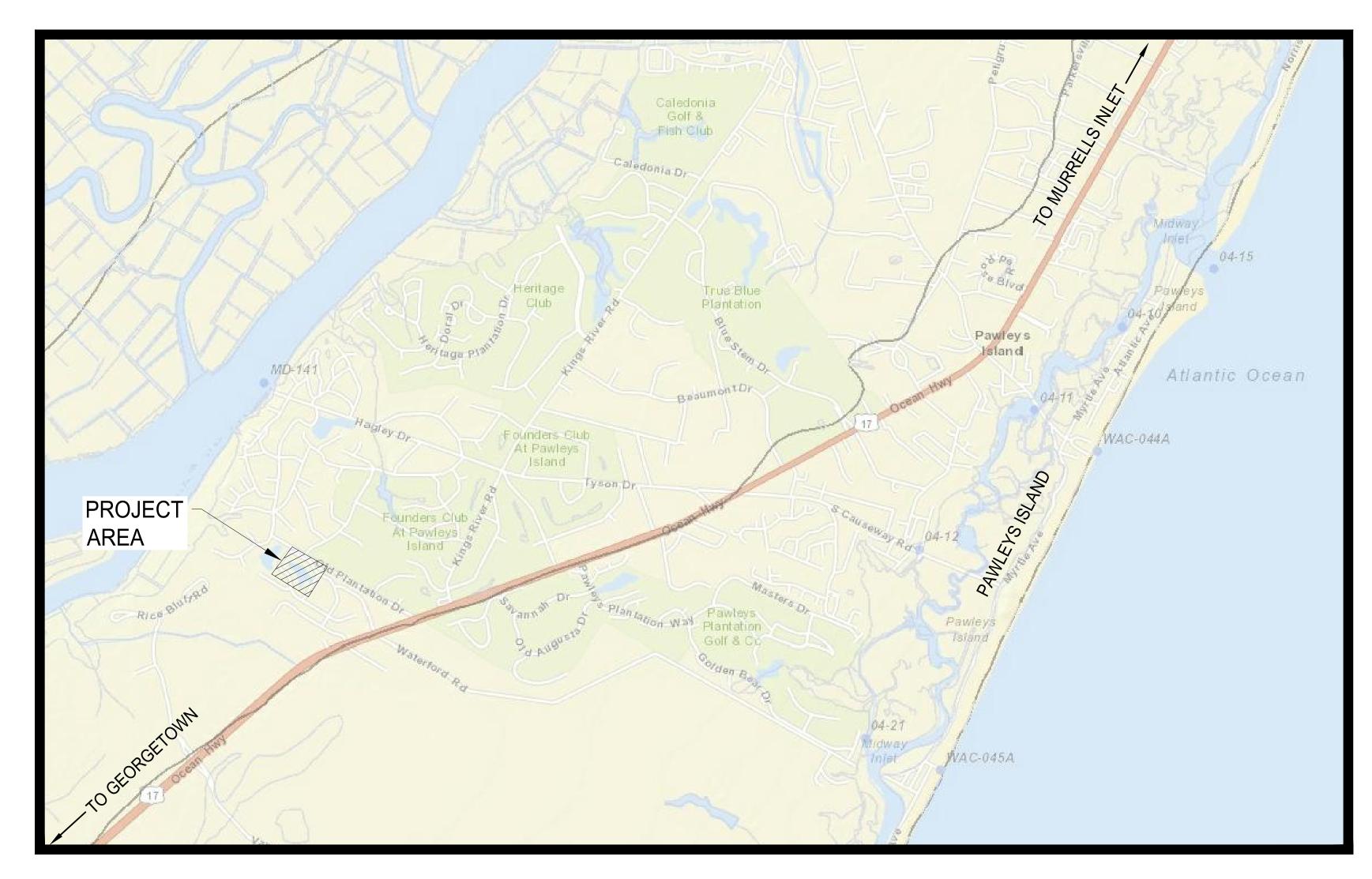


# DELOACH TRAIL Roadway & Drainage Improvements Georgetown County, SC

# GEORGETOWN COUNTY

129 Screven Street, 2nd Floor Georgetown, SC 29440 843.545.3270

SUBMITTAL: September 2019 PROJECT NUMBER: 178420926



# VICINITY MAP

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COVER

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UTILITY PLAN

UTILITY DETAILS

Sheet Number

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	August 30, 2019
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(843) 545-3270

2. ENGINEER: STANTEC CONSULTING SERVICES, INC BRYAN KIZER, P.E. 4969 CENTRE POINTE DR SUITE 200 NORTH CHARLESTON, SC 29418

TEL: (843) 740-7700

- 3. BOUNDARY, TOPOGRAPHIC & EXISTING CONDITIONS INFORMATION TAKEN FROM A TOPOGRAPHIC SURVEY BY PARKER LAND SURVEYING, DATED FEBRUARY 28, 2017.
- VERTICAL DATUM USED WAS NAVD 88.
- GEORGETOWN COUNTY WILL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY WETLAND IMPACT PERMITS.
- 6. WETLANDS, CRITICAL AREAS, OTHER INDICATED ENVIRONMENTALLY SENSITIVE AREAS AND UNDISTURBED BUFFERS SHALL NOT BE DISTURBED EXCEPT WHERE SPECIFICALLY INDICATED WITHIN THESE CONSTRUCTION DOCUMENTS AND/OR AS AUTHORIZED BY THE USACE AND SCDHEC-OCRM
- GEORGETOWN COUNTY WILL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY EASEMENTS.
- 8. ALL DRAINAGE EASEMENTS TO BE DEDICATED TO GEORGETOWN COUNTY.
- CONTRACTOR IS TO VERIFY ALL INFORMATION CONTAINED HEREIN PRIOR TO CONSTRUCTION AND NOTIFY ENGINEER OR OWNER OF ANY DISCREPANCY PRIOR TO
- 10. ALL CONSTRUCTION, METHODS, MATERIALS, AND WORKMANSHIP, NOT OTHERWISE INDICATED IN THESE PLANS. SHALL CONFORM TO GEORGETOWN COUNTY SPECIFICATIONS. LATEST EDITION. WHERE CONFLICT OCCURS BETWEEN CONSTRUCTION PLANS, SPECIFICATIONS, AND/OR FIELD CONDITIONS, CONTRACTOR IS TO CONTACT ENGINEER OR OWNER FOR CLARIFICATION PRIOR TO CONSTRUCTION.
- 11. CONTRACTOR TO COORDINATE WITH OWNER AND ENSURE ALL APPLICABLE CONSTRUCTION AND LAND DISTURBANCE PERMITS HAVE BEEN OBTAINED PRIOR TO COMMENCING ANY
- 12. CONTRACTOR TO NOTIFY GEORGETOWN COUNTY WATER & SEWER A MINIMUM OF 48 HOURS BEFORE ANY WATER OR SEWER WORK IS TO BEGIN.

- 1. DURING THE CONSTRUCTION AND MAINTENANCE OF THE THIS PROJECT, ALL SAFETY REGULATIONS SHALL BE ENFORCED. THE CONTRACTOR OR HIS REPRESENTATIVE SHALL BE RESPONSIBLE FOR THE CONTROL AND SAFETY OF THE TRAVELING PUBLIC AND THE SAFETY OF HIS PERSONNEL
- 2. THE CONTRACTOR'S MAINTENANCE OF TRAFFIC CONTROL PLAN MUST BE SUBMITTED AND APPROVED BY THE SCDOT AND APPLICABLE LOCAL AGENCIES PRIOR TO COMMENCEMENT OF CONSTRUCTION WITHIN STATE RIGHT OF
- 3. LABOR SAFETY REGULATIONS SHALL CONFORM TO THE PROVISIONS SET FORTH BY OSHA IN THE FEDERAL REGISTER OF THE DEPARTMENT OF TRANSPORTATION.
- 4. CONTRACTOR SHALL PROVIDE AND MAINTAIN HIS OWN SAFETY EQUIPMENT IN ACCORDANCE WITH HIS HEALTH AND SAFETY PROGRAM AND ALL OTHER APPLICABLE LEGAL AND HEALTH AND SAFETY REQUIREMENTS. THE CONTRACTOR IS ALSO RESPONSIBLE FOR PROVIDING IT'S EMPLOYEES AND SUB CONTRACTORS WITH ADEQUATE INFORMATION AND TRAINING TO ENSURE THAT ALL EMPLOYEES, SUB CONTRACTORS AND SUB CONTRACTOR'S EMPLOYEES COMPLY WITH ALL APPLICABLE REQUIREMENTS. CONTRACTOR SHALL REMAIN IN COMPLIANCE WITH ALL OCCUPATION SAFETY AND HEALTH REGULATIONS AS WELL AS THE ENVIRONMENTAL PROTECTION LAWS. THE FOLLOWING IS NOT TO BE PERCEIVED AS THE ENTIRE SAFETY PROGRAM BUT JUST BASIC REQUIREMENTS.
- 5. ALL EXCAVATIONS BY THE CONTRACTOR SHALL CONFORM TO THE REQUIREMENTS OF THE DEPARTMENT OF LABOR'S OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION RULES AN REGULATIONS. PARTICULAR ATTENTION MUST BE PAID TO THE CONSTRUCTION STANDARDS FOR EXCAVATIONS, 29 CFR PART 1926, SUBPART P.
- 6. THE MINIMUM STANDARDS AS SET FORTH IN THE CURRENT EDITION OF "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) BE FOLLOWED IN THE DESIGN APPLICATION, INSTALLATION, MAINTENANCE AND REMOVAL OF ALL TRAFFIC CONTROL DEVICES, WARNING DEVICES AND BARRIERS NECESSARY TO PROTECT THE PUBLIC AND WORKMEN FROM HAZARDS WITHIN THE PROJECT LIMITS
- 7. ALL TRAFFIC CONTROL MARKINGS AND DEVICES SHALL CONFORM TO THE PROVISIONS SET FORTH IN THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES PREPARED BY THE US DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION ALL SOUTH CAROLINA AMENDMENTS SHALL APPLY
- 8. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO COMPLY AND ENFORCE ALL APPLICABLE SAFETY REGULATIONS. THE ABOVE INFORMATION HAS BEEN PROVIDED FOR THE CONTRACTOR'S INFORMATION ONLY AND DOES NOT IMPLY THAT THE OWNER OR ENGINEER WILL INSPECT AND/OR ENFORCE SAFETY REGULATION.
- 9. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION IN AREAS OF BURIED UTILITIES AND SHALL PROVIDE AT LEAST 48 HOURS NOTICE TO THE UTILITY COMPANIES PRIOR TO CONSTRUCTION IN ORDER TO OBTAIN FIELD LOCATIONS OF EXISTING UNDERGROUND UTILITIES.
- 10. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE TO EXISTING FACILITIES, ABOVE OR BELOW GROUND, THAT MAY OCCUR AS A RESULT OF THE WORK PERFORMED BY THE CONTRACTOR CALLED FOR IN THIS

# **CLEARING AND DEMOLITION:**

- 1 THE CONTRACTOR SHALL CLEAR AND GRUB ONLY THOSE PORTIONS OF THE SITE NECESSARY FOR CONSTRUCTION. DISTURBED AREAS WILL BE SEEDED. MULCHED, SODDED OR PLANTED WITH OTHER APPROVED LANDSCAPE MATERIAL TO EXISTING OR BETTER CONDITION IMMEDIATELY FOLLOWING CONSTRUCTION
- ALL DEMOLITION, CONSTRUCTION DEBRIS AND OTHER WASTE MATERIALS SHALL BE DISPOSED OF OFF-SITE IN ACCORDANCE WITH APPLICABLE REGULATORY AGENCY REQUIREMENTS OR AS DIRECTED BY THE OWNER OR THE
- 3. CONTRACTOR SHALL REPLACE ALL DRIVEWAYS TO EXISTING OR BETTER CONDITION USING SIMILAR MATERIALS.
- 4. CONTRACTOR SHALL MAINTAIN WATER AND SEWER SERVICES, WITH MINIMAL SERVICE INTERRUPTION THROUGHOUT
- 5. CONTRACTOR SHALL MAINTAIN ACCESS TO PROPERTIES DURING CONSTRUCTION. ANY REQUIRED ACCESS INTERRUPTION SHALL BE COORDINATED WITH PROPERTY OWNERS.
- 6. CONTRACTOR SHALL MAINTAIN ACCESS TO RESIDENTIAL MAILBOXES DURING CONSTRUCTION, AND REPLACE MAILBOXES ONCE CONSTRUCTION IS COMPLETE

- 1. WATER INSTALLATION SHALL BE IN ACCORDANCE WITH "TEN STATES STANDARDS". S.C.D.H.E.C. REGULATIONS, AND GEORGETOWN COUNTY WATER & SEWER DEPARTMENTS' MINIMUM STANDARDS FOR THE DESIGN & CONSTRUCTION OF WATER AND SANITARY SEWER
- 2. CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING ALL TAPS. TAPS REQUIRING A SLEEVE SHALL BE NO CLOSER TO A JOINT THAN 4 FEET.
- 3. THRUST BLOCKING SHALL BE USED ONLY ON WET TAPS. CONTRACTOR SHALL NOTIFY COUNTY INSPECTOR 72 HOURS (THREE FULL WORKING DAYS) PRIOR TO MAKING ANY WET
- 4. ROUGH GRADING SHALL BE DONE PRIOR TO INSTALLATION OF WATER MAINS.
- 5. CONTRACTOR SHALL MAINTAIN BETWEEN 36" 48" COVER OVER TOP OF PIPE.
- 6. ALL COMPONENTS OF THE PIPING SYSTEM SHALL BE EITHER PVC C900 OR CLASS 50 DUCTILE
- 7. ALL VALVES AND HYDRANTS SHALL OPEN CLOCKWISE.

WATER NOTES

- 8. MEGALUG, FORD SERIES 1400, OR SIGMA ONE-LOK RETAINER GLANDS SHALL BE USED FOR ALL FITTINGS, VALVES, AND HYDRANTS.
- 9. RESTRAINED LENGTHS SHALL BE IN MULTIPLES OF A FULL LENGTH OF PIPE.

OTHER LINE. THE CROSSING SHALL BE AT NOT LESS THAN A 45° ANGLE.

- 10. USE 45° OR FLATTER BENDS WHEN GOING UNDER RCP AND DO NOT INSTALL VALVES, HYDRANTS, OR SERVICES ON DEEP PIPE SECTIONS.
- 11. WHERE POSSIBLE, HORIZONTAL WATERLINES SHALL BE DEFLECTED IN LIEU OF USING BENDS. DEFLECTIONS SHALL NOT EXCEED 75% OF MANUFACTURER'S SPECIFICATIONS.
- 12. WHERE WATER AND SANITARY SEWER LINES CROSS WITHIN 18", THE LINE LAID LAST SHALL HAVE A FULL LENGTH OF PIPE INSTALLED WITH ITS MIDPOINT VERTICALLY IN LINE WITH THE
- 13. ALL MATERIAL SHALL CONFORM TO GEORGETOWN COUNTY SPECIFICATIONS AS TO MANUFACTURER, TYPE, AND DESIGN.
- 14. DEVELOPER'S ENGINEER SHALL INSPECT PROJECT WEEKLY TO PROVIDE WRITTEN WEEKLY UPDATES TO GEORGETOWN COUNTY INSPECTOR AND TO CERTIFY THE CORRECTNESS OF THE WATER PORTION OF CONTRACTOR'S RECORD DRAWINGS.
- 15. CONTRACTOR INSTALLING THE WATER SYSTEM SHALL BE ON GEORGETOWN COUNTY'S APPROVED CONTRACTORS LIST.
- 16. COORDINATE INSPECTION AND TESTING OF THE BACKFLOW DEVICES WITH GEORGETOWN COUNTY WATER & SEWER DEPARTMENT. WATER SERVICE SHALL NOT BE TURNED ON UNTIL ALL BACKFLOW DEVICES HAVE PASSED INSPECTION AND TESTING.
- 17. DEVELOPER SHALL TAKE NECESSARY MEASURES TO PROTECT GEORGETOWN COUNTY'S WATER SYSTEM DURING THE TIME BETWEEN THE COUNTY INSPECTION AND THE 2-YEAR MAINTENANCE BOND INSPECTION.
- 18. GEORGETOWN COUNTY RESERVES THE RIGHT NOT TO INSTALL WATER METERS IF METER BOXES ARE NOT LOCATED AND ON GRADE IN COMPLIANCE WITH ITS MINIMUM STANDARDS.
- 19. ALL METER VAULTS AND ASSOCIATED PIPING 3" AND LARGER SHALL BE INSTALLED BY GEORGETOWN COUNTY UNLESS APPROVED IN WRITING BY THE WATER DISTRIBUTION FNGINFFR
- 20. THERE SHALL BE NO LOSS OF SERVICE TO EXISTING WATER CUSTOMERS DURING WATERLINE CONSTRUCTION

# **SEWER NOTES**

- 1. WASTEWATER INSTALLATION SHALL BE IN ACCORDANCE WITH "TEN STATES STANDARDS" S.C.D.H.E.C. REGULATIONS AND GEORGETOWN COUNTY WATER & SEWER DEPARTMENT'S SPECIFICATIONS FOR THE DESIGN & CONSTRUCTION OF WATER AND SANITARY SEWER
- CONNECTIONS TO EXISTING MANHOLES SHALL BE MADE IN THE PRESENCE OF A GEORGETOWN COUNTY REPRESENTATIVE. CONTRACTOR SHALL NOTIFY GEORGETOWN COUNTY AT LEAST 72 HOURS BEFORE CONNECTION BEGINS.
- 3. ROUGH GRADING SHALL BE DONE PRIOR TO INSTALLATION OF WASTEWATER MAINS.
- 4. NO MANHOLE COVERS ARE ALLOWED IN CURBING. MANHOLES SHALL BE LOCATED OUTSIDE CONCRETE AND ASPHALT PAVING WHENEVER POSSIBLE.
- CONNECTIONS TO GRAVITY LINES AND MANHOLES SHALL BE EQUAL TO OR GREATER THAN 90° TO THE DOWNSTREAM LINE.
- CONTRACTOR SHALL INSTALL WATERTIGHT RINGS AND COVERS ON ALL MANHOLES.
- 7. 4" SEWER SERVICES SHALL BE SCH40 PVC, 6" SEWER SERVICES SHALL BE SDR 35 PVC AND LAID ON A MINIMUM SLOPE OF 1.0% UNLESS OTHERWISE STATED. THE SERVICES SHALL BE CONNECTED TO MANHOLES WHERE REASONABLY POSSIBLE.
- 8. ALL GRAVITY MAINS SHALL BE SDR 35 PVC ASTM D3034 OR DUCTILE IRON ANSI A21.51 CLASS 50 PVC LINES.
- 9. DIP OR PVC SDR-18 FOR WASTEWATER SHALL BE USED:

DESIGN. AND MANUFACTURER.

- WITH LESS THAN 3' OF COVER OR GREATER THAN 14' OF COVER; CROSSING OVER STORM DRAINAGE PIPE WITH LESS THAN 2' OF CLEARANCE;
- CROSSING UNDER STORM DRAINAGE PIPE WITH LESS THAN 3' OF CLEARANCE; CROSSING WATER MAINS: WITHIN CASINGS.
- 10. LINING FOR DIP FOR WASTEWATER SHALL BE PROTECTO 401 AT 40 MILS THICKNESS.
- 11. TRANSITIONAL FITTINGS SHALL BE USED TO TRANSITION BETWEEN PVC AND DIP. FERNCO OR SIMILAR COUPLINGS ARE NOT ALLOWED.
- 12. WHERE WATER AND SANITARY SEWER LINES CROSS WITHIN 18", THE LINE LAID LAST SHALL HAVE A FULL LENGTH OF PIPE INSTALLED WITH ITS MIDPOINT VERTICALLY IN LINE WITH THE OTHER LINE. THE CROSSING SHALL BE AT NOT LESS THAN A 45° ANGLE.
- 14. DEVELOPER'S ENGINEER SHALL INSPECT PROJECT WEEKLY TO PROVIDE WRITTEN WEEKLY

13. ALL MATERIAL SHALL CONFORM TO GEORGETOWN COUNTY SPECIFICATIONS AS TO TYPE,

- UPDATES AND TO CERTIFY THE CORRECTNESS OF THE WASTEWATER PORTION OF CONTRACTOR'S RECORD DRAWINGS. 15. 15. CONTRACTOR INSTALLING THE WASTEWATER SYSTEM SHALL BE ON GEORGETOWN
- COUNTY'S APPROVED CONTRACTORS LIST.
- 16. DEVELOPER SHALL TAKE NECESSARY MEASURES TO PROTECT GEORGETOWN COUNTY WASTEWATER SYSTEM DURING THE TIME BETWEEN THE COUNTY INSPECTION AND THE 2-YEAR MAINTENANCE BOND INSPECTION.
- 17. JUST PRIOR TO COMMISSIONING, CONTRACTOR, AT HIS EXPENSE, SHALL TELEVISE IN DVD FORMAT ALL SEWER MAINS AND SERVICES FOR GEORGETOWN COUNTY'S RECORDS.
- 18. CONTRACTOR TO MAINTAIN SEWER SERVICE TO EXISTING SEWER CUSTOMERS AT ALL TIMES DURING CONSTRUCTION.

1. ALL DELETERIOUS SUBSURFACE MATERIAL (I.E. MUCK, PEAR, BURIED DEBRIS) IS TO BE EXCAVATED IN ACCORDANCE WITH THESE PLANS OR AS DIRECTED BY THE OWNER. THE OWNER'S ENGINEER. OR OWNER'S SOIL TESTING COMPANY. DELETERIOUS MATERIAL IS TO BE STOCKPILED OR REMOVED FROM THE SITE AS DIRECTED BY THE OWNER OR THE OWNER'S ENGINEER. EXCAVATED AREAS TO BE BACKFILLED WITH APPROVED MATERIALS AND COMPACTED AS SHOWN ON THESE PLANS. CONTRACTOR IS RESPONSIBLE FOR ACQUIRING ANY PERMITS THAT ARE NECESSARY FOR REMOVING DELETERIOUS MATERIAL FROM THE SITE.

PAVING AND GRADING

- 2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXCAVATIONS AGAINST COLLAPSE AND WILL PROVIDE BRACING SHEETING OR SHORING AS NECESSARY, DEWATERING METHODS SHALL BE USED AS REQUIRED TO KEEP TRENCHES DRY WHILE PIPE AND APPURTENANCES ARE BEING PLACED.
- 3. ALL NECESSARY FILL AND EMBANKMENT THAT IS PLACED DURING CONSTRUCTION SHALL CONSIST OF MATERIAL SPECIFIED BY THE OWNER'S SOIL TESTING COMPANY OR ENGINEER AND BE PLACED AND COMPACTED ACCORDING TO THESE PLANS OR THE REFERENCED SOILS REPORT. 4. PROPOSED SPOT ELEVATIONS REPRESENT FINISHED PAVEMENT OR GROUND SURFACE GRADE UNLESS OTHERWISE NOTED ON
- 5. UNLESS OTHERWISE NOTED, ALL GRADING, ROCKING AND PAVING TO CONFORM TO SCDOT STANDARD SPECIFICATIONS. LATEST EDITION.
- 6. CLEAR AND GRUB WITHIN WORK LIMITS ALL SURFACE VEGETATION, TREES, STUMPS, BRUSH, ROOTS, ETC. DO NOT DAMAGE OR REMOVE TREES EXCEPT AS APPROVED BY THE APPROPRIATE MUNICIPAL AUTHORITY OR AS SHOWN ON THE DRAWINGS. PROTECT ALL ROOTS.
- 7. STRIP WORK LIMITS, REMOVING ALL ORGANIC MATTER WHICH CANNOT BE COMPACTED INTO A STABLE MASS. ALL TREES, BRUSH AND DEBRIS ASSOCIATED WITH CLEARING, STRIPPING OR GRADING SHALL BE REMOVED AND DISPOSED OF OFF-SITE BY THE CONTRACTOR.
- 8. IMMEDIATELY FOLLOWING FINE GRADING OPERATIONS, COMPACT SUBGRADE TO 95%%% OF THE MAXIMUM DRY DENSITY PER AASHTO T-180.
- 9. ALL FILLS WITHIN PUBLIC RIGHT-OF-WAYS AND EASEMENTS SHALL BE ENGINEERED. ADDITIONALLY, ANY FILLS OUTSIDE OF PUBLIC RIGHT-OF-WAYS WHICH ARE OVER 2 FEET IN DEPTH SHALL BE ENGINEERED. ENGINEERED FILLS SHALL BE CONSTRUCTED IN 6" LIFTS. EACH LIFT SHALL BE COMPACTED TO 95 %%% OF THE MAXIMUM DRY DENSITY PER AASHTO T-180 TEST METHOD (MODIFIED PROCTOR).
- 10. OR BE FEATHERED PAST JOINTS WITH EXISTING PAVEMENT AS REQUIRED TO PROVIDE A SMOOTH, FREE DRAINING SURFACE.
- 11. CRUSHED ROCK SHALL CONFORM TO THE REQUIREMENTS OF SECTION 02630 (BASE AGGREGATE) SCDOT STANDARD SPECIFICATIONS. COMPACT TO 95%%% OF THE MAXIMUM DRY DENSITY PER AASHTO T-180 TEST METHOD (MODIFIED PROCTOR) A C. PAVEMENT SHALL CONFORM TO SECTION 00745 (ASPHALT CONCRETE PAVEMENT) SCDOT STANDARD SPECIFICATIONS FOR STANDARD DUTY MIX. A.C. PAVEMENT SHALL BE COMPACTED TO A MINIMUM OF 91%%% OF MAXIMUM DENSITY AS DETERMINED BY THE RICE STANDARD
- 12. ALL EXISTING OR CONSTRUCTED MANHOLES, CLEANOUTS, MONUMENTS, GAS VALVES, WATER VALVES AND SIMILAR STRUCTURES SHALL BE ADJUSTED TO MATCH FINISH GRADE OF THE PAVEMENT, SIDEWALK, LANDSCAPED AREA WHEREIN THEY LIE.
- 13. IF WIND EROSION BECOMES SIGNIFICANT DURING CONSTRUCTION, THE CONTRACTOR SHALL STABILIZE THE AFFECTED AREA USING SPRINKLING, IRRIGATION OR OTHER ACCEPTABLE METHODS.
- 14. ENGINEERED FILL MATERIAL SHALL NOT CONTAIN ROCKS OR HARD LUMPS GREATER THAN 3 INCHES IN MAXIMUM DIMENSIONS AND SHALL BE FREE OF VEGETATION, ORGANIC MATTER, DEBRIS, RUBBLE AND OTHER UNSUITABLE MATERIALS.
- 15. IMPORTED SOILS FOR USE AS ENGINEERED FILL SHALL BE NON-EXCLUSIVE MATERIALS AND SHALL NOT CONTAIN ROCKS OR HARD LUMPS GREATER THAN 3 INCHES IN MAXIMUM DIMENSIONS AND SHALL BE FREE OF VEGETATION, ORGANIC MATTER, DEBRIS, RUBBLE, AND OTHER UNSUITABLE MATERIALS.
- 16. AGGREGATE BASE MATERIAL SHALL MEET THE FOLLOWING GRADATION REQUIREMENTS:

SIEVE SIZE (PER ASTM D422)	PERCENT PASSING BY WEIGHT
1 INCH	100
3/4	90–100
NO. 8	35–55
NO. 200	0–8

- 17. ALL AREAS TO RECEIVE FILL, AND AREAS OF STRUCTURES AND PAVEMENTS, SHALL BE STRIPPED OF VEGETATION. ORGANIC MATTER. DEBRIS. RUBBLE. AND OTHER UNSUITABEL MATERIALS. STRIPPED SOILS SHALL NOT BE USED IN ENGINEERED FILL, BUT MAY BE USED IN LANDSCAPE AREAS.
- ENGINEERED FILL MATERIAL SHALL BE COMPACTED TO AT LEAST THE FOLLOWING PERCENTAGES OF MAXIMUM DRY DENSITY AND OPTIMUM MOISTURE CONTENT, PER ASTM D698 (STANDARD PROCTOR)

ENGINEERED FILL MATERIAL	MINIMUM PERCENT COMPACTION	MOISTURE CONTENT (RANGE)
NATIVE SOIL	90%	OPTIMUM TO OPTIMUM PLUS 3%
ENGINEERED FILL UNDER STRUCTURES AND BEHIND RETAINING WALLS	95%	OPTIMUM TO OPTIMUM PLUS 3%
ENGINEERED FILL UNDER PAVEMENTS	95%	OPTIMUM TO OPTIMUM PLUS 2%
FILL IN LANDSCAPE AREAS	95%	2 TO 5% ABOVE OPTIMUM

AGGREGATE BASE COURSE SHALL BE COMPACTED TO AT LEAST THE FOLLOWING PERCENTAGES OF MAXIMUM DRY DENSITY AND OPTIMUM MOISTURE CONTENT. PER AASHTO T180 (MODIFIED PROCTOR)

ENGINEERED FILL MATERIAL	MINIMUM PERCENT COMPACTION	MOISTURE CONTENT (RANGE)
AGGREGATE BASE MATERIAL OR IMPORTED GRANULAR SOIL IN BUILDING AND PAVEMENT AREAS	100%	OPTIMUM PLUS OR MINUS 2%

NOTE: MOISTURE CONTENT OF ENGINEERED FILL MATERIAL MAY REQUIRE ADJUSTMENT DURING CONSTRUCTION TO PREVENT SOIL PUMPING.

- 18. ENGINEERED FILL SHALL BE PLACED IN LIFTS NO GREATER THAN 6 INCHES THICK (LOOSE).
- 19. THE TOP 6 INCHES OF SOIL EXPOSED AT THE BOTTOM OF THE EXCAVATIONS SHALL BE COMPACTED, SCARIFIED AND COMPACTED AS ENGINEERED FILL PRIOR TO PLACEMENT OF ADDITIONAL FILL.

UNTIL THE SOLIDS BECOME WORKABLE WITHOUT PUMPING. THE MOISTURE CONTENT OF THE SOILS

20. IF SOFT OR LOOSE SOIL IS PRESENT AT THE BASE OF EXCAVATIONS, IT SHALL BE EXCAVATED AND/OR COMPACTED AS ENGINEERED FILL OR AS RECOMMENDED BY THE ENGINEER'S FIELD REPRESENTATIVE. 21. IF SUBGRADE SOILS EXHIBIT PUMPING DURING COMPACTION, THE AREA SHALL BE ALLOWED TO DRY

SHALL BE ADJUSTED TO PREVENT PUMPING.

LABORATORY.

22. UNLESS OTHERWISE SHOWN ON THE DRAWINGS, STRAIGHT GRADES SHALL BE RUN BETWEEN ALL FINISH GRADE ELEVATIONS AND/OR FINISH CONTOUR LINES SHOWN. FINISH PAVEMENT GRADES AT TRANSITION TO EXISTING PAVEMENT SHALL MATCH EXISTING PAVEMENT GRADES EXPOSURE TO THE ENVIRONMENT MAY REDUCE THE STRENGTH OF SOILS IN PAVED AREAS. IF THIS OCCURS. THE SOFTENED SOILS SHALL BE REMOVED AND REWORKED IMMEDIATELY PRIOR TO CONCRETE PLACEMENT. IF RAINFALL IS EXPECTED AT A TIME WHEN BEARING SOILS IN FOOTING AREAS ARE

EXPOSED, A 2 TO 4 INCH THICK LAYER OF LEAN CONCRETE MAY BE PLACED IN SUCH AREA.

- 23. THE SITE SHALL BE GRADED TO TRANSPORT SURFACE RUNOFF AWAY FROM THE PAVED AREAS. WATER SHALL NOT BE ALLOWED TO ACCUMULATE (POND) ON PAVED AREAS.
- 24. BACKFILL AND FILL SHALL CONFORM TO THE GENERAL REQUIREMENTS FOR SOIL MATERIALS ABOVE AND SHALL BE CLASSIFIED AS GW, GP, GM, GC, SW, SP, SM, SC, ML, CL BY ASTM D2487 AND SHALL CONFORM TO THE FOLLOWING:
- SHALL BE CAPABLE OF BEING COMPACTED TO THE SPECIFIED DEGREE OF COMPACTION WHEN THE MOISTURE CONTENT IS WITHIN 3 PERCENTAGE POINTS OF THE OPTIMUM PERCENT MOISTURE. LIQUID LIMIT SHOULD NOT EXCEED 40 PERCENT WHEN TESTED IN ACCORDANCE WITH ASTM D4318.
- PLASTICITY INDEX SHOULD NOT BE GREATER THAN 30 PERCENT WHEN TESTED IN ACCORDANCE NO MORE THAN 75 PERCENT BY WEIGHT SHALL BE FINER THAN NO. 200 SIEVE WHEN TESTED IN
- ACCORDANCE WITH ASTM D1140 25. UNSUITABLE SOIL SHALL BE ANY SOIL MATERIALS DETERMINED BY THE INDEPENDENT GEOTECHNICAL LABORATORY AS NOT CONFORMING TO THE REQUIREMENTS DESCRIBED ABOVE FOR BACKFILL AND FILL. A MOISTURE CONTENT WHICH IS MORE THAN 3 PERCENTAGE POINTS FROM OPTIMUM SHALL NOT BE CONSIDERED UNSUITABLE IF SUCH MATERIALS WOULD OTHERWISE BE SUITABLE IF THE
- 26. MEASUREMENT OF UNSUITABLE MATERIAL: THE VOLUME OF UNSUITABLE MATERIAL EXCAVATION SHALL BE DETERMINED BY A LICENSED SURVEYOR BY THE AVERAGE END AREA METHOD. THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER A SCALED PLAN WITH SUFFICIENT ELEVATION POINTS TO ACCURATELY DEFINE THE VOLUME OF UNSUITABLE MATERIAL EXCAVATED. THE EXTENT OF UNSUITABLE MATERIAL EXCAVATION SHALL BE DETERMINED BY THE INDEPENDENT GEOTECHNICAL

MIXING, ADDING WATER, OR OTHER MEANS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

MOISTURE CONTENT WERE ADJUSTED. ADJUSTMENTS TO THE SOIL MOISTURE CONTENT BY DRYING,

- 27. ALL PAINTED ARROWS AND OTHER SYMBOLS TO BE PER MUTCD AND SCDOT STANDARD
- 28. BUILDING PADS SHALL BE STRIPPED AND COMPACTED TO 95% MODIFIED PROCTOR OR PER GEOTECHNICAL RECOMENDATION, THE MORE STRINGENT OF THE TWO.

## DRAINAGE

- 1. ALL STORM DRAIN PIPE SHALL BE REINFORCED CONCRETE PIPE, TONGUE AND GROOVE CLASS III, UNLESS OTHERWISE NOTED ON PLANS. ALL DRAINAGE STRUCTURES SHALL BE IN ACCORDANCE WITH SCDOT STANDARDS, APPLICABLE GOVERNING AGENCY STANDARDS AND DETAILS INCORPORATED IN THIS PLAN.
- 2. PIPE LENGTHS SHOWN ARE APPROXIMATE AND CENTER TO CENTER ON DRAINAGE STRUCTURES OR TO END OF PIPE. CONTRACTOR SHALL VERIFY ALL QUANTITIES PRIOR TO SUBMITTAL OF BID.
- 3. ALL DRAINAGE STRUCTURE GRATES AND COVERS IN RIGHT-OF-WAY SHALL BE PER SCDOT STANDARDS AND SPECIFICATIONS, LATEST EDITION, UNLESS OTHERWISE NOTED
- 4. ALL STORM DRAIN PIPING SHALL BE SUBJECT TO A VISUAL INSPECTION BY THE OWNER'S ENGINEER AND MUNICIPALITY HAVING PRIOR TO THE
- PLACEMENT OF BACKFILL. CONTRACTOR TO NOTIFY THE ENGINEER 48 HOURS IN ADVANCE TO SCHEDULE INSPECTIONS. 5. THE CONTRACTOR SHALL MAINTAIN AND PROTECT FROM MUD, DIRT, DEBRIS, ETC THE STORM DRAINAGE SYSTEM UNTIL FINAL ACCEPTANCE OF
- THE PROJECT. THE CONTRACTOR MAY BE REQUIRED TO RECLEAN PIPES AND INLETS FOR THESE PURPOSES.
- 6. FOR CONSTRUCTION OF THE DROP INLET WALLS EITHER BRICK MASONRY OR CLASS 3000 CONCRETE MAY BE USED. FOR CONCRETE THE WALLS ARE TO BE 6" THICK WITH A REINFORCING STEEL AREA OF 0.20 SQ. INCH PER FT. FOR BRICK THE WALLS ARE TO BE 8" THICK.
- 7. THE BOTTOM SLAB OF THE BOX SHALL BE A MINIMUM OF 6 IN. THICK CLASS 3000 CONCRETE WITH A REINFORCING STEEL AREA OF 0.20 SQ. INCH PER FT. WIRE MESH MAY BE USED IN LIEU OF STEEL BARS PROVIDED A MINIMUM OF 0.20 SQ. IN. PER FT. IS MET.
- 8. MORTAR SHALL BE TYPE S OR M.
- 9. IF DESIRED THESE ITEMS MAY BE PRECAST PRIOR TO INSTALLATION IN LIEU OF BEING CAST IN PLACE. 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 FOR ADDITIONAL DETAILS AND SPECIFICATIONS.
- 10. REINFORCING STEEL SHALL BE DEFORMED AND SHALL CONFORM TO AASHTO M 31, GRADE 60. WIRE MESH SHALL CONFORM TO AASHTO M 55
- 11. IF STRUCTURE DEPTH EXCEEDS 4'-6", METAL STEPS ARE TO BE PLACED ON WALL. SEE STEP STANDARD DRAWING 719-16.
- 12. CASTING SHALL CONFORM TO AASHTO M 105, CLASS 35B AND THE ALTERNATE LOAD TEST OF AASHTO M 306. CASTINGS SHALL ALSO MEET THE LOADING REQUIREMENTS OF FEDERAL SPECIFICATION RR-F-621 (LATEST EDITION).
- 13. STEEL GRATES AND FRAME MAY BE USED IN LIEU OF CAST IRON AS LONG AS THE LOADING AND HYDRAULIC REQUIREMENTS ARE MET, AND ARE ON SCDOT LIST OF APPROVED SUPPLIERS.
- 14. STEEL GRATES SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH AASHTO M 111.
- 15. STEEL GRATES AND FRAMES SHALL BE DIMENSIONED TO BE INTERCHANGEABLE WITH EACH PIECE OF THE CAST IRON GRATE AND FRAME SHOWN. MUST HAVE A POSITIVE MEANS TO RETAIN THE GRATE IN THE FRAME.
- 16. STRENGTH REQUIREMENTS OF STEEL GRATES AND FRAMES MUST MEET FEDERAL SPECIFICATION RR-F-621 (LATEST EDITION).
- 17. MANUFACTURERS DESIRING TO BE PLACED ON THE DEPARTMENT'S APPROVAL SHEETS SHOULD CONTACT THE RESEARCH AND MATERIALS ENGINEER FOR PROCEDURES.
- 18. THE LONGEST DIMENSIONS OF THE OPENING IN THE IRON GRATE SHOULD BE ORIENTED IN THE DIRECTION OF FLOW IF PRACTICAL.
- 19. AS SHOWN BY THIS DRAWING THE FRAME IS SET LEVEL, BUT THE ENGINEER MAY SET SAME ON SLOPE AS REQUIRED BY LOCAL DRAINAGE
- 20. AFTER THE FRAME IS SET IN ITS FINAL POSITION, IT IS TO BE ENCASED WITH CONCRETE AS SHOWN BY DRAWING.
- 21. THE INSIDE OF THE OUTLET PIPE SHALL BE FLUSH WITH FLOOR OF BASIN, UNLESS OTHERWISE SHOWN ON PLANS (SUMP). 22. THE SOFFIT (INSIDE TOP OF PIPE) OF THE OUTLET PIPE SHOULD BE NO HIGHER THAN THE SOFFIT OF THE INLET PIPE, UNLESS OTHERWISE
- 23. THE CONTRACTOR IS RESPONSIBLE FOR BEDDING ALL PIPE PER SCDOT'S "THE 2007 STANDARD SPECIFICATION FOR HIGHWAY CONSTRUCTION"
- 24. SHOULD THE CONTRACTOR ENCOUNTER UNSUITABLE MATERIAL, THEN THE CONTRACTOR WILL ENGAGE AN INDEPENDENT GEOTECHNICAL ENGINEER TO VERIFY UNSUITABLE MATERIAL AND MAKE RECOMMENDATIONS ON THE REMOVAL AND THE PLACEMENT AND TYPE OF NEW BEDDING AND BACKFILL MATERIAL. THE RECOMMENDATIONS BY THE INDEPENDENT GEOTECHNICAL ENGINEER SHALL BE SUBMITTED TO THE OWNER AND CIVIL ENGINEER FOR CONCURRENCE PRIOR TO PROCEEDING WITH WORK.

# STANDARD EROSION CONTROL NOTES:

ONCE CONSTRUCTION IS COMPLETE AND THE SITE IS STABILIZED

SHOWN ON PLANS.

- 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

-WHERE STABILIZATION BY THE 14TH DAY IS PRECLUDED BY SNOW COVER OR FROZEN GROUND CONDITIONS STABILIZATION MEASURE 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
- NFORMATION 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,
- WATER SHOULD BE FILTERED TO REMOVE SEDIMENT 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

COVER, AND TEMPORARY SEEDING AT THE END OF EACH DAY ARE RECOMMENDED. IF WATER IS ENCOUNTERED WHILE TRENCHING, THE

- 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 NDIVIDUAL 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 UPSLOPE RUNOFF AND/OR TO DIVERT SEDIMENT-LADEN WATER TO APPROPRIATE TRAPS OR STABLE OUTLETS.
- 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

9. ALL WATERS OF THE STATE (WOS), INCLUDING WETLANDS, ARE TO BE FLAGGED OR OTHERWISE CLEARLY MARKED IN THE FIELD. A DOUBLE

- 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.

-WASTEWATER FROM WASHOUT OF CONCRETE, UNLESS MANAGED BY AN APPROPRIATE CONTROL:

ROUTED THROUGH APPROPRIATE BMPS (SEDIMENT BASIN, FILTER BAG, ETC.).

BE HELD ON-SITE UNLESS THE DEPARTMENT HAS APPROVED OTHERWISE.

16. THE FOLLOWING DISCHARGES FROM SITES ARE PROHIBITED:

WASH WATERS MUST BE TREATED IN A SEDIMENT BASIN OR ALTERNATIVE CONTROL THAT PROVIDES EQUIVALENT OR BETTER TREATMENT 15. MINIMIZE THE DISCHARGE OF POLLUTANTS FROM DEWATERING OF TRENCHES AND EXCAVATED AREAS. THESE DISCHARGES ARE TO BE

14. MINIMIZE THE DISCHARGE OF POLLUTANTS FROM EQUIPMENT AND VEHICLE WASHING, WHEEL WASH WATER, AND OTHER WASH WATERS.

- -WASTEWATER FROM WASHOUT AND CLEANOUT OF STUCCO, PAINT, FORM RELEASE OILS, CURING COMPOUNDS AND OTHER CONSTRUCTION -FUELS, OILS, OR OTHER POLLUTANTS USED IN VEHICLE AND EQUIPMENT OPERATION AND MAINTENANCE; -SOAPS OR SOLVENTS USED IN VEHICLE AND EQUIPMENT WASHING.
- 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

17. AFTER CONSTRUCTION ACTIVITIES BEGIN, INSPECTIONS MUST BE CONDUCED AT A MINIMUM OF AT LEAST ONCE EVERY CALENDAR WEEK AND

SWPPP AND ALTERNATIVE BMPS 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





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Client/Project

Georgetown County

Deloach Trail improvement

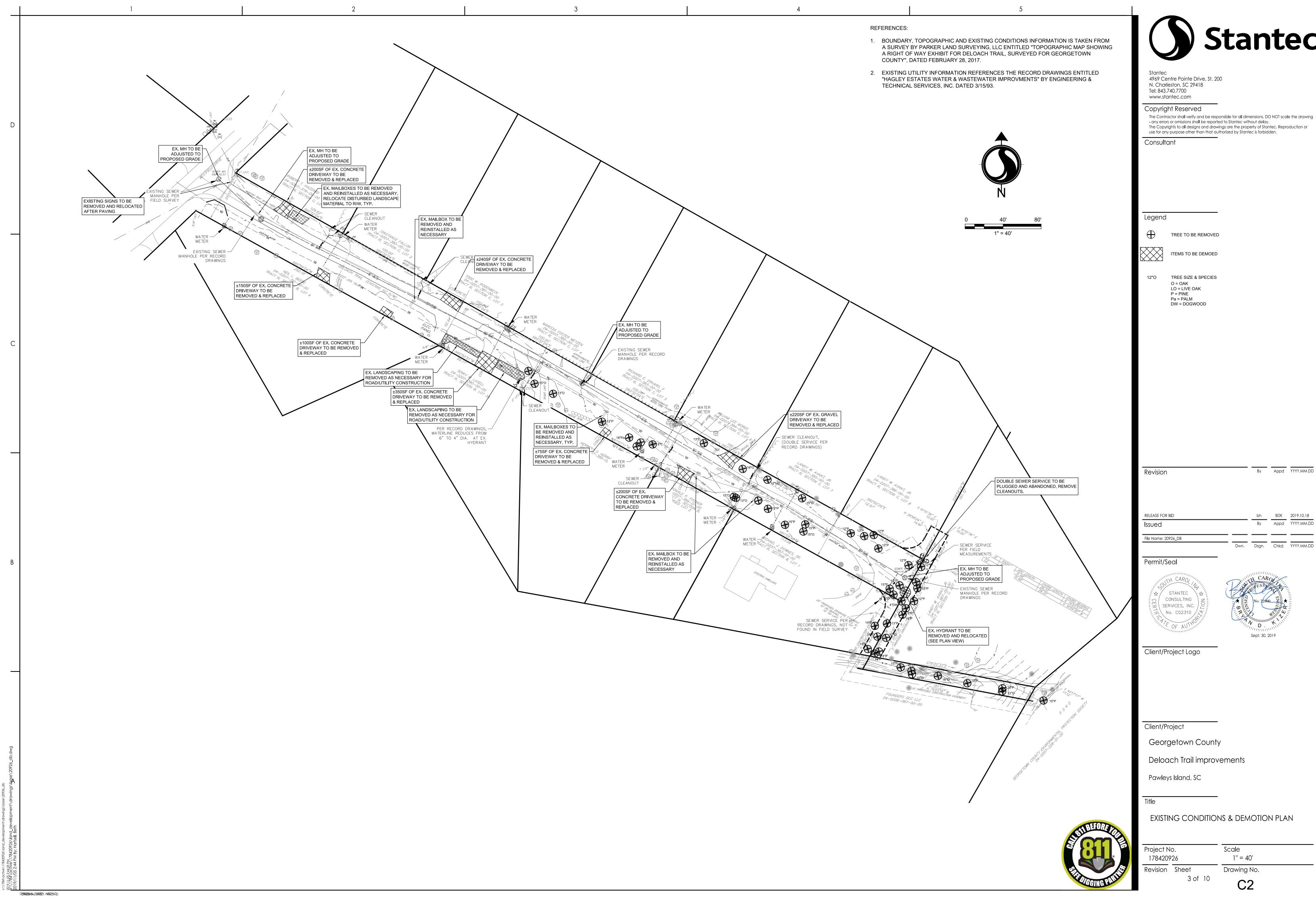
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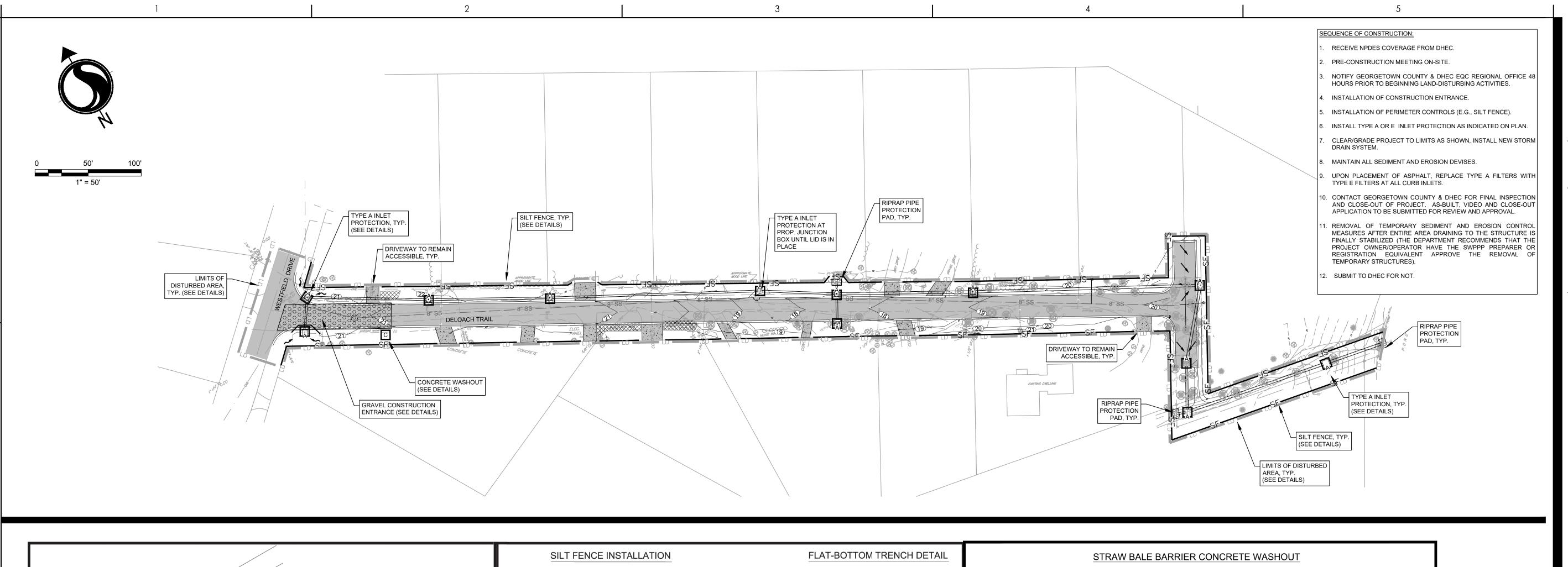
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ORIGINAL SHEET - ARCH D







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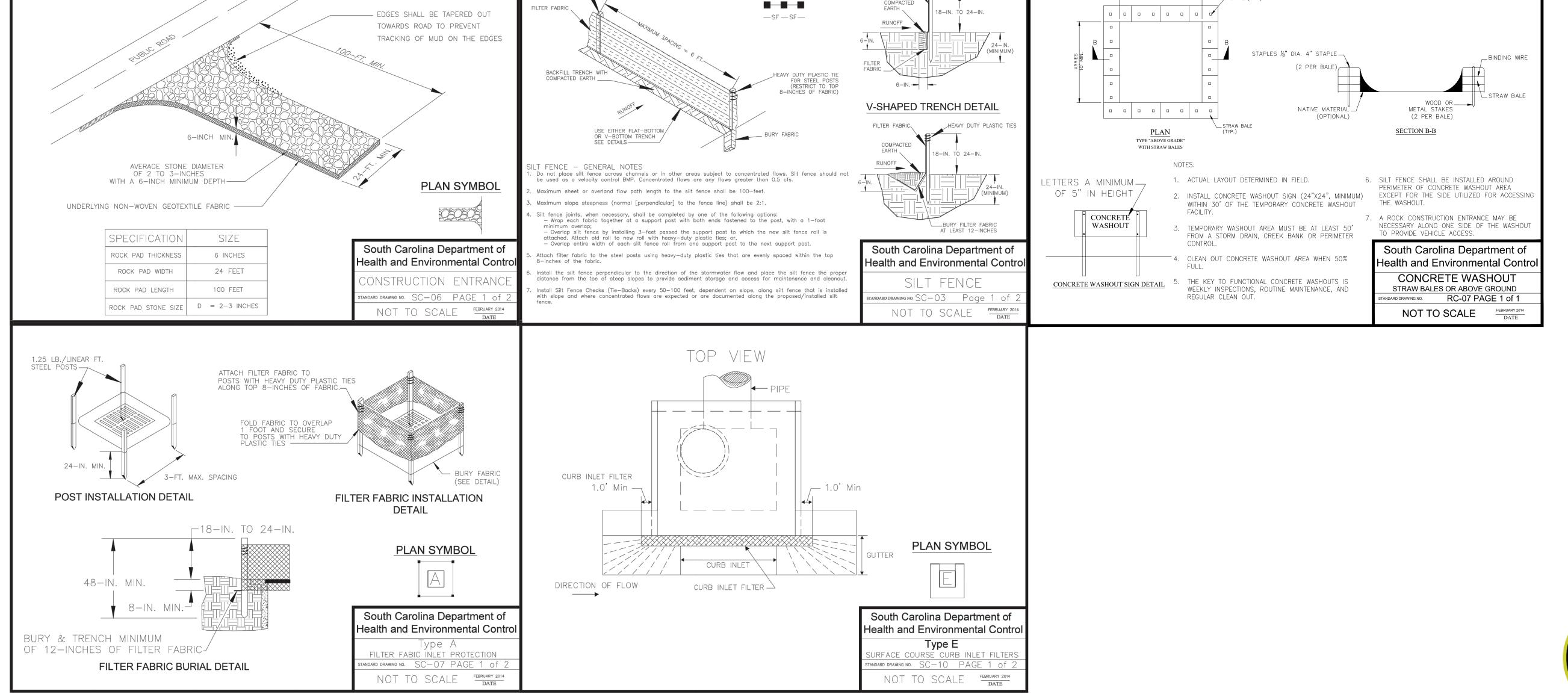
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EROSION CONTROL PLAN

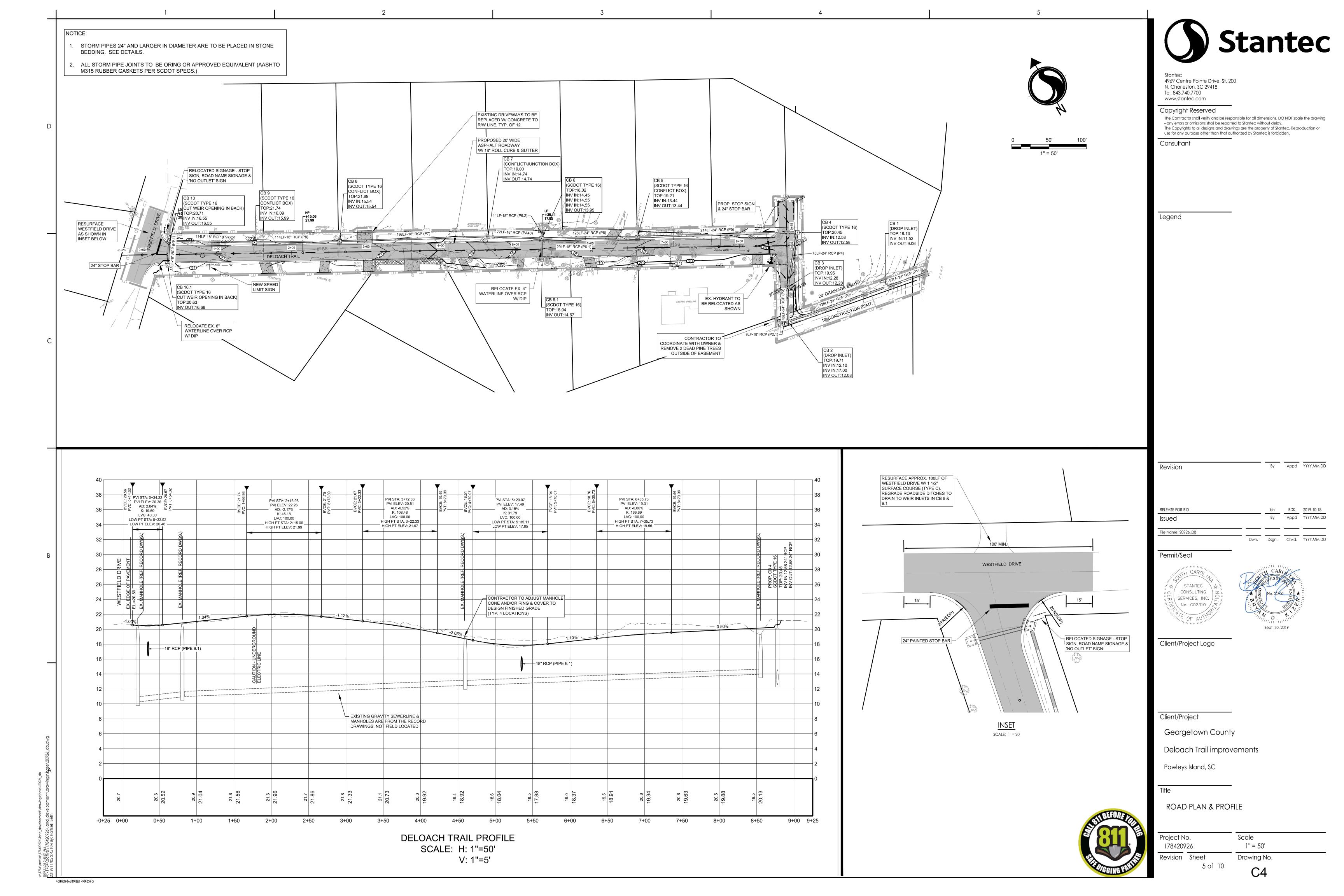
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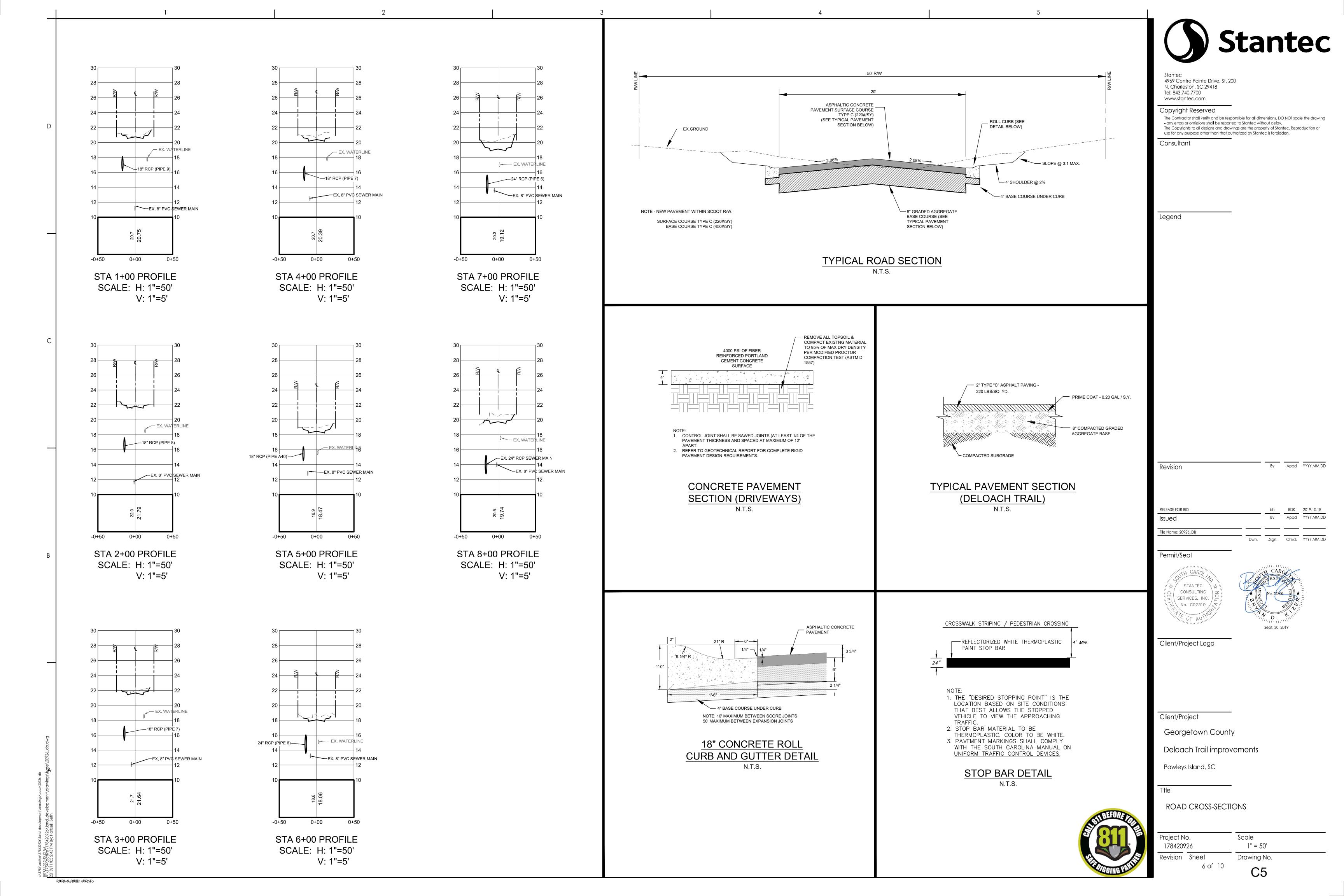
Scale 1'' = 50'Drawing No. 4 of 10



PLAN SYMBOL

1.25 LB./LINEAR FT. STEEL POSTS





PROP. CB 10
SCDOT TYPE 16
CUT WEIR OPENINC
TOP 20.71
INV IN:16.55 18" RCI
INV OUT:16.55 18" R
PROP. CB 10.1
SCDOT TYPE 16
CUT WEIR OPENINC
TOP 20.63
INV OUT:16.98 18" R PROP. CB 2
DRCP INLET
TOP 19.71
INV IN:12.10 24" RCP
INV OUT:12.08 24" RCP
INV OUT:12.08 24" RCP
TOP: 19.95
INV OUT:12.28 24" RCP FR SERVICE LOCATOR 
PROP. CB 4
SCDOT TYPE 16
TOP: 20.45
INV IN: 12:58 24" RC 7 18" RCP 5 18" RCP 5 18" RCP 5 18" RCP 95 24" RCI PROP. CB 6 SCDOT TYPE TOP: 18.02 INV IN:14.451 INV IN:14.551 INV IN:14.551 INV OUT:13.9 EXISTING GROUND — PROPOSED GRADE -EX. 6" WATER INE
RELOCATED ABOVE NEW 18"
RCP W/ DIP 18 138LF OF 24" ORING RCP @ 0.40% (PIPE 2) EXISTING 12 POND -46LF OF 24" ORING RCP @ 0.40% (PIPE 3) \_\_\_57LF OF 24" ORING RCP @ 1.86% (PIPE 1) -INV=8.00 5+50 6+00 6+50 10+50 12+00 -0+25 0+00 0+50 1+00 1+50 2+00 2+50 3+00 3+50 4+00 4+50 5+00 7+00 7+50 8+00 8+50 9+00 9+50 10+00 11+00 11+50 STORMDRAIN A PROFILE NOTICE: SCALE: H: 1"=50' STORM PIPES 24" AND LARGER IN DIAMETER ARE V: 1"=5' TO BE PLACED IN STONE BEDDING. SEE DETAILS.



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STORM DRAIN PROFILES

Project No. 178420926 Revision Sheet

Drawing No. 7 of 10

Scale

C6

EX. 4" WATERLINE -RELOCATED ABOVE THE NEW 18" RCP W/ DIP

-0+25 0+00

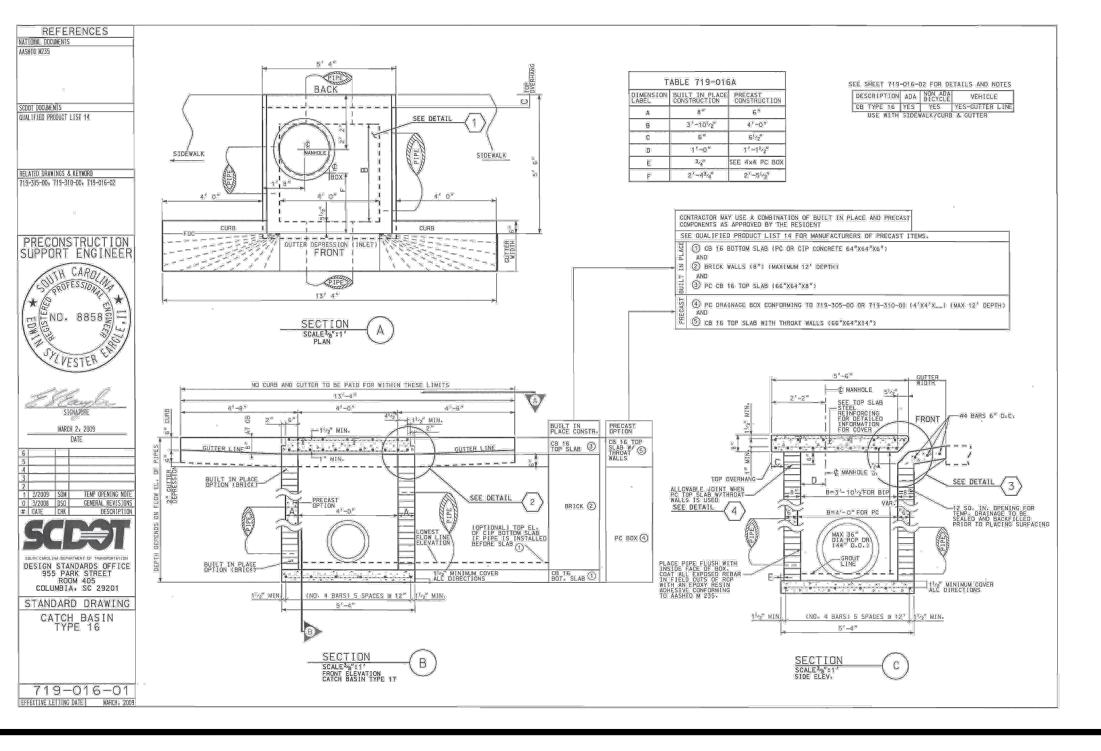
STORMDRAIN B PROFILE

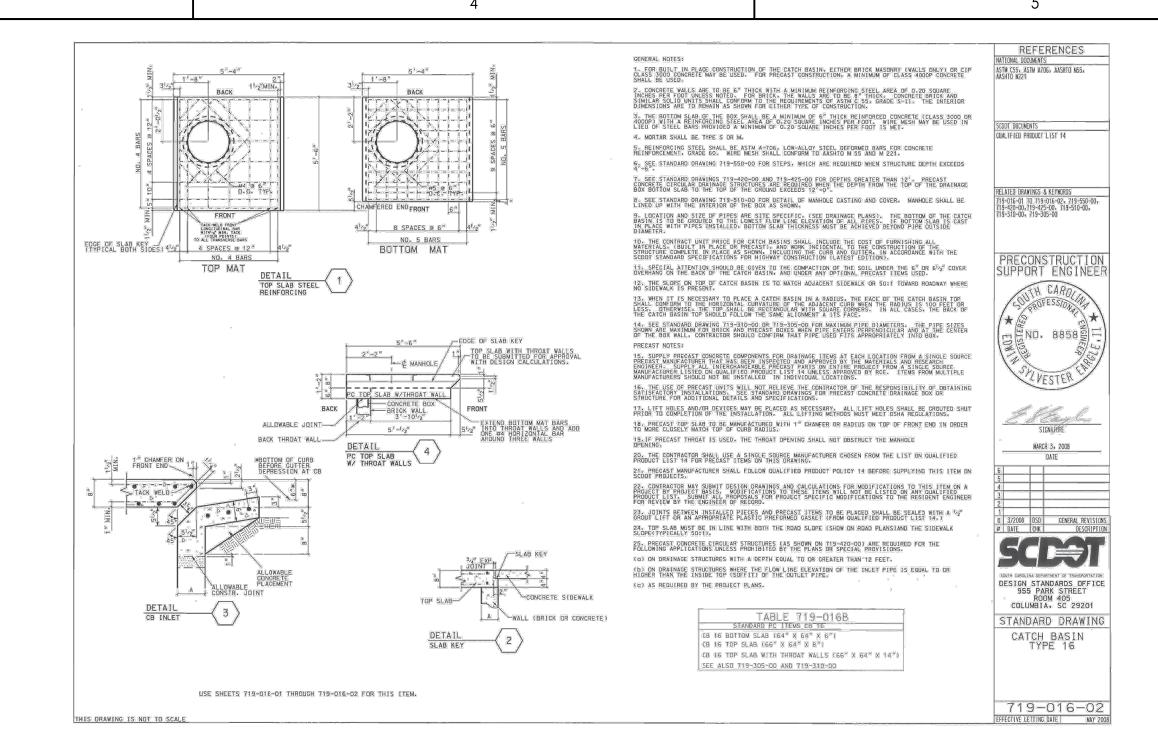
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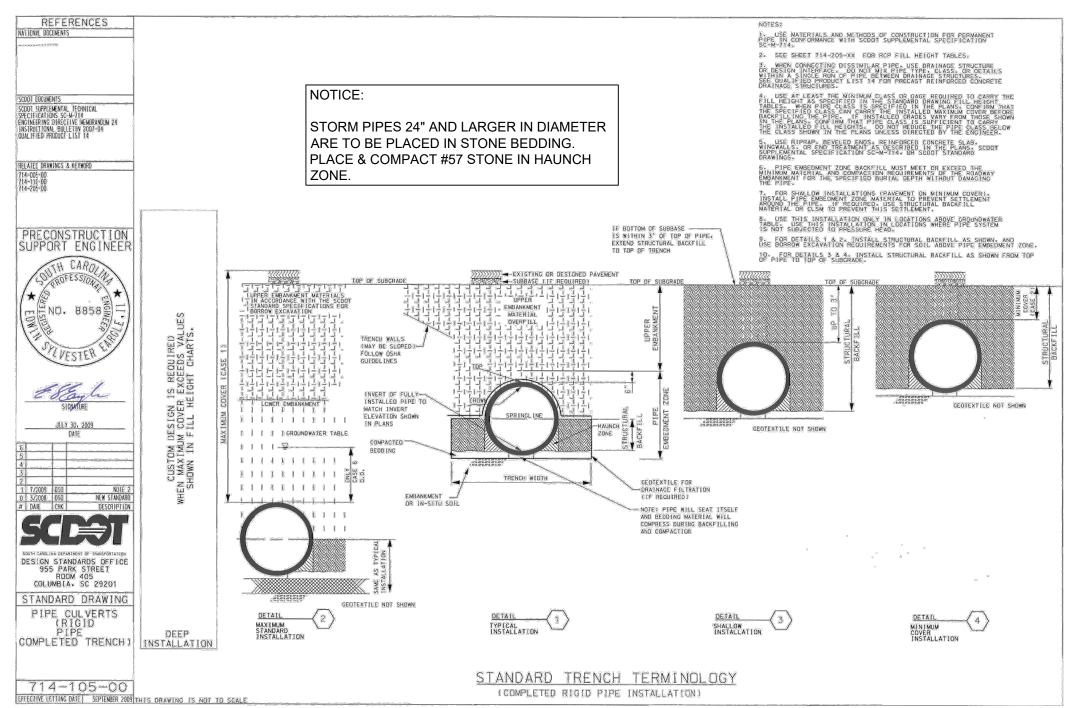
V: 1"=5'

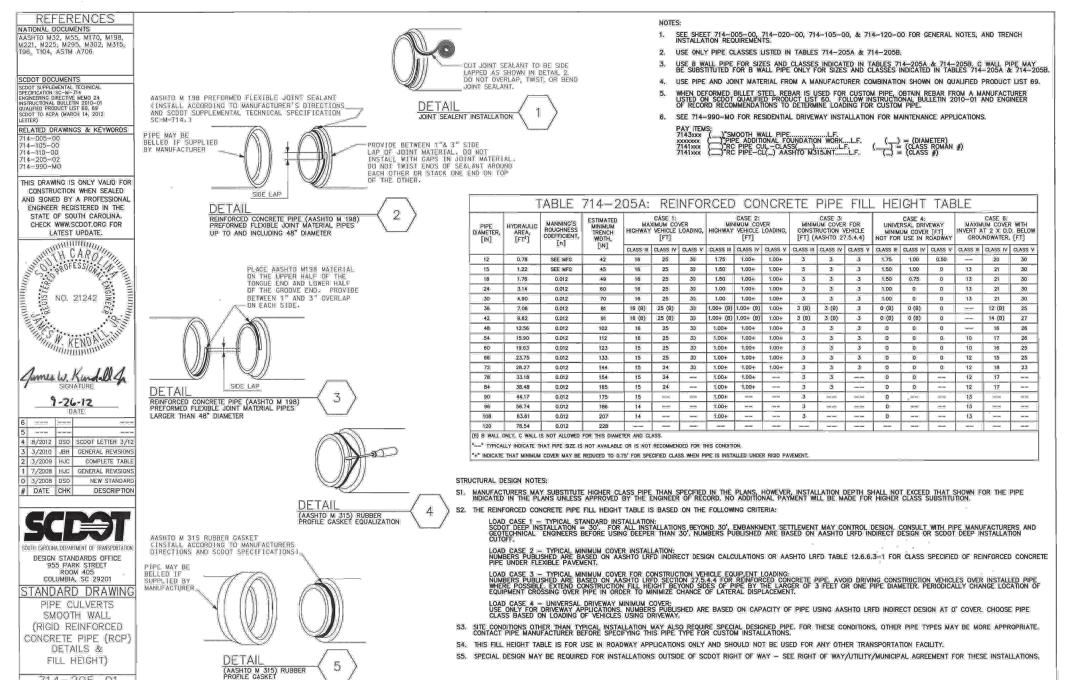
11LF OF 18" ORING RCP @ 13.67% (PIPE 6.2)

29LF OF 18" ORING RCP @ 0.40% (PIPE 6.1) EX. 8" PVC SEWER MAIN

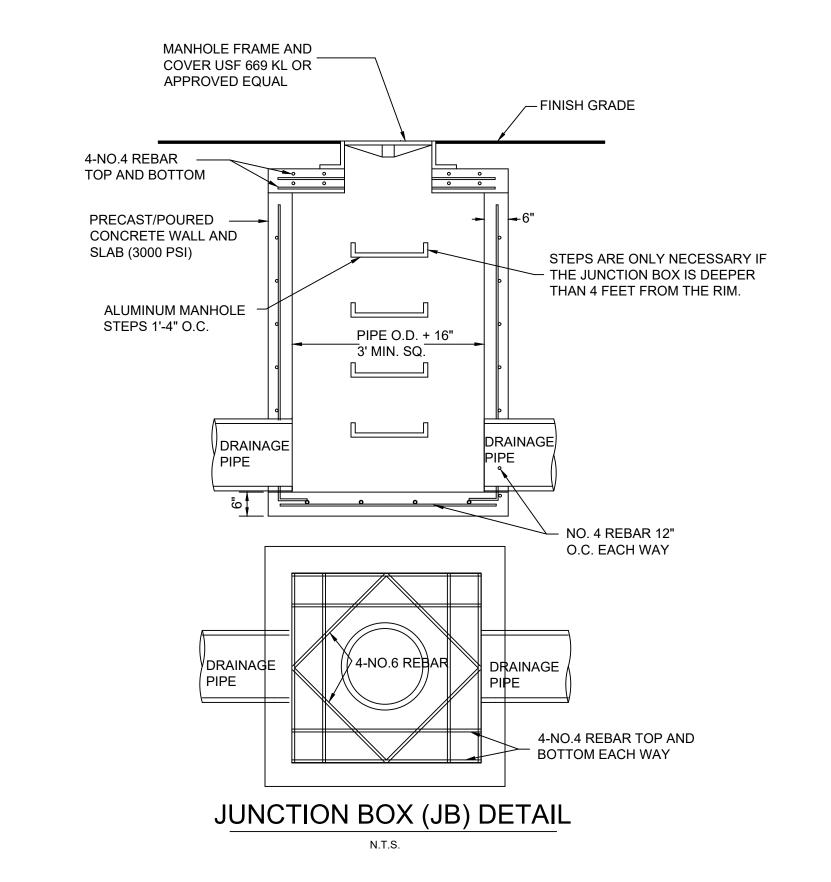








OBKROWAA ISHHEET ARROHAD





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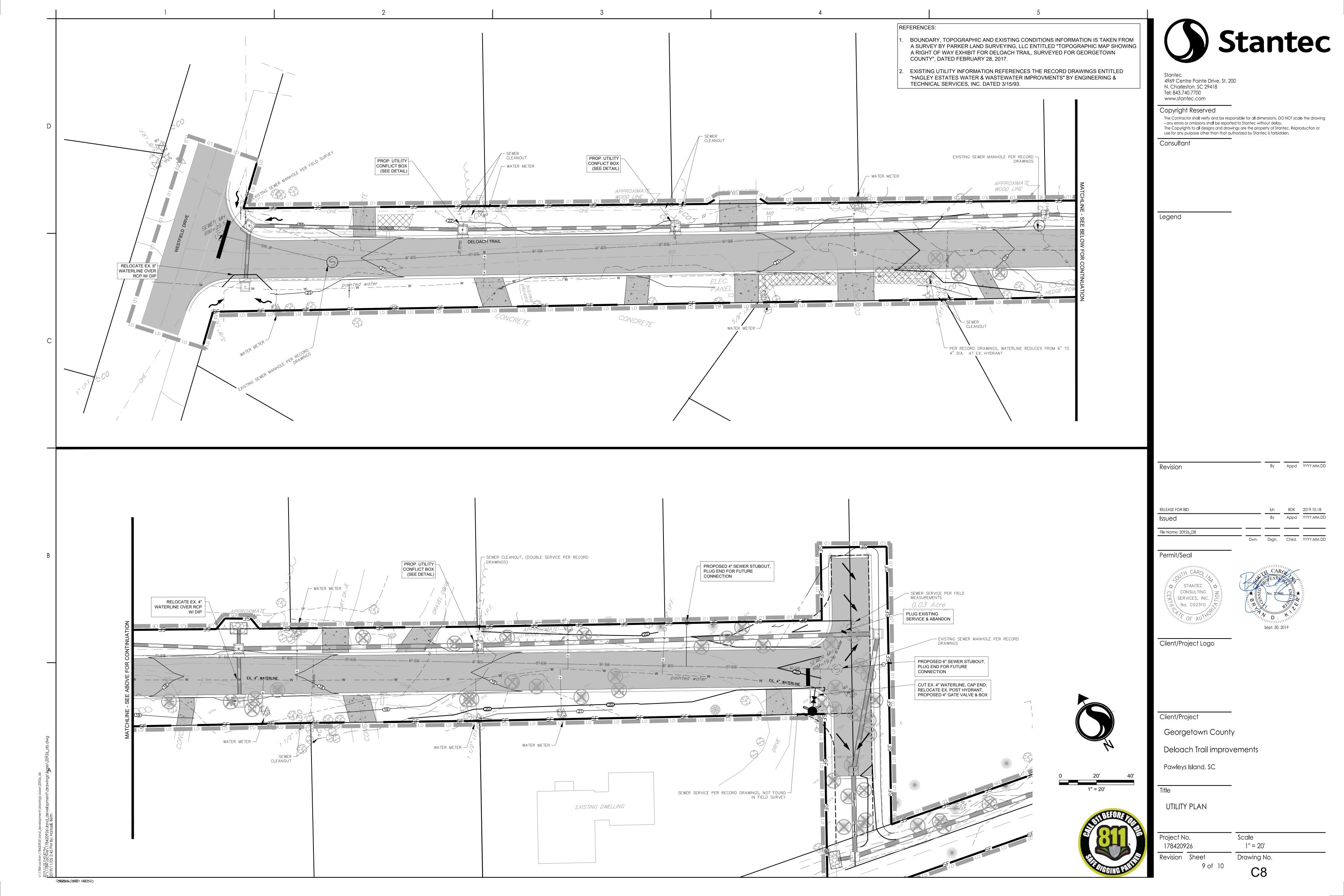
STORM DRAIN DETAILS

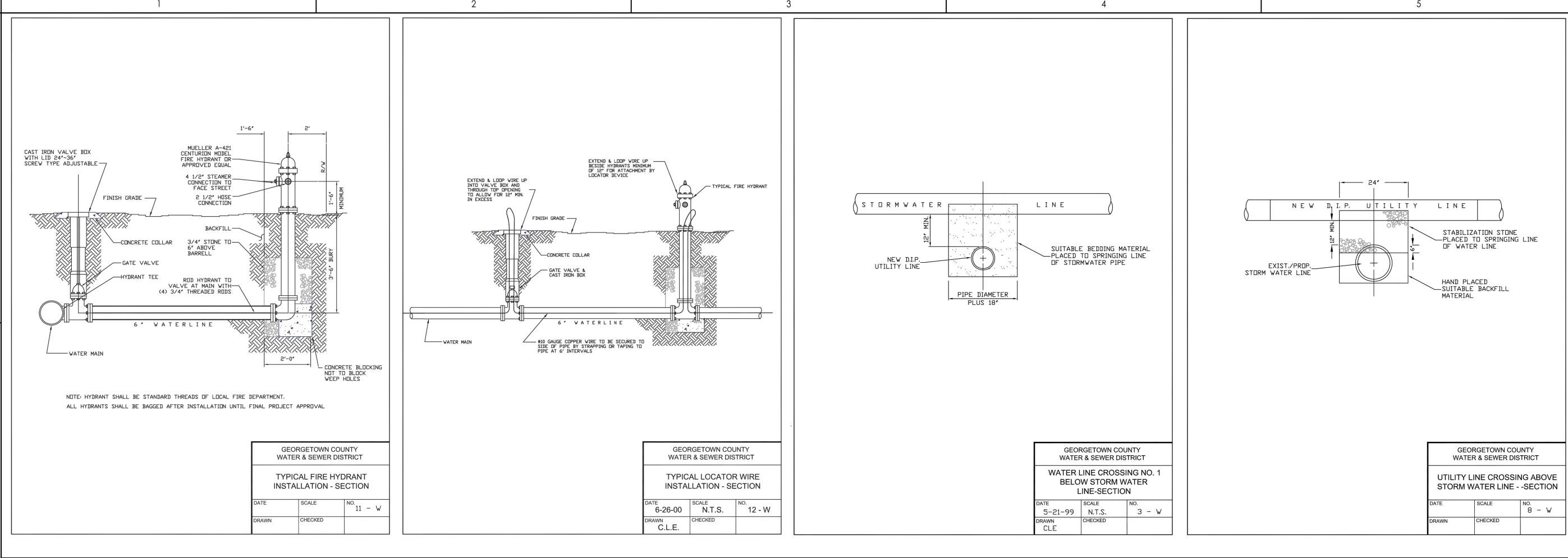
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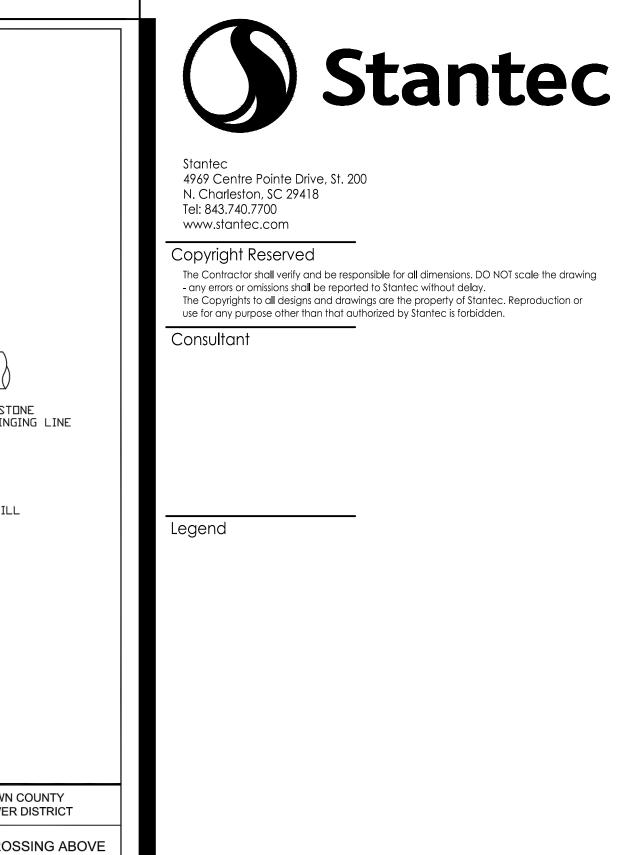
Drawing No. 8 of 10

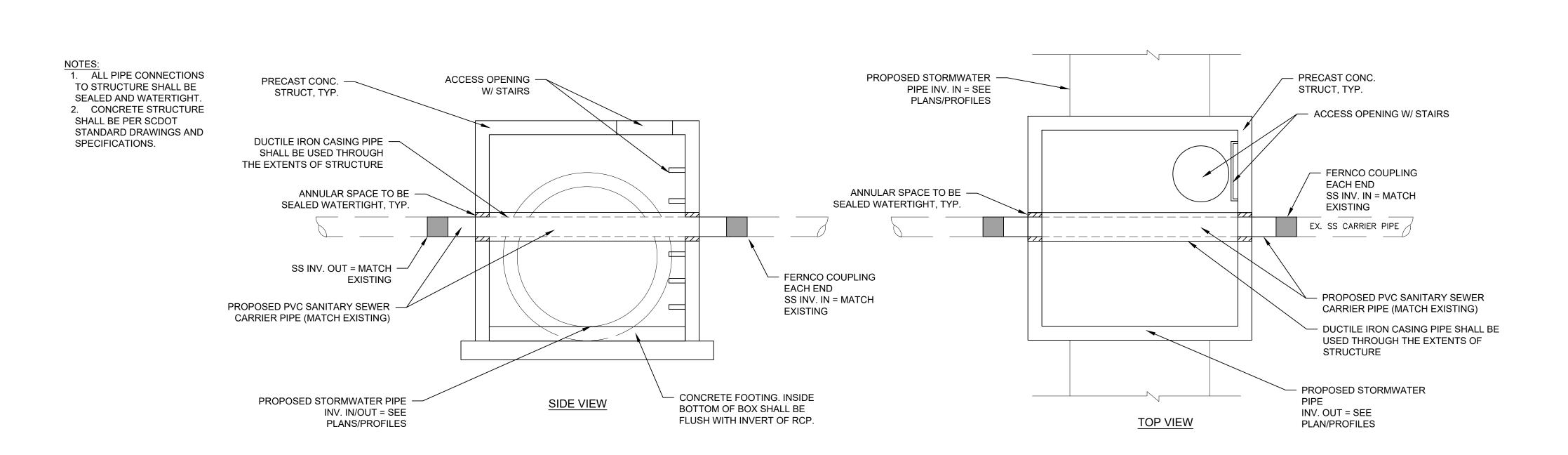
Scale

714-205-01 EFFECTIVE LETTING DATE JANUARY, 2013









PROPOSED PRECAST CONCRETE

UTILITY CONFLICT BOX

N.T.S.



Project No. 178420926

Revision Sheet

10 of 10

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