS WEEDS, AND REASONABLY FREE OF OTHER WEEDS. SPREAD MULCH AT A RATE OF 1TON PER ACRE ON SLOPES UP TO 8.0 %
6. SPREAD LIME AT A RATE OF 2,000 LBS. PER ACRE.
7. SPREAD SEED AT A RATE AS NOTED IN THE TABLES BELOW.
8. IMMEDIATELY AFTER FERTILIZING AND SEEDING HAVE BEEN COMPLETED, ENTIRE AREA SHALL BE COMPACTED BY MEANS OF A CULTIPACKER, ROLLER, OR APPROVED EQUIPMENT WEIGHING APPROXIMATELY 90 LBS. PER LINEAR FOOT OF ROLLER. USE OF SPECIFIED MULCH, APPLIED AT A RATE OF 1 - 2 TONS/ACRE (USE THE HIGHER RATE FOR 3 TO 1 SLOPES OR GREATER), WITH ASPHALT EMULSION TYPE SS-1, MS-2, RS-1, OR RS-2, SHALL BE USED TO PROTECT SITE AGAINST EROSION.
9. AREAS THAT REQUIRE RE-FERTILIZATION AND RE-SEEDING WILL BE DESIGNATED BY THE ENGINEER. WHEN ANY PORTION OF SURFACE BECOMES GULLIED OR OTHERWISE DAMAGED FOLLOWING SEEDING, OR SEEDLINGS HAVE BEEN WINTER-KILLED OR OTHERWISE DESTROYED, AFFECTED PORTION SHALL BE REPAIRED TO RE-ESTABLISH CONDITION AND GRADE OF SOIL PRIOR TO SEEDING AND SHALL BE RESEEDED AS SPECIFIED ABOVE.
10. ALL DISTURBED AREAS ARE TO BE GRASSED IMMEDIATELY AFTER CONSTRUCTION IN THE AREA. AT NO TIME WILL AN AREA BE LEFT BARE FOR MORE THAN 14 DAYS AFTER COMPLETION OF CONSTRUCTION.

DHEC CONSTRUCTION SEQUENCE

ITEMS MUST OCCUR IN THE ORDER LISTED; ITEMS CANNOT OCCUR CONCURRENTLY UNLESS SPECIFICALLY NOTED.

1. RECEIVE NPDES COVERAGE FROM DHEC
2. PRE-CONSTRUCTION MEETING (ON-SITE IF MORE THAN 10 DISTURBED AND NON-LINEAR)
3. NOTIFY DHEC EQC REGIONAL OFFICE OR OCRM OFFICE 48 HOURS PRIOR TO BEGINNING LAND-DISTURBING ACTIVITIES
4. INSTALLATION OF CONSTRUCTION ENTRANCE(S)
5. CLEARING & GRUBBING ONLY AS NECESSARY FOR INSTALLATION OF PERIMETER CONTROLS
6. INSTALLATION OF PERIMETER CONTROLS (E.G., SILT FENCE)
7. CLEARING & GRUBBING ONLY IN AREAS OF BASINS/ TRAPS/ PONDS
8. INSTALLATION OF BASINS/ TRAPS/ PONDS AND INSTALLATION OF DIVERSIONS TO THOSE STRUCTURES (OUTLET STRUCTURES MUST BE COMPLETELY INSTALLED AS SHOWN ON THE DETAILS BEFORE PROCEEDING TO NEXT STEP; AREAS DRAINING TO THESE STRUCTURES CANNOT BE DISTURBED UNTIL THE STRUCTURES AND DIVERSIONS TO THE STRUCTURES ARE COMPLETELY INSTALLED)
9. CLEARING & GRUBBING OF SITE OR DEMOLITION (SEDIMENT & EROSION CONTROL MEASURES FOR THESE AREAS MUST ALREADY BE INSTALLED)
10. ROUGH GRADING
11. INSTALLATION OF STORM DRAIN SYSTEM AND PLACEMENT OF INLET PROTECTION AS EACH INLET IS INSTALLED
12. FINE GRADING, PAVING, ETC.
13. PERMANENT/ FINAL STABILIZATION
14. CLEAN-OUT OF DETENTION BASINS THAT WERE USED AS SEDIMENT CONTROL STRUCTURES AND RE-GRADING OF DETENTION POND BOTTOMS; IF NECESSARY, MODIFICATION OF SEDIMENT BASIN RISER TO CONVERT TO DETENTION BASIN OUTLET STRUCTURE
15. REMOVAL OF TEMPORARY SEDIMENT & EROSION CONTROL MEASURES AFTER ENTIRE AREA DRAINING TO THE STRUCTURE IS FINALLY STABILIZED (THE DEPARTMENT RECOMMENDS THAT THE PROJECT OWNER/ OPERATOR HAVE THE SWPPP PREPARE OR REGISTRATION EQUIVALENT APPROVE THE REMOVAL OF TEMPORARY STRUCTURES.)
16. SUBMIT NOTICE OF TERMINATION (NOT) TO DHEC AS APPROPRIATE.

- NOTE: INCLUDE INDIVIDUAL LOT DEVELOPMENT/ CONSTRUCTION IN THE SEQUENCE IF THE SITE WILL NOT BE MASS-GRADED.
- NOTE: INSTALLATION OF SOME PERMANENT WATER QUALITY DEVICES SHOULD OCCUR AFTER THE SITE IS STABILIZED; INCLUDE THIS IN THE SEQUENCE. CLEANOUT OF OTHER WATER QUALITY DEVICES THAT WERE USED DURING CONSTRUCTION SHOULD OCCUR AFTER SITE STABILIZATION.
- NOTE: MAINTENANCE OF SEDIMENT AND EROSION CONTROL MEASURES MUST CONTINUE UNTIL THE SITE IS PERMANENTLY STABILIZED AND THE CONTROLS ARE REMOVED.
- NOTE: IF NPDES COVERAGE IS BEING ISSUED AFTER LAND-DISTURBING ACTIVITIES HAVE ALREADY STARTED (E.G., IN RESPONSE TO A NOTICE TO COMPLY, NOTICE OF VIOLATION, OR ENFORCEMENT ACTION), THEN THE CONSTRUCTION SEQUENCE MUST SPECIFICALLY INDICATE THE ITEMS THAT HAVE ALREADY OCCURRED AND THE ITEMS THAT WILL BE OCCURRING AFTER NPDES COVERAGE IS ISSUED.
- NOTE: IF FLOWS FROM OFFSITE AREAS WILL BE DIVERTED AROUND THE SITE AND THE ON-SITE STRUCTURES ARE NOT DESIGNED TO HANDLE FLOWS FROM THE OFFSITE AREAS, THEN THE DIVERSIONS/ PIPING FOR THE OFFSITE FLOWS MUST BE INSTALLED BEFORE LAND-DISTURBING ACTIVITIES BEGIN ON THE SITE; INCLUDE THIS IN THE SEQUENCE. SEDIMENT AND EROSION CONTROL MEASURES FOR THE DISTURBED AREAS FOR THE DIVERSION/ PIPING MUST BE INSTALLED BEFORE THOSE AREAS ARE DISTURBED AND SHOULD BE SHOWN ON THE PLANS.
- NOTE: IF AN EXISTING DETENTION/ SEDIMENT BASIN IS BEING MODIFIED TO HANDLE THE FLOWS FROM THE PROPOSED DEVELOPMENT, THEN IT MUST BE MODIFIED BEFORE LAND-DISTURBING ACTIVITIES BEGIN ON THE SITE. THIS SHOULD BE INCLUDED IN THE SEQUENCE.

DEMOLITION AND CLEARING NOTES

1. THE CONTRACTOR SHALL INCLUDE IN HIS BID, CLEARING AND GRUBBING. THE LANDSCAPE ARCHITECT AND / OR ENGINEER SHALL DESIGNATE WHICH AREAS SHALL BE CLEARED UNDER THIS CONTRACT AND SHALL DESIGNATE TREES TO REMAIN WITHIN THE AREAS TO BE CLEARED.
2. OWNER'S REPRESENTATIVE, GOVERNING AGENCIES AND UTILITY COMPANIES SHALL BE NOTIFIED 72 HOURS PRIOR TO ANY DEMOLITION OPERATIONS.
3. CONTRACTOR SHALL COORDINATE WITH GOVERNING AGENCIES AND ALL UTILITY COMPANIES TO COORDINATE TIMING OF AND RESPONSIBILITY OF DEMOLITION OPERATION INCLUDING ANY REQUIRED INSPECTIONS.
4. UTILITIES TO REMAIN IN-PLACE SHALL BE PROTECTED BY THE CONTRACTOR FROM DAMAGE IN ACCORDANCE WITH UTILITY COMPANY REQUIREMENTS. CONTRACTOR IS RESPONSIBLE FOR DAMAGE TO EXISTING UTILITIES.
5. ANY HISTORICALLY SIGNIFICANT ARTICLES (CORNER STONES, ETC.) FOUND DURING CONSTRUCTION SHALL BE PRESENTED TO THE OWNER FOR CLASSIFICATION. CONTRACTOR SHALL STOP WORK IN THE AREA OF THE FIND AND IMMEDIATELY NOTIFY THE OWNER AND GOVERNING AGENCIES FOR DIRECTION. THE OWNER SHALL RETAIN ALL MATERIAL IF CONSIDERED SIGNIFICANT. ALL OTHER MATERIAL SHALL BE DISPOSED OF OFF-SITE.
6. THE CONTRACTOR SHALL TURN OVER ANY REMOVED PUBLIC UTILITY ITEMS, i.e. WATER METERS, TO THE UTILITY DEPARTMENT. ALL OTHER MATERIAL SHALL BE DISPOSED OF OFF-SITE IN A LEGAL MANNER.
7. ALL DEBRIS FROM DEMOLITION OPERATION SHALL BE DISPOSED OF OFF-SITE IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS.
8. TREES TO BE SAVED SHALL BE PROTECTED FROM CONSTRUCTION DISTURBANCE PER DETAIL. TREES NOT SHOWN TO BE SAVED SHALL BE REMOVED.
9. CONTRACTOR IS TO VERIFY ALL EXISTING SITE CONDITIONS PRIOR TO AND DURING CONSTRUCTION AND REPORT ANY CONFLICTS OR DISCREPANCIES TO THE ENGINEER.
10. CONTRACTOR SHALL FIELD LOCATE ALL EXISTING UTILITIES PRIOR TO ANY SITE CONSTRUCTION OR DEMOLITION. THIS SHALL INCLUDE, BUT SHALL NOT BE LIMITED TO, BOTH MAIN AND SERVICE LINES FOR THE FOLLOWING:
   POTABLE WATER LINES
   SANITARY SEWER LINES
   ELECTRIC LINES (OVERHEAD AND UNDERGROUND)
   GAS LINES
   TELEPHONE LINES
   CABLE TELEVISION LINES
   STORMWATER CONVEYANCE LINES
11. UNLESS SPECIFICALLY NOTED ON THE PLAN TO BE ABANDONED IN PLACE OR PROTECTED, ALL UTILITIES ON SITE (OVERHEAD OR UNDERGROUND) SHALL BE ENTIRELY REMOVED TO THE PROPERTY LINE, OR SERVICE POLE. ENDS OF PIPES BEYOND PROPERTY LINE TO BE ABANDONED SHALL BE PROPERLY CAPPED OR PLUGGED AS REQUIRED BY GOVERNING UTILITY COMPANY. ANY ACTIVE ELECTRIC POLES MAINTAINED BY SANTEE ELECTRIC SHALL BE COORDINATED WITH SANTEE ELECTRIC FOR REMOVAL.
12. CONTRACTOR IS RESPONSIBLE FOR PROVIDING ANY TRAFFIC CONTROL AND SAFETY MEASURES FOR DEMOLITION OPERATIONS.

GRADING AND DRAINAGE NOTES

1. *ALL PAVING, CONSTRUCTION, MATERIALS, AND WORKMANSHIP WITHIN SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION'S (S.C.D.O.T.'S) RIGHTS-OF-WAY SHALL BE IN ACCORDANCE WITH S.C.D.O.T.'S SPECIFICATIONS AND STANDARDS.*
2. *ALL UNPAVED AREAS IN EXISTING RIGHT-OF-WAY D

SITE LAYOUT LEGEND

DESCRIPTION	EXISTING	PROPOSED
BUILDING		
ASPHALT PAVEMENT		
CONCRETE PAVEMENT		
STONE BASE		
CONCRETE SIDEWALK		
CUT AND PATCH		
CENTERLINE		
CURB & GUTTER		
FENCE (AS INDICATED)		
RIGHT-OF-WAY LINE		
SIGN (POST MOUNTED)		
TRAFFIC FLOW ARROW		
TREE TO BE REMOVED		

UTILITIES LEGEND

DESCRIPTION	EXISTING	PROPOSED
SANITARY SEWER	S S	S S
WATER LINE W/SIZE	W W	W W
UNDERGROUND ELECTRIC	UGE UGE	UGE UGE
CLEANOUT		
FIRE HYDRANT ASSEMBLY		
FORCE MAIN W/SIZE	FM	FM
GAS LINE	G	GAS GAS
GATE VALVE & BOX		
HOSE BIBB		
OVERHEAD WIRE	OE OE	OE OE
FIRE DEPT. CONNECTION		
SANITARY SEWER		
TAPPING SLEEVE & VALVE		
TELEPHONE	T	T
TELEPHONE LINE	UGT UGT	UGT UGT
WATER METER	W	W
UTILITY POLE		

SEDIMENT AND EROSION CONTROL LEGEND

SYMBOL	PRACTICE	DESCRIPTION
IP A	TYPE - A FILTER FABRIC INLET PROTECTION	A TEMPORARY SEDIMENT BARRIER LAID AROUND A STORM DRAIN INLET TO PREVENT SEDIMENT FROM ENTERING THE DRAINAGE SYSTEM.
IP A	TYPE - A SEDIMENT TUBE INLET PROTECTION	USE SEDIMENT TUBE INLET PROTECTION FILTERS THAT HAVE A MINIMUM HEIGHT OR DIAMETER OF 18-24 INCHES PLACED AROUND THE INLET STRUCTURE STAKED IN PLACE OR DANDY BAGS.
OP	OUTLET PROTECTION	RIP RAP CHANNEL / BANK PLACED BELOW DRAINAGE OUTLETS TO REDUCE THE VELOCITY OF FLOW, EROSION, AND STABILIZE GRADES DOWNSTREAM OF OUTLET STRUCTURES.
CE	CONSTRUCTION ENTRANCE	A STONE STABILIZED PAD LOCATED AT ANY POINT THAT TRAFFIC WILL BE LEAVING A CONSTRUCTION SITE TO A PUBLIC RIGHT-OF-WAY, STREET, ALLEY, SIDEWALK, OR PARKING PLOT WHICH WILL REDUCE OR ELIMINATE THE TRANSPORT OF MUD FROM THE CONSTRUCTION SITE.
SF	SILT FENCE	A TEMPORARY STRUCTURE USED TO SLOW THE VELOCITY OF RUN-OFF, CAUSE SEDIMENT DEPOSITION AT THE STRUCTURE, AND FILTER SEDIMENT FROM RUN-OFF.
CD	STONE CHECK DAM	A TEMPORARY STONE BARRIER CONSTRUCTED ACROSS A SWALE, DRAINAGE DITCH, OR AREA OF CONCENTRATED FLOW USED TO REDUCE VELOCITY, FILTER SEDIMENT, AND STABILIZE GRADE.
TS	TEMPORARY DISTURBED AREA STABILIZATION	ESTABLISHING A TEMPORARY VEGETATIVE COVER WITH FAST GROWING SEEDING ON DISTURBED AREAS.
PS	PERMANENT SEEDING DISTURBED AREA STABILIZATION	ESTABLISHING PERMANENT VEGETATIVE COVER SUCH AS TREES, SHRUBS, VINES, GRASSES, SOD, OR LEGUMES ON DISTURBED AREAS.
CWA	CONCRETE WASHOUT AREA	TEMPORARY ONSITE CONTAINMENT FOR CONCRETE TRUCKS TO WASHOUT. PRIOR TO LEAVING THE CONSTRUCTION SITE. THE CONTRACTOR MAY RELOCATE THE WASHOUT AREA PENDING SITE ACTIVITIES. THE SWPPP PERMIT BOX IS TO LOCATED ADJACENT TO WASHOUT AREA.

DRAINAGE LEGEND

DESCRIPTION	EXISTING	PROPOSED
SPOT ELEVATIONS	28.75	28.75
DRAINAGE PIPE		
CATCH BASIN		
FINISHED GRADE		F.G.
DRAINAGE FLOW ARROW		
DRAINAGE BASIN DIVIDE		
SOIL BORING LOCATION		
STORM DRAIN JUNCTION BOX		
CURB INLET		
DROP INLET		
CONTOUR LINE	22	22
SWALE		
HEADWALL		

NOTES:

1. PIPE LENGTHS SHOWN ARE FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.
2. VERTICAL ELEVATIONS ARE BASED UPON ASSUME DATUM, THE TBM IS LOCATED AT THE EXISTING CATCH BASIN WITH TOP ELEVATION 16.1.
3. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDED THE COUNTY WITH A STORMWATER AS-BUILT RECORD DRAWING SIGNED AND SEALED BY A LICENSED LAND LAND SURVEYOR. THE SURVEY SHOULD SHOW GRADES, CONTOURS, AND DEPTHS FOR ALL STRUCTURES, PONDS AND SHOULD INCLUDE THE ELEVATIONS AND DIMENSIONS OF ALL OUTLET STRUCTURES, INCLUDING BUT NOT LIMITED TO PIPES. ORIFICES, RISERS, WEIRS AND EMERGENCY SPILLWAYS. THE SURVEY SHOULD INCLUDE ALL OF THE STORMWATER IMPROVEMENTS INSTALLED BY THE CONTRACTOR INDICATING THEIR SIZES AND MATERIAL.
4. THE CONTRACTOR SHALL FURNISH AND INSTALL THE DROP INLET IN ACCORDANCE WITH SCDOT STANDARD DRAWING NO. 719-105-01, 02 AS SHOWN ON SHEET C-8.

Georgetown County
129 Screven Street, Georgetown, SC 29442
Phone: (843) 545-3524 Fax: (843) 545-3005
Internet: www.georgetowncountysc.org

NO.	DATE	DESCRIPTION
1	05/20/2021	DESIGN DRAWINGS
2	06/18/2021	CONSTRUCTION DRAWING REV. 1

PROJECT:
BIG DAM SWAMP RECYCLE CENTER
GEORGETOWN COUNTY, SOUTH CAROLINA

SCALE: N.T.S.
DESIGNED BY: ASB
DRAWN BY: MPM
DATE: 06/18/2021

GENERAL LEGEND

SHEET NO: C-02

Georgetown County
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Internet: www.georgetowncountysc.org

No.	Date	Description
1	05/20/2021	DESIGN DRAWINGS
2	06/18/2021	CONSTRUCTION DRAWINGS REV. 1

PROJECT:
BIG DAM SWAMP RECYCLE CENTER
GEORGETOWN COUNTY, SOUTH CAROLINA

SCALE:	H:1"=50'
DESIGNED BY:	ASB
DRAWN BY:	MPM
DATE:	06/18/2021

MASTER PLAN

SHEET NO: C-03

Georgetown County
129 Screven Street, Georgetown, SC 29442
Phone: (843) 545-3524 Fax: (843) 545-3005
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No. 1	05/20/2021	DESIGN DRAWINGS
No. 2	06/18/2021	CONSTRUCTION DRAWINGS REV. 1

PROJECT:

BIG DAM SWAMP RECYCLE CENTER
GEORGETOWN COUNTY, SOUTH CAROLINA

SCALE:	H:1"=20'
DESIGNED BY:	ASB
DRAWN BY:	MPM
DATE:	06/18/2021

PHASE PLAN

SHEET NO: C-04

NOTES:

1. TMS # 02-0409-020-04-11
2. RECYCLE CENTER EXISTING CONDITIONS SURVEY PROVIDED BY PARKER LAND SURVEYING, LLC DATED APRIL 29, 2016.
3. ROAD AND DRAINAGE ASBUILT PROVIDED BY PARKER LAND SURVEYING, LLC DATED APRIL 29, 2019.

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NO. 1	05/20/2021	DESIGN DRAWINGS
NO. 2	06/18/2021	CONSTRUCTION DRAWINGS REV. 1

PROJECT:
BIG DAM SWAMP RECYCLE CENTER
GEORGETOWN COUNTY, SOUTH CAROLINA

SCALE:	H:1"=20'
DESIGNED BY:	ASB
DRAWN BY:	MPM
DATE:	06/18/2021

EXISTING CONDITIONS AND DEMO PLAN

SHEET NO: C-05

NOTES:

1. CONCRETE DUMPSTER AND COMPACTOR PADS SHALL HAVE 12" TURNDOWN EDGES ON ALL SIDES.

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NO. 2	06/18/2021	CONSTRUCTION DRAWINGS REV. 1

PROJECT:

BIG DAM SWAMP RECYCLE CENTER
GEORGETOWN COUNTY, SOUTH CAROLINA

SCALE:	H:1"=20'
DESIGNED BY:	ASB
DRAWN BY:	MPM
DATE:	06/18/2021

SITE PLAN

SHEET NO: C-06

NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR ALL UTILITY COORDINATION.

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ACCREDITED AGENCY APWA

REGISTERED PROFESSIONAL ENGINEER No. 18868 STATE OF SOUTH CAROLINA

No.	Date	Description
1	05/20/2021	DESIGN DRAWINGS
2	06/18/2021	CONSTRUCTION DRAWINGS REV. 1

PROJECT:

BIG DAM SWAMP RECYCLE CENTER
GEORGETOWN COUNTY, SOUTH CAROLINA

SCALE:	H:1"=20'
DESIGNED BY:	ASB
DRAWN BY:	MPM
DATE:	06/18/2021

WATER AND SEWER UTILITY PLAN

SHEET NO: C-07

NOTES:

1. ALL STORMWATER PIPES SHALL BE M315 (O-RING) AND INSTALLED WITH BEVELED END SECTIONS AND RIP RAP ACCORDING TO SCDOT TYPICAL DETAIL 719-610-00.
2. ALL CATCH BASINS SHALL BE SCDOT TYPE 9.
3. CONTRACTOR IS RESPONSIBLE FOR STABILIZATION.
4. CONTRACTOR IS RESPONSIBLE FOR AS-BUILT SURVEY.

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No.	Date	Description
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2	06/18/2021	CONSTRUCTION DRAWINGS REV. 1

PROJECT:

BIG DAM SWAMP RECYCLE CENTER
GEORGETOWN COUNTY, SOUTH CAROLINA

SCALE:	H:1"=20'
DESIGNED BY:	ASB
DRAWN BY:	MPM
DATE:	06/18/2021

GRADING AND DRAINAGE PLAN

SHEET NO: C-08

NOTES:

1. RECYCLE CENTER EXISTING CONDITIONS SURVEY PROVIDED BY PARKER LAND SURVEYING, LLC DATED APRIL 29, 2016.
2. ROAD AND DRAINAGE ASBUILT PROVIDED BY PARKER LAND SURVEYING, LLC DATED APRIL 29, 2019.

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No.	Date	Description
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2	06/18/2021	CONSTRUCTION DRAWINGS REV. 1

PROJECT:
BIG DAM SWAMP RECYCLE CENTER
GEORGETOWN COUNTY, SOUTH CAROLINA

SCALE:	H:1"=10' V:1"=1'
DESIGNED BY:	ASB
DRAWN BY:	MPM
DATE:	06/18/2021

RECYCLE CENTER ENTRANCE PROFILE

SHEET NO: C-09

NOTES:

1. RECYCLE CENTER EXISTING CONDITIONS SURVEY PROVIDED BY PARKER LAND SURVEYING, LLC DATED APRIL 29, 2016.
2. ROAD AND DRAINAGE ASBUILT PROVIDED BY PARKER LAND SURVEYING, LLC DATED APRIL 29, 2019.

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No.	Date	Description
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2	06/18/2021	CONSTRUCTION DRAWINGS REV. 1

PROJECT:
BIG DAM SWAMP RECYCLE CENTER
GEORGETOWN COUNTY, SOUTH CAROLINA

SCALE:	H:1"=10' V:1"=1'
DESIGNED BY:	ASB
DRAWN BY:	MPM
DATE:	06/18/2021

RECYCLE CENTER EXIT PROFILE

SHEET NO: C-10

NOTES:

1. ALL CATCH BASINS SHALL HAVE FILTER FABRIC INLET PROTECTION.
2. STABILIZED CONSTRUCTION ENTRANCE SHALL BE INSTALLED ACCORDING TO SCDOT TYPICAL DETAIL 815-505-00.

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PROJECT:

BIG DAM SWAMP RECYCLE CENTER
GEORGETOWN COUNTY, SOUTH CAROLINA

SCALE:	H:1"=20'
DESIGNED BY:	ASB
DRAWN BY:	MPM
DATE:	06/18/2021

SEDIMENT AND EROSION CONTROL PLAN

SHEET NO: C-11

SILT FENCE INSTALLATION

FLAT-BOTTOM TRENCH DETAIL

V-SHAPED TRENCH DETAIL

South Carolina Department of Health and Environmental Control

STANDARD SILT FENCE DETAIL

STANDARD DRAWING NO. SC-03 Page 1, 2 & 3 of 3

APPROVED BY: SCDHEC AUGUST, 2005 DATE

SILT FENCE DETAIL

WHEN AND WHERE TO USE IT
SILT FENCE IS APPLICABLE IN AREAS:

WHERE THE MAXIMUM SHEET OR OVERLAND FLOW PATH LENGTH TO THE FENCE IS 100–FEET. WHERE THE MAXIMUM SLOPE STEEPNESS (NORMAL [PERPENDICULAR] TO FENCE LINE) IS 2H:1V. THAT DO NOT RECEIVE CONCENTRATED FLOWS GREATER THAN 0.5 CFS.

DO NOT PLACE SILT FENCE ACROSS CHANNELS OR USE IT AS A VELOCITY CONTROL BMP.

MATERIALS

STEEL POSTS
USE 48–INCH LONG STEEL POSTS THAT MEET THE FOLLOWING MINIMUM PHYSICAL REQUIREMENTS: COMPOSED OF HIGH STRENGTH STEEL WITH MINIMUM YIELD STRENGTH OF 50,000 PSI.
HAVE A STANDARD "T" SECTION WITH A NOMINAL FACE WIDTH OF 1.38–INCHES AND NOMINAL "T" LENGTH OF 1.48–INCHES.
WEIGH 1.25 POUNDS PER FOOT (± 8%).
HAVE A SOIL STABILIZATION PLATE WITH A MINIMUM CROSS SECTION AREA OF 17–SQUARE INCHES ATTACHED TO THE STEEL POSTS.
PAINTED WITH A WATER BASED BAKED ENAMEL PAINT.

USE STEEL POSTS WITH A MINIMUM LENGTH OF 4–FEET, WEIGHING 1.25 POUNDS PER LINEAR FOOT (± 8%) WITH PROJECTIONS TO AID IN FASTENING THE FABRIC. EXCEPT WHEN HEAVY CLAY SOILS ARE PRESENT ON SITE, STEEL POSTS WILL HAVE A METAL SOIL STABILIZATION PLATE WELDED NEAR THE BOTTOM SUCH THAT WHEN THE POST IS DRIVEN TO THE PROPER DEPTH, THE PLATE WILL BE BELOW THE GROUND LEVEL FOR ADDED STABILITY. THE SOIL PLATES SHOULD HAVE THE FOLLOWING CHARACTERISTICS:
BE COMPOSED OF MINIMUM 15 GAUGE STEEL. HAVE A MINIMUM CROSS SECTION AREA OF 17–SQUARE INCHES.

GEOTEXTILE FILTER FABRIC
FILTER FABRIC IS:
COMPOSED OF FIBERS CONSISTING OF LONG CHAIN SYNTHETIC POLYMERS COMPOSED OF AT LEAST 85% BY WEIGHT OF POLYOLEFINS, POLYESTERS, OR POLYAMIDES. FORMED INTO A NETWORK SUCH THAT THE FILAMENTS OR YARNS RETAIN DIMENSIONAL STABILITY RELATIVE TO EACH OTHER. FREE OF ANY TREATMENT OR COATING WHICH MIGHT ADVERSELY ALTER ITS PHYSICAL PROPERTIES AFTER INSTALLATION. FREE OF DEFECTS OR FLAWS THAT SIGNIFICANTLY AFFECT ITS PHYSICAL AND/OR FILTERING PROPERTIES. CUT TO A MINIMUM WIDTH OF 36 INCHES.

USE ONLY FABRIC APPEARING ON SCDOT APPROVAL SHEET #34 MEETING THE REQUIREMENTS OF THE MOST CURRENT EDITION OF THE SCDOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

INSTALLATION
EXCAVATE A TRENCH APPROXIMATELY 6–INCHES WIDE AND 6–INCHES DEEP WHEN PLACING FABRIC BY HAND. PLACE 12–INCHES OF GEOTEXTILE FABRIC INTO THE 6–INCH DEEP TRENCH, EXTENDING THE REMAINING 6–INCHES TOWARDS THE UPSLOPE SIDE OF THE TRENCH. BACKFILL THE TRENCH WITH SOIL OR GRAVEL AND COMPACT.BURY 12–INCHES OF FABRIC INTO THE GROUND WHEN PNEUMATICALLY INSTALLING SILT FENCE WITH A SLICING METHOD. PURCHASE FABRIC IN CONTINUOUS ROLLS AND CUT TO THE LENGTH OF THE BARRIER TO AVOID JOINTS. WHEN JOINTS ARE NECESSARY, WRAPPED THE FABRIC TOGETHER AT A SUPPORT POST WITH BOTH ENDS FASTENED TO THE POST, WITH A 6–INCH MINIMUM OVERLAP. INSTALL POSTS TO A MINIMUM DEPTH OF 24–INCHES. INSTALL POSTS A MINIMUM OF 1– TO 2– INCHES ABOVE THE FABRIC, WITH NO MORE THAN 3–FEET OF THE POST ABOVE THE GROUND. SPACE POSTS TO MAXIMUM 6–FEET CENTERS. ATTACH FABRIC TO WOOD POSTS USING STAPLES MADE OF HEAVY–DUTY WIRE AT LEAST 1½–INCH LONG, SPACED A MAXIMUM OF 6–INCHES APART. STAPLE A 2–INCH WIDE LATHE OVER THE FILTER FABRIC TO SECURELY FASTEN IT TO THE UPSLOPE SIDE OF WOODEN POSTS. ATTACH FABRIC TO THE STEEL POSTS USING HEAVY–DUTY PLASTIC TIES THAT ARE EVENLY SPACED AND PLACED IN A MANNER TO PREVENT SAGGING OR TEARING OF THE FABRIC. IN CALL CASES, TIES SHOULD BE AFFIXED IN NO LESS THAN 4 PLACES. INSTALL THE FABRIC A MINIMUM OF 24–INCHES ABOVE THE GROUND. WHEN NECESSARY, THE HEIGHT OF THE FENCE ABOVE GROUND MAY BE GREATER THAN 24–INCHES. IN TIDAL AREAS, EXTRA SILT FENCE HEIGHT MAY BE REQUIRED. THE POST HEIGHT WILL BE TWICE THE EXPOSED POST HEIGHT. POST SPACING WILLREMAIN THE SAME AND EXTRA HEIGHT FABRIC WILL BE 4–, 5–, OR 6–FEET TALL. LOCATE SILT FENCE CHECKS EVERY 100 FEET MAXIMUM AND AT LOW POINTS. INSTALL THE FENCE PERPENDICULAR TO THE DIRECTION OF FLOW AND PLACE THE FENCE THE PROPER DISTANCE FROM THE TOE OF STEEP SLOPES TO PROVIDE SEDIMENT STORAGE AND ACCESS FOR MAINTENANCE AND CLEANOUT.

INSPECTION AND MAINTENANCE
INSPECT EVERY SEVEN CALENDAR DAYS AND WITHIN 24–HOURS AFTER EACH RAINFALL EVENT THAT PRODUCES ½–INCHES OR MORE OF PRECIPITATION. CHECK FOR SEDIMENT BUILDUP AND FENCE INTEGRITY. CHECK WHERE RUNOFF HAS ERODED A CHANNEL BENEATH THE FENCE, OR WHERE THE FENCE HAS SAGGED OR COLLAPSED BY FENCE OVERTOPPING. IF THE FENCE FABRIC TEARS, BEGINS TO DECOMPOSE, OR IN ANY WAY BECOMES INEFFECTIVE, REPLACE THE SECTION OF FENCE IMMEDIATELY. REMOVE SEDIMENT ACCUMULATED ALONG THE FENCE WHEN IT REACHES 1/3 THE HEIGHT OF THE FENCE, ESPECIALLY IF HEAVY RAINS ARE EXPECTED. REMOVE TRAPPED SEDIMENT FROM THE SITE OR STABILIZE IT ON SITE. REMOVE SILT FENCE WITHIN 30 DAYS AFTER FINAL STABILIZATION IS ACHIEVED OR AFTER TEMPORARY BEST MANAGEMENT PRACTICES (BMPS) ARE NO LONGER NEEDED. PERMANENTLY STABILIZE DISTURBED AREAS RESULTING FROM FENCE REMOVAL

NOTE: ALL DANDY BAGS CAN BE ORDERED WITH OUR OPTIONAL OIL ABSORBENT PILLOWS

DANDY BAG INLET PROTECTION DETAIL

SCALE: N.T.S.

NOTES:
1. WHEN PIPE EMPTIES INTO A DITCH OR SWALE THE RIP-RAP WILL TAKE THE SHAPE OF THE DITCH OR SWALE.
2. THE LENGTH AND WIDTH OF THE OUTFALL RIP RAP SHALL BE DETERMINED FROM THE OUTLET PROTECTION RIP RAP DIMENSIONS TABLE.

OUTLET PROTECTION DETAIL

SCALE: N.T.S.

POST INSTALLATION DETAIL

FILTER FABRIC INSTALLATION DETAIL

FILTER FABRIC BURIAL DETAIL

South Carolina Department of Health and Environmental Control

TYPE A - FILTER FABRIC INLET PROTECTION

STANDARD DRAWING NO. SC-07 Page 1 & 2 of 2

APPROVED BY: SCDHEC AUGUST, 2005 DATE

FILTER FABRIC INLET PROTECTION

MATERIALS:
USE FILTER FABRIC THAT CONFORMS TO SCDOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (LATEST EDITION). REFER TO THE SILT FENCE GEOTEXTILE FABRICS APPROVAL SHEET #34.

USE STEEL POSTS THAT MEET THE FOLLOWING MINIMUM PHYSICAL REQUIREMENTS:
BE COMPOSED OF HIGH STRENGTH STEEL WITH MINIMUM YIELD STRENGTH OF 50,000 PSI.
HAVE A STANDARD "T" SECTION WITH A NOMINAL FACE WIDTH OF 1.38-INCHES AND NOMINAL "T" LENGTH OF 1.48-INCHES. WEIGHT 1.25 POUNDS PER FOOT (± 8%).
BE PAINTED WITH A WATER BASED BAKED ENAMEL PAINT.

ATTACH FABRIC TO METAL POSTS WITH HEAVY-DUTY PLASTIC TIES.

INSTALLATION:
EXCAVATE A TRENCH 6-INCHES WIDE AND 6-INCHES DEEP AROUND THE OUTSIDE PERIMETER OF THE INLET UNLESS THE FABRIC IS PNEUMATICALLY INSTALLED.

EXTEND THE FILTER FABRIC A MINIMUM OF 12-INCHES INTO THE TRENCH. BACKFILL THE TRENCH WITH SOIL OR CRUSHED STONE AND COMPACT OVER THE FILTER FABRIC UNLESS THE FABRIC IS PNEUMATICALLY INSTALLED.

USE STEEL POSTS WITH A MINIMUM POST LENGTH OF 60-INCHES CONSISTING OF STANDARD "T" SECTIONS WITH A WEIGHT OF 1.25 POUNDS PER FOOT (±8%). INSTALL THE FILTER FABRIC TO A MINIMUM HEIGHT OF 24-INCHES ABOVE GRADE. SPACE THE STEEL POSTS AROUND THE PERIMETER OF THE INLET A MAXIMUM OF 3-FEET APART AND DRIVE THEM INTO THE GROUND A MINIMUM OF 24-INCHES. CUT THE FILTER FABRIC FROM A CONTINUOUS ROLL TO THE LENGTH OF THE PROTECTED AREA TO AVOID THE USE OF JOINTS. WHEN JOINTS ARE NECESSARY, WRAP FILTER FABRIC TOGETHER ONLY AT A SUPPORT POST WITH BOTH ENDS SECURELY FASTENED TO THE POST, WITH A MINIMUM 6-INCH OVERLAP.

ATTACH FABRIC TO STEEL POSTS WITH HEAVY-DUTY PLASTIC TIES.

ATTACH AT LEAST FOUR (4) EVENLY SPACED TIES IN A MANNER TO PREVENT SAGGING OR TEARING OF THE FABRIC. IN ALL CASES, AFFIX TIES IN NO LESS THAN FOUR (4) PLACES.

INSPECTION AND MAINTENANCE:
INSPECTIONS SHOULD BE MADE EVERY 7 CALENDAR DAYS AND WITHIN 24-HOURS AFTER EACH STORM THAT PRODUCES ½-INCHES OR MORE OF RAIN.IF THE FABRIC BECOMES CLOGGED, IT SHOULD BE REPLACED. SEDIMENT SHOULD BE REMOVED WHEN IT REACHES APPROXIMATELY 1/3 THE HEIGHT OF THE FENCE. TAKE CARE NOT TO DAMAGE OR UNDERCUT FABRIC WHEN REMOVING SEDIMENT.IF A SUMP IS USED, SEDIMENT SHOULD BE REMOVED WHEN IT FILLS APPROXIMATELY 1/3 THE DEPTH OF THE HOLE.MAINTAIN THE POOL AREA, ALWAYS PROVIDING ADEQUATE SEDIMENT STORAGE VOLUME FOR THE NEXT STORM.

STORM DRAIN INLET PROTECTION STRUCTURES SHOULD BE REMOVED ONLY AFTER THE DISTURBED AREAS ARE PERMANENTLY STABILIZED. REMOVE ALL CONSTRUCTION MATERIAL AND SEDIMENT, AND DISPOSE OF THEM PROPERLY. GRADE THE DISTURBED AREA TO THE ELEVATION OF THE DROP INLET STRUCTURE CREST. USE APPROPRIATE PERMANENT STABILIZATION METHODS TO STABILIZE BARE AREAS AROUND THE INLET.

CONCRETE WASHOUT SIGN DETAIL

NOTES:

1. ACTUAL LAYOUT DETERMINED IN FIELD.
2. INSTALL CONCRETE WASHOUT SIGN (24"X24", MINIMUM) WITHIN 30' OF THE TEMPORARY CONCRETE WASHOUT FACILITY.
3. TEMPORARY WASHOUT AREA MUST BE AT LEAST 50' FROM A STORM DRAIN, CREEK BANK OR PERIMETER CONTROL.
4. CLEAN OUT CONCRETE WASHOUT AREA WHEN 50% FULL.
5. THE KEY TO FUNCTIONAL CONCRETE WASHOUTS IS WEEKLY INSPECTIONS, ROUTINE MAINTENANCE, AND REGULAR CLEAN OUT.
6. SILT FENCE SHALL BE INSTALLED AROUND PERIMETER OF CONCRETE WASHOUT AREA EXCEPT FOR THE SIDE UTILIZED FOR ACCESSING THE WASHOUT.
7. A ROCK CONSTRUCTION ENTRANCE MAY BE NECESSARY ALONG ONE SIDE OF THE WASHOUT TO PROVIDE VEHICLE ACCESS.

EXCAVATED PIT CONCRETE WASHOUT DETAIL

SCALE: N.T.S.

STABILIZED CONSTRUCTION ENTRANCE

WHEN AND WHERE TO USE IT

STABILIZED CONSTRUCTION ENTRANCES SHOULD BE USED AT ALL POINTS WHERE TRAFFIC WILL BE LEAVING A CONSTRUCTION SITE AND MOVING DIRECTLY ONTO A PUBLIC ROAD.

IMPORTANT CONSIDERATIONS

IF WASHING IS USED, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFFSITE. WASHDOWN FACILITIES SHALL BE REQUIRED AS DIRECTED BY SCDHEC AS NEEDED. WASHDOWN AREAS IN GENERAL MUST BE ESTABLISHED WITH CRUSHED GRAVEL AND DRAIN INTO A SEDIMENT TRAP OR SEDIMENT BASIN.
CONSTRUCTION ENTRANCES SHOULD BE USED IN CONJUNCTION WITH THE STABILIZATION OF CONSTRUCTION ROADS TO REDUCE THE AMOUNT OF MUD PICKED UP BY VEHICLES.

INSTALLATION:

REMOVE ALL VEGETATION AND ANY OBJECTIONABLE MATERIAL FROM THE FOUNDATION AREA.
DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM STONES TO A SEDIMENT TRAP OR BASIN.
INSTALL A NON-WOVEN GEOTEXTILE FABRIC PRIOR TO PLACING ANY STONE.
INSTALL A CULVERT PIPE ACROSS THE ENTRANCE WHEN NEEDED TO PROVIDE POSITIVE DRAINAGE.

THE ENTRANCE SHALL CONSIST OF 1-INCH TO 3-INCH D50 STONE PLACED AT A MINIMUM DEPTH OF 6-INCHES. MINIMUM DIMENSIONS OF THE ENTRANCE SHALL BE 24-FEET WIDE BY 100-FEET LONG, AND MAY BE MODIFIED AS NECESSARY TO ACCOMMODATE SITE CONSTRAINTS.
THE EDGES OF THE ENTRANCE SHALL BE TAPERED OUT TOWARDS THE ROAD TO PREVENT TRACKING OF MUD AT THE EDGE OF THE ENTRANCE.

INSPECTION AND MAINTENANCE:

INSPECT CONSTRUCTION ENTRANCES EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24-HOURS AFTER EACH RAINFALL EVENT THAT PRODUCES ½-INCHES OR MORE OF PRECIPITATION, OR AFTER HEAVY USE. CHECK FOR MUD AND SEDIMENT BUILDUP AND PAD INTEGRITY. MAKE DAILY INSPECTIONS DURING PERIODS OF WET WEATHER. MAINTENANCE IS REQUIRED MORE FREQUENTLY IN WET WEATHER CONDITIONS. RESHAPE THE STONE PAD AS NEEDED FOR DRAINAGE AND RUNOFF CONTROL.

WASH OR REPLACE STONES AS NEEDED AND AS DIRECTED BY THE INSPECTOR. THE STONE IN THE ENTRANCE SHOULD BE WASHED OR REPLACED WHENEVER THE ENTRANCE FAILS TO REDUCE MUD BEING CARRIED OFF-SITE BY VEHICLES. FREQUENT WASHING WILL EXTEND THE USEFUL LIFE OF STONE.

IMMEDIATELY REMOVE MUD AND SEDIMENT TRACKED OR WASHED ONTO PUBLIC ROADS BY BRUSHING OR SWEEPING. FLUSHING SHOULD ONLY BE USED WHEN THE WATER CAN BE DISCHARGED TO A SEDIMENT TRAP OR BASIN.

REPAIR ANY BROKEN PAVEMENT IMMEDIATELY.

STABLIZED CONSTRUCTION ENTRANCE

SCALE: N.T.S.

GEORGETOWN COUNTY, SOUTH CAROLINA
ACCREDITED AGENCY APWA
Georgetown County
129 Screven Street, Georgetown, SC 29442
Phone: (843) 545-3524 Fax: (843) 545-3005
Internet: www.georgetowncountysc.org

SOUTH CAROLINA PROFESSIONAL ENGINEER No. 18699 STEPHEN D. BRYANT 06/18/21

NO.	DATE	DESCRIPTION
1	05/20/2021	DESIGN DRAWINGS
2	06/18/2021	CONSTRUCTION DRAWINGS REV. 1

PROJECT:
BIG DAM SWAMP RECYCLE CENTER
GEORGETOWN COUNTY, SOUTH CAROLINA

SCALE:	N.T.S.
DESIGNED BY:	ASB
DRAWN BY:	MPM
DATE:	06/18/2021

SEDIMENT AND EROSION CONTROL DETAILS

SHEET NO: C-12

NOTE:

IN-SITU & IMPORTED EARTH FOR USE IN THE FILL AREAS OF THE PAVEMENT SECTION SHALL BE FREE OF ANY ROOTS, ROCK OR OTHER DELETERIOUS MATERIAL AND IN CONFORMANCE WITH AASHTO A-1, A-3 OR A-2-4.

TYPICAL PERVIOUS SLAG SECTION

SCALE: N.T.S.

NOTE:

IN-SITU & IMPORTED EARTH FOR USE IN THE FILL AREAS OF THE PAVEMENT SECTION SHALL BE FREE OF ANY ROOTS, ROCK OR OTHER DELETERIOUS MATERIAL AND IN CONFORMANCE WITH AASHTO A-1, A-3 OR A-2-4.

TYPICAL PERVIOUS F.L.B.C. SECTION

SCALE: N.T.S.

NOTES:

1. FLOWBABLE FILL SHALL BE EXCAVATABLE CONCRETE AND SHALL ENCASE CROSS PIPE THROUGHOUT ENTIRE LENGTH OF OPEN CUT. FLOWABLE FILL SHALL EXTENDED A MINIMUM OF 6" (MINIMUM) ON EVERY SIDE AND BOTTOM OF THE CROSS PIPE.
2. SELECT FILL SHALL BE NATIVE MATERIAL FREE OF LARGE ROCKS, DEBRIS OR ORGANICS AND PLACED IN 6" OR 8" LOOSE LIFTS AND COMPACTED TO MIN. 95% OF THE SOILS STANDARD PROCTOR, AND 98% WHEN UNDER PAVEMENT.

TYPICAL OPEN CUT SECTION

SCALE: N.T.S.

NOTE:

1. IN-SITU & IMPORTED EARTH FOR USE IN THE FILL AREAS OF THE PAVEMENT SECTION SHALL BE FREE OF ANY ROOTS, ROCK OR OTHER DELETERIOUS MATERIAL AND SHALL BE PROOF ROLLED PRIOR TO BASE PLACEMENT.
2. THE AVERAGE DENSITY OF 92% OF THE REFERENCE MAXIMUM THEORETICAL DENSITY ACCORDING TO ASTM D-2041 BUT NOT LESS THAN 90% NOR GREATER THAN 96% FOR ANY INDIVIDUAL TEST.
2. MAINTAIN MINIMUM 2" COVER OVER ALL REINFORCING STEEL

DUMPSTER/COMPACTOR CONCRETE PAD SECTION

SCALE: N.T.S.

RECYCLE STATION DETAIL

SCALE: N.T.S.

Georgetown County
129 Screven Street, Georgetown, SC 29442
Phone: (843) 545-3524 Fax: (843) 545-3005
Internet: www.georgetowncountysc.org

NO. 1	05/20/2021
NO. 2	06/18/2021

DESIGN DRAWINGS
CONSTRUCTION DRAWINGS REV. 1

PROJECT:
BIG DAM SWAMP RECYCLE CENTER
GEORGETOWN COUNTY, SOUTH CAROLINA

SCALE:	N.T.S.
DESIGNED BY:	ASB
DRAWN BY:	MPM
DATE:	06/18/2021

TYPICALDETAILS

SHEET NO: C-13

REFERENCES

WORK ZONE TRAFFIC CONTROL ENGINEER

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER NO. 24242 WILLIE E. McCONNELL, JR.

SIGNATURE 6/1/2018 DATE

#	DATE	CHK	DESCRIPTION
5			
4			
3			
2			
1	4-27-18	MEM	REVISED FLAGGING OPERATIONS NOTE 9
0	1/14/15	JCS	NEW DRAWING

SCDOT
SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION
DESIGN STANDARDS OFFICE
955 PARK STREET
ROOM 405
COLUMBIA, SC 29201

STANDARD DRAWING

FLAGGING OPERATIONS TWO-LANE TWO-WAY PRIMARY & SECONDARY ROUTES

610-005-00

EFFECTIVE LETTING DATE: JAN 2019

FLAGGING OPERATIONS GENERAL NOTES

(ALL NOTES, SPECIFICATIONS AND REQUIREMENTS ON THIS STANDARD DRAWING APPLY TO ALL SUBSEQUENT STANDARD DRAWINGS REGARDING FLAGGING OPERATIONS UNLESS OTHERWISE NOTED)

FLAGGING OPERATIONS -

A) KEY FEATURES/RELEVANT TO FLAGGING OPERATIONS:

- APPROACH TAPER = THIS IS A ONE-LANE TWO-WAY TAPER PLACED IN THE TRAVEL LANE WHERE THE WORK ACTIVITY TAKES PLACE. THIS TAPER ALSO ALLOCATES THE BUFFER SPACE AND THE WORK ACTIVITY AREA. THE LENGTH OF THIS TAPER MAY VARY FROM 50 FEET TO 100 FEET. INSTALL AND MAINTAIN NO LESS THAN FIVE (5) TRAFFIC CONE(S), DEVICES EQUALLY SPACED AT NO TO 20' INTERVALS AS NECESSARY TO CORRESPOND WITH THE LENGTH OF THE TAPER.
- DOWNSTREAM TAPER = THIS TAPER, PLACED IN THE TRAVEL LANE WHERE THE WORK ACTIVITY TAKES PLACE, FOLLOWS THE WORK ACTIVITY AREA AND SERVES AS THE TERMINATION AREA FOR THE CLOSURE OF THE TRAVEL LANE. THE LENGTH OF THIS TAPER MAY VARY FROM 50 FEET TO 100 FEET. INSTALL AND MAINTAIN NO LESS THAN FIVE (5) TRAFFIC CONTROL DEVICES IN THIS TAPER.
- FLAGGER STATION = THIS IS THE SPECIFIC LOCATION OF THE FLAGGER.
- CLOSED LANE FLAGGER = THIS FLAGGER IS STATIONED ADJACENT TO THE FIRST TRAFFIC CONTROL DEVICE IN THE APPROACH TAPER WHO CONTROLS THE TRAFFIC THAT RESUMES RELOCATION FROM THE TRAVEL LANE BEING CLOSED TO TRAFFIC.
- OPEN LANE FLAGGER = THIS FLAGGER IS STATIONED 100 FEET BEYOND THE LAST TRAFFIC CONTROL DEVICE IN THE DOWNSTREAM TAPER WHO CONTROLS THE TRAFFIC OPERATING IN THE TRAVELL LANE REMAINING OPEN TO TRAFFIC.
- SIDE ROAD FLAGGER = THIS FLAGGER IS STATIONED ON AN INTERSECTING SIDE ROAD AND CONTROLS THE SIDE ROAD TRAFFIC ENTERING INTO THE ROADWAY WHERE THE WORK ACTIVITY AREA IS LOCATED.
- BUFFER SPACE = THIS AREA IS LOCATED BETWEEN THE DOWNSTREAM END OF THE APPROACH TAPER AND THE NEAREST LIMITS OF THE WORK ACTIVITY AREA AND MAY PROVIDE SOME RECOVERY SPACE FOR AN ERRANT VEHICLE. THE PRESENCE OF PERSONNEL, TOOLS, MATERIALS, EQUIPMENT, WORK VEHICLES, ETC. ARE PRESENT WITHIN THIS AREA TO CONDUCT THE WORK. INSTALL AND MAINTAIN THE REQUIREMENTS FOR THE BUFFER SPACE AS SHOWN ON THIS STANDARD DRAWING. THE BUFFER SPACE IS MANDATORY ENCROACHMENT UPON THE BUFFER SPACE IN ACCORDANCE WITH THE REQUIREMENTS SPECIFIED IN THE SECTION BELOW ENTITLED "BUFFER SPACE", WHEN APPROVED BY THE ENGINEER.
- WORK ACTIVITY AREA = PERSONNEL, MATERIALS, EQUIPMENT, WORK VEHICLES, ETC. ARE PRESENT WITHIN THIS AREA TO CONDUCT THE WORK.
- LIMITS of the WORK ACTIVITY AREA = THIS IS THE BOUNDARY OF THE WORK ACTIVITY AREA FIRST ENCOUNTERED, FROM EITHER DIRECTION, BY MOTORISTS PASSING BY THE WORK ACTIVITY AREA IN THE ADJACENT TRAVEL LANE SPEED TO TRAFFIC AND CONTROLLED BY THE FLAGGERS.
- APPROACH LANE = TRAFFIC APPROACHES AN INTERSECTION OR A SPECIFIC LOCATION IN THIS TRAVEL LANE.
- DEPARTURE LANE = TRAFFIC DEPARTS FROM AN INTERSECTION OR A SPECIFIC LOCATION IN THIS TRAVEL LANE.
- MAINLINE APPROACH = THIS IS AN APPROACH TO THE WORK ACTIVITY AREA ON THE ROADWAY WHERE THE WORK ACTIVITY AREA IS LOCATED.
- SIDE ROADS = THESE ROADS INTERSECT THE ROADWAY ON WHICH THE WORK ACTIVITY AREA IS LOCATED.
- LIMITS of the INTERSECTION = THE LIMITS OF, OR THE PHYSICAL AREA WITHIN AN INTERSECTION IS DEFINED BY THE LOCATION OF STOP BARS WHEN PRESENT, WHEN STOP BARS ARE ABSENT, THE LIMITS OF OR THE PHYSICAL AREA WITHIN AN INTERSECTION IS DEFINED BY THE LOCATION POINTS WHERE THE CORNER RADII BETWEEN ADJACENT ROADWAY APPROACHES TIE TO THE EDGE OF PAVEMENT OR THE EDGE OF TRAVEL LANE ADJACENT TO THE EDGE OF PAVEMENT OF EACH ROADWAY.

2. INSTALL, CONDUCT AND MAINTAIN FLAGGING OPERATIONS IN ACCORDANCE WITH THE STANDARD DRAWINGS, THE MUTCD, AND "SCDOT FLAGGER TRAINING MANUAL" AND ANY SUPPLEMENTAL DRAWINGS PROVIDED BY THE ENGINEER. CONDUCT A TRAINING OPERATION PRIOR TO INITIATION OF THE OPERATION AND REFRESHER COURSES AS DEEM CONSTANTLY UPON INITIATION OF THE OPERATION. EQUIP EACH FLAGGER WITH A 24" x 24" STOP/SLOW PADDLE MOUNTED ON A ROUND HANDLE WITH A MINIMUM LENGTH OF 7 FEET. THE DEPARTMENT PROHIBITS THE USE OF FLAGS EXCEPT DURING EMERGENCY SITUATIONS.
3. FLARE CLOSURES FOR FLAGGING OPERATIONS ARE RESTRICTED TO A MAXIMUM DISTANCE OF 3 MILES UNLESS OTHERWISE APPROVED BY THE ENGINEER. THE WORK LIMITS WILL COMPLY WITH THE CONTRACT AND SHALL REQUIRE THE ENGINEER'S APPROVAL PRIOR TO BEGINNING THE WORK.
4. INSTALL AND MAINTAIN THE PROPER ARRAY OF ADVANCE WARNING SIGNS FOR EACH "MAINLINE APPROACH" WHEN A FLAGGING OPERATION IS IN PLACE AND ACTIVE. WHEN NECESSARY TO RELOCATE THE "FLAGGER STATION" WHILE ACTIVELY MAINTAINING THE FLAGGING OPERATION, INSTALL AND MAINTAIN AN ARRAY OF ADVANCE WARNING SIGNS AT THE LOCATION RELATIVE TO THE NEW "FLAGGER STATION" AND REMOVE THE ORIGINAL ARRAY OF ADVANCE WARNING SIGNS IMMEDIATELY UPON COMPLETION OF THE RELOCATION OF THE FLAGGER TO THE NEW "FLAGGER STATION".
5. INSTALL ALL ADVANCE WARNING SIGNS IMMEDIATELY PRIOR TO INITIATING A FLAGGING OPERATION AND REMOVE OR COVER ALL SIGNS IMMEDIATELY UPON TERMINATION OF THE OPERATION.
6. MAINTAIN TWO-WAY RADIO COMMUNICATIONS BETWEEN ALL FLAGGERS.

NIGHTTIME FLAGGING OPERATIONS -

7. EACH FLAGGER SHALL WEAR SAFETY APPAREL IN COMPLIANCE WITH THE REQUIREMENTS OF ANSI/ISEA 107 STANDARD PERFORMANCE FOR CLASS 3 RISK EXPOSURE, LATEST REVISION, WHEN CONDUCTING NIGHTTIME FLAGGING OPERATIONS.
8. ILLUMINATE EACH "FLAGGER STATION" WITH ANY COMBINATION OF PORTABLE LIGHTS, STANDARD ELECTRIC LIGHTS, EXISTING STREET LIGHTS, ETC. THAT WILL PROVIDE A MINIMUM ILLUMINATION LEVEL OF 108 LX (10 FC) WHEN CONDUCTING NIGHTTIME FLAGGING OPERATIONS.
9. SUPPLEMENT EACH ARRAY OF ADVANCE WARNING SIGNS FOR EACH "MAINLINE APPROACH" WITH A TRAILER MOUNTED CHANGEABLE MESSAGE SIGN. THESE CHANGEABLE MESSAGE SIGNS ARE NOT REQUIRED ON SIDE ROADS INTERSECTING THE ROADWAY WHERE THE "WORK ACTIVITY AREA" IS LOCATED. ALSO, THESE CHANGEABLE MESSAGE SIGNS ARE NOT REQUIRED DURING DAYTIME FLAGGING OPERATIONS UNLESS OTHERWISE SPECIFIED BY THE STANDARD DRAWINGS. INSTALL THE CHANGEABLE MESSAGE SIGNS IN ADVANCE OF THE ADVANCE WARNING SIGN ARRAYS. THE MESSAGES SHOULD BE "PREPARE TO STOP", "FLAGGER AHEAD". A TRUCK MOUNTED CHANGEABLE MESSAGE SIGN IS NOT AN ACCEPTABLE ALTERNATIVE TO A TRAILER MOUNTED CHANGEABLE MESSAGE SIGN DURING NIGHTTIME FLAGGING OPERATIONS.
10. UTILIZE PORTABLE PLASTIC DRUMS OR 42" OVERSIZED TRAFFIC CONES IN PLACE OF 36" STANDARD TRAFFIC CONES DURING NIGHTTIME FLAGGING OPERATIONS.

BUFFER SPACE -

1. THE MINIMUM DISTANCE REQUIREMENTS FOR THE "BUFFER SPACE" ARE BASED UPON THE LEGAL POSTED REGULATORY SPEED LIMIT OF THE ROADWAY PRIOR TO BEGINNING THE WORK:

SPEED LIMIT	DISTANCES
LOW SPEED ≤ 35 MPH	350 FEET
INTERMEDIATE SPEED 40 - 50 MPH	350 FEET
HIGH SPEED: 55 MPH	450 FEET

2. THE PRESENCE OF PERSONNEL, TOOLS, MATERIALS, EQUIPMENT, WORK VEHICLES, ETC. WITHIN THE LIMITS OF THE "BUFFER SPACE" IS PROHIBITED. A TRUCK MOUNTED ATTENUATOR TO THE ONLY WORK VEHICLE THAT MAY TEMPORARILY ENCROACH UPON THE "BUFFER SPACE" IN ACCORDANCE WITH THE CONDITIONS SPECIFIED IN THE FOLLOWING NOTE WHEN APPROVED BY THE ENGINEER. SEE NOTE NO 3.
3. <NOTE THE MINIMUM DISTANCE REQUIREMENTS FOR THE "BUFFER SPACE" ARE MINIMUM. DUE TO FIELD CONDITIONS, IT MAY BE NECESSARY FOR A TRUCK MOUNTED ATTENUATOR TO TEMPORARILY ENCROACH UPON THE "BUFFER SPACE" WHEN APPROVED BY THE ENGINEER. A TRUCK MOUNTED ATTENUATOR IS THE ONLY WORK VEHICLE THAT MAY ENTER THE "BUFFER SPACE" WHEN APPROVED BY THE ENGINEER. THE "BUFFER SPACE" IS PERMITTED WHEN ALL REASONABLE OPTIONS TO AVOID SOME SO HAVE BEEN EXHAUSTED. WHEN ENCROACHMENT UPON THE "BUFFER SPACE" IS APPROVED BY THE ENGINEER, MINIMIZE THE TIME DURATION OF THE ENCROACHMENT BY REMOVAL OF THE TRUCK MOUNTED ATTENUATOR FROM THE "BUFFER SPACE" AT THE FIRST OPPORTUNITY THE MINIMUM DISTANCE REQUIREMENTS FOR THE "BUFFER SPACE" BECOME AVAILABLE.

SIGNS AND TRAFFIC CONTROL DEVICES -

1. MEASURE THE ADVANCE WARNING SIGN LOCATIONS FOR EACH APPROACH FROM THE "FLAGGER STATION" LOCATED ON THAT APPROACH.
2. INSTALL THE ADVANCE WARNING SIGNS AT SPACING INTERVALS BASED UPON THE POSTED REGULATORY SPEED LIMIT OF THE ROADWAY PRIOR TO BEGINNING ANY WORK. THE ADVANCE WARNING SIGN SPACING INTERVALS INDICATED ARE FOR NORMAL CONDITIONS. ADJUSTMENTS TO THESE DISTANCES MAY BE REQUIRED DUE TO THE EXISTING SIGNS, INTERSECTING ROADWAYS, HORIZONTAL AND/OR VERTICAL ALIGNMENTS OR OTHER SIGHT DISTANCE RESTRICTIONS. SEE TABLE A.
3. INSTALL ADVANCE WARNING SIGNS MOUNTED ON PORTABLE SIGN SUPPORTS NO LESS THAN 4 FEET FROM THE NEAR EDGE OF THE SIGN TO THE NEAR EDGE OF AN ADJACENT TRAVEL LANE ON ROADWAYS WITH EARTH SHOULDERS AND NO LESS THAN 6 FEET FROM THE NEAR EDGE OF THE SIGN TO THE NEAR EDGE OF AN ADJACENT TRAVEL LANE ON ROADWAYS WITH PAVED SHOULDERS. WHEN CURB & GUTTER IS PRESENT, INSTALL THE SIGN NO LESS THAN 2 FEET FROM THE NEAR EDGE OF THE SIGN TO THE FACE OF THE CURB.
4. ALL SIGNS MOUNTED ON PORTABLE SIGN SUPPORTS SHALL HAVE A MINIMUM MOUNTING HEIGHT OF 5 FEET FROM THE GROUND TO THE BOTTOM OF THE SIGN. ALL SIGNS MOUNTED ON GROUND MOUNTED U-CHANNEL OR SQUARE STEEL TUBE POSTS SHALL HAVE A MINIMUM MOUNTING HEIGHT OF 7 FEET FROM THE GRADE ELEVATION OF THE NEAR EDGE OF THE ADJACENT TRAVEL LANE TO THE BOTTOM OF THE SIGN UNLESS OTHERWISE DIRECTED BY THE DEPARTMENT. MOUNT ALL SIGNS STRAIGHT AND LEVEL AND WITH THE FACE OF THE SIGNS PERPENDICULAR TO THE SURFACE OF THE ROADWAY.
5. RETROFLECTORIZE ORANGE ADVANCE WARNING SIGNS AND ANY ORANGE AREAS OF A MULTI-COLORED ADVANCE WARNING SIGN WITH A FLUORESCENT ORANGE COLORED PRISMATIC RETROFLECTIVE SHEETING. RETROFLECTORIZE WHITE REGULATORY SIGNS AND ANY WHITE AREAS OF A MULTI-COLORED ADVANCE WARNING SIGN WITH A WHITE COLORED PRISMATIC RETROFLECTIVE SHEETING.
6. ALL TRAFFIC CONTROL DEVICES SHALL COMPLY WITH THE REQUIREMENTS OF NCHRP REPORT 350 OR THE AASHTO MANUAL FOR ASSESSING SAFETY HARDWARE (MASH) AND SHALL RECEIVE APPROVAL BY THE DEPARTMENT. ONLY THOSE TRAFFIC CONTROL DEVICES INCLUDED ON THE "APPROVED PRODUCTS LIST" WILL BE ACCEPTED FOR USE. TRAFFIC CONTROL DEVICES IN "WORK ZONES" ARE CONSIDERED ACCEPTABLE FOR USE. THIS LIST MAY BE ACCESSED ON THE DEPARTMENTS WEB SITE AT: www.scdot.org
7. REFLECTORIZATION OF 36" TRAFFIC CONES USED DURING DAYLIGHT HOURS IS NOT REQUIRED. IN THE EVENT A DAYTIME FLAGGING OPERATION EXTENDS INTO THE NIGHTTIME HOURS, REPLACE ALL 36" TRAFFIC CONES WITH EITHER PORTABLE PLASTIC DRUMS OR 42" OVERSIZED TRAFFIC CONES. REFLECTORIZE ALL PORTABLE PLASTIC DRUMS AND 42" OVERSIZED TRAFFIC CONES WITH TYPE III OR GREATER FLEXIBLE MICROPRISMATIC RETROREFLECTIVE SHEETING UNLESS OTHERWISE DIRECTED BY THE DEPARTMENT.
8. DELINEATE THE TANGENT AREA OF THE LANE CLOSURE WITH THE NECESSARY TRAFFIC CONTROL DEVICES TO MINIMIZE ENCROACHMENT BY MOTORISTS INTO THE CLOSED TRAVEL LANE UNLESS OTHERWISE DIRECTED BY THE ENGINEER. ON ROADWAYS WITH POSTED REGULATORY SPEED LIMITS OF 35 MPH OR LESS, INSTALL THE TRAFFIC CONTROL DEVICES AT SPACING INTERVALS OF 25 FEET. ON ROADWAYS WITH POSTED REGULATORY SPEED LIMITS OF 40 MPH OR GREATER, INSTALL THE TRAFFIC CONTROL DEVICES AT SPACING INTERVALS OF 50 FEET. SEE TABLE B.

ADVANCE WARNING ARROW PANEL -

1. DURING FLAGGING OPERATIONS, AN ADVANCE WARNING ARROW PANEL SHALL OPERATE IN THE "FOUR CORNERS" CAUTION MODE WHEN LOCATED WITHIN 801 M (BETWEEN THE LIMITS OF THE ADVANCE WARNING SIGN ARRAYS SPECIFIED FOR A FLAGGING OPERATION. OPERATION OF AN ADVANCE WARNING ARROW PANEL IN AN ARROW, CHEVRON OR ANY OTHER TYPE OF CAUTION MODE OTHER THAN THE "FOUR CORNERS" CAUTION MODE WHEN LOCATED WITHIN OR IN BETWEEN THE LIMITS OF THE ADVANCE WARNING SIGN ARRAYS AS SPECIFIED HEREINABOVE IS PROHIBITED.
2. ALL ADVANCE WARNING ARROW PANELS SHALL COMPLY WITH THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, LATEST EDITION. THE ENGINEER MAY REQUIRE ADJUSTMENTS DUE TO HORIZONTAL AND/OR VERTICAL ALIGNMENT OR OTHER SIGHT DISTANCE RESTRICTIONS.

TRUCK MOUNTED ATTENUATOR -

1. A TRUCK MOUNTED ATTENUATOR IS OPTIONAL. UTILIZATION OF A TRUCK MOUNTED ATTENUATOR SHOULD BE CONSIDERED WHEN THE MINIMUM DISTANCE REQUIREMENTS FOR THE "BUFFER SPACE" ARE UNAVAILABLE OR REDUCED DUE TO FIELD CONDITIONS. WHEN A TRUCK MOUNTED ATTENUATOR IS NOT UTILIZED, AN ARROW PANEL MAY BE UTILIZED IN PLACE OF A TRUCK MOUNTED ATTENUATOR DURING TRAFFIC CONTROL SETUPS FOR WORK ACTIVITIES SUCH AS ASPHALT CONCRETE PLACEMENT OPERATIONS WHEN APPROVED BY THE ENGINEER.
2. WHEN UTILIZING A TRUCK MOUNTED ATTENUATOR, ENSURE THE TRUCK HAS THE CORRECT CROSS VEHICULAR WEIGHT (GVW) REQUIRED FOR THE TYPE OF TRUCK MOUNTED ATTENUATOR BEING UTILIZED. A DIRECT TRUCK MOUNTED ATTENUATOR, A UNIT MOUNTED AND ATTACHED TO BRACKETS OR SIMILAR DEVICES CONNECTED TO THE FRAME OF THE TRUCK, REQUIRES A TRUCK WITH A MINIMUM GVW OF 15,000 POUNDS (ACTUAL WEIGHT). UNLESS OTHERWISE DIRECTED BY THE DEPARTMENT, A TRAILER TOWED TRUCK MOUNTED ATTENUATOR REQUIRES A TRAILER TYPE UNIT CONNECTED TO A TRUCK WITH A MINIMUM GVW OF 26,000 POUNDS (ACTUAL WEIGHT) WITH A MINIMUM OF 4,000 POUNDS OF ADDITIONAL BALLAST (ACTUAL WEIGHT) UNLESS OTHERWISE DIRECTED BY THE DEPARTMENT. IF THE ADDITION OF SUPPLEMENTAL WEIGHT TO THE VEHICLE AS BALLAST IS NECESSARY, CONTROL THE WEIGHT BY MAINTAINING SUFFICIENT STRUCTURAL CONSTRUCTION OF STEEL. CONSTRUCT THE STRUCTURE TO HAVE A MINIMUM OF FOUR (4) SIDES AND A BOTTOM. A TOP IS OPTIONAL. BOLT THIS STRUCTURE TO THE FRAME OF THE TRUCK. UTILIZE A SUFFICIENT NUMBER OF FASTENERS FOR ATTACHMENT OF THE STEEL STRUCTURE TO THE FRAME OF THE TRUCK TO ENSURE THE STRUCTURE WILL NOT SEPARATE FROM THE FRAME OF THE TRUCK DURING A RAM IMPACT. THE STEEL STRUCTURE MUST BE CAPABLE OF RETAINING BALLAST (ACTUAL WEIGHT) WITHIN THE STEEL STRUCTURE. THE TOTAL WEIGHT OF THE BALLAST (ACTUAL WEIGHT) MUST EQUAL OR EXCEED THE TOTAL WEIGHT OF THE BALLAST MATERIAL SHOULD REMAIN CONTAINED WITHIN THE CONFINES OF THE STEEL STRUCTURE IN ITS ENTIRETY AND SHALL NOT FRAGMENT FROM THE STEEL STRUCTURE IN ANY MANNER.
3. LOCATE THE TRUCK MOUNTED ATTENUATOR APPROXIMATELY 100 FEET IN ADVANCE OF THE "WORK ACTIVITY AREA" UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
4. PROVIDE, INSTALL AND MAINTAIN THE TRUCK MOUNTED ATTENUATOR AS SPECIFIED BY THE STANDARD SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER.

GENERAL -

1. CONSIDER THE WORK IN SUCH A MANNER SO AS NOT TO ENCROACH ONTO THE ADJACENT TRAVEL LANE OPEN TO TRAFFIC. INSTALL, MAINTAIN AND ADJUST THE TRAFFIC CONTROL DEVICES AS NECESSARY TO ENSURE PROPER DELINEATION OF THE WORK AREA.
2. IF WORK IS BEING PERFORMED ON TWO ADJACENT LANES OF TRAVEL IN THE SAME TIME FRAME, SEPARATE THE TWO DIFFERENT LOCATIONS BY NO LESS THAN 3 MILES FROM THE LAST TRAFFIC CONTROL DEVICE IN THE "DOWNSTREAM TAPER" OF THE FIRST LANE CLOSURE TO THE FIRST TRAFFIC CONTROL DEVICE IN THE "APPROACH TAPER" OF THE SECOND LANE CLOSURE ENCOUNTERED BY A MOTORIST UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
3. THE DEPARTMENT RESERVES THE RIGHT TO RESTRICT WORK OPERATIONS AND/OR WITHHOLD THE MONTHLY ESTIMATE IF THE TRAFFIC CONTROL IS NOT PROPERLY INSTALLED AND MAINTAINED AS DIRECTED BY THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, THE STANDARD DRAWINGS, THE PLANS AND/OR THE ENGINEER.

DRAWING 610-005-10 NOTES

1. SEE STANDARD DRAWING NO. 610-005-00 FOR ALL GENERAL NOTES AND REQUIREMENTS.

TABLE A

SIGN PLACEMENT INTERVALS	
SPEED LIMIT	*
≤ 35 MPH LOW SPEED	200
40 - 50 MPH INTERMEDIATE SPEED	350
55 MPH HIGH SPEED	500

* REGULATORY POSTED SPEED LIMIT PRIOR TO BEGINNING WORK

TABLE B

TRAFFIC CONTROL DEVICE SPACING INTERVALS WORK ACTIVITY / BUFFER SPACE AREAS	
SPEED LIMIT	SPACING INTERVALS
≤ 35 MPH	25 FEET
40 - 55 MPH	50 FEET

THIS DRAWING IS NOT TO SCALE

REFERENCES

WORK ZONE TRAFFIC CONTROL ENGINEER

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER NO. 24242 WILLIE E. McCONNELL, JR.

SIGNATURE 7/27/15 DATE

#	DATE	CHK	DESCRIPTION
6			
5			
4			
3			
2			
1			
0	1-15-15	JCS	NEW DRAWING

SCDOT
SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION
DESIGN STANDARDS OFFICE
955 PARK STREET
ROOM 405
COLUMBIA, SC 29201

STANDARD DRAWING

FLAGGING OPERATIONS TWO-LANE TWO-WAY ROADWAYS WITHOUT INTERSECTIONS

610-005-10

EFFECTIVE LETTING DATE: JAN 2016

REFERENCES

SIGNING AND MARKING ENGINEER

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER NO. 23845 MARK H. MEYNOW

SIGNATURE 2-11-08 DATE

#	DATE	CHK	DESCRIPTION
6			
5			
4			
3			
2			
1			
0			

SCDOT
SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION
DESIGN STANDARDS OFFICE
955 PARK STREET
ROOM 405
COLUMBIA, SC 29201

STANDARD DRAWING

STANDARD SIGNS

651-115-01

MAY 2008 EFFECTIVE LETTING DATE

SOUTH CAROLINA STANDARD SIGNS

DETAILED DRAWIINGS FOR MOST SIGNS ARE CONTAINED IN THE STANDARD SIGNING BOOK. DETAILED DRAWINGS FOR ALL OTHER SIGNS ARE AVAILABLE FROM THE DIRECTOR OF TRAFFIC ENGINEERING.

REGULATORY SIGNS OVERHEAD APPLICATIONS (TYPE VIII OR IX REFLECTIVE SHEETING)

DESCRIPTION	SIZE	NUMBER	SIGN
BACKGROUND: RED-REFL. LEGEND & BORDER: WHITE	96"x120"	OH-R1-1-96	STOP
BACKGROUND: WHITE-REFL. LEGEND & BORDER: BLACK	30"x36"	R3-1L-30	ONLY
BACKGROUND: WHITE-REFL. LEGEND & BORDER: BLACK	30"x36"	R3-5R-30	ONLY
BACKGROUND: WHITE-REFL. LEGEND & BORDER: BLACK	30"x36"	R3-5A-30	ONLY
BACKGROUND: RED-REFL. LEGEND & BORDER: BLACK	30"x36"	R3-8L-30	
BACKGROUND: WHITE-REFL. LEGEND & BORDER: BLACK	30"x36"	R3-8R-30	

REGULATORY SIGNS (TYPE III REFLECTIVE SHEETING)

DESCRIPTION	SIZE	NUMBER	SIGN
BACKGROUND: WHITE-REFL. LEGEND & BORDER: BLACK	30" x 36" 48" x 60"	R16-3-30 R16-3-48	PENALTY FOR UNLAWFUL ACTIVITY ON BRIDGE
BACKGROUND: WHITE-REFL. LEGEND & BORDER: BLACK	24" x 18" 48" x 36"	R23-1-24 R23-1-48	EXIT LAW ENFORCEMENT VEHICLE

DESCRIPTION	SIZE	NUMBER	SIGN
BACKGROUND: WHITE-REFL. LEGEND & BORDER: BLACK	24" x 30" 30" x 48" 48" x 60"	R4-8-24 R4-8-30 R4-8-48	
BACKGROUND: WHITE-REFL. LEGEND & BORDER: BLACK	24" x 30" 30" x 48" 48" x 60"	R4-7-24 R4-7-30 R4-7-48	
SYMBOL: RED-REFL. LEGEND & BACKGROUND: WHITE-REFL.	30" x 30" 30" x 36" 48" x 48"	R5-1-30 R5-1-36 R5-1-48	DO NOT ENTER
BACKGROUND: RED-REFL. LEG. & BORDER: WHITE-REFL.	30" x 18" 24" x 24" 42" x 30"	R5-1a-30 R5-1a-24 R5-1a-42	WRONG WAY
BACKGROUND: WHITE-REFL. LEGEND & BORDER: BLACK	30" x 36"	R5-1b-30	WRONG WAY WRONG WAY
BACKGROUND & LEGEND: BLACK ARROW & BORDER: WHITE-REFL.	36" x 12" 54" x 18"	R6-1L-36 R6-1L-54	
BACKGROUND & LEGEND: BLACK ARROW & BORDER: WHITE-REFL.	36" x 12" 54" x 18"	R6-1R-36 R6-1R-54	
BACKGROUND: WHITE-REFL. LEGEND & BORDER: BLACK	36" x 42"	R7-1D-36	ONE WAY ONE WAY ONE WAY
BACKGROUND: WHITE-REFL. LEGEND & BORDER: BLACK	36" x 42"	R7-1D1-36	ONE WAY ONE WAY ONE WAY
BACKGHOUND: WHITE-REFL. LEGEND & BORDER: BLACK	48" x 30"	R11-2-48	ROAD CLOSED
BACKGROUND: WHITE-REFL. LEGEND & BORDER: BLACK	30" x 30"	R11-5-36	ROAD ENDS

DESCRIPTION	SIZE	NUMBER	SIGN
BACKGROUND: WHITE-REFL. LEGEND & BORDER: BLACK	24" x 30" 30" x 48" 48" x 60"	R4-1-24 R4-1-30 R4-1-48	STOP
BACKGROUND: WHITE-REFL. LEGEND & BORDER: BLACK	24" x 30" 30" x 48" 48" x 60"	R4-2-24 R4-2-30 R4-2-48	YIELD
BACKGROUND: WHITE-REFL. LEGEND & BORDER: BLACK	24" x 30" 30" x 48" 48" x 60"	R4-3-24 R4-3-30 R4-3-48	
BACKGROUND: WHITE-REFL. LEGEND & BORDER: BLACK	24" x 30" 30" x 48" 48" x 60"	R4-7-24 R4-7-30 R4-7-48	
BACKGROUND: WHITE-REFL. LEGEND & BORDER: BLACK	24" x 30" 30" x 48" 48" x 60"	R4-8-24 R4-8-30 R4-8-48	
BACKGROUND: WHITE-REFL. LEGEND & BORDER: BLACK	24" x 30" 30" x 48" 48" x 60"	R4-9a-24 R4-9a-30 R4-9a-48	
BACKGROUND: WHITE-REFL. LEGEND & BORDER: BLACK	24" x 30" 30" x 48" 48" x 60"	R4-11-24 R4-11-30 R4-11-48	DO NOT PASS
BACKGROUND: WHITE-REFL. LEGEND & BORDER: BLACK	24" x 30" 30" x 48" 48" x 60"	R4-12-24 R4-12-30 R4-12-48	PASS WITH CARE
BACKGROUND: WHITE-REFL. LEGEND & BORDER: BLACK	24" x 30" 30" x 48" 48" x 60"	R4-5-24 R4-5-30 R4-5-48	TRUCKS USE RIGHT LANE

* LAST DIGITS DESIGNATE M.P.H.

THIS DRAWING IS NOT TO SCALE

REFERENCES

NATIONAL DOCUMENTS

SCDOT DOCUMENTS

SCDOT SUPPLEMENTAL TECHNICAL SPECIFICATION SC-M-714
ENGINEERING DIRECTIVE MEMORANDUM 24
INSTRUCTIONAL BULLETIN 2010-01

RELATED DRAWINGS & REFERENCES

714-105-00
714-110-00
714-505-00
714-010-00

PRECONSTRUCTION SUPPORT ENGINEER

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER NO. 8858 EDWIN SYLVESTER EARGLE, III

SIGNATURE APRIL 30, 2010 DATE

#	DATE	CHK	DESCRIPTION
5			
4			
3			
2	3/2010	JBH	REV 10
1	1/2005	MJC	DELK COMPACTION NOTES
0	7/2006	MJC	GENERAL REVISIONS
0	3/2006	DVG	NEW STANDARD

SCDOT
SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION
DESIGN STANDARDS OFFICE
955 PARK STREET
ROOM 405
COLUMBIA, SC 29201

STANDARD DRAWING

PIPE CULVERTS (PIPE TRENCH TYPICAL PREPARATION)

714-005-00

EFFECTIVE LETTING DATE: JANUARY 2011

ALL PIPE REQUIRE GOOD FOUNDATION MATERIAL. WHEN SITE SOILS REQUIRE THE INSTALLATION OF AN IMPROVED PIPE FOUNDATION, FOLLOW SCDOT STANDARD DRAWING 714-020-000.
DETAIL FOUNDATION REQUIREMENTS 1
CONSTRUCT EMBANKMENT AS REQUIRED BEFORE EXCAVATION OF PIPE TRENCH. EMBANKMENT BACKFILL MUST BE ABLE TO SUPPORT PIPE STRUCTURAL BACKFILL.
TRENCH WIDTH

REFERENCES

NATIONAL DOCUMENTS
AASHTO M32, M55, M170, M198, M221, M225, M295, M302, M315, T96, T104, ASTM A706

SCDOT DOCUMENTS
SCDOT SUPPLEMENTAL TECHNICAL SPECIFICATION SC-M-714 ENGINEERING DIRECTIVE MEMO 24 INSTRUCTIONAL BULLETIN 2010-01 QUALIFIED PRODUCT LIST 65, 69 (LOOSE TO AEPA (MARCH 14, 2012 LETTER)

RELATED DRAWINGS & KEYWORDS
714-005-00
714-105-00
714-110-00
714-205-02
714-990-MO

THIS DRAWING IS ONLY VALID FOR CONSTRUCTION WHEN SEALED AND SIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF SOUTH CAROLINA. CHECK WWW.SCDOT.ORG FOR LATEST UPDATE.

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER NO. 21242 JAMES W. KENDALL

SIGNATURE

9-26-12
DATE

#	DATE	CHK	DESCRIPTION
6	----	----	----
5	----	----	----
4	8/2012	DSO	SCDOT LETTER 3/12
3	3/2010	JRH	GENERAL REVISIONS
2	3/2009	RJC	COMPLETE TABLE
1	7/2008	RJC	GENERAL REVISIONS
0	3/2008	DSO	NEW STANDARD

SCDOT
SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION
DESIGN STANDARDS OFFICE
955 PARK STREET
ROOM 405
COLUMBIA, SC 29201

STANDARD DRAWING
PIPE CULVERTS
SMOOTH WALL
(RIGID REINFORCED CONCRETE PIPE (RCP)
DETAILS & FILL HEIGHT

714-205-01
EFFECTIVE LETTING DATE: JANUARY, 2013

NOTES:

1. SEE SHEET 714-005-00, 714-020-00, 714-105-00, & 714-120-00 FOR GENERAL NOTES, AND TRENCH INSTALLATION REQUIREMENTS.
2. USE ONLY PIPE CLASSES LISTED IN TABLES 714-205A & 714-205B.
3. USE B WALL PIPE FOR SIZES AND CLASSES INDICATED IN TABLES 714-205A & 714-205B. C WALL PIPE MAY BE SUBSTITUTED FOR B WALL PIPE ONLY FOR SIZES AND CLASSES INDICATED IN TABLES 714-205A & 714-205B.
4. USE PIPE AND JOINT MATERIAL FROM A MANUFACTURER COMBINATION SHOWN ON QUALIFIED PRODUCT LIST 69.
5. WHEN DEFORMED BILLET STEEL REBAR IS USED FOR CUSTOM PIPE, OBTAIN REBAR FROM A MANUFACTURER LISTED ON SCDOT QUALIFIED PRODUCT LIST 60. FOLLOW INSTRUCTIONAL BULLETIN 2010-01 AND ENGINEER OF RECORD RECOMMENDATIONS TO DETERMINE LOADING FOR CUSTOM PIPE.
6. SEE 714-990-MO FOR RESIDENTIAL DRIVEWAY INSTALLATION FOR MAINTENANCE APPLICATIONS.

PAY ITEMS:
714xxxx (___)"SMOOTH WALL PIPE.....L.F.
xxxxxxx (___)"PIPE ADDITIONAL FOUNDATION.....L.F. (___) = (DIAMETER)
714xxxx (___)"RCP PIPE CUL-CLASS.....L.F. (___) = (CLASS ROMAN #)
714xxxx (___)"RC PIPE-(___) AASHTO M206/M170.....L.F. (___) = (CLASS #)

TABLE 714-205A: REINFORCED CONCRETE PIPE FILL HEIGHT TABLE

PIPE DIAMETER, [IN]	HYDRAULIC AREA, [FT²]	MANNING'S HYDRAULIC ROUGHNESS COEFFICIENT, [n]	ESTIMATED MINIMUM TRENCH WIDTH, [IN]	CASE 1. MAXIMUM COVER HIGHWAY VEHICLE LOADING, [FT]			CASE 2. MINIMUM COVER HIGHWAY VEHICLE LOADING, [FT]			CASE 3. MINIMUM COVER FOR CONSTRUCTION VEHICLE [FT] (AASHTO 27.5.4.4)			CASE 4. UNIVERSAL DRIVEWAY MINIMUM COVER [FT] NOT FOR USE IN ROADWAY			CASE 5. MAXIMUM COVER WITH INVERT AT 2 X O.D. BELOW GROUNDWATER, [FT]	
				CLASS III	CLASS IV	CLASS V	CLASS III	CLASS IV	CLASS V	CLASS III	CLASS IV	CLASS V	CLASS III	CLASS IV	CLASS V	CLASS IV	CLASS V
12	----	0.78	SEE MFG	42	18	25	30	1.75	1.00+	1.00+	3	3	3	1.75	1.00	0.50	----	----	20	30
15	1.22	SEE MFG		45	16	25	30	1.50	1.00+	1.00+	3	3	3	1.50	1.00	0	0	13	21	30
18	1.76	0.012		49	16	25	30	1.50	1.00+	1.00+	3	3	3	1.50	0.75	0	0	13	21	30
24	3.14	0.012		60	16	25	30	1.00	1.00+	1.00+	3	3	3	1.00	0	0	0	13	21	30
30	4.90	0.012		70	16	25	30	1.00	1.00+	1.00+	3	3	3	1.00	0	0	0	13	21	30
36	7.06	0.012		81	16 (9)	25 (9)	30	1.00+ (9)	1.00+ (9)	1.00+	3 (9)	3 (9)	3	0 (9)	0 (9)	0	----	12 (9)	23
42	9.62	0.012		91	16 (9)	25 (9)	30	1.00+ (9)	1.00+ (9)	1.00+	3 (9)	3 (9)	3	0 (9)	0 (9)	0	----	14 (9)	27
48	12.56	0.012		102	16	25	30	1.00+	1.00+	1.00+	3	3	3	0	0	0	----	16	28
54	15.90	0.012		112	16	25	30	1.00+	1.00+	1.00+	3	3	3	0	0	0	10	17	28
60	19.63	0.012		123	15	25	30	1.00+	1.00+	1.00+	3	3	3	0	0	0	10	16	25
66	23.75	0.012		133	15	25	30	1.00+	1.00+	1.00+	3	3	3	0	0	0	12	15	25
72	28.27	0.012		144	15	24	30	1.00+	1.00+	1.00+	3	3	3	0	0	0	12	18	23
78	33.18	0.012		154	15	24	----	1.00+	1.00+	----	3	3	----	0	0	----	12	17	----
84	38.48	0.012		165	15	24	----	1.00+	1.00+	----	3	3	----	0	0	----	12	17	----
90	44.17	0.012		175	15	----	----	1.00+	----	----	3	3	----	0	----	----	13	----	----
96	50.24	0.012		186	14	----	----	1.00+	----	----	3	3	----	0	----	----	13	----	----
108	63.61	0.012		207	14	----	----	1.00+	----	----	3	----	----	0	----	----	13	----	----
120	78.54	0.012		228	----	----	----	----	----	----	3	----	----	0	----	----	13	----	----

(9) B WALL ONLY. C WALL IS NOT ALLOWED FOR THIS DIAMETER AND CLASS.
"----" TYPICALLY INDICATE THAT PIPE SIZE IS NOT AVAILABLE OR IS NOT RECOMMENDED FOR THIS CONDITION.
"+" INDICATE THAT MINIMUM COVER MAY BE REDUCED TO 0.75' FOR SPECIFIED CLASS WHEN PIPE IS INSTALLED UNDER RIGID PAVEMENT.

STRUCTURAL DESIGN NOTES:

S1. MANUFACTURERS MAY SUBSTITUTE HIGHER CLASS PIPE THAN SPECIFIED IN THE PLANS, HOWEVER, INSTALLATION DEPTH SHALL NOT EXCEED THAT SHOWN FOR THE PIPE INDICATED IN THE PLANS UNLESS APPROVED BY THE ENGINEER OF RECORD. NO ADDITIONAL PAYMENT WILL BE MADE FOR HIGHER CLASS SUBSTITUTION.

S2. THE REINFORCED CONCRETE PIPE FILL HEIGHT TABLE IS BASED ON THE FOLLOWING CRITERIA:

LOAD CASE 1 – TYPICAL STANDARD INSTALLATION:
SCDOT DEEP INSTALLATION – 30' FOR ALL INSTALLATIONS BEYOND 30', EMBANKMENT SETTLEMENT MAY CONTROL DESIGN. CONSULT WITH PIPE MANUFACTURERS AND GEOTECHNICAL ENGINEERS BEFORE USING DEEPER THAN 30'. NUMBERS PUBLISHED ARE BASED ON AASHTO LRFD INDIRECT DESIGN OR SCDOT DEEP INSTALLATION CUTOFF.

LOAD CASE 2 – TYPICAL MINIMUM COVER INSTALLATION:
NUMBERS PUBLISHED ARE BASED ON AASHTO LRFD INDIRECT DESIGN CALCULATIONS OR AASHTO LRFD TABLE 12.6.6.3-1 FOR CLASS SPECIFIED OF REINFORCED CONCRETE PIPE UNDER FLEXIBLE PAVEMENT.

LOAD CASE 3 – TYPICAL MINIMUM COVER FOR CONSTRUCTION VEHICLE EQUIPMENT LOADING:
NUMBERS PUBLISHED ARE BASED ON AASHTO LRFD TABLE 12.7.4.4-1 FOR CLASS SPECIFIED OF REINFORCED CONCRETE PIPE. AVOID DRIVING CONSTRUCTION VEHICLES OVER INSTALLED PIPE. WHERE POSSIBLE EXTEND CONSTRUCTION FILL HEIGHT BEYOND CASE 3' PIPE BY ONE LARGER OF 3 FEET OR ONE PIPE DIAMETER. PERIODICALLY CHANGE LOCATION OF EQUIPMENT CROSSING OVER PIPE IN ORDER TO MINIMIZE CHANCE OF LATERAL DISPLACEMENT.

LOAD CASE 4 – UNIVERSAL DRIVEWAY MINIMUM COVER:
NUMBERS PUBLISHED ARE BASED ON AASHTO LRFD TABLE 12.7.4.4-1 FOR REINFORCED CONCRETE PIPE AT 0° COVER. CHOOSE PIPE CLASS BASED ON LOADING OF VEHICLES USING DRIVEWAY.

S3. SITE CONDITIONS OTHER THAN TYPICAL INSTALLATION MAY ALSO REQUIRE SPECIAL DESIGNED PIPE. FOR THESE CONDITIONS, OTHER PIPE TYPES MAY BE MORE APPROPRIATE. CONTACT PIPE MANUFACTURER BEFORE SPECIFYING THIS PIPE TYPE FOR CUSTOM INSTALLATIONS.

S4. THIS FILL HEIGHT TABLE IS FOR USE IN ROADWAY APPLICATIONS ONLY AND SHOULD NOT BE USED FOR ANY OTHER TRANSPORTATION FACILITY.

S5. SPECIAL DESIGN MAY BE REQUIRED FOR INSTALLATIONS OUTSIDE OF SCDOT RIGHT OF WAY – SEE RIGHT OF WAY/UTILITY/MUNICIPAL AGREEMENT FOR THESE INSTALLATIONS.

REFERENCES

NATIONAL DOCUMENTS
AASHTO M35

SCDOT DOCUMENTS
QUALIFIED PRODUCT LIST 14

RELATED DRAWINGS & KEYWORDS
719-001-01 TO 719-001-04

PRECONSTRUCTION SUPPORT ENGINEER
SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER NO. 8858 EDWIN SYLVESTER CARGILE, II

SIGNATURE

MARCH 2, 2009
DATE

#	DATE	CHK	DESCRIPTION
5			
4			
3			
2			
1	1/2005	DSO	GENERAL REVISIONS
0	01-03-02	DSO	GENERAL REVISIONS

SCDOT
SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION
DESIGN STANDARDS OFFICE
955 PARK STREET
ROOM 405
COLUMBIA, SC 29201

STANDARD DRAWING
CATCH BASIN
TYPE 1
DETAILS

719-001-01
EFFECTIVE LETTING DATE: MAY 2009

CONTRACTOR MAY USE PRECAST OR BUILT IN PLACE CONSTRUCTION NOTED ABOVE OR COMBINE OPTIONS AS DESIRED. SEE QUALIFIED PRODUCT LIST 14 FOR MANUFACTURERS OF PRECAST ITEMS.	
BUILT IN PLACE	① CB TYPE 1 BOTTOM SLAB (PC OR CIP 46"X52"X6")
	② BRICK WALLS (8" THICK) (MAXIMUM 12" DEPTH)
	③ CB TYPE 1 FRAME, GRATE, AND HOOD
PRECAST	④ PRECAST BOX CONFORMING TO STD. DRAWING 719-310-00 OR 719-305-00
	⑤ CB TYPE 1 FRAME, GRATE, AND HOOD

PRECAST ITEMS
TYPE CB 1 BOTTOM SLAB (46"x52"x6")
SEE ALSO STD. DRAWING 719-310-00, 719-305-00, & 719-315-00

DIMENSION	BUILT IN PLACE OPTION	PRECAST OPTION
A	8"	6"
B	2'-6"	2'-6"
C	3'-0"	3'-0"
D	3'-10"	3'-6"
E	4'-4"	4'-0"

GENERAL NOTES:

1. FOR BUILT IN PLACE CONSTRUCTION OF THE CATCH BASIN, EITHER BRICK MASONRY (WALLS ONLY) OR CAST IN PLACE CONCRETE MAY BE USED. FOR PRECAST CONSTRUCTION, A MINIMUM OF CLASS 4000P CONCRETE SHALL BE USED.

2. CONCRETE WALLS ARE TO BE 6" THICK WITH A MINIMUM REINFORCING STEEL AREA OF 0.20 SQUARE INCHES PER FOOT UNLESS NOTED. FOR BRICK, THE WALLS ARE TO BE 8" THICK. CONCRETE BRICK AND SIMILAR SOLID UNITS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C 55. THE INTERIOR DIMENSIONS ARE TO REMAIN AS SHOWN FOR EITHER TYPE OF CONSTRUCTION.

3. THE BOTTOM SLAB OF THE BOX SHALL BE A MINIMUM OF 6" THICK REINFORCED CONCRETE (CLASS 3000 OR 4000P) WITH A REINFORCING STEEL AREA OF 0.20 SQUARE INCHES PER FOOT. WIRE MESH MAY BE USED IN LIEU OF STEEL BARS PROVIDED A MINIMUM OF 0.20 SQUARE INCHES PER FOOT IS MET.

4. MORTAR SHALL BE TYPE S OR M.

5. REINFORCING STEEL SHALL BE ASTM A-706, LOW-ALLOY STEEL DEFORMED BARS FOR CONCRETE REINFORCEMENT, GRADE 60. WIRE MESH SHALL CONFORM TO AASHTO M 55 AND M 221.

6. SEE STANDARD DRAWING 719-050-00 FOR STEPS. WELDS ARE REQUIRED WHEN STRUCTURE DEPTH EXCEEDS 4'-0".

7. SEE STANDARD DRAWINGS 719-420-00 AND 719-425-00 FOR DEPTHS GREATER THAN 12'. PRECAST CONCRETE CIRCULAR DRAINAGE STRUCTURES ARE REQUIRED WHEN THE DEPTH FROM THE TOP OF THE DRAINAGE BOX BOTTOM SLAB TO THE TOP OF THE GROUND EXCEEDS 12'-0".

8. LOCATION AND SIZE OF PIPES ARE SITE SPECIFIC. (SEE DRAINAGE PLANS). THE BOTTOM OF THE CATCH BASIN IS TO BE GROUTED TO THE LOWEST FLOW LINE ELEVATION OF ALL PIPES. BOTTOM SLAB IS CAST IN PLACE WITH PIPES INSTALLED. BOTTOM SLAB THICKNESS MUST BE ACHIEVED BEYOND PIPE OUTSIDE DIAMETER.

9. THE CONTRACT UNIT PRICE FOR CATCH BASINS SHALL INCLUDE THE COST OF FURNISHING ALL MATERIALS, (BUILT IN PLACE OR PRECAST), AND WORK INCIDENTAL TO THE CONSTRUCTION OF THE STRUCTURE COMPLETE IN PLACE AS SHOWN, INCLUDING THE CURB AND GUTTER, IN ACCORDANCE WITH THE SCDOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (LATEST EDITION).

10. CASTINGS SHALL CONFORM TO AASHTO M 105. CLASS 35B AND THE SPECIFICATIONS OF AASHTO M 306.

11. (a) STEEL GRATES AND FRAME MAY BE USED IN LIEU OF CAST IRON AS LONG AS THE LOADING (NOTE 15A) AND HYDRAULIC REQUIREMENTS ARE MET, AND ARE ON THE DEPARTMENT'S LIST OF PRECAST INLET GRATES (QUALIFIED PRODUCT LIST 14).
(b) STEEL GRATES SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH AASHTO M 111.
(c) STEEL GRATES AND FRAMES SHALL BE DIMENSIONED TO BE INTERCHANGEABLE WITH EACH PIECE OF THE CAST IRON GRATE AND FRAME SHOWN. STEEL GRATES MUST HAVE POSITIVE MEANS TO BE SECURED TO THE FRAME.
(d) STRENGTH REQUIREMENTS OF STEEL GRATES AND FRAMES MUST MEET AASHTO M 306.
(e) MANUFACTURERS DESIRING TO BE PLACED ON THE DEPARTMENT'S QUALIFIED PRODUCT LIST SHOULD CONTACT THE MATERIALS AND RESEARCH ENGINEER FOR PROCEDURES.

12. AFTER THE FRAME AND HOOD ARE SET, THE FINAL 4" OF CLASS 3000 CONCRETE IS TO BE POURED FLUSH WITH THE TOP OF THE CATCH BASIN OR BACK OF CURB. PROVIDE PROTECTION FOR BOLTS AND NUTS AT FRAME ADJUSTMENT SLOTS. BOLTS AND NUTS SHALL MEET ASTM A-307 AND WILL BE GALVANIZED ACCORDING TO AASHTO M 232.

13. GRATE OPENINGS EXCEED ½" AND ARE NOT SUITABLE FOR PEDESTRIAN TRAFFIC.

14. ALL MANUFACTURING PROCESS FOR THE FRAME, GRATE, AND HOOD MUST OCCUR IN THE UNITED STATES.

15. SEE STANDARD DRAWING 719-305-00 OR 719-310-00 FOR MAXIMUM PIPE DIAMETERS. THE PIPE SIZES SHOWN ARE MAXIMUM FOR BRICK AND PRECAST BOXES WHEN PIPE ENTERS PERPENDICULAR AND AT THE CENTER OF THE BOX WALL. CONTRACTOR SHOULD CONFIRM THAT PIPE USED FITS APPROPRIATELY INTO BOX.

15A. ADDITIONAL MATERIAL AND LABOR TO CONSTRUCT FLARED OUTLET TO BE INCLUDED IN THE PAY ITEM CATCH BASIN TYPE 1.

PRECAST NOTES:

1. SUPPLY PRECAST CONCRETE COMPONENTS FOR DRAINAGE ITEMS AT EACH LOCATION FROM A SINGLE SOURCE PRECAST MANUFACTURER THAT HAS BEEN INSPECTED AND APPROVED BY THE MATERIALS AND RESEARCH DEPARTMENT. ALL PRECAST DRAINAGE ITEMS AT EACH LOCATION SHALL BE FROM A SINGLE SOURCE MANUFACTURER. ALL PRECAST ITEMS MUST BE PLACED IN UNIFORM LINES. ITEMS FROM MULTIPLE MANUFACTURERS SHOULD NOT BE INSTALLED IN INDIVIDUAL LOCATIONS.

2. THE USE OF PRECAST UNITS WILL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF OBTAINING SATISFACTORY INSTALLATIONS. SEE STANDARD DRAWINGS FOR PRECAST CONCRETE DRAINAGE BOX OR STRUCTURE FOR ADDITIONAL DETAILS AND SPECIFICATIONS.

3. LIFT HOLES AND/OR DEVICES MAY BE PLACED AS NECESSARY. ALL LIFT HOLES SHALL BE GROUTED SMOOTH PRIOR TO COMPLETION OF THE INSTALLATION. ALL LIFTING METHODS MUST MEET OSHA REGULATIONS.

4. THE CONTRACTOR SHALL USE A SINGLE SOURCE MANUFACTURER CHOSEN FROM QUALIFIED PRODUCT LIST FOR PRECAST ITEMS ON THIS DRAWING.

5. PRECAST MANUFACTURER SHALL FOLLOW QUALIFIED PRODUCT POLICY 14.

6. CONTRACTOR MAY SUBMIT DESIGN DRAWINGS AND CALCULATIONS FOR MODIFICATIONS TO THIS ITEM ON A PROJECT BY PROJECT BASIS. MODIFICATIONS TO THESE ITEMS WILL NOT BE LISTED ON ANY QUALIFIED PRODUCT LIST. SUBMIT ALL PROPOSALS FOR PRODUCT SPECIFIC MODIFICATIONS TO THE RESIDENT ENGINEER FOR REVIEW BY THE ENGINEER OF RECORD.

7. JOINTS BETWEEN INSTALLED PIECES AND PRECAST ITEMS TO BE PLACED SHALL BE SEALED WITH A ½" GROUT LIFT ON AN APPROPRIATE PLASTIC PREFORMED GASKET (QUALIFIED PRODUCT LIST 13.)

PRECAST INSTALLATION NOTES:
23. BED SHALL BE PREPARED AND COMPACTED FOR PRECAST DRAINAGE STRUCTURE AS REQUIRED BY SCDOT STANDARD SPECIFICATIONS FOR PRECAST ITEMS. ELEVATION OF BEDDING MATERIAL SHALL BE APPROPRIATE TO ACCOMMODATE ELEVATIONS OF ALL PIPES AND REQUIRED BOX TOP ELEVATION.

24. PLACE AND LEVEL PRECAST BOX OR SLAB.

25. PIPES SHALL BE INSTALLED AND GROUTED IN PLACE.

26. PIPES AND BOX SHALL BE BACKFILLED AND COMPACTED AS REQUIRED BY SCDOT STANDARD SPECIFICATIONS.

27. ANY LOCATION WHERE THE ABOVE REQUIREMENTS CANNOT BE MET SHALL BE COMPLETED USING CAST IN PLACE MATERIALS MEETING THE REQUIREMENTS OF THIS STANDARD DRAWING. ANY ADDITIONAL MATERIALS OR COSTS ASSOCIATED WITH THE USE OF PRECAST SHALL BE PAID FOR BY THE CONTRACTOR AND MAY NOT BE CHARGED TO SCDOT.

28. THE CONTRACT UNIT PRICE FOR DROP INLETS SHALL INCLUDE THE COST OF FURNISHING ALL MATERIALS, (BUILT IN PLACE OR PRECAST), AND WORK INCIDENTAL TO THE CONSTRUCTION OF THE STRUCTURE COMPLETE IN PLACE AS SHOWN, INCLUDING THE CURB AND GUTTER, IN ACCORDANCE WITH THE SCDOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (LATEST EDITION).

29. PRECAST CONCRETE CIRCULAR STRUCTURES ARE REQUIRED FOR THE FOLLOWING APPLICATIONS UNLESS PROHIBITED BY THE PLANS OR SPECIAL PROVISIONS:

(a) ON DRAINAGE STRUCTURES WITH A DEPTH EQUAL TO OR GREATER THAN 12 FEET.
(b) ON DRAINAGE STRUCTURES WHERE THE FLOW LINE ELEVATION OF THE INLET PIPE IS EQUAL TO OR HIGHER THAN THE INSIDE TOP ISOFFIT OF THE OUTLET PIPE.
(c) AS REQUIRED BY THE PROJECT PLANS.

30. THE PAY ITEM SHALL BE:
SMOOTH INLET (24"X24")_____EA

REFERENCES

NATIONAL DOCUMENTS
ASTM C55, ASTM A706, AASHTO M035, AASHTO M306

SCDOT DOCUMENTS
QUALIFIED PRODUCT LIST 13, QUALIFIED PRODUCT LIST 14, QUALIFIED PRODUCT LIST 43

RELATED DRAWINGS & KEYWORDS
719-105-01 TO 719-105-03, 719-110-01, 719-000-00, 719-420-00, 719-425-00, 719-305-00, 719-310-00.

PRECONSTRUCTION SUPPORT ENGINEER
SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER NO. 8858 EDWIN SYLVESTER CARGILE, II

SIGNATURE

MARCH 3, 2008
DATE

#	DATE	CHK	DESCRIPTION
5			
4			
3			
2			
1			
0	3/2008	DSO	GENERAL REVISIONS

SCDOT
SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION
DESIGN STANDARDS OFFICE
955 PARK STREET
ROOM 405
COLUMBIA, SC 29201

STANDARD DRAWING
DROP INLET
(24"X24")
DETAILS

719-105-01
EFFECTIVE LETTING DATE: MAY 2008

CONTRACTOR MAY USE PRECAST OR BUILT IN PLACE CONSTRUCTION AS NOTED OR COMBINE OPTIONS AS DESIRED. SEE QUALIFIED PRODUCT LIST 14 FOR MANUFACTURERS OF PRECAST ITEMS.

24"X24" DROP INLET
PRECAST BUILT IN PLACE
① 24"X24" DROP INLET BOTTOM SLAB (PC OR CIP 40"X40"X6")
AND
② BRICK WALLS (8")
AND
③ 24"X24" DROP INLET FRAME AND GRATE
④ PRECAST BOX CONFORMING TO STD DRAWING 719-310-00 OR 719-305-00 (2"X2"XH)
AND
⑤ 24"X24" DROP INLET FRAME AND GRATE

TABLE 719-105B

STANDARD PC ITEMS FOR DROP INLET

(24"X24") DROP INLET BOTTOM SLAB (PC OR CIP 40"X40"X6")
SEE ALSO STD. DRAWING 719-310-00 OR 719-305-00

TABLE 719-105A

DIMENSION	24"X24" DROP INLET	
	BUILT IN PLACE OPTION	PRECAST
A	8"	6"
B	24"	SEE STD. DRAWING 719-305-00 AND 719-310-00 (2'-6" W/1 PRECAST BOX
C	3'-4"	SEE STD. DRAWING 719-305-00 AND 719-310-00 (2'-6" W/1 PRECAST BOX

USE SHEETS 719-105-01 THROUGH 719-105-02 FOR THIS ITEM.

THIS DRAWING IS NOT TO SCALE

NOTES:

1. SEE 719-110-00 FOR DROP INLET (24"X 36"). FOR BUILT IN PLACE CONSTRUCTION OF THE CATCH BASIN WALLS, EITHER BRICK MASONRY (WALLS ONLY) OR CIP CLASS 3000 CONCRETE MAY BE USED. FOR PRECAST CONSTRUCTION, A MINIMUM OF CLASS 4000P CONCRETE SHALL BE USED.

2. CONCRETE WALLS ARE TO BE 6" THICK WITH A MINIMUM REINFORCING STEEL AREA 0.20 SQUARE INCHES PER FOOT UNLESS NOTED. FOR BRICK, THE WALLS ARE TO BE 8" THICK. CONCRETE BRICK AND SIMILAR SOLID UNITS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C 55. THE INTERIOR DIMENSIONS ARE TO REMAIN AS SHOWN FOR EITHER TYPE OF CONSTRUCTION.

3. THE BOTTOM SLAB OF THE BOX SHALL BE A MINIMUM OF 6" THICK REINFORCED CONCRETE (CLASS 3000 OR 4000P) WITH A REINFORCING STEEL AREA OF 0.20 SQUARE INCHES PER FOOT. WIRE MESH MAY BE USED IN LIEU OF STEEL BARS PROVIDED A MINIMUM OF 0.20 SQUARE INCHES PER FOOT IS MET.

4. MORTAR SHALL BE TYPE S OR M.

5. REINFORCED STEEL SHALL BE ASTM A-706, LOW-ALLOY STEEL DEFORMED BARS FOR CONCRETE REINFORCEMENT, GRADE 60. WIRE MESH SHALL CONFORM TO AASHTO M 55 AND M 221.

6. SEE STANDARD DRAWING 719-050-00 FOR STEPS. WELDS ARE REQUIRED WHEN STRUCTURE DEPTH EXCEEDS 4'-0".

7. SEE STANDARD DRAWINGS 719-420-00 AND 719-425-00 FOR DEPTHS GREATER THAN 12'. PRECAST CONCRETE CIRCULAR DRAINAGE STRUCTURES ARE REQUIRED WHEN THE DEPTH FROM THE TOP OF THE DRAINAGE BOX BOTTOM SLAB TO THE TOP OF THE GROUND EXCEEDS 12'-0".

8. LOCATION AND SIZE OF PIPES ARE SITE SPECIFIC. (SEE DRAINAGE PLANS). THE BOTTOM OF THE CATCH BASIN IS TO BE GROUTED TO THE LOWEST FLOW LINE ELEVATION OF ALL PIPES. BOTTOM SLAB IS CAST IN PLACE WITH PIPES INSTALLED. BOTTOM SLAB THICKNESS MUST BE ACHIEVED BEYOND PIPE OUTSIDE DIAMETER.

9. THE FLOOR OF THE BASIN MUST SLOPE IN THE DIRECTION OF THE OUTLET PIPE AS SHOWN AND THE INSIDE OF OUTLET PIPE SHALL BE FREE FROM WITH FLOOR OF BASIN.

10. SEE STANDARD DRAWING 719-305-00 OR 719-310-00 FOR MAXIMUM PIPE DIAMETERS. THE PIPE SIZES SHOWN ARE MAXIMUM FOR BRICK AND PRECAST BOXES WHEN PIPE ENTERS PERPENDICULAR AND AT THE CENTER OF THE BOX WALL. CONTRACTOR SHOULD CONFIRM THAT PIPE USED FITS APPROPRIATELY INTO BOX.

FRAME AND GRATE NOTES:
11. ALL CASTINGS SHALL CONFORM TO AASHTO M 105. CLASS 35B AND THE SPECIFICATIONS OF AASHTO M 306.

12. (a) STEEL GRATES AND FRAME MAY BE USED IN LIEU OF CAST IRON AS LONG AS THE LOADING (NOTE 15A) AND HYDRAULIC REQUIREMENTS ARE MET, AND ARE ON THE DEPARTMENT'S LIST OF PRECAST INLET GRATES (QUALIFIED PRODUCT LIST 14).
(b) STEEL GRATES SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH AASHTO M 111.
(c) STEEL GRATES AND FRAMES SHALL BE DIMENSIONED TO BE INTERCHANGEABLE WITH EACH PIECE OF THE CAST IRON GRATE AND FRAME SHOWN. STEEL GRATES MUST HAVE POSITIVE MEAN

REFERENCES

NATIONAL DOCUMENTS

SCDOT DOCUMENTS

SC-M-815-8
GPL 57

RELATED DRAWINGS & KEYWORDS

PRECONSTRUCTION SUPPORT ENGINEER

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER No. 21242 JAMES W. KENDALL, JR.

SIGNATURE

11/18/2016

DATE

#	DATE	CHK	DESCRIPTION
5			
4			
3			
2	8/2016	DSO	GENERAL REVISIONS. UPDATED DIMENSIONS AND NOTES.
1	8/2012	DSO	
0	3/2008	DSO	GENERAL REVISIONS

SCDOT
SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION
DESIGN STANDARDS OFFICE
955 PARK STREET
ROOM 405
COLUMBIA, SC 29201

STANDARD DRAWING

TYPE A
INLET STRUCTURE
FILTERS

815-001-01

EFFECTIVE LETTING DATE | JUL 2017 | THIS DRAWING IS NOT TO SCALE

INSTALLATION:

1. FILTER FABRIC IS USED FOR INLET PROTECTION WHEN STORMWATER FLOWS ARE RELATIVELY SMALL (1.0 CFS OR LESS) WITH LOW VELOCITIES. WHERE THE INLET DRAINS AREA HAS GRADES LESS THAN 5% AND THE IMMEDIATE DRAINAGE AREA AROUND THE INLET IS FOUR RADIUS1 HAS GRADES LESS THAN 1%, DO NOT USE IN AREAS RECEIVING CONCENTRATED FLOW OR WHERE OUTFLOWS ARE PASSED ACROSS TRENCHES SHALL BE EXCAVATED 6 INCHES WIDE AND 6 INCHES DEEP AROUND THE OUTER PERIMETER OF THE STAKES UNLESS FABRIC IS PNEUMATICALLY INSTALLED.

2. FILTER FABRIC SHALL CONFORM TO SCDOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (LATEST EDITION). FILTER FABRIC SHALL BE PLACED ON THE EXCAVATED SOIL AREA. THE FABRIC SHALL BE ANCHORED BY BACKFILLING WITH SOIL OR CRUSHED STONE AND COMPACTED OVER THE FILTER FABRIC UNLESS FABRIC IS PNEUMATICALLY INSTALLED.

3. USE STEEL POSTS WITH A MINIMUM POST LENGTH OF 5 FEET CONSISTING OF STANDARD "T" SECTIONS WITH A WEIGHT OF 1.25 POUNDS PER FOOT (LBS/FT). THE HEIGHT OF THE FILTER BARRIER ABOVE GROUND SHALL BE A MINIMUM OF 24 INCHES. POSTS SHALL BE SPACED AROUND THE PERIMETER OF THE INLET A MAXIMUM OF 2 FEET APART AND DRIVEN INTO THE GROUND A MINIMUM OF 24 INCHES. ATTACH FABRIC TO POSTS USING ONLY HEAVY DUTY PLASTIC TIES. ATTACH AT LEAST 4 EVENLY SPACED TIES IN A MANNER TO PREVENT SAGGING OR TEARING OF THE FABRIC.

4. FILTER FABRIC SHOULD BE IN A CONTINUOUS ROLL AND CUT TO THE LENGTH OF THE PROTECTED AREA TO AVOID THE USE OF JOINTS. WHEN JOINTS ARE NECESSARY, FILTER FABRIC SHOULD BE WEAVED TOGETHER ONLY AT A SUPPORT POST WITH BOTH ENDS SECURELY FASTENED TO THE POST WITH A MINIMUM 6 INCH OVERLAP.

5. PROVIDE A FILTER FABRIC CAPABLE OF REDUCING EFFLUENT SEDIMENT CONCENTRATIONS BY NOT LESS THAN 40% UNDER TYPICAL SEDIMENT MITIGATION CONDITIONS.

INSPECTION AND MAINTENANCE:

1. INSPECTIONS SHOULD BE MADE EVERY SEVEN (7) CALENDAR DAYS. ANY NEEDED REPAIRS SHOULD BE HANDLED IMMEDIATELY.

2. IF THE FABRIC BECOMES CLOGGED, IT SHOULD BE REPLACED.

3. SEDIMENT SHOULD BE REMOVED WHEN IT REACHES APPROXIMATELY 1/3 THE HEIGHT OF THE FILTER FABRIC. IF A SUMP IS USED, SEDIMENT SHOULD BE REMOVED WHEN IT FILLS APPROXIMATELY 1/3 THE DEPTH OF THE HOLE. MAINTAIN THE POOL AREA, ALWAYS PROVIDING ADEQUATE SEDIMENT STORAGE VOLUME FOR THE NEXT STORM EVENT. CLEANING INLET STRUCTURE FILTERS PAID FOR EACH (EA) FILTER CLEANED OF DEPOSITED SEDIMENT FROM THE AREA ADJACENT TO EACH INLET STRUCTURE FILTER.

4. STORM DRAIN INLET PROTECTION STRUCTURES SHOULD BE REMOVED ONLY AFTER THE DISTURBED AREAS ARE PERMANENTLY STABILIZED. REMOVE ALL CONSTRUCTION MATERIAL AND SEDIMENT, AND DISPOSE OF THEM PROPERLY. GRADE THE DISTURBED AREA TO DRAIN. USE APPROPRIATE PERMANENT STABILIZATION METHODS TO STABILIZE BARE AREAS AROUND THE INLET.

5. THE PAY ITEMS SHALL BE:
8156210 INLET STRUCTURE FILTER TYPE A.....LF
8154155 CLEANING INLET STRUCTURE FILTERS.....EA

TYPE A
LOW FLOW INLET FILTERS
(FILTER FABRIC INLET PROTECTION)

INSTALLATION:

1. INSTALL SEDIMENT TUBES BY LAYING THEM FLAT ON THE GROUND. CONSTRUCT A SMALL TRENCH TO A DEPTH THAT IS 20% OF THE SEDIMENT TUBE DIAMETER. EXCAVATE THE SEDIMENT TUBE IN THE TRENCH AND COMPACT THE SOIL AND THE BOTTOM OF THE SEDIMENT TUBE. INSTALL STAKES AS SHOWN. INSTALL THE SEDIMENT TUBES TO THE SOIL AND THE BOTTOM OF THE SEDIMENT TUBE. LAP THE ENDS WHEN MORE THAN ONE SEDIMENT TUBE IS REQUIRED. ENSURE A MINIMUM OF 6 INCHES TO PREVENT FLOW AND SEDIMENT FROM PASSING THROUGH THE FIELD JOINT. NEVER STACK SEDIMENT TUBES ON TOP OF ONE ANOTHER.

2. SHOULD SEDIMENT TUBE BECOME DAMAGED DURING INSTALLATION, PLACE A STAKE ON BOTH SIDES OF THE DAMAGED AREA TERMINATING THE TUBE SEGMENT AND INSTALL A NEW TUBE SEGMENT.

3. INSTALL SEDIMENT TUBES USING WOODEN STAKES WITH A MINIMUM POST LENGTH OF 4 FEET AND A MINIMUM MEASURED DIMENSION OF ¾" X 1¾" FOR EACH LEAF WITHOUT BARK. USE A MINIMUM OF 2 X 2 OR USING STEEL POSTS (1.25LBS./FT)WITHOUT FOOTPLATE. USE STEEL POSTS WITHOUT A SOIL PLATE AND PAINTING IS NOT REQUIRED. SPACE POSTS ON STAKES ON 2-FOOT CENTERS AND DRIVE THEM INTO THE GROUND TO A MINIMUM DEPTH OF 2 FEET. INSTALL THE STAKES ON THE DOWNSTREAM 1/3 OF THE SEDIMENT TUBE. ENSURE THE AREAS FOR STAKE INSTALLATION ARE COMPACTED SO THE POSTS ARE PROPERLY INSTALLED.

INSPECTION AND MAINTENANCE:

1. INSPECT SEDIMENT TUBES AFTER INSTALLATION FOR GAPS UNDER THE SEDIMENT TUBES AND FOR GAPS BETWEEN THE JOINTS OF ADJACENT ENDS OF SEDIMENT TUBES. REPAIR RILLS, GULLIES, AND ALL UNDERCUTTING NEAR SEDIMENT TUBES. INSPECT SEDIMENT TUBES EVERY 7 DAYS.

2. REMOVE SEDIMENT WHEN IT REACHES APPROXIMATELY ½ HEIGHT OF THE INLET STRUCTURE FILTER. IF A SUMP IS USED, REMOVE SEDIMENT WHEN IT FILLS APPROXIMATELY ¼ THE DEPTH OF THE HOLE. MAINTAIN THE POOL AREA, ALWAYS PROVIDING ADEQUATE SEDIMENT STORAGE VOLUME FOR THE NEXT STORM EVENT. CLEANING INLET STRUCTURE FILTERS PAID FOR EACH (EA) FILTER CLEANED OF DEPOSITED SEDIMENT FROM THE AREA ADJACENT TO EACH INLET STRUCTURE FILTER.

3. REMOVE AND/OR REPLACE INSTALLED SEDIMENT TUBES AS REQUIRED TO ADAPT TO CHANGING CONSTRUCTION SITE CONDITIONS.

4. REMOVE ALL SEDIMENT TUBES FROM THE SITE WHEN THE FUNCTIONAL LONGEVITY IS EXCEEDED AS DETERMINED BY THE ENGINEER, INSPECTOR, OR MANUFACTURER'S REPRESENTATIVE.

5. DISPOSE OF SEDIMENT TUBES BY REGULAR MEANS AS NON-HAZARDOUS, INERT MATERIAL.

6. THE PAY ITEMS SHALL BE:
8154215 INLET STRUCTURE FILTER TYPE A.....LF
8154150 CLEANING INLET STRUCTURE FILTERS.....EA

TYPE A
LOW FLOW INLET FILTERS
(SEDIMENT TUBE INLET PROTECTION)

REFERENCES

NATIONAL DOCUMENTS

SCDOT DOCUMENTS

WGMS, SC-M-810,
SC-M-815-9, GPL 55

RELATED DRAWINGS & KEYWORDS

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER NO. 21242 JAMES W. KENDALL, JR.

SIGNATURE

11/18/2016

DATE

#	DATE	CHK	DESCRIPTION
6			
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0			

SCDOT
SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION
DESIGN STANDARDS OFFICE
955 PARK STREET
ROOM 405
COLUMBIA, SC 29201

STANDARD DRAWING

GRASSED CHANNELS AND SWALES

815-008-01

EFFECTIVE LETTING DATE | JULY 2017

NOTES:

1. GRASSED CHANNELS AND SWALES WILL BE DESIGNED IN ACCORDANCE WITH THE SCDOT WATER QUALITY MANUAL.
2. 1 FOOT OF FREEBOARD SHALL BE PROVIDED ABOVE THE 10-YEAR STORM IF SITE CONDITIONS ALLOW.
3. V-SHAPED DITCHES SHALL NOT BE USED AS GRASSED CHANNELS AND SWALES FOR WATER QUALITY.
4. THE STANDARD APPLICATION FOR WATER QUALITY APPLIES ONLY TO THE LAST 100 FEET OF GRASSED CHANNELS AND SWALES PRIOR TO OUTFALL AND DOES NOT INCLUDE THE ENTIRE CONVEYANCE.
5. PAY ITEMS FOR PERMANENT AND TEMPORARY SEEDING FOR CHANNEL AND SWALE STABILIZATION ARE PROVIDED IN SUPPLEMENTAL SPECIFICATION SC-M-810-4 OR MOST RECENT VERSION.
6. THE PAY ITEM SHALL BE:
   2031000 UNCLASSIFIED EXCAVATION_____CY

THIS DRAWING IS NOT TO SCALE

THIS DRAWING IS NOT TO SCALE

NOTES:

1. SEDIMENT TUBE SHALL COMPLY WITH THE REQUIREMENTS OF SECTION 815 OF THE SCDOT STANDARD SPECIFICATION FOR HIGHWAY CONSTRUCTION (LATEST EDITION). SEDIMENT TUBE SHALL BE FILLED WITH 100% COMPOSTED MATERIAL. SEDIMENT TUBE SHALL BE ANCHORED WITH WOODEN STAKES AND/OR ENTRICH SUPPLEMENTARY SPECIFICATIONS BEFORE BEING LISTED ON QPL, AND BE FREE FROM DEFECTS OR TRANSPORTATION DAMAGE.

2. PROPER SITE PREPARATION IS ESSENTIAL TO ENSURE SEDIMENT TUBES ARE IN COMPLETE CONTACT WITH UNDERLYING SOIL. SEDIMENT TUBES ARE TO BE 18-24 INCHES IN DIAMETER AND ARE TO BE TRENCHED TO A DEPTH OF 20% OF TUBE DIAMETER. ENSURE THE SEDIMENT TUBE IS IN COMPLETE CONTACT WITH THE GROUND. COMPACT THE UPSTREAM SEDIMENT TUBE WITH INTERLOCKING PLACEMENT AND ANCHOR THE SEDIMENT TUBE ENDS SO THEY ARE POSITIONED UPSTREAM OF THE SEDIMENT TUBE CENTER POINT. SEDIMENT TUBES FOR DITCH CHECKS WEIGHING MORE THAN 18 POUNDS PER FOOT DO NOT REQUIRE TRENCHING.

3. SEDIMENT TUBE SHALL BE INSTALLED IMMEDIATELY AFTER GRADING AND CONSTRUCTION. SEDIMENT TUBE SHALL BE MAINTAINED DURING SUBGRADE AND BASE PREPARATION UNTIL BASE COURSE IS COMPLETE. SEDIMENT TUBES MAY BE TEMPORARILY MOVED DURING CONSTRUCTION.

4. SEDIMENT TUBES ARE TO BE INSTALLED PERPENDICULAR TO WATER FLOW AND EXTEND UP SIDE SLOPES A MINIMUM OF 1 FOOT ABOVE DESIGN FLOW DEPTH. SPACE TUBES ACCORDING TO THE FOLLOWING TABLES

SLOPE	MAXIMUM SEDIMENT TUBE SPACING
LESS THAN 2%	150 FEET
2%	100 FEET
3%	75 FEET
4%	50 FEET
5%	40 FEET
6%	30 FEET
GREATER THAN 6%	25 FEET

5. STAKE SEDIMENT TUBES FOR DITCH CHECKS USING STAKES WITH A MINIMUM MEASURED DIMENSION OF ¾" X 1¾" AND A MAXIMUM MEASURED DIMENSION OF 2" X 2". USE STAKES WITHOUT BARK OR PAINTED. USE A MINIMUM OF 2 STAKES PER TUBE. USE STEEL POSTS WITHOUT A SOIL PLATE AND PAINTING IS NOT REQUIRED. SPACE POSTS OF STAKES ON 2' CENTERS AND DRIVE THEM INTO THE GROUND TO A MINIMUM DEPTH OF 2 FEET. INSTALL THE STAKES ON THE DOWNSTREAM THIRD OF THE SEDIMENT TUBE. SEDIMENT TUBES FOR DITCH CHECKS WEIGHING MORE THAN 18 POUNDS PER FOOT DO NOT REQUIRE STAKING.

6. SELECT PROPER LENGTH OF TUBE TO MINIMIZE THE NUMBER NEEDED TO SPAN THE MID-DITCH DRAINAGE AREA. UNDERCUTTING OF SEDIMENT TUBES CAUSED BY COMPACTED SOIL OR GAPS BETWEEN THE SOIL AND THE BOTTOM OF THE SEDIMENT TUBES CAN BE COMPARED TO A MINIMUM OF 6 INCHES TO PREVENT PASSAGE OF FLOW AND SEDIMENT THROUGH FIELD JOINT.

7. INSTALL SEDIMENT TUBES FOR DITCH CHECKS OVER BARE SOIL, MULCHED AREAS, OR EROSION CONTROL BLANKETS. KEEP SEDIMENT TUBES FOR DITCH CHECKS IN PLACE UNTIL FULLY ESTABLISHED VEGETATION AND ROOT SYSTEMS HAVE COMPLETELY DEVELOPED AND CAN SURVIVE ON THEIR OWN.

8. INSPECT SEDIMENT TUBES AFTER INSTALLATION FOR GAPS UNDER THE SEDIMENT TUBES AND FOR GAPS BETWEEN THE JOINTS OF ADJACENT ENDS OF SEDIMENT TUBES. INSPECT SEDIMENT TUBES EVERY 7 DAYS. REPAIR ALL RILLS, GULLIES, AND UNDERCUTTING NEAR SEDIMENT TUBES. REMOVE ALL SEDIMENT DEPOSITS THAT REACHES 1/3 THE HEIGHT OF THE EXPOSED SEDIMENT TUBES. REPLACE WHEN THE SEDIMENT REACHES 1/3 THE HEIGHT OF THE EXPOSED SEDIMENT TUBES.

9. REMOVE AND/OR REPLACE INSTALLED SEDIMENT TUBES AS REQUIRED TO ADAPT TO CHANGING CONSTRUCTION SITE CONDITIONS. REMOVE SEDIMENT TUBES WHEN THE FUNCTIONAL LONGEVITY IS EXCEEDED AS DETERMINED BY THE ENGINEER, INSPECTOR, OR MANUFACTURER'S REPRESENTATIVE. GATHER SEDIMENT TUBES AND DISPOSE OF THEM IN REGULAR MEANS AS NON-HAZARDOUS, INERT MATERIAL.

10. PRIOR TO INSTALLING SEDIMENT TUBES, REMOVE TRASH, DEPRESSIONS, AND OTHER GROUND DISTURBANCES CAUSED BY THE REMOVAL OF SEDIMENT TUBES.

11. CLEAN OUT OF TUBES WILL BE PAID FOR AS CLEANING SILT BASINS.

12. PAYMENT SHALL INCLUDE ALL MATERIALS, LABOR, TOOLS, EQUIPMENT, MAINTENANCE, AND INCIDENTALS NECESSARY TO COMPLETE WORK.

13. THE PAY ITEMS SHALL BE:
8154300 SEDIMENT TUBE ..... LF
8154010 CLEANING SILT BASINS ..... CY

SECTION A-A

REFERENCES

NATIONAL DOCUMENTS

SCDOT DOCUMENTS

SC-M-815-12
GPL 57

RELATED DRAWINGS & KEYWORDS

PRECONSTRUCTION SUPPORT ENGINEER

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER No. 21242 JAMES W. KENDALL, JR.

SIGNATURE

11/18/2016

DATE

#	DATE	CHK	DESCRIPTION
5			
4			
3			
2	8/2016	DSO	GENERAL REVISIONS. UPDATED NOTES.
1	6/2013	DSO	WOOD TEXT REMOVED
0	3/2008	DSO	GENERAL REVISIONS

SCDOT
SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION
DESIGN STANDARDS OFFICE
955 PARK STREET
ROOM 405
COLUMBIA, SC 29201

STANDARD DRAWING

SEDIMENT TUBE DITCH APPLICATION

815-205-00

EFFECTIVE LETTING DATE | JUL 2017

REFERENCES

NATIONAL DOCUMENTS

SCDOT DOCUMENTS

SC-M-815-10

RELATED DRAWINGS & KEYWORDS

PRECONSTRUCTION SUPPORT ENGINEER

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER No. 21242 JAMES W. KENDALL, JR.

SIGNATURE

11/09/2016

DATE

#	DATE	CHK	DESCRIPTION
6			
5			
4			
3	11/2016	DSO	GENERAL REVISIONS
2	8/2016	DSO	GENERAL REVISIONS
1	8/2012	DSO	ADDED CHART 815-505
0	3/2008	DSO	GENERAL REVISIONS

SCDOT
SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION
DESIGN STANDARDS OFFICE
955 PARK STREET
ROOM 405
COLUMBIA, SC 29201

STANDARD DRAWING

STABILIZED CONSTRUCTION ENTRANCE

815-505-00

EFFECTIVE LETTING DATE | JUL 2017 | THIS DRAWING IS NOT TO SCALE

NOTES:

1. STABILIZED CONSTRUCTION ENTRANCES SHOULD BE USED AT ALL POINTS WHERE TRAFFIC WILL BE LEAVING A CONSTRUCTION SITE AND MOVING DIRECTLY ONTO A PUBLIC ROAD.

2. IF WASHING IS USED, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF SITE. WASHDOWN FACILITIES SHALL BE REQUIRED AS DIRECTED BY SCDOT AS NEEDED. WASHDOWN AREAS IN GENERAL MUST BE CONSTRUCTED ON A STABILIZED AREA DRAINING INTO A SEDIMENT TRAP OR SEDIMENT BASIN. CONSTRUCTION ENTRANCES SHOULD BE USED IN CONJUNCTION WITH THE STABILIZATION OF CONSTRUCTION ROADS TO REDUCE THE AMOUNT OF MUD PICKED UP BY VEHICLES.

3. REMOVE ALL VEGETATION AND ANY OBJECTIONABLE MATERIAL FROM THE FOUNDATION AREA.

4. DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM STONES TO A SEDIMENT TRAP OR BASIN.

5. INSTALL A CLASS 2 NON-WOVEN GEOTEXTILE FABRIC UNDERLAYER ON THE PREPARED FOUNDATION AS PER THE STANDARDS AND SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, LATEST EDITION, PRIOR TO PLACING ANY STONE.

6. MINIMUM DIMENSIONS OF THE ENTRANCE SHALL BE 100' LONG BY 24' WIDE. THESE DIMENSIONS MAY BE MODIFIED AS NECESSARY TO ACCOMMODATE SITE CONSTRAINTS.

7. INSPECT CONSTRUCTION ENTRANCES EVERY SEVEN (7) CALENDAR DAYS AND REMOVE TOP MUD AND SEDIMENT BUILDUP AS MUCH AS PRACTICABLE. MAINTENANCE IS REQUIRED MORE FREQUENTLY IN WET WEATHER CONDITIONS. RESHAPE THE STONE PAD AS NEEDED FOR DRAINAGE AND RUNOFF CONTROL.

8. WASH OR REPLACE STONES AS NEEDED AND AS DIRECTED BY THE ENGINEER. THE STONE IN THE ENTRANCE SHOULD BE WASHED OR REPLACED WHENEVER ITS EFFECTIVENESS IS REDUCED BY SEDIMENT BEING CARRIED OFF SITE BY VEHICLES. FREQUENT WASHING WILL EXTEND THE USEFUL LIFE OF STONE.

9. IMMEDIATELY REMOVE MUD AND SEDIMENT TRACKED ONTO PUBLIC ROADWAY. THE ROADWAY SHOULD BE SWEPT. SWEEPING OF ROADWAYS SHOULD ONLY BE USED WHEN THE WATER CAN BE DISCHARGED TO A SEDIMENT TRAP OR BASIN.

10. REPAIR ANY BROKEN PAVEMENT IMMEDIATELY.

11. USE AGGREGATE No. 1, 2, 24, OR 3 AS CONSTRUCTION ENTRANCE MATERIAL.

12. PAY ITEM:
8156490 STABILIZED CONSTRUCTION ENTRANCE.....SY

THIS DRAWING IS NOT TO SCALE

GEORGETOWN COUNTY, SC
ACCREDITED AGENCY APWA
Georgetown County
129 Screven Street, Georgetown, SC 29442
Phone: (843) 545-3500 Fax: (843) 545-3505
Internet: www.georgetowncountysc.org

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER No. 18669 JAMES M. BRADLEY

6/18/2021

NO.	DATE	DESCRIPTION
1	05/20/2021	DESIGN DRAWINGS
2	06/18/2021	CONSTRUCTION DRAWINGS REV. 1

PROJECT:

BIG DAM SWAMP RECYCLE CENTER
GEORGETOWN COUNTY, SOUTH CAROLINA

SCALE: N.T.S.

DESIGNED BY: ASB

DRAWN BY: MPM

DATE: 06/18/2021

SCDOT DETAILS

SHEET NO: C-16

NOTES:

1. THIS PLAN SERVES AS THE CONCEPTUAL ELECTRICAL PLAN. COUNTY TO PROVIDE CONTRACTOR WITH ELECTRICAL PLAN AT A LATER DATE.

Georgetown County
129 Screven Street, Georgetown, SC 29442
Phone: (843) 545-3524 Fax: (843) 545-3005
Internet: www.georgetowncounty-sc.org

NO.	DESIGN DRAWINGS / CONSTRUCTION DRAWINGS REV. 1
1	05/20/2021
2	06/18/2021

PROJECT:

BIG DAM SWAMP RECYCLE CENTER
GEORGETOWN COUNTY, SOUTH CAROLINA

SCALE:	H:1"=20'
DESIGNED BY:	ASB
DRAWN BY:	MPM
DATE:	06/18/2021

ELECTRIC UTILITY (CONCEPT)

SHEET NO: E-01

DESIGN VALUES (ASCE 7-16, 2018 IBC)

LIVE LOADS:
- ROOF = 20 PSF
- ATTIC = 10 PSF
- FLOOR = 50 PSF
- PORCH FLOOR = 75 PSF

SNOW LOAD: 5 PSF
- ROOF SNOW LOAD: 5 PSF
- EXPOSURE FACTOR: Ce=1.0
- IMPORTANCE FACTOR: Is=1.0
- THERMAL FACTOR: Ct=1.0

WIND LOADS:
- ULTIMATE WIND SPEED: 145 MPH
- IBC NOMINAL WIND SPEED: 112 MPH
- BUILDING STRUCTURE: ENCLOSED, LOW-RISE
- IMPORTANCE FACTOR: Iw=1.0
- RISK CATEGORY: II
- WIND EXPOSURE: B
- INTERNAL PRESSURE COEFFICIENT: +/- 0.18
- DP RATING FOR COMPONENTS & CLADDING: DP50 (DP30 PER ASD)

SEISMIC LOADS:
- IMPORTANCE FACTOR: Ie=1.0
- RISK CATEGORY: II
- SITE LOCATION: GEORGETOWN COUNTY, SC
- SITE CLASS: D
- SPECTRAL RESPONSE ACCELERATIONS: Ss=0.59, S1=0.19
- SPECTRAL RESPONSE COEFFICIENTS: Sds=0.52, Sd1=0.28
- SEISMIC DESIGN CATEGORY: D2
- SEISMIC FORCE RESISTING SYSTEM:
  - BEARING WALL SYSTEM USING LIGHT FRAMED WALLS WITH SHEAR PANELS
- DESIGN BASE SHEAR: 1,183 LBS
- SEISMIC RESPONSE COEFFICIENT: Cs=0.08
- RESPONSE MODIFICATION FACTOR: R=6.5
- ANALYSIS PROCEDURE: SIMPLIFIED ANALYSIS PROCEDURE

FLOOD LOADS:
- FEMA FLOOD HAZARD ZONE: NA
- LOWEST FINISHED FLOOR ELEVATION: NA

RAIN LOADS:
- RAIN INTENSITY: 4.25 in/hr

GEOTECHNICAL:
- SOIL BEARING CAPACITY: 2000 PSF ASSUMED

TRUSS LAYOUTS AND REACTION REPORTS HAVE NOT BEEN REVIEWED BY ADVANTAGE ENGINEERING, LLC OR THE ENGINEER OF RECORD. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW THE TRUSS LAYOUTS AND REACTION REPORTS AND TO ENSURE THE SPECIFIED CONNECTORS SHOWN ON THE DESIGN DRAWINGS ARE SUFFICIENT TO RESIST THE UPLIFT AND LATERAL LOADS IMPOSED.

NOTES:
1. IF STICK-FRAMING IS SUBSTITUTED FOR THE TRUSSES, CONTRACTOR TO CONSULT WITH ADVANTAGE ENGINEERING TO DETERMINE IF THERE ARE ADDITIONAL INTERIOR LOAD-BEARING WALLS.
2. SEE DETAIL D FOR STRAPPING OF TRUSS GIRDERS/BEAMS/STUD CLUSTERS.

DETAIL A
RAFTER/TRUSS CONNECTION

DETAIL B
ROOF SHEATHING

DETAIL C
PORCH COLUMN FASTENING

GENERAL NOTES

1. ENGINEER'S DESIGN APPLIES TO DRAWINGS AS STAMPED. DESIGNS ARE FOR WIND, SEISMIC, AND FOUNDATION SYSTEMS ONLY AS SHOWN AND ASSUMES THE BUILDING ENVELOPE WILL BE MAINTAINED DURING HURRICANE FORCE WINDS.
2. ANY ALTERATIONS OR DEVIATIONS FROM THE CONSTRUCTION SPECIFICATIONS CONTAINED WITHIN THESE DESIGN DOCUMENTS SHALL BE THE RESPONSIBILITY OF THE PARTIES INVOLVED AND MAY VOID THE ENGINEERED DESIGN.
3. ERECTOR SHALL BE RESPONSIBLE FOR FIELD VERIFYING ALL DIMENSIONS. DISCREPANCIES SHALL BE RESOLVED AS NEEDED WITH ENGINEER BEFORE PROCEEDING.
4. ERECTOR SHALL FOLLOW STANDARD CONSTRUCTION PRACTICES DICTATED BY THE 2018 "INTERNATIONAL BUILDING CODE" (IBC) EXCEPT AS NOTED.
5. ALL EXPOSED WOOD (POSTS, BEAMS, ETC.) AND WOOD IN CONTACT WITH CONCRETE OR MASONRY (SILL PLATES) SHALL BE PRESSURE TREATED FOR EXTERIOR USE IN ACCORDANCE WITH AMERICAN WOOD PRESERVERS ASSOCIATION (AWPA) GUIDELINES. WOOD SHALL BE TREATED FOR ABOVE OR BELOW GROUND USE, WHICHEVER APPLIES.
6. ALL LIGHT GAUGE HARDWARE SHALL HAVE A MINIMUM G90 GALVANIZED COATING IN ACCORDANCE WITH ASTM A653 OR SHALL BE POST HOT-DIP GALVANIZED IN ACCORDANCE WITH ASTM A123 (CONNECTORS) OR A153 (FASTENERS). HARDWARE IN CONTACT WITH TREATED WOOD SHALL HAVE A MINIMUM G185 COATING, SHALL BE POST HOT-DIP GALVANIZED, OR SHALL BE TYPE 316L STAINLESS STEEL.
7. ALL CONNECTORS ARE SHOWN PLACED DIRECTLY ON THE FRAMING IN THE CONSTRUCTION DETAILS. THE CONNECTORS ARE SHOWN IN THIS MANNER FOR CLARITY. CONNECTORS CAN BE PLACED DIRECTLY ON FRAMING BEHIND THE SHEATHING OR ON TOP OF THE SHEATHING. IN EITHER CASE, THE CONNECTORS WOULD STILL BE PLACED TO BE NAILED DIRECTLY INTO FRAMING MEMBERS. ALWAYS FOLLOW THE MANUFACTURER'S INSTRUCTIONS FOR INSTALLATION REQUIREMENTS.
8. NAILS SPECIFIED SHALL BE COMMON WIRE NAILS OR EQUIVALENT PNEUMATIC NAILS UNLESS NOTED OTHERWISE. FOR EXAMPLE, 10d PNEUMATIC NAILS WITH 0.131" SHANK DIAMETER AND 2.5" OR GREATER LENGTH SHALL BE EQUIVALENT TO 8d COMMON NAILS WITH 0.131" SHANK AND 2.5" LENGTH.
9. ANCHORS SHALL BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS. ANCHOR BOLTS SHALL BE MINIMUM ASTM F1554, GRADE 36; THREADED BOLTS SHALL BE MINIMUM ASTM A325; ALL THREAD ROD SHALL BE MINIMUM ASTM A36.
10. FLOOR, CEILING, AND ROOF FRAMING SHALL BE SYP, GRADE 2 OR BETTER, SIZED AND SPACED IN ACCORDANCE WITH AFPA AMERICAN WOOD COUNCIL STANDARD PS20 SPAN TABLES OR THE SPAN TABLES CONTAINED IN CHAPTER 23 OF THE 2018 IBC, UNLESS NOTED OTHERWISE. EXTERIOR WALLS SHALL BE FRAMED USING SPF 2x4 STUDS @16" C-C.
11. REFER TO GYPSUM ASSOCIATION GA-216-2016, TABLE 1 FOR MAXIMUM FRAMING SPACING OF SINGLE LAYER GYPSUM BOARD WITH VARIOUS TEXTURES. FOR INTERIOR WALLS AND CEILINGS, FASTEN GYPSUM WALLBOARD WITH 6d COOLER NAILS AT 7" CENTER-TO-CENTER ON EDGES AND 7" CENTER-TO-CENTER IN FIELD. 6d COOLER NAILS MAY BE SUBSTITUTED WITH 1.25" TYPE S OR W, #6 DRYWALL SCREWS.
12. TRUSSES (WHERE SUPPLIED) SHALL BE DESIGNED BY MANUFACTURER. FOLLOW MANUFACTURER'S INSTRUCTIONS FOR INSTALLATION. TRUSSES SHALL BE DESIGNED IN ACCORDANCE WITH ANSI/TPI 1 "NATIONAL DESIGN STANDARD FOR METAL PLATE CONNECTED WOOD TRUSS CONSTRUCTION." MANUFACTURER TO SUBMIT DESIGN SPECIFICATIONS INDICATING DESIGN WIND SPEED (MIN. 145 MPH, EXPOSURE B, LOW-RISE PER ASCE 7-16), DEAD AND LIVE LOADS, HEIGHT ABOVE GROUND, AND AMOUNT OF UPLIFT AT THE BEARING POINTS. TRUSSES SHALL BE SPACED NO MORE THAN 24" ON CENTER AND SHALL BE DESIGNED FOR AN ENCLOSED/PARTIALLY OPEN BUILDING PER ASCE 7-16. ADJUST CONNECTOR TYPE AND CAPACITY PER MANUFACTURER'S DESIGN IF MORE RESTRICTIVE THAN TRUSS CONNECTOR DETAIL SHOWN. TRUSS LAYOUTS AND REACTION REPORTS HAVE NOT BEEN REVIEWED BY ADVANTAGE ENGINEERING, LLC OR THE ENGINEER OF RECORD. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW THE TRUSS LAYOUTS AND REACTION REPORTS AND TO ENSURE THAT THE SPECIFIED CONNECTORS SHOWN ON THE DESIGN DRAWINGS ARE SUFFICIENT TO RESIST THE UPLIFT AND LATERAL LOADS IMPOSED. A COPY OF THE REPORTS MAY BE FORWARDED TO ADVANTAGE ENGINEERING FOR REVIEW.
13. COMPONENTS & CLADDING SYSTEMS (ROOFING, SHUTTERS, ETC.) SHALL BE RATED FOR 145 MPH IN ACCORDANCE WITH ASCE 7-16. FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR INSTALLATION. DOORS AND WINDOWS SHALL MEET A MINIMUM DESIGN PRESSURE RATING OF DP50 (DP30 PER ASD) PER ANSI/AAMA/NWWDA 101/I.S.2-97 (UP TO 40' MEAN ROOF HEIGHT). GLAZED OPENINGS SHALL MEET THE REQUIREMENTS OF THE LARGE MISSILE TEST OF ASTM E 1996 AND ASTM E 1886 OR BE PROTECTED BY WOOD STRUCTURAL PANELS IN ACCORDANCE WITH TABLE 1609.2 OF THE 2018 IBC.
14. DESIGN BASED ON PLANS DESIGNED BY GEORGETOWN COUNTY'S FACILITIES SERVICE DEPARTMENT TITLED "GEORGETOWN COUNTY BIG DAM RECYCLE" DATED JULY 11, 2016.

DETAIL D
CONNECTION DETAIL FOR A TRUSS GIRDER/BEAM ON A SLAB FOUNDATION

DETAIL E
FRAMING & SHEATHING CONSTRUCTION DETAILS
ONE STORY, SLAB FOUNDATION

SOUTH CAROLINA ADVANTAGE ENGINEERING LLC No. C03896 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER JAMES ANTHONY HARRISON No. 25537

SEAL

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LIGHT COMMERCIAL RESIDENTIAL INDUSTRIAL

ADVANTAGE ENGINEERING, LLC

"LET US BE YOUR TECHNICAL ADVANTAGE"

STRUCTURAL, MECHANICAL, PLUMBING & ELECTRICAL ENGINEERING

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E-mail: info@aelec.com

202 Mechanic Avenue
P.O. Box 1000
Georgetown, SC 29442

WIND & SEISMIC DESIGN DETAILS
BIG DAM SWAMP RECYCLE CENTER
17 BIG DAM SWAMP DRIVE
ANDREWS, SC 29510

DWG BY:	JAH
DSN BY:	JAH
DATE:	07-08-21
SCALE:	NA

REV#	DATE
1	XX/XX/XX
2	XX/XX/XX
3	XX/XX/XX
4	XX/XX/XX

SHEET NO.

S1

SECTION A

SCALE: ½"= 1'-0"

SECTION B

SCALE: ½"= 1'-0"

FOUNDATION PLAN

SCALE: ½"= 1'-0"

FOUNDATION NOTES

1. SOLID SOIL BEARING CAPACITY TO BE 2000 PSF MINIMUM. REMOVE ORGANIC MATERIAL AND POUR FOOTINGS AND SLAB ON COMPACTED NATURAL GROUND. IF SOIL IS SUSPECT OR OTHER THAN NATURAL GROUND, A SOIL ANALYSIS BY A QUALIFIED GEOTECHNICAL ENGINEER IS RECOMMENDED. SUCH ANALYSIS MAY SHOW REASON TO REDESIGN FOUNDATION.
2. CONCRETE WORK SHALL MEET THE REQUIREMENTS OF ACI 318-19, "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE." CONCRETE TO HAVE A 3000 PSI MINIMUM COMPRESSIVE STRENGTH.
3. REBAR SHALL MEET THE REQUIREMENTS OF ASTM A615, GRADE 40 OR 60. REBAR SPLICES SHALL BE TIED AND LAPPED A MINIMUM OF 40 DIAMETERS (E.G. 25" FOR #5 REBAR) UNLESS NOTED OTHERWISE. WELDED WIRE REINFORCEMENT (WWR) SHALL MEET THE REQUIREMENTS OF ASTM A82/A185.
4. SAW CUT SLAB CONTROL JOINTS ON MAXIMUM 10' GRID EACH WAY FOLLOWING CONCRETE PLACEMENT (UNHEATED AREAS ONLY).
5. PROVIDE WARRANTED TERMITE TREATMENT PER 2018 IBC PRIOR TO CONCRETE PLACEMENT OR TREAT ALL INTERIOR AND EXTERIOR STRUCTURAL WOOD AND SHEATHING A MINIMUM OF 3 FEET UP FROM THE SLAB WITH BORA-CARE. CONSULT BORA-CARE TECHNICAL BULLETIN BC-W1-0202 FOR PROPER MIXING TECHNIQUES AND APPLICATION.

SOUTH CAROLINA
ADVANTAGE ENGINEERING LLC
No. C03896
CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA
REGISTERED PROFESSIONAL ENGINEER
No. 15537
JOHN ANTHONY HARRISON
SEAL

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FOUNDATION DESIGN DETAILS
BIG DAM SWAMP RECYCLE CENTER
17 BIG DAM SWAMP DRIVE
ANDREWS, SC 29510

DWG BY:	JAH
DSN BY:	JAH
DATE:	07-08-21
SCALE: NOTED	
REV#	DATE
1	XX/XX/XX
2	XX/XX/XX
3	XX/XX/XX
4	XX/XX/XX

SHEET NO.

F1

GENERAL CONSTRUCTION REQUIREMENTS

GENERAL

These design documents are diagrammatic. They describe in general terms only the scope of work to be performed. Specific information presented in the documents beyond that necessary to describe the project is presented solely for the local authority's plans review staff for its use in granting a building permit.

The drawings show approximate locations for equipment, devices, and materials that are not verified by the owner or with actual field conditions. Fully coordinate every device and equipment location among all of the contractor trades and with the owner, if necessary. Install every piece of equipment and all control devices so that all code-required and manufacturer-recommended servicing clearances are free of obstruction.

The contractor shall supplement these design documents with all details of construction; all material, device, and equipment installation instructions; any needed manufacturer, supply house, and vendor assistance; shop drawings, and field installation drawings necessary to complete the project.

The design intent of the engineer is that the work be performed according to all relevant codes, all referenced standards, and the most current interpretations of the code as stated by the authority having jurisdiction. If anything is necessary for the complete, proper, and safe installation, operation, and function of the work described in these documents, the contractor shall provide it even if not clearly indicated in these documents.

The contractor shall be responsible for fully understanding the actual field conditions of the project device, and equipment installation instructions; any needed manufacturer, supply house, and vendor assistance; shop drawings, and field installation drawings necessary to complete the project.

The contractor shall be responsible for fully understanding the actual field conditions of the project site and the scope of work as expressed by the party to whom the contractor has contracted to perform the work. Therefore, the contractor shall review these documents thoroughly for all conflicts, and for any aspect of the work shown in these documents that is at variance with the contractor's understanding of the work. The contractor shall perform all work necessary to complete the facility owner's intended scope of work for the project.

CONTRACTOR COORDINATION AND PRICING:

Visit the site of this project as often as necessary to become thoroughly familiar with all existing field conditions and the full extent of the work to be performed. Verify every aspect of the proposed work as described or implied by these design documents prior to submitting a price for this work.

The contractor's price shall be based upon these design documents. Include a 5% contingency amount for discretionary changes requested for by the owner, tenant, architect, engineer, inspector, or contractor trade.

Any pricing presented prior to the contractor's receipt of these design documents shall be immediately revised to show all adjustments to the original price. Any cost incurred prior to obtaining all clarifications to these documents, or to the designer's or owner's intent shall be solely at the contractor's risk.

The engineer has prepared these design documents from what may be inaccurate and incomplete information and has not independently verified all existing field conditions. Take actual field measurements at the job site instead of scaling the drawings.

Where the engineer has not been retained for construction administration services, all discrepancies, conflicts, and interferences shall be brought to the engineer's attention prior to commencing work and incurring cost, or resolved by coordination among all the trades during construction. Inform the engineer of any deviations made from the design documents. All trades shall provide all information about construction activities and coordination issues to the general contractor.

All requests for information (RFI) shall be submitted with copies of relevant portions of the plans and specifications with written, legible comments defining the information desired. Any poorly prepared or inadequately documented RFI shall be rejected. RFIs indicating failed coordination among trades or a poor understanding of the project scope or design intent shall be rejected at the engineer's discretion.

QUALIFICATIONS AND STANDARDS OF WORKMANSHIP:

Perform all work using experienced, skilled craftsmen licensed in their respective trades, and competent to performed the work involved with this project.

All work and materials shall comply with applicable state, local, and national codes (including OSHA). Compliance with the latest edition of the International Building Code and these specifications shall be the absolute minimum standard of acceptance.

MATERIALS AND METHODS:

Provide all cutting and patching necessary to properly install all work. Repair any damage done.

Perform all excavating and backfilling in a safe manner. Protect the stability of all structures (or any part thereof) and any work installed by other trades. Restore all damaged walks, walls, paved areas, or graded areas to their final finish appearance.

Provide only new materials and equipment listed and labeled (for the use intended) by an approved third party laboratory service such as Underwriter's Laboratories, Inc.

Provide appropriately-rated equipment and device enclosures. Equipment and devices installed anywhere outdoors or at indoor washdown locations shall have NEMA 3R enclosures as a minimum.

Seal all pipe, conduit, wiring, and duct penetrations through fire-rated walls or floors using approved sealing materials and following the details in these documents. Verify the UL fire-rated assembly prior to sealing the penetration to avoid unapproved installations. All non-rated assemblies penetrated shall be draft-stopped with materials common to the construction of the wall, floor, slab, or ceiling. All pipes, conduits, and wiring penetrating block walls or slabs shall be sleeved.

UTILITY AND BUILDING OWNER'S REPRESENTATIVE COORDINATION:

Utility regulations shall govern service connections and metering provisions.

Fully coordinate with the power, telephone, CATV, gas, and water utilities to provide services to the facility. Provide any necessary concrete pads or underground ducts requested by the utility. The Owner will pay for all service connection, line extension, and impact fees directly to the appropriate utility.

Coordinate all outages and down-time that will impact building tenants with the authorized representative of the building owner.

Provide temporary services as necessary to support all construction activities.

SUBMITTALS AND TESTING:

Submit shop drawings and catalog data in four (4) copies for all electrical light fixtures, equipment, and devices; all HVAC equipment, controls, devices, and insulation; all plumbing fixtures, equipment, devices, and insulation; and all communication equipment and devices not otherwise contained in the design documents.

The contractor shall retain installation instructions, manufacturer's packing documents, etc., for all life safety related equipment as evidence to the authority having jurisdiction that the correct materials and devices were used in the construction, penetration, and sealing of a penetration for all rated assemblies.

Testing shall comply with all local, state, and national codes, and with the requests of the local inspector. The contractor shall bear the full cost for any destructive testing necessary to demonstrate compliance with these drawings and code.

All devices and equipment shall be turned "on" and "off", switched, used, etc., to demonstrate proper installation and satisfactory operation. In particular, HVAC dampers shall be tested after installation and restored to full capability at the conclusion of the testing.

PERMITS, WARRANTY, AND INSPECTIONS:

Contractor shall obtain and pay for any and all required permits, inspections, certificates of inspections and approval, and the like and shall deliver such certificates to the owner. The architect and engineer shall be notified of all inspection requests at the same time as the inspection authority.

Warrant all materials, equipment, and workmanship shown or implied by these documents to be free of defects for a period of one year, starting from the time of acceptance by the building owner. If within one year after the acceptance date any work or equipment is found to be defective, correct it promptly at no cost to the building owner.

PLUMBING SPECIFICATIONS

GENERAL:

Provide all work, equipment, services, labor, and materials necessary for the Installation of complete and functional waste, vent, and domestic cold and hot water piping systems, fixtures, and equipment as described or implied by the design documents.

All plumbing to comply with the 2018 edition of the International Plumbing Code.

See additional notes and Plumbing Fixture Schedule on Drawing PME2.

PIPING, PIPE FITTINGS, PIPE HANGERS/SUPPORTS, & INSULATION:

Domestic water piping above ground shall be seamless copper tubing, ASTM B-88-61, Type L, hard drawn copper, cross-linked polyethylene (PEX) plastic tubing conforming to ASTM F 877, cross-linked polyethylene/aluminum/cross-linked polyethylene (PEX-AL-PEX) pipe conforming to ASTM F 1281, or chlorinated polyvinyl chloride (CPVC) pipe conforming to ASTM D 2846 and ASTM F 441. All hot water distribution piping shall have a minimum pressure rating of 100 psi at 180F.

Underground piping shall be seamless copper tubing, Type K, conforming to ASTM B-88, PEX plastic tubing conforming to ASTM F 876, or schedule 80 CPVC conforming to ASTM F 441 with approved solvent.

Sanitary waste and vent lines shall be cast iron, ABS, DWV, and/or PVC Schedule 40.

Copper pipe fittings shall be wrought metal soldered joint type conforming to ANSI B16.22. PEX tubing fittings shall be metal insert fittings utilizing a copper crimp ring for SDR9 tubing and conforming to ASTM F 1807. Polyethylene pipe fittings shall conform to ASTM D 2609. CPVC pipe fittings shall conform to ASTM F 437, ASTM F 438, and ASTM F 439.

Cast iron fittings shall be cast iron 'no hub' types with stainless steel couplings.

Install piping and related items neatly with routes generally chosen to be parallel and perpendicular to building lines. Horizontal sanitary piping 2½" or less shall be installed with a slope of ¼" per linear foot. All waste piping 3" to 6" shall be installed with a slope of ⅛" per linear foot.

Piping shall be arranged so that all valves, traps, and cleanouts are easily accessed. Ream piping to remove all burrs, fins, and foreign materials. Thoroughly clean all piping before soldering. Use only lead-free 95/5 solder. Seal the spaces around all piping penetrations in an approved manner.

Provide chromium-plated escutcheons with set screws for all exposed water supplies, traps and wall cleanouts.

All water piping shall be continuously insulated with Armaflex II or approved equal with a conductivity rating between 0.24 and 0.28.

Vent pipes shall be flashed and made watertight at the roof.

Install shut off valves for each plumbing fixture.

Install a 12" long air chamber at the top of each cold and hot water riser to prevent air hammer.

FIXTURES AND EQUIPMENT:

All plumbing fixtures shall meet or exceed the descriptions on the drawings. See Plumbing Fixture Schedule on Drawing PME2.

Water closets, lavatories, urinals, and sinks shall be by American Standard, Kohler, Moen, Just, or Eljer.

Faucets, hydrants, valves, and other accessories shall be by Briggs, Mansfield, Delta, Kohler, Eljer, Sloan, or Moen.

Backflow preventers shall be installed on the service, if not already equipped. Size per service. Backflow preventer shall be Watts or Febco.

Water heaters shall have an efficiency rating equal to or exceeding ASHRAE 90, revised and so labeled.

TESTING:

Water piping shall be hydrostatically tested with potable water for two hours at no less than 100 psi.

Drainage, vent, and branches shall be tested with water or air per local codes and the International Plumbing Code.

STERILIZATION:

All new domestic water piping, fixtures, and faucets shall be flushed clean. Remove and clean all aerators.

All new domestic water pipe shall be sterilized in accordance with the South Carolina Board of Health and AWWA C601-537.

The sterilization solution shall be allowed to remain in the system for a minimum period of 24-hours. During the sterilization period, all valves and outlets shall be opened and closed several times. After sterilization, the solution shall be flushed from the system with clean water until residual chlorine content is not greater than 1.0 parts per million unless otherwise directed. After the system has been flushed, additional samples will be taken and tests made. If the water is found unsafe for human consumption, the sterilization procedure specified herein before, shall be repeated.

MECHANICAL SPECIFICATIONS

GENERAL:

Provide all work, equipment, services, labor, and materials necessary for the installation of complete and functional mechanical systems, equipment, and ductwork as described or implied by the design documents.

All HVAC equipment and ducts shall comply with the 2018 edition of the International Mechanical Code.

PIPING, PIPE FITTINGS, PIPE HANGERS/SUPPORTS, & INSULATION:

Refrigerant piping shall be Type 'ACR' hard drawn copper conforming to ANSI B-31.5 or ASTM B280 and delivered to the job site in 25, 35, or 50 foot "line sets".

Condensate drain piping shall be Type 'L' hard drawn copper conforming to ASTM B-88 or Schedule 40 PVC.

Copper pipe fittings shall be wrought metal solder joint type conforming to ANSI B16.22.

Install piping and related items neatly with routes generally chosen to be parallel and perpendicular to building lines. Piping shall be arranged (and traps installed where necessary) to allow proper return of oil to the compressor.

Ream piping to remove all burrs, fins, and foreign materials. Thoroughly clean all piping before soldering. During soldering, purge piping with nitrogen. Use only silver solder with non-corrosive flux.

Provide P-traps on each condensate drain and connect all piping to equipment so that the trap and evaporator pan can be easily serviced. Maintain access to all valves and equipment.

Space hangers and supports not to exceed 5'-0". Provide pipe covering protection saddles at all supports for insulated piping. Use clamps and metal straps to secure refrigerant lines. For other piping use 10-gauge sheet metal saddles measuring one-half the circumference of the insulation and a minimum of 12 inches long.

All refrigerant equipment not tested at the factory shall be shut off from the rest of the system and tested. Piping systems shall be tested after installation is complete and before any insulation is applied. All controls and other apparatus that may be damaged by the test pressure shall be removed before the tests are made.

Refrigerant lines shall be tested at 150 PSIG with dry nitrogen. Pressure shall be maintained for 60 minutes without loss of pressure level. Each joint shall be checked for leaks with a soap solution. Testing and repair shall continue until there is no loss of pressure. After satisfactory pressure test, high vacuum pumps (do not use compressor) shall be connected to the system and the system shall be evacuated to a pressure of 0.2 inches of mercury at an ambient system temperature greater than 36% RH, 127F for 12 hours minimum. After this, the vacuum equipment shall be isolated by valve from the system, and the vacuum in the system broken by charging the system with refrigerant.

All piping specialties shall be compatible with the refrigerant used, sized and rated for the system capacities, having soldered connections, and shall be manufactured by Henry, Alco, or Sporlan.

EQUIPMENT:

All equipment shall conform to the drawing schedules and notes. Equal products by different manufacturers will be accepted provide the performance and electrical requirements are the same. Provide all appurtenances necessary for the complete and total installation of a system which shall perform satisfactorily under typical weather conditions and situations to be expected.

All compressors shall have five year warranties.

Install all equipment and controls so that the system meets or exceeds the performance characteristics of the equipment manufacturer.

Provide an appropriate thermostat, control wiring, and all sensor/control devices necessary for the proper operation of the equipment. Control wiring materials and methods shall conform to the electrical specifications.

Mechanical and electrical components and systems shall be designed to resist the forces for Seismic Design Category D2 in accordance with Section 13.6 of ASCE 7-16.

ELECTRICAL SPECIFICATIONS

GENERAL:

Provide all work, equipment, services, labor, and materials necessary to install complete and functional electrical and communication systems as described or implied by the design documents.

All electrical work to be done in accordance with the 2017 edition of the National Electrical Code. Electrical components and systems shall be designed to resist the forces for Seismic Design Category D2 in accordance with Section 13.6 of ASCE 7-16.

CONDUITS:

All conduit shall be ½" minimum size and zinc-coated EMT, except in wet, damp, or washdown areas where zinc-coated rigid steel (GRS) or immediate metallic conduit (IMC) shall be used. See NOTE under "Other Requirements."

EMT fittings shall be steel set screw types.

Flexible conduit connectors shall be steel compression types.

Secure conduits using manufactured, galvanized straps. Tie wire is not allowed.

Route all conduit concealed above ceilings, in walls or casework, or below grade. Route all conduits parallel or perpendicular to structural elements and in groups. When installed at the roof or ceiling, groupings shall be single depth and tight against the structure.

Thoroughly coat all underground metallic conduits with two coats of asphaltum or bitumastic paint. Conduits installed underground on the exterior of the building shall be buried 2'-0" minimum under roadways and parking areas.

Rigid nonmetallic conduit may be used only for the secondary underground service, the underground telephone service conduit, and branch circuits and telephone system conduits located below the concrete floor slab on grade or buried on the exterior of the building. All PVC shall be schedule 40 (unless noted otherwise) polyvinyl chloride UL listed for use with 75C conductors. Installation shall comply with all codes, the utility company regulations, and the manufacturer's instructions.

All PVC components of the PVC conduit system shall be furnished from the same manufacturer and used specifically for their intended purpose. Make all field bends according to the manufacturer's instructions and UL requirements. PVC that has been heated with a torch shall be replaced. PVC shall not penetrate slab on grade for any reason; use GRS conduit for all penetrations.

Provide pull cords in all empty conduits.

All outlet boxes shall be galvanized steel except that cast boxes with gasketed covers shall be required in all interior wet areas and on the exterior of the building. Outlet boxes shall be no less than 4" x 4" x 2" deep and mounted 18" above finished floor or 44" AFF over countertops/desks/etc., unless noted otherwise.

WIRING:

Conductors shall be copper, THHN/THWN, solid for #10 AWG through #14 AWG, and stranded for all larger sizes. Control circuit conductors may be #14 AWG solid. All 208/120 VAC conductors shall be color-coded Black, Red, Blue, White, and Green for Phases A, B, C, Neutral, and Ground respectively. Type MC with saddle connectors is permitted.

All conductors and cables shall be installed in conduits and tested for continuity and ground before being energized. All faulty conductors shall be replaced.

Controls wiring for equipment provided by the another trade shall be provided by the trade furnishing the equipment in strict accordance with these specifications.

Verify that the electrical characteristics of the circuit(s) are correct prior to energizing the equipment.

Fully coordinate with the other trades to determine the power requirements and connection points for equipment furnished by others. Provide electrical power to each piece of equipment based upon the manufacturer's wiring diagrams and unit mounted nameplates.

The conduit and neutral conductors of the electrical system and all electrical equipment shall be grounded. Provide an insulated equipment grounding conductor with every circuit. The conduit system and neutral conductors shall be bonded together only at the service entrance equipment. Grounding at the service entrance shall comply with NEC Article 250.

DEVICES:

All wiring devices shall be commercial grade. The color shall be selected by the Architect from the manufacturer's standard colors.

Switches shall be quiet operating types rated 20A.

Receptacles shall be NEMA 5-20R types unless otherwise noted.

Provide a single multi-gang box and device plate for all group mounted wiring devices.

All coverplates shall be plastic types.

Wall receptacles shall be grounded. Wall receptacles shall be ground fault interrupter circuits at locations within six feet of a water source, all exterior and ground level applications, and other code required locations.

POWER EQUIPMENT:

Load centers shall be dead-front safety type with full height, aluminum bussing, and a nominal 22 inches wide cabinet. All circuit breakers shall be molded case, bolt-on, automatic thermal magnetic type, calibrated for 40C, or ambient compensating. All directories shall be typed and so labeled in panels.

Safety switches shall be general duty, quick-make, quick-break, types of the size and fuse ampacity as denoted on the drawings. Provide ground bus, solid neutral (when circuit has a neutral), Class RK-5 dual element time delay fuses, rejection type fuse holders, and NEMA rated enclosure.

Manual motor starters shall be motor sentinel type with properly sized overload heaters and disconnect switch (toggle type) mounted in a NEMA rated enclosure.

All lugs, terminals, and enclosures for power equipment (such as transformers, panels, circuit breaker, switches, and starters) shall be rated for 75C conductors.

LIGHTING EQUIPMENT:

All light fixtures shall be provided complete with lamps, all necessary accessories, and as described on the drawings. Coordinate all construction details such as proper fixture trim with ceiling construction.

Ceiling mounted or suspended light fixtures shall be supported by a method rate at least five times the support weight. The method shall also comply with Articles 410-30 and 410-36, as appropriate, of the 2017 NEC.

Emergency lighting and illuminated exit signs shall be provided with an emergency source of power and comply with Section 1011 of the 2018 International Building Code.

COMMUNICATION SYSTEMS:

Provide complete telephone, cable, and network services, as directed by the owner.

Telephone service includes equipment not provided by the phone company and may include service entrance equipment, outlets, terminal boards and other items required for a complete operating telephone service.

Cable television includes equipment not provided by the cable company and may include service entrance equipment, outlets, and other items required for a complete operating cable service.

Network includes equipment not provided by the network provider, excluding modems, routers, servers, computers, etc., but may include CAT5 cables, outlets, and other items required for a complete operating intranet and internet service.

Coordinate installation of items provided by the telephone, cable, and network providers.

OTHER REQUIREMENTS:

Provide fuses for all equipment requiring fuses and lamps for every light fixture.

Furnish and install any miscellaneous supports, fasteners, mounts, hangers, side braces, etc., which may be required to securely anchor and support electrical equipment.

NOTE: For branch circuits utilizing #12 AWG CU or #14 AWG CU wiring, it shall be acceptable to use UL rated Armored Cable, Type ACTH, ACTHH, or ACHH. The armored cable shall comply with Article 320 of the NEC and shall have an armor of flexible metal tape and an internal bonding strip of copper or aluminum in intimate contact with the armor for its entire length to serve as an equipment grounding conductor in accordance with Section 250.118 of the NEC.

SOUTH CAROLINA
ADVANTAGE ENGINEERING LLC
No. C03896
CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA
REGISTERED PROFESSIONAL ENGINEER
No. 16537
07/28/21
MICHAEL ANTHONY HARRISON
SEAL

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LIGHT COMMERCIAL
MECHANICAL
INDUSTRIAL

ADVANTAGE ENGINEERING, LLC
"LET US BE YOUR TECHNICAL ADVANTAGE"
STRUCTURAL, MECHANICAL, PLUMBING, & ELECTRICAL ENGINEERING

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252 Mechanic Avenue
P.O. Box 1139
Georgetown, SC 29442

WIND & SEISMIC DESIGN DETAILS
BIG DAM SWAMP RECYCLE CENTER
17 BIG DAM SWAMP DRIVE
ANDREWS, SC 29510

DWG BY:	JAH
DSN BY:	JAH
DATE:	07-08-21
SCALE: NA	

REV#	DATE
1	XX/XX/XX
2	XX/XX/XX
3	XX/XX/XX
4	XX/XX/XX

SHEET NO.

PME 1

GENERAL PLUMBING NOTES

1. WASTE, VENT, AND POTABLE WATER SYSTEMS SHALL COMPLY WITH THE REQUIREMENTS AS SET FORTH IN THE 2018 INTERNATIONAL BUILDING CODE AND THE 2018 INTERNATIONAL PLUMBING CODE.
2. PREPLAN ALL WORK PRIOR TO ORDERING, PURCHASING, OR FABRICATING ANY PART OF THE WORK DESCRIBED BY THIS DRAWING.
3. IMMEDIATELY NOTIFY THE ENGINEER OF ANY CONFLICTS WITH EXISTING FIELD CONDITIONS OR THE WORK OF OTHER TRADES.
4. RESOLVE ALL CONFLICTS PRIOR TO INCURRING ANY MATERIAL OR LABOR EXPENSES.
5. COMPLY WITH THE MANUFACTURER'S TECHNICAL INSTRUCTIONS WHEN INSTALLING PLUMBING FIXTURES, MATERIALS, AND DEVICES.
6. LOCATE FIXTURES AND EQUIPMENT GENERALLY AS SHOWN ON THE PLANS; HOWEVER, COORDINATE LOCATIONS WITH ACTUAL FIELD CONDITIONS TO PRESERVE ALL CODE-REQUIRED AND MANUFACTURER-REQUESTED SERVICE CLEARANCES.
7. COORDINATE ROUTING OF ALL PIPING WITH BUILDING STRUCTURE AND WITH THE WORK OF OTHER TRADES.
8. INSULATE ALL NEW COLD AND HOT WATER PIPING.
9. ALL WORK SHALL BE IN COMPLIANCE WITH LOCAL, STATE, AND NATIONAL CODES.
10. CONTRACTOR SHALL REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS.
11. CONTRACTOR SHALL FURNISH AND INSTALL DIELECTRIC UNIONS AT ALL CONNECTIONS BETWEEN DISSIMILAR METALS.
12. CONTRACTOR SHALL FURNISH AND INSTALL ESCUTCHEONS AND COVER PLATES AT ALL FINISHED WALL OPENINGS.
13. PIPING SHALL BE DISINFECTED IN ACCORDANCE WITH STATE AND LOCAL CODE.
14. ALL PIPING SHALL BE TESTED FOR LEAKS. IF ANY LEAKS ARE DETECTED THE PIPING SHALL BE REPAIRED, RESOLDERED OR REPLACED AND RETESTED.
15. ALL SOLDER SHALL BE OF THE LEAD FREE TYPE.
16. WATER DISTRIBUTION PIPING SHALL BE CROSS-LINKED POLYETHYLENE (PEX) TUBING CONFORMING TO ASTM F 877. ALL HOT WATER DISTRIBUTION PIPING SHALL HAVE A MINIMUM PRESSURE RATING OF 100 PSI AT 180 F. UNDERGROUND PIPING LARGER THAN ¾" SHALL BE SCHEDULE 80 CPVC PIPE CONFORMING TO ASTM F-441. CPVC PIPE FITTINGS SHALL CONFORM TO ASTM F 437/ASTM F 438/ASTM F 439.
17. WASTE AND VENT PIPING SHALL BE POLYVINYL CHLORIDE (PVC) PLASTIC SCHEDULE 40 PIPE (TYPE DWV) CONFORMING TO ASTM D 2665/ASTM D 2949/ASTM F 1488 OR CAST IRON PIPING CONFORMING TO ASTM A 74/ASTM A 888. PVC PIPE FITTINGS SHALL CONFORM TO ASTM D 2665/ASTM D 3311/ASTM F 1866. CAST IRON PIPE FITTINGS SHALL CONFORM TO ASME B 16.4/ASME B 16.12/ASTM A 74/ASTM A 888/CISPI 301.
18. MAIN WASTE PIPING (3") SHALL HAVE A MINIMUM 0.125" PER 12" SLOPE. ALL BRANCHES SHALL HAVE A MINIMUM 0.25" PER 12" SLOPE.
19. GENERAL CONTRACTOR TO PROVIDE PRE-MOLDED PIPE SEALS COMPATIBLE WITH ROOFING MATERIALS FOR ALL VENTS THROUGH THE ROOF.
20. PIPING SYSTEMS SHALL COMPLY WITH THE PROVISIONS IN SECTION 13.6.7 OF ASCE 7-16.
21. SEE ADDITIONAL NOTES ON DRAWING PME1.

PLUMBING FIXTURE SCHEDULE

P-1 HANDICAPPED WATER CLOSET, FLOOR MOUNTED, WATER SAVER TYPE (1.6 GAL/FLUSH), ELONGATED BOWL, OPEN FRONT SEAT, COVER AND SUPPLY;ELJER MODEL# 091-2175 OR EQUAL, WHITE WITH FLUSH ACTUATOR.

P-2 SINGLE COMPARTMENT SELF RIMMING UNIMOUNT CAST IRON SINK MOUNTED 34" AFF; ELJER MODEL#212-1083 OR EQUAL, WHITE. SUPPLY WITH ELJER MODEL# 35820030 ADA COMPLIANT, POLISHED CHROME FAUCET OR EQUAL.

P-3 2.5 GALLON ELECTRIC WATER HEATER, 1.2 KW; HOME HEATING PRODUCTS MODEL# HHP2.5, OR EQUAL.

NOTES
1. PROVIDE "A" SIZE PDI WATER HAMMER ARRESTOR ON HOT AND COLD WATER SUPPLIES TO ALL FIXTURES OR BRANCH PER PDI-WH 201 STANDARD AND CONFORMING TO ASSE 1010.
2. OFFSET TO AVOID OBSTRUCTIONS WHERE NECESSARY.

DETAIL A

SHOCK ARRESTOR

HANDICAP RESTROOM DETAILS

WASTE & VENT LEGEND

— — — — — —	VENT
————————	WASTE BELOW SLAB
— - — — - —	WASTE BELOW GRADE
(1)	KEY NOTE NUMBER
VTR	VENT THROUGH ROOF

NOTES KEYED TO PLANS

(1) INSTALL SPLASH SHIELD ON GROUND FOR DRAINAGE PIPES FROM WATER HEATER.

(2) STUB 5 FEET FROM BUILDING. INSTALL BALL VALVE IN C.I. BOX WITH BACKFLOW PREVENTER. CONTINUE TO MAIN POTABLE WATER SUPPLY.

(3) 1" INCOMING WATER SERVICE FROM FIRE STATION - SEE SITE PLAN.

POTABLE WATER LEGEND

————————	NEW COLD WATER PIPE
—·—·—·—·—	NEW HOT WATER PIPE
	BALL VALVE
	BACKFLOW PREVENTER
	HOSE BIBB WITH VACUUM BREAKER A MINIMUM OF 6" ABOVE (IPC 608.15.4)
(1)	KEY NOTE NUMBER
BG	PIPING BELOW GRADE
IW	PIPING IN WALL

WASTE & VENT PLAN

POTABLE WATER PLAN

GENERAL MECHANICAL NOTES

1. HEATING, VENTILATING, AND AIR CONDITIONING SYSTEMS SHALL COMPLY WITH THE REQUIREMENTS AS SET FORTH IN THE 2018 INTERNATIONAL BUILDING CODE AND THE 2018 INTERNATIONAL MECHANICAL CODE.
2. PREPLAN ALL WORK PRIOR TO PURCHASING, ORDERING, OR FABRICATING ANY PART OF THE WORK DESCRIBED ON THESE DRAWINGS.
3. IMMEDIATELY NOTIFY THE ENGINEER OF ANY CONFLICTS WITH EXISTING FIELD CONDITIONS OR THE WORK OF OTHER TRADES.
4. RESOLVE ALL CONFLICTS PRIOR TO INCURRING ANY MATERIAL OR LABOR EXPENSES.
5. COMPLY WITH THE MANUFACTURER'S TECHNICAL INSTRUCTIONS WHEN INSTALLING MECHANICAL EQUIPMENT, DEVICES, AND OTHER MATERIALS. PROVIDE ALL APPURTENANCES NECESSARY TO PROPERLY INSTALL EQUIPMENT, DEVICES, AND OTHER MATERIALS.
6. LOCATE EQUIPMENT GENERALLY AS SHOWN ON THE PLANS; HOWEVER, COORDINATE LOCATIONS WITH ACTUAL FIELD CONDITIONS TO PRESERVE ALL CODE-REQUIRED AND MANUFACTURER - REQUESTED SERVICE CLEARANCES.
7. COORDINATE THE ROUTING OF ALL PIPING WITH THE BUILDING STRUCTURE AND WITH THE WORK OF OTHER TRADES.
8. SEE SPECIFICATIONS ON DRAWING PME1 FOR ADDITIONAL REQUIREMENTS.
9. HEATING AND COOLING LOADS BASED UPON A MAXIMUM OCCUPANCY OF 1 PERSON.
10. MECHANICAL COMPONENTS SHALL BE SECURED TO THE BUILDING STRUCTURE/ FOUNDATION IN ACCORDANCE WITH SECTION 13.6 OF ASCE 7-16 FOR SEISMIC DESIGN CATEGORY D2. PIPING SYSTEMS SHALL COMPLY WITH THE PROVISIONS IN SECTION 13.6.7 OF ASCE 7-16.

NOTES KEYED TO PLAN:

(1) CARRIER MODEL# 38MHRBQ09AA3 HEAT PUMP CONDENSER (9,000 BTUH COOLING CAPACITY & 9,800 (47F) / 7,500 (17F) BTUH HEATING CAPACITY)

(2) CARRIER MODEL# 40MHHQ09---3 HEAT PUMP INDOOR UNIT. MOUNT BELOW CEILING IN ACCORDANCE WITH MANUFACTURER'S CLEARANCES.

(3) BROAN MODEL 684 CEILING EXHAUST FAN (80 CFM). INTERLOCK WITH BATHROOM LIGHTING AND PROVIDE WITH A BROAN MODEL# 885AL 4" HOODED WALL CAP.

(4) ½" CONDENSATE DRAIN DOWN TO CONCRETE SPLASH BLOCK AT GRADE.

MECHANICAL PLAN

SOUTH CAROLINA ADVANTAGE ENGINEERING LLC No. C03896 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER ANTHONY HARRISON No. 19537 07/08/21

SEAL

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PLUMBING & MECHANICAL PLANS
BIG DAM SWAMP RECYCLE CENTER
17 BIG DAM SWAMP DRIVE
ANDREWS, SC 29510

DWG BY:	JAH
DSN BY:	JAH
DATE:	07-08-21
SCALE:	¼" = 1'-0"
REV#	DATE
1	XX/XX/XX
2	XX/XX/XX
3	XX/XX/XX
4	XX/XX/XX

SHEET NO.

PME 2

LOAD CALCULATIONS FOR:
BIG DAM SWAMP RECYCLE CENTER
17 BIG DAM SWAMP DRIVE
GEORGETOWN COUNTY, SC

SERVICE LOAD (208 SQ FT BUILDING)
SERVICE: 208/120v 3PH, 4W

CONNECTED LOAD	CONNECTED KVA	DEMAND FACTOR	DEMAND KVA
LIGHTS			
INTERIOR (Office Building - 3.5 VA/sf x 208 sf)	0.728	1.00	0.728
EXTERIOR	0.013	1.25	0.016
SIGN	0.000	1.25	0.000
RECEPTACLES			
1ST 10 KVA	1.440	1.00	1.440
REMAINDER	0.000	.50	0.000
HVAC EQUIPMENT	1.331	1.00	1.331
MISC EQUIPMENT	63.775	1.00	63.775
KITCHEN EQUIPMENT	1.920	1.00	1.920
WATER HEATERS	0.000	1.25	0.000
LARGEST MOTOR (Compactor #3)	27.348	.25	6.837
TOTAL DEMAND KVA (NEC CALCULATED)			76.047
TOTAL DEMAND AMPS (NEC CALCULATED)			211.34A
TOTAL NEUTRAL DEMAND KVA (NEC CALCULATED)			69.210
TOTAL NEUTRAL DEMAND AMPS (NEC CALCULATED)			192.34A

PANEL "A"

VOLTAGE: 208/120
PHASE: 3 WIRE: 4
MAIN DEVICE: MLO

BUS RATING: 225A
MCB RATING:
KAIC RATING: 25 SER.

MOUNTING: SURFACE
ENCLOSURE: NEMA 3R
VENDOR: SQUARE D
MODEL NQ430L2C

	CKT. NO.	BKR. SIZE	CONDUCT. H	CONDUCT. N	CONDUCT. G	COND	CKT. LOAD (KVA)	SERVICE	SERVICE	CKT. LOAD (KVA)	COND	CONDUCT. H	CONDUCT. N	CONDUCT. G	BKR. SIZE	CKT. NO.	
A	1	15A	14	14	14	½"	0.237	LIGHTS & RR FAN	RECEPTACLES - REAR	0.180	½"	12	12	12	20A	2	A
B	3	20A						SPARE	RECEPTACLES - RIGHT	1.080	½"	12	12	12	20A	4	B
C	5	20A						SPARE	RECEPTACLES - LEFT	2.100	½"	12	12	12	20A	6	C
A	7	60A	4	4	10	1"	5.398	COMPACTOR #1 (15 hp) [1]	WATER HEATER	1.200	½"	12	12	12	20A	8	A
B	9	60A	4				5.398		HEAT PUMP (HP-1)	0.666	½"	14	14	14	15A	10	B
C	11	60A	4				5.398			0.666		14			15A	12	C
A	13	60A	4	4	10	1"	5.398	COMPACTOR #2 (15 hp) [1]	SEWER LIFT STATION	1.373	½"	10	10	10	30A	14	A
B	15	60A	4				5.398			1.373		10			30A	16	B
C	17	60A	4				5.398									18	C
A	19	125A	1/0	1/0	6	1½"	9.116	COMPACTOR #3 (30 hp) [2]								20	A
B	21	125A	1/0				9.116									22	B
C	23	125A	1/0				9.116									24	C
A	25															26	A
B	27															28	B
C	29															30	C

NOTES:
1. PROVIDE WITH A 3-POLE 60A FUSIBLE DISCONNECT AT COMPACTOR. SUPPLY WITH 60A FUSES.
2. PROVIDE WITH A 3-POLE 125A FUSIBLE DISCONNECT AT COMPACTOR. SUPPLY WITH 110A FUSES.

POWER PLAN

POWER RISER DIAGRAM

OUTSIDE WALL

ELECTRICAL SYMBOL LEGEND	
	RECESSED OUTDOOR CAN LIGHT - LITHONIA WF6 LL LED 27K BN; 12.7W
	LED WRAPAROUND - LITHONIA LBL4 LP835 (CI-254RJY); 32W
	EXHAUST FAN
$	SINGLE POLE SWITCH; MOUNT 44" AFF, UNO
	DUPLEX OUTLET, 120V; MOUNT 18" AFF, UNO, NEMA 5-20R
100A	NON-FUSIBLE DISCONNECT WITH RATING
	PUSHBUTTON FOR COMPACTOR #1
	TELEPHONE/DATA CAT6 OUTLET
PANEL A	NEMA 3R SURFACE MOUNT CIRCUIT BREAKER PANEL
A4	FEEDER OR BRANCH CIRCUIT TO PANEL WITH CIRCUIT NUMBER
WP	WATERPROOF ENCLOSURE
GF	GROUND FAULT CIRCUIT INTERRUPT

LIGHTING PLAN

CONDUIT & CABLE SCHEDULE					
	COPPER				
COND. TAB	COND. SIZE	TYPE	CABLE/CONDUIT * PHASE	NEUTRAL	EGC
SL	(1)EA 2½"	RNC SCH 40	(3)EA 250kcmil	(1)EA 250kcmil	
F1	(1)EA 2½"	RNC SCH 40	(3)EA 250kcmil	(1)EA 250kcmil	
F2	(1)EA 2½"	RNC SCH 40	(3)EA 250kcmil	(1)EA 250kcmil	(1)EA #6 AWG

*NOTE: EACH CONDUIT CONTAINS NUMBER AND SIZE OF CONDUCTORS SPECIFIED IN THE TABLE (I.E., SOME OF THESE CIRCUITS REQUIRE PARALLEL CONDUCTORS FOR HOT AND NEUTRALS).

NOTES

1. INSULATION FOR ALL CONDUCTORS TO BE RATED 75C OR GREATER, AND LISTED FOR WET LOCATIONS.
2. PROVIDE LISTED CONNECTORS AND FITTINGS FOR ALL CABLE CONNECTIONS. PREPARE ALL CABLES UTILIZING APPROVED METHODS IN ACCORDANCE WITH THE MANUFACTURERS INSTRUCTIONS.

GENERAL ELECTRICAL NOTES

1. ALL ELECTRICAL WORK IS TO BE PERFORMED IN ACCORDANCE WITH THE 2017 EDITION OF THE NATIONAL ELECTRICAL CODE (NEC) AND TO THE SATISFACTION OF THE AUTHORITY HAVING JURISDICTION.
2. THE ELECTRICAL CONTRACTOR IS TO COORDINATE WITH ALL OTHER TRADES, THE GENERAL CONTRACTOR, AND THE OWNER FOR THE PROPER PLACEMENT OF ALL ELECTRICAL EQUIPMENT, LIGHTING, AND OUTLETS.
3. THE ELECTRICAL CONTRACTOR IS TO VERIFY ALL FIXED APPLIANCE AND EQUIPMENT NAMEPLATE RATINGS TO ASSURE PROPER OVERCURRENT PROTECTION AND CONNECTIONS PER THE 2017 NEC.
4. ALL WIRING IS TO BE PULLED ACCORDING TO THE APPLICABLE POWER RISER OR PANEL LEDGER SCHEDULE.
5. UNLESS NOTED OTHERWISE ON THE DRAWINGS, ALL CONDUCTOR WIRING TO BE COPPER, 75C RATED OR GREATER AND LISTED FOR WET LOCATIONS.
6. INSTALL ALL WIRING IN LISTED RACEWAY OR CABLE SYSTEMS UTILIZING LISTED FITTINGS AND CONNECTORS. RACEWAYS AND WIRING SHALL BE RUN CONCEALED IN THE SLAB, WALLS AND CEILING, UNLESS CONDITIONS DICTATE OTHERWISE.
7. ALL PENETRATIONS OF WOOD STRUCTURAL MEMBERS BY ELECTRICAL OR COMMUNICATION CABLES SHALL BE SEALED UTILIZING AN APPROVED AND LISTED FIRESTOP.
8. SURFACE MOUNTED LIGHT FIXTURES SHALL BE MOUNTED AND INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS.

SYSTEM GROUNDING NOTES

UFER GROUNDING ELECTRODE
- THE UFER GROUNDING ELECTRODE SHALL CONSIST OF A MINIMUM OF 20 FT OF CONTINUOUS #4 (½") SIZED OR GREATER REBAR LOCATED NEAR THE BOTTOM OF THE BUILDING PERIMETER CONCRETE FOOTING. THE REBAR GROUNDING ELECTRODE MAY CONSIST OF SEVERAL PIECES OF REBAR WHICH HAVE BEEN SPLICED TOGETHER UTILIZING REBAR TIE WIRE TO OBTAIN THE REQUIRED 20 FT LENGTH.
- CONNECT THE UFER GROUNDING ELECTRODE TO THE #4 AWG GROUNDING ELECTRODE CONDUCTOR UTILIZING A GROUNDING CLAMP LISTED FOR ENCASEMENT.
- BRING THE GROUNDING ELECTRODE CONDUCTOR THROUGH THE FOOTING UTILIZING A RNC SLEEVE. TERMINATE THE #4 AWG GEC TO THE NEUTRAL BAR OF PANEL "MDP."

200A MAIN DISCONNECT PANEL "MDP"
- BOND THE NEUTRAL BAR TO THE BOX UTILIZING A FACTORY SUPPLIED MAIN BONDING JUMPER OR AN EQUIVALENT #2 AWG COPPER JUMPER.
- CONNECT EQUIPMENT GROUNDING BAR TO THE BOX.
- CONNECT THE EQUIPMENT GROUNDING CONDUCTOR TO THE EQUIPMENT GROUNDING BAR.

POWER PANEL "A"
- NO CONNECTIONS BETWEEN THE NEUTRAL AND EQUIPMENT GROUND ARE PERMITTED.
- CONNECT NEUTRAL CONDUCTOR TO NEUTRAL BAR.
- CONNECT EQUIPMENT GROUNDING CONDUCTOR TO EQUIPMENT GROUND BAR.

SOUTH CAROLINA ADVANTAGE ENGINEERING LLC No. C03896 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER MICHAEL ANTHONY HARRISON No. 17837

SEAL

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ADVANTAGE ENGINEERING, LLC
"LET US BE YOUR TECHNICAL ADVANTAGE"
STRUCTURAL MECHANICAL PLUMBING & ELECTRICAL ENGINEERING
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Phone: (843) 546-1880
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E-mail: info@advengsc.com

ELECTRICAL PLAN
BIG DAM SWAMP RECYCLE CENTER
17 BIG DAM SWAMP DRIVE
ANDREWS, SC 29510

DWG BY:	JAH
DSN BY:	JAH
DATE:	07-08-21
SCALE:	¼" = 1'-0"
REV#	DATE
1	XX/XX/XX
2	XX/XX/XX
3	XX/XX/XX
4	XX/XX/XX

SHEET NO.
PME
3

MONOLITHIC WALL SECTION

MONOLITHIC SLAB

All wood framing members and sheathing shall comply with the specifications outlined in the 2018 International Building Code and American Forest & Paper Association's (AF&PA) 2018 Edition of the National Design Specification (NDS) for Wood Construction. Wood framing members for the roof and ceiling shall be minimum #2 Southern Yellow Pine (SYP) and the wall framing shall be minimum stud grade Spruce-Pine-Fir (SPF). See General Note 10 on Advantage Engineering Drawing S1. Sheathing shall be minimum APA rated OSB or plywood, exposure 1.

CONSULTANTS

FACILITY
SERVICES
PROJECTS

GEORGETOWN COUNTY
BIG DAM SWAMP RECYCLE CENTER

CONSTRUCTION
DRAWING

REVISIONS

MARK	DATE	DESCRIPTION

DATE: JULY 22, 2021

CAD DWG FILE: RECYCLE 4-22-21.DWG

DRAWN BY: DEC

DESIGNED BY: DEC

SHEET TITLE:

FRONT

SCALE:

3/4" = 1'

SHEET NO:

A-100

P A N E L A					
120-208 volts, 3 Phase, 225 amp main breaker, NEMA 3					
1	20	Lights	2	20	Receptacles
3			4	20	Receptacles
5			6	20	Mini Split
7			8	30	Grinder Pump Lift Station
9	60	Compactor #01	10		
11			12	20	Water Heater
13			14		
15	60	Compactor #02	16		
17			18		
19			20		
21	110	Compactor #03	22		
23			24		
25			26		
27			28		
29			30		

E L E C T R I C A L N O T E S		
1	S	Switch 48" Off Finished Floor (White)
2		Receptacle 18" Off Finished Floor (White)
3	GFI	GFCI Receptacle 42" Off Finished Floor (White)
4		Data/Phone 18" Off Finished Floor (White)
5	PB	Push buttons for Compactor #1
6		Receptacle 18" Off Finished Floor (White)
7	30	30amp 208 volt Receptacle weatherproof
8	GFI	GFCI Receptacle 18" Off Finished Floor (White)
9		
10		
11		

L I G H T S N O T E S		
1		LED surface mounted wrap around fixture
2		Led Recessed Light Fixture
3		Bath exhaust fan (NuTone EZ80N 80 cfn)
4		
5		
6		
7		
8		
9		
10		
11		

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CONSULTANTS

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GEORGETOWN COUNTY
BIG DAM SWAMP RECYCLE CENTER

CONSTRUCTION DRAWING

REVISIONS

MARK	DATE	DESCRIPTION

DATE: JULY 22, 2021

CAD DWG FILE: RECYCLE 4-22-21.DWG

DRAWN BY: DEC

DESIGNED BY: DEC

SHEET TITLE:

ELECTRICAL

SCALE:

Not to scale

SHEET NO:

E-100

		M E C H A N I C L N O T E S
1		9000 BTU Heat Pump wall mounted head. Daikin or equivalent.
2		Drain install in wall to drain to the outside.
3		Surge Protector to be installed on unit.
4		
5		
6		
7		
8		
9		
10		
11		

All wood framing members and sheathing shall comply with the specifications outlined in the 2018 International Building Code and American Forest & Paper Association's (AF&PA) 2018 Edition of the National Design Specification (NDS) for Wood Construction. Wood framing members for the roof and ceiling shall be minimum #2 Southern Yellow Pine (SYP) and the wall framing shall be minimum stud grade Spruce-Pine-Fir (SPF). See General Note 10 on Advantage Engineering Drawing S1. Sheathing shall be minimum APA rated OSB or plywood, exposure 1.

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GEORGETOWN COUNTY
BIG DAM SWAMP RECYCLE CENTER

CONSTRUCTION DRAWING

REVISIONS

MARK	DATE	DESCRIPTION

DATE: JULY 22, 2021

CAD DWG FILE: RECYCLE 4-22-21.DWG

DRAWN BY: DEC

DESIGNED BY: DEC

SHEET TITLE:

MECHANICAL

SCALE:

Not to scale

SHEET NO:

M_100

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GEORGETOWN COUNTY
BIG DAM SWAMP RECYCLE CENTER

CONSTRUCTION
DRAWING

REVISIONS

MARK	DATE	DESCRIPTION

DATE: JULY 22, 2021

CAD DWG FILE: RECYCLE 4-22-21.DWG

DRAWN BY: DEC

DESIGNED BY: DEC

SHEET TITLE:

PLUMBING

SCALE:

Not to scale

SHEET NO:

E-100

CUSTOM BUILT
STRUCTURES

STRUCTURAL DESIGN

PARTIALLY ENCLOSED (UTILITY) BUILDING

MAXIMUM 30'-0" WIDE X 16'- 0" EAVE HEIGHT-
BOX EAVE FRAME AND BOW FRAME

2 October 2020
Revision 0
M&A Project No. 20198S

Prepared for:

Custom Built Structures, Inc.
1124 N. South Street
Mt. Airy, NC 27030

Prepared by:

Moore and Associates Engineering and Consulting, Inc.
1009 East Avenue
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ENGINEERING AND CONSULTING

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SOUTH CAROLINA MOORE AND ASSOCIATES, INC. No. C02968 CERTIFICATE OF AUTHORIZATION	STATE OF OHIO WAYNE S. MOORE E-61988 10/2/20 REGISTERED PROFESSIONAL ENGINEER	STATE OF KENTUCKY WAYNE S. MOORE 10/2/20 30617 LICENSED PROFESSIONAL ENGINEER	
GEORGIA REGISTERED 10/2/20 No. 24069 PROFESSIONAL ENGINEER WAYNE S. MOORE	COMMONWEALTH OF VIRGINIA WAYNE S. MOORE Lic. No. 051637 10/2/20 PROFESSIONAL ENGINEER		
NORTH CAROLINA PROFESSIONAL SEAL 26784 10/2/20 ENGINEER WAYNE S. MOORE	WAYNE SHERIDAN MOORE, JR. REGISTERED 21776 10/2/20 STATE OF WEST VIRGINIA PROFESSIONAL ENGINEER		
NORTH CAROLINA Moore and Associates Engineering and Consulting, Inc. No. C-3166 CERTIFICATE OF AUTHORIZATION	COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL WAYNE SHERIDAN MOORE 10/2/20 ENGINEER PE082820		

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DRAWN BY: JG	CUSTOM BUILT STRUCTURES, INC. 1124 N. SOUTH STREET MOUNT AIRY, NC 27030 30'-0"x16'-0" UTILITY STRUCTURE		
CHECKED BY: PDH			
PROJECT MGR: WSM	DATE: 10-2-20	SCALE: NTS	JOB NO: 20198S
CLIENT: CBS	SHT. 1	DWG. NO: SK-2	REV.: 0

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INSTALLATION NOTES AND SPECIFICATIONS

1. DESIGN IS FOR MAXIMUM 30'-0" WIDE x 16'-0" EAVE HEIGHT OPEN UTILITY STRUCTURES.
2. DESIGN WAS DONE IN ACCORDANCE WITH THE 2018 NORTH CAROLINA BUILDING CODE (NCBC), 2018 INTERNATIONAL BUILDING CODE (IBC), 2015 IBC AND 2012 IBC.
3. DESIGN LOADS ARE AS FOLLOWS:

   A) DEAD LOAD = 1.5 PSF
   B) LIVE LOAD = 12 PSF
   C) GROUND SNOW LOAD = 45 PSF
   = 30 PSF WITH U-CHANNEL PEAK BRACE (W $\leq$ 24'-0")
   NOTE: UNBALANCED SNOW LOAD DUE TO DRIFTING HAS NOT BEEN EVALUATED.
4. 3-SECOND GUST ULTIMATE WIND SPEED (V_{ULT}) $\leq$ 145 MPH (NOMINAL WIND SPEED $\leq$ 112 MPH).
5. MAXIMUM RAFTER/COLUMN AND END COLUMN SPACING = 5.0 FEET (UNLESS NOTED OTHERWISE).
6. ENDWALL COLUMNS (POSTS) AND SIDE WALL COLUMNS ARE EQUIVALENT IN SIZE AND SPACING (UNLESS NOTED OTHERWISE).
7. RISK CATEGORY I.
8. WIND EXPOSURE CATEGORY B.
9. SPECIFICATIONS APPLICABLE TO 29 GAUGE METAL PANELS FASTENED DIRECTLY TO 2 1/2" x 2 1/2" - 14 GAUGE TUBE STEEL (TS) FRAMING MEMBERS (UNLESS NOTED OTHERWISE). 2 1/4" x 2 1/4" - 12 GAUGE TS MAY BE USED AS OPTIONAL FRAMING MEMBERS.
10. AVERAGE FASTENER SPACING ON-CENTERS ALONG RAFTERS OR HAT CHANNELS, AND COLUMNS (INTERIOR OR END) = 10 INCHES.
11. FASTENERS CONSIST OF #12-14x3/4" SELF-DRILLING FASTENER (SDF), USE CONTROL SEAL WASHER WITH EXTERIOR FASTENERS. SPECIFICATIONS APPLICABLE ONLY FOR MEAN ROOF HEIGHT OF 16 FEET OR LESS, AND ROOF SLOPES OF 14° (3:12 PITCH) OR LESS SPACING REQUIREMENTS FOR OTHER ROOF HEIGHTS AND/OR SLOPES MAY VARY. ROOF SLOPES LESS THAN 3:12 REQUIRE USE OF JOINT SEALANT.
12. GROUND ANCHORS SHALL BE INSTALLED THROUGH BASE RAIL WITHIN 6" OF EACH COLUMN.
13. STANDARD GROUND ANCHORS (SOIL NAILS) CONSIST OF #4 REBAR W/ WELDED NUT x 36" LONG AND MAY BE USED IN SUITABLE SOILS. OPTIONAL ANCHORAGE MAY BE USED IN SUITABLE SOILS AND MUST BE USED IN UNSUITABLE SOILS AS NOTED.
14. WIND FORCES GOVERN OVER SEISMIC FORCES. SEISMIC PARAMETERS ANALYZED ARE:

    SOIL SITE CLASS = D
    RISK CATEGORY I
    R= 3.25 I_E= 1.0
    S_{DS}= 2.039 g V= C_SW
    S_{D1}= 1.258 g

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	CLIENT: CBS	SHT. 3	DWG. NO: SK-2	REV.: 0

BOX EAVE FRAME RAFTER STRUCTURE

TYPICAL END ELEVATION

SCALE: NTS

TYPICAL SIDE ELEVATION

SCALE: NTS

BOW EAVE FRAME RAFTER STRUCTURE

TYPICAL END ELEVATION

SCALE: NTS

TYPICAL SIDE ELEVATION

SCALE: NTS

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CHECKED BY: PDH			
PROJECT MGR: WSM	DATE: 10-2-20	SCALE: NTS	JOB NO: 20198S
CLIENT: CBS	SHT. 4	DWG. NO: SK-2	REV.: 0

TYPICAL RAFTER/COLUMN FRAME SECTION

SCALE: NTS

TYPICAL RAFTER/COLUMN FRAME SECTION

SCALE: NTS

TYPICAL RAFTER/COLUMN FRAME SECTION

SCALE: NTS

TYPICAL RAFTER/COLUMN SIDE FRAMING SECTION

SCALE: NTS

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	CLIENT: CBS	SHT. 5	DWG. NO: SK-2	REV.: 0

TYPICAL RAFTER/COLUMN FRAME SECTION

SCALE: NTS

TYPICAL RAFTER/COLUMN FRAME SECTION

SCALE: NTS

TYPICAL RAFTER/COLUMN FRAME SECTION

SCALE: NTS

TYPICAL RAFTER/COLUMN SIDE FRAMING SECTION

SCALE: NTS

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	CLIENT: CBS	SHT. 5A	DWG. NO: SK-2	REV.: 0

1

BOX EAVE RAFTER/CORNER POST CONNECTION DETAIL
FOR HEIGHTS 11'-0" < TO ≤ 16'-0"

SCALE: NTS

1A

BOX EAVE RAFTER/CORNER POST CONNECTION DETAIL
FOR HEIGHTS 11'-0" < TO ≤ 16'-0"

SCALE: NTS

BRACE SECTION

SCALE: NTS

MOORE AND ASSOCIATES ENGINEERING AND CONSULTING, INC.	DRAWN BY: JG	CUSTOM BUILT STRUCTURES, INC. 1124 N. SOUTH STREET MOUNT AIRY, NC 27030 30'-0"x16'-0" UTILITY STRUCTURE		
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	CLIENT: CBS	SHT. 6	DWG. NO: SK-2	REV.: 0

1B BOX EAVE RAFTER/CORNER POST CONNECTION DETAIL FOR HEIGHTS ≤ 11'-0"

SCALE: NTS

1C BOX EAVE RAFTER/CORNER POST CONNECTION DETAIL FOR HEIGHTS ≤ 11'-0"

SCALE: NTS

BRACE SECTION

SCALE: NTS

MOORE AND ASSOCIATES ENGINEERING AND CONSULTING, INC.	DRAWN BY: JG	CUSTOM BUILT STRUCTURES, INC. 1124 N. SOUTH STREET MOUNT AIRY, NC 27030 30'-0"x16'-0" UTILITY STRUCTURE		
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	CLIENT: CBS	SHT. 6A	DWG. NO: SK-2	REV.: 0

FOR WIND SPEEDS ≤ 130 MPH

1D BOX EAVE RAFTER/CORNER POST CONNECTION DETAIL FOR HEIGHTS 12'-0" < TO ≤ 16'-0"

SCALE: NTS

1E BOX EAVE RAFTER/CORNER POST CONNECTION DETAIL FOR HEIGHTS 12'-0" < TO ≤ 16'-0"

SCALE: NTS

BRACE SECTION

SCALE: NTS

MOORE AND ASSOCIATES ENGINEERING AND CONSULTING, INC.	DRAWN BY: JG	CUSTOM BUILT STRUCTURES, INC. 1124 N. SOUTH STREET MOUNT AIRY, NC 27030 30'-0"x16'-0" UTILITY STRUCTURE		
	CHECKED BY: PDH			
	PROJECT MGR: WSM	DATE: 10-2-20	SCALE: NTS	JOB NO: 20198S
	CLIENT: CBS	SHT. 6B	DWG. NO: SK-2	REV.: 0

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FOR WIND SPEEDS ≤ 130 MPH

1F BOX EAVE RAFTER/CORNER POST CONNECTION DETAIL FOR HEIGHTS ≤ 12'-0"

SCALE: NTS

1G BOX EAVE RAFTER/CORNER POST CONNECTION DETAIL FOR HEIGHTS ≤ 12'-0"

SCALE: NTS

BRACE SECTION

SCALE: NTS

MOORE AND ASSOCIATES ENGINEERING AND CONSULTING, INC.	DRAWN BY: JG	CUSTOM BUILT STRUCTURES, INC. 1124 N. SOUTH STREET MOUNT AIRY, NC 27030 30'-0"x16'-0" UTILITY STRUCTURE		
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	CLIENT: CBS	SHT. 6C	DWG. NO: SK-2	REV.: 0

TYPICAL RAFTER/COLUMN FRAME SECTION

SCALE: NTS

TYPICAL RAFTER/COLUMN FRAME SECTION

SCALE: NTS

TYPICAL RAFTER/COLUMN FRAME SECTION

SCALE: NTS

TYPICAL RAFTER/COLUMN SIDE FRAMING SECTION

SCALE: NTS

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TYPICAL RAFTER/COLUMN FRAME SECTION

SCALE: NTS

TYPICAL RAFTER/COLUMN FRAME SECTION

SCALE: NTS

TYPICAL RAFTER/COLUMN FRAME SECTION

SCALE: NTS

TYPICAL RAFTER/COLUMN SIDE FRAMING SECTION

SCALE: NTS

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1

BOW EAVE RAFTER/CORNER POST CONNECTION DETAIL
FOR HEIGHTS 11'-0" < TO ≤ 16'-0"
SCALE: NTS

1A

BOW EAVE RAFTER/CORNER POST CONNECTION DETAIL
FOR HEIGHTS 11'-0" < TO ≤ 16'-0"
SCALE: NTS

BRACE SECTION
SCALE: NTS

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1B

BOW EAVE RAFTER/CORNER POST CONNECTION DETAIL FOR HEIGHTS ≤ 11'-0"

SCALE: NTS

1C

BOW EAVE RAFTER/CORNER POST CONNECTION DETAIL FOR HEIGHTS ≤ 11'-0"

SCALE: NTS

BRACE SECTION

SCALE: NTS

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	CLIENT: CBS	SHT. 8A	DWG. NO: SK-2	REV.: 0

FOR WIND SPEEDS ≤ 130 MPH

1D BOW EAVE RAFTER/CORNER POST CONNECTION DETAIL FOR HEIGHTS 12'-0" < TO ≤ 16'-0"

SCALE: NTS

1E BOW EAVE RAFTER/CORNER POST CONNECTION DETAIL FOR HEIGHTS 12'-0" < TO ≤ 16'-0"

SCALE: NTS

BRACE SECTION

SCALE: NTS

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	CLIENT: CBS	SHT. 8B	DWG. NO: SK-2	REV.: 0

FOR WIND SPEEDS ≤ 130 MPH

1F BOW EAVE RAFTER/CORNER POST CONNECTION DETAIL FOR HEIGHTS ≤ 12'-0"

SCALE: NTS

1G BOW EAVE RAFTER/CORNER POST CONNECTION DETAIL FOR HEIGHTS ≤ 12'-0"

SCALE: NTS

BRACE SECTION

SCALE: NTS

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	CLIENT: CBS	SHT. 8C	DWG. NO: SK-2	REV.: 0

BASE RAIL ANCHORAGE OPTIONS

2 CONCRETE MONOLITHIC SLAB BASE RAIL ANCHORAGE

SCALE: NTS
MINIMUM ANCHOR EDGE DISTANCE IS 4".
* COORDINATE WITH LOCAL BUILDING CODE AND/ORD REGARDING MINIMUM FROST DEPTH (LENGTH).

2A CONCRETE SLAB BASE RAIL ANCHORAGE

SCALE: NTS
MINIMUM ANCHOR EDGE DISTANCE IS 4".
* COORDINATE WITH LOCAL BUILDING CODE AND/ORD REGARDING MINIMUM FROST DEPTH (LENGTH).

GENERAL NOTES

NOTE: CONCRETE MONOLITHIC SLAB DESIGN BASED ON MINIMUM SOIL BEARING CAPACITY OF 1,500 PSF.

CONCRETE:

CONCRETE SHALL HAVE A MINIMUM SPECIFIED COMPRESSIVE STRENGTH OF 3,000 PSI AT 28 DAYS.

COVER OVER REINFORCING STEEL:

FOR FOUNDATIONS, MINIMUM CONCRETE COVER OVER REINFORCING BARS SHALL BE PER ACI-318:
3" IN FOUNDATIONS WHERE THE CONCRETE IS CAST AGAINST AND PERMANENTLY IN CONTACT WITH THE EARTH OR EXPOSED TO THE EARTH OR WEATHER, AND 1 1/2" ELSEWHERE.

REINFORCING STEEL:

THE TURNDOWN REINFORCING STEEL SHALL BE ASTM A615 GRADE 60. THE SLAB REINFORCEMENT SHALL BE WELDED WIRE FABRIC MEETING ASTM A185 OR FIBERGLASS FIBER REINFORCEMENT.

REINFORCEMENT MAY BE BENT IN THE SHOP OR THE FIELD PROVIDED:

1. REINFORCEMENT IS BENT COLD.
2. THE DIAMETER OF THE BEND, MEASURED ON THE INSIDE OF THE BAR, IS NOT LESS THAN SIX-BAR DIAMETERS.
3. REINFORCEMENT PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FIELD BENT.

HELIX ANCHOR NOTES:

1. FOR VERY DENSE AND/OR CEMENTED SANDS, COARSE GRAVEL AND COBBLES, CALICHE, PRELOADED SILTS AND CLAYS, USE MINIMUM (2) 4" HELICES WITH MINIMUM 30" EMBEDMENT OR SINGLE 6" HELIX WITH MINIMUM 50" EMBEDMENT
2. FOR CORAL USE MINIMUM (2) 4" HELICES WITH MINIMUM 30" EMBEDMENT OR SINGLE 6" HELIX WITH MINIMUM 50" EMBEDMENT.
3. FOR MEDIUM DENSE COARSE SANDS, SANDY GRAVELS, VERY STIFF SILTS, AND CLAYS USE MINIMUM (2) 4" HELICES WITH MINIMUM 30 INCH EMBEDMENT OR SINGLE 6" HELIX WITH MINIMUM 50" EMBEDMENT.
4. FOR LOOSE TO MEDIUM DENSE SANDS, FIRM TO STIFF CLAYS AND SILTS ALLUVIAL FILL, USE MINIMUM (2) 6" HELICES WITH MINIMUM 50" EMBEDMENT.
5. FOR VERY LOSE TO MEDIUM DENSE SANDS, FIRM TO STIFFER CLAYS AND SILTS, ALLUVIAL FILL, USE MINIMUM (2) 8" HELICES WITH MINIMUM 60" EMBEDMENT.

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	CLIENT: CBS	SHT. 9	DWG. NO: SK-2	REV.: 0

BASE RAIL ANCHORAGE OPTIONS

2B GROUND BASE HELIX ANCHORAGE

SCALE: NTS

(CAN BE USED FOR ASPHALT)

* COORDINATE WITH LOCAL BUILDING CODE AND/ORD REGARDING MINIMUM FROST DEPTH (LENGTH).

2C ASPHALT BASE ANCHORAGE

SCALE: NTS

* COORDINATE WITH LOCAL BUILDING CODE AND/ORD REGARDING MINIMUM FROST DEPTH (LENGTH).

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BOX EAVE RAFTER END WALL AND SIDE WALL OPENINGS

TYPICAL BOX EAVE RAFTER
END WALL FRAMING SECTION

SCALE: NTS

TYPICAL BOX EAVE RAFTER END
WALL OPENINGS FRAMING SECTION

SCALE: NTS

TYPICAL BOX EAVE RAFTER
SIDE WALL OPENINGS FRAMING SECTION

SCALE: NTS

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	CLIENT: CBS	SHT. 10	DWG. NO: SK-2	REV.: 0

BOW EAVE RAFTER END WALL AND SIDE WALL OPENINGS

TYPICAL BOW EAVE RAFTER END WALL FRAMING SECTION

SCALE: NTS

TYPICAL BOW EAVE RAFTER END WALL OPENINGS FRAMING SECTION

SCALE: NTS

TYPICAL BOW EAVE RAFTER SIDE WALL OPENINGS FRAMING SECTION

SCALE: NTS

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	CLIENT: CBS	SHT. 11	DWG. NO: SK-2	REV.: 0

CONNECTION DETAILS

3 POST/BASE RAIL CONNECTION DETAIL
SCALE: NTS

3A POST/BASE RAIL CONNECTION DETAIL
SCALE: NTS

4 END COLUMN/RAFTER CONNECTION DETAIL
SCALE: NTS

5 END COLUMN/BASE RAIL CONNECTION DETAIL
SCALE: NTS

5A END COLUMN/BASE RAIL CONNECTION DETAIL
SCALE: NTS

6 COLUMN OR WINDOW RAIL/WALL GIRT TO POST CONNECTION DETAIL
SCALE: NTS

6A COLUMN OR WINDOW RAIL TO POST CONNECTION DETAIL
SCALE: NTS

7 COLUMN TO HEADER, BASE RAIL, OR WINDOW RAIL CONNECTION DETAIL
SCALE: NTS

8 COLUMN/BASE RAIL CONNECTION DETAIL
SCALE: NTS

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	CLIENT: CBS	SHT. 12	DWG. NO: SK-2	REV.: 0

CONNECTION DETAILS

9 COLUMN/DOUBLE HEADER CONNECTION DETAIL
SCALE: NTS

10 DOUBLE HEADER/COLUMN CONNECTION DETAIL
SCALE: NTS

11 RAFTER TO CHORD CONNECTION DETAIL
SCALE: NTS

12 COLLAR TIE CONNECTION DETAIL
SCALE: NTS

13 COLUMN TO HEADER OR BASE RAIL CONNECTION DETAIL
SCALE: NTS

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BOX EAVE RAFTER LEAN-TO OPTIONS

TYPICAL BOX EAVE RAFTER LEAN-TO OPTIONS FRAMING SECTION (BOTH OPTIONS SHOWN)

SCALE: NTS

NOTE: KNEE BRACE MUST BE 4'-0" REGARDLESS OF COLUMN HEIGHT.
FOR SHARED COLUMNS REFERENCE RAFTER COLUMN CONNECTION DETAILS FOR APPROPRIATE COLUMN HEIGHT AND TUBING SPECIFICATIONS.

14 LEAN-TO RAFTER TO RAFTER COLUMN CONNECTION DETAIL FOR RAFTER SPANS ≤ 12'-0"

SCALE: NTS

14A LEAN-TO RAFTER TO RAFTER COLUMN CONNECTION DETAIL FOR RAFTER SPANS 12'-0" < TO ≤ 16'-0"

SCALE: NTS

14B LEAN-TO RAFTER TO RAFTER COLUMN CONNECTION DETAIL FOR RAFTER SPANS ≤ 12'-0"

SCALE: NTS

14C LEAN-TO RAFTER TO RAFTER COLUMN CONNECTION DETAIL FOR RAFTER SPANS 12'-0" < TO ≤ 16'-0"

SCALE: NTS

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BOX EAVE RAFTER LEAN-TO OPTIONS

15 SIDE EXTENSION RAFTER/COLUMN DETAIL FOR SPANS ≤ 12'-0"

SCALE: NTS

15A SIDE EXTENSION RAFTER/COLUMN DETAIL FOR SPANS 12'-0" < TO ≤ 16'-0"

SCALE: NTS

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	CLIENT: CBS	SHT. 14A	DWG. NO: SK-2	REV.: 0

BOW EAVE RAFTER LEAN-TO OPTIONS

TYPICAL BOW EAVE RAFTER LEAN-TO OPTIONS FRAMING SECTION

SCALE: NTS

NOTE: KNEE BRACE MUST BE 4'-0" REGARDLESS OF COLUMN HEIGHT.
FOR SHARED COLUMNS REFERENCE RAFTER COLUMN CONNECTION DETAILS FOR APPROPRIATE COLUMN HEIGHT AND TUBING SPECIFICATIONS.

16 LEAN-TO RAFTER TO RAFTER COLUMN CONNECTION DETAIL FOR RAFTER SPANS ≤ 12'-0"

SCALE: NTS

16A LEAN-TO RAFTER TO RAFTER COLUMN CONNECTION DETAIL FOR RAFTER SPANS 12'-0" < TO ≤ 16'-0"

SCALE: NTS

16B LEAN-TO RAFTER TO RAFTER COLUMN CONNECTION DETAIL FOR RAFTER SPANS ≤ 12'-0"

SCALE: NTS

16C LEAN-TO RAFTER TO RAFTER COLUMN CONNECTION DETAIL FOR RAFTER SPANS 12'-0" < TO ≤ 16'-0"

SCALE: NTS

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BOX EAVE RAFTER VERTICAL ROOF/SIDING OPTION

TYPICAL END ELEVATION
VERTICAL ROOF/SIDING
SCALE: NTS

TYPICAL SIDE ELEVATION
VERTICAL ROOF/SIDING
SCALE: NTS

TYPICAL SECTION VERTICAL
ROOF/SIDING OPTION
SCALE: NTS

TYPICAL FRAMING SECTION VERTICAL
ROOF/SIDING OPTION WITH TS GIRTS
SCALE: NTS

PANEL ATTACHMENT
(ALTERNATE FOR VERTICAL ROOF PANELS)
SCALE: NTS

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	CLIENT: CBS	SHT. 16	DWG. NO: SK-2	REV.: 0

SIDE WALL HEADER OPTIONS

HEADER DETAIL FOR SIDE
WALL DOOR OPENINGS
10'-0" < LENGTH ≤ 16'-0"

SCALE: NTS
(12'-0" < LENGTHS ≤ 16'-0"
FOR SNOW LOADS ≤ 35 PSF)

HEADER DETAIL FOR SIDE
WALL DOOR OPENINGS
6'-0" < LENGTH ≤ 10'-0"

SCALE: NTS
(6'-0" < LENGTHS ≤ 12'-0"
FOR SNOW LOADS ≤ 35 PSF)

HEADER DETAIL FOR SIDE
WALL DOOR OPENINGS ≤ 6'-0"

SCALE: NTS

END WALL HEADER OPTIONS

HEADER DETAIL FOR SIDE
WALL DOOR OPENINGS
12'-0" < LENGTH ≤ 16-0"

SCALE: NTS

HEADER DETAIL FOR END
WALL DOOR OPENINGS ≤ 12'-0"

SCALE: NTS

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	CLIENT: CBS	SHT. 17	DWG. NO: SK-2	REV.: 0