ENGINEERING PLANS & SPECIFICATIONS FOR DEKALB COUNTY DEPARTMENT OF WATERSHED MANAGEMENT

SOUTH FORK PEACHTREE CREEK SANITARY SEWER REPLACEMENT

ISSUED FOR BID

MASON MILL PARK

VICINITY MAP

LOCATION MAP

PROJECT SUMMARY

CHIEF EXECUTIVE OFFICER

BOARD OF COMMISSIONERS:

MIKE THURMOND

NANCY JESTER - DISTRICT 1 JEFF RADER - DISTRICT 2 LARRY JOHNSON - DISTRICT 3 SHARON BARNES SUTTON - DISTRICT 4 MEREDA DAVIS JOHNSON - DISTRICT 5 KATHIE GANNON - DISTRICT 6 **GREGORY ADAMS - DISTRICT 7**

DEKALB COUNTY DEPARTMENT OF WATERSHED MANAGEMENT 1580 ROADHAVEN DRIVE STONE MOUNTAIN, GA 30083 PHONE: (770) 621-7212 FAX: (770) 724-1407



CONTACT:

IF YOU DIG GEORGIA... CALL US FIRST! UTILITIES PROTECTION CENTER 1 - 800 - 282 - 7411(404) 325-5000 (metro Atlanta only) IT'S THE LAW

PROJECT NARRATIVE:

AS PART OF DEKALB COUNTY DEPARTMENT OF WATERSHED MANAGEMENT'S (DWM) ONGOING SEWER ASSESSMENT AND REHABILITATION PROGRAM AIMED AT REDUCING THE FREQUENCY OF SANITARY SEWER OVERFLOWS (SSO), THE SOUTH FORK PEACHTREE CREEK SANITARY SEWER BASIN WAS PRIORITIZED FOR MODELING AND ASSESSMENT. RESULTS OF THE ASSESSMENT REVEALED SEVERAL EXISTING SEGMENTS OF SANITARY SEWER WITH REVERSE GRADE CONDITIONS, AND THESE EXISTING SEGMENTS WERE PRIORITIZED FOR REPLACEMENT.

EXISTING SITE CONDITIONS:

SITE 1 IS LOCATED ON DEKALB COUNTY OWNED LITTLE CREEK FARM NEAR THE INTERSECTION OF ORION DRIVE AND LAWRENCEVILLE HIGHWAY (US 29, SR 78). THE ADJACENT PROPERTIES TO THIS LOCATION CONSIST OF RESIDENTIAL AND COMMERCIAL AREAS. THE EXISTING SITE IS A PASTURELAND WITH MEDIUM VEGETATION. THE STREAMBANK LIES WITHIN 20' OF THE EXISTING TRENCHBED. THE EXISTING 30" REINFORCED CONCRETE PIPE (RCP) ROUTES THROUGH MILD FORESTATION WITH MULTIPLE STORM TRENCH CROSSINGS. THE PIPE IS REROUTED AT THE SOUTHERN END TO AVOID CONFLICTING WITH THE STREAMBANK.

SITE 2 IS LOCATED ADJACENT TO SOUTH FORK PEACHTREE CREEK NEAR THE INTERSECTION OF MONTREAL ROAD AND MONTREAL CREEK COURT. THE ADJACENT PROPERTIES TO THIS LOCATION CONSIST OF RESIDENTIAL AND COMMERCIAL AREAS. THE EXISTING SITE RUNS PARALLEL TO THE CREEK AND PRIVATE RESIDENTIAL PROPERTY. THE EXISTING 24" RCP ROUTES THROUGH DENSELY VEGETATED AREAS AND MULTIPLE STORM TRENCH CROSSINGS. THE STREAMBANK LIES WITHIN 20' OF THE EXISTING TRENCHBED WITH EXPOSED PIPE AT THE NORTHERN END OF THE ALIGNMENT. THE PIPE IS REROUTED AT THE NORTHERN END TO AVOID CONFLICTING WITH THE STREAMBANK.

SITE 3 IS LOCATED ADJACENT TO BURNT FORK CREEK. THE EXISTING SITE RUNS PARALLEL TO THE CREEK THROUGH PRIVATE RESIDENTIAL PROPERTY AS WELL AS THROUGH CSX AND GEORGIA POWER PROPERTY. THE ALIGNMENT BEGINS NEAR THE INTERSECTION OF NORTH DRUID HILLS ROAD AND SPRING CREEK ROAD WITHIN PRIVATE RESIDENTIAL PROPERTY. AFTER TRAVERSING NORTH DRUID HILLS ROAD, THE ALIGNMENT RUNS PARALLEL TO THE CREEK THROUGH FORESTED DEKALB COUNTY OWNED PROPERTY AND NAVIGATES BETWEEN PRIVATELY OWNED MULTI-RESIDENTIAL HOMES BEFORE TYING INTO THE EXISTING SANITARY SEWER SYSTEM IMMEDIATELY NORTH OF SOUTH FORK PEACHTREE CREEK. THE EXISTING 30" RCP PIPE ROUTES THROUGH THICK VEGETATION AND MULTIPLE STREAM/STORM TRENCH CROSSINGS. THE PIPE IS REROUTED WITHIN CSX RIGHT-OF WAY, AND IS REROUTED BETWEEN THE MULTI-RESIDENTIAL HOMES TO AVOID EASEMENT ENCROACHMENTS ON THE EXISTING BUILDINGS.

PROPOSED SITE CONDITIONS:

ALL SANITARY SEWER REPLACEMENT WILL BE CONSTRUCTED UTILIZING THE SAME ROUTE AND ALIGNMENT AS THE EXISTING SYSTEM EXCEPT WHERE DESIGN CONDITIONS DICTATED CHANGES IN ALIGNMENT. THE EXISTING SYSTEM WILL BE REPLACED IN LINE USING TEMPORARY BYPASS PUMPING TO MAINTAIN CONTINUOUS WASTEWATER FLOW DURING CONSTRUCTION EXCEPT FOR BRIEF INTERRUPTIONS TO RECONNECT SERVICE LATERALS. CONTRACTOR TO COORDINATE WITH PROPERTY OWNERS ACCORDINGLY. IMPACTS TO THE SURROUNDING AREAS WILL BE KEPT TO A MINIMUM USING BEST MANAGEMENT PRACTICES (BMP).

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SEWER MAIN PLAN & PROFILE - SITE 3 (STA 49+50 - 54+50)

PROJECT SITE LOCATION													
SITE	SEGMENT	DISTRICT	LAND LOT	AREA OF DISTURBANCE	START	END							
1	ORION DRIVE	18	63 & 100	± 1.0 AC	N33.8039	N33.8051							
	ORION DRIVE	10	03 & 100	£ 1.0 AC	W84.2743	W84.2721							
2	MONTREAL ROAD	18	118 & 119	± 2.2 AC	N33.8140	N33.8158							
	WONTKEAL KOAD	10	110 & 119	1 2.2 AO	W84.2437	W84.2398							
	NORTH DRUID HILLS ROAD	18	102 & 113		N33.8063	N33.8136							
3	BURNT FORK CREEK	18	103	± 6.4 AC									
	MASON MILL PARK	18	103		W84.3017	W84.2940							

C-49

NOTE: PORTIONS OF THE DISTURBED AREA IS WITHIN THE 100 YEAR FLOOD HAZARD ZONE (REFERENCE FEMA FLOOD INSURANCE RATE MAPS (FIRM) 13089C0058J, 13089C0066J, 13089C0067J, & 13089C0078J, DATED MAY 16, 2013) THE SITE WILL BE GRADED TO EXISTING GRADE AFTER SANITARY SEWER INSTALLATION AND FINISHED WITH GROUND COVER SIMILAR TO EXISTING CONDITIONS. THEREFORE, THE FLOOD INSURANCE RATE MAPS ARE NOT IMPACTED BY THIS PROJECT.

1841 PEELER RD ATLANTA, GA 30338

TAMP: **PROFESSIONAI**

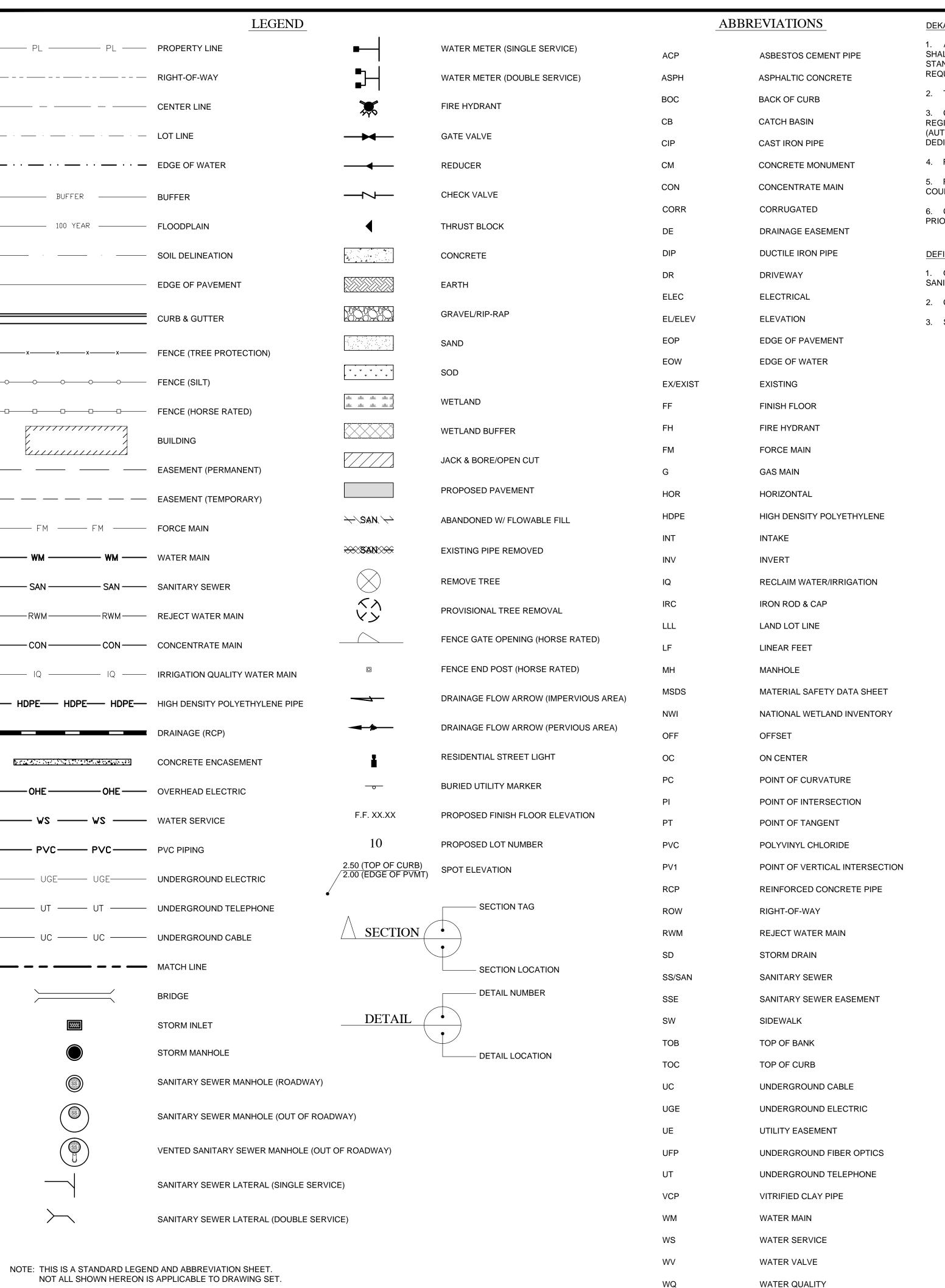
SHEET TITLE: 1 of 65

COVER SSUED: 5.27.16

CALE: NONE

RAWN BY: J.J. **G-0**

ESIGNED BY: J.J.



DEKALB COUNTY NOTES

1. ALL CONSTRUCTION FOR WATER, SEWER, FIRE LINES, LIFT STATIONS AND BACKFLOW PREVENTION SHALL COMPLY WITH DEKALB COUNTY DEPARTMENT OF WATERSHED MANAGEMENT DESIGN STANDARDS 2009 EDITION, VERSION 1.0. ACTUAL FIELD CONDITIONS COULD DICTATE MORE STRINGENT REQUIREMENTS IF DEEMED NECESSARY BY THE CONSTRUCTION INSPECTOR.

- 2. TO PURCHASE A COPY OF THE DESIGN STANDARDS, PLEASE CALL (770) 414-2383 OR (770) 621-7272.
- 3. CONTRACTOR SHALL PROVIDE RECORD DRAWINGS "AS-BUILT PLANS" SIGNED AND SEALED BY A GA REGISTERED LAND SURVEYOR, AND "FINAL PLATS" (IF APPLICABLE) IN HARD COPY AND ELECTRONIC (AUTOCAD OR MICROSTATION FORMAT), AS WELL AS RECORD ALL EASEMENTS THAT WILL BE DEDICATED TO DEKALB COUNTY IN THE COURTHOUSE, PRIOR TO APPROVAL OF AS-BUILT PLANS.
- 4. FIRE LINES, F.O.G., BACKFLOW PREVENTION, AND LIFT STATIONS REQUIRE A SEPARATE REVIEW.
- 5. FIELD CHANGES DURING CONSTRUCTION MUST BE SUBMITTED FOR REVIEW & APPROVAL TO THE COUNTY ENGINEER.
- 6. CONTRACTOR MUST NOTIFY WATER & SEWER CONSTRUCTION INSPECTOR AT LEAST 72 HOURS PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES.

DEFINITIONS

1. OWNER - DEKALB COUNTY DEPARTMENT OF WATERSHED MANAGEMENT (DCDWM) FOR ALL WATER AND SANITARY SEWER INFRASTRUCTURE

- 2. CONTRACTOR UTILITY CONTRACTOR
- 3. SUBCONTRACTOR UTILITY, PAVING, AND ALL OTHER CONSTRUCTION SUBCONTRACTORS

PROCEDURE

1. THE CONTRACTOR SHALL FURNISH ALL MATERIALS FOR, AND PROPERLY RESTORE ALL PAVEMENT, DRIVES, SIDEWALKS, FENCES, CURBS, AND OTHER EXISTING ITEMS WHICH MAY HAVE BEEN DAMAGED, REMOVED OR DISTURBED AS A RESULT OF ACCOMPLISHING THE WORK. SIGNS AND MAIL BOXES REMOVED OR DAMAGED SHALL BE REPLACED IN KIND AT NO ADDITIONAL COST TO OWNER. CONTRACTOR IS RESPONSIBLE FOR REPLACING ITEMS TO EXISTING CONDITIONS REGARDLESS IF THEY ARE IDENTIFIED ON THE DRAWINGS.

2. THE CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY GRADES AND DIMENSIONS AND TO NOTIFY THE ENGINEER IN ADVANCE AND IN WRITING OF ANY DISCREPANCIES PRIOR TO PERFORMING HIS WORK.

3. EXISTING UTILITY LOCATIONS SHOWN ARE BASED ON SURFACE OBSERVATION AND LIMITED DETECTION SERVICES AND ARE FOR INFORMATIONAL PURPOSES ONLY. NOT ALL EXISTING UTILITIES ARE SHOWN ON THE DRAWING.

4. CONTRACTOR IS RESPONSIBLE FOR DETERMINING BOTH THE EXACT LOCATION OF ALL UTILITIES AND FOR THEIR PROTECTION DURING CONSTRUCTION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE HIS OPERATIONS WITH ALL UTILITIES WHICH MAY BE EXISTING AND MAY BE IN CONFLICT WITH HIS WORK.

5. ALL WORK AROUND THE EXISTING UTILITIES AND UTILITY STRUCTURES WHETHER ABOVE OR BELOW GROUND SHALL BE PERFORMED IN A MANNER THAT WILL AVOID DAMAGE TO THE UTILITIES AND STRUCTURES. PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL ACCURATELY LOCATE ABOVE AND BELOW UTILITIES WHICH MAY BE AFFECTED BY THE WORK AND PROTECT ALL UTILITIES NOT DESIGNATED FOR REMOVAL, RESTORATION, OR REPLACEMENT IN THE COURSE OF CONSTRUCTION. PROVIDE SEVENTY-TWO (72) HOURS OF ADVANCE NOTICE, EXCLUDING HOLIDAYS AND WEEKENDS, TO THE UTILITY OWNER AND DEKALB COUNTY PRIOR TO BEGINNING CONSTRUCTION IN THE VICINITY OF THE EXISTING UTILITIES. FOR EXISTING UTILITY LOCATION ASSISTANCE CALL THE UNDERGROUND UTILITIES PROTECTION CENTER (UPC) AT 1-800-282-7411.

6. ANY DAMAGE TO EXISTING UTILITIES CAUSED BY THE CONTRACTOR, CONTRACTOR'S CREW AND/OR EQUIPMENT SHALL BE THE CONTRACTOR'S COST AND RESPONSIBILITY TO REPLACE PER OWNER'S

STANDARDS AND SPECIFICATIONS.

7. THIS PROJECT IS IN THE VICINITY OF GEORGIA POWER COMPANY POWER POLES AND POWER LINES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT UPC SEVENTY-TWO HOURS IN ADVANCE, EXCLUDING HOLIDAYS AND WEEKENDS, TO OBTAIN AN OVERHEAD LOCATE REQUEST PRIOR TO WORKING ADJACENT TO THE POWER LINES AND POLES.

THE POWER LINES AND POLES.

8. THE CONTRACTOR SHALL COMPLY WITH ALL RULES AND REGULATIONS OF THE GEORGIA UTILITY FACILITY PROTECTION ACT, O.C.G.A. TITLE 25 CHAPTER 9 AND THE GEORGIA OVERHEAD UTILITY PROTECTION ACT.

9. CONTRACTOR SHALL CONSTRUCT AND MAINTAIN TEMPORARY BYPASS SEWERS TO MAINTAIN

CONTINUOUS AND RELIABLE WASTEWATER FLOW DURING CONSTRUCTION.

10. SEWER MAINS SHALL MAINTAIN EIGHTEEN (18) INCHES VERTICAL CLEARANCE FROM POTABLE PIPELINES AND TWENTY-FOUR (24) INCHES VERTICAL CLEARANCE FROM ANY EXISTING GAS MAIN. (MEASURED FROM OUTSIDE OF PIPE TO OUTSIDE OF PIPE).

11. SEWER MAINS SHALL MAINTAIN THIRTY-SIX (36) INCHES VERTICAL CLEARANCE FROM ANY EXISTING PERPENDICULAR CROSSING OF GRAVITY AND FORCE MAINS (MEASURED FROM OUTSIDE OF PIPE TO OUTSIDE OF PIPE).

12. SEWER MAINS SHALL MAINTAIN TEN (10) FEET HORIZONTAL CLEARANCE FROM ANY BUILDING, STRUCTURE, WATER MAIN OR OTHER UTILITY WHEN PRACTICAL.

13. BOLT DOWN MANHOLE COVERS ARE TO BE USED FOR ALL MANHOLES LOCATED WITHIN THE ONE

HUNDRED (100) YEAR FLOODPLAIN.

14. ALL MANHOLES OUTSIDE OF PAVED AREAS SHALL BE A MINIMUM OF TWENTY-FOUR (24) INCHES ABOVE

GROUND LEVEL.

15. A COPY OF THE APPROVED SET OF CONSTRUCTION PLANS, AND AT LEAST ONE COPY OF THE DCDWM

15. A COPY OF THE APPROVED SET OF CONSTRUCTION PLANS, AND AT LEAST ONE COPY OF THE DCDWM DESIGN STANDARDS, 2009 EDITION, V1.0 SHALL BE ON THE JOB SITE AT ALL TIMES THAT CONSTRUCTION IS LINDER WAY

16. ALL EROSION AND SEDIMENTATION CONTROLS AND TREE PROTECTION MEASURES SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBANCE ACTIVITY.

17. HAUL OPERATIONS SHALL NOT BE PERMITTED DURING <u>PEAK TRAFFIC PERIODS</u> AS DEFINED BY DCDWM. CONTRACTOR SHALL COORDINATE AND OBTAIN APPROVAL OF THE HAULING OPERATING SCHEDULE AND OPERATIONS WITH DEKALB COUNTY AND GEORGIA DEPARTMENT OF TRANSPORTATION.

18. THE REFUSE RESULTING FROM THE CLEARING AND/OR DEMOLITION SHALL BE HAULED TO A DISPOSAL SITE SECURED BY THE CONTRACTOR AND SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL REQUIREMENTS OF FEDERAL, STATE, COUNTY, & CITY MUNICIPAL REGULATIONS. NO DEBRIS OF ANY KIND SHALL BE DEPOSITED IN ANY STREAM OR BODY OF WATER, OR IN ANY STREET OR ALLEY. NO DEBRIS SHALL BE DEPOSITED UPON ANY PRIVATE PROPERTY EXCEPT BY WRITTEN CONSENT OF THE PROPERTY OWNER. IN NO CASE SHALL ANY MATERIAL BE LEFT ON THE PROJECT, SHOVED ONTO ABUTTING PRIVATE PROPERTIES, OR BE BURIED IN THE EMBANKMENTS OR TRENCHES ON THE PROJECT.

19. THE CONTRACTOR SHALL FURNISH AND MAINTAIN ALL NECESSARY BARRICADES & TRAFFIC CONTROL DEVICES NEEDED FOR THIS PROJECT. NO OPEN TRENCHES ARE ALLOWED TO BE UNATTENDED ON THIS PROJECT AT ANY TIME. IN THE EVENT THE TRENCH WILL REQUIRE BEING OPEN, IT SHALL BE PROPERLY COVERED FOR BOTH VEHICULAR AND PEDESTRIAN TRAFFIC AND SAFETY AND APPROVED BY DEKALB COUNTY. THE CONTRACTOR SHALL PROVIDE THE PROPER COVER AND BARRICADES THAT MEETS ALL LOCAL, STATE AND FEDERAL SAFETY STANDARDS FOR BOTH VEHICULAR AND PEDESTRIAN TRAFFIC.

20. ALL EXCAVATIONS SHALL BE ADEQUATELY SHORED TO ENSURE WORKER SAFETY. ALL PIPE LAYING

OPERATIONS SHALL COMPLY WITH OSHA REQUIREMENTS FOR TRENCH SAFETY.

21. ALL SUBSURFACE FEATURES SHOWN ARE APPROXIMATE AND BASED ON LIMITED SUB-SURFACE

21. ALL SUBSURFACE FEATURES SHOWN ARE APPROXIMATE AND BASED ON LIMITED SUB-SURFACE EXPLORATIONS. THE CONTRACTOR AT HIS EXPENSE SHALL CONDUCT ADDITIONAL SUBSURFACE SOIL AND STRUCTURE EXPLORATION IF DEEMED NECESSARY.

22. THE PROJECT CONSTRUCTION SITE IS ADJACENT TO ACTIVE ROADWAYS AND BUSINESSES. ALL CONSTRUCTION ACTIVITIES SHALL BE CONDUCTED IN SUCH A MANNER THAT WILL PROVIDE THE ACCEPTABLE LEVELS OF SAFETY AND MAINTENANCE OF UTILITIES, ROADWAY, TRAFFIC, DRIVEWAY, SIDEWALKS, ETC. TO ALL OWNERS, DEKALB COUNTY DEPARTMENT OF WATERSHED MANAGEMENT AND ALL BUSINESSES. THE CONTRACTOR SHALL AT ALL TIMES MAINTAIN AND PROTECT ALL UTILITY SERVICES AND DRIVEWAY ACCESS TO, SUCH AS BUT NOT LIMITED TO, BUSINESSES, FIRE PROTECTION PERSONNEL, VEHICLES, AND ALL OTHER VEHICULAR AND PEDESTRIAN TRAFFIC, ETC. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGES THAT OCCUR AS A RESULT OF CONSTRUCTION ACTIVITIES.

23. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL ROAD OPENING AND ROAD CLOSURE PERMITS FROM THE DEKALB COUNTY DEPARTMENT OF PUBLIC WORKS TRANSPORTATION DIVISION AT 770-492-5259. THE CONTRACTOR SHALL COORDINATE, OBTAIN APPROVAL, AND PROVIDE TEMPORARY TRAFFIC ROUTING PLANS PRIOR TO ANY LANE CLOSURES WITH THE DEKALB COUNTY DEPARTMENT OF PUBLIC WORKS TRANSPORTATION DIVISION.

24. ANY CONSTRUCTION ACTIVITIES REQUIRING LANE CLOSURE SHALL BE COMPLETED DURING WEEKENDS. WORKING HOURS SHALL BE BETWEEN 9:00 P.M. FRIDAY AND 5:00 A.M. MONDAY MORNING OR AS COORDINATED WITH APPLICABLE PERMITTING AGENCY. ALL LANE CLOSURES SHALL BE CLOSELY COORDINATED WITH DEKALB COUNTY DEPARTMENT OF PUBLIC WORKS TRANSPORTATION DIVISION OR THE GEORGIA DEPARTMENT OF TRANSPORTATION, AS APPLICABLE.

25. WORKING HOURS SHALL BE BETWEEN MONDAY - FRIDAY 7:30 A.M. TO 5:00 P.M. UNLESS PRIOR APPROVAL IS GRANTED BY DCDWM. WORK WITH ROADWAY TRAVEL LANES SHALL BE BETWEEN 9:00 AM MONDAY MORNING AND 4:00 P.M. FRIDAY AFTERNOON.

26. ALL SALVAGEABLE METAL MATERIAL, SUCH AS BUT NOT LIMITED TO, FIRE HYDRANTS, MANHOLE FRAMES AND COVERS, SHALL REMAIN THE PROPERTY OF THE OWNER AND SHALL BE CLEANED AND STORED ON THE OWNER'S PROPERTY AS DIRECTED BY THE OWNER. ALL OTHER MATERIALS WHICH ARE NOT DELIVERED TO OWNER AS SPECIFIED ABOVE SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DEMOLISH AND DISPOSE OF PER DEKALB COUNTY STANDARDS AND REQUIREMENTS. ALL DEMOLISHED STRUCTURES, EQUIPMENT AND MATERIALS SHALL BE REMOVED FROM THE WORK SITE BY THE CONTRACTOR. ALL DEMOLISHED STRUCTURES, EQUIPMENT AND MATERIALS WHICH ARE EITHER LEFT IN PLACE OR REMOVED TO THE DISPOSAL SITE SHALL BE IN A NON-HAZARD CONDITION. CONTRACTOR TO MAINTAIN CLEANLINESS OF SITE TO SATISFACTION OF INSPECTOR. CONTRACTOR TO NOTIFY INSPECTOR AT LEAST SEVENTY-TWO (72) HOURS IN ADVANCE OF IMPACTING PRIVATE PROPERTY.

27. CONTRACTOR TO PROVIDE VERIFICATION OF NOTIFICATION OF ALL PROPERTY OWNERS AFFECTED BY OFF-SITE WORK. A MINIMUM OF 48 HOURS NOTICE SHALL BE PROVIDED.

28. FINISHED GRADING OF THE DISTURBED AREA SHALL BE RESTORED TO ORIGINAL GRADE. NO STANDING WATER OR PONDING OF ANY KIND IS ALLOWED. ALL DISTURBED AREAS SHALL BE IMMEDIATELY STABILIZED OR GRASSED AS INDICATED.

29. KNOWN SERVICE LATERALS ARE SHOWN ON PLANS. CONTRACTOR SHALL LOCATE ALL SERVICE LATERALS PRIOR TO EXCAVATION. CONNECTION OF SERVICE LATERALS AND SEWER MAIN SHALL BE REBUILT IMMEDIATELY AFTER THE ACCEPTANCE OF THE PROPOSED PIPE. CONTRACTOR TO COORDINATE CONSTRUCTION WITH PROPERTY OWNER FOR TIMES OF SERVICE INTERRUPTION.

30. NO PERMANENT STRUCTURES SHALL BE CONSTRUCTED WITHIN THE PERMANENT SANITARY SEWER EASEMENT.
31. PRIOR TO INITIATING CONSTRUCTION ACTIVITIES, CONTRACTOR SHALL STAKE MANHOLE LOCATIONS AND

CONDUCT A SITE VISIT WITH OWNER AND CITY ARBORIST TO CONFIRM ALL TREES TO BE REMOVED.

32. ALL WORK WITHIN THE STATE RIGHT-OF-WAY MUST BE COORDINATED WITH THE GEORGIA DEPARTMENT OF TRANSPORTATION AREA 1 OFFICE AT LEAST SEVENTY-TWO (72) HOURS IN ADVANCE OF THE PLANNED CONSTRUCTION.

33. NO DEBRIS SHALL BE DEPOSITED UPON ANY PRIVATE PROPERTY EXCEPT BY WRITTEN CONSENT OF THE PROPERTY OWNER NOR WITHOUT PROPERLY ISSUED DEKALB COUNTY PERMITS.



1841 PEELER RD.

UNIT C ATLANTA, GA 30338 PHONE: (678) 336-5732 WWW.R2TINC.COM

DEKALB COUNTY DEPARTMENT OF WATERSHED MANAGEMENT

SOUTH FORK
PEACHTREE CREEK
SANITARY SEWER
REPLACEMENT
LAND LOTS 63, 100, 102, 103, 113, 118, & 119

REV DATE DESCRIPTION

To 5/27/16 INITIAL ISSUE

1 12/9/16 REVIEW COMMENTS

No. 26889
PROFESSIONAL
5/27/16
ENGINEER

CFORGE

SHEET TITLE: 2 of 65

LEGEND, ABBREVIATIONS & GENERAL NOTES

ISSUED: 5.27.16

ROJECT NO.

CHKD BY: A.R.
DESIGNED BY: J.J.
DESIGNED BY: J.J.

GENERAL

AT NO TIME WILL ANY GRAVITY SANITARY SEWER CONSTRUCTION COMMENCE PRIOR TO APPROVAL OF ALL PLANS, RECEIPT OF ALL REQUIRED DOCUMENTS INCLUDING NECESSARY EASEMENTS, ISSUANCE OF SANITARY SEWER CONSTRUCTION PERMIT TO APPROVED CONTRACTOR BY DCDWM AND A PRECONSTRUCTION CONFERENCE HELD WITH A DCDWM INSPECTOR (TWENTY-FOUR (24) HOURS ADVANCE NOTICE REQUIRED).

ALL GRAVITY SANITARY SEWER LINES, MANHOLES AND OTHER APPURTENANCES TO BE GOVERNED BY DCDWM SHALL BE INSTALLED ACCORDING TO APPROVED PLANS AND PROFILES. IF A FIELD CHANGE MUST OCCUR, THE REDESIGNED AREA(S) MUST BE SUBMITTED FOR APPROVAL PRIOR TO INSTALLATION, IN ACCORDANCE WITH GEORGIA ENVIRONMENTAL PROTECTION DIVISION'S RULES AND REGULATIONS FOR WATER QUALITY CONTROL, CHAPTER 391 3 6 .02 (10). CONTRACTOR MUST HAVE A SET OF THE "APPROVED" DESIGN CONTAINING AN ORIGINAL DCDWM STAMP, AND A COPY OF THE DWM DESIGN STANDARDS, CURRENT EDITION, ON SITE AT ALL

CONTRACTOR SHALL ADHERE TO ALL FEDERAL, STATE, COUNTY AND LOCAL LAWS, ORDINANCES AND REGULATIONS WHICH IN ANY MANNER AFFECT THE CONDUCT OF THE WORK, INCLUDING BUT NOT LIMITED TO INITIATING, MAINTAINING AND SUPERVISING ALL SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH

SANITARY SEWER CONSTRUCTION SHALL BE DONE IN OPEN TRENCHES AND IN A MANNER TO PROTECT LINES, SANITARY SEWERS OR STRUCTURES FROM UNUSUAL STRESSES.

THE CONTRACTOR SHALL PROVIDE FOR THE FLOW OF ALL SANITARY SEWERS, DRAINS OR CREEKS INTERRUPTED DURING THE PROGRESS OF THE WORK AND SHALL RESTORE SAME TO A PRECONSTRUCTION CONDITION.

AT THE START OF CONSTRUCTION, THE CONTRACTOR SHALL INSTALL AN AIR PLUG IN THE FIRST PIPE LAID OUT OF THE ENTRANCE MANHOLE AND IN THE DOWNGRADE SIDE OF THE FIRST NEWLY INSTALLED MANHOLE. SAID PLUGS SHALL REMAIN IN PLACE UNTIL FINAL INSPECTION AND APPROVAL IS GIVEN BY DCDWM. CONTRACTOR MUST EXERCISE EXTREME CAUTION TO ENSURE THAT PLUGS ARE NOT LOST INTO THE GRAVITY SANITARY SEWER SYSTEM.

THE CONTRACTOR MUST COMPLY WITH ALL REQUIREMENTS OF THE DEKALB COUNTY SOIL EROSION AND SEDIMENT CONTROL ORDINANCE, THE PROVISIONS OF THE "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA," AND ANY SPECIAL CONDITIONS REQUIRED BY THE EPD ASSOCIATED WITH ANY VARIANCES ISSUED BY THE SAME, AND ANY SPECIAL CONDITIONS REQUIRED BY THE DCDWM INSPECTOR.

ACCEPTABLE MATERIALS

1) GRAVITY SANITARY SEWER LINES

GRAVITY SANITARY SEWER LINES SHALL BE DUCTILE IRON PIPE (DIP) AND COMPLY WITH CURRENT DCDWM

THE MATERIAL SELECTED SHOULD BE ADAPTED TO LOCAL CONDITIONS, SUCH AS, CHARACTERISTICS OF INDUSTRIAL WASTES, POSSIBILITY OF SEPTICITY, SOIL CHARACTERISTICS, EXCEPTIONALLY HEAVY EXTERNAL LOADINGS, ABRASION, AND SIMILAR PROBLEMS.

ALL SANITARY SEWERS SHALL BE DESIGNED TO PREVENT DAMAGE FROM SUPERIMPOSED LOADS. PROPER ALLOWANCE FOR LOADS ON THE SANITARY SEWER BECAUSE OF THE WIDTH AND DEPTH OF A TRENCH SHOULD BE MADE. WHEN STANDARD STRENGTH SANITARY SEWER PIPE IS NOT SUFFICIENT, THE ADDITIONAL STRENGTH NEEDED MAY BE OBTAINED BY USING EXTRA STRENGTH PIPE OR BY SPECIAL CONSTRUCTION, SUCH AS IMPROVING BEDDING CONDITIONS OR ENCASING THE PIPE IN CONCRETE.

SANITARY SEWER PIPE AND FITTINGS SHALL BE MARKED IN ACCORDANCE WITH THE LATEST ASTM/ANSI DESIGNATIONS. AS A MINIMUM, MARKING FOR PIPE SHALL INCLUDE MANUFACTURER'S NAME OR TRADEMARK, NOMINAL PIPE SIZE, SPECIFICATION DESIGNATION AND DATE OF MANUFACTURE. PIPE MARKINGS SHALL APPEAR AT INTERVALS OF FIVE (5) FEET OR LESS ON PIPE BARREL. THE PIPE SHALL CONFORM TO THE APPLICABLE SPECIFICATIONS AS FOLLOWS.

A) DUCTILE IRON PIPE (DIP) AND FITTINGS:

PIPE SHALL BE PUSH-ON JOINT TYPE CONFORMING TO THE LATEST REQUIREMENTS OF THE LATEST REVISION OF ANSI STANDARD SPECIFICATIONS A21.50/A21.51, PRESSURE CLASS 350 DUCTILE IRON, UNLESS OTHERWISE SPECIFIED HEREIN.
 PROVIDE FITTINGS WITH A BODY THICKNESS AND RADII OF CURVATURE CONFORMING TO THE LATEST ANSI STANDARD SPECIFICATION A21.10 AND JOINTS IN ACCORDANCE WITH THE LATEST ANSI STANDARD SPECIFICATION A21.11.

PIPE SHALL BE LINED WITH PROTECTO 401®.
 WHENEVER CONNECTIONS ARE MADE BETWEEN DUCTILE IRON PIPE AND PIPE OF OTHER MATERIALS, USE OF AN APPROVED TYPE OF TRANSITION GASKET OR COUPLING IS REQUIRED.
 ALL PIPE AND FITTINGS SHALL BE BITUMINOUS COATED AT THE POINT OF MANUFACTURE IN ACCORDANCE WITH THE LATEST REVISION OF ANSI A21.51.

B) STEEL (CASING FOR BORE AND JACK ONLY):

STEEL PIPE SHALL BE USED FOR BORE AND JACK CASING.
 PIPE SHALL CONFORM TO THE LATEST REVISIONS OF ASTM A134 OR ASTM A139 WITH A MINIMUM YIELD OF THIRTY-FIVE THOUSAND (35,000) PSI. ALLOY SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF ASTM A36.

2) GRAVITY SANITARY SEWER MANHOLES

MANHOLES SHALL BE POLYMER CONCRETE CONSTRUCTION MADE IN CONFORMANCE WITH THE LATEST EDITION OF ANSI/ASTM C478. THE MINIMUM WALL THICKNESS FOR A FOUR (4) FOOT DIAMETER MANHOLE IS THREE (3) INCHES, AND FOR A FIVE (5) DIAMETER AND LARGER MANHOLE IS FOUR (4) INCHES.

3) RESILIENT CONNECTOR (RUBBER BOOT)

ALL PIPES ENTERING A MANHOLE MUST BE SEALED BY A RESILIENT CONNECTION (RUBBER BOOT) MEETING THE LATEST REVISION OF ASTM C923 SUCH AS A-LOK, Z-LOK OR KOR-N-SEAL. THE MATERIAL IS TO BE EPDM RUBBER WITH A STAINLESS STEEL BAND.

4) CONCRETE

THERE SHALL BE TWO CLASSES OF CONCRETE, CLASS A FOR FORMED, REINFORCED CAST-IN-PLACE STRUCTURES AND CLASS B FOR UN-REINFORCED CONCRETE THRUST BLOCKS. CONCRETE CRADLES, CONCRETE ENCASEMENT, CONCRETE FILL AND SIMILAR USES. CLASS A CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF THREE THOUSAND FIVE HUNDRED (3,500), FOUR THOUSAND (4,000), OR FOUR THOUSAND FIVE HUNDRED (4,500) PSI. CLASS B CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF TWO THOUSAND FIVE HUNDRED

TRENCH EXCAVATION

ALL EXCAVATION SHALL BE OPEN CUT UNLESS OTHERWISE INDICATED ON THE "APPROVED" DESIGN OR DIRECTED BY DCDWM. IN GENERAL, TOPSOIL MAY BE REMOVED BY MACHINE METHOD. EXCAVATION BELOW TOPSOIL MAY ALSO BE PERFORMED BY MACHINE, BUT SHALL BE SUPPLEMENTED BY SUCH HAND DRESSING OR LEVELING AS MAY BE REQUIRED TO CONFORM TO LINES AND GRADES AS GIVEN BY DCDWM. MATERIAL SO REMOVED SHALL BE USED IN BACKFILL, MAKING EMBANKMENTS, FILLING LOW AREAS, OR AS OTHERWISE DIRECTED.

HAND TOOL EXCAVATION SHALL BE USED WHERE NECESSARY TO PROTECT EXISTING UTILITIES AND STRUCTURES

(2,500) OR THREE THOUSAND (3,000) PSI. NO BAGGED OR SACKED CONCRETE IS ALLOWED.

ALL SLOPES SHALL BE CAREFULLY CUT OR GRADED BY HAND TO GRADES REQUIRED BY DCDWM AND SHALL BE TAMPED OR OTHERWISE COMPACTED TO MAINTAIN THE MATERIAL IN POSITION. THE FINAL TRIMMING OF THE BOTTOMS AND SIDES OF EXCAVATIONS WHICH IS TO BE ADJACENT TO CONCRETE ROADS, SIDEWALKS, CURBS, OR OTHER STRUCTURES SHALL BE DONE JUST BEFORE THE CONCRETE IS PLACED, OR POURED.

IN OPEN OR IMPROVED LAWN AREAS, EXCAVATION SHOULD BE DONE, IF POSSIBLE, UTILIZING A TRACTOR-MOUNTED BACKHOE AND" EXTREME CARE SHOULD BE TAKEN TO AVOID DAMAGE TO ADJOINING LAWN AREAS. IN AREAS NOT READILY ACCESSIBLE BY MACHINERY AND WHERE EXCAVATION IS REQUIRED NEAR EXISTING TREES AND SHRUBBERIES WHICH MAY BE DAMAGED BY EXCAVATION EQUIPMENT, THE TRENCH SHALL BE EXCAVATED USING HAND TOOLS.

THE MINIMUM WIDTH OF TRENCH FROM AN ELEVATION OF TWELVE (12) INCHES ABOVE THE TOP OF THE PIPE TO THE BOTTOM OF THE TRENCH SHALL BE AS INDICATED ON STANDARD DETAIL S-018 ON PAGE C-21.

IN ORDER TO LIMIT LOADS ON THE PIPE, THE MAXIMUM WIDTH OF THE TRENCH SHALL NOT BE MORE THAN TWENTY-FOUR (24) INCHES WIDER THAN THE OUTSIDE DIAMETER OF THE PIPE. THIS TRENCH WIDTH RESTRICTION APPLIES FROM THE BOTTOM OF THE BEDDING TO TWELVE (12) INCHES ABOVE THE TOP OF THE PIPE. TRENCHES GREATER THAN SIX (6) FEET DEEP SHALL BE SLOPED FROM A POINT TWELVE (12) INCHES ABOVE THE PIPE TO GROUND SURFACE ELEVATION, REFER TO STANDARD DETAIL S-018 ON PAGE C-21.

EXCAVATION OF PIPE TRENCHES WITH SIDES SLOPING TO THE TRENCH BOTTOM WILL NOT BE PERMITTED.

SHOULD TRENCHES BE EXCAVATED WITH MORE THAN THE SPECIFIED MAXIMUM WIDTHS, DCDWM MAY REQUIRE THE CONTRACTOR TO FURNISH CONCRETE CRADLES OR CONCRETE ENCASEMENT FOR THE PIPE.

REMOVAL OF WATER

REMOVAL OF WATER FROM EXCAVATED AREAS SHALL BE AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL PUMP OUT, OR OTHERWISE REMOVE AND PROPERLY DISPOSE OF ANY WATER (E.G. STORM WATER AND/OR GROUND WATER) AS FAST AS IT COLLECTS IN THE EXCAVATION. WATER SHALL NOT ACCUMULATE OR BE PRESENT IN THE EXCAVATED TRENCH AT ANY TIME. THIS REMOVAL IS REQUIRED REGARDLESS OF THE SOURCE.

ALL NECESSARY PRECAUTIONS SHALL BE TAKEN TO PREVENT DISTURBANCE AT, AND TO PROPERLY DRAIN, ANY AREAS UPON WHICH CONCRETE IS TO BE POURED, OR UPON WHICH PIPE IS TO BE LAID.

APPROVED, AND APPROPRIATE, EQUIPMENT WITH SUFFICIENT CAPACITY TO REMOVE WATER FROM THE WORK SHALL BE KEPT ON SITE AT ALL TIMES. EQUIPMENT SHALL BE USED IN SUCH A MANNER AS TO NOT WITHDRAW SAND OR CEMENT FROM CONCRETE. CONTRACTOR IS ALSO TO ENSURE THAT REMOVAL OF ANY LIQUIDS WILL NOT INTERFERE WITH THE PROPER LAYING OF PIPE, OR PROSECUTION OF ANY OF THE REQUIRED WORK FOR THE COMPLETE CONSTRUCTION OF THE PROJECT.

THE FLOW IN SANITARY SEWERS, DRAINS, GUTTERS, OR WATER COURSES ENCOUNTERED DURING THE CONSTRUCTION SHALL BE ADEQUATELY PROVIDED FOR BY THE CONTRACTOR TO ENSURE THESE FLOWS DO

NOT INTERFERE WITH THE PROSECUTION OF THE WORK. AND ARE MAINTAINED IN SUCH A MANNER AS TO

ENSURE CONTINUITY OF FLOW AT ALL TIMES.

UNLESS OTHERWISE PERMITTED, GROUND WATER ENCOUNTERED WITHIN THE LIMITS OF EXCAVATION SHALL BE DEPRESSED TO AN ELEVATION NOT LESS THAN TWELVE (12) INCHES BELOW THE BOTTOM OF SUCH EXCAVATION.

DEPRESSED TO AN ELEVATION NOT LESS THAN TWELVE (12) INCHES BELOW THE BOTTOM OF SUCH EXCAVATION.
THIS DEPRESSION IS TO BE DONE BEFORE PIPE LAYING OR CONCRETE WORK IS STARTED AND SHALL BE SO
MAINTAINED UNTIL CONCRETE AND JOINT MATERIALS HAVE ATTAINED INITIAL SET.

IF RAW SEWAGE IS ENCOUNTERED DURING PERFORMANCE OF THE WORK, THE CONTRACTOR WILL IMMEDIATELY STOP WORK AND SHALL NOTIFY DCDWM. DCDWM WILL THEN DETERMINE IF ACTIONS BY THE CONTRACTOR CAUSED THE LEAK. ANY RAW SEWAGE ENCOUNTERED SHALL IMMEDIATELY BE PUMPED AND HAULED TO A MANHOLE, PUMP STATION, OR ADVANCED WASTEWATER FACILITY, AS DIRECTED BY DCDWM.

IF OTHER HAZARDOUS LIQUIDS OR MATERIALS (AS DEFINED BY THE STATE OF GEORGIA IN CONJUNCTION WITH CERCLA AND SARA, TITLE III) ARE ENCOUNTERED DURING PERFORMANCE OF THE WORK, THE CONTRACTOR WILL IMMEDIATELY STOP WORK AND SHALL NOTIFY THE APPROPRIATE STATE AGENCY AND DCDWM. HAZARDOUS LIQUIDS INCLUDE, BUT ARE NOT LIMITED TO GASOLINE, DIESEL FUEL, AND INDUSTRIAL SOLVENTS OR CLEANERS. THE STATE, IN CONJUNCTION WITH DCDWM, WILL THEN DETERMINE IF ACTIONS BY THE CONTRACTOR CAUSED THE LIQUIDS OR MATERIALS TO LEAK OR BE FURTHER DISPERSED. ANY HAZARDOUS LIQUIDS OR MATERIALS SHALL BE PROPERLY DISPOSED OF AS DIRECTED BY THE STATE, IN CONJUNCTION WITH DCDWM.

SHEETING AND SHOPIN

THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUPPORTING AND MAINTAINING REQUIRED EXCAVATIONS EVEN TO THE EXTENT OF SHEETING AND SHORING THE SIDES AND ENDS OF EXCAVATIONS WITH TIMBER OR OTHER SUPPORTS. IF THE SHEETING, BRACES, SHORES, STRINGERS, WAILING TIMBERS, OR OTHER SUPPORTS ARE NOT PROPERLY PLACED, OR ARE INSUFFICIENT, THE CONTRACTOR SHALL PROVIDE ADDITIONAL OR STRONGER SUPPORTS AS MAY BE REQUIRED. THE REQUIREMENT OF SHEETING OR SHORING, OR OF THE ADDITION OF SUPPORTS, SHALL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY OF THEIR SUFFICIENCY.

TRENCH SHEETING SHALL BE LEFT IN PLACE UNTIL THE BACKFILLING HAS BEEN COMPLETED TO AN ELEVATION NOT LESS THAN TWELVE (12) INCHES ABOVE THE TOP OF THE PIPE. UNLESS OTHERWISE ORDERED BY DCDWM, SHEETING SHALL BE CUT OFF AT THE TOP OF THE LOWEST SET OF BRACING AND THE UPPER SECTION SHALL BE

WHERE IN THE OPINION OF DCDWM THE REMOVAL OF SHEETING MAY ENDANGER THE WORK, SUCH SHEETING WILL BE ORDERED TO BE LEFT IN PLACE AND THE TOPS CUT OFF AS DIRECTED OR AS SPECIFIED ABOVE. REMOVAL OF THE SHEETING SHALL BE DONE IN SUCH A MANNER AS TO PREVENT INJURIOUS CAVING OF THE SIDES. ALL VOIDS LEFT BY THE SHEETING ALONG TRENCHES SHALL BE CAREFULLY FILLED AND RAMMED WITH

IN QUICKSAND OR SOFT GROUND, SHEETING SHALL BE DRIVEN TO SUCH DEPTH BELOW THE BOTTOM OF THE TRENCH AS DIRECTED.

SHEETING AND SHORING TO BE DESIGNED AND SEALED BY A PROFESSIONAL ENGINEER.

BEDDING

BEDDING MATERIALS SHALL BE IN ACCORDANCE WITH GDOT STANDARD SPECIFICATION SECTION 812, TYPE II

BEDDING REQUIREMENTS SPECIFIED HEREIN SHALL APPLY TO SANITARY SEWER LINES ONLY. THEY ARE TO BE CONSIDERED MINIMUM BEDDING REQUIREMENTS AND AS SUCH, DO NOT RELIEVE THE ENGINEER/CONTRACTOR OF THE RESPONSIBILITY TO PROVIDE ANY ADDITIONAL BEDDING NECESSARY FOR PROPER CONSTRUCTION.

THE BEDDING MATERIAL SHALL BE PLACED IN THE BOTTOM OF THE TRENCH AFTER IT HAS BEEN EXCAVATED TO AN ELEVATION SUFFICIENT TO PERMIT THE PLACING OF NOT LESS THAN SIX (6) INCHES, OR AS DIRECTED. BEDDING SHALL BE CAREFULLY PLACED ALONG THE FULL WIDTH OF THE TRENCH SO THAT THE PIPE IS TRUE TO LINE AND GRADE OF THE PIPE BARREL. THE SURFACE OF THE BEDDING MATERIAL SHALL BE SPREAD TO FORM A UNIFORM SUPPORT FOR THE PIPE AND APPURTENANCES. AFTER INSTALLING EACH SECTION OF THE PIPE, ADDITIONAL BEDDING MATERIAL SHALL BE PLACED ON EITHER SIDE OF THE PIPE TO AN ELEVATION CONSISTENT WITH THE BEDDING TYPE SPECIFIED HEREIN, AS INDICATED ON THE PLANS OR SPECIFICATIONS, OR AS DIRECTED BY DCDWM. THIS MATERIAL IS TO BE WELL TAMPED AND COMPACTED INTO PLACE SO AS TO SECURE A FIRM, EVEN BEARING

AS USED HEREIN "CAREFULLY PLACED" SHALL BE CONSTRUED TO MEAN MATERIAL THAT HAS BEEN SPADED OR SHOVEL SLICED SO THAT THE MATERIAL TILLS AND SUPPORTS THE HAUNCH AREA AND ENCASES PIPE TO THE

BELL HOLES SHALL BE PROVIDED IN ALL CLASSES OF BEDDING SO AS TO RELIEVE PIPE BELLS OF ALL LOADS, BUT SMALL ENOUGH TO ENSURE THAT SUPPORT IS PROVIDED THROUGHOUT THE LENGTH OF PIPE BARREL.

ALL EXCAVATIONS SHALL BE ADEQUATELY SHORED TO ENSURE WORKER SAFETY. ALL PIPE LAYING OPERATIONS SHALL COMPLY WITH OSHA REQUIREMENTS FOR TRENCH SAFETY.

1) CRUSHED STONE EMBEDMENT

MATERIAL SHALL CONFORM TO THE LATEST EDITION OF ASTM C33, GRADATION NO. 57 VARYING IN SIZES ONE-QUARTER (1/4) INCH THROUGH THREE-QUARTER (3/4) INCH. BEDDING MATERIAL SHALL BE CARRIED UP THE SIDES OF THE PIPE TO THE HEIGHTS SHOWN FOR THE VARIOUS CLASSES OF BEDDING.

2) CLASS B BEDDIN

THE MINIMUM THICKNESS OF THE COMPACTED STONE NO. 57 BEDDING UNDER THE BOTTOM OF THE PIPE SHALL BE ONE-HALF (1/2) OF THE OUTSIDE DIAMETER FOR PIPE UP TO TWELVE (12) INCHES IN DIAMETER.

THE MINIMUM THICKNESS OF COMPACTED STONE NO. 57 UNDER THE BOTTOM OF THE PIPE SHALL BE 1/4 OF THE OUTSIDE DIAMETER FOR PIPE GREATER THAN TWELVE (12) INCHES IN DIAMETER. THE COMPACTED STONE NO. 57 PLACEMENT SHALL BE UP TO ONE-HALF (1/2) OF THE OUTSIDE DIAMETER OF THE PIPE. THE BACKFILL SHALL THEN BE COMPLETED WITH SELECTED MATERIAL, HAND PLACED AND TAMPED, TO THE LIMITS DENOTED IN THE DETAIL. BEDDING AND BACKFILL SHALL BE PLACED TO THE FULL WIDTH OF THE TRENCH, AS EXCAVATED. REFER TO STANDARD DETAIL S-013 ON PAGE C-21 FOR CLASS B BEDDING.

3) CLASS C BEDDING

THE MINIMUM THICKNESS OF THE COMPACTED STONE NO. 57 BEDDING UNDER THE BOTTOM OF THE PIPE SHALL BE ONE-HALF (1/2) OF THE OUTSIDE DIAMETER FOR PIPE UP TO TWELVE (12) INCHES IN DIAMETER.

THE MINIMUM THICKNESS OF COMPACTED STONE NO. 57 UNDER THE BOTTOM OF THE PIPE SHALL BE 1/4 OF THE OUTSIDE DIAMETER FOR PIPE GREATER THAN TWELVE (12) INCHES IN DIAMETER. THE COMPACTED STONE NO. 57 PLACEMENT SHALL BE UP TO ONE-QUARTER (1/4) OF THE OUTSIDE DIAMETER OF THE PIPE. THE BACKFILL SHALL THEN BE COMPLETED WITH SELECTED MATERIAL, HAND PLACED AND TAMPED, TO THE LIMITS DENOTED IN THE DETAIL. BEDDING AND BACKFILL SHALL BE PLACED TO THE FULL WIDTH OF THE TRENCH. AS EXCAVATED. CLASS

C BEDDING SHALL BE USED FOR DIP, REFER TO STANDARD DETAIL S-014 ON PAGE C-21 FOR CLASS C BEDDING.

4) FLOW DAMS

FLOW DAMS MAY BE REQUIRED UNDER CERTAIN CONDITIONS. IF, IN THE OPINION OF THE INSPECTOR, THERE IS A LARGE VOLUME OF GROUNDWATER WHICH MIGHT FOLLOW THE CRUSHED STONE BEDDING DOWNHILL AND DUE TO THE ELEVATION CHANGE, MIGHT BUILD ADEQUATE PRESSURE TO CREATE PROBLEMS, THEN FLOW DAMS WILL BE REQUIRED. FLOW DAMS CONSIST OF RED CLAY BEDDING A MINIMUM OF THREE (3) FEET LONG AND SPACED ONE HUNDRED (100) FEET ALONG PIPELINE.

PIPE HANDLING

UNLOAD DUCTILE IRON PIPE AND ACCESSORIES FROM TRUCKS WITH HOISTS OR BY SKIDDING. DO NOT SKID OR ROLL PIPE HANDLED ON SKIDWAYS AGAINST PIPE ALREADY ON THE GROUND. UNDER NO CIRCUMSTANCES ARE SAID MATERIALS TO BE DROPPED OFF ANY DELIVERY VEHICLE. SHOULD ANY MATERIAL BE ACCIDENTALLY DROPPED, IT SHALL BE IMMEDIATELY SET ASIDE, AND THOROUGHLY INSPECTED BY DCDWM BEFORE ANY DECISION IS MADE REGARDING ITS ACCEPTABILITY. IF DAMAGE OCCURS TO THE LINING, REPLACE AS DIRECTED BY DCDWM. IF THERE IS ANY QUESTION REGARDING ACCEPTABILITY OF SAID SUSPECT MATERIALS BY DCDWM, THE CONTRACTOR SHALL EITHER REMOVE AND REPLACE THE QUESTIONABLE MATERIALS, OR OBTAIN A SWORN STATEMENT FROM THE MANUFACTURER CERTIFYING THE MATERIALS AS "UNDAMAGED".

USE PROPER, SUITABLE TOOLS AND APPLIANCES FOR THE SAFE AND CONVENIENT HANDLING AND LAYING OF PIPE AND FITTINGS. TAKE GREAT CARE TO PREVENT THE COATING AND LINING FROM BEING DAMAGED.

PIPE MAY NOT BE "STRUNG", OR LAID OUT, ALONG THE PROJECT WITHIN EXISTING HIGHWAY RIGHTS-OF-WAY, UNLESS SPECIFICALLY DIRECTED TO DO SO BY DCDWM, AND ONLY THEN AFTER RECEIVING PERMISSION FROM THE ROAD AUTHORITY WHICH HAS JURISDICTION. PIPE SHALL BE STORED IN SUCH A MANNER AS TO KEEP THE INTERIOR FREE OF DIRT AND OTHER FOREIGN MATTER.

THE CONTRACTOR SHALL CAREFULLY EXAMINE ALL PIPE AND FITTINGS FOR DEFECTS JUST BEFORE LAYING. NO PIPE OR FITTING WHICH IS KNOWN TO BE DEFECTIVE SHALL BE LAID. IN THE EVENT THAT DEFECTIVE PIPE OR FITTINGS ARE DISCOVERED AFTER HAVING BEEN LAID, THE CONTRACTOR SHALL REMOVE AND REPLACE WITH SOUND PIPE OR FITTINGS IN A MANNER SATISFACTORY TO AND AT NO ADDITION COST TO DCDWM.

PIPE LAYING

1) GRAVITY SANITARY SEWER LINES

PIPE SHALL BE INSTALLED STRAIGHT IN ALIGNMENT TRUE TO GRADE AND EXHIBIT A "FULL MOON" CONFIGURATION CLEARLY VISIBLE BETWEEN MANHOLES.

ALL PIPE SHALL BE THOROUGHLY CLEANED BEFORE BEING LAID AND SHALL BE KEPT CLEAN UNTIL FINAL ACCEPTANCE OF THE WORK.

ALL TRENCHES SHALL BE KEPT FREE FROM WATER WHILE PIPE LAYING IS IN PROGRESS. WATER SHALL NOT BE ALLOWED TO RISE TO WITHIN TWELVE (12) INCHES OF THE BOTTOM OF THE PIPE UNTIL JOINTING IS COMPLETED.

PIPE LAYING SHALL COMMENCE AT THE LOWEST MANHOLE UNLESS OTHERWISE DIRECTED BY THE DCDWM INSPECTOR AND PIPE SHALL BE LAID SO THAT THE SPIGOT ENDS (IF ANY) POINT IN THE DIRECTION OF FLOW TO PREVENT BEDDING MATERIAL FROM ENTERING THE JOINT.

CLEAN RING AND SPIGOT- THE GASKET, GROOVE, AND PIPE SPIGOT SHALL BE WIPED CLEAN OF ALL FOREIGN MATERIAL.

INSTALL GASKET - INSERT THE RING IN THE GROOVE TAKING CARE TO SEE THAT THE GASKET IS EVENLY SEATED AND FREE FROM TWISTS.

APPLY LUBRICANT- LUBRICATE THE SPIGOT END OF THE PIPE FROM THE PIPE END TO THE FULL INSERTION MARK. USE ONLY THE LUBRICANT APPROVED BY THE MANUFACTURER. AFTER THE SPIGOT END HAS BEEN LUBRICATED IT MUST BE KEPT CLEAN AND FREE OF DIRT, SAND OR EMBEDMENT MATERIAL. IF FOREIGN MATTER ADHERES TO THE LUBRICATED END, THE SPIGOT MUST BE WIPED CLEAN AND RE-LUBRICATED. FOR PIPE INSTALLED IN FLOOD PLAINS, PIPE JOINTS SHALL BE SEATED USING COAL TAR EPOXY.

ASSEMBLY - AFTER THE PIPE SECTIONS ARE ALIGNED, THE SPIGOT END SHOULD BE PUSHED INTO THE BELL OR COUPLING UNTIL IT HITS THE STOP AND/OR THE REFERENCE INSERTION MARK IS IN THE PROPER LOCATION. THE RECOMMENDED ASSEMBLY METHOD IS THE USE OF A BAR AND A BLOCK. PULLERS SUCH AS A "COME ALONG" MAY ALSO BE USED IF THE PIPE IS PROTECTED FROM THE CHAIN OR CABLE.

MAY ALSO BE USED IF THE PIPE IS PROTECTED FROM THE CHAIN OR CABLE.

PIPE CUTTING: WHENEVER A PIPE REQUIRES CUTTING TO FIT THE LINE OR BRING IT TO THE REQUIRED LOCATION,
THE WORK SHALL BE DONE IN A SATISFACTORY MANNER SO AS TO LEAVE A SMOOTH END AT RIGHT ANGLES TO

REFER TO STANDARD DETAIL S-010 ON PAGE C-21 FOR REQUIREMENTS REGARDING THE INSTALLATION OF A

THE AXIS OF THE PIPE. JOINTING OF FIELD CUT PIPE SHALL BE MADE IN ACCORDANCE WITH THE

SANITARY SEWER LINE INTO AN EXISTING MANHOLE STRUCTURE.

THE OPEN END OF UNCOMPLETED PIPE LINES SHALL BE PROVIDED WITH A TEMPORARY CAP OR PLUG CAREFULLY FITTED SO AS TO KEEP DIRT, ANIMALS, AND OTHER SUBSTANCES FROM ENTERING. THIS CAP OR PLUG SHALL BE MAINTAINED IN POSITION AT ALL TIMES WHEN LAYING PIPE IS NOT ACTUALLY IN PROGRESS. TEMPORARY PLUG REQUIREMENTS FOR GRAVITY SANITARY SEWER LINES ARE DEPICTED IN STANDARD DETAIL S-021 ON PAGE C-22.

SANITARY MANHOLE INSTALLATION

SANITARY SEWER MANHOLES SHALL BE PRE-CAST REINFORCED POLYMER CONCRETE STRUCTURES. ALL MANHOLES SHALL BE PLACED ON A TWELVE (12) INCH CUSHION OF COMPACTED NO. 57 STONE. THE STANDARD PRECAST SANITARY MANHOLE IS PROVIDED IN STANDARD DETAIL S-001 ON PAGE C-20.

FOLLOW THE REQUIREMENTS FOR SANITARY MANHOLE ABANDONMENT PRESENTED IN STANDARD DETAIL S-004, ON PAGE C-20, AS NEEDED.

THE MANUFACTURER SHALL USE ONLY POLYESTER OR VINYL ESTER RESIN SYSTEMS DESIGNED FOR USE WITH THIS PARTICULAR APPLICATION. RESIN CONTENT SHALL BE A MINIMUM OF 7% BY WEIGHT.

2) FILLER

ALL AGGREGATE, SAND AND QUARTZ POWDER SHALL MEET THE REQUIREMENTS OF ASTM C33, WHERE APPLICABLE.

3) ADDITIVES

RESIN ADDITIVES, SUCH AS CURING AGENTS, PIGMENTS, DYES, FILLERS AND THIXOTROPIC AGENTS, WHEN USED, SHALL NOT BE DETRIMENTAL TO THE MANHOLE.

4) ELECTROMETRIC GASKETS

GASKETS SHALL BE SUITABLE FOR THE SERVICE INTENDED. ALL GASKETS SHALL MEET THE REQUIREMENT OF ASTM C443. SEE DETAIL 27 ON PAGE C-23.

5) MANHOLES

MANHOLE COMPONENTS SHALL BE MANUFACTURED BY THE VIBRATORY VERTICAL CASTING PROCESS RESULTING IN A DENSE, NON-POROUS, CORROSION-RESISTANT, HOMOGENEOUS, COMPOSITE STRUCTURE. MANHOLES SHALL BE STEEL REINFORCED PER ASTM C478. MANHOLES SHALL HAVE A MONOLITHIC BASE SLAB UNLESS OTHERWISE APPROVED. MANHOLES SHALL HAVE ENGINEERED AND RATED LIFTING DEVICES THAT SHALL NOT PENETRATE THROUGH THE WALL.

6) JOINTS

ROUND MANHOLE COMPONENTS SHALL BE CONNECTED WITH AN ELASTOMERIC SEALING GASKET AS THE SOLE MEANS TO MAINTAIN JOINT WATER-TIGHTNESS AND BOTH THE GASKET MATERIAL AND THE MANHOLE JOINT SHALL MEET THE REQUIREMENTS OF ASTM C443. ROUND MANHOLES SHALL UTILIZE SPIGOT AND BELL TYPE JOINTS INCORPORATING EITHER A CONFINED O-RING OR SINGLE STEP PROFILE. SQUARE AND RECTANGULAR STRUCTURES SHALL UTILIZE A SHIP-LAP JOINT AND BE SEALED WITH A BUTYL ROPE SEALANT PER ASTM C990 AS RECOMMENDED BY THE STRUCTURE MANUFACTURER.

7) FITTINI

CONES, REDUCER SLABS, BASE SLABS AND ADJUSTING RINGS SHALL BE OF THE SAME MATERIAL AS ADJOINING

8) ACCEPTABLE MANUFACTURER

MANUFACTURER OF MANHOLES SHALL EMPLOY MANUFACTURING METHODS AND MATERIAL FORMULATION IN USE FOR A MINIMUM OF 5 YEARS. MANUFACTURER OF MANHOLES SHALL HAVE BEEN ACTIVELY PRODUCING MANHOLES UNDER CURRENT NAME FOR A MINIMUM OF 7 YEARS WITH NO MORE THAN ONE YEAR BETWEEN MANHOLE PROJECTS. REFERENCES DEMONSTRATING THIS REQUIREMENT SHALL BE SUBMITTED FOR REVIEW. POLYMER CONCRETE MANHOLES SHALL BE MANUFACTURED IN ACCORDANCE WITH ASTM C478.

9) PIPE PENETRATIONS

OPENINGS IN PRECAST BASES TO RECEIVE SANITARY SEWER PIPES SHALL BE CAST AT THE FACTORY AT THE REQUIRED LOCATIONS, SIZE AND HEIGHT. OPENINGS CORED INTO MANHOLES IN THE FIELD WILL BE PERMITTED ONLY WHEN PRIOR WRITTEN APPROVAL IS GIVEN BY DCDWM.

PIPES SHALL BE DIRECTLY CONNECTED TO ALL STRUCTURES USING RESILIENT FLEXIBLE PIPE TO MANHOLE CONNECTOR PER ASTM C923. COLD JOINT PIPE STUB GROUTING SHALL NOT BE ALLOWED UNLESS SHOWN ON PLANS AS SUCH. IN CASES WHERE COLD JOINT PIPE STUBS ARE SHOWN, THEY SHALL BE GROUTED USING A CORROSION RESISTANT NON-SHRINK GROUT AND RUBBER WATER STOP GROUT RING.

RESILIENT CONNECTORS, OR RUBBER BOOTS, SHALL BE CAST INTO THE MANHOLE BY THE PRECAST MANUFACTURER. SEE SECTION III.D.2.C FOR APPROVED RESILIENT CONNECTOR MATERIAL REQUIREMENTS.

PIPES ENTERING THE MANHOLE BASE SHALL BE INSTALLED FLUSH WITH THE INSIDE WALL OF THE MANHOLE.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PERFORMING MANHOLE CORINGS WITH PROPER CORING EQUIPMENT. MINIMUM DISTANCE BETWEEN CORES SHALL BE TWELVE (12) INCHES. MISSED CORES OR CORES INTO A JOINT ARE NOT ALLOWED AND SHALL RESULT IN THE ENTIRE SECTION BEING REPLACED. ALL PIPE CORES MUST BE GROUTED THREE HUNDRED AND SIXTY (360) DEGREES AROUND THE RUBBER BOOTS.

THE CORING MUST NOT BE BACKFILLED UNTIL APPROVED BY THE DCDWM INSPECTOR. FAILURE, FOR ANY REASON, TO HAVE THE DCDWM INSPECTOR APPROVE THE CORING WILL CAUSE ALL WORK TO BE HALTED UNTIL THE CORED MANHOLE IS EXCAVATED AND THE RUBBER BOOT EXPOSED.

BORING OR BREAKING INTO MANHOLES IS PROHIBITED AND SHALL REQUIRE REPLACEMENT OF THE DAMAGED SECTIONS.

CORES FOR FUTURE DEVELOPMENT" OR "FUTURE TIE-ONS" ARE ONLY APPROVED FOR AN EIGHT (8) INCH STUB AND ARE ONLY ALLOWED WHEN INSTALLED WITH A RUBBER BOOT, ONE FULL JOINT OF DUCTILE IRON PIPE, AND A MECHANICAL JOINT CAP.

SEE SECTION III.D.10.F FOR MANHOLE CORING REQUIREMENTS.

11) INVERTS (CHANNELS) AND BENCHES

INVERT CHANNELS, IF POSSIBLE, SHALL BE FACTORY BUILT WITH POLYMER CONCRETE. PORTLAND CEMENT CONCRETE SHALL NOT BE ALLOWED FOR CHANNEL CONSTRUCTION. THE FLOW INVERT, OR CHANNEL, STRAIGHT THROUGH A MANHOLE SHALL BE MADE TO CONFORM AS CLOSELY AS POSSIBLE IN SHAPE AND SLOPE TO THAT OF THE CONNECTING SANITARY SEWERS.

THE INVERT WALLS SHALL BE FORMED, OR SHAPED, TO THE FULL HEIGHT OF THE CROWN OF THE OUTLET SANITARY SEWER IN SUCH A MANNER AS TO NOT OBSTRUCT MAINTENANCE, INSPECTION, OR FLOW IN THE SANITARY SEWERS. WHEN CHANGING LINE SIZES, THE CROWNS (TOP INSIDES) OF THE PIPE SHALL BE MATCHED UNLESS OTHERWISE APPROVED BY DCDWM. ALL NEW INVERT CHANNELS AT TIE-IN MANHOLES MUST MEET EXISTING INVERT CHANNEL IN A MANNER THAT PROVIDES PROPER HYDRAULIC FLOW. INVERTS FORMED WITH HALF PIPE, ARE NOT ALLOWED.

THE INVERT OF THE MANHOLES SHALL BE SHAPED AND SMOOTH SO THAT NO PROJECTIONS WILL EXIST AND FLOW CHANNELS WILL BE FORMED IN THE INVERTS SO THAT THE MANHOLE WILL BE SELF-CLEANING AND HAVE SMOOTH FLOW TRANSITIONS. INVERTS SHALL BE FREE OF AREAS WHERE SOLIDS MAY BE DEPOSITED.

WHERE CURVED FLOW INVERTS ARE SPECIFIED IN MANHOLES, INCLUDING BRANCH INLETS, SLOPES SHALL BE

INCREASED AS REQUIRED TO MAINTAIN ACCEPTABLE VELOCITIES. INVERTS SHALL BE CONSTRUCTED WITH THE

SAME RADIUS AS THE OUTFLOW PIPE; SEE STANDARD DETAIL S-009 ON PAGE C-21.

A BENCH SHALL BE PROVIDED ON EACH SIDE OF ALL MANHOLE INVERTS. THE BENCH SHALL BE SLOPED TO PROVIDE A MINIMUM THREE (3) INCH FALL FROM THE TOP OR THE BENCH TO THE CROWN (TOP INSIDE) OF THE PIPE OR ONE-HALF (1/2) INCH PER FOOT, WHICHEVER IS GREATER. NO LATERAL SEWER, SERVICE CONNECTION, OR DROP CONNECTION SHALL DISCHARGE ONTO THE SURFACE OF THE BENCH. THE BENCH SHALL BE CONSTRUCTED OF POLYMER CONCRETE WITH SMOOTH, VENEER FINISH AND TROWELED SMOOTH FROM

STEPS

MANHOLE WALL TO INVERT.

MANHOLE STEPS SHALL MEET THE LATEST REVISION OF ASTM C478 AND SHALL CONFORM TO THE REQUIREMENTS OF THE OCCUPATIONAL SAFETY AND HEALTH STANDARDS, U.S. DEPARTMENT OF LABOR. STEPS SHALL BE EQUAL TO M.A. INDUSTRIES, INC. MODEL (PS-1) OR (PS-1 PF).

THE UPPERMOST STEP SHALL BE CAST INTO THE SIDE OF THE MANHOLE NO GREATER THAN EIGHTEEN (18) INCHES BELOW THE TOP OF MANHOLE COVER. THE STEPS SHALL BE CONTINUED IN ALIGNMENT DOWNWARD ALONG THE INTERIOR VERTICAL SIDE OF THE MANHOLE TO A POINT NO LOWER THAN THE CROWN OF THE LARGEST SANITARY SEWER. SPACING OF STEPS SHALL NOT EXCEED TWELVE (12) VERTICAL INCHES. STEPS SHALL NOT DESCEND OVER ANY PIPE CONNECTION INTO THE MANHOLE. STEP DIMENSIONING AND SPACING ARE PRESENTED IN STANDARD DETAILS S-001 AND S-005 ON PAGE C-20.

13) FRAMES AND COVERS

WHERE MANHOLES ARE CONSTRUCTED IN NON-PAVED AREAS, THE TOP SURFACE OF THE FRAME AND COVER SHALL HAVE BOLT-DOWN LIDS WITH A WATERTIGHT GASKET. LOCKED MANHOLE COVERS MAY BE DESIRABLE IN ISOLATED EASEMENT LOCATIONS OR WHERE VANDALISM MAY BE A PROBLEM. MANHOLES IN WOODED OR UN-MAINTAINED EASEMENT AREAS SHALL BE A MINIMUM OF TWENTY-FOUR (24) INCHES ABOVE GROUND LEVEL. MANHOLES LOCATED WITHIN THE ONE HUNDRED (100) YEAR FLOOD PLAIN SHALL CONTAIN MANHOLE FRAMES THAT ARE BOLTED TO THE ECCENTRIC CONE IN ORDER TO STABILIZE THE MANHOLE ADJUSTMENT RINGS. IN THESE CASES, THE MANHOLE ADJUSTMENT RINGS SHALL CONTAIN PRE-DRILLED HOLES FOR THE BOLTS FROM THE PRE-CAST MANUFACTURER. MANHOLE CONCRETE RINGS SHALL BE SECURED TO EACH OTHER, THIS IS ESSENTIAL IN FLOOD PLAIN AREAS WHERE THE SLIDE AND TILT OF PRECAST RINGS IS LIKELY TO OCCUR DUE TO RILIOVANCY

IF THE MANHOLE TOP ELEVATION IS TO BE FOUR (4) FEET OR HIGHER ABOVE GRADE A FLAT TOP, ECCENTRIC, MANHOLE SHALL BE REQUIRED TO ALLOW FOR SAFE AND EASY ACCESS. HEIGHT ABOVE GRADE FOR MANHOLES ON SLOPED GROUND IN UN-MAINTAINED AREAS SHALL BE MEASURED ON THE UPHILL SIDE OF THE MANHOLE. THE CAST IRON FRAME SHALL BE FACTORY CAST INTO THE CONCRETE CONE. MANHOLES IN MAINTAINED GRASS AREAS MAY BE FLUSH WITH THE GROUND. REFER TO STANDARD DETAILS S-006 AND S-007 ON PAGE C-20 FOR MANHOLE FRAME AND COVER REQUIREMENTS IN NON-PAVED AREAS.

TOP OF COVER SHALL BE FACTORY IMPRINTED TO READ "SEWER".

THE FRAMES SHALL BE PROPERLY SET IN PLACE IN A FULL BED OF MORTAR AND ADJUSTED SO AS TO MAKE THE TOP OF THE FRAME CONFORM TO THE FINISHED SURFACES WHEN LOCATED IN STREETS, PUBLIC HIGHWAYS AND ALL PAVED AREAS. IN OTHER LOCATIONS THEY SHALL CONFORM TO SUCH ELEVATIONS AS ARE REQUIRED.

ALL FRAMES AND COVERS ARE TO BE SET SO AS TO PROVIDE ACCESS TO THE MANHOLE.

14) DROP CONNECTION

DROP CONNECTIONS SHALL BE UTILIZED WHEN THE DROP INTO THE MANHOLE IS GREATER THAN TWO (2) FEET; SEE DETAIL 2 ON PAGE C-20. NO OUTSIDE DROP CONNECTIONS ARE ALLOWED. ALL INSIDE DROPS GREATER THAN ONE (1) FOOT REQUIRE ONE (1) JOINT (EIGHTEEN (18) FEET MINIMUM) OF DIP ADJACENT TO THE MANHOLE.

THE INSIDE DROP PIPE SHALL BE CONSTRUCTED OF DUCTILE IRON MATERIALS. MANHOLES WITH INSIDE DROP CONNECTIONS SHALL BE INCREASED IN DIAMETER BY ONE (1) FOOT.

BACKFILL IN TRENCHES WHERE PIPE HAS BEEN LAID SHALL BE PLACED CONTINUOUSLY IN LAYERS NOT EXCEEDING SIX (6) INCHES IN THICKNESS AND CAREFULLY AND THOROUGHLY CONSOLIDATED BY TAMPING SIMULTANEOUSLY ON BOTH SIDES OF THE PIPE TO A HEIGHT OF TWELVE (12) INCHES ABOVE THE TOP OF THE PIPE. THIS BACKFILLING AND COMPACTING MUST BE DONE PROMPTLY AND BEFORE ANY BACKFILL MATERIAL IS DEPOSITED DIRECTLY FROM A MACHINE BUCKET, LOADERS, TRUCKS, OR OTHER MECHANICAL EQUIPMENT. ONCE UTILIZING A MACHINE BUCKET FOR BACKFILLING, THE BUCKET MUST BE LOWERED INTO THE TRENCH TO DEPOSIT THE MATERIAL IN SUCH A MANNER AS TO AVOID THE SHOCK OF FALLING EARTH WHICH COULD INJURE OR DAMAGE THE PIPE OR STRUCTURE. UNDER NO CIRCUMSTANCES SHOULD THE MATERIAL BE ALLOWED TO FALL FROM THE MACHINE OR LOADER BUCKET DIRECTLY ONTO THE PIPE OR CONDUIT IN THE TRENCH. FOLLOW STANDARD DETAIL S-018 ON PAGE C-21, FOR TRENCH BACKFILL PROCEDURE.

EXCEPT AS OTHERWISE ORDERED BY DCDWM, ALL FORMS, BRACING, AND LUMBER SHALL BE REMOVED FROM

BOTTOMS OF TRENCHES IN EARTH MUST BE SHAPED OR MOLDED AND COMPACTED TO THE CONTOUR OF THE OUTSIDE OF THE PIPE, USING BEDDING MATERIALS, AS DIRECTED, OR WHERE INDICATED ON THE APPROVED DESIGN, TO GIVE FULL SUPPORT TO THE LOWER SEGMENT OF THE PIPE. THIS SHALL BE DONE IN SUCH A MANNER AS TO PREVENT ANY SUBSEQUENT SETTLEMENT OF THE PIPE. BOULDERS OR LOOSE ROCK WHICH MIGHT BEAR AGAINST THE PIPE WILL NOT BE PERMITTED IN THE TRENCH BOTTOM, OR IN THE BACKFILL WITHIN THE FIRST TWO (2) FEET ABOVE THE TOP OF THE PIPE. BOTTOMS OF EXCAVATIONS WHICH ARE OF LOOSE GRANULAR SOILS SHALL BE COMPACTED BY VIBRATORY COMPACTOR PRIOR TO LAYING OF PIPE TO A MINIMUM DENSITY OF NINETY-FIVE PERCENT (95%) OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE STANDARD PROCTOR TEST ASTM D698 (LATEST VERSION).

WHERE FOUNDATION CONDITIONS ARE SUCH THAT PROPER BEDDING CANNOT BE PROVIDED, SUCH AS IN QUICKSAND, THE CONTRACTOR MAY BE DIRECTED BY DCDWM TO PROVIDE FOUNDATION CUSHION, CONCRETE CRADLES, OR OTHER SPECIAL PROVISIONS TO PROVIDE SUPPORT FOR THE PIPE.

ONLY AFTER THE BACKFILL HAS BEEN PLACED AND HAND-COMPACTED TO AT LEAST SIX (6) INCHES ABOVE THE TOP OF THE PIPE MAY THE WORK PROCEED IN THE PLACEMENT OF THE REMAINING BACKFILL MATERIAL, WHICH MUST BE CAREFULLY PLACED AND COMPACTED. IN STREETS, OTHER SURFACED AREAS, OR WHERE DIRECTED, THE BACKFILL SHALL BE PLACED AND COMPACTED IN LIFTS NOT TO EXCEED EIGHT (8) INCHES IN THICKNESS. ALL PRECAUTIONS MUST BE TAKEN TO AVOID HAVING ANY UNINCORPORATED MATERIAL WHICH MAY RESULT IN FUTURE SETTLEMENT IN THESE AREAS. COMPACTION SHALL BE ACCOMPLISHED BY APPROVED MECHANICAL TAMPERS. THE NUMBER OF EMPLOYEES TAMPING SHALL AT NO TIME BE LESS THAN THE NUMBER OF EMPLOYEES BACKFILLING, AND IF NECESSARY, ADDITIONAL EMPLOYEES SHALL BE KEPT IN THE TRENCH TO SPREAD THE

THE MAXIMUM DRY DENSITY AS DETERMINED BY THE STANDARD PROCTOR TEST ASTM D698 (LATEST VERSION). WHEN DIRECTED, THE CONTRACTOR SHALL ARRANGE TO HAVE SUCH COMPACTION TESTS CONDUCTED BY AN INDEPENDENT TESTING FIRM; THE NUMBER AND LOCATIONS TO BE DETERMINED BY DCDWM. COMPACTION TESTS SHALL BE PERFORMED AT THE CONTRACTOR'S EXPENSE.

BACKFILL MATERIAL SHALL BE COMPACTED TO A DENSITY OF NOT LESS THAN NINETY-FIVE PERCENT (95%) OF

MATERIALS USED FOR BACKFILLING SHALL BE FREE FROM ALL PERISHABLE ORGANICS OR OTHER OBJECTIONABLE MATERIALS, AND SHALL CONTAIN NO STONES LARGER THAN SIX (6) INCHES IN ITS LONGEST

TRENCHES WITHIN ROADWAYS OR OTHER PAVED AREAS SHALL HAVE A MINIMUM OF 95% COMPACTION OF

AND SHALL FURNISH, HAUL, AND PLACE BORROW MATERIAL SUITABLE FOR PROPER BACKFILL

BACKFILL SLIGHTLY ABOVE THE ADJACENT GROUND TO ALLOW FOR SETTLEMENT.

PROCTOR MAX DENSITY. #57 STONE IS ONLY ALLOWED WITHIN THE TOP 2' OF THE PIPE BELL.

IF, IN THE OPINION OF DCDWM, THE ORIGINAL EXCAVATED MATERIAL IS UNSUITABLE FOR USE AS BACKFILL, SUCH AS PERISHABLE MATTER, REFUSE, BUILDING MATERIALS, WIRE, BRUSH, STUMPS, ASHES, LARGE STONES, MUCK, OR OTHER SOFT MATERIALS, THE CONTRACTOR SHALL PROPERLY DISPOSE OF THE OBJECTIONABLE MATERIALS.

BACKFILLING SHALL NOT BE DONE IN FREEZING WEATHER, EXCEPT BY PERMISSION OF DCDWM, AND SHALL NOT BE DONE USING FROZEN MATERIALS OR UPON FROZEN MATERIALS.

ALL BACKFILLING SHALL BE LEFT WITH SMOOTH, EVEN SURFACES, PROPERLY GRADED, AND SHALL BE MAINTAINED IN SUCH CONDITION UNTIL FINAL COMPLETION AND ACCEPTANCE OF THE WORK, NOTWITHSTANDING APPLICABLE WARRANTY PERIODS. WHERE DIRECTED BY DCDWM, THE CONTRACTOR SHALL MOUND THE

BORE AND JACK

1) GENERAL

WORKING DRAWINGS SHALL SHOW THE SIZE AND LOCATION OF BORE AND JACK PITS TOGETHER WITH ALL SHEETING AND SHORING TO BE USED. IN ADDITION, SUCH DRAWINGS SHALL INCLUDE LARGE-SCALE PLAN AND PROFILE OF THE PROPOSED INSTALLATION AND AFFECTED STRUCTURES IF REQUESTED BY DCDWM.

2) CASING PIPE

VALSPAR.

CASING PIPE SHALL BE NEW AND UNUSED PIPE. THE CASING SHALL BE MADE FROM STEEL PLATE HAVING A MINIMUM YIELD STRENGTH OF THIRTY-FIVE THOUSAND (35,000) PSI. THE STEEL PLATE SHALL ALSO MEET THE CHEMICAL REQUIREMENTS OF ASTM A36, LATEST EDITION. THE OUTSIDE OF THE CASING PIPE SHALL BE COATED WITH COAL TAR EPOXY HAVING A MINIMUM DRY FILM THICKNESS OF SIXTEEN (16) MILS. SURFACE PREPARATION SHALL BE SSPC-SP-10. EPOXY SHALL HAVE A MINIMUM SOLIDS CONTENT OF SIXTY-FIVE (65) PERCENT BY VOLUME AND SHALL BE AIR OR AIRLESS SPRAY APPLIED; MINIMUM DRYING TIME SHALL BE SEVEN (7) DAYS. BRUSHING SHALL BE PERMITTED IN SMALL AREAS ONLY. ALL COATING AND RECOATING SHALL BE DONE IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. EPOXY SHALL BE TNEMEC, CARBOLINE, OR

THE THICKNESSES OF CASINGS HEREIN ARE MINIMUM THICKNESSES. ACTUAL THICKNESSES SHALL BE DETERMINED BY THE CASING INSTALLER, BASED ON ITS EVALUATION OF THE REQUIRED FORCES TO BE EXERTED ON THE CASING WHEN JACKING. ANY BUCKLING OF THE CASING DUE TO JACKING FORCES SHALL BE REPAIRED AT NO ADDITIONAL COST TO DCDWM.

THE DIAMETERS OF CASINGS LISTED IN SECTION III.D.15 ARE THE MINIMUM TO BE USED. LARGER CASINGS, WITH THE DCDWM'S APPROVAL, MAY BE PROVIDED AT NO ADDITIONAL COST TO THE DCDWM, FOR WHATEVER REASONS THE CONTRACTOR MAY DECIDE, WHETHER CASING SIZE AVAILABILITY, LINE AND GRADE TOLERANCES, SOIL CONDITIONS, ETC. CASING AND PIPE SUPPORT INSTALLATION REQUIREMENTS ARE PROVIDED IN STANDARD

3) CASING SPACERS

CASING SPACERS SHALL MEET ONE OF THE FOLLOWING REQUIREMENTS:

DETAIL S-023 AND STANDARD DETAIL W-024 ON PAGE C-22.

CASING SPACERS SHALL BE FLANGED, BOLT-ON STYLE WITH A TWO-SECTION STAINLESS STEEL SHELL LINED WITH A PVC LINER, MINIMUM 0.09-INCH THICK HAVING A HARDNESS OF EIGHTY-FIVE (85) TO NINETY (90) DUROMETER, MINIMUM FOURTEEN (14) GAUGE BAND AND TEN (10) GAUGE RISERS, WITH TWO (2) INCH WIDE GLASS REINFORCED POLYESTER INSULATING SKIDS. RUNNERS SHALL BE ATTACHED TO STAINLESS STEEL RISERS WHICH SHALL BE PROPERLY WELDED TO THE SHELL. THE HEIGHT OF THE RUNNERS AND RISERS SHALL BE MANUFACTURED SUCH THAT THE PIPE DOES NOT FLOAT WITHIN THE CASING. CASING SPACERS SHALL BE AS MANUFACTURED BY CASCADE WATERWORKS MANUFACTURING COMPANY, PIPELINE SEAL AND INSULATOR, INC., OR ADVANCED PRODUCTS AND SYSTEMS. INC.

4) INSTALLATION

WHERE PIPE IS REQUIRED TO BE INSTALLED UNDER RAILROADS, HIGHWAYS, STREETS OR OTHER FACILITIES BY BORE AND JACK METHOD, ALL OPERATIONS OF THE CONTRACTOR SHALL BE SUBORDINATE TO THE FREE AND UNOBSTRUCTED USE OF HIGHWAY AND STRUCTURES AND SHALL NOT WEAKEN THE ROADBED OR STRUCTURE: SEE STANDARD DETAIL S-023 ON PAGE C-22.

THE CONTRACTOR SHALL PROCEED WITH THE WORK IN SUCH A MANNER AS WILL PERMIT REGULAR TRANSACTION OF BUSINESS BY THE HIGHWAY DEPARTMENT AND/OR PROPERTY OWNER WITHOUT DELAY OR DANGER TO LIFE OR PROPERTY. CONTRACTOR SHALL PLACE NECESSARY BARRICADES, WARNING SIGNS, SIGNALS, LIGHTS AND, IF NECESSARY, WATCHMEN FOR THE PROTECTION OF THE PUBLIC.

JACKS FOR FORCING THE CASING PIPE THROUGH THE ROADBED SHALL HAVE A JACKING HEAD CONSTRUCTED IN SUCH A MANNER AS TO APPLY UNIFORM PRESSURE AROUND THE RING OF THE PIPE. THE PIPE TO BE JACKED SHALL BE SET ON GUIDES, BRACED TOGETHER TO PROPERLY SUPPORT THE SECTION OF THE PIPE AND DIRECT IT TO THE PROPER LINE AND GRADE. IN GENERAL, ROADBED MATERIAL SHALL BE EXCAVATED JUST AHEAD OF

WHENEVER POSSIBLE, THE PIPE SHALL BE JACKED FROM THE LOW OR DOWNSTREAM END.

EXCAVATED MATERIAL WILL BE PLACED NEAR THE TOP OF THE WORKING PIT AND DISPOSED OF AS REQUIRED. USE OF WATER OR OTHER FLUIDS WILL BE PERMITTED ONLY TO THE EXTENT NECESSARY FOR LUBRICATION. JETTING WILL NOT BE PERMITTED.

THE DIAMETER OF THE EXCAVATION SHALL CONFORM TO THE OUTSIDE DIAMETER AND CIRCUMFERENCE OF THE CASING PIPE AS CLOSELY AS FEASIBLE. ANY VOIDS WHICH DEVELOP DURING THE INSTALLATION OPERATION SHALL BE PRESSURE GROUTED.

AFTER THE STEEL CASING PIPE HAS BEEN INSTALLED, THE CARRIER PIPE SHALL BE INSTALLED IN THE CASING

PIPE. CARE SHALL BE EXERCISED AT ALL TIMES TO MAINTAIN TIGHT, FULL SEATED JOINTS IN THE CARRIER PIPE. AT EACH END OF THE CASING PIPE, THE VOID BETWEEN THE CARRIER PIPE AND CASING SHALL BE SEALED WITH CASING END CAPS.

WHEN REQUESTED BY DCDWM, EITHER NON-SHRINK GROUT, FLOWABLE FILL, OR SAND SHALL BE USED TO FILL ALL VOIDS BETWEEN THE CARRIER PIPE AND STEEL CASING. ALL METHODS AND MATERIALS SHALL BE SUBMITTED FOR REVIEW AND COMMENT.

ALL SHEETING PLACED FOR THE JACKING/AUGURING MUST BE COMPLETELY REMOVED BY THE CONTRACTOR.

ALL BORE AND JACK DESIGNS SHALL INCLUDE A MANHOLE AT OR NEAR EACH END OF THE JACKED SECTION.

WHEN SITE CONDITIONS DICTATE, CONVENTIONAL TUNNELING TECHNIQUES MAY BE UTILIZED AS AN ALTERNATI
TO BORE AND JACK; SEE STANDARD DETAIL S-015 ON PAGE C-22.

RESTORATION OF PAVEMENTS, SIDEWALK, AND CURBS

FOLLOW STANDARD DETAIL S-016 ON PAGE C-21 FOR THE REPAIR OF CONCRETE AND ASPHALTIC CONCRETE SURFACES

WORK INCLUDED

THE CONTRACTOR SHALL FURNISH ALL MATERIALS FOR, AND PROPERLY RESTORE ALL PAVEMENTS, DRIVES, SIDEWALKS, AND CURBS, WHICH MAY HAVE BEEN DAMAGED, REMOVED, OR DISTURBED AS A RESULT OF ACCOMPLISHING THE WORK. RESTORATION AND REPLACEMENT SHALL BE MADE TO THE SATISFACTION OF DCDWM. THIS SHALL INCLUDE IN GENERAL, BUT WITHOUT LIMITATION, ALL NECESSARY CONCRETE, REINFORCING STEEL, STONE, CINDERS, GRAVEL, SLAG, ASPHALT, OR OTHER BITUMINOUS MATERIAL NECESSARY FOR THE PROPER COMPLETION AND RESTORATION OF THE WORK AS MAY BE REQUIRED, DIRECTED, OR SPECIFIED.

BY THE CONTRACTOR IN ACCORDANCE TO ALL LOCAL, STATE AND FEDERAL LAWS. NO EXISTING MATERIAL MAY BE REUSED IN THE WORK UNLESS PRE-APPROVED BY DCDWM. ALL WORKMANSHIP SHALL BE FIRST CLASS.

3) RESTORING PAVEMENTS

THREE THOUSAND (3,000) PSI, UNLESS OTHERWISE SPECIFIED IN THE DRAWINGS OR SPECIFICATIONS.

MATERIALS TO BE USED IN THE REPAIR AND RESTORATION OF PAVEMENTS, DRIVES, SIDEWALKS, AND CURBS,

CONCRETE SHALL BE CLASS 8 PLAIN CONCRETE WITH A TWENTY-EIGHT (28) DAY COMPRESSIVE STRENGTH OF

ALL ROADWAY RESTORATION SHALL BE DONE IN ACCORDANCE WITH GDOT STANDARDS. SEE GDOT STANDARD

SHALL BE FIRST QUALITY. ALL MATERIALS REMOVED WHILE ACCOMPLISHING THE WORK SHALL BE DISPOSED OF

1401 ON PAGE C-19 FOR PAVEMENT PATCHING DETAILS.

AFTER THE PIPE HAS BEEN LAID, APPURTENANT WORK CONSTRUCTED, AND BACKFILL COMPLETED, THE CONTRACTOR SHALL FURNISH, PLACE, RESTORE, AND MAINTAIN ALL PAVEMENTS OR ROADWAY SURFACES WHICH HAVE BEEN REMOVED OR DAMAGED BY OR IN PURSUIT OF THE WORK. THE FORM AND DEGREE OF RESTORATION SHALL BE AS SPECIFIED ON THE APPROVED DESIGN, AS SPECIFIED HEREIN, AND/OR AS DIRECTED

TRENCHES WITHIN ROADWAYS OR OTHER PAVED AREAS SHALL HAVE A MINIMUM OF 95% COMPACTION OF

PROCTOR MAX DENSITY. #57 STONE IS ONLY ALLOWED WITHIN THE TOP 2' OF THE PIPE BELL.

ALL ROADWAY RESTORATION SHALL BE DONE IN ACCORDANCE WITH THE LAWFUL REQUIREMENTS OF THE AUTHORITIES WITHIN WHOSE JURISDICTION SUCH PAVEMENT IS LOCATED. ALL HIGHWAY UTILITIES AND TRAFFIC CONTROLS ARE TO BE MAINTAINED AND WORK SHALL CONFORM TO THE RULES AND REGULATIONS OF THE AUTHORITIES, INCLUDING THE USE OF STANDARD SIGNS. THE CONTRACTOR SHALL FURNISH ALL SUCH BONDS OR CHECKS WHICH MAY BE REQUIRED BY THE HIGHWAY AUTHORITIES TO ENSURE PROPER RESTORATION OF

WHEN REMOVAL OF PAVEMENT IS REQUIRED (OTHER THAN GRAVEL TYPES) THE CONTRACTOR SHALL OUTLINE THE AREA TO BE REMOVED BY MAKING SAW-CUTS. SAW-CUTS SHALL BE VERTICAL TO ALLOW THE REMOVAL OF THE PAVING MATERIAL IN STRAIGHT LINES. IF PAVEMENT BREAKAGE OCCURS BEYOND THE SAW-CUT, THE CONTRACTOR SHALL MAKE A NEW STRAIGHT SAW-CUT BEYOND THE FURTHEST POINT OF BREAKAGE.

THE CONCRETE BASE COURSE SHALL EXTEND THE FULL WIDTH OF THE TRENCH CUT PLUS A MINIMUM OF TWELVE (12) INCHES ON EITHER SIDE OF THE TRENCH. THE EXISTING PAVEMENT SHALL BE NEATLY SAWED ALONG BOTH SIDES OF THE DITCH. THE CONCRETE USED SHALL BE CLASS A OR B CONCRETE. ONCE THE CONCRETE BASE COURSE HAS PROPERLY SET, THE CONCRETE SURFACE SHALL BE CLEANED AND A MINIMUM OONE (1) INCH THICK ASPHALTIC CONCRETE PAVEMENT SHALL BE LAID TO MATCH THE LEVEL OF THE ADJACENT PAVEMENT. SEE STANDARD DETAIL S-016 ON PAGE C-21 FOR PATCH AND RESURFACING REQUIREMENTS.

AT ANY TIME THAT AN EXISTING ROAD IS CUT LONGITUDINALLY FOR A DISTANCE GREATER THAN ONE HUNDRED (100) FEET, THE CONCRETE SHALL BE POURED FLUSH WITH EXISTING AND THE STREET SHALL BE RESURFACED CURB TO CURB WITH ONE (1) INCH MINIMUM OF ASPHALTIC CONCRETE. EXISTING ROAD SHALL BE RESTORED TO PRECONSTRUCTION CONDITION

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL PAVEMENT CUTS PRIOR TO PROJECT ACCEPTANCE AND DURING THE ONE (1) YEAR MAINTENANCE PERIOD. SHOULD ANY FAILURES BE NOTED ASSOCIATED WITH ANY PORTION OF THE WORK, THE CONTRACTOR SHALL REMOVE ALL SUCH DAMAGED SURFACES AND MAKE FULL REPAIRS; THIS INCLUDES ADDING AND RE-COMPACTING APPROVED BACKFILL MATERIALS, PLACING AND MAINTAINING BITUMINOUS CONCRETE PAVEMENT OR STONE ROAD SURFACES. ALL REQUIRED PAVEMENT REPAIRS NECESSITATED DUE TO PAVEMENT FAILURE, EITHER PRIOR TO FINAL PROJECT ACCEPTANCE OR DURING THE ONE (1) YEAR MAINTENANCE PERIOD, SHALL BE COMPLETED BY THE CONTRACTOR WITHIN FIVE (5) WORKING DAYS OF NOTIFICATION BY DCDWM. BITUMINOUS CONCRETE PAVEMENTS OR STONE ROAD SURFACES. WHICH THE CONTRACTOR IS REQUIRED TO REPLACE. SHALL BE IN AT LEAST AS GOOD

CONDITION AT THE END OF THE ONE (1) YEAR MAINTENANCE PERIOD AS IT WAS BEFORE CONSTRUCTION.

4) ROADWAY PERMITS

THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL ROAD OPENING PERMITS FROM THE DEKALB COUNTY DEPARTMENT OF PUBLIC WORKS TRANSPORTATION DIVISION AT (770) 492-5222, INCLUDING PROVIDING ANY REQUIRED RESTORATION BONDS.

DCDWM SHALL OBTAIN ALL ROAD OPENING PERMITS REQUIRED BY THE GOOT, THE CONTRACTOR IS NOT

PERMITTED TO MAKE ANY TYPE OF CUTS ON ROADWAYS REQUIRING A PERMIT FROM THE GDOT UNTIL SUCH TIME AS THE PERMIT IS PROVIDED AND PROMINENTLY DISPLAYED ON-SITE.

R2T

VER TO TAP

1841 PEELER RD. UNIT C ATLANTA, GA 30338 PHONE: (678) 336-5732 WWW.R2TINC.COM

DEKALB COUNTY DEPARTMENT OF WATERSHED MANAGEMENT

SOUTH FORK

PEACHTREE CREEK

SANITARY SEWER

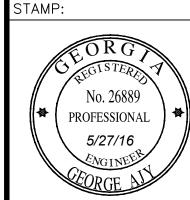
REPLACEMENT

ND LOTS 63, 100, 102, 103, 113, 118, & 119

REV DATE DESCRIPTION

0 5/27/16 INITIAL ISSUE

1 12/9/16 REVIEW COMMENTS



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SCALE: NONE

CHKD BY: A.R.

DESIGNED BY: J.J.

RAWN BY: J.J.

THE CONTRACTOR SHALL REPAIR OR REPLACE ALL DRIVEWAY SECTIONS DISTURBED BY THE PROCESS OF THE WORK. DRIVEWAYS SHALL BE CONSTRUCTED OF THE SAME MATERIALS AND TO THE SAME THICKNESS OF THE ADJOINING WEARING SURFACE OR TO THE MINIMUMS INDICATED ON GDOT STANDARD DETAIL A1 IN APPENDIX E, WHICHEVER IS GREATER. IN RESTORING DRIVEWAYS, THE SUBSOIL AND FOUNDATION MATERIAL SHALL BE WELL-COMPACTED SO AS TO PREVENT ANY FUTURE SETTLEMENT OR CRACKING OF THE DRIVEWAY PAVEMENT. IN RESTORING CONCRETE DRIVEWAYS, THE BASE COURSE SHALL BE WETTED PRIOR TO POURING NEW CONCRETE. WHERE NECESSARY TO CUT A CONCRETE DRIVEWAY, THE CUTS SHALL BE MADE WITH A MASONRY SAW, PROVIDING A SMOOTH, STRAIGHT LINE COMPLETELY ACROSS THE DRIVEWAY. PARTIAL CUT-OUTS, CROOKED CUTS, OR CUTS MADE BY ANY OTHER METHOD OTHER THAN MASONRY SAW ARE NOT PERMITTED. IN GENERAL, OR WHERE DIRECTED, CONCRETE SLAB REMOVAL SHALL BE MADE IN ENTIRE PAVEMENT SECTIONS TO THE NEAREST EXISTING EXPANSION-JOINT.

RESTORING CURBS

ALL CURB RESTORATION SHALL BE DONE IN ACCORDANCE WITH GDOT STANDARDS. SEE GDOT STANDARD 9032B ON PAGE C-19 FOR CURB DETAILS.

THE CONTRACTOR SHALL RESTORE ALL CURBS AND COMBINATION CURBS AND GUTTERS WHICH HAVE BEEN REMOVED OR DISTURBED IN THE PROGRESS OF THE WORK. CURBING SHALL BE MADE TO CONFORM ACCURATELY IN SIZE, LINE, GRADE, AND MATERIALS AS THE ADJOINING SECTION. IN RESTORING CURBS, THE SUBSOIL AND FOUNDATION MATERIAL SHALL BE WELL COMPACTED SO AS TO PREVENT ANY FUTURE SETTLEMENT OF THE CONCRETE CURBING. THE SUB-BASE SHALL BE THOROUGHLY ROLLED OR TAMPED AND SHALL BE WET JUST BEFORE THE CONCRETE IS PLACED, BUT SHALL SHOW NO POOLS OF WATER.

7) RESTORING SIDEWALKS

THE CONTRACTOR SHALL RESTORE ALL SIDEWALKS WHICH HAVE BEEN REMOVED OR DISTURBED IN THE PROGRESS OF THE WORK. SIDEWALKS SHALL BE CONSTRUCTED TO THE SAME DIMENSIONS AND MATERIALS AS THE ADJOINING SECTIONS

WHERE NECESSARY TO CUT A SIDEWALK, ENTIRE SECTIONS SHALL BE REMOVED AND REPLACED UNLESS OTHERWISE DIRECTED BY DCDWM.

THE SUB-BASE SHALL BE THOROUGHLY ROLLED OR TAMPED AND SHALL BE WETTED JUST BEFORE THE CONCRETE IS PLACED, BUT SHALL SHOW NO POOLS OF WATER.

8) CONTRACTOR'S WARRANTY OF RESTORED PAVED SURFACES

THE CONTRACTOR SHALL MAKE EVERY PROVISION TO ENSURE COMPACTION BY PROPERLY TAMPING ANY BACKFILL UNDER AREAS TO BE PAVED. ANY SETTLEMENT WHICH MAY OCCUR DURING THE ONE-YEAR WARRANTY PERIOD SHALL BE CORRECTED BY THE CONTRACTOR AT HIS EXPENSE, INCLUDING REMOVING, RE-COMPACTING, AND REPLACING ANY PAVED SURFACES WHICH SHOW SIGNS OF SETTLEMENT, WHETHER OR NOT ACTUAL DAMAGE TO THE PAVED SURFACE HAS OCCURRED. THIS SHALL APPLY TO ALL PAVED SURFACES INCLUDING STREETS, DRIVES, SIDEWALKS, AND CURBS AND GUTTERS.

SHOULD SETTLEMENT, CRACKS, OR OTHER INDICATIONS OF FAILURE, OR IMPENDING FAILURE, APPEAR IN THE PAVED SURFACE, THE ADJOINING PAVING SHALL BE REMOVED TO THE EXTENT NECESSARY TO SECURE A FIRM, UNDISTURBED BEARING. ALL REMOVAL, RE-COMPACTION, AND REPLACEMENT SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS CONCERNING THESE OPERATIONS AS STATED ELSEWHERE.

SEEDING / SOD REPLACEMENT

1) WORK INCLUDED

THE DEVELOPER/CONTRACTOR SHALL FURNISH ALL MATERIALS FOR, AND PROPERLY RESTORE TO THE SATISFACTION OF DCDWM, ALL GROUND SURFACES IRRESPECTIVE OF TYPE, WHICH MAY BE DISTURBED IN THE PROGRESS OF THE WORK. THE DEVELOPER/CONTRACTOR SHALL REFER TO THE AASHTO "GREEN BOOK" FOR EROSION AND SEDIMENTATION CONTROL FOR ADDITIONAL STANDARDS AND REQUIREMENTS NOT LISTED IN DWM STANDARDS.

THIS SHALL INCLUDE IN GENERAL BUT WITHOUT LIMITATION, THE SPREADING OF TOPSOIL, SEEDING, SOD REPLACEMENT, FERTILIZING, AND MULCHING REQUIRED TO RESTORE DISTURBED AREAS AS MAY BE NECESSARY, DIRECTED, OR SPECIFIED HEREIN. ON ALL "SOD" TYPE LAWNS AND OTHER IMPROVED, WELL ESTABLISHED GRASS AREAS, THE SOD/GRASS SHALL BE CAREFULLY REMOVED, KEPT ALIVE, AND REPLACED AFTER THE BACKFILLING AND GRADING IS FINISHED. THE CONTRACTOR SHALL ALSO REMOVE ALL SPOIL FROM SUCH AREAS AS QUICKLY AS POSSIBLE AFTER THE EXCAVATION IS BACKFILLED, AND HE SHALL LEAVE THE PREMISES IN AS GOOD CONDITION AS BEFORE UNDERTAKING THE WORK. IT IS THE INTENT OF THE DWM DESIGN STANDARDS TO RESTORE ALL DISTURBED AREAS, TO PLACE SEED AND MULCH IN AREAS NOT SPECIFICALLY IDENTIFIED AS IMPROVED LAWNS, TO PLACE TOPSOIL AND SEED WHERE IMPROVED LAWNS EXISTED PRIOR TO CONSTRUCTION, AND TO PROVIDE FOR "SOD" REMOVAL AND REPLACEMENT IN AREAS IDENTIFIED AS SUCH PRIOR TO CONSTRUCTION. HOWEVER, THE DEKALB COUNTY PLANNING AND DEVELOPMENT STANDARD APPLY WITH RESPECT TO EROSION AND SEDIMENT CONTROL.

2) TEMPORARY SEDIMENTATION AND EROSION CONTROL

LIMITATION OF EXPOSURE OF ERODIBLE EARTH: CONTRACTOR IS TO PROVIDE EROSION AND/OR POLLUTION CONTROL MEASURES TO PREVENT CONTAMINATION OF ANY RIVER, STREAM, LAKE, TIDAL WATERS, RESERVOIR, CANAL, OR OTHER WATER IMPOUNDMENTS OR TO PREVENT DETRIMENTAL EFFECTS ON PROPERTY OUTSIDE THE PROJECT RIGHT-OF-WAY OR DAMAGE TO THE PROJECT. EROSION AND SEDIMENTATION CONTROL DESIGN SHALL BE BASED ON THE "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA", GEORGIA SOIL AND WATER CONSERVATION COMMISSION, LATEST EDITION (GREEN BOOK), NPDES PERMIT REQUIREMENTS, AND APPROVED BY DEKALB COUNTY WATERSHED PROTECTION DIVISION.

USE TEMPORARY EROSION CONTROL FEATURES TO:

A) CORRECT CONDITIONS THAT DEVELOP DURING CONSTRUCTION WHICH WERE NOT FORESEEN AT THE TIME OF DESIGN,
 B) CONTROL EROSION PRIOR TO THE TIME IT IS PRACTICAL TO CONSTRUCT PERMANENT CONTROL FEATURES,
 C) PROVIDE IMMEDIATE TEMPORARY CONTROL OF EROSION THAT DEVELOPS DURING NORMAL CONSTRUCTION OPERATION.

SCHEDULE OPERATIONS SUCH THAT THE AREA OF UNPROTECTED ERODIBLE EARTH EXPOSED AT ANY ONE TIME IS NOT LARGER THAN THE MINIMUM AREA NECESSARY FOR EFFICIENT CONSTRUCTION OPERATIONS, AND THE DURATION OF EXPOSURE OF UNCOMPLETED CONSTRUCTION TO THE ELEMENTS IS AS SHORT AS PRACTICABLE.

3) ACCEPTABLE EROSION CONTROL MEASURES:

A) TEMPORARY MULCHING:

FURNISH AND APPLY A TWO (2) TO FOUR (4) INCH THICK BLANKET OF STRAW OR HAY MULCH TO AREAS, AS NEEDED, THEN MIX OR FORCE THE MULCH INTO THE TOP TWO (2) INCHES OF THE SOIL IN ORDER TO TEMPORARILY CONTROL EROSION. WHEN BEGINNING PERMANENT GRASSING OPERATIONS, PLOW UNDER TEMPORARY MULCH MATERIALS IN CONJUNCTION WITH PREPARATION OF THE GROUND.

B) ARTIFICIAL COVERINGS:

a. USE ARTIFICIAL COVERINGS COMPOSED OF NATURAL OR SYNTHETIC FIBER MATS, PLASTIC SHEETING, OR NETTING AS PROTECTION AGAINST EROSION DURING TEMPORARY PAUSES IN CONSTRUCTION CAUSED BY INCLEMENT WEATHER OR OTHER CIRCUMSTANCES. REMOVE THE MATERIAL WHEN CONSTRUCTION RESUMES.

b. USE ARTIFICIAL COVERINGS AS EROSION CONTROL BLANKETS TO FACILITATE PLANT GROWTH WHILE PERMANENT GRASSING IS BEING ESTABLISHED. FOR THE PURPOSE DESCRIBED, USE NON-TOXIC, BIODEGRADABLE, NATURAL OR SYNTHETIC WOVEN FIBER MATS.

INSTALL EROSION CONTROL BLANKETS CAPABLE OF SUSTAINING A MAXIMUM DESIGN VELOCITY OF SIX AND ONE-HALF (6.5) FPS AS DETERMINED FROM TESTS PERFORMED BY UTAH STATE UNIVERSITY, TEXAS TRANSPORTATION INSTITUTE OR AN INDEPENDENT TESTING LABORATORY.

INSTALL ALL SEDIMENT CONTROL DEVICES IN A TIMELY MANNER TO ENSURE THE CONTROL OF SEDIMENT AND THE PROTECTION OF LAKES, STREAMS, GULF OR OCEAN WATERS, OR ANY WETLANDS ASSOCIATED THEREWITH AND TO ANY ADJACENT PROPERTY OUTSIDE THE RIGHT OF-WAY AS REQUIRED.

AT SITES WHERE EXPOSURE TO SUCH SENSITIVE AREAS IS PREVALENT, COMPLETE THE INSTALLATION OF ANY SEDIMENT CONTROL DEVICE PRIOR TO THE COMMENCEMENT OF ANY EARTHWORK.

4) ACCEPTABLE SEDIMENTATION CONTROL MEASURES:

A) SANDBAGS: FURNISH AND PLACE SANDBAGS IN CONFIGURATIONS TO CONTROL EROSION AND SILTATION.

 B) BERMS: CONSTRUCT TEMPORARY EARTH BERMS TO DIVERT THE FLOW OF WATER FROM AN ERODIBLE

C) BALED HAY OR STRAW: PROVIDE BALES HAVING MINIMUM DIMENSIONS OF FOURTEEN (14) BY EIGHTEEN (18) BY THIRTY-SIX (36) INCHES AT THE TIME OF PLACEMENT. CONSTRUCT BALED HAY OR STRAW DAMS AS NEEDED TO PROTECT AGAINST DOWNSTREAM ACCUMULATIONS OF SEDIMENT.

D) TEMPORARY SILT FENCES: FURNISH, INSTALL, MAINTAIN, AND REMOVE TEMPORARY SILT FENCES, IN ACCORDANCE WITH THE MANUFACTURER'S DIRECTIONS.

E) ROCK BAGS: FURNISH AND PLACE ROCK BAGS TO CONTROL EROSION AND SILTATION.

5) STANDARD SPECIFICATION FOR SEEDING / SOD REPLACEMENT

THE REQUIREMENTS OF THE GDOT "STANDARD SPECIFICATIONS - CONSTRUCTION OF ROADS AND BRIDGES", CURRENT EDITION, AND AS REVISED TO DATE, SHALL APPLY INSOFAR AS THEY ARE APPLICABLE FOR ALL SEEDING/SOD REPLACEMENT.

6) TOPSOIL

WHERE DIRECTED BY DCDWM, AREA TO BE SEEDED SHALL BE COVERED WITH A LAYER OF TOPSOIL. THE TOPSOIL SHALL BE OF SUFFICIENT THICKNESS THAT WHEN SPREAD AND COMPACTED, A MINIMUM OF FOUR (4) INCHES WILL BE AVAILABLE. THE CONTRACTOR SHALL FURNISH NATURAL TOPSOIL OF A GOOD CONDITION AND TILLABLE STRUCTURE.

OBTAIN TOPSOIL AS BORROW FROM AN OUTSIDE SOURCE OF UNIFORM TEXTURE, DRAINAGE, AND OTHER CHARACTERISTICS SO AS TO CONSTITUTE A HOMOGENEOUS SOIL MEETING THE REQUIREMENTS OF GDOT, AND AS APPROVED BY DCDWM

THE CONTRACTOR SHALL FURNISH TOPSOIL THAT IS FREE FROM OBJECTIONABLE MATERIALS SUCH AS HARD CLODS, STIFF CLAY, SODS, HARDPAN, PARTIALLY DISINTEGRATED ROCK, LARGE ROOTS, OR OTHER MATERIALS THAT ARE NOT INTEGRALLY A NATURAL COMPONENT OF GOOD AGRICULTURAL SOILS, AND WHICH ARE HARMFUL OR NOT BENEFICIAL FOR SUCCESSFUL PLANT GROWTH. DO NOT USE TOPSOIL CONTAINING FROST OR IN AN EXCESSIVELY WET (MUDDY) CONDITION. IF UTILIZING EXISTING MATERIAL OBTAINED FROM THE INITIAL EXCAVATION OF THE WORK SITE FOR RE-USE AS TOPSOIL, THE CONTRACTOR MUST FIRST OBTAIN APPROVAL FROM DCDWM AS TO SUITABILITY OF ITS CONTENT, INCLUDING APPROVAL OF LOCATION AND METHOD OF STORAGE OF TOPSOIL FOR RE-USE.

7) SEEDING

SEEDING SHALL BE ACCOMPLISHED BY THE CONTRACTOR USING A PROPERLY PROPORTIONED MIXTURE OF INOCULATED SEED APPROVED FOR USE IN "ZONE ONE" AS DETAILED IN THE GDOT'S STANDARD SPECIFICATIONS. SEEDING SHALL ONLY BE PERMITTED IN THE SPECIFIED PLANTING SEASON FOR "ZONE ONE" FOR THE SPECIFIED MIXTURE. ALL SEEDED AREAS SHALL BE UNIFORMLY MULCHED IMMEDIATELY AFTER SEEDING.

THE CONTRACTOR SHALL MAINTAIN ALL SEEDED AREAS TO INCLUDE MOWING, WATERING, AND RE-SEEDING ANY BARE AREAS UNTIL A SATISFACTORY STAND OF GRASS HAS BEEN OBTAINED AND FINAL ACCEPTANCE OF THE WORK HAS BEEN RECEIVED FROM DCDWM. AREAS SHOWING EVIDENCE OF SETTLEMENT OR LOSS OF TOPSOIL SHALL BE REBUILT AND RE-SEEDED AS REQUIRED.

IN GENERAL THE CONTRACTOR SHALL REPLACE EXISTING MAINTAINED LAWN AREAS WITH THE SAME TYPE OF GRASS AS WAS ESTABLISHED PRIOR TO CONSTRUCTION. ANY DEVIATIONS OR ALTERNATIVES PROPOSED DUE TO UNAVAILABILITY OF SEASONAL GRASSES, OR INAPPROPRIATENESS OF SEEDING DUE TO TIME OF YEAR MUST BE PRESENTED TO THE DCDWM INSPECTOR IN WRITING WITH SIGNED AUTHORIZATION OF HOMEOWNER.

8) PREPARATION OF SEEDED/SOD AREAS

THE SUBGRADE FOR ANY AREAS TO BE SEEDED SHALL BE BROUGHT TO A UNIFORM GRADE BY THE CONTRACTOR AND SHALL BE FREE OF STONES LARGER THAN ONE (1) INCH, ROOTS, GRAVEL, OR OTHER DEBRIS. WHERE TOPSOIL IS REQUIRED BY DCDWM, THE TOPSOIL SHALL BE UNIFORMLY GRADED, TRIMMED, AND RAKED FREE OF UNSUITABLE MATERIALS, RIDGES, BUMPS, OR DEPRESSIONS. OVER THIS AREA, THE CONTRACTOR SHALL SPREAD AGRICULTURAL LIME AT THE RATE OF ONE HUNDRED (100) POUNDS PER ONE THOUSAND (1,000) SQUARE FEET AND SHALL SPREAD A GENERAL FERTILIZER UNIFORMLY ON THE SURFACE OF THE GROUND AT A RATE OF THIRTY-FIVE (35) POUNDS PER ONE THOUSAND (1,000) SQUARE FEET. THE LIME AND FERTILIZER SHALL BE MIXED UNIFORMLY INTO THE TOP FOUR (4) INCHES OF THE SOIL USING SUITABLE HARROWS, TILLERS, OR OTHER MECHANICAL EQUIPMENT.

9) SOD REMOVAL/REPLACEMENT

ON ALL WELL ESTABLISHED AND "SOD" TYPE LAWNS, THE CONTRACTOR MAY AT HIS DISCRETION, UTILIZING SUITABLE SOD CUTTING EQUIPMENT, CUT THE SOD INTO ROLLS, CAREFULLY REMOVE AND STORE THE SOD, AND WATER AND MAINTAIN IN A VIABLE CONDITION FOR REPLACEMENT AFTER BACKFILL. ANY SUCH SOD REMOVED AND REPLACED IN THIS MANNER MUST BE DEMONSTRATED TO BE LIVING TO THE DCDWM INSPECTOR PRIOR TO FINAL ACCEPTANCE OF PROJECT.

IF SOD IS TO BE REPLACED WITH "NEW" SOD, THE CONTRACTOR SHALL ONLY REPLACE USING SOD OF THE SAME TYPE AS THAT REMOVED. ANY DEVIATIONS OR ALTERNATIVES PROPOSED DUE TO UNAVAILABILITY OF SEASONAL GRASSES MUST BE PRESENTED TO DCDWM INSPECTOR IN WRITING WITH SIGNED AUTHORIZATION OF

CONSTRUCTION OVERSIGHT

1) GENERAL

HOMEOWNER.

WHEN CALLING FOR AN INSPECTION, STATE WHETHER IT IS PRELIMINARY, FINAL, OR OTHER SPECIFIC TYPE OF INSPECTION. NO APPROVAL OF A PROJECT WILL BE GRANTED BY DCDWM UNTIL ALL INSPECTIONS ARE CONDUCTED, NO DEFECTS NOTED, AND ALL APPROPRIATE DOCUMENTS HAVE BEEN RECEIVED AND ACCEPTED. LETTERS OF PRELIMINARY AND FINAL INSPECTION/APPROVALS WILL BE SENT TO DEVELOPERS AND/OR CONTRACTORS BY THE DCDWM AND PLACED IN DEPARTMENT FILES.

JOBSITES SHALL BE LANDSCAPED TO AN EQUAL OR SATISFACTORY CONDITION AS PRESENTED PRIOR TO START OF CONSTRUCTION ACTIVITIES. ANY DAMAGE TO THE EXISTING SYSTEM OCCURRING DURING CONSTRUCTION ACTIVITIES SHALL BE PROMPTLY REPORTED TO THE PROPER AUTHORITIES SO THAT PROPER ACTION MAY BE

ANY AND ALL CLEANING OF A NEWLY INSTALLED SYSTEM PRIOR TO INSPECTION/APPROVAL MUST BE SUCH AS NOT TO IMPAIR AND/OR DAMAGE AN EXISTING SYSTEM.

2) INSPECTION PRIOR TO INSTALLATION

PIPE SHALL BE INSPECTED AND TESTED AT THE MILL OR WAREHOUSE BY AN INDEPENDENT TESTING LABORATORY TO DETERMINE CONFORMITY WITH THE REQUIREMENTS OF ASTM STANDARDS. SIGNED AND DATED CERTIFICATES STATING RESULTS OF INSPECTION AND TESTS SHALL BE TILED WITH THE DCDWM.

PRIOR TO LOWERING PIPE AND SPECIALS INTO THE TRENCH, A FIELD INSPECTION MAY BE CONDUCTED

3) FINAL INSPECTION

RECORD DRAWINGS SHALL BE SUBMITTED WITH ELEVATIONS TO MEAN SEA LEVEL, MANHOLE RIM/INVERT ELEVATIONS, MANHOLE COORDINATES, SERVICE LINE CLEANOUT COORDINATES, AND STUB LENGTHS/LOCATIONS SHOWN.

A CCTV INSPECTION MEETING ALL PACP AND/OR MACP STANDARDS, OF ALL NEWLY CONSTRUCTED SANITARY SEWER LINES AND STRUCTURES SHALL BE CONDUCTED BY THE CONTRACTOR. THE VIDEO AND REPORT WILL BE SUBMITTED TO THE DCDWM FOR APPROVAL AND ACCEPTANCE, SEE SECTION III.F.3 FOR CCTV INSPECTION REQUIREMENTS.

TESTING

1) VISUAL TEST

THE CONTRACTOR SHALL INSTALL THE NEW GRAVITY SANITARY SEWER SYSTEM AS WATERTIGHT AS PRACTICAL. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ELIMINATE ALL VISIBLE POINTS OF GROUNDWATER INFILTRATION AND ANY OTHER SIGNIFICANT POINTS OF LEAKAGE WHICH CAN BE LOCATED REGARDLESS OF TEST RESULTS OBTAINED AS HEREINAFTER REQUIRED. SANITARY SEWER LINES COMPLETED IN PLACE SHALL BE INSPECTED AND TESTED WITH A METHOD SATISFACTORY TO THE DCDWM SHOWING A CLEAR AND UNOBSTRUCTED LINE BETWEEN MANHOLES. LINES AND MANHOLES SHALL BE FLUSHED AND WASHED DOWN BEFORE INSPECTION AND TESTING. THE CONTRACTOR, AT HIS OWN EXPENSE, SHALL PERFORM SYSTEM INFILTRATION TESTS AND AIR TESTS AS DESCRIBED BELOW.

AIR TEST

ALL SANITARY SEWERS SHALL BE TESTED BY CONTRACTOR FOR LEAKAGE USING LOW PRESSURE AIR TESTING, ACCORDING TO LATEST REVISIONS OF ASTM C924 FOR RCP, ASTM F1417 FOR PLASTIC PIPE, AND AS SPECIFIED HEREIN. ALL PIPE SHALL BE BACKFILLED PRIOR TO AIR TESTING. FOR PIPES LESS THAN THIRTY-SIX (36) INCHES IN DIAMETER, THE AIR TEST SHALL BE PERFORMED BY TESTING COMPLETE SECTIONS OF PIPE BETWEEN MANHOLES. FOR PIPES THIRTY-SIX (36) INCHES IN DIAMETER AND OVER, THE AIR TEST MAY BE PERFORMED BY TESTING EACH JOINT CONNECTION INDIVIDUALLY USING A JOINT TESTER SIMILAR TO THE CHERNE JOINT TESTER.

THE FOLLOWING PROCEDURE SHALL BE USED FOR AIR TESTING A SANITARY SEWER SYSTEM: ALL PNEUMATIC PLUGS SHALL BE SEAL-TESTED BEFORE BEING USED IN THE ACTUAL TEST INSTALLATION. ONE LENGTH OF PIPE SHALL BE LAID IN THE GROUND AND SEALED AT BOTH ENDS WITH THE PNEUMATIC PLUGS. AIR SHALL BE INTRODUCED INTO THE PLUGS UNTIL A PRESSURE OF TWENTY FIVE (25) PSIG IS REACHED. THE SEALED PIPE SHALL BE PRESSURIZED UNTIL THE INTERNAL AIR PRESSURE REACHES FIVE (5) PSIG. THE PLUGS SHALL HOLD AGAINST THIS PRESSURE WITH BRACING AND WITH MOVEMENT OF THE PLUGS OUT OF THE PIPE. PLUGS SHALL BE READILY REMOVABLE TO PROVIDE AN UNOBSTRUCTED LATERAL HOUSE CONNECTION OR EXTENSION. ALL WYES, AND/OR STUBS SHALL BE PLUGGED IN A MANNER ACCEPTABLE TO THE INSPECTOR.

WHERE HIGH GROUND WATER IS KNOWN TO EXIST, THE POUNDS OF PRESSURE THAT WILL BE ADDED TO THE INTERNAL AIR PRESSURE USED FOR THE TEST SHALL BE THE HEIGHT IN FEET OF GROUND WATER ABOVE THE INVERT OF THE SANITARY SEWER DIVIDED BY TWO AND THIRTY-ONE ONE-HUNDREDTHS (2.31).

AT LEAST TWO (2) MINUTES WILL BE ALLOWED FOR AIR TEMPERATURE IN THE TEST SEGMENT TO STABILIZE, WHILE INTERNAL AIR PRESSURE REMAINS NO LESS THAN THREE AND ONE-HALF (3.5) PSIG ABOVE GROUND WATER PRESSURE.

THE ELAPSED TIME FOR THE INTERNAL PRESSURE TO DROP TO TWO AND ONE-HALF (2.5) PSIG ABOVE GROUND WATER PRESSURE WILL BE ACCURATELY DETERMINED. IF IT IS OBVIOUS TO THE INSPECTOR THAT NO LEAKAGE IS OCCURRING, HE MAY TERMINATE THE TEST EARLY. THE AIR TEST IS DEEMED ACCEPTABLE IF THE ELAPSED TIME FOR THE INTERNAL PRESSURE DROP EQUATES TO OR EXCEEDS THREE (3) HOURS.

IF THE INSTALLATION FAILS TO MEET THE REQUIREMENTS OF THIS TEST, THE CONTRACTOR SHALL DETERMINE THE SOURCE OF THE LEAKAGE. THE CONTRACTOR SHALL REPAIR OR REPLACE ALL DEFECTIVE MATERIALS AND/OR WORKMANSHIP. THE INSTALLATION WILL THEN BE RETESTED FOR COMPLIANCE WITH DWM STANDARDS.

CCTV TESTING

A TELEVISION INSPECTION OF THE SANITARY SEWER SHALL BE PERFORMED AT THE CONTRACTOR'S EXPENSE DURING FINAL INSPECTION. DCDWM SHALL BE PROVIDED WITH ONE COPY OF THE TV INSPECTION REPORT AND CD-ROMS SHOWING THE ENTIRE LENGTH OF THE GRAVITY SANITARY SEWER TESTED. A COPY OF THE FIRST PAGE OF THE CCTV INSPECTION FORM IS PROVIDED IN APPENDIX J. THE REPORT SHALL CONTAIN THE CONDITION OF THE PIPE, NAME AND LOCATION OF THE PROJECT INCLUDING STREET NAME, MANHOLE NUMBER, TYPE OF PIPE, DEPTH, LOCATION OF SERVICES, LENGTH, TYPE OF JOINTS, ROUNDNESS, AND DISTANCE BETWEEN MANHOLES. ANY PIPE FOUND TO BE CRACKED, LEAKING, MISALIGNED, BELLIED, OR OTHERWISE DEFECTIVE SHALL BE REMOVED AND REPLACED. RECORD DRAWINGS CERTIFIED AND STAMPED BY CONTRACTOR'S ENGINEER SHALL ALSO BE SUBMITTED TO DCDWM. CONTRACTOR SHALL GIVE ADEQUATE NOTICE TO DCDWM SO THAT AN INSPECTOR CAN BE PRESENT DURING THE CCTV TESTING.

INTERNAL GROUTING TO REPAIR NEW LINES WILL NOT BE ALLOWED, NOR WILL A "RE-ROUNDING" PROCESS TO REPAIR EXCESSIVE DEFLECTION BE ALLOWED.

FOLLOWING CORRECTIONS OF DISCREPANCIES, THE LINE WILL BE RE-INSPECTED AT NO COST TO DCDWM. ALL ITEMS MUST BE APPROVED AND ACCEPTED BY DCDWM PRIOR TO SUBMITTAL OF THE FINAL PLAT.

4) INFLOW/INFILTRATION

MEASURE INFLOW AND INFILTRATION (I/I) INTO EACH MAJOR SEGMENT OF SANITARY SEWER DURING WET WEATHER, AS REQUESTED BY DCDWM. USE SUITABLE TEMPORARY WEIRS AND DEPTH MEASURING DEVICES, ACCEPTABLE TO DCDWM. THESE DEVICES WILL BE FURNISHED, INSTALLED AND REMOVED BY THE CONTRACTOR.

FOR SANITARY SEWERS SIXTEEN (16) INCHES OR LESS IN DIAMETER, NO INFILTRATION OR LEAKS WILL BE ALLOWED. ANY INFILTRATION FLOWING AT ANY SECTION OF THE SANITARY SEWER PROJECT MUST BE ELIMINATED PRIOR TO FINAL INSPECTION AND APPROVAL.

FOR SANITARY SEWERS GREATER THAN SIXTEEN (16) INCHES, TAKE ACTION NECESSARY TO PERMANENTLY REDUCE INFILTRATION FROM ALL WATER SOURCES INTO ALL CONSTRUCTED WORK TO THE FLOW RATE DETERMINED BY TESTS WITNESSED BY THE DCDWM. ACCEPTABLE I/I SHALL NOT EXCEED 0.0 L GALLONS PER INCH OF NOMINAL PIPE DIAMETER PER FOOT OF PIPE PER TWENTY FOUR (24) HOURS. REPAIR METHODS MUST BE APPROVED BY DCDWM.

NO VISIBLE OR KNOWN LEAKS WILL BE ALLOWED REGARDLESS OF INFILTRATION TEST RESULTS.

5) MANHOLE TESTING

ALL MANHOLES SHALL BE VACUUM TESTED. MANHOLES SHALL BE TESTED IN THE PRESENCE OF THE DCDWM INSPECTOR. THE VACUUM TEST SHALL CONSIST OF APPLYING A VACUUM TO THE MANHOLE.

EACH MANHOLE SHALL BE TESTED AFTER THE INSTALLATION HAS BEEN COMPLETED. IF TESTED PRIOR TO BACKFILL, THE TEST SHALL CONFORM TO THE LATEST REVISION OF ASTM C1244. ALL PIPES ENTERING THE MANHOLE SHALL BE PLUGGED. CONTRACTOR SHALL TAKE CARE TO SECURELY BRACE THE PLUG FROM BEING DRAWN INTO THE MANHOLE.

THE TEST HEAD SHALL BE PLACED AT THE INSIDE OF THE MANHOLE COVER FRAME AND THE SEAL INFLATED.

THE TEST HEAD SHALL BE PLACED AT THE INSIDE OF THE MANHOLE COVER FRAME AND THE SEAL INFLATED. PUMP SHUT OFF SHALL OCCUR ONCE A VACUUM OF TEN (10) INCHES OF MERCURY IS DRAWN. WITH THE VALVES CLOSED, THE TIME SHALL BE MEASURED FOR THE VACUUM TO DROP TO NINE (9) INCHES OF MERCURY. THE MANHOLE SHALL PASS IF THE TIME IS GREATER THAN OR EQUAL TO THE FOLLOWING:

SIXTY (60) SECONDS FOR FORTY-EIGHT (48) INCH DIAMETER,
 SEVENTY-FIVE (75) SECONDS FOR SIXTY (60) INCH DIAMETER,

NINETY (90) SECONDS FOR SEVENTY-TWO (72) INCH DIAMETER MANHOLES.

FOR MANHOLES DEEPER THAN TWENTY (20) FEET, THE TEST TIMES SHALL INCREASE BY ONE (1) SECOND PER FOOT OF ADDITIONAL MANHOLE DEPTH. IF THE MANHOLE FAILS THE INITIAL TEST, NECESSARY REPAIRS SHALL BE MADE. RETESTING SHALL PROCEED UNTIL A SATISFACTORY TEST IS OBTAINED.

IF THE TEST IS PERFORMED AFTER THE MANHOLE HAS BEEN BACKFILLED, THE PROCEDURE SHALL BE MODIFIED PER NPCA GUIDELINES.

SEWER BYPASS PUMPING

1) GENERAL

DURING VARIOUS PHASES OF THE WORK, IT WILL BE NECESSARY TO CONSTRUCT AND MAINTAIN TEMPORARY BYPASS SEWERS TO MAINTAIN CONTINUOUS AND RELIABLE WASTEWATER FLOW IN ALL PIPES, INCLUDING INDIVIDUAL SERVICE CONNECTIONS. VARIOUS PHASES OF THE WORK THAT SHALL REQUIRE THE IMPLEMENTATION OF TEMPORARY BYPASS SEWERS INCLUDE, BUT ARE NOT LIMITED TO, CONNECTIONS OF NEW SEWERS TO EXISTING SEWERS, TRENCHLESS REHABILITATION OF EXISTING SEWERS, AND PIPELINE INSPECTION. SEWAGE SHALL BE PUMPED BACK INTO THE SAME SYSTEM.

2) BYPASS SEWER REQUIREMENTS

CONTRACTOR SHALL CONSTRUCT AND MAINTAIN ALL TEMPORARY BYPASS SEWERS AND BE RESPONSIBLE FOR ALL BYPASS PUMPING OF SEWAGE THAT MAY BE REQUIRED TO PREVENT BACKING UP OF SEWAGE AND ALLOW APPROPRIATE CONDITIONS FOR PROPER INSPECTION, REHABILITATION, TESTING OR DRAINAGE DURING REPAIR, REHABILITATION, REPLACEMENT, OR RECONNECTIONS TO EXISTING SEWERS OR FORCE MAINS. THE CONTRACTOR SHALL IMMEDIATELY REMOVE AND DISPOSE OF ALL OFFENSIVE MATTER SPILLED DURING THE BYPASS PUMPING AT HIS OWN EXPENSE. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR PAYING ANY FINES IMPOSED AS A RESULT OF SPILLS OR OVERFLOWS THAT OCCUR AS A RESULT OF THE BYPASS PUMPING

CONTRACTOR SHALL PROVIDE A REDUNDANT BYPASS PUMP, INTAKE AND DISCHARGE CONNECTION, AND OTHER EQUIPMENT NECESSARY TO PROVIDE CONTINUOUS WASTEWATER FLOW AND PREVENT THE BACKING UP OF SEWAGE IN THE CASE OF EMERGENCIES AT ALL TIMES.

4) NOISE POLLUTION

PRIMARY BYPASS PUMPS SHALL BE CRITICALLY SILENCED WHEN USED IN RESIDENTIAL SETTINGS OR AREAS WHERE EXCESSIVE NOISE LEVELS WOULD CREATE A DISTURBANCE. REDUNDANT BYPASS PUMPING DOES NOT HAVE TO BE CRITICALLY SILENCED.

5) SCHEDULE

THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER A SCHEDULE TO COMPLETE THE WORK. IT WILL INCLUDE THE SEQUENCING AND COORDINATION OF CONNECTIONS TO EXISTING SEWERS, PIPELINE INSPECTION, TRENCHLESS REHABILITATION AND TESTING OF EXISTING SEWERS, AND THE HANDLING OF WASTEWATER FLOW DURING CONSTRUCTION. THE SCHEDULE OF WORK SHALL ALSO BE REVIEWED AND APPROVED BY THE OPERATOR IN RESPONSIBLE CHARGE (ORC).

6) OPERATION

THE DESIGN, INSTALLATION, AND OPERATION OF THE TEMPORARY PUMPING SYSTEM SHALL BE THE CONTRACTOR'S RESPONSIBILITY. THE CONTRACTOR SHALL EITHER DEMONSTRATE, OR EMPLOY THE SERVICES OF A SUBCONTRACTOR WHO CAN DEMONSTRATE, TO THE ENGINEER AND ORC THAT HE SPECIALIZES IN THE DESIGN AND OPERATION OF TEMPORARY BYPASS PUMPING SYSTEMS. EACH BYPASS PUMPING OPERATION SHALL INCLUDE THE COMPONENTS AND SYSTEMS TO ACCOMPLISH THE BYPASS IN ACCORDANCE WITH THESE SPECIFICATIONS AND THE SPECIAL PROJECT CONDITIONS.

7) BYPASS PUMPING PLAN

THE CONTRACTOR SHALL PREPARE A SPECIFIC, DETAILED DESCRIPTION OF THE PROPOSED PUMPING SYSTEM (BYPASS PUMPING PLAN). THE BYPASS PUMPING PLAN SHALL BE SUBMITTED AND APPROVED PRIOR TO THE MOBILIZATION OF ANY OF THE EQUIPMENT INCLUDED IN THE BYPASS PUMPING PLAN. THE BYPASS PUMPING PLAN SHALL OUTLINE ALL PROVISIONS AND PRECAUTIONS TO BE TAKEN BY THE CONTRACTOR REGARDING HANDLING OF EXISTING WASTEWATER FLOWS. THIS BYPASS PUMPING PLAN MUST BE SPECIFIC AND COMPLETE, INCLUDING SUCH ITEMS AS SCHEDULES, LOCATIONS, ELEVATIONS, CAPACITIES OF EQUIPMENT, MATERIALS, AND ALL OTHER INCIDENTAL ITEMS NECESSARY AND/OR REQUIRED TO ENSURE PROPER PROTECTION OF THE FACILITIES, INCLUDING PROTECTION OF THE ACCESS AND BYPASS PUMPING LOCATIONS FOR DAMAGE DUE TO THE DISCHARGE FLOWS, AND COMPLIANCE WITH THE REQUIREMENTS AND PERMIT CONDITIONS SPECIFIED HEREIN. NO CONSTRUCTION SHALL BEGIN UNTIL ALL PROVISIONS AND REQUIREMENTS HAVE BEEN REVIEWED AND ACCEPTED BY THE ENGINEER AND ORC. THE PLAN SHALL INCLUDE BUT NOT LIMITED TO THE FOLLOWING

A) STAGING AREAS FOR PUMPS.

B) SEWER PLUGGING METHOD AND TYPES OF PLUGS.

C) SIZE AND LOCATION OF MANHOLES OR ACCESS POINTS FOR SUCTION AND DISCHARGE HOSE OR PIPING.

D) SIZE OF PIPELINE OR CONVEYANCE SYSTEM TO BE BYPASSED.E) NUMBER, SIZE, MATERIAL, LOCATION AND METHOD OF INSTALLATION OF SUCTION PIPING.

F) NUMBER, SIZE, MATERIAL, LOCATION AND METHOD OF INSTALLATION OF DISCHARGE PIPING.

G) BYPASS PUMP SIZES, CAPACITIES, AND NUMBER OF EACH SIZE TO BE PROVIDED ONSITE INCLUDING ALL PRIMARY, SECONDARY, AND SPARE PUMPING UNITS.

H) CALCULATIONS OF STATIC LIFT, FRICTION LOSSES, AND FLOW VELOCITY (PUMP CURVES SHOWING PUMP,

OPERATING RANGE SHALL BE SUBMITTED).

I) DOWNSTREAM DISCHARGE PLAN.

J) METHOD OF PROTECTING DISCHARGE MANHOLES OR STRUCTURES FROM EROSION AND DAMAGE.

K) THRUST AND RESTRAINT BLOCK SIZES AND LOCATIONS. PROVIDE THE DETAILS NECESSARY TO DEMONSTRATE THE INTEGRITY OF ALL SUCTION AND DISCHARGE PIPING INCLUDING PIPING AND FITTINGS ASSOCIATED WITH ALL PRIMARY AND SECONDARY PUMPING UNITS.

L) SECTIONS SHOWING SUCTION AND DISCHARGE PIPE DEPTH, EMBEDMENT, SELECT FILL AND SPECIAL BACKFILL.

M) METHOD OF NOISE CONTROL FOR EACH PUMP AND ANY ADDITIONAL EQUIPMENT THAT IS INCLUDED IN THE BYPASS PUMPING PLAN.

N) ANY TEMPORARY PIPE SUPPORTS AND ANCHORING REQUIREMENTS.

O) ACCESS PLANS TO ALL BYPASS PUMPING LOCATIONS INDICATED ON THE DRAWINGS.

P) CALCULATIONS FOR SELECTION OF BYPASS PUMPING PIPE SIZE.Q) SCHEDULE FOR INSTALLATION OF AND MAINTENANCE OF BYPASS PUMPING LINES.

R) PLAN INDICATING LOCATION OF BYPASS PUMPING PIPE LOCATIONS.S) EMERGENCY PLAN FOR ADVERSE WEATHER AND FLOODING FOR VARIOUS PHASES OF THE WORK.

T) CONTRACTORS PLAN FOR PROVIDING CONTINUOUS MONITORING OF THE BYPASS PUMPING OPERATION AS

WELL AS THE MONITORING PERSONS' QUALIFICATIONS.

8) FOLIPMENT

THE CONTRACTOR SHALL SUPPLY PUMPS, CONDUITS, POWER, AND OTHER EQUIPMENT TO DIVERT THE FLOW OF SEWAGE AROUND THE SECTION IN WHICH WORK IS TO BE PERFORMED. THE BYPASS SYSTEM SHALL BE OF SUFFICIENT CAPACITY TO HANDLE THE WASTEWATER FLOWS IN THE TABLE LOCATED AT THE END OF THIS SECTION. IT IS THE INTENT OF THESE SPECIFICATIONS TO REQUIRE THE CONTRACTOR TO ESTABLISH ADEQUATE BYPASS PUMPING AS REQUIRED REGARDLESS OF THE FLOW CONDITION.

9) MATERIALS

ALL BYPASS PUMPING PIPING SHALL CONFORM TO DWM STANDARDS FOR SEWER MAIN MATERIALS, OR SHALL BE HDPE AND CONFORM TO THE FOLLOWING REQUIREMENTS:

A) ALL POLYETHYLENE (HDPE) PIPES SHALL MEET THE REQUIREMENTS OF ASTM F714. DR RATING OF THE PIPE SHALL BE SUFFICIENT TO WITHSTAND THE PRESSURE AND LEAKAGE TEST OUTLINED BELOW.

B) HDPE PIPE SHALL BE FURNISHED IN STANDARD LAYING LENGTHS NOT EXCEEDING 50 FEET

C) JOINING SYSTEM: THE HDPE PIPE SHALL BE JOINED WITH BUTT, HEAT FUSION JOINTS. ALL JOINTS SHALL BE MADE IN STRICT COMPLIANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND ASTM 2657. WHERE REQUIRED, FLANGE CONNECTIONS, MECHANICAL JOINT CONNECTIONS AND BUTT CONNECTIONS USING BOLTED MECHANICAL COUPLERS SHALL BE PROVIDED FROM A PIPE STUB WITH A POLYETHYLENE AND STEEL STIFFENER. FLANGED CONNECTIONS SHALL BE PROVIDED FROM A PIPE STUB AND A STEEL BACK-UP FLANGE. BACK FLANGES SHALL BE PRIMED AND PAINTED IN CORROSION PROTECTED PAINT. QUICK CONNECT COUPLINGS WILL NOT BE PERMITTED ON HDPE BYPASS PIPING.

D) HDPE FITTINGS SHALL BE FULLY PRESSURE RATED TO MATCH THE PIPE DR PRESSURE RATING. ALL FITTINGS SHALL BE MOLDED OR FABRICATED BY THE SAME MANUFACTURER AS THE PIPE. HDPE FITTINGS SHALL BE JOINED USING BUTT, HEAT FUSION, AND/OR ELECTROFUSION. ADHESIVES AND SOLVENT CEMENTS SHALL NOT BE PERMITTED.

10) TESTING

THE CONTRACTOR SHALL PERFORM LEAKAGE AND PRESSURE TESTS OF THE BYPASS PUMPING DISCHARGE PIPING USING CLEAN WATER PRIOR TO THE ACTUAL OPERATION. THE PRESSURE AND LEAKAGE TEST SHALL BE CONDUCTED AT ONE-AND-A-HALF TIMES THE MAXIMUM PRESSURE THE SYSTEM WILL EXPERIENCE BASED ON THE APPROVED BYPASS PUMPING PLAN FOR A PERIOD OF TWO HOURS. NO LEAKAGE IS PERMITTED DURING THIS TEST. THE ENGINEER WILL BE GIVEN 24 HOURS NOTICE PRIOR TO TESTING. IN ADDITION, THE CONTRACTOR SHALL DEMONSTRATE THAT THE PUMPING SYSTEM IS IN GOOD WORKING ORDER AND IS SUFFICIENTLY SIZED TO SUCCESSFULLY HANDLE FLOWS BY PERFORMING A TEST RUN FOR A PERIOD OF 24 HOURS PRIOR TO BEGINNING

THE CONTRACTOR SHALL PROVIDE ON-SITE MANUAL OVERSIGHT OF ALL BYPASS PUMPING OPERATIONS 24 HOURS PER DAY, 7 DAYS PER WEEK WHEN THE BYPASS PUMPING SYSTEM IS IN OPERATION.

40) FLOWS

FLOWS FROM PRIVATE, COMMERCIAL, AND INDUSTRIAL USERS SHALL BE HANDLED BY THE CONTRACTOR DURING THE WORK WITHOUT INTERRUPTION.

13) REPAIRS

THE CONTRACTOR SHALL BE REQUIRED TO REPAIR, AT HIS OWN EXPENSE, ANY DAMAGE TO PUBLIC OR PRIVATE PROPERTY CAUSED BY HIS OPERATIONS. SHOULD DAMAGE OF ANY KIND OCCUR TO THE EXISTING SEWERS, THE CONTRACTOR SHALL, AT HIS OWN EXPENSE MAKE REPAIRS TO THE SATISFACTION OF THE ENGINEER AND THE ORC.

14) OVERFLOWS

THE CONTRACTOR SHALL NOT BE PERMITTED TO OVERFLOW, BYPASS, PUMP OR BY ANY OTHER MEANS CONVEY DRAINAGE TO ANY LAND, STREET, STORM DRAIN OR WATER COURSE. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE AUTHORITY SHOULD A SANITARY SEWER OVERFLOW (SSO) OCCUR AND TAKE THE NECESSARY ACTION TO CLEAN UP AND DISINFECT THE SPILLAGE TO THE SATISFACTION OF THE AUTHORITY AND/OR OTHER GOVERNMENTAL AGENCY. IF SEWAGE IS SPILLED ONTO PUBLIC OR PRIVATE PROPERTY, THE CONTRACTOR SHALL WASH DOWN, CLEAN UP, AND DISINFECT THE SPILLAGE TO THE SATISFACTION OF THE PROPERTY OWNER, DEKALB COUNTY, AND/OR ALL OTHER AHJS, AND SHALL MEET ALL MINIMUM STATE AND FEDERAL AGENCY

15) CEASE OF OPERATIONS

OPERATIONS ARE COMPLETE, ALL BYPASS PIPING SHALL BE FLUSHED WITH FRESH WATER AND DRAINED INTO THE WASTEWATER SYSTEM PRIOR TO DISASSEMBLY.

16) DAMAGE PREVENTION

CONTRACTOR MUST TAKE CARE TO PREVENT DAMAGE TO EXISTING STRUCTURES. DISCHARGE PIPING TO GRAVITY SEWER SYSTEMS SHALL BE DESIGNED IN SUCH A MANNER AS TO PREVENT DISCHARGE FROM

THE CONTRACTOR SHALL CEASE BYPASS PUMPING OPERATIONS AND RETURN FLOWS TO THE NEW AND/OR

DUMPED, OR SPILLED IN OR ONTO ANY AREA OUTSIDE THE EXISTING WASTEWATER SYSTEM, WHEN BYPASS

EXISTING SEWER WHEN DIRECTED BY THE OWNER. DURING BYPASSING, NO WASTEWATER SHALL BE LEAKED,

NECESSARY TO REMOVE THE MANHOLE CONE TO PROVIDE SUFFICIENT SPACE FOR THE BYPASS PIPING. IF THIS IS REQUIRED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING MANHOLE

17) WET WEATHER EVENTS

THE CONTRACTOR SHALL ESTABLISH ADEQUATE BYPASS PUMPING ADHERENT TO THE CONDITIONS ABOVE AND

CONTACTING MANHOLE WALLS OR BENCHING AND FULL DISCHARGE SHALL GO INTO DOWNSTREAM PIPE WITH AS

MINIMAL TURBULENCE AS POSSIBLE. CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO MANHOLES. IT MAY BE

ANTICIPATE SEVERE WEATHER CONDITIONS AND INCREASES IN PEAK FLOWS DURING RAIN EVENTS.

18) 24 HOUR MONITOR

THE 24-HOUR MONITORING PERSON SHALL BE PROPERLY TRAINED, EXPERIENCED, AND MECHANICALLY QUALIFIED SUCH THAT THEY CAN QUICKLY AND EFFECTIVELY ADDRESS ANY POTENTIAL EMERGENCY AND NON-EMERGENCY SITUATIONS ASSOCIATED WITH THE PUMPS AND BYPASS PUMPING SYSTEM THAT MUST REMAIN IN OPERATION FOR AN EXTENDED PERIOD.

POLYETHYLENE PROTECTIVE WRAPPING

THE CONTRACTOR SHALL USE POLYETHYLENE ENCASEMENT IN ALL AREAS WHERE THE WATER MAIN IS IN CORROSIVE SOILS, IN SOILS WITH ELECTRICAL CURRENT, OR IN SOILS WITHIN TEN (10) FEET OF AN EXISTING GAS

POLYETHYLENE PROTECTIVE WRAPPING ("POLYWRAP") SHALL CONFORM TO THE REQUIREMENTS OF ANSI/AWWA C105/A21.5 ENCASEMENT SHALL BE EITHER EIGHT (8) MIL THICK TUBING OF LINEAR LOW-DENSITY POLYETHYLENE, OR FOUR (4) MIL THICK HIGH-DENSITY, CROSS-LAMINATED (HDCL) POLYETHYLENE.

TUBING SHALL BE TAPED AND SECURED WITH GENERAL PURPOSE POLYETHYLENE TAPE. POLYWRAP SHALL BE TAPED TO PROVIDE A SNUG FIT ALONG THE PIPE.

POLYETHYLENE PROTECTIVE WRAPPING (POLYWRAP) FOR DUCTILE IRON PIPE SHALL BE FURNISHED AND INSTALLED ON WATER LINES AS INDICATED ON THE PLANS AS NOTED BELOW. POLYWRAP SHALL BE INSTALLED SO AS PREVENT ANY SECTION OF THE PIPE, FITTINGS, VALVES, SERVICES, OR APPURTENANCES FORM CONTACTING THE SOIL.

AN ADDITIONAL THREE (3) LAYERS WRAP OF POLYETHYLENE SHALL BE MADE AT ALL TAPPING LOCATIONS A MINIMUM OF TWELVE (12) INCHES IN WIDTH OPENINGS FOR SERVICE TAPS, BLOW-OFFS, OR SIMILAR APPURTENANCES SHALL BE CUT IN 'POLYWRAP' DURING BACKFILLING OF TRENCH. CORPORATION STOPS AND COPPER SERVICE LINES SHALL BE WRAPPED WITH POLYETHYLENE PROTECTIVE WRAPPING FOR A MINIMUM CLEAR DISTANCE OF THREE (3) FEET FROM THE WATER MAIN.

ANY PUNCTURES, TEARS OR OTHER DAMAGE SHALL BE PATCHED WITH POLYETHYLENE WRAP AND TAPE IN ACCORDANCE WITH THE REQUIREMENTS OR ANSI/AWWA C105/A21.5 AND MANUFACTURER'S INSTRUCTIONS. ROCKS OR OTHER MATERIAL THAT COULD DAMAGE THE WRAPPING SHALL NOT BE INCLUDED IN THE BACKFILL.

FINAL APPROVAL

1) GENERAL

THE FINAL PLAT WILL BE SIGNED BY DCDWM AFTER THE FOLLOWING ITEMS HAVE BEEN SUBMITTED AND ACCEPTED BY THE DEPARTMENT:

APPROVAL BY DCDWM OF INSTALLATION, INSPECTION(S) AND TESTING(S).

SUBMISSION OF SIGNED RECORD DRAWINGS.
 SUBMITTAL OF CONSTRUCTION COMPLETION FORM

SUBMITTAL OF ONE (1) ELECTRONIC COPY OF THE DRAWINGS ON COMPACT DISC (CD), IN MICROSTATION V8
AND PDF FORMAT. DRAWINGS SHALL CONTAIN ELEVATIONS; WHERE ZERO (0) FOOT REPRESENTS THE ELEVATION
AT SEA LEVEL. RELATIVE DEPTH/DISTANCE ALONE SHALL NOT BE ACCEPTED. SPECIFICALLY AND NOT LIMITED TO,
MANHOLE RIM/INVERT ELEVATIONS, MANHOLE COORDINATES, SERVICE LINE CLEANOUT COORDINATES, AND
STUB LENGTHS AND LOCATIONS USING THE COUNTY'S APPROVED COORDINATE PLANE SHALL BE PROVIDED IN
THE DRAWINGS.

2) CONSTRUCTION COMPLETION FORM

CONTRACTOR/DEVELOPER IS TO SEND INSPECTOR ACCEPTANCE REPORTS TO DCDWM, 1580 ROADHAVEN DRIVE, STONE MOUNTAIN, GEORGIA 30083. DCDWM SHALL SEND THE "CONSTRUCTION COMPLETION FORM" ONCE THE AS-BUILT DRAWINGS ARE APPROVED.

CONTRACTOR/DEVELOPER MUST SUBMIT A COMPLETED "CONSTRUCTION COMPLETION FORM" TO DCDWM PRIOR TO FINAL PLAT APPROVAL. A COPY OF THE FORM IS PROVIDED IN APPENDIX G.

3) RECORD DRAWINGS

RECORD DRAWINGS (AS-BUILTS) MUST BE SUBMITTED TO DCDWM BEFORE A PROJECT CAN RECEIVE FINAL APPROVAL, AND/OR CERTIFICATES OF OCCUPANCY. (NOTE: IN ORDER TO AVOID DELAYS IN THE "APPROVAL PROCESS" OF DEVELOPMENTS/SUBDIVISIONS, AS-BUILT DRAWINGS SHOULD BE SUBMITTED AS SOON AS THE SANITARY SEWER INSTALLATION IS COMPLETE TO ALLOW SUFFICIENT TIME FOR REVIEW).

4) GUARANTEE OF WORK

THE CONTRACTOR (AND DEVELOPER IN PRIVATE DEVELOPMENTS) SHALL GUARANTEE FOR A PERIOD OF TWELVE (12) MONTHS FROM THE DATE OF FINAL ACCEPTANCE (FROM DATE OF FINAL PLAT APPROVAL OR CERTIFICATE OF OCCUPANCY IN PRIVATE DEVELOPMENTS), ALL SANITARY SEWER LINES AND MANHOLES, APPURTENANCES, TRENCHES, ROADWAY AND SURFACE RESTORATIONS, LANDSCAPING, AND ANY OTHER AREAS DISTURBED BY THE CONSTRUCTION OF THE PROJECT, TO BE FREE FROM DEFECTS, AND TO BE INSTALLED IN COMPLIANCE WITH ALL REGULATIONS, SPECIFICATIONS, PLANS, DIRECTIONS, AND CONSTRUCTION PRACTICES WHICH GOVERN SAID INSTALL ATIONS

THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRS TO ANY LEAKING PIPE, FITTINGS, ETC.

SHOULD TRENCHES SETTLE DURING THE WARRANTY PERIOD, CONTRACTOR SHALL PROMPTLY FURNISH AND PLACE TILL TO THE ORIGINAL GRADE AND RESTORE ANY DAMAGED LANDSCAPING. SHOULD ANY LEAKS OR TRENCH SETTLEMENT OCCUR UNDER NEW PAVEMENT, THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR THE

THE DETERMINATION OF THE REQUIREMENT FOR THE CONTRACTOR TO PERFORM WORK UNDER THIS GUARANTEE SHALL BE AT THE SOLE DISCRETION OF DCDWM.

COST OF ALL REPAIRS, INCLUDING PAVEMENT REPLACEMENT.

MAINTENANCE OF TRAFFIC

THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL ROAD OPENING PERMITS FROM THE DEKALB COUNTY DEPARTMENT OF PUBLIC WORKS TRANSPORTATION DIVISION AT (770) 492-5222, INCLUDING PROVIDING ANY

WHEN A SANITARY SEWER LINE IS TO BE INSTALLED WITHIN THE TRAVEL WAY OF A DEKALB COUNTY, LOCAL MUNICIPALITY, OR GDOT CONTROLLED ROAD, A TRAFFIC CONTROL PLAN (TCP) WILL BE REQUIRED. THE TCP, WITH THE CONSTRUCTION PLANS, SHALL BE SUBMITTED TO THE REVIEWING AGENCY FOR REVIEW AND APPROVAL. THE FOLLOWING ROADWAY FEATURES SHALL BE SHOWN ON THE TCP:

PAVEMENT WIDTH
PAVEMENT TYPE
SPEED LIMIT
TRAFFIC LANE DESIGNATION
PAVEMENT MARKINGS
TRAFFIC SIGNS/SIGNALS
SIDESTREETS/INTERSECTION LOCATION

A TCP SHALL INCLUDE THE FOLLOWING:

WORK HOUR RESTRICTIONS

LANE CLOSURE RESTRICTIONS

CONSTRUCTION SEQUENCE/PHASING

WORK ZONE DESIGNATION

SIGN PLACEMENT

TAPER LENGTH

TRAFFIC MOVEMENT DESIGNATION

DRUM/CONE/BARRICADE/BARRIER PLACEMENT

FLAGGING REQUIREMENT/LOCATION

UNIFORMED POLICE OFFICER REQUIREMENT/LOCATION

THE FOLLOWING AGENCY SHALL BE CONTACTED WHEN PREPARING A TCP:

DEKALB COUNTY DEPARTMENT OF PUBLIC WORKS TRANSPORTATION DIVISION (770) 492-5222

THE FOLLOWING PUBLICATIONS GOVERN THE DESIGN AND INSTALLATION OF TCP'S AND DEVICES:

MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (LATEST EDITION)
GDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES (LATEST EDITION)
GDOT ROADWAY DESIGN MANUAL (LATEST EDITION)

RULES AND REGULATIONS OF THE AUTHORITIES, INCLUDING THE USE OF STANDARD SIGNS.

AS THE PERMIT IS PROVIDED AND PROMINENTLY DISPLAYED ON-SITE.

ALL HIGHWAY UTILITIES AND TRAFFIC CONTROLS ARE TO BE MAINTAINED AND WORK SHALL CONFORM TO THE

DCDWM SHALL OBTAIN ALL ROAD OPENING PERMITS REQUIRED BY THE GDOT. THE CONTRACTOR IS NOT

PERMITTED TO MAKE ANY TYPE CUTS ON ROADWAYS REQUIRING A PERMIT FROM THE GDOT UNTIL SUCH TIME

WORK WITHIN GDOT RIGHT-OF-WAY

ALL ROADWAY RESTORATION SHALL BE DONE IN ACCORDANCE WITH THE LAWFUL REQUIREMENTS OF THE AUTHORITIES WITHIN WHOSE JURISDICTION SUCH PAVEMENT IS LOCATED. ALL HIGHWAY UTILITIES AND TRAFFIC CONTROLS ARE TO BE MAINTAINED, AND WORK SHALL CONFORM TO THE RULES AND REGULATIONS OF THE AUTHORITIES, INCLUDING THE USE OF STANDARD SIGNS. THE CONTRACTOR SHALL FURNISH ALL SUCH BONDS OR CHECKS WHICH MAY BE REQUIRED BY THE HIGHWAY AUTHORITIES TO ENSURE PROPER RESTORATION OF PAVED AREAS

R2I

VER TO TAP

1841 PEELER RD. UNIT C ATLANTA, GA 30338 PHONE: (678) 336-5732 WWW.R2TINC.COM

KALB COUNTY PARTMENT OF VATERSHED

DEKALB CC DEPARTME WATERSI

REV DATE DESCRIPTION

0 5/27/16 INITIAL ISSUE

1 12/9/16 REVIEW COMMENTS

No. 26889
PROFESSIONAL
5/27/16
ENGINEER

CEORGE

TECHNICAL SPECIFICATIONS

HEET TITLE: 4 of 65

ISSUED: 5.27.16

PROJECT NO.

SCALE: NONE

CHKD BY: A.R.

DESIGNED BY: J.J.

RAWN BY: J.J.

ITEM NO.	ITEM	UNIT	QTY.
004-0022	COORDINATE SITE RESTORATION	LS	\$100,000
163-0001	EROSION CONTROL PER SEWER MAIN DRAWINGS	LS	1
207-0203	FOUNDATION BACKFILL MATERIAL, TYPE II	CY	4500
207-0203	IMPERFECT TRENCH BACKFILL MATERIAL, TYPE III	CY	500
	<u> </u>	TN	
402-3130	RECYCLED ASPHALTIC CONCRETE, 12.5MM SUPERPAVE, GP 2		2
432-0208	MILL ASPH CONC PVMT, 2" DEPTH	SY	80
441-0104	CONCRETE SIDEWALK, 4"	SY	10
444-1000	SAWED JOINTS IN EXIST PAVEMENTS, PCC	LF	200
500-3101	CLASS A CONCRETE	CY	340
610-0100	REMOVED BARBED WIRE FENCE	LF	72
610-0200	REMOVE CHAINLINK FENCE	LF	211
610-0300	REMOVE WOOD FENCE	LF	94
610-0400	REMOVE FENCE MOW STRIP	LF	116
610-1055	REMOVE GUARDRAIL	LF	120
610-1075	REMOVE GUARDRAIL ANCHORAGE	EA	12
610-1700	REMOVE SANITARY SEWER PIPE	LF	7541
610-6625	REMOVE SANITARY SEWER MANHOLE	EA	26
610-9100	REMOVE BRICK PIPE SUPPORT	EA	4
611-4890	RESET FENCE	LF	378
611-5300	RESET GUARDRAIL	EA	120
611-5320	RESET GUARDRAIL ANCHORAGE	LF	12
615-1000	JACK AND BORE PIPE	LF	1134
643-8210	HORSE RATED FENCE	LF	650
643-8220	HORSE RATED GATE	EA	3
660-0808	SANITARY SEWER PIPE, 8" DUCTILE IRON	LF	20
660-0824	SANITARY SEWER PIPE, 24" DUCTILE IRON	LF	1411
660-0830	SANITARY SEWER PIPE, 30" DUCTILE IRON	LF	5681
660-1150	CUT & PLUG EXISTING SEWER MAIN	EA	8
660-3275	ABANDON MANHOLE	EA	9
668-3300	SANITARY SEWER MANHOLE, TYPE 1, RESIN CONCRETE	EA	38
668-9000	MANHOLE VENT	EA	7
670-9290	STEEL CASING, 42"	LF	1134
	CSX TRAFFIC CONTROL	DAYS	15
	BURIED UTILITY MARKER	EA	2

1	SUMMARY OF QUANTITIES	
– /		



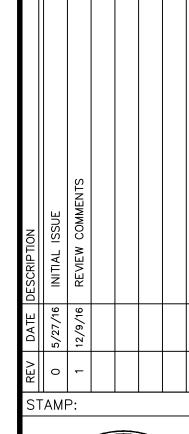
- 1. ALL SAW CUTTING, PRESSURE TESTING, AND ALL MISCELLANEOUS CONCRETE QUANTITIES (THRUST BLOCKS, CONCRETE CAPS) ARE INCLUDED IN THE SEWER MAIN INSTALLATION PRICE.
- 2. CONTRACTOR SHALL PROVIDE ALL ITEMS REQUIRED FOR THE COMPLETE INSTALLATION OF THE PROPOSED PIPELINE, WHETHER OR NOT SUCH ITEMS ARE SHOWN OR CALLED OUT ON THE PLANS. THE CONTRACTOR SHALL NOT RECEIVE ANY ADDITIONAL PAYMENT OR TIME EXTENSION FOR ITEMS NOT BEING SHOWN IN PLANS OR FOR FIELD ADJUSTMENTS MADE DUE TO ACTUAL SUBSURFACE CONDITIONS AND UTILITY LOCATION.

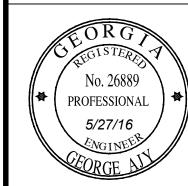


1841 PEELER RD. UNIT C ATLANTA, GA 30338 PHONE: (678) 336-5732 WWW.R2TINC.COM

DEKALB COUNTY
DEPARTMENT OF
WATERSHED
MANAGEMENT

SOUTH FORK
PEACHTREE CREEK
SANITARY SEWER





SHEET TITLE: 5 of 65

SUMMARY OF QUANTITIES

ISSUED: 5.27.16

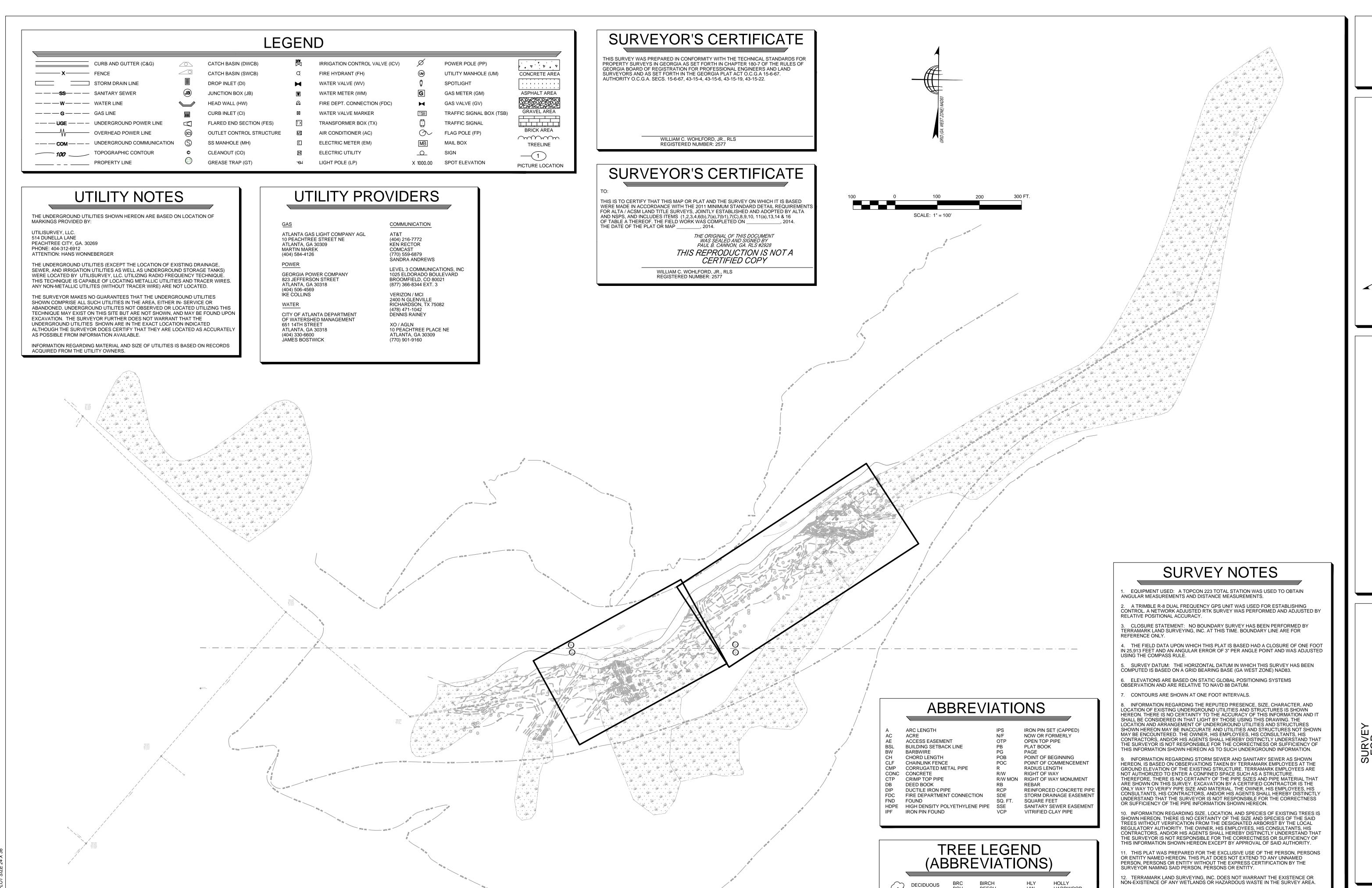
PROJECT NO.

SCALE: NONE

CHKD BY: A.R.

DESIGNED BY: J.J.

DRAWN BY: J.J.



CHTREE CREEK REPLACEMENTS

LOCATED IN F 63 & 100, 18TH LB COUNTY, GE

SHEET NO.

DRAWING# TM 24 X 36

HARDWOOD

MAGNOLIA

POPLAR

SYCAMORE

ORNAMENTAL

MAPLE

OAK

13. PROPERTY IS SUBJECT TO RIGHTS OF UPPER AND LOWER RIPARIAN OWNERS IN AND TO THE WATER OF CREEKS AND BRANCHES CROSSING OR ADJOINING SUBJECT

14. THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT, WHICH

PROPERTY AND THE NATURAL FLOW THEREOF, FREE FROM DIMINUTION OR

COULD REVEAL ENCUMBRANCES NOT SHOWN ON THIS SURVEY.

BEECH

CHERRY

FUR

GINKO

GINKO GUM HIC

CYPRESS

HICKORY

SWEET GUM

CRAPE MYRTLE MAG

MAP

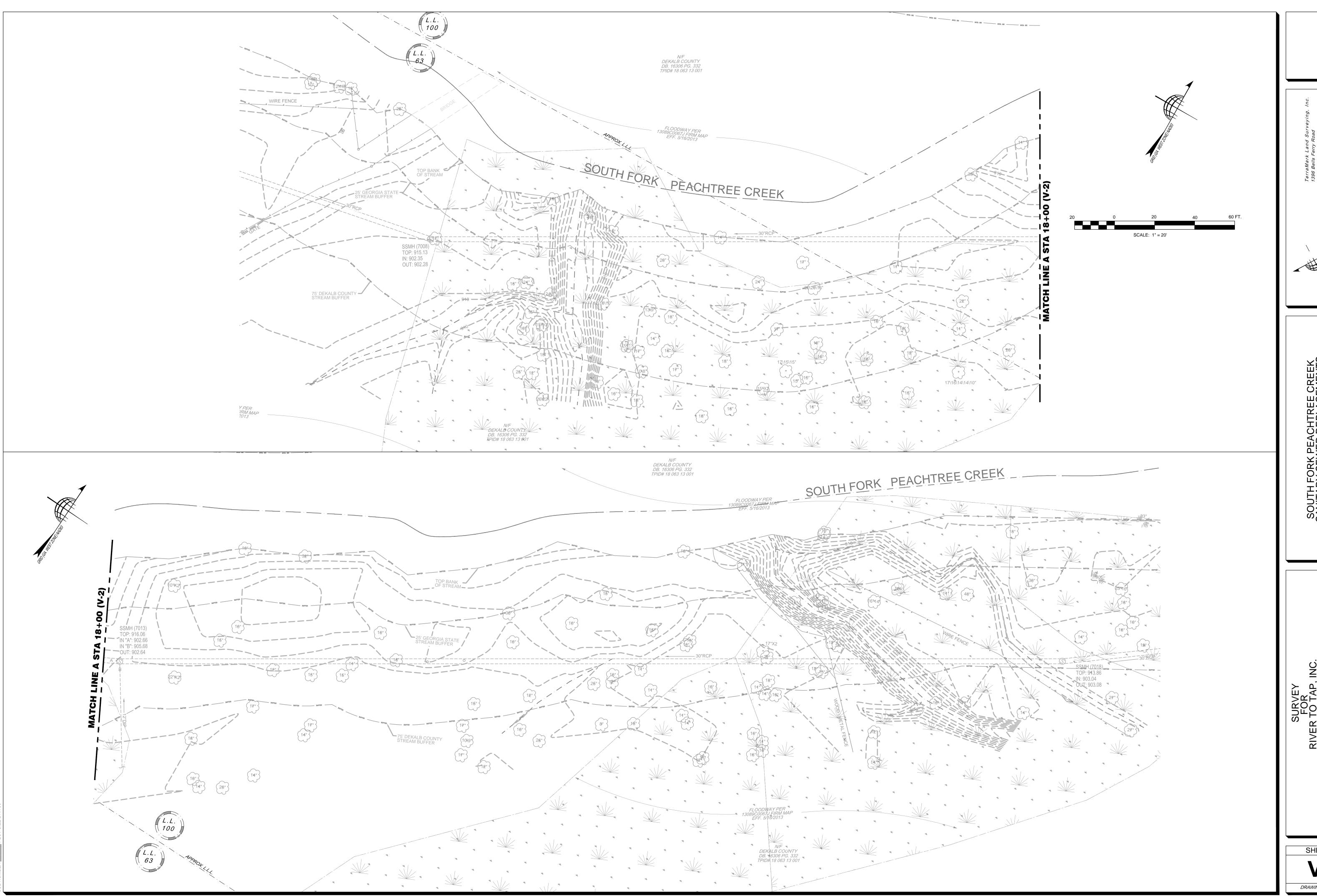
OAK

ORN PEAR POP SYC

(TREE)

CONIFER

(TREE)



TerraMark Lan.
1396 Bells Ferry
Marietta, Georgii
Phone No. (770) 42

Www.TerraMark.C

SOUTH FORK PEACHTREE CREEK SANITARY SEWER REPLACEMENTS SITE 1

RIVER TO TAP, INC.

LOCATED IN

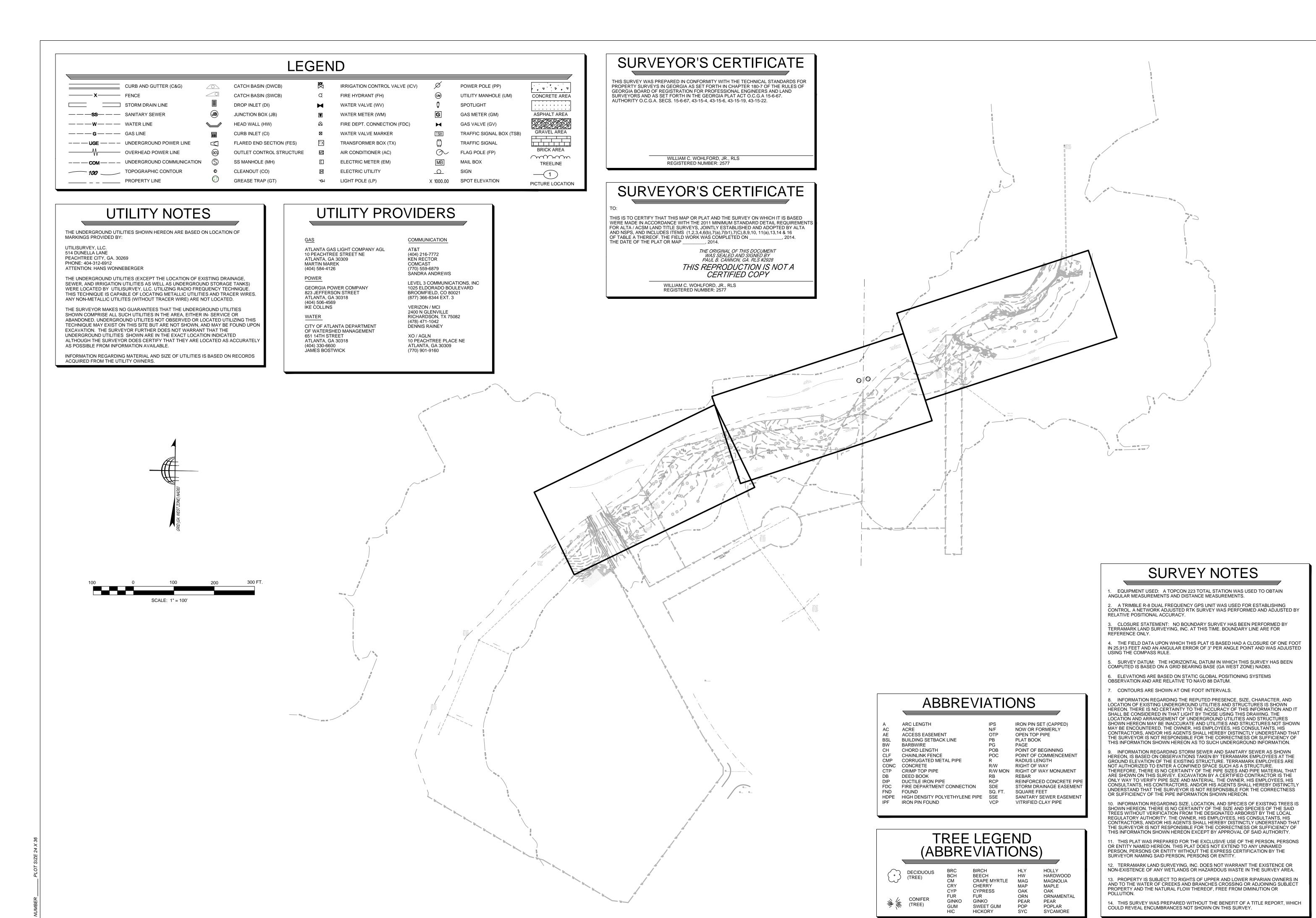
LOT 63 & 100, 18TH DISTRICT

RIVER TO LOCA LAND LOT 63 & 1 DEKALB COU

SHEET NO.

7 of

DRAWING# TM 24 X 36



TerraMark Land Surveyii 1396 Bells Ferry Road Marietta, Georgia 30066 Phone No. (770) 421-1927 Fax. No. (770) 421-0552 www.TerraMark.com Land Surveyi@ @.A.#LSF000810

ORK PEACHTREE CREEK
7 SEWER REPLACEMENTS
SITE 2 KEY

LOCATED IN LOCATED IN LOT 118 & 119, 18TH DISTRICT EKALB COUNTY, GEORGIA

SHEET NO.

8 of 69

DRAWING# TM 24 X 36

TerraMark Land Surveying 1396 Bells Ferry Road Marietta, Georgia 30066 Phone No. (770) 421-1927 Fax. No. (770) 421-0552 www.TerraMark.com Professional Land Surveying 9. 4.# LSF000810

SOUTH FORK PEACHTREE CREEK SANITARY SEWER REPLACEMENTS SITE 2

FOR FOR LOCATED INC.

LOCATED IN LAND LOT 118 & 119, 18TH DISTRICT DEKALB COUNTY, GEORGIA

SHEET NO.

9 of 6

DRAWING# TM 24 X 36



SOUTH FORK PEACHTREE CREEK SANITARY SEWER REPLACEMENTS SITE 2

SURVEY FOR RIVER TO TAP, INC. LOCATED IN LAND LOT 118 & 119, 18TH DISTRICT DEKALB COUNTY, GEORGIA



UTILITY NOTES

THE UNDERGROUND UTILITIES SHOWN HEREON ARE BASED ON LOCATION OF MARKINGS PROVIDED BY:

CURB AND GUTTER (C&G)

STORM DRAIN LINE

— SANITARY SEWER

---- UGE --- UNDERGROUND POWER LINE

OVERHEAD POWER LINE

TOPOGRAPHIC CONTOUR

———W——— WATER LINE

_____ PROPERTY LINE

———**G**——— GAS LINE

UTILISURVEY, LLC. 514 DUNELLA LANE PEACHTREE CITY, GA. 30269 PHONE: 404-312-6912 ATTENTION: HANS WONNEBERGER

THE UNDERGROUND UTILITIES (EXCEPT THE LOCATION OF EXISTING DRAINAGE, SEWER, AND IRRIGATION UTILITIES AS WELL AS UNDERGROUND STORAGE TANKS) WERE LOCATED BY UTILISURVEY, LLC. UTILIZING RADIO FREQUENCY TECHNIQUE. THIS TECHNIQUE IS CAPABLE OF LOCATING METALLIC UTILITIES AND TRACER WIRES. ANY NON-METALLIC UTILITES (WITHOUT TRACER WIRE) ARE NOT LOCATED.

THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN- SERVICE OR ABANDONED. UNDERGROUND UTILITES NOT OBSERVED OR LOCATED UTILIZING THIS TECHNIQUE MAY EXIST ON THIS SITE BUT ARE NOT SHOWN, AND MAY BE FOUND UPON EXCAVATION. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH THE SURVEYOR DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATEL' AS POSSIBLE FROM INFORMATION AVAILABLE.

INFORMATION REGARDING MATERIAL AND SIZE OF UTILITIES IS BASED ON RECORDS ACQUIRED FROM THE UTILITY OWNERS.

UTILITY PROVIDERS

GREASE TRAP (GT)

ATLANTA GAS LIGHT COMPANY AGL 10 PEACHTREE STREET NE ATLANTA, GA 30309 MARTIN MAREK (404) 584-4126

LIGHT POLE (LP)

GEORGIA POWER COMPANY 823 JEFFERSON STREET ATLANTA, GA 30318 (404) 506-4569 IKE ĆOLLINS WATER

CITY OF ATLANTA DEPARTMENT OF WATERSHED MANAGEMENT ATLANTA, GA 30318 (404) 330-6600 JAMÉS BOSTWICK

COMMUNICATION

AT&T

(404) 216-7772 KEN RECTOR COMCAST (770) 559-6879 SANDRA ANDREWS LEVEL 3 COMMUNICATIONS, INC 1025 ELDORADO BOULEVARD BROOMFIELD, CO 80021 (877) 366-8344 EXT. 3

X 1000.00 SPOT ELEVATION

PICTURE LOCATION

VERIZON / MCI 2400 N GLENVILLE RICHARDSON, TX 75082 (478) 471-1042 DENNIS RAINEY

XO / AGLN 10 PEACHTREE PLACE NE ATLANTA, GA 30309 (770) 901-9160

SURVEYOR'S CERTIFICATE

THIS SURVEY WAS PREPARED IN CONFORMITY WITH THE TECHNICAL STANDARDS FOR PROPERTY SURVEYS IN GEORGIA AS SET FORTH IN CHAPTER 180-7 OF THE RULES OF GEORGIA BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS AND AS SET FORTH IN THE GEORGIA PLAT ACT O.C.G.A 15-6-67. AUTHORITY O.C.G.A. SECS. 15-6-67, 43-15-4, 43-15-6, 43-15-19, 43-15-22.

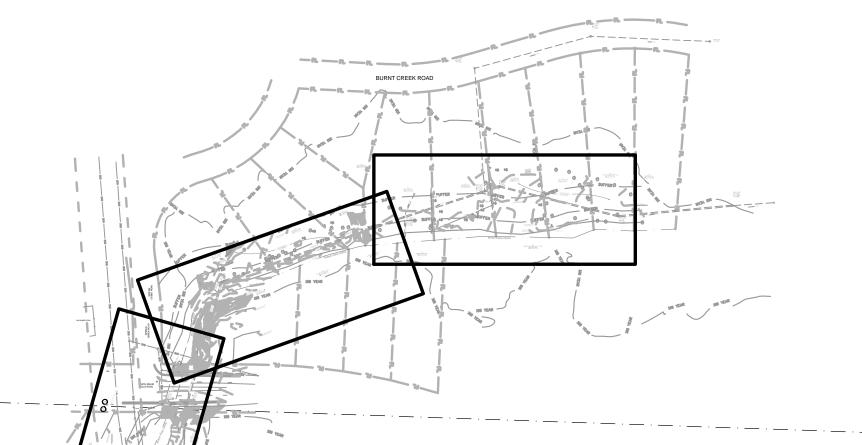
> WILLIAM C. WOHLFORD, JR., RLS **REGISTERED NUMBER: 2577**

SURVEYOR'S CERTIFICATE

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2011 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA / ACSM LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS. AND INCLUDES ITEMS (1,2,3,4,6(b),7(a),7(b1),7(C),8,9,10, 11(a),13,14 & 16 OF TABLE A THEREOF. THE FIELD WORK WAS COMPLETED ON ___ THE DATE OF THE PLAT OR MAP _

> THE ORIGINAL OF THIS DOCUMENT WAS SEALED AND SIGNED BY PAUL B. CANNON, GA. RLS #2928 THIS REPRODUCTION IS NOT A CERTIFIED COPY

WILLIAM C. WOHLFORD, JR., RLS REGISTERED NUMBER: 2577



ABBREVIATIONS

OTP

SQ. FT.

VCP

TREE LEGEND (ABBREVIATIONS)

BEECH

CHERRY

FUR

GINKO

GINKO GUM HIC

CYPRESS

HICKORY

SWEET GUM

CRAPE MYRTLE

IRON PIN SET (CAPPED)

NOW OR FORMERLY

POINT OF BEGINNING

POINT OF COMMENCEMENT

REINFORCED CONCRETE PIPI

STORM DRAINAGE EASEMENT

SANITARY SEWER EASEMENT

HOLLY

MAPLE

POPLAR

SYCAMORE

OAK

HARDWOOD

ORNAMENTAL

MAGNOLIA

VITRIFIED CLAY PIPE

OPEN TOP PIPE

RADIUS LENGTH

RIGHT OF WAY

R/W MON RIGHT OF WAY MONUMENT

SQUARE FEET

PLAT BOOK

PAGE

REBAR

MAG

OAK

ORN PEAR POP SYC

ARC LENGTH

BARRWIRE

CONCRETE

DEED BOOK

FOUND

CRIMP TOP PIPE

ACCESS EASEMENT

CHORD LENGTH

CHAINLINK FENCE

DUCTILE IRON PIPE

IRON PIN FOUND

DECIDUOUS

(TREE)

CONIFER

(TREE)

BUILDING SETBACK LINE

CORRUGATED METAL PIPE

FIRE DEPARTMENT CONNECTION

HDPE HIGH DENSITY POLYETHYLENE PIPE SSE

ACRE

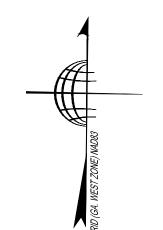
BSL BW CH CLF

CMP

CONC CTP

DB

DIP FDC FND





SURVEY NOTES

EQUIPMENT USED: A TOPCON 223 TOTAL STATION WAS USED TO OBTAIN

3. CLOSURE STATEMENT: NO BOUNDARY SURVEY HAS BEEN PERFORMED BY TERRAMARK LAND SURVEYING, INC. AT THIS TIME. BOUNDARY LINE ARE FOR REFERENCE ONLY.

4. THE FIELD DATA UPON WHICH THIS PLAT IS BASED HAD A CLOSURE OF ONE FOOT IN 25,913 FEET AND AN ANGULAR ERROR OF 3" PER ANGLE POINT AND WAS ADJUSTED USING THE COMPASS RULE.

COMPUTED IS BASED ON A GRID BEARING BASE (GA WEST ZONE) NAD83. 6. ELEVATIONS ARE BASED ON STATIC GLOBAL POSITIONING SYSTEMS

7. CONTOURS ARE SHOWN AT ONE FOOT INTERVALS.

INFORMATION REGARDING THE REPUTED PRESENCE, SIZE, CHARACTER, AND SHOWN HEREON MAY BE INACCURATE AND UTILITIES AND STRUCTURES NOT SHOWN CONTRACTORS. AND/OR HIS AGENTS SHALL HEREBY DISTINCTLY UNDERSTAND THAT

9. INFORMATION REGARDING STORM SEWER AND SANITARY SEWER AS SHOWN HEREON, IS BASED ON OBSERVATIONS TAKEN BY TERRAMARK EMPLOYEES AT THE GROUND ELEVATION OF THE EXISTING STRUCTURE. TERRAMARK EMPLOYEES ARE NOT AUTHORIZED TO ENTER A CONFINED SPACE SUCH AS A STRUCTURE. THEREFORE, THERE IS NO CERTAINTY OF THE PIPE SIZES AND PIPE MATERIAL THAT ARE SHOWN ON THIS SURVEY. EXCAVATION BY A CERTIFIED CONTRACTOR IS THE ONLY WAY TO VERIFY PIPE SIZE AND MATERIAL. THE OWNER, HIS EMPLOYEES, HIS CONSULTANTS, HIS CONTRACTORS, AND/OR HIS AGENTS SHALL HEREBY DISTINCTLY UNDERSTAND THAT THE SURVEYOR IS NOT RESPONSIBLE FOR THE CORRECTNESS

10. INFORMATION REGARDING SIZE, LOCATION, AND SPECIES OF EXISTING TREES IS SHOWN HEREON. THERE IS NO CERTAINTY OF THE SIZE AND SPECIES OF THE SAID TREES WITHOUT VERIFICATION FROM THE DESIGNATED ARBORIST BY THE LOCAL REGULATORY AUTHORITY. THE OWNER, HIS EMPLOYEES, HIS CONSULTANTS, HIS CONTRACTORS, AND/OR HIS AGENTS SHALL HEREBY DISTINCTLY UNDERSTAND THAT THE SURVEYOR IS NOT RESPONSIBLE FOR THE CORRECTNESS OR SUFFICIENCY OF

11. THIS PLAT WAS PREPARED FOR THE EXCLUSIVE USE OF THE PERSON, PERSONS OR ENTITY NAMED HEREON. THIS PLAT DOES NOT EXTEND TO ANY UNNAMED PERSON, PERSONS OR ENTITY WITHOUT THE EXPRESS CERTIFICATION BY THE

14. THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT, WHICH COULD REVEAL ENCUMBRANCES NOT SHOWN ON THIS SURVEY.

ANGULAR MEASUREMENTS AND DISTANCE MEASUREMENTS. 2. A TRIMBLE R-8 DUAL FREQUENCY GPS UNIT WAS USED FOR ESTABLISHING CONTROL. A NETWORK ADJUSTED RTK SURVEY WAS PERFORMED AND ADJUSTED BY RELATIVE POSITIONAL ACCURACY.

5. SURVEY DATUM: THE HORIZONTAL DATUM IN WHICH THIS SURVEY HAS BEEN

OBSERVATION AND ARE RELATIVE TO NAVD 88 DATUM.

LOCATION OF EXISTING UNDERGROUND UTILITIES AND STRUCTURES IS SHOWN HEREON. THERE IS NO CERTAINTY TO THE ACCURACY OF THIS INFORMATION AND IT SHALL BE CONSIDERED IN THAT LIGHT BY THOSE USING THIS DRAWING. THE LOCATION AND ARRANGEMENT OF UNDERGROUND UTILITIES AND STRUCTURES MAY BE ENCOUNTERED. THE OWNER, HIS EMPLOYEES, HIS CONSULTANTS, HIS THE SURVEYOR IS NOT RESPONSIBLE FOR THE CORRECTNESS OR SUFFICIENCY OF

THIS INFORMATION SHOWN HEREON AS TO SUCH UNDERGROUND INFORMATION.

OR SUFFICIENCY OF THE PIPE INFORMATION SHOWN HEREON. THIS INFORMATION SHOWN HEREON EXCEPT BY APPROVAL OF SAID AUTHORITY.

SURVEYOR NAMING SAID PERSON, PERSONS OR ENTITY. TERRAMARK LAND SURVEYING, INC. DOES NOT WARRANT THE EXISTENCE OR NON-EXISTENCE OF ANY WETLANDS OR HAZARDOUS WASTE IN THE SURVEY AREA.

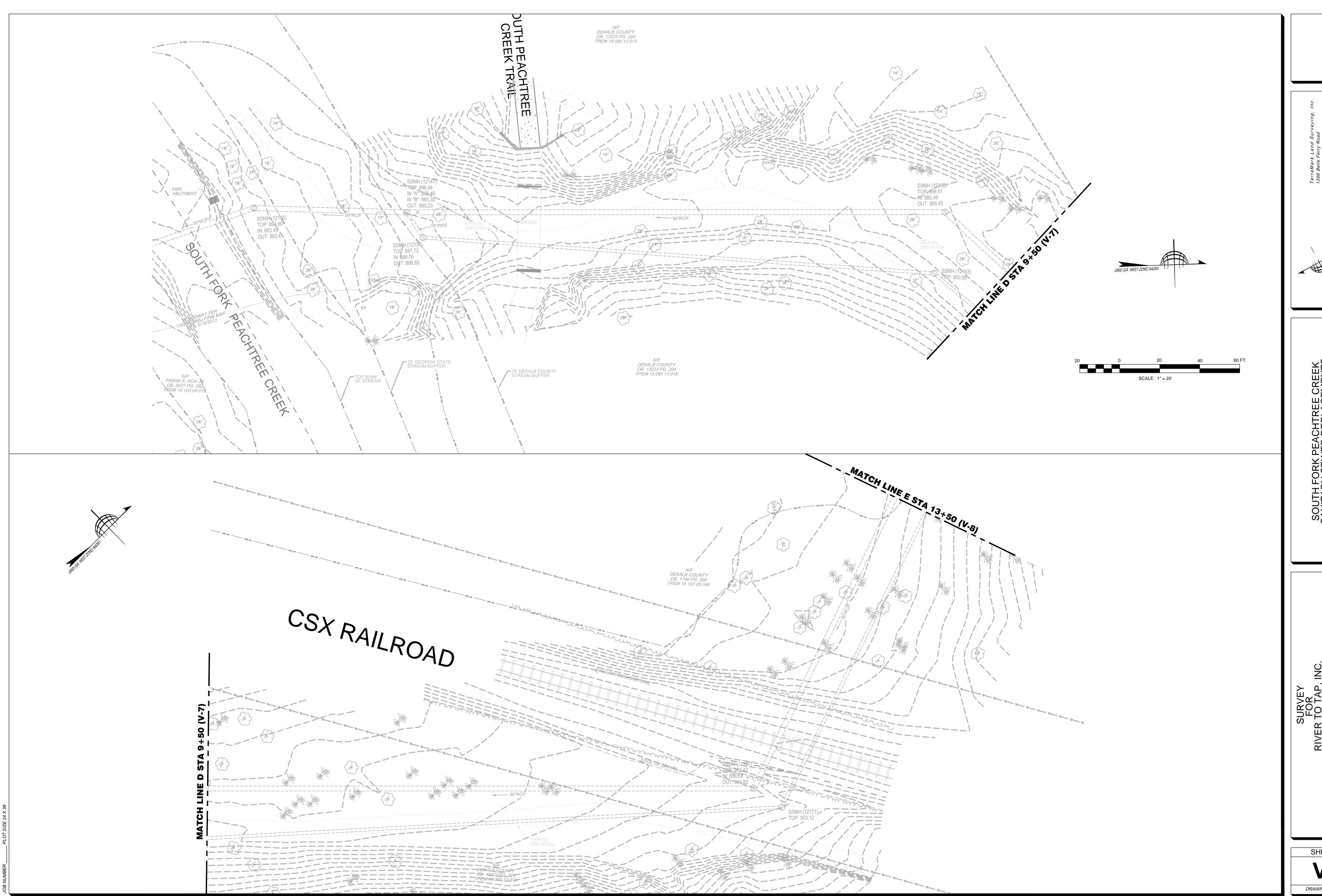
13. PROPERTY IS SUBJECT TO RIGHTS OF UPPER AND LOWER RIPARIAN OWNERS IN AND TO THE WATER OF CREEKS AND BRANCHES CROSSING OR ADJOINING SUBJECT PROPERTY AND THE NATURAL FLOW THEREOF, FREE FROM DIMINUTION OR

SHEET NO.

LOCATED IN 103, & 113, 18 COUNTY, GE

CHTREE CREEK REPLACEMENTS

DRAWING# TM 24 X 36



REEK Tents TerraMar

SOUTH FORK PEACHTREE CREEK SANITARY SEWER REPLACEMENTS SITE 1

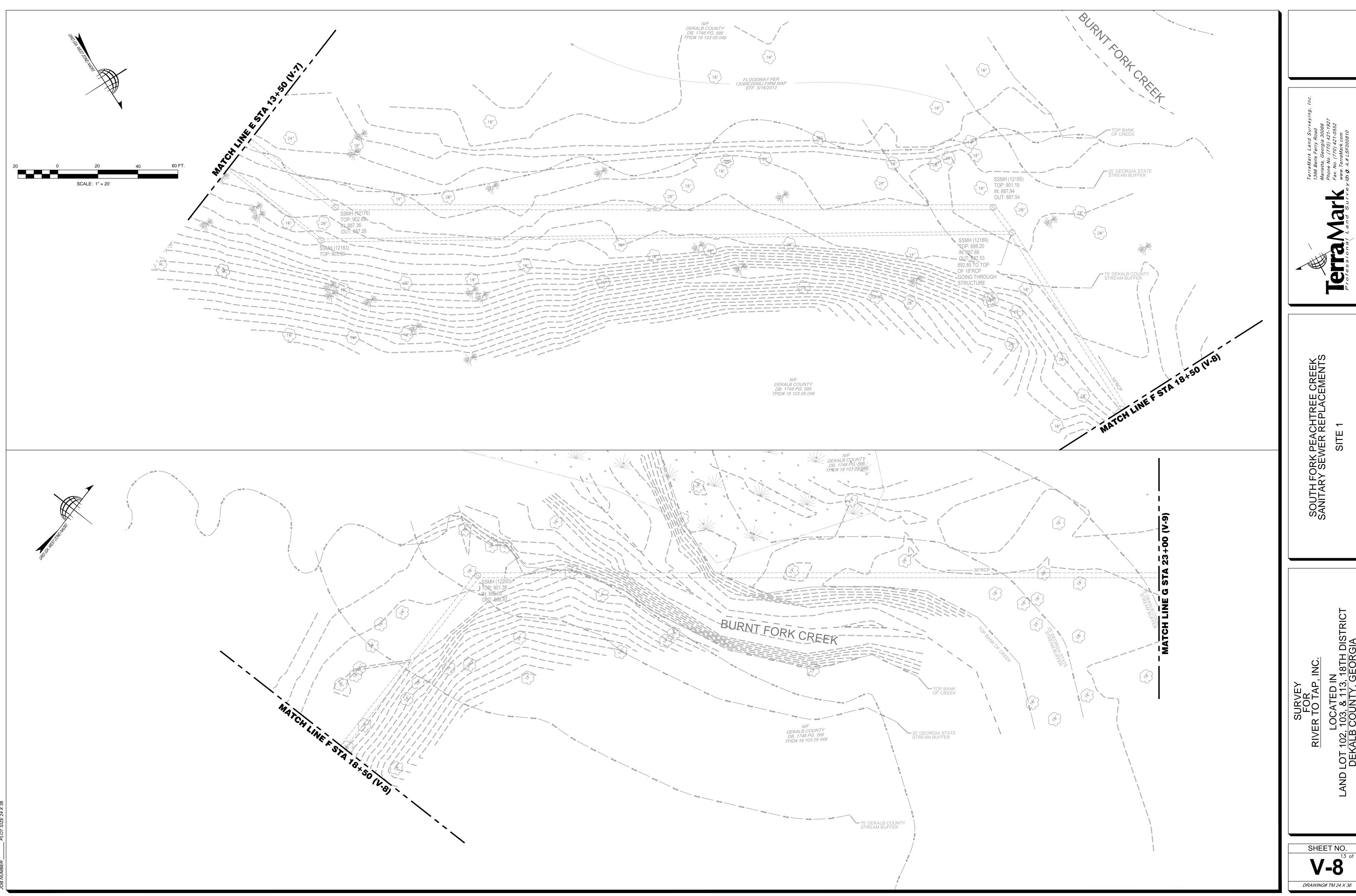
> FOR RIVER TO TAP, INC. LOCATED IN AND LOT 102, 103, & 113, 18TH DISTRICT

SHEET NO.

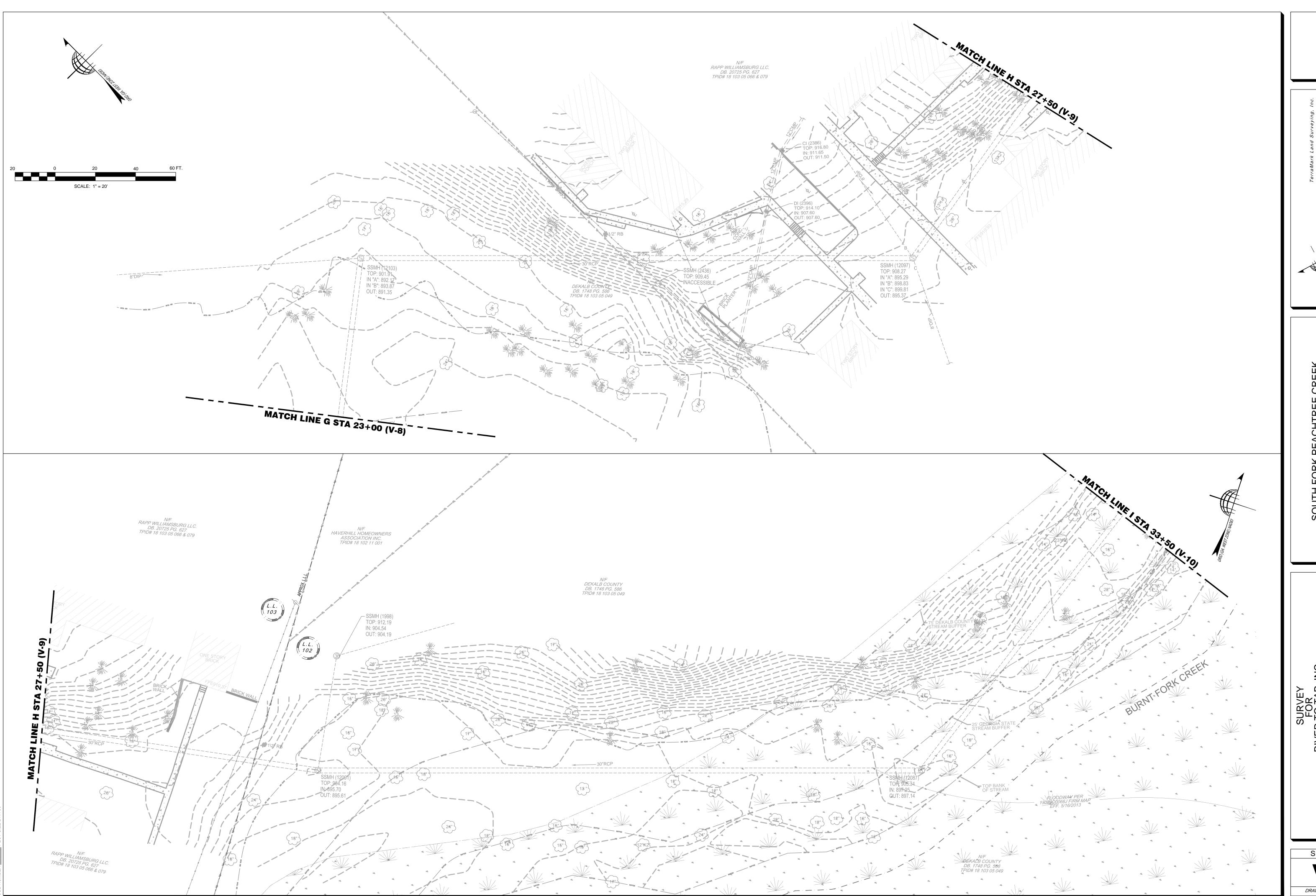
12 of 6

7

DRAWING# TM 24 X 36



SHEET NO. V-8



SOUTH FORK PEACHTREE CREEK
SANITARY SEWER REPLACEMENTS
SITE 1

O TAP, INC.
ATED IN

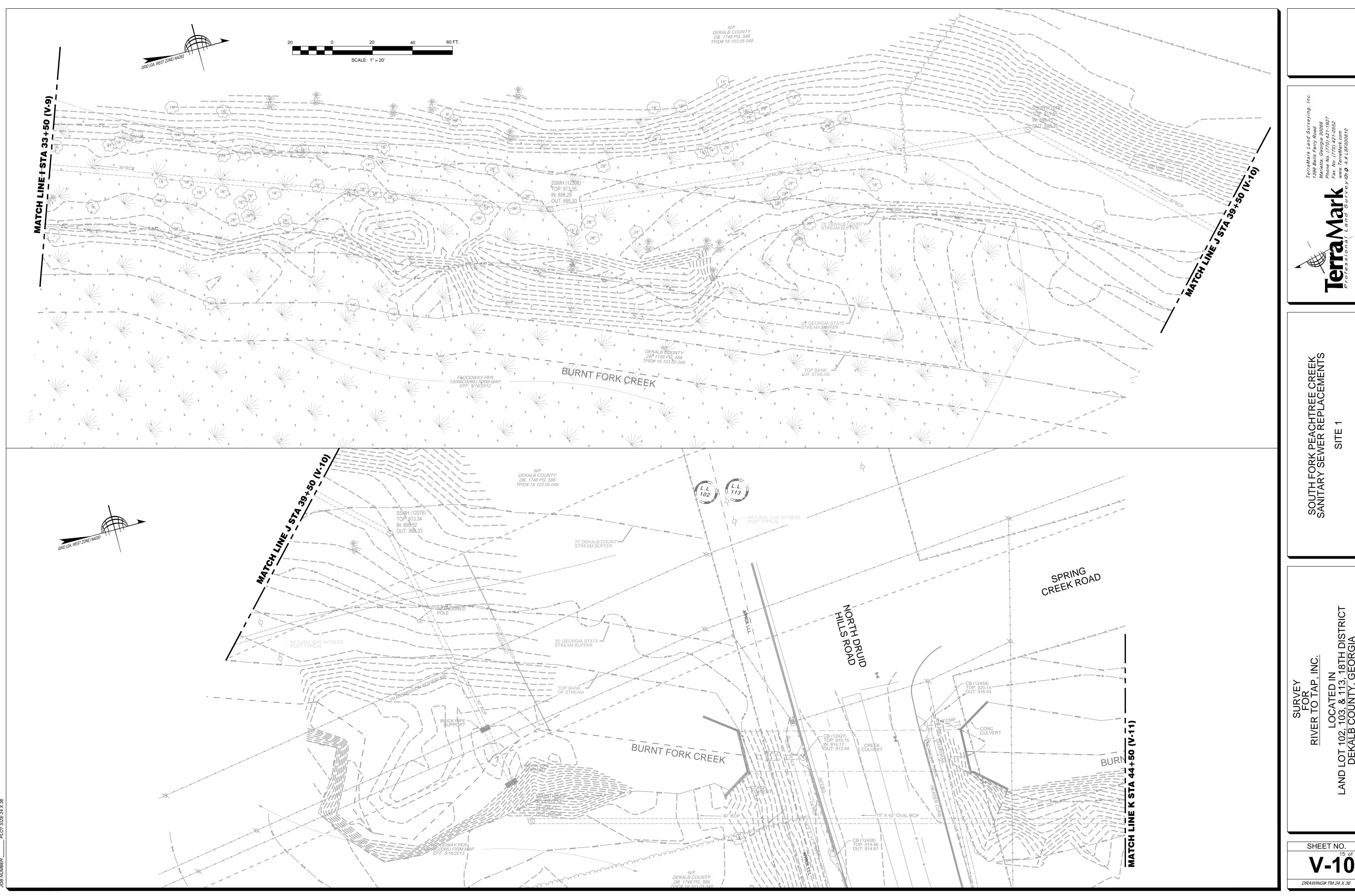
SURVEY FOR RIVER TO TAP, INC. LOCATED IN

SHEET NO.

14 of 6

V-9

DRAWING# TM 24 X 36

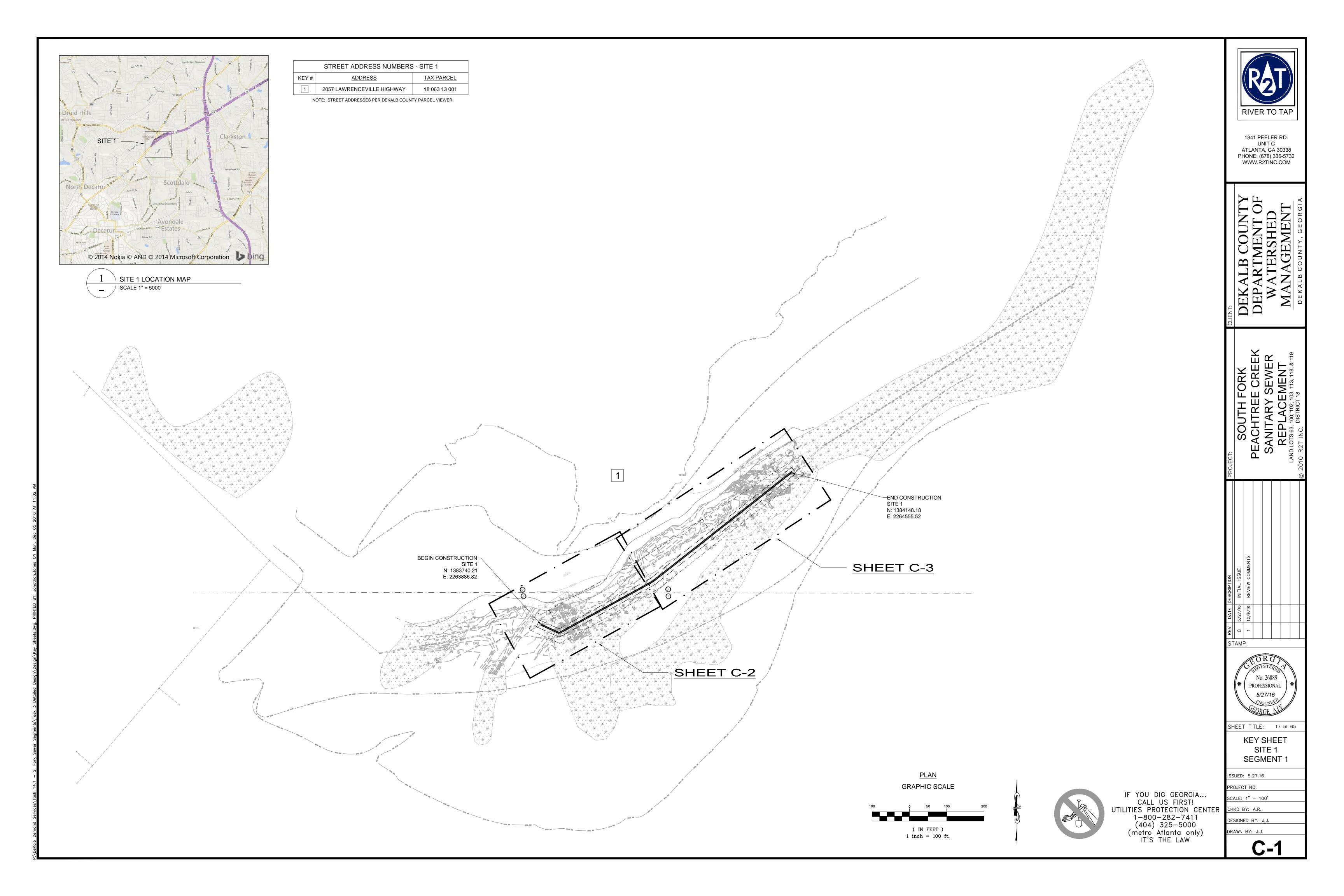


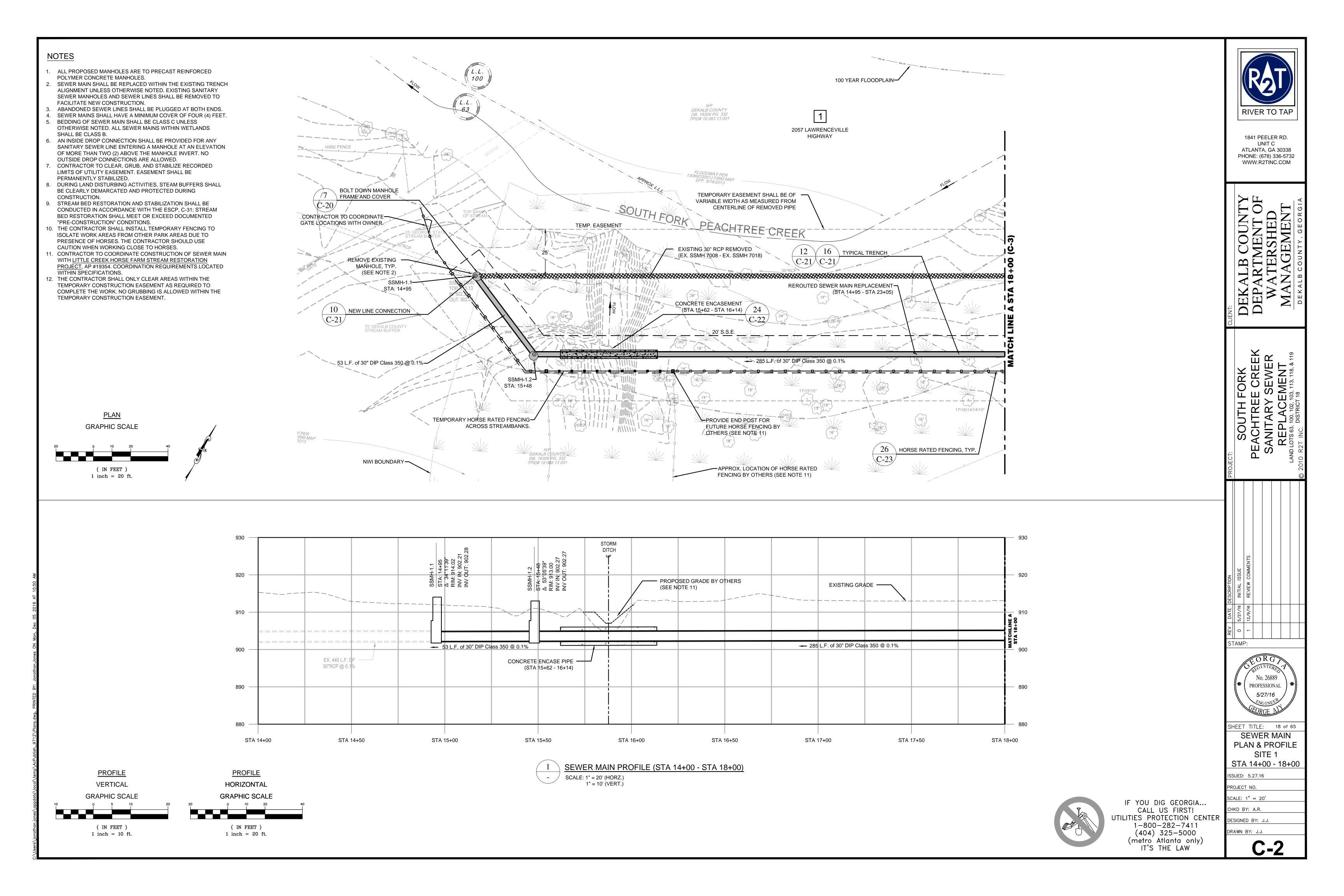
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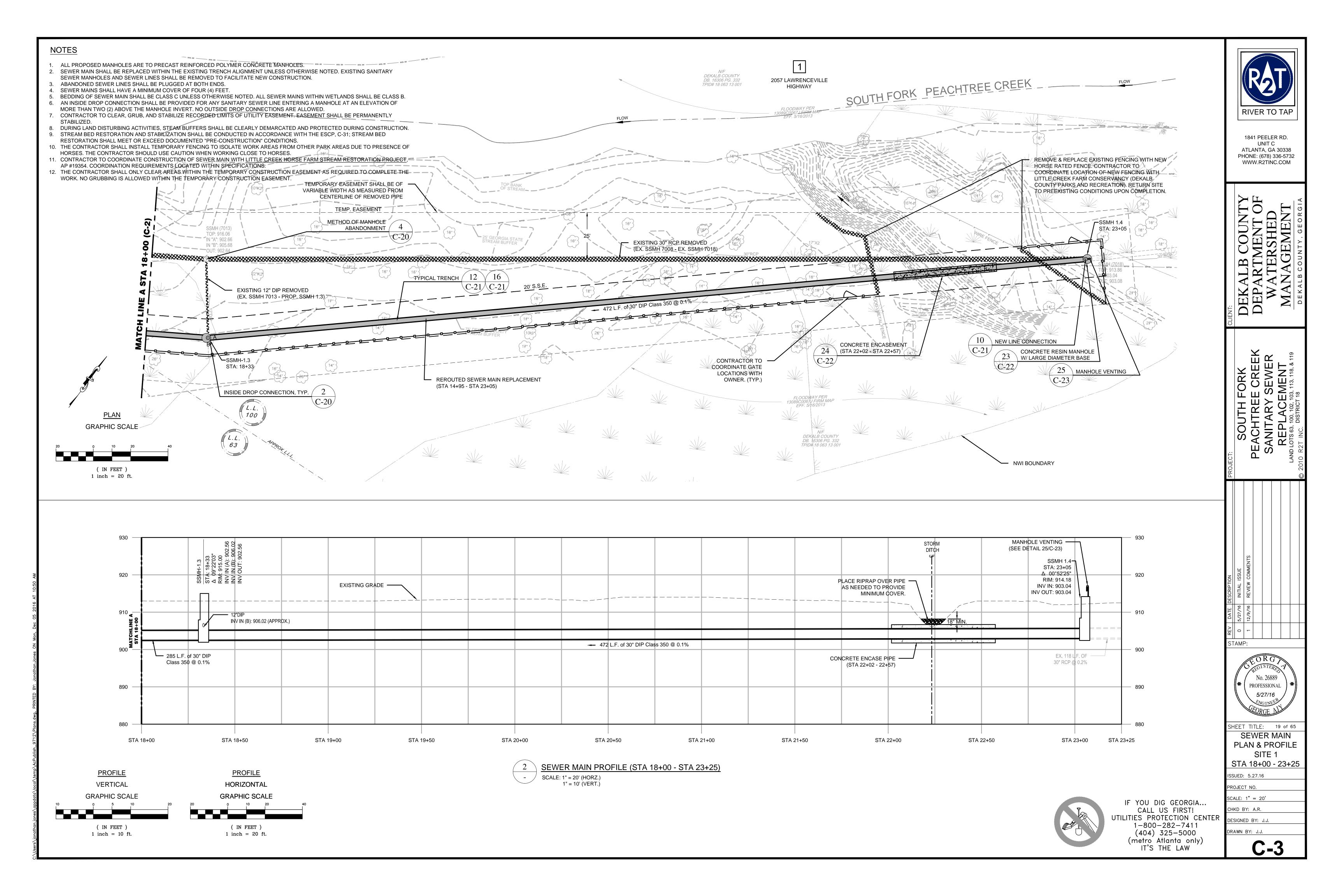


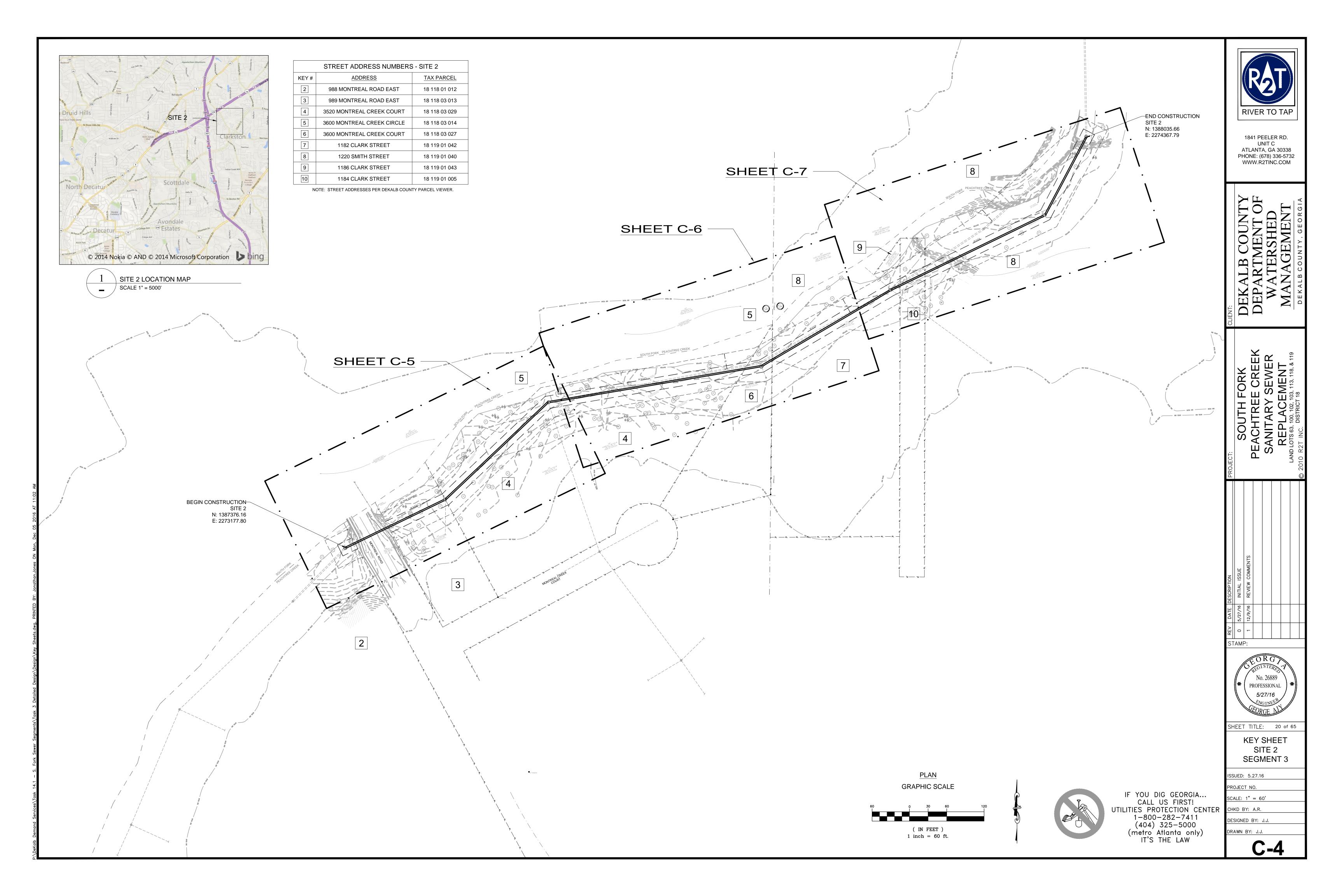
SOUTH FORK PEACHTREE CREEK SANITARY SEWER REPLACEMENTS SITE 1

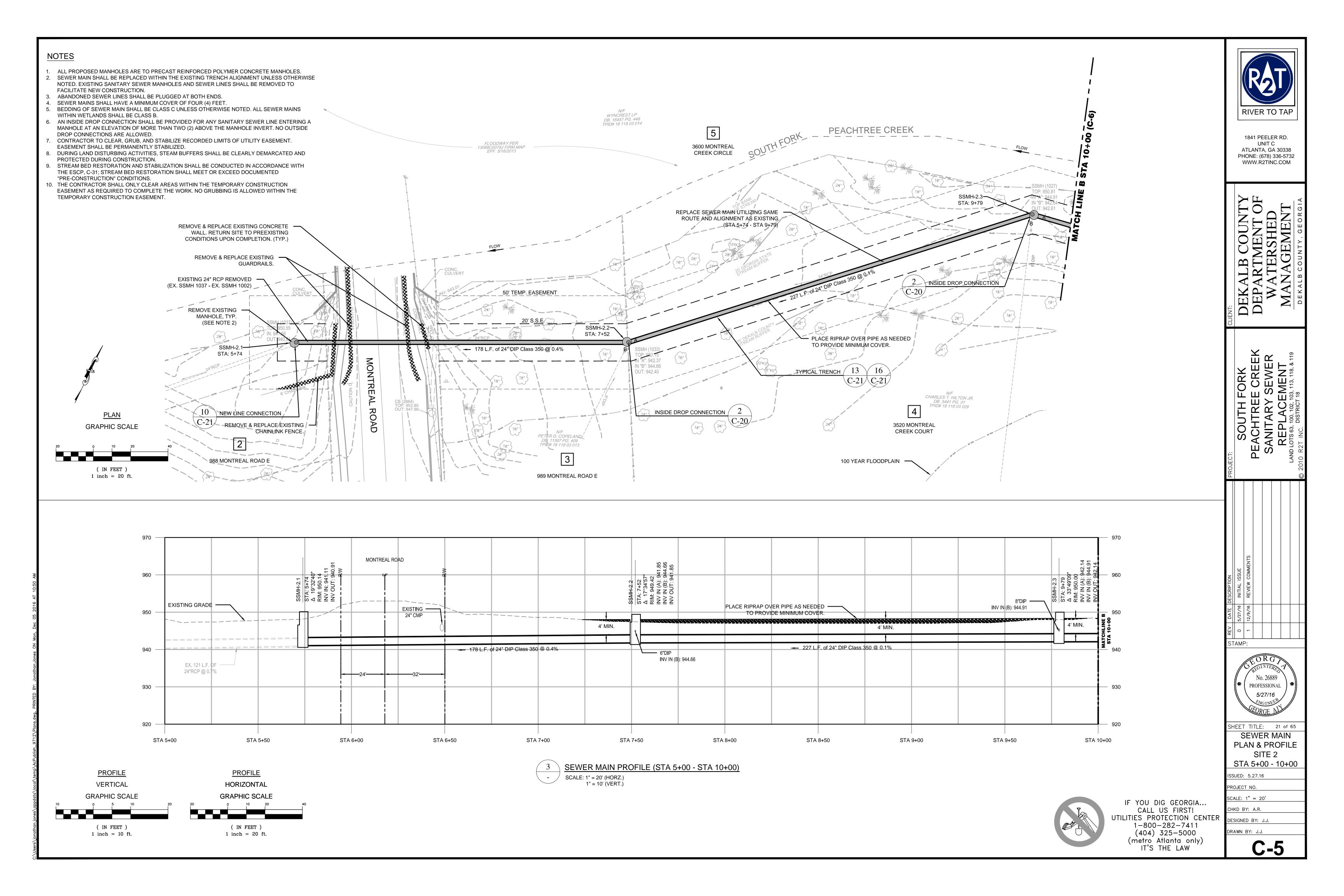
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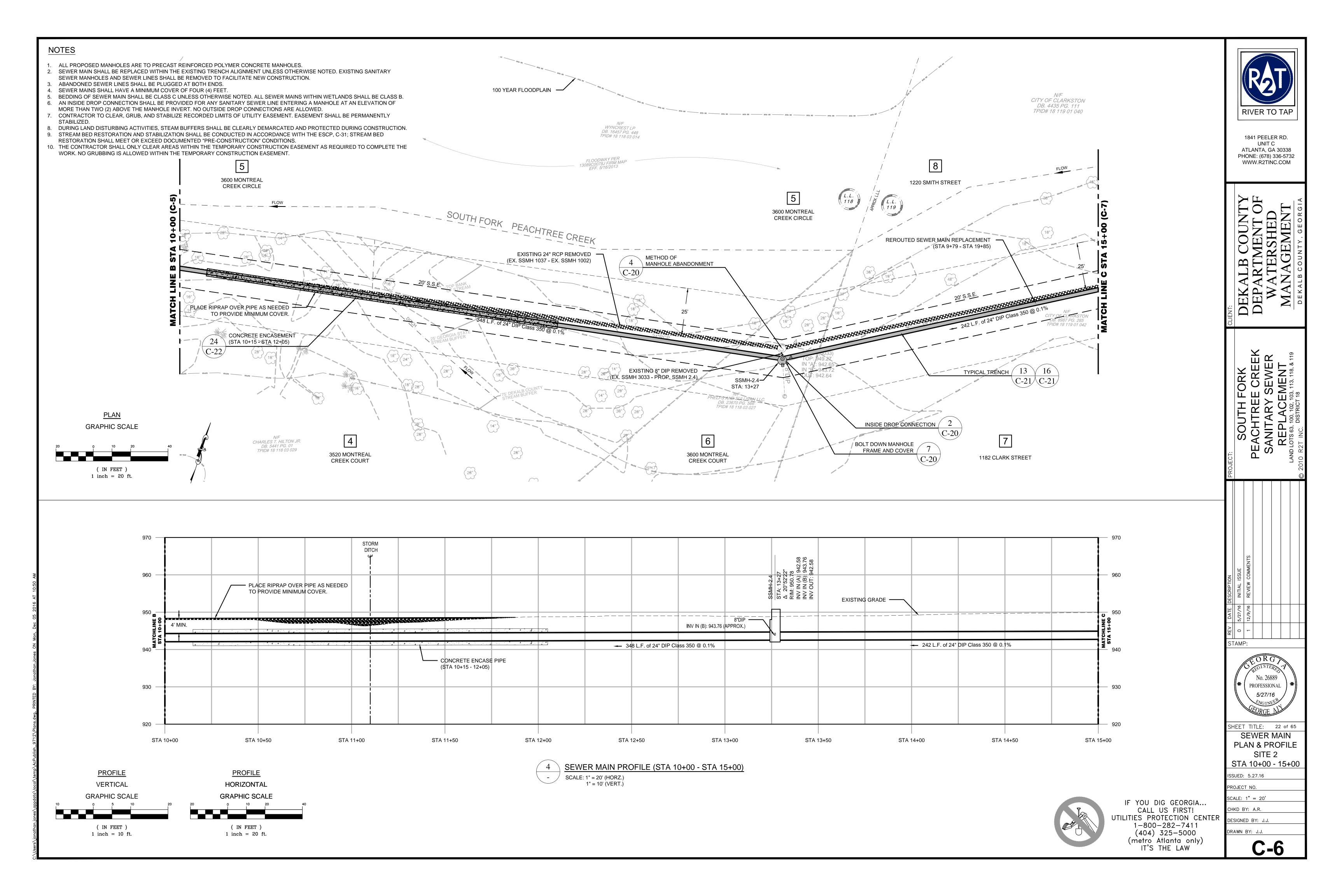


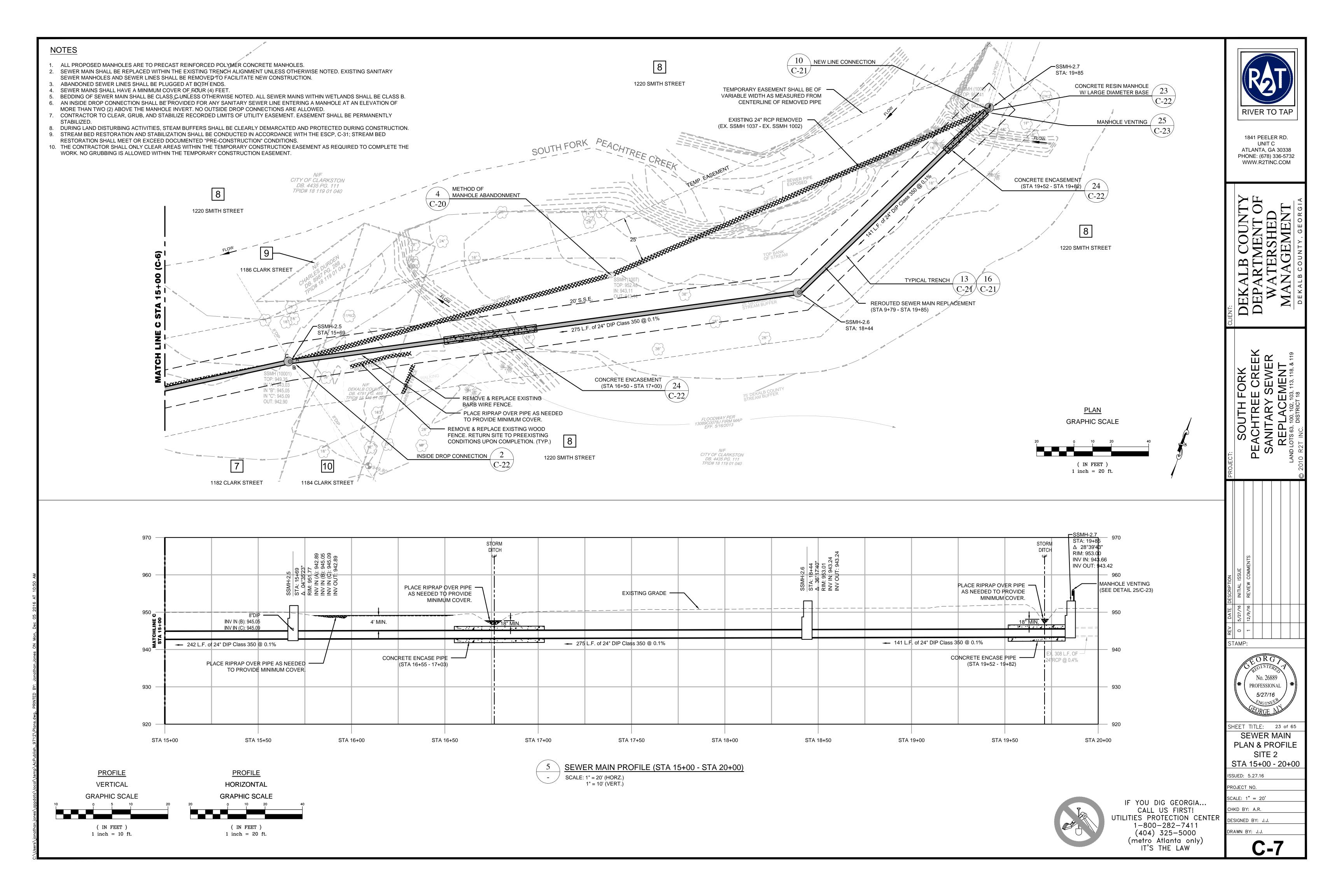


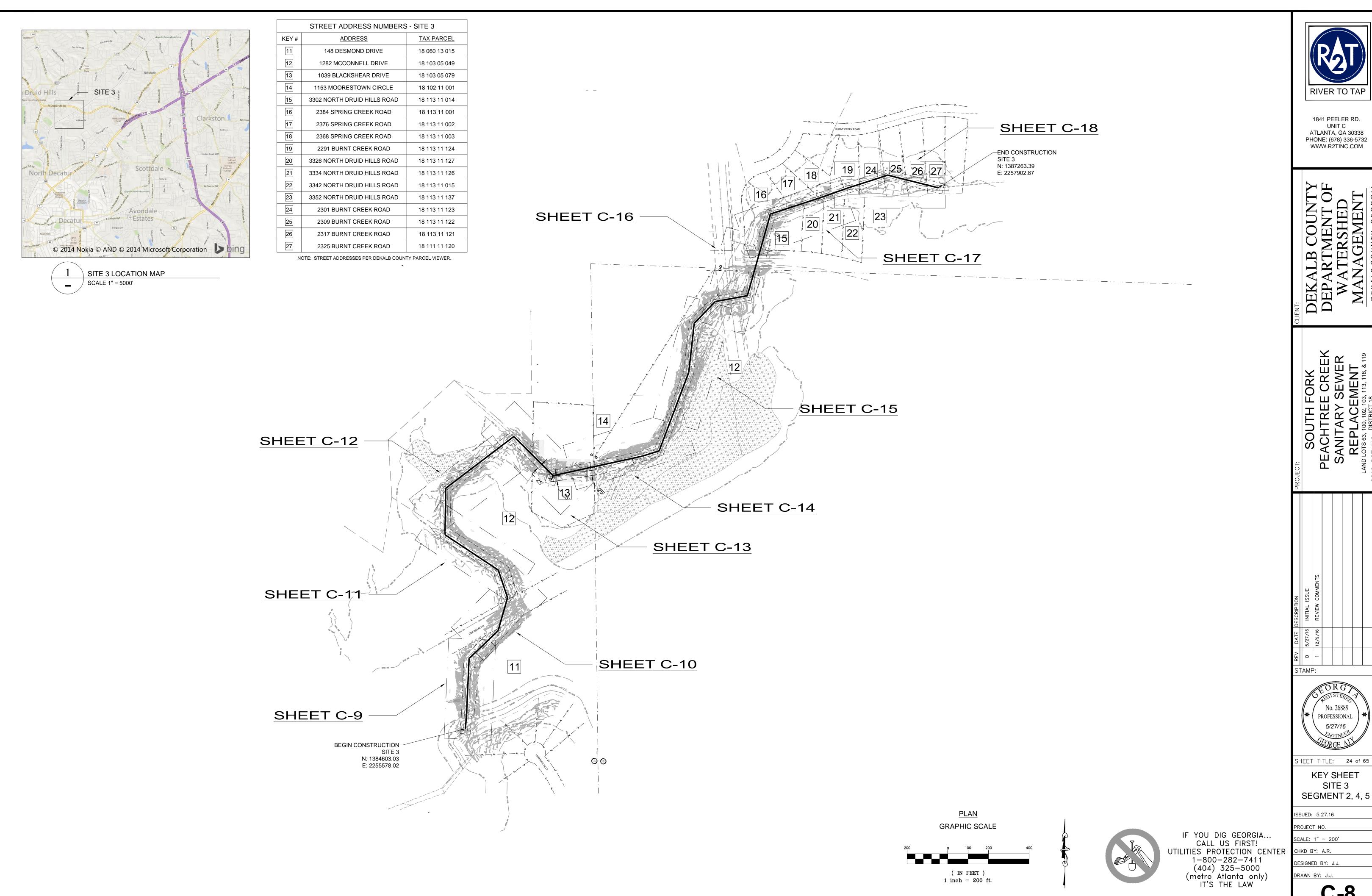




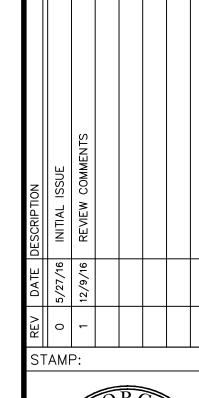






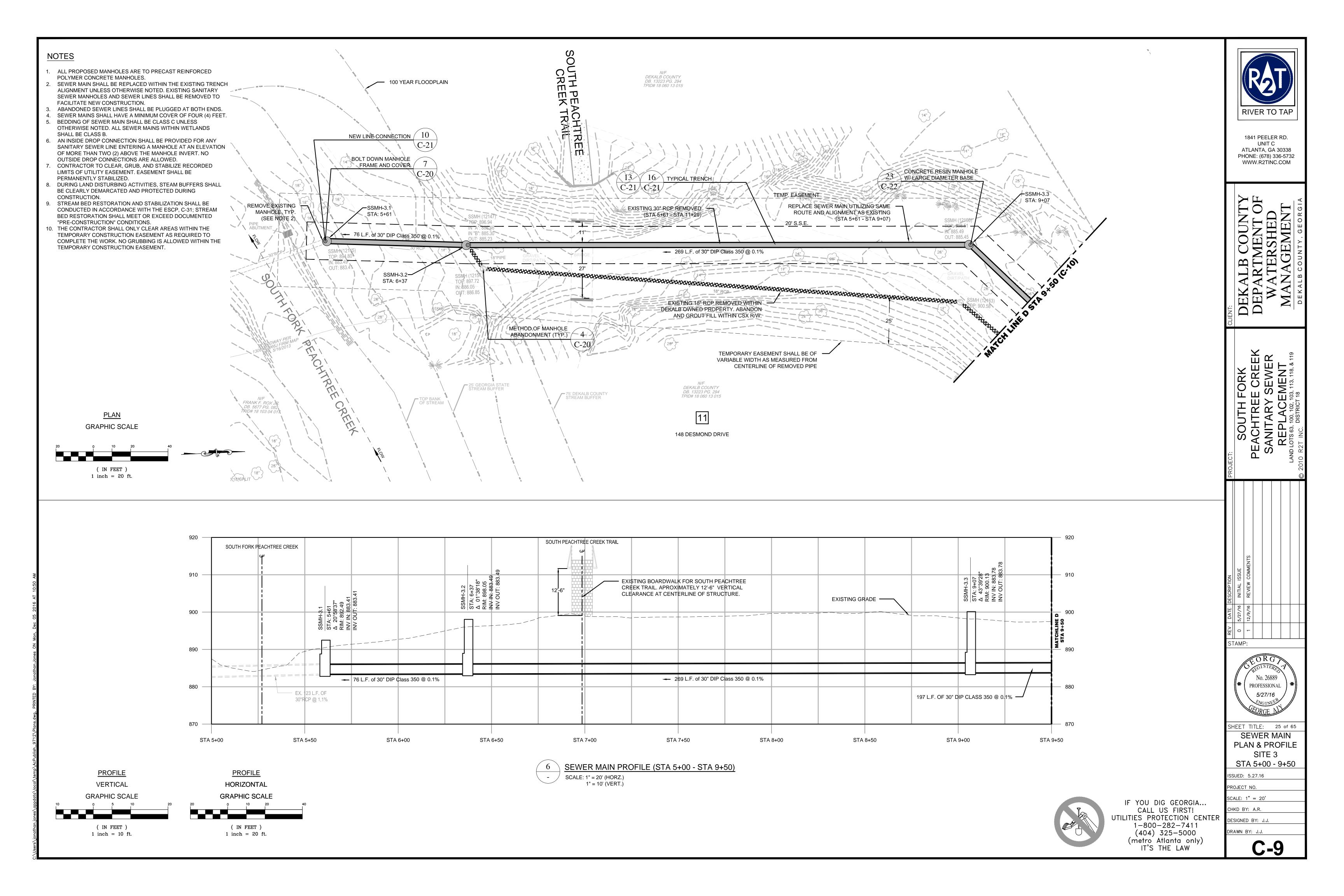


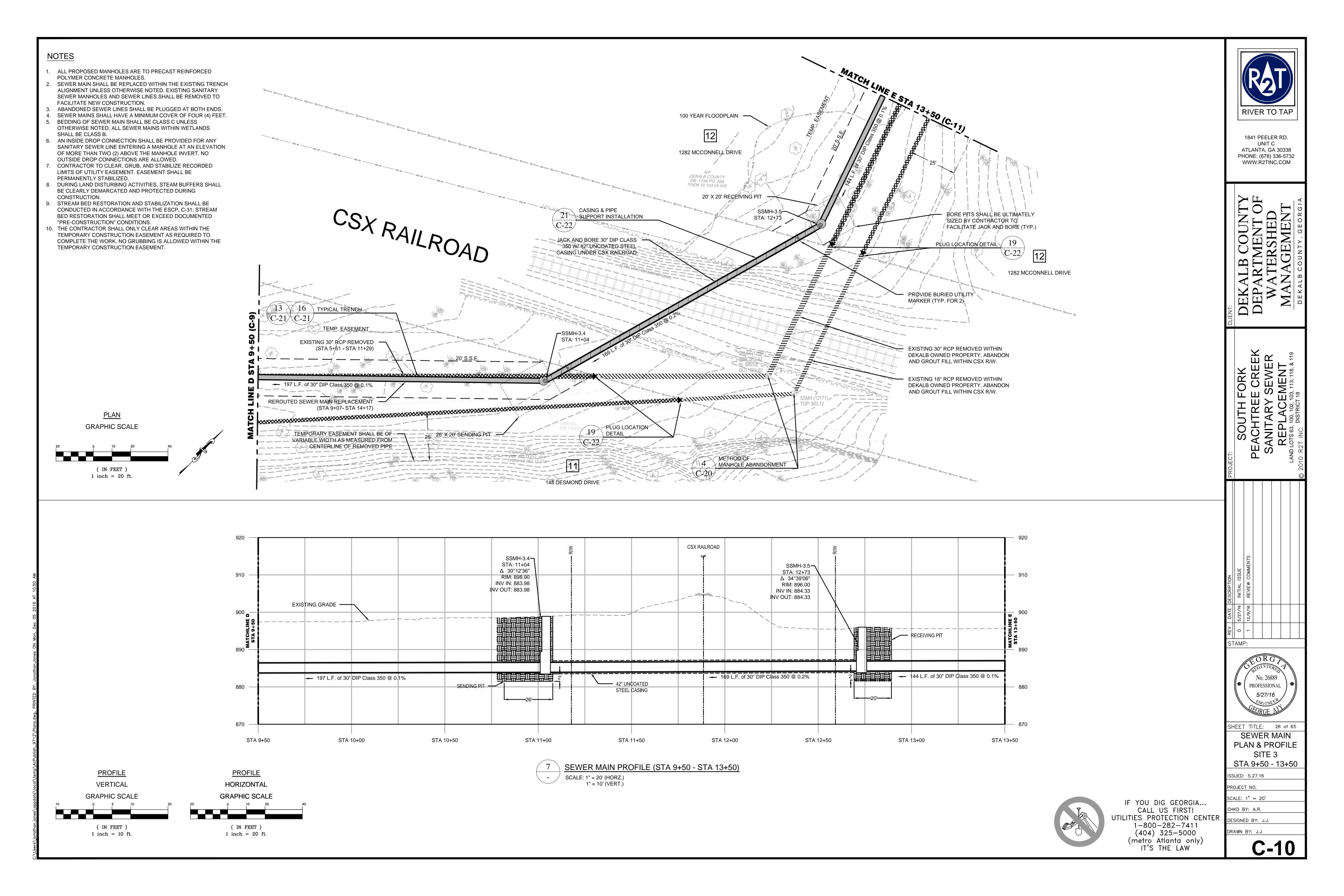
1841 PEELER RD. UNIT C ATLANTA, GA 30338 PHONE: (678) 336-5732 WWW.R2TINC.COM

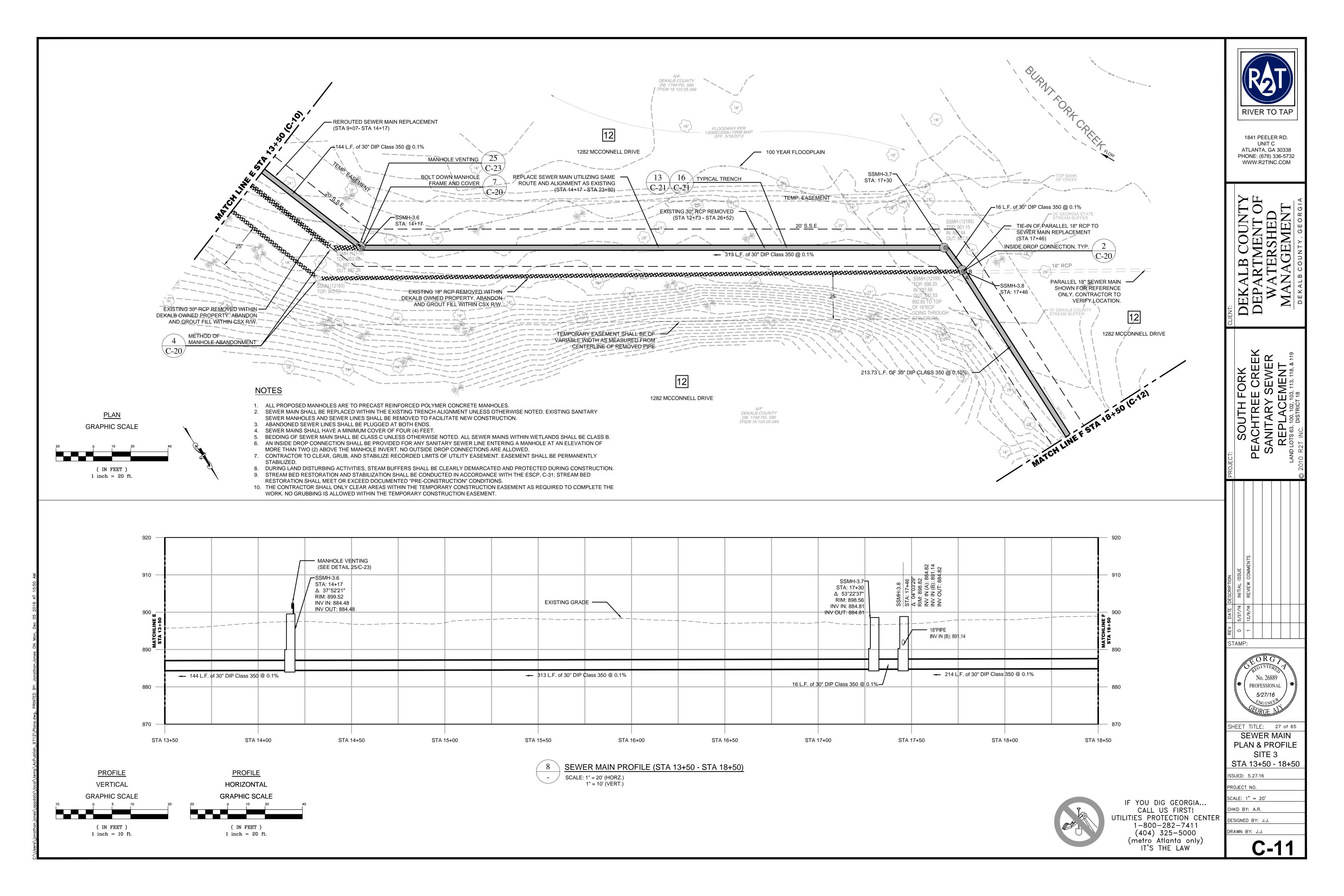


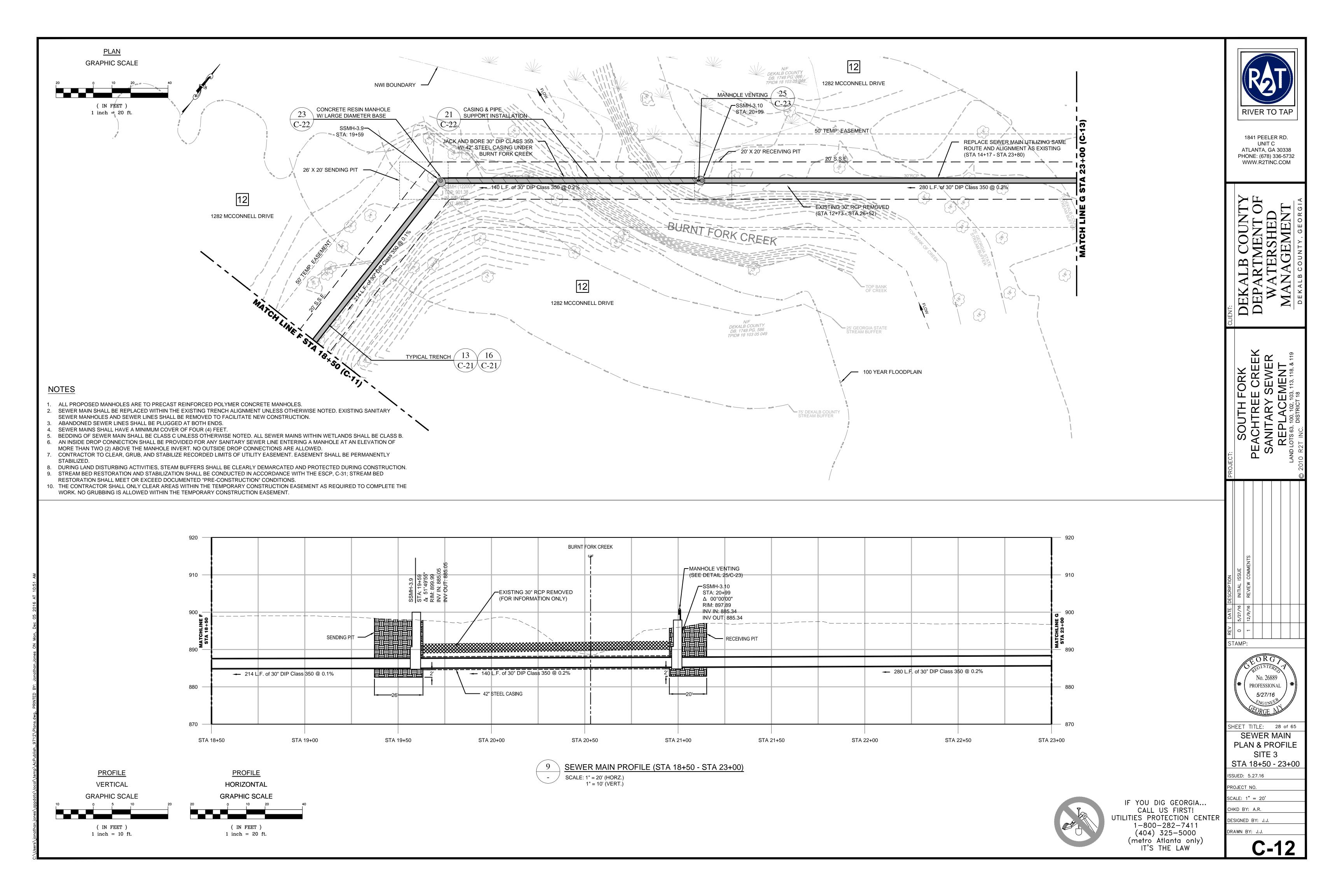


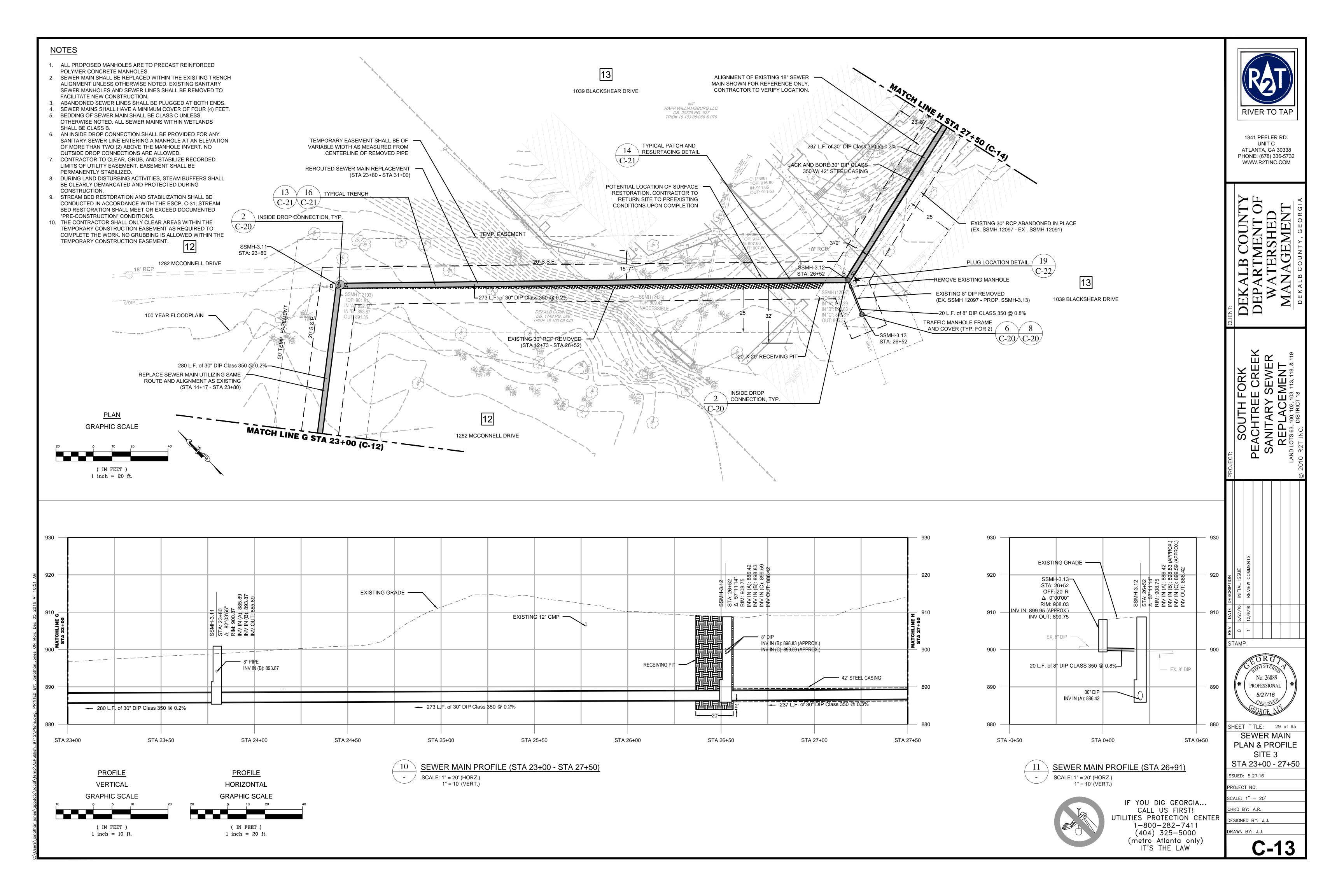
SHEET TITLE: 24 of 65 KEY SHEET SITE 3

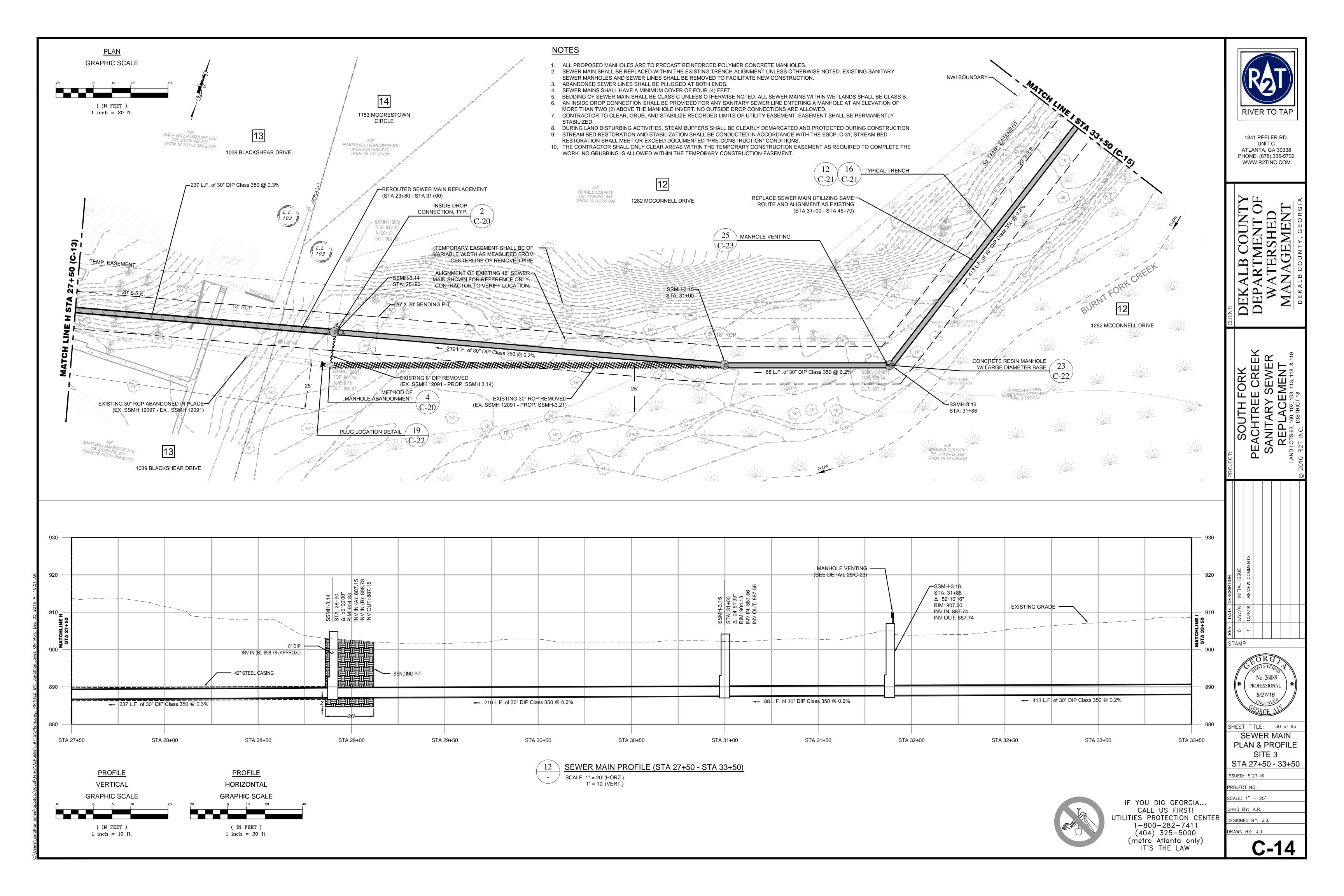


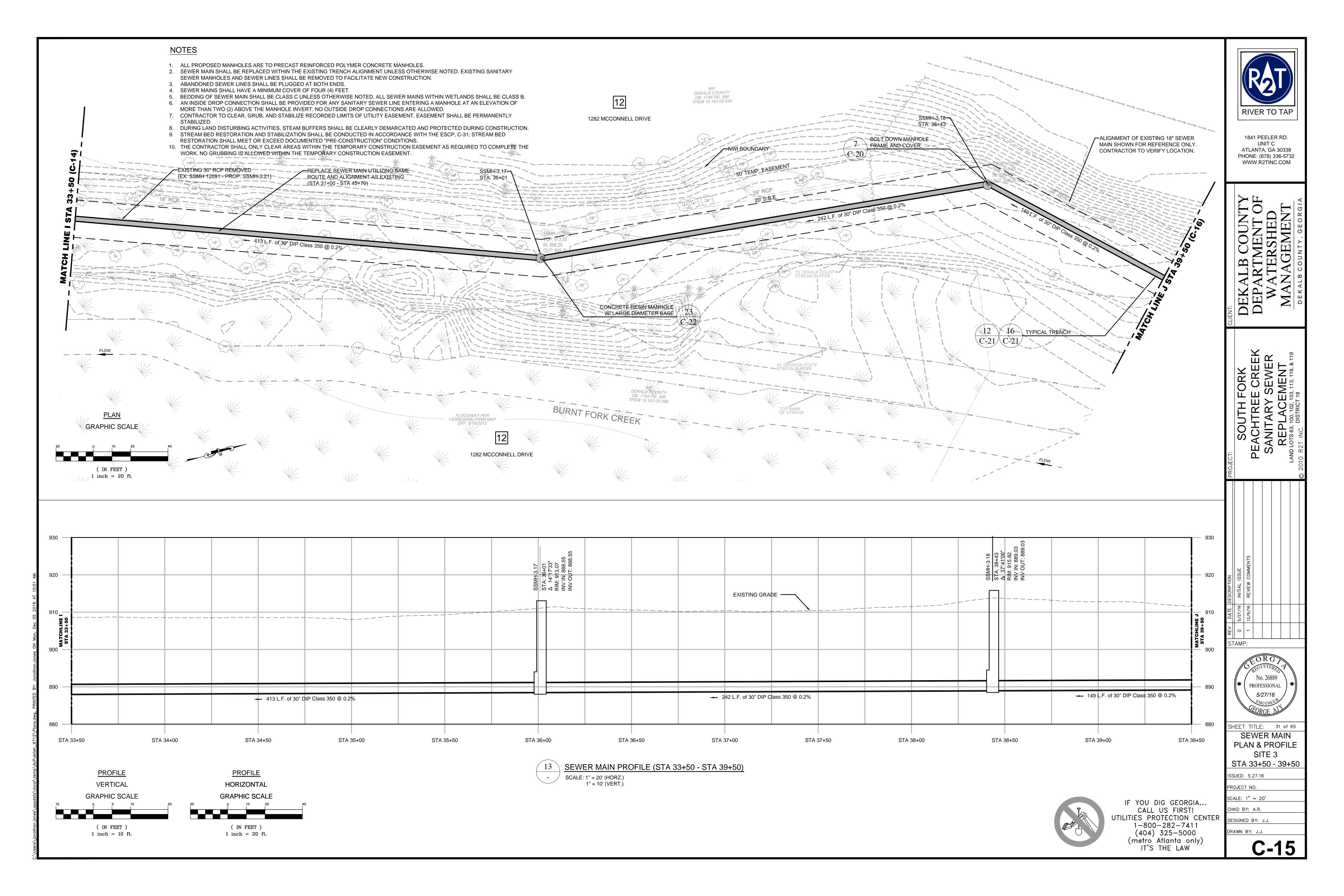


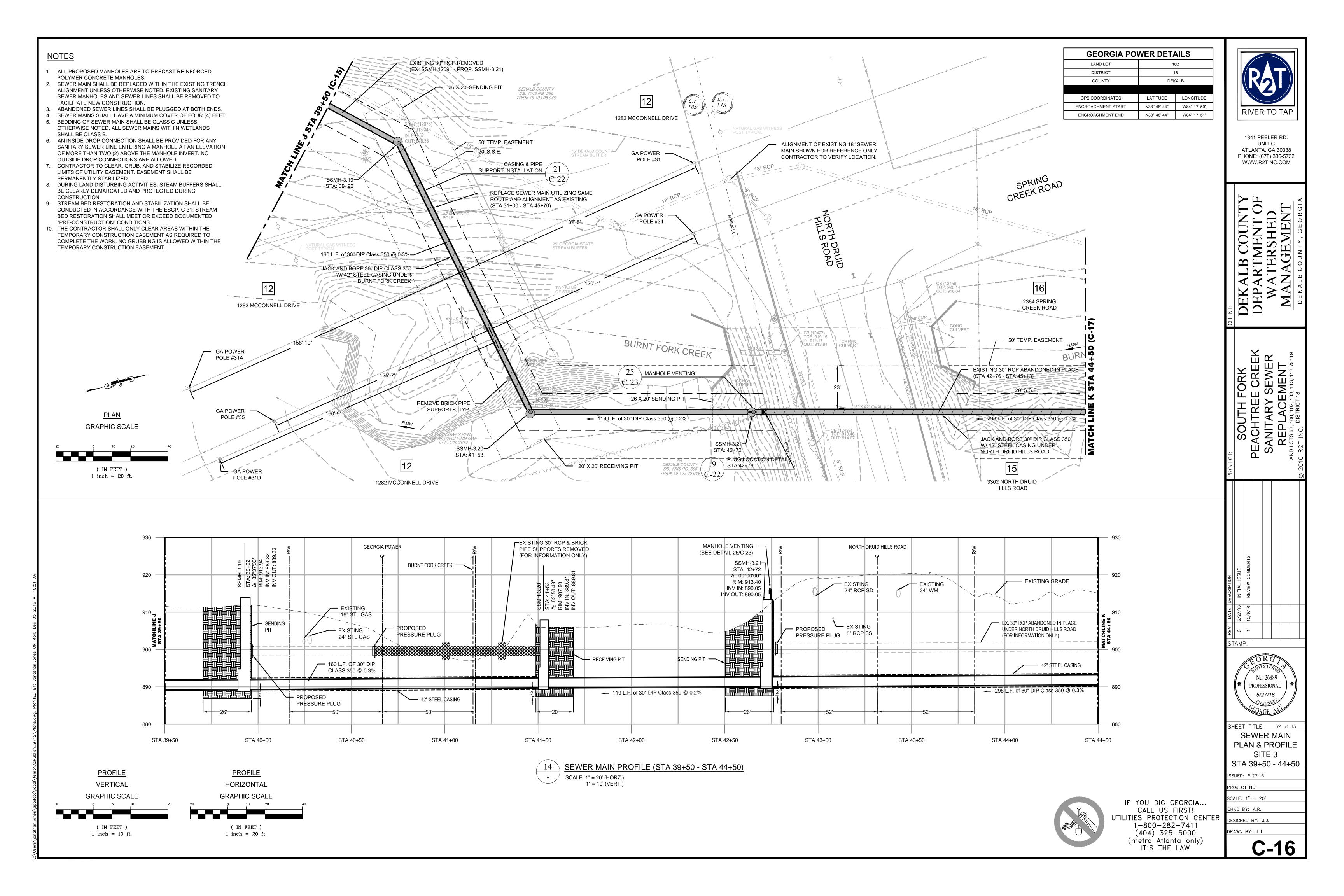


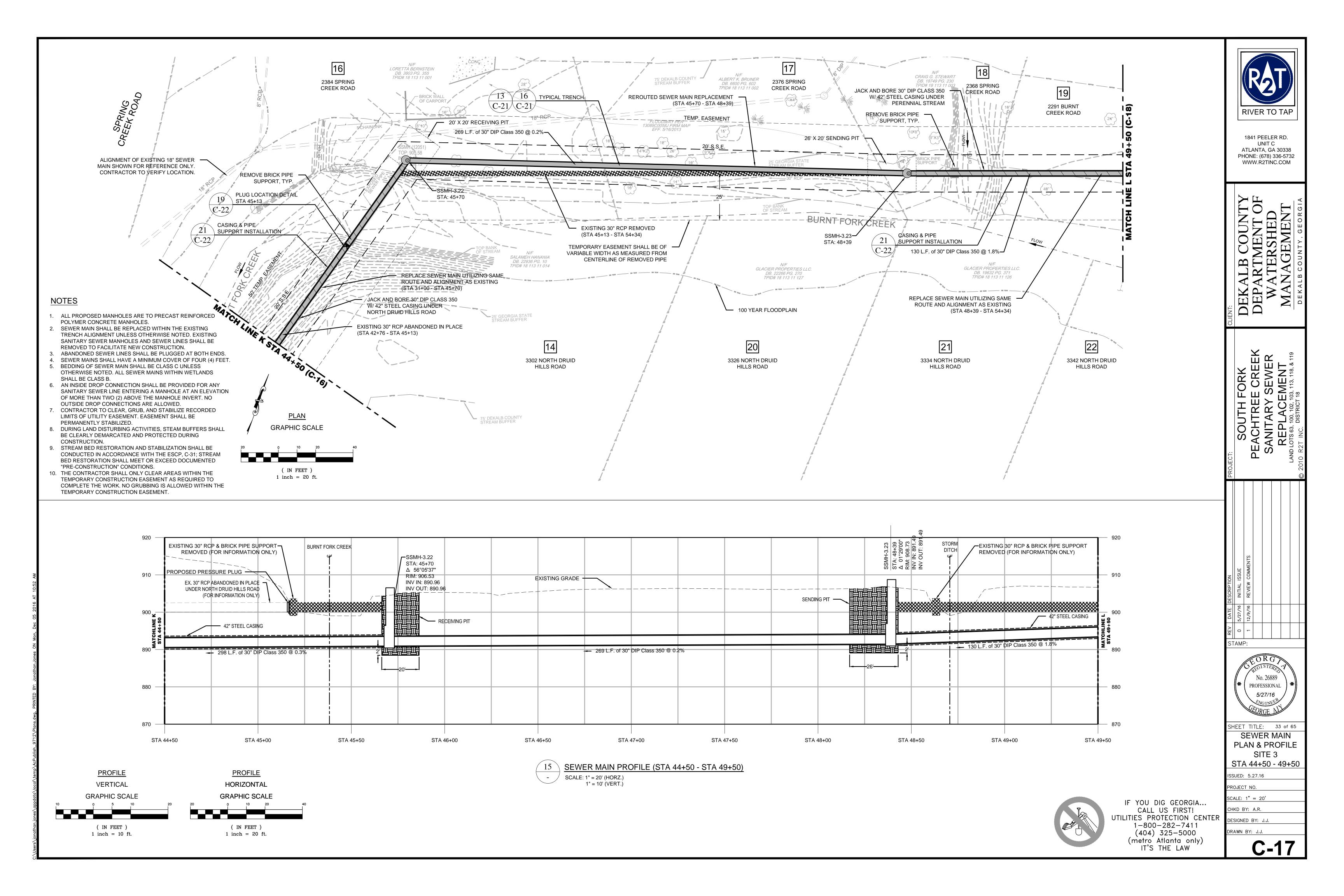


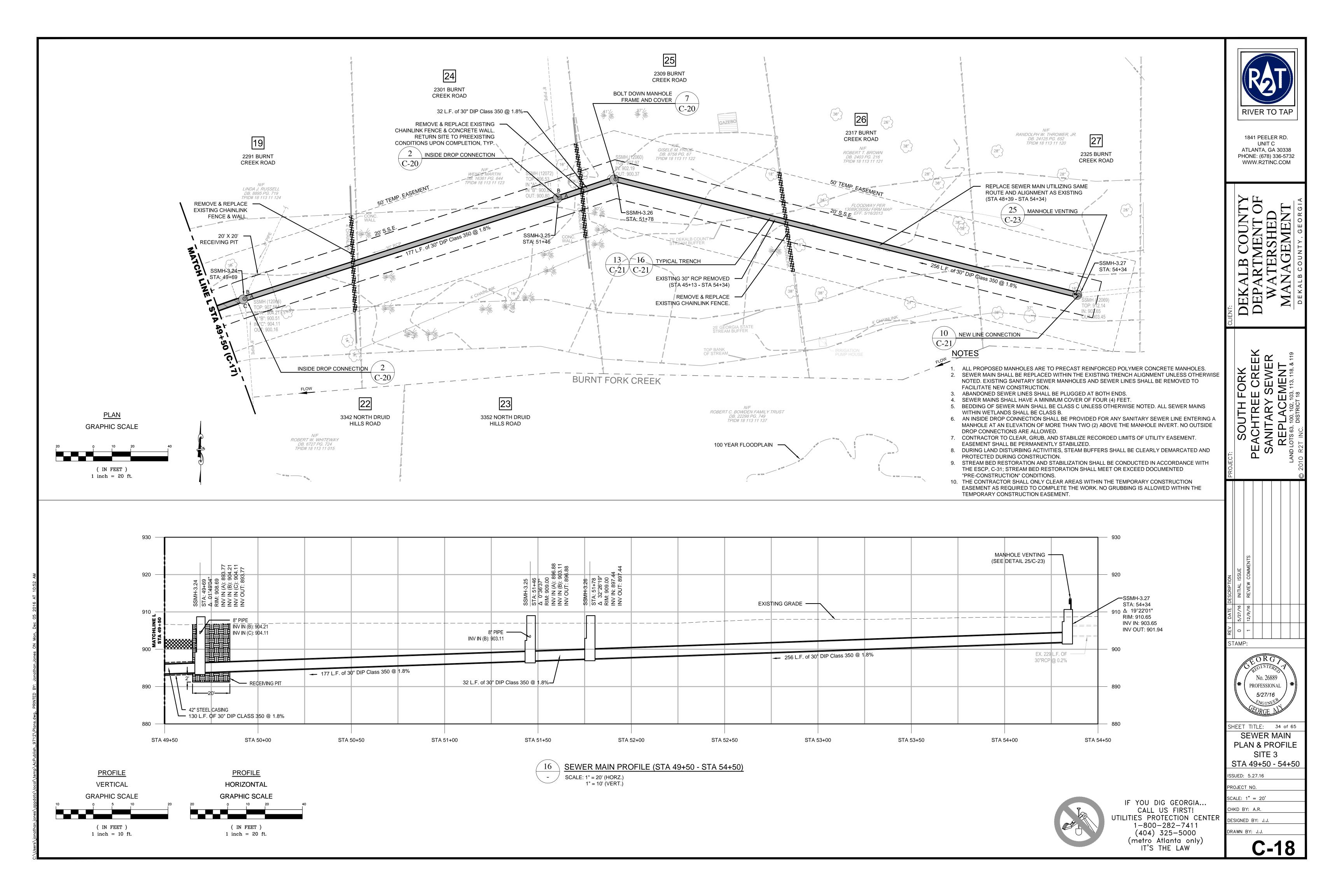












DOWNSTREAM UPSTREAM WASHINGE TOWN WASHINGE PPELENTINE PPELENTINE AND SLOPE SAME CONFLICTS NOTES				JLE	PIPE SCHEDU	SANITARY SEWER F					
SSM+12 SSM+13 902.27 902.56 256 350 DIP CLASS 350 0.1 CLASS B DITCH CONCRETE FINCASPMENT SSM+13 902.56 909.04 477 30 DIP CLASS 350 0.1 CLASS B DITCH CONCRETE FINCASPMENT SSM+21 911.11 911.56 178 28 DIP CLASS 350 0.1 CLASS C MONTREAL RS, SIMILLOW COVER RIPRAP CONCRETE FINCASSIMENT CLASS C SMALLOW COVER RIPRAP CONCRETE FINCASSIMENT CLASS C SMALLOW COVER RIPRAP CONCRETE FINCASSIMENT CLASS C	7/6/2004_2:20:51_PM_\\QQQT:QRNI\QQPLQT\QQF\QQLTIFF.QUTPUI.QCF_QQWENS_M·\QARY\ENGLISH_STANDARDS_UPDATED_AND_UPDATED_INDEX\L491.PRF	NOTES	CONFLICTS	BACKFILL		,					
SSMH-13 SSMH-14 S02-56 S03.04 472 S0F DP CLASS 50 0.1 CLASS 6 DTCH CONDETT ENCASEMENT SSMH-27 SSMH-27 SSMH-27 SSMH-27 SSMH-27 SSMH-27 SSMH-28 SSMH-28 SSMH-29 SSMH-28	STORM DRAIN AND UTILITY IN'	CONCRETE ENCASEMENT	DITCH	CLASS B	0.1	30" DIP CLASS 350	53	902.27	902.21	SSMH-1.2	SSMH-1.1
SSMIP-21 SSMIP-23 SSMIP-24 SSMIP-25 SSMIP-24 SSMIP-25 SSMIP-24 SSMIP-25				CLASS B	0.1	30" DIP CLASS 350	285	902.56	902.27	SSMH-1.3	SSMH-1.2
SSMH-22 SSMH-23 SSMH-24 SSMH-24 SSMH-24 SSMH-25 SSMH-24 SSMH-24 SSMH-24 SSMH-24 SSMH-24 SSMH-24 SSMH-25 SSMH-25 SSMH-28 SSMH-24 SSMH-25 SSMH-25 SSMH-28 SSMH-24 ZF 27 ZF DP CLASS 350 0.1 CLASS C SHALLOW COVER, DTICH RIPPAR, CONCRETE ENCASEMENT SSMH-24 SSMH-25 SSMH-25 SSMH-26 SSMH-27 SSMH-28 SSMH-27 SSMH-27 SSMH-28	IS GREATER.	CONCRETE ENCASEMENT	DITCH	CLASS B	0.1	30" DIP CLASS 350	472	903.04	902.56	SSMH-1.4	SSMH-1.3
SSMH-24	PAVEMENT TO BE SAWED OR CULT AS DIRECTED EXISTING PAVEMENT SECTION 12" 2" 12"	RIPRAP	MONTREAL RD, SHALLOW COVER	CLASS C	0.4	24" DIP CLASS 350	178	941.85	941.11	SSMH-2.1	SSMH-2.1
SSMH-23 SSMH-24 42.14 44.2.5 348 24.7 DP.CLASS 350 0.1 CLASS C SHALLOW COVER, DITCH RIPRAP, CONCRETE ENCASE MENT SSMH-24 SSMH-25 58.5 SM-26 042.89 042.42 275 24.7 DP.CLASS 350 0.1 CLASS C SHALLOW COVER, DITCH RIPRAP, CONCRETE ENCASE MENT SSMH-26 042.89 043.24 275 24.7 DP.CLASS 360 0.1 CLASS C SHALLOW COVER, DITCH RIPRAP, CONCRETE ENCASE MENT SSMH-31 SSMH-32 SSMH-32 SSMH-33 SSMH-34		RIPRAP	SHALLOW COVER	CLASS C	0.1	24" DIP CLASS 350	227	942.14	941.85	SSMH-2.3	SSMH-2.2
SSMH-2.5 SSMH-2.6 SSMH-2.1 SSMH-3.1 SSMH-3.2 SSMH-3.3 883.40 883.76 290 30° DP CLASS 360 0.1 CLASS C DITCH CONCRETE ENCASEMENT CONCRETE ENCASEMENT SSMH-3.1 SSMH-3.2 SSMH-3.3 883.40 883.76 290 30° DP CLASS 360 0.1 CLASS C SSMH-3.1 SSMH-3.4 SSMH-3.10 SSMH-3.10 865.65 865.64 140 30° DP CLASS 360 0.1 CLASS C STREAM CROSSING 42° STEEL CASING FOR J&B SSMH-3.10 SSMH-3.10 865.65 865.64 140 30° DP CLASS 360 0.2 CLASS C STREAM CROSSING 42° STEEL CASING FOR J&B SSMH-3.10 SSMH-3.10 865.65 865.64 140 30° DP CLASS 360 0.2 CLASS C STREAM CROSSING 42° STEEL CASING FOR J&B SSMH-3.10 SSMH-3.10 865.65 865.64 140 30° DP CLASS 360 0.2 CLASS C STREAM CROSSING 42° STEEL CASING FOR J&B SSMH-3.10 SSMH-3.11 SSMH-3.12 865.65 866.62 270 30° DP CLASS 360 0.2 CLASS C STREAM CROSSING 42° STEEL CASING FOR J&B SSMH-3.11 SSMH-3.13 SSMH-3.10		RIPRAP, CONCRETE ENCASEMENT	SHALLOW COVER, DITCH	CLASS C	0.1	24" DIP CLASS 350	348	942.58	942.14	SSMH-2.4	SSMH-2.3
SSMH-25 SSMH-26 SSMH-27 SSMH-24 SSMH-25 SSMH	SUBBASE, SUBGRADE,			CLASS C	0.1	24" DIP CLASS 350	242	942.89	942.58	SSMH-2.5	SSMH-2.4
SSMH-26	□ □ □ SEE NOTE 3 □ □ × × □	RIPRAP, CONCRETE ENCASEMENT	SHALLOW COVER, DITCH	CLASS C	0.1	24" DIP CLASS 350	275	943.24	942.89	SSMH-2.6	SSMH-2.5
SSMIN-32 SSMIN-33 SSSA-9	- \(\(\)0.0.\(\)	CONCRETE ENCASEMENT	DITCH	CLASS C	0.1	24" DIP CLASS 350	141	943.45	943.24	SSMH-2.7	SSMH-2.6
SSMH-3.2 SSMH-3.3 883.49 883.78 883.89 197 30 FD CLASS 350 0.1 CLASS C SSMH-3.4 883.78 883.89 197 30 FD CLASS 350 0.2 CLASS C SSMH-3.4 SSMH-3.5 883.98 197 30 FD CLASS 350 0.2 CLASS C RAILROAD CROSSING 42 STEEL CASING FOR JAB SSMH-3.6 884.33 884.89 144 30 FD CLASS 350 0.1 CLASS C SSMH-3.7 884.88 184.81 313 30 FD CLASS 350 0.1 CLASS C SSMH-3.7 SSMH-3.8 884.81 884.81 188.82 16 30 FD CLASS 350 0.1 CLASS C SSMH-3.7 SSMH-3.8 884.81 884.82 16 30 FD CLASS 350 0.1 CLASS C SSMH-3.10 SSMH-3.11 885.34 885.85 280 30 FD CLASS 350 0.2 CLASS C STREAM CROSSING 42 STEEL CASING FOR JAB SSMH-3.11 885.34 885.89 280 30 FD CLASS 350 0.2 CLASS C SSMH-3.11 SSMH-3.12 SSMH-3.13 899.79 899.95 20 8 FD CLASS 350 0.2 CLASS C SSMH-3.14 SSMH-3.15 SSMH-3.15 SSMH-3.16 SSMH-3.15 SSMH-3.16 SSMH-3.16 SSMH-3.16 SSMH-3.17 SSMH-3.16 SSMH-3.17 SSMH-3.16 SSMH-3.17 SSMH-3.16 SSMH-3.17 SSMH-3.16 SSMH-3.17 SSMH-3.17 SSMH-3.17 SSMH-3.17 SSMH-3.18 SSMH-3.19 SSMH-3.17 SSMH-3.17 SSMH-3.19 SSMH-3.19 SSMH-3.17 SSMH-3.19 SSMH-3.19 SSMH-3.10 SSMH-3.11 SSMH-3.11 SSMH-3.15 SSMH-3.17 SSMH-3.17 SSMH-3.18 SSMH-3.19 SSMH-3.19 SSMH-3.19 SSMH-3.10 SSMH-3.20 SS	TYPICAL 12" EACH SIDE FOR PIPE CULVERT 9" EACH SIDE FOR UTILITY LINE, SEE NOTE 3. STAGE 1 STAGE 2			CLASS C	0.1	30" DIP CLASS 350	76	883.49	883.41	SSMH-3.2	SSMH-3.1
SSMH-3.4 SSMH-3.5 883.98 884.33 169 30° DIP CLASS 350 0.2 CLASS C RAILROAD CROSSING 42° STEEL CASING FOR J&B SSMH-3.6 884.33 884.48 144 30° DIP CLASS 350 0.1 CLASS C SSMH-3.6 SSMH-3.7 884.48 884.81 131 30° DIP CLASS 350 0.1 CLASS C SSMH-3.8 SSMH-3.8 SSMH-3.8 SSMH-3.8 SSMH-3.8 SSMH-3.8 SSMH-3.8 SSMH-3.9 SSMH-3.8 SSMH-3.9 SSMH-3.10 SSMH-3.10 SSMH-3.11 SSMH-3.11 SSMH-3.11 SSMH-3.11 SSMH-3.11 SSMH-3.12 SSMH-3.13 SSMH-3.13 SSMH-3.13 SSMH-3.14 SSMH-3.15 SSMH-3.15 SSMH-3.16 SSMH-3.17 SSMH-3.18 SSMH-3.19 SSMH-3.20 SSMH-3.21 SSMH-3.19 SSMH-3.21 SSMH-3.21 SSMH-3.21 SSMH-3.22 SSMH-3.22 SSMH-3.22 SSMH-3.23 SSMH-3.24 SSMH-3.25 SSMH-3.24 SSMH-3.25 SSMH-3.25 SSMH-3.26 SSMH-3.2				CLASS C	0.1	30" DIP CLASS 350	269	883.78	883.49	SSMH-3.3	SSMH-3.2
SSMH-3.6 SSMH-3.6 884.48 884.81 313 30" DIP CLASS 350 0.1 CLASS C				CLASS C	0.1	30" DIP CLASS 350	197	883.98	883.78	SSMH-3.4	SSMH-3.3
SSMH-3.6 SSMH-3.6 SSMH-3.7 884.48 144 30° DIP CLASS 350 0.1 CLASS C SSMH-3.7 SSMH-3.9 884.81 884.82 16 30° DIP CLASS 350 0.1 CLASS C SSMH-3.8 SSMH-3.9 884.81 884.82 16 30° DIP CLASS 350 0.1 CLASS C SSMH-3.8 SSMH-3.9 SSMH-3.9 885.05 885.34 140 30° DIP CLASS 350 0.2 CLASS C SSMH-3.10 SSMH-3.11 SSMH-3.11 885.35 885.99 280 30° DIP CLASS 350 0.2 CLASS C SSMH-3.11 SSMH-3.12 SSMH-3.12 SSMH-3.13 889.79 899.95 20 8° DIP CLASS 350 0.2 CLASS C SSMH-3.14 SSMH-3.15 SSMH-3.16 887.56 210 30° DIP CLASS 350 0.2 CLASS B SSMH-3.15 SSMH-3.16 887.56 210 30° DIP CLASS 350 0.2 CLASS B SSMH-3.17 SSMH-3.18 SSMH-3.16 887.56 889.03 242 30° DIP CLASS 350 0.2 CLASS B SSMH-3.18 SSMH-3.19 889.32 889.81 160 30° DIP CLASS 350 0.2 CLASS B SSMH-3.18 SSMH-3.19 889.32 889.81 160 30° DIP CLASS 350 0.2 CLASS B SSMH-3.18 SSMH-3.19 889.05 889.03 242 30° DIP CLASS 350 0.2 CLASS B SSMH-3.18 SSMH-3.19 889.05 889.03 242 30° DIP CLASS 350 0.2 CLASS B SSMH-3.18 SSMH-3.19 889.05 889.03 242 30° DIP CLASS 350 0.2 CLASS B SSMH-3.18 SSMH-3.19 889.05 889.03 889.98 20 0.00 DIP CLASS 350 0.2 CLASS B SSMH-3.18 SSMH-3.19 889.05 889.03 889.05 119 30° DIP CLASS 350 0.2 CLASS B SSMH-3.18 SSMH-3.19 889.05 889.03 242 30° DIP CLASS 350 0.2 CLASS B SSMH-3.18 SSMH-3.19 889.05 889.03 242 30° DIP CLASS 350 0.2 CLASS B SSMH-3.19 SSMH-3.19 889.05 889.03 242 30° DIP CLASS 350 0.2 CLASS C SSMH-3.21 SSMH-3.22 889.81 889.05 889.05 119 30° DIP CLASS 350 0.2 CLASS C SSMH-3.21 SSMH-3.23 889.81 889.05 889.07 119 30° DIP CLASS 350 0.2 CLASS C SSMH-3.22 SSMH-3.24 889.81 889.06 889.07 120° DIP CLASS 350 0.2 CLASS C SSMH-3.25 SSMH-3.26 889.07 889.08 889.08 177 30° DIP CLASS 350 0.2 CLASS C SSMH-3.25 SSMH-3.26 889.08 889.08 177 30° DIP CLASS 350 0.1 8 CLASS C DITCH 42° STEEL CASING FOR J&B SSMH-3.25 SSMH-3.26 889.08 889.04 32 DIP CLASS 350 0.1 8 CLASS C DITCH 42° STEEL CASING FOR J&B SSMH-3.25 SSMH-3.25 889.08 889.08 177 30° DIP CLASS 350 1.8 CLASS C DITCH 42° STEEL CASING FOR J&B SSMH-3.25 SSMH-3.25 889.08 889.04 32 30° DIP CLASS 350 1.8 CLASS C		42" STEEL CASING FOR J&B	RAILROAD CROSSING	CLASS C	0.2	30" DIP CLASS 350	169	884.33	883.98	SSMH-3.5	SSMH-3.4
SSMH-3.7 SSMH-3.8 884.81 884.82 16 30° DIP CLASS 350 0.1 CLASS C SSMH-3.9 SSMH-3.9 884.82 886.05 214 30° DIP CLASS 350 0.1 CLASS C SSMH-3.9 SSMH-3.10 885.05 885.34 140 30° DIP CLASS 350 0.2 CLASS C STREAM CROSSING 42° STEEL CASING FOR J&B SSMH-3.11 SSMH-3.11 885.34 885.89 280 30° DIP CLASS 350 0.2 CLASS C SSMH-3.11 SSMH-3.12 SSMH-3.13 898.79 889.95 20 8° DIP CLASS 350 0.2 CLASS C SSMH-3.12 SSMH-3.14 886.42 887.15 237 30° DIP CLASS 350 0.2 CLASS C SSMH-3.15 SSMH-3.16 SSMH-3.16 SSMH-3.16 SSMH-3.16 SSMH-3.16 SSMH-3.16 SSMH-3.17 887.74 88 30° DIP CLASS 350 0.2 CLASS B SSMH-3.16 SSMH-3.17 887.74 888.55 889.03 242 30° DIP CLASS 350 0.2 CLASS B SSMH-3.17 SSMH-3.18 SSMH-3.19 SSMH-3.19 SSMH-3.19 SSMH-3.19 889.32 149 30° DIP CLASS 350 0.2 CLASS B SSMH-3.19 SSMH-3.19 SSMH-3.20 SSMH-3.21 889.81 160 30° DIP CLASS 350 0.2 CLASS C STREAM CROSSING 42° STEEL CASING FOR J&B SSMH-3.20 SSMH-3.21 889.81 160 30° DIP CLASS 350 0.2 CLASS C STREAM CROSSING 42° STEEL CASING FOR J&B SSMH-3.21 889.81 160 30° DIP CLASS 350 0.2 CLASS C STREAM CROSSING 42° STEEL CASING FOR J&B SSMH-3.21 889.81 160 30° DIP CLASS 350 0.2 CLASS C STREAM CROSSING 42° STEEL CASING FOR J&B SSMH-3.21 889.81 160 30° DIP CLASS 350 0.2 CLASS C STREAM CROSSING 42° STEEL CASING FOR J&B SSMH-3.22 SSMH-3.22 SSMH-3.22 SSMH-3.23 SSMH-3.24 891.49 893.77 130 30° DIP CLASS 350 0.2 CLASS C DITCH 42° STEEL CASING FOR J&B SSMH-3.24 891.49 893.77 130 30° DIP CLASS 350 1.8 CLASS C DITCH 42° STEEL CASING FOR J&B SSMH-3.24 891.49 893.77 130 30° DIP CLASS 350 1.8 CLASS C DITCH 42° STEEL CASING FOR J&B SSMH-3.24 891.49 893.77 130 30° DIP CLASS 350 1.8 CLASS C DITCH 42° STEEL CASING FOR J&B SSMH-3.25 SSMH-3.26 896.88 897.44 32 30° DIP CLASS 350 1.8 CLASS C DITCH 42° STEEL CASING FOR J&B SSMH-3.25 SSMH-3.26 896.88 897.44 32 30° DIP CLASS 350 1.8 CLASS C	STORM DRAIN AND UTILITY INSTALLATION BY OPEN CUT ACROSS P.C. C			CLASS C	0.1	30" DIP CLASS 350	144	884.48	884.33	SSMH-3.6	SSMH-3.5
SSMH-3.7 SSMH-3.8 SSMH-3.9 884.82 886.05 214 30° DIP CLASS 350 0.1 CLASS C SSMH-3.9 SSMH-3.10 885.05 885.34 140 30° DIP CLASS 350 0.2 CLASS C STREAM CROSSING 42" STEEL CASING FOR J&B SSMH-3.11 885.34 886.89 280 30° DIP CLASS 350 0.2 CLASS C STREAM CROSSING 42" STEEL CASING FOR J&B SSMH-3.11 SSMH-3.12 885.89 886.42 273 30° DIP CLASS 350 0.2 CLASS C SSMH-3.12 SSMH-3.13 899.79 899.95 20 8° DIP CLASS 350 0.8 CLASS C SSMH-3.12 SSMH-3.14 886.42 887.15 237 30° DIP CLASS 350 0.2 CLASS C SSMH-3.14 SSMH-3.16 SSMH-3.16 887.56 210 30° DIP CLASS 350 0.2 CLASS B SSMH-3.16 SSMH-3.16 887.56 887.74 88 30° DIP CLASS 350 0.2 CLASS B SSMH-3.16 SSMH-3.16 887.56 887.74 88 30° DIP CLASS 350 0.2 CLASS B SSMH-3.17 SSMH-3.18 888.55 889.03 242 30° DIP CLASS 350 0.2 CLASS B SSMH-3.17 SSMH-3.18 SSMH-3.19 SSMH-3.19 SSMH-3.19 SSMH-3.19 SSMH-3.19 SSMH-3.19 SSMH-3.19 SSMH-3.20 SSMH-3.21 889.81 890.05 119 30° DIP CLASS 350 0.2 CLASS C STREAM CROSSING 42" STEEL CASING FOR J&B SSMH-3.22 SSMH-3.22 SSMH-3.23 SSMH-3.23 SSMH-3.24 889.49 890.05 890.96 891.49 269 30° DIP CLASS 350 0.2 CLASS C STREAM CROSSING 42" STEEL CASING FOR J&B SSMH-3.23 SSMH-3.24 881.49 893.77 130 30° DIP CLASS 350 0.2 CLASS C STREAM CROSSING 42" STEEL CASING FOR J&B SSMH-3.22 SSMH-3.23 SSMH-3.24 881.49 893.77 130 30° DIP CLASS 350 0.2 CLASS C STREAM CROSSING 42" STEEL CASING FOR J&B SSMH-3.22 SSMH-3.24 881.49 893.77 130 30° DIP CLASS 350 0.2 CLASS C DITCH 42" STEEL CASING FOR J&B SSMH-3.24 881.49 893.77 896.88 177 30° DIP CLASS 350 1.8 CLASS C DITCH 42" STEEL CASING FOR J&B SSMH-3.25 SSMH-3.26 896.88 897.44 32 30° DIP CLASS 350 1.8 CLASS C SSMH-3.26 896.88 897.44 32 30° DIP CLASS 350 1.8 CLASS C SSMH-3.26 896.88 897.44 32 30° DIP CLASS 350 1.8 CLASS C	8′ MIN			CLASS C	0.1	30" DIP CLASS 350	313	884.81	884.48	SSMH-3.7	SSMH-3.6
SSMH-3.9 SSMH-3.10 885.05 885.34 140 30° DIP CLASS 350 0.2 CLASS C STREAM CROSSING 42° STEEL CASING FOR J&B	EXISTING PAVEMENT JOINT— PAVEMENT CUT			CLASS C	0.1	30" DIP CLASS 350	16	884.82	884.81	SSMH-3.8	SSMH-3.7
SSMH-3.10				CLASS C	0.1	30" DIP CLASS 350	214	885.05	884.82	SSMH-3.9	SSMH-3.8
SSMH-3.11 SSMH-3.12 885.89 886.42 273 30" DIP CLASS 350 0.2 CLASS C SSMH-3.12 SSMH-3.13 899.79 899.95 20 8" DIP CLASS 350 0.8 CLASS C SSMH-3.14 886.42 887.15 237 30" DIP CLASS 350 0.8 CLASS C SSMH-3.15 SSMH-3.14 886.42 887.15 887.56 210 30" DIP CLASS 350 0.2 CLASS B SSMH-3.16 SSMH-3.16 887.56 887.74 88 30" DIP CLASS 350 0.2 CLASS B SSMH-3.16 SSMH-3.17 887.74 888.55 413 30" DIP CLASS 350 0.2 CLASS B SSMH-3.17 SSMH-3.18 888.55 889.03 242 0.2 CLASS B SSMH-3.19 SSMH-3.19 889.03 889.32 149 30" DIP CLASS 350 0.2 CLASS C SSMH-3.21 SSMH-3.20 889.32 889.81 160 30" DIP CLASS 350 0.2 CLASS C SSMH-3.21 SSMH-3.22 890.05 890.96 298 30" DIP CLASS 350 0.2 CLASS C SSMH-3.21 SSMH-3.23 890.96 891.49 269 30" DIP CLASS 350 0.2 CLASS C SSMH-3.23 SSMH-3.23 890.96 891.49 269 30" DIP CLASS 350 0.2 CLASS C SSMH-3.24 SSMH-3.25 890.78 893.77 130 30" DIP CLASS 350 1.8 CLASS C SSMH-3.25 SSMH-3.26 896.88 897.44 32 30" DIP CLASS 350 1.8 CLASS C SSMH-3.25 SSMH-3.26 896.88 897.44 32 30" DIP CLASS 350 1.8 CLASS C SSMH-3.25 SSMH-3.26 896.88 897.44 32 30" DIP CLASS 350 1.8 CLASS C SSMH-3.25 SSMH-3.26 896.88 897.44 32 30" DIP CLASS 350 1.8 CLASS C SSMH-3.25 SSMH-3.26 896.88 897.44 32 30" DIP CLASS 350 1.8 CLASS C	6. MIN. 18 8 6. MIN.	42" STEEL CASING FOR J&B	STREAM CROSSING	CLASS C	0.2	30" DIP CLASS 350	140	885.34	885.05	SSMH-3.10	SSMH-3.9
SSMH-3.12				CLASS C	0.2	30" DIP CLASS 350	280	885.89	885.34	SSMH-3.11	SSMH-3.10
SSMH-3.12 SSMH-3.13 899.79 899.95 20 8" DIP CLASS 350 0.8 CLASS C SSMH-3.14 SSMH-3.15 SSMH-3.14 SSMH-3.15 887.15 237 30" DIP CLASS 350 0.2 CLASS B SSMH-3.15 SSMH-3.16 887.56 87.74 88 30" DIP CLASS 350 0.2 CLASS B SSMH-3.17 85MH-3.17 85MH-3.17 85MH-3.17 887.74 888.55 413 30" DIP CLASS 350 0.2 CLASS B SSMH-3.17 SSMH-3.18 888.55 889.03 242 30" DIP CLASS 350 0.2 CLASS B SSMH-3.19 889.03 889.32 149 30" DIP CLASS 350 0.2 CLASS C STREAM CROSSING 42" STEEL CASING FOR J&B SSMH-3.19 SSMH-3.20 889.31 889.81 160 30" DIP CLASS 350 0.2 CLASS C STREAM CROSSING 42" STEEL CASING FOR J&B SSMH-3.21 SSMH-3.22 890.05 890.96 298 30" DIP CLASS 350 0.3 CLASS C STREAM CROSSING 42" STEEL CASING FOR J&B SSMH-3.22 SSMH-3.23 890.96 891.49 269 30" DIP CLASS 350 0.2 CLASS C SSMH-3.23 SSMH-3.24 SSMH-3.24 SSMH-3.24 SSMH-3.25 893.77 896.88 177 30" DIP CLASS 350 1.8 CLASS C STREAM CROSSING 42" STEEL CASING FOR J&B SSMH-3.25 SSMH-3.26 896.88 897.44 32 30" DIP CLASS 350 1.8 CLASS C DITCH 42" STEEL CASING FOR J&B SSMH-3.25 SSMH-3.26 896.88 897.44 32 30" DIP CLASS 350 1.8 CLASS C DITCH 42" STEEL CASING FOR J&B SSMH-3.25 SSMH-3.26 896.88 897.44 32 30" DIP CLASS 350 1.8 CLASS C	Description of the proof of the			CLASS C	0.2	30" DIP CLASS 350	273	886.42	885.89	SSMH-3.12	SSMH-3.11
SSMH-3.14 SSMH-3.15 887.15 887.56 210 30° DIP CLASS 350 0.2 CLASS B SSMH-3.16 887.56 887.74 88 30° DIP CLASS 350 0.2 CLASS B SSMH-3.16 SSMH-3.17 887.74 888.55 413 30° DIP CLASS 350 0.2 CLASS B SSMH-3.18 888.55 889.03 242 30° DIP CLASS 350 0.2 CLASS B SSMH-3.19 889.03 889.32 149 30° DIP CLASS 350 0.2 CLASS B SSMH-3.18 SSMH-3.19 SSMH-3.19 SSMH-3.20 889.32 889.81 160 30° DIP CLASS 350 0.2 CLASS C STREAM CROSSING 42° STEEL CASING FOR J&B SSMH-3.21 SSMH-3.21 889.81 890.05 119 30° DIP CLASS 350 0.2 CLASS C SSMH-3.21 SSMH-3.22 SSMH-3.22 SSMH-3.23 890.96 891.49 269 30° DIP CLASS 350 0.3 CLASS C N. DRUID HILLS RD. 42° STEEL CASING FOR J&B SSMH-3.23 SSMH-3.24 891.49 893.77 130 30° DIP CLASS 350 0.2 CLASS C SSMH-3.25 SSMH-3.24 891.49 893.77 130 30° DIP CLASS 350 1.8 CLASS C SSMH-3.25 SSMH-3.26 896.88 897.44 32 30° DIP CLASS 350 1.8 CLASS C SSMH-3.25 SSMH-3.26 896.88 897.44 32 30° DIP CLASS 350 1.8 CLASS C SSMH-3.25 SSMH-3.26 896.88 897.44 32 30° DIP CLASS 350 1.8 CLASS C SSMH-3.25 SSMH-3.26 896.88 897.44 32 30° DIP CLASS 350 1.8 CLASS C SSMH-3.25 SSMH-3.26 896.88 897.44 32 30° DIP CLASS 350 1.8 CLASS C				CLASS C	0.8	8" DIP CLASS 350	20	899.95	899.79	SSMH-3.13	SSMH-3.12
SSMH-3.15 SSMH-3.16 887.56 887.74 88 30" DIP CLASS 350 0.2 CLASS B SSMH-3.17 SSMH-3.17 887.74 888.30" DIP CLASS 350 0.2 CLASS B SSMH-3.16 SSMH-3.17 SSMH-3.18 888.55 413 30" DIP CLASS 350 0.2 CLASS B SSMH-3.18 SSMH-3.19 889.03 889.32 149 30" DIP CLASS 350 0.2 CLASS C STREAM CROSSING 42" STEEL CASING FOR J&B SSMH-3.19 SSMH-3.20 889.32 889.81 160 30" DIP CLASS 350 0.2 CLASS C STREAM CROSSING 42" STEEL CASING FOR J&B SSMH-3.21 SSMH-3.21 SSMH-3.22 890.05 890.96 298 30" DIP CLASS 350 0.2 CLASS C N. DRUID HILLS RD. 42" STEEL CASING FOR J&B SSMH-3.22 SSMH-3.23 SSMH-3.24 891.49 269 30" DIP CLASS 350 0.2 CLASS C SSMH-3.23 SSMH-3.24 891.49 893.77 130 30" DIP CLASS 350 1.8 CLASS C DITCH 42" STEEL CASING FOR J&B SSMH-3.24 SSMH-3.25 SSMH-3.25 SSMH-3.26 896.88 897.44 32 30" DIP CLASS 350 1.8 CLASS C SSMH-3.26 896.88 897.44 32 30" DIP CLASS 350 1.8 CLASS C SSMH-3.25 SSMH-3.26 896.88 897.44 32 30" DIP CLASS 350 1.8 CLASS C SSMH-3.25 SSMH-3.26 896.88 897.44 32 30" DIP CLASS 350 1.8 CLASS C SSMH-3.25 SSMH-3.26 896.88 897.44 32 30" DIP CLASS 350 1.8 CLASS C SSMH-3.26 SSMH-3.26 896.88 897.44 32 30" DIP CLASS 350 1.8 CLASS C SSMH-3.26 SSMH-3.26 896.88 897.44 32 30" DIP CLASS 350 1.8 CLASS C SSMH-3.26 SSMH-3.27 SSMH-3.26 SSMH-3.2	-EXISTING CONCRETE PAVEMENT CLASS AN CONC. CONCRETE	42" STEEL CASING FOR J&B	APARTMENTS	CLASS C	0.3	30" DIP CLASS 350	237	887.15	886.42	SSMH-3.14	SSMH-3.12
SSMH-3.16	////			CLASS B	0.2	30" DIP CLASS 350	210	887.56	887.15	SSMH-3.15	SSMH-3.14
SSMH-3.17 SSMH-3.18 888.55 889.03 242 30" DIP CLASS 350 0.2 CLASS B SSMH-3.18 SSMH-3.19 889.03 889.32 149 30" DIP CLASS 350 0.2 CLASS C SSMH-3.19 SSMH-3.20 889.32 889.81 160 30" DIP CLASS 350 0.3 CLASS C SSMH-3.21 889.81 890.05 119 30" DIP CLASS 350 0.2 CLASS C SSMH-3.22 SSMH-3.22 890.05 890.96 298 30" DIP CLASS 350 0.3 CLASS C SSMH-3.22 SSMH-3.23 890.96 891.49 269 30" DIP CLASS 350 0.2 CLASS C SSMH-3.23 SSMH-3.24 891.49 893.77 130 30" DIP CLASS 350 1.8 CLASS C SSMH-3.24 SSMH-3.25 893.77 896.88 177 30" DIP CLASS 350 1.8 CLASS C SSMH-3.25 SSMH-3.26 896.88 897.44 32 30" DIP CLASS 350 1.8 CLASS C SCMH-3.25 SSMH-3.26 896.88 897.44 32 30" DIP CLASS 350 1.8 CLASS C				CLASS B	0.2	30" DIP CLASS 350	88	887.74	887.56	SSMH-3.16	SSMH-3.15
SSMH-3.17 SSMH-3.18 888.55 889.03 242 30" DIP CLASS 350 0.2 CLASS B SSMH-3.18 SSMH-3.19 889.03 889.32 149 30" DIP CLASS 350 0.2 CLASS C SSMH-3.19 SSMH-3.20 889.32 889.81 160 30" DIP CLASS 350 0.3 CLASS C SSMH-3.21 889.81 890.05 119 30" DIP CLASS 350 0.2 CLASS C SSMH-3.22 SSMH-3.22 890.05 890.96 298 30" DIP CLASS 350 0.3 CLASS C SSMH-3.22 SSMH-3.23 890.96 891.49 269 30" DIP CLASS 350 0.2 CLASS C SSMH-3.23 SSMH-3.24 891.49 893.77 130 30" DIP CLASS 350 1.8 CLASS C SSMH-3.24 SSMH-3.25 893.77 896.88 177 30" DIP CLASS 350 1.8 CLASS C SSMH-3.25 SSMH-3.26 896.88 897.44 32 30" DIP CLASS 350 1.8 CLASS C SCMH-3.25 SSMH-3.26 896.88 897.44 32 30" DIP CLASS 350 1.8 CLASS C	SUBBASE —			CLASS B	0.2	30" DIP CLASS 350	413	888.55	887.74	SSMH-3.17	SSMH-3.16
SSMH-3.20 SSMH-3.21 889.81 890.05 119 30" DIP CLASS 350 0.2 CLASS C STREAM CROSSING 42" STEEL CASING FOR J&B SSMH-3.22 890.05 890.96 298 30" DIP CLASS 350 0.2 CLASS C N. DRUID HILLS RD. 42" STEEL CASING FOR J&B SSMH-3.22 SSMH-3.23 890.96 891.49 269 30" DIP CLASS 350 0.2 CLASS C SSMH-3.23 SSMH-3.24 891.49 893.77 130 30" DIP CLASS 350 1.8 CLASS C DITCH 42" STEEL CASING FOR J&B SSMH-3.25 SSMH-3.25 893.77 896.88 177 30" DIP CLASS 350 1.8 CLASS C SSMH-3.25 SSMH-3.26 896.88 897.44 32 30" DIP CLASS 350 1.8 CLASS C	MIN. DEPTH OF PATCH SHALL BE EXISTING PAVEMENT DEPTH PLUS 2°.			CLASS B	0.2	30" DIP CLASS 350	242	889.03	888.55	SSMH-3.18	SSMH-3.17
SSMH-3.20 SSMH-3.21 889.81 890.05 119 30" DIP CLASS 350 0.2 CLASS C STREAM CROSSING 42" STEEL CASING FOR J&B SSMH-3.22 890.05 890.96 298 30" DIP CLASS 350 0.2 CLASS C N. DRUID HILLS RD. 42" STEEL CASING FOR J&B SSMH-3.22 SSMH-3.23 890.96 891.49 269 30" DIP CLASS 350 0.2 CLASS C SSMH-3.23 SSMH-3.24 891.49 893.77 130 30" DIP CLASS 350 1.8 CLASS C DITCH 42" STEEL CASING FOR J&B SSMH-3.25 SSMH-3.25 893.77 896.88 177 30" DIP CLASS 350 1.8 CLASS C SSMH-3.25 SSMH-3.26 896.88 897.44 32 30" DIP CLASS 350 1.8 CLASS C	SEE NOTE 3			CLASS C	0.2	30" DIP CLASS 350	149	889.32	889.03	SSMH-3.19	SSMH-3.18
SSMH-3.21 SSMH-3.22 890.05 890.96 298 30" DIP CLASS 350 0.3 CLASS C N. DRUID HILLS RD. 42" STEEL CASING FOR J&B SSMH-3.22 SSMH-3.23 890.96 891.49 269 30" DIP CLASS 350 0.2 CLASS C SSMH-3.23 SSMH-3.24 891.49 893.77 130 30" DIP CLASS 350 1.8 CLASS C DITCH 42" STEEL CASING FOR J&B SSMH-3.24 SSMH-3.25 893.77 896.88 177 30" DIP CLASS 350 1.8 CLASS C SSMH-3.25 SSMH-3.26 896.88 897.44 32 30" DIP CLASS 350 1.8 CLASS C	-SEE NOTE S	42" STEEL CASING FOR J&B	STREAM CROSSING	CLASS C	0.3	30" DIP CLASS 350	160	889.81	889.32	SSMH-3.20	SSMH-3.19
SSMH-3.22 SSMH-3.23 890.96 891.49 269 30" DIP CLASS 350 0.2 CLASS C SSMH-3.23 SSMH-3.24 891.49 893.77 130 30" DIP CLASS 350 1.8 CLASS C DITCH 42" STEEL CASING FOR J&B SSMH-3.24 SSMH-3.25 893.77 896.88 177 30" DIP CLASS 350 1.8 CLASS C SSMH-3.25 SSMH-3.26 896.88 897.44 32 30" DIP CLASS 350 1.8 CLASS C				CLASS C	0.2	30" DIP CLASS 350	119	890.05	889.81	SSMH-3.21	SSMH-3.20
SSMH-3.23 SSMH-3.24 891.49 893.77 130 30" DIP CLASS 350 1.8 CLASS C DITCH 42" STEEL CASING FOR J&B SSMH-3.24 SSMH-3.25 893.77 896.88 177 30" DIP CLASS 350 1.8 CLASS C SSMH-3.25 SSMH-3.26 896.88 897.44 32 30" DIP CLASS 350 1.8 CLASS C		42" STEEL CASING FOR J&B	N. DRUID HILLS RD.	CLASS C	0.3	30" DIP CLASS 350	298	890.96	890.05	SSMH-3.22	SSMH-3.21
SSMH-3.24 SSMH-3.25 893.77 896.88 177 30" DIP CLASS 350 1.8 CLASS C				CLASS C	0.2	30" DIP CLASS 350	269	891.49	890.96	SSMH-3.23	SSMH-3.22
SSMH-3.24 SSMH-3.25 893.77 896.88 177 30" DIP CLASS 350 1.8 CLASS C SSMH-3.25 SSMH-3.26 896.88 897.44 32 30" DIP CLASS 350 1.8 CLASS C	7/2/384_5/3/3/5/8/0/1/00/1/00/1/00/1/00/1/00/1/00/1/0	42" STEEL CASING FOR J&B	DITCH	CLASS C	1.8	30" DIP CLASS 350	130	893.77	891.49	SSMH-3.24	SSMH-3.23
	TO A SECOND TO A VALUE DATA AND LOT MAN AND LITTLE SOUTH OF THE OFFICE OFFICE OF THE OFFICE OFFICE OFFICE OFFICE OFFICE OFFICE O			CLASS C	1.8	30" DIP CLASS 350	177	896.88	893.77	SSMH-3.25	SSMH-3.24
SSMH-3.26 SSMH-3.27 897.44 901.94 256 30" DIP CLASS 350 1.8 CLASS C				CLASS C	1.8	30" DIP CLASS 350	32	897.44	896.88	SSMH-3.26	SSMH-3.25
				CLASS C	1.8	30" DIP CLASS 350	256	901.94	897.44	SSMH-3.27	SSMH-3.26

STORM DRAIN AND UTILITY IN REMOVE ADDITIONAL PAVEMENT ON EACH SIDE OF TERCH TO 12' MIN. OR TO VISIBLE OVERBREAK WHICHEVER IS GREATER. PAVEMENT TO BE SAWED OR CUT AS DIRECTED BY THE ENGINEER. SUBGRADE, ETC. SEE NOTE 3 STAGE 1 STAGE 2	TACK COAT REQUIRED WITH ASPHALT SURFACE TOP 2' TO BE REPLACED WITH SAME * TYPE MAINIMIN 8' CLASS 'B' COORRETE OR MINIMIN 8' CLASS 'B' COORRETE OR MINIMIN 12' SOIL CEMENT BASE BASE, SUBBASE, ETC. TO BE REPLACED AS DIRECTED BY ENGINEER NOTE: SUFFACES ARE TO BE THOROUGHLY CLASS 'B' COORRETE OR MINIMIN 12' SOIL CEMENT BASE **SUFFACES ARE TO BE THOROUGHLY CLARED AND BITTONIOUS TACK COAT APPLIED BEFORE PLACMENT OF ASPHALTIC SURFACE COURSE. **WHERE RESURFACING IS REQUIRED ON TH PROJECT OMIT THE TOP 2' SHOWN ADD GRADE CONCRETE PATCH SUFFACE SAME AS EXISTING SURFACE, WITH THE RESURFACING OVERLAY BEING STAGE 4.	EXISTING SURFACE COURSE EXISTING BASE, SUBBASE, ETC. EXISTING CURB EXISTING SIDEN
EXISTING PAVEMENT JOINT EXISTING PAVEMENT JOINT PAVEMENT CUT FOR THE PAVEMENT CUT CLASS 'A' CONC., CONCRETE PAVEMENT PAYEMENT CLASS 'A' CONC., CONCRETE PAYEMENT CLASS 'A' CONC., CONCRETE PAYEMENT CLASS 'A' CONC., CONCRETE PAYEMENT OF MIN. 8' MIN. 8' MIN. 6' MIN. 8' MIN. 6' MIN. 6' MIN. 8' MIN. 6' MIN. 6' MIN. 6' MIN. 6' MIN. 6' MIN. 6' MIN.	EDGE OF TRENCH BY MIN PAVEMENT CUT OBLIQUE CROSSING NOTE: WHERE EDGE OF CUT IN RIGID PAVEMENT IS CLOSER THAN 6 FT. TO A TRANSVERSE JOINT, ALL PAVEMENT IN THAT AREA(SHADED) IS TO BE REPLACED AS DIRECTED BY THE ENGINEER. ALL PAVEMENT JOINTS ARE TO BE RE-ESTABLISHED. DOWELS AND TIE-BARS ARE TO BE REPLACED.	GENERAL NOTES: 1. SPECIFICATIONS: GEORGIA STANDARD, CURRENT EDITION & SUPPLEMENTS THERETO. 2. GOIOTHER PAVEMENT REPLACEMENT MATERIALS, SUCH AS HIGH EARLY STRENG CONCRETE, MAY BE SUBSTITUTED FOR MATERIALS SHOWN WHEN CALLED FIN THE PLANS OR BY THE ENGINEER. (D)PAYMENT FOR PIPE CULVERT OR UTILITY SHALL INCLUDE SAWING AND/OR CUTTING AND REMOVING EXISTING PAVEMENT AND REPLACING THE PAVEMENT AS SPECIFIED. PAYMENT FOR PIPE OR UTILITY INCLUDES THIS PAVEMENT OR WHERE OTHER MATERIALS SHOWN ARE IN CONTROL OF WHERE MATERIALS SHOWN ARE IN CONTROL OF SUBWALK, CURB. CURB & GUITTER MEDIAN PAVIND RIVEWAYS, ETC., WHICH ARE DISTURBED DUE TO THE INSTALLATION. 3. TRENCH DETAIL SHOWN IS GENERAL, SEE STANDARD 1030D FOR DETAILS REQUIRED FOR PIPE CULVERT INSTALLATIONS, SEE THE UTILITIES MANUAL FOR UTILITY INSTALLATION REQUIREMENTS. 4. AFTER REMOVING EXISTING PAVEMENT, THE SUBBASE AND VERTICAL FACE EXISTING PAVING SHALL BED AND WELL AND WITH A SOLUTION OF THE WAY OF
SUBBASE MIN. DEPTH OF PATCH SHALL BE EXISTING PAVEMENT DEPTH PLUS 2*. SEE NOTE 3	NOTE: WHEN THE CONCRETE IS POURED, IT SHALL BE STRUCK OFF AT AN ELEVATION SLIGHTLY HIGHER THAN THE INTENDED SURFACE AND TAMPED TO OFFSET SHRINKAGE. MECHANICAL VIBRATING EQUIPMENT SHALL BE USED TO CONSOLIDATE THE PLACED CONCRETE, ESPECIALLY AT THE EDGES AND AROUND THE STEEL AT JOINTS, THE CONCRETE SHALL THEN BE TAMPED A SECOND TIME, THEN SCREEDED AND CHECKED WITH A STRAIGHT EDGE TO GIVE THE SAME SURFACE GRADE AS THE EXISTING PAVMENT.	NOTE: THIS STANDARD IS FOR USE WHERE PERMANENT PAVEMEN' PATCHING IS REQUIRED. TEMPORARY PATCHING, IF REQUIRED SHALL BE ACCORDING TO OTHER DETAILS, SPECIFICATIONS, AS DIRECTED BY THE ENGINEER. DEPARTMENT OF TRANSPORTA STANDARD PAVEMENT PATCHING DETAILS (STORM DRAIN OR UTILITY INSTALLA BY OPEN CUT ACROSS EXISTING PAV NO SCALE REV. SUBMITTED TO SAMPLE PROVED THE PROVED TO SECONDER 1812.



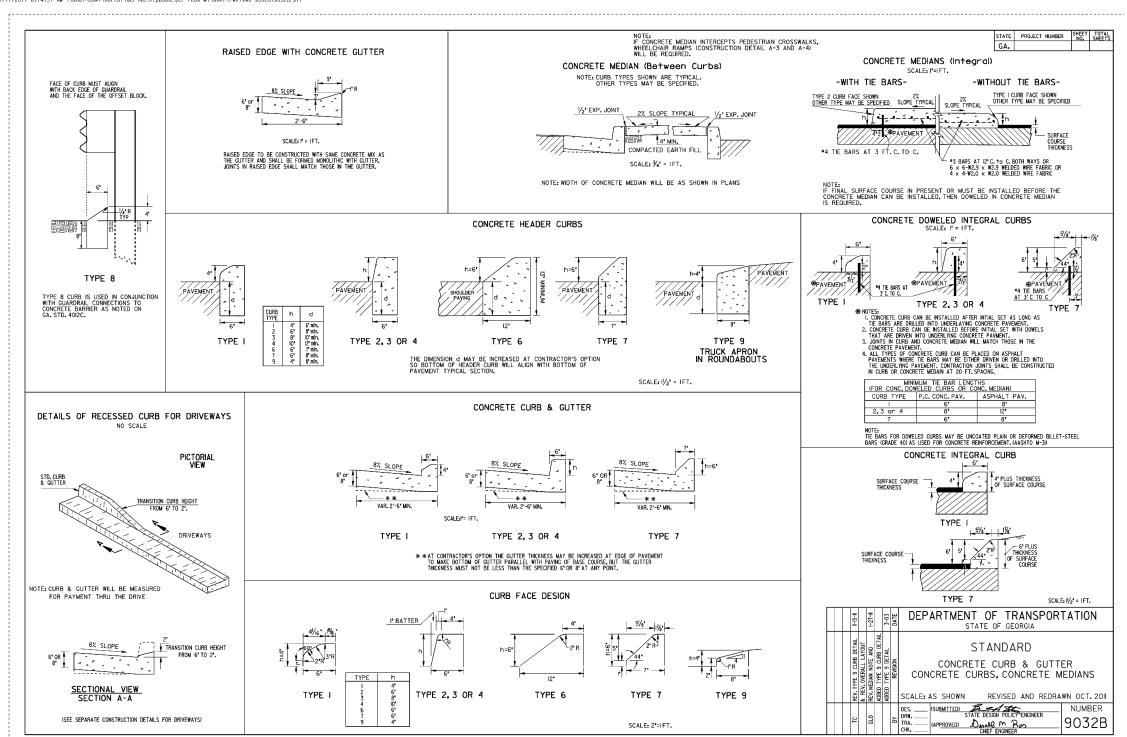
SANITARY SEWER PIPE SCHEDULE

SANITARY SEWER MANHOLE SCHEDULE																				
NAANII IOI E "	OTATION	MANUACI E TVDE	INCOMING	NODTUNO	FACTING	DEFLECTION	RIM	INVERT	INVERT	EXISTING		SER		SE		DATION	FRAME AND	NOTEO		
MANHOLE #	STATION	MANHOLE TYPE	PIPE SIZE	NORTHING	EASTING	(Δ)	ELEV. (FT)	IN (FT)	OUT (FT)	INVERT(S) (FT)	I.D. (FT)	THK (IN)	I.D. (FT)	THK (IN)	I.D. (FT)	THK (IN)	COVER TYPE	NOTES		
SSMH-1.1	14+95	CONCRETE RESIN	30"	1383740.21	2263886.82	34°11'39"	914.02	902.21	902.28	-	4' - 0"	0' - 3"	5' - 0"	0' - 6"	8' - 0"	0' - 8"	BOLT DOWN			
SSMH-1.2	15+48	CONCRETE RESIN	30"		2263934.70	53°05'39"	913.00	902.27	902.27	-	4' - 0"	0' - 3"	5' - 0"	0' - 6"	8' - 0"	0' - 8"	BOLT DOWN			
SSMH-1.3	18+33	CONCRETE RESIN	30"	-	2264184.60	09°22'03"	915.00	902.56	902.56	906.02	4' - 0"	0' - 3"	5' - 0"	0' - 6"	8' - 0"	0' - 8"	BOLT DOWN	INSIDE DROP	12/12/2011 9:04:54 AM \\GDDT-DSW1\GDPLDT\QCF\GO_K1p8000.qcf too 1/17/2011 8:14:31 AM \\GDDT-DSW1\GOPLDT\QCF\GO_	
SSMH-1.4	23+05	CONCRETE RESIN	30"		2264555.45	00°52'25"	914.18	903.04	903.04	-	4' - 0"	0' - 3"	5' - 0"	0' - 6"	8' - 0"	0' - 8"	BOLT DOWN	VENTED	<u> </u>	
SSMH-2.1	5+74	CONCRETE RESIN	24"	1387376.16	2273177.80	19°32'40"	950.14	941.11	940.91	-	4' - 0"	0' - 3"	5' - 0"	0' - 6"	8' - 0"	0' - 8"	BOLT DOWN			RAISED
SSMH-2.2	7+52	CONCRETE RESIN	24"	1387453.81	2273338.06	17°34'57"	949.42	941.85	941.85	944.66	4' - 0"	0' - 3"	5' - 0"	0' - 6"	8' - 0"	0' - 8"	BOLT DOWN	INSIDE DROP		
SSMH-2.3	9+79	CONCRETE RESIN	24"	1387609.86	2273502.89	33°49'09"	950.00	942.14	942.14	944.91	4' - 0"	0' - 3"	5' - 0"	0' - 6"	8' - 0"	0' - 8"	BOLT DOWN	INSIDE DROP	FACE OF CURB MUST ALIGN WITH BACK EDGE OF GUARDRAIL AND THE FACE OF THE OFFSET BLOCK.	6' or
SSMH-2.4	13+27	CONCRETE RESIN	24"	1387667.96	2273845.96	20°52'22"	950.78	942.58	942.58	943.76	4' - 0"	0' - 3"	5' - 0"	0' - 6"	8' - 0"	0' - 8"	BOLT DOWN	INSIDE DROP		6' or 8"
SSMH-2.5	15+69	CONCRETE RESIN	24"	1387790.64	2274054.25	04°35'23"	951.77	942.89	942.89	945.09, 945.05	4' - 0"	0' - 3"	5' - 0"	0' - 6"	8' - 0"	0' - 8"	BOLT DOWN	INSIDE DROP		
SSMH-2.6	18+44	CONCRETE RESIN	24"	1387910.89	2274301.92	36°17'40"	953.01	943.24	943.24	-	4' - 0"	0' - 3"	5' - 0"	0' - 6"	8' - 0"	0' - 8"	BOLT DOWN			RAISED EDGE THE GUTTER JOINTS IN RO
SSMH-2.7	19+85	CONCRETE RESIN	24"	1388035.66	2274367.72	28°39'43"	953.00	943.66	943.42	-	4' - 0"	0' - 3"	5' - 0"	0' - 6"	8' - 0"	0' - 8"	BOLT DOWN	VENTED	6'	
SSMH-3.1	5+61	CONCRETE RESIN	30"	1384603.03	2255578.02	20°58'37"	892.49	883.41	883.41	-	4' - 0"	0' - 3"	5' - 0"	0' - 6"	8' - 0"	0' - 8"	BOLT DOWN		1/4'R 4	-
SSMH-3.2	6+37	CONCRETE RESIN	30"	1384679.27	2255583.67	01°38'18"	898.05	883.49	883.49	-	4' - 0"	0' - 3"	5' - 0"	0' - 6"	8' - 0"	0' - 8"	BOLT DOWN			-
SSMH-3.3	9+07	CONCRETE RESIN	30"	1384948.31	2255595.86	43°39'28"	900.13	883.78	883.78	-	4' - 0"	0' - 3"	5' - 0"	0' - 6"	8' - 0"	0' - 8"	BOLT DOWN		<u> </u>	
SSMH-3.4	11+04	CONCRETE RESIN	30"	1385084.69	2255738.33	30°12'36"	898.90	883.98	883.98	-	4' - 0"	0' - 3"	5' - 0"	0' - 6"	8' - 0"	0' - 8"	BOLT DOWN	AT GRADE	TYPE 8	PAVEMENT PAVEMENT
SSMH-3.5	12+73	CONCRETE RESIN	30"	1385247.51	2255785.16	34°39'06"	896.00	884.33	884.33	-	4' - 0"	0' - 3"	5' - 0"	0' - 6"	8' - 0"	0' - 8"	BOLT DOWN	AT GRADE	TYPE 8 CURB IS USED IN CONJUNCT WITH GUARDRAIL CONNECTIONS TO CONCRETE BARRIER AS NOTED ON GA. STD. 4012C.	ON PAVEMENT
SSMH-3.6	14+17	CONCRETE RESIN	30"	1385383.76	2255739.28	37°52'21"	899.52	884.48	884.48	-	4' - 0"	0' - 3"	5' - 0"	0' - 6"	8' - 0"	0' - 8"	BOLT DOWN	VENTED	GA. STD. 4012C.	- 6' -
SSMH-3.7	17+30	CONCRETE RESIN	30"	1385556.49	2255478.50	53°22'37"	898.56	884.81	884.81	-	4' - 0"	0' - 3"	5' - 0"	0' - 6"	8' - 0"	0' - 8"	BOLT DOWN			TYPE I
SSMH-3.8	17+46	CONCRETE RESIN	30"	1385572.23	2255477.64	04°03'29"	898.82	884.82	884.82	891.14	4' - 0"	0' - 3"	5' - 0"	0' - 6"	8' - 0"	0' - 8"	BOLT DOWN	INSIDE DROP		
SSMH-3.9	19+59	CONCRETE RESIN	30"	1385785.93	2255481.20	51°49'55"	899.99	885.05	885.05	-	4' - 0"	0' - 3"	5' - 0"	0' - 6"	8' - 0"	0' - 8"	BOLT DOWN			
SSMH-3.10	20+99	CONCRETE RESIN	30"	1385870.60	2255592.69	00°00'00"	897.89	885.34	885.34	-	4' - 0"	0' - 3"	5' - 0"	0' - 6"	8' - 0"	0' - 8"	BOLT DOWN	VENTED	DETAILS OF RECESSED CU	RB FOR DRIVEWAYS
SSMH-3.11	23+80	CONCRETE RESIN	30"	1386040.19	2255815.99	82°03'55"	900.87	885.89	885.89	893.87	4' - 0"	0' - 3"	5' - 0"	0' - 6"	8' - 0"	0' - 8"	BOLT DOWN	INSIDE DROP		
SSMH-3.12	26+52	CONCRETE RESIN	30"	1385847.78	2256009.41	57°11'14"	908.75	886.42	886.42	898.83, 899.59	4' - 0"	0' - 3"	6' - 0"	0' - 7"	9' - 2"	0' - 8"	TRAFFIC	INSIDE DROP		PICTORIAL VIEW
SSMH-3.13	26+52	CONCRETE RESIN	8"	1385829.44	2256001.43	00°00'00"	908.03	899.95	899.75	-	4' - 0"	0' - 3"	4' - 0"	0' - 3"	6'- 6"	0' - 8"	TRAFFIC		STD. CURB & GUTTER	
SSMH-3.14	28+90	CONCRETE RESIN	30"	1385898.52	2256241.40	00°00'00"	904.83	887.15	887.15	898.78	4' - 0"	0' - 3"	5' - 0"	0' - 6"	8' - 0"	0' - 8"	BOLT DOWN	INSIDE DROP	TRAN	SITION CURB HEIGHT FROM 6' TO 2'.
SSMH-3.15	31+00	CONCRETE RESIN	30"	1385943.36	2256446.42	04°51'33"	904.13	887.56	887.56	-	4' - 0"	0' - 3"	5' - 0"	0' - 6"	8' - 0"	0' - 8"	BOLT DOWN			DRIVEWAYS
SSMH-3.16	31+88	CONCRETE RESIN	30"	1385969.49	2256530.86	52°10'16"	907.00	887.74	887.74	-	4' - 0"	0' - 3"	5' - 0"	0' - 6"	8' - 0"	0' - 8"	BOLT DOWN	VENTED		
SSMH-3.17	36+01	CONCRETE RESIN	30"	1386355.85	2256676.33	14°17'33"	913.07	888.55	888.55	-	4' - 0"	0' - 3"	6' - 0"	0' - 7"	9' - 2"	0' - 8"	BOLT DOWN		NOTE: CURB & GUTTER WILL BE MEASL	
SSMH-3.18	38+43	CONCRETE RESIN	30"	1386596.76	2256703.10	37°41'06"	915.82	889.03	889.03	-	4' - 0"	0' - 3"	6' - 0"	0' - 7"	9' - 2"	0' - 8"	BOLT DOWN		FOR PAYMENT THRU THE DRIVE	REU
SSMH-3.19	39+92	CONCRETE RESIN	30"	1386703.91	2256806.67	35°37'33"	913.94	889.32	889.32	-	4' - 0"	0' - 3"	6' - 0"	0' - 7"	9' - 2"	0' - 8"	BOLT DOWN			
SSMH-3.20	41+53	CONCRETE RESIN	30"	1386732.72	2256964.41	63°50'48"	907.90	889.81	889.81	-	4' - 0"	0' - 3"	5' - 0"	0' - 6"	8' - 0"	0' - 8"	BOLT DOWN		8% SLOPE	TRANSITION CURB HEIGHT FROM 6' TO 2'.
SSMH-3.21	42+72	CONCRETE RESIN	30"	1386850.16	2256997.65	00°00'00"	914.40	890.05	890.05	-	4' - 0"	0' - 3"	6' - 0"	0' - 7"	9' - 2"	0' - 8"	BOLT DOWN	VENTED	8"	_ ↑
SSMH-3.22	45+70	CONCRETE RESIN	30"	1387126.23	2257075.80	56°05'37"	906.53	890.96	890.96	-	4' - 0"	0' - 3"	5' - 0"	0' - 6"	8' - 0"	0' - 8"	BOLT DOWN		<u>SECTIONAL VIEW</u> SECTION A-A	
SSMH-3.23	48+39	CONCRETE RESIN	30"	1387217.91	2257333.46	01°29'00"	908.73	891.49	891.49		4' - 0"	0' - 3"	5' - 0"	0' - 6"	8' - 0"	0' - 8"	BOLT DOWN		(SEE SEPARATE CONSTRUCTION DET	AILS FOR DRIVEWAYS)
SSMH-3.24	49+69	CONCRETE RESIN	30"	1387261.48	2257455.94	01°49'04"	908.69	893.77	893.77	904.21, 904.11	4' - 0"	0' - 3"	5' - 0"	0' - 6"	8' - 0"	0' - 8"	BOLT DOWN	INSIDE DROP		x M:\TPC\9032B\Approved_9032B, pdf
SSMH-3.25	51+46	CONCRETE RESIN	30"	1387315.46	2257624.38	00°36'37"	909.00	896.88	896.88	903.11	4' - 0"	0' - 3"	5' - 0"	0' - 6"	8' - 0"	0' - 8"	BOLT DOWN	INSIDE DROP		
SSMH-3.26	51+78	CONCRETE RESIN	30"	1387325.54	2257654.74	32°26'19"	909.00	897.44	897.44	-	4' - 0"	0' - 3"	5' - 0"	0' - 6"	8' - 0"	0' - 8"	BOLT DOWN			

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GDOT STANDARD DETAIL 1401

PAVEMENT PATCHING DETAILS



4' - 0" | 0' - 3" | 5' - 0" | 0' - 6" | 8' - 0" | 0' - 8" | BOLT DOWN | VENTED

GDOT STANDARD DETAIL 9032B CONCRETE CURB & GUTTER, CONCRETE CURBS, CONRETE MEDIANS

UNIT C

1841 PEELER RD. ATLANTA, GA 30338 PHONE: (678) 336-5732 WWW.R2TINC.COM

DEKALB COUNTY
DEPARTMENT OF
WATERSHED
MANAGEMENT

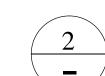
STAMP: EORG PROFESSIONAL

SHEET TITLE: 35 of 65

SEWER SCHEDULE & GDOT DETAILS

SSUED: 5.27.16 PROJECT NO. SCALE: NONE CHKD BY: A.R.

DESIGNED BY: J.J. DRAWN BY: J.J.

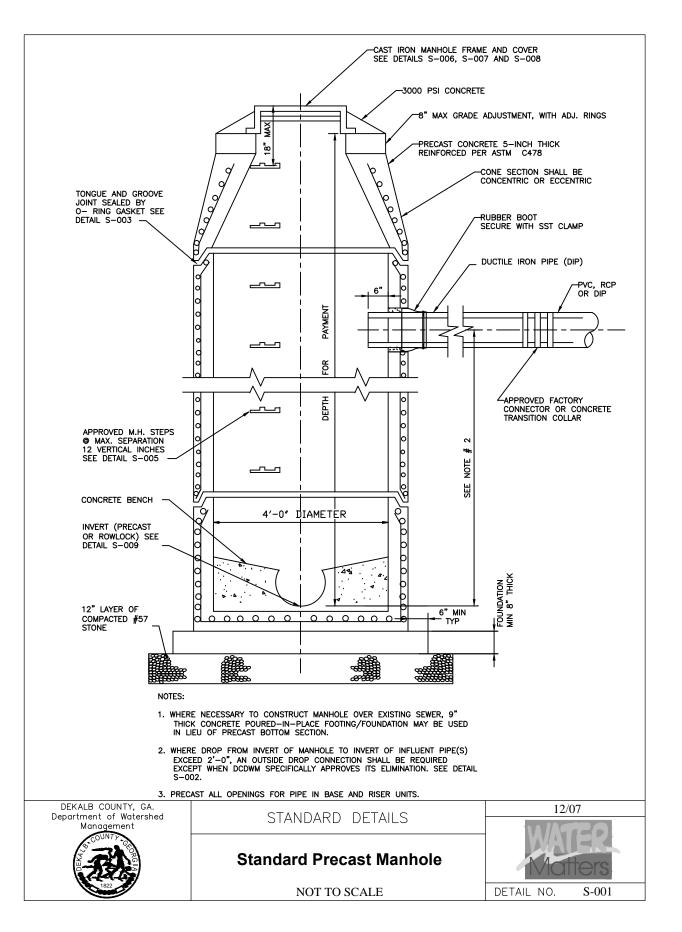


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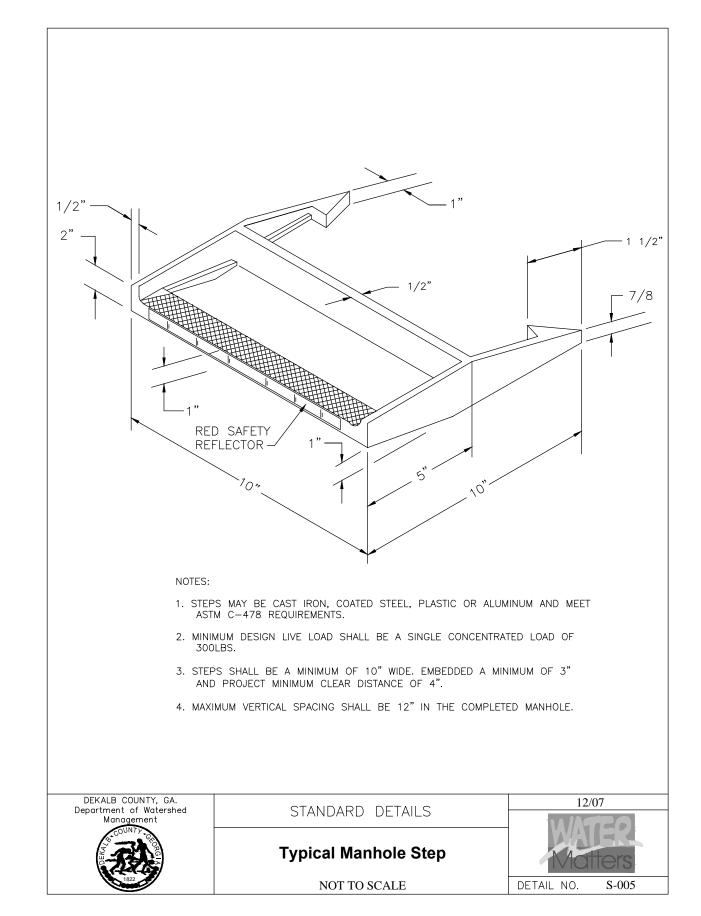
SSMH-3.27 54+34 CONCRETE RESIN

SANITARY SEWER MANHOLE SCHEDULE

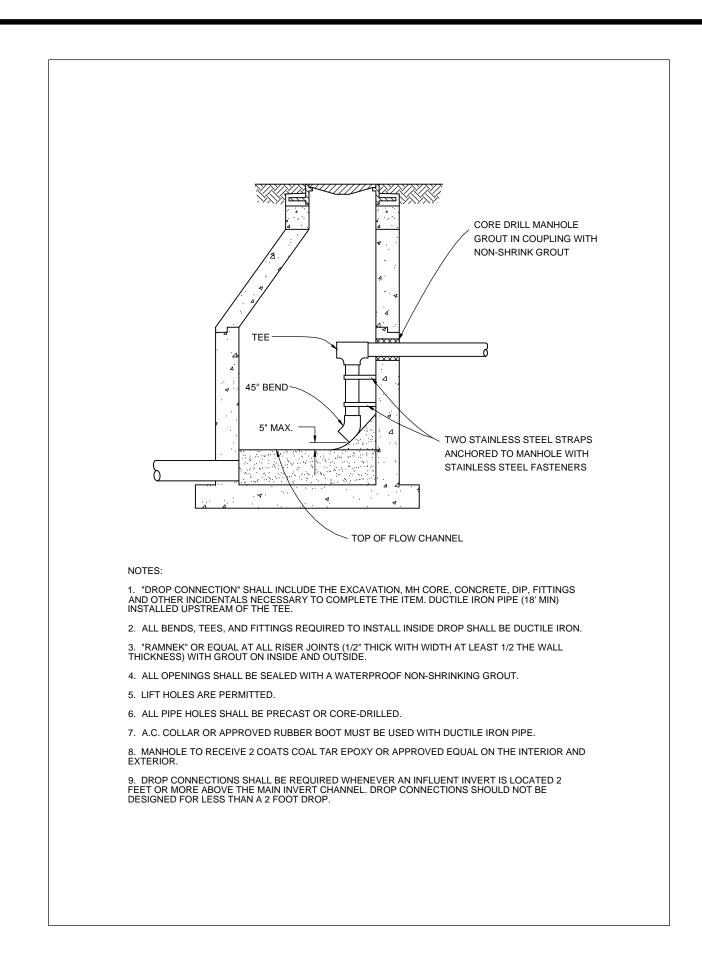
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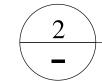




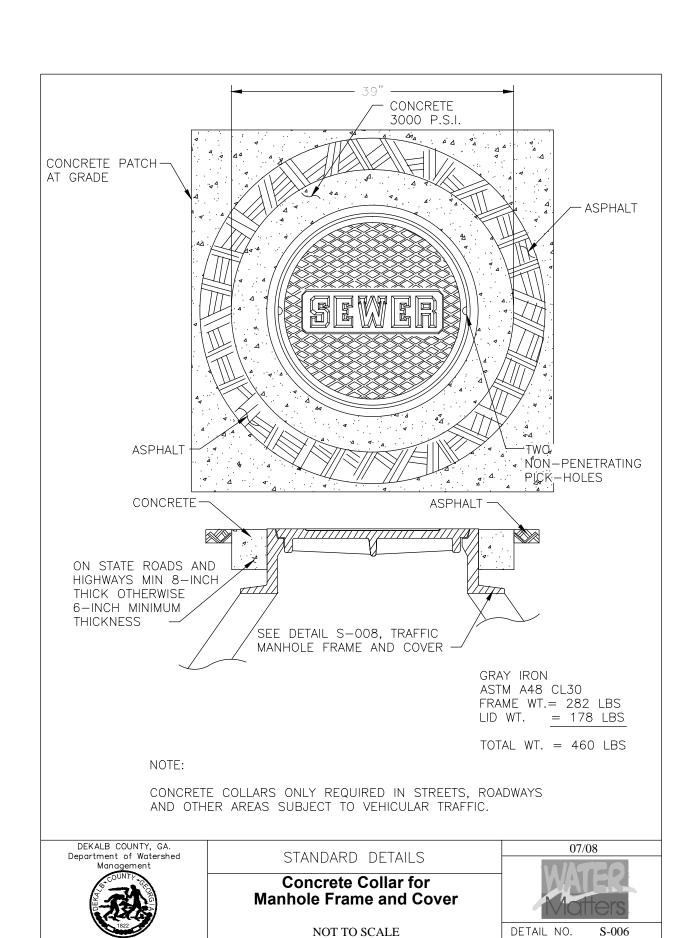




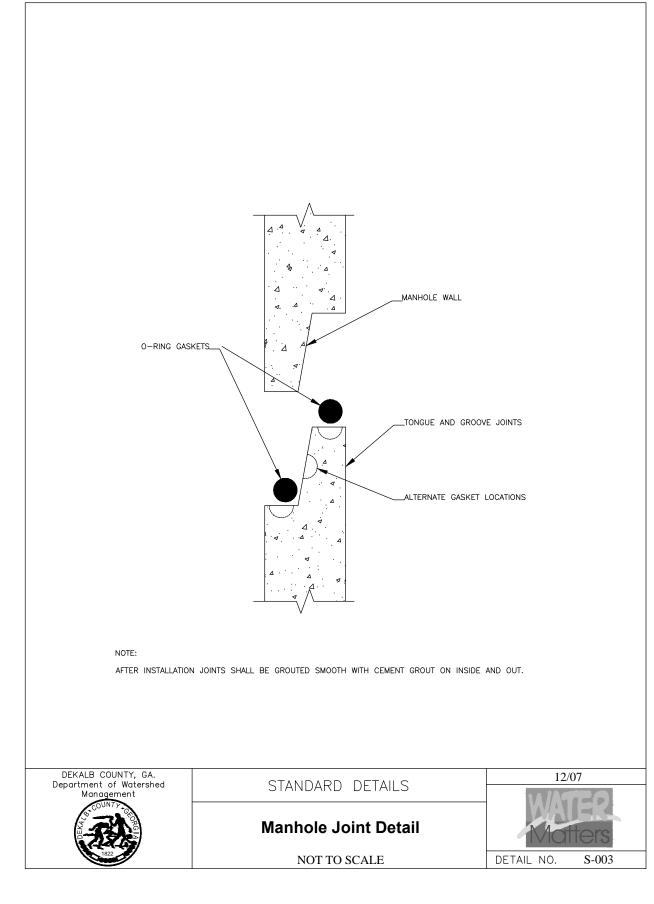


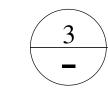


INSIDE DROP CONNECTION FOR PRECAST MANHOLE

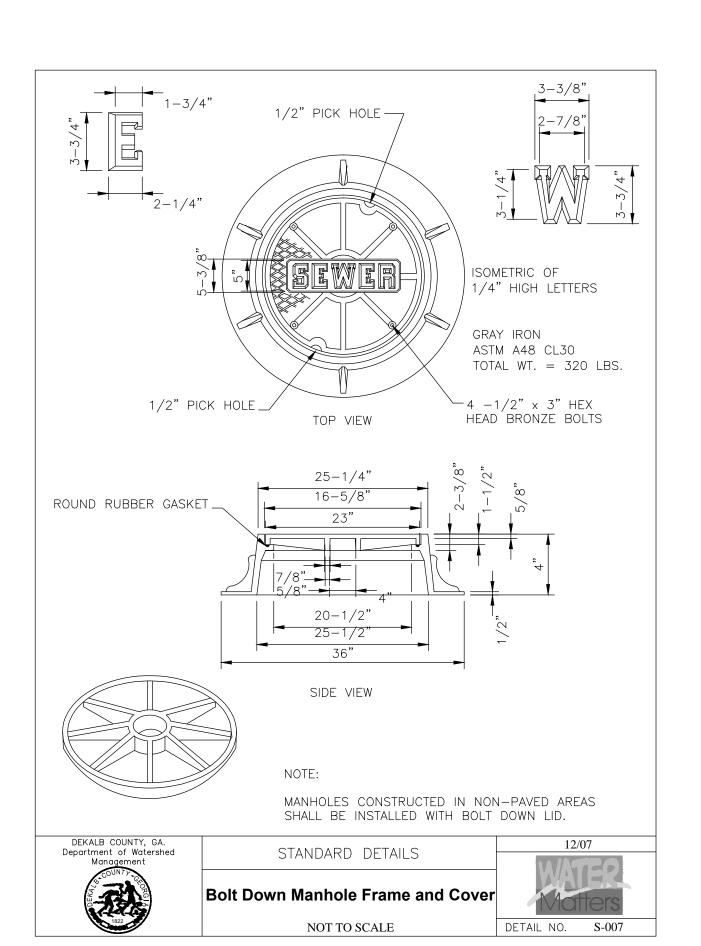


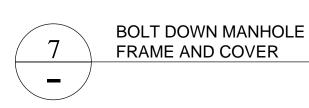


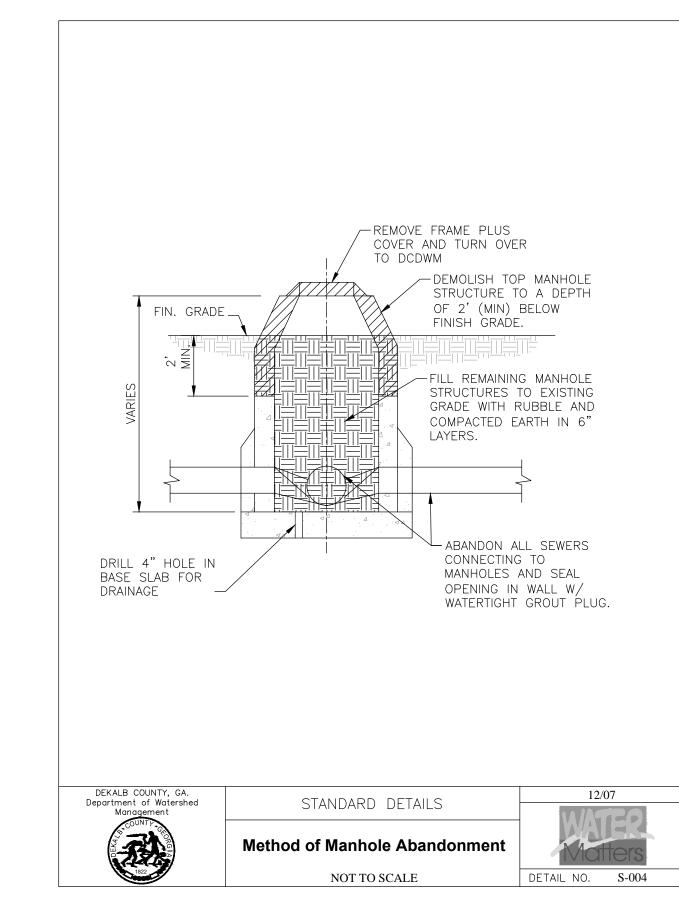


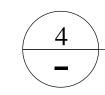


MANHOLE JOINT DETAIL

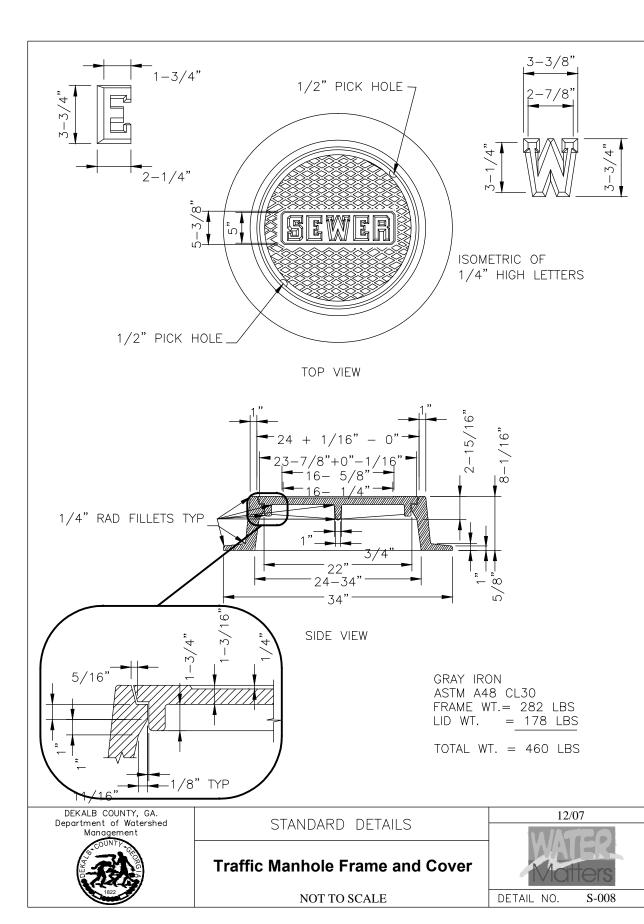


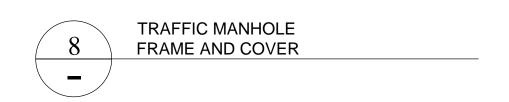


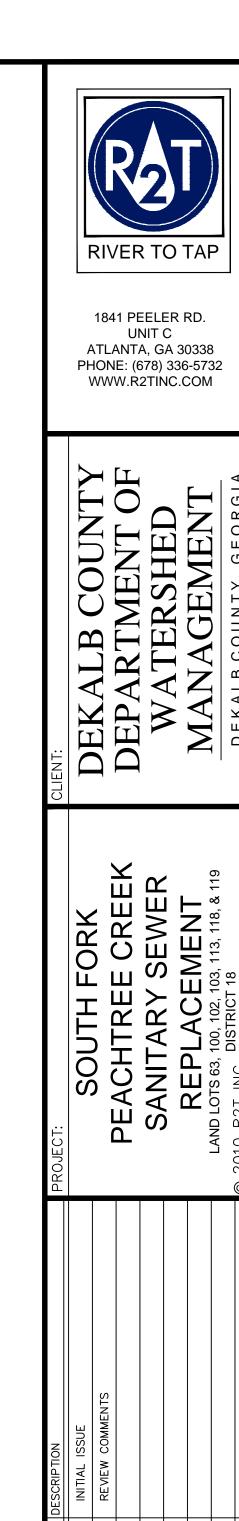


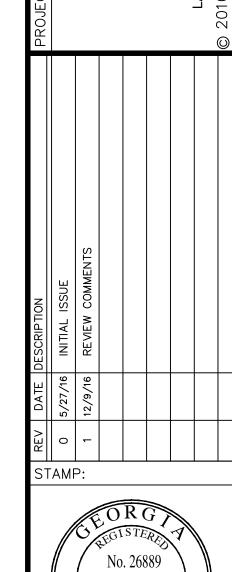


METHOD OF MANHOLE ABANDONMENT







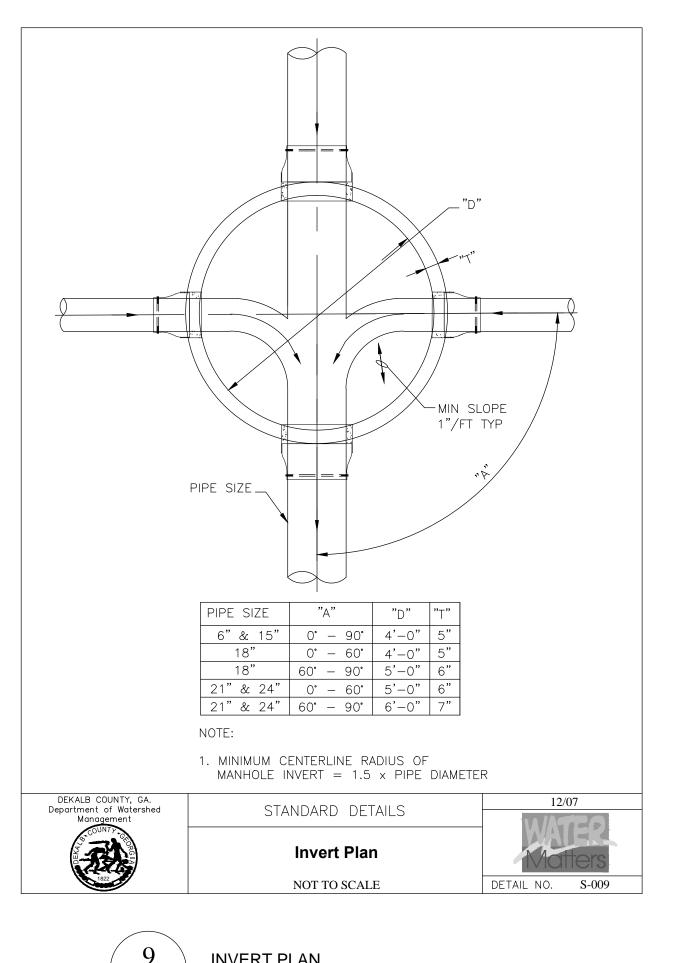


PROFESSIONAL SHEET TITLE: 36 of 65

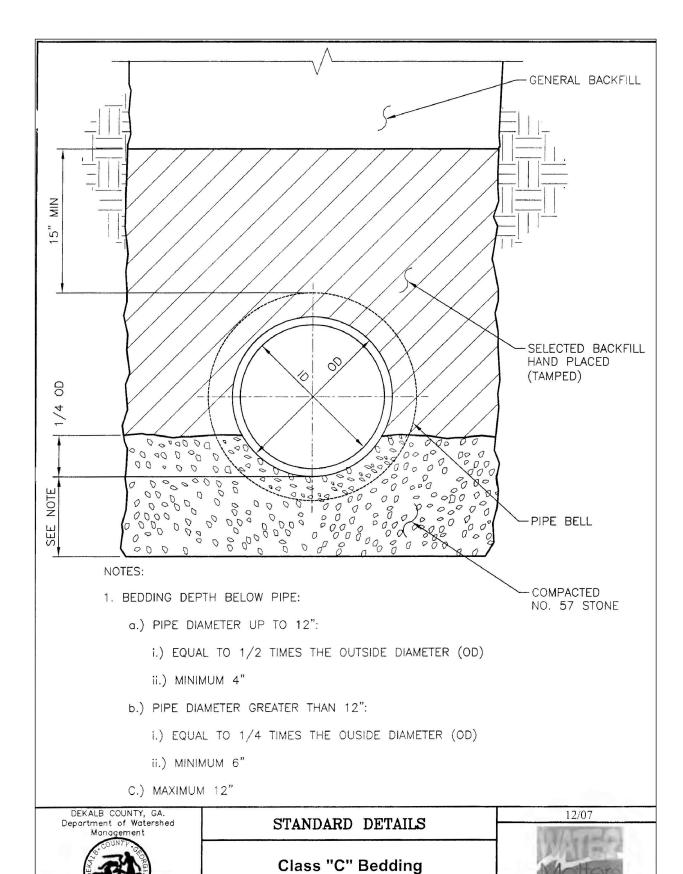
TYPICAL DETAILS

SSUED: 5.27.16 ROJECT NO. CALE: NONE CHKD BY: A.R. ESIGNED BY: J.J.

RAWN BY: J.J.



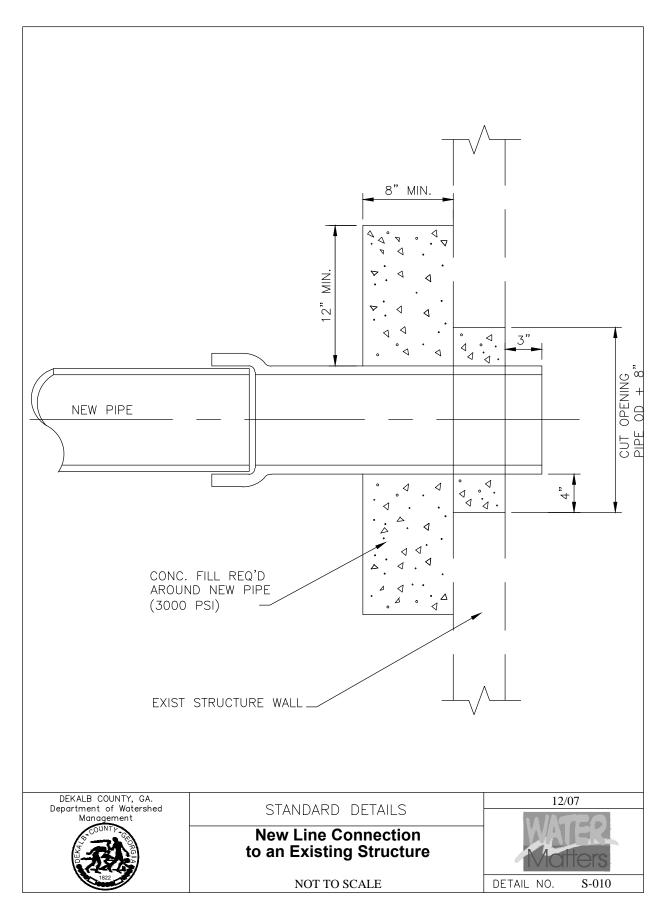


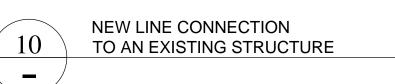


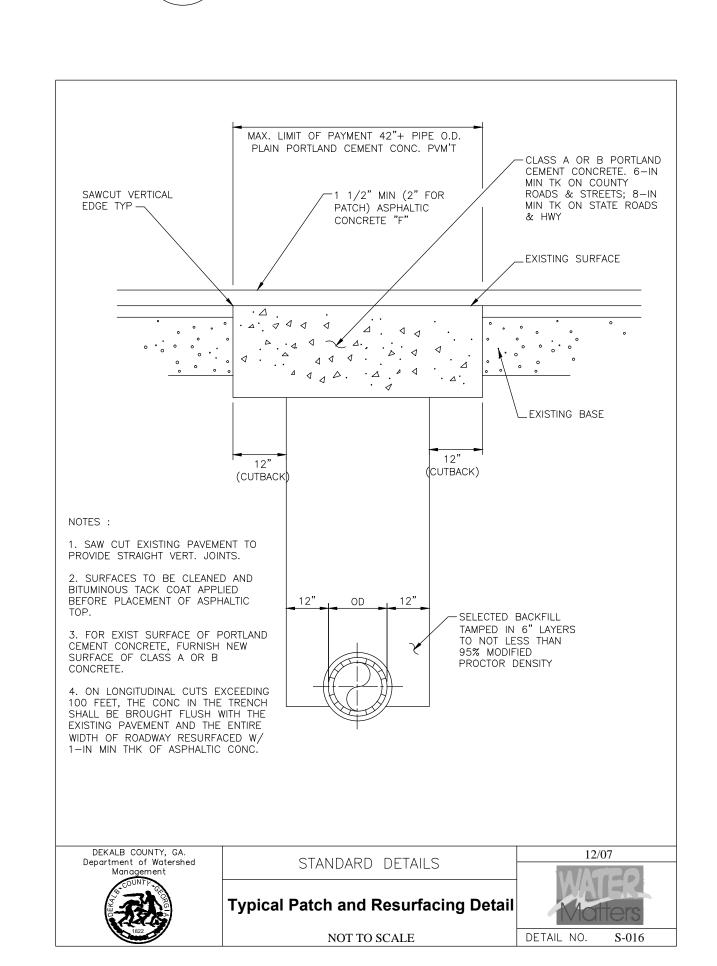


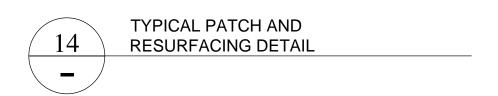
NOT TO SCALE

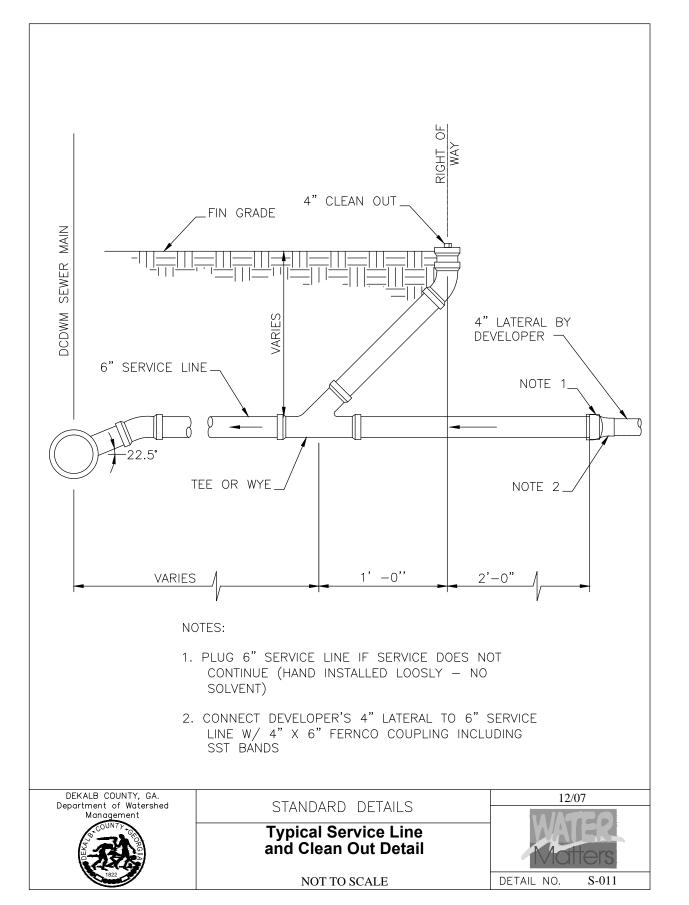
DETAIL NO. S-014



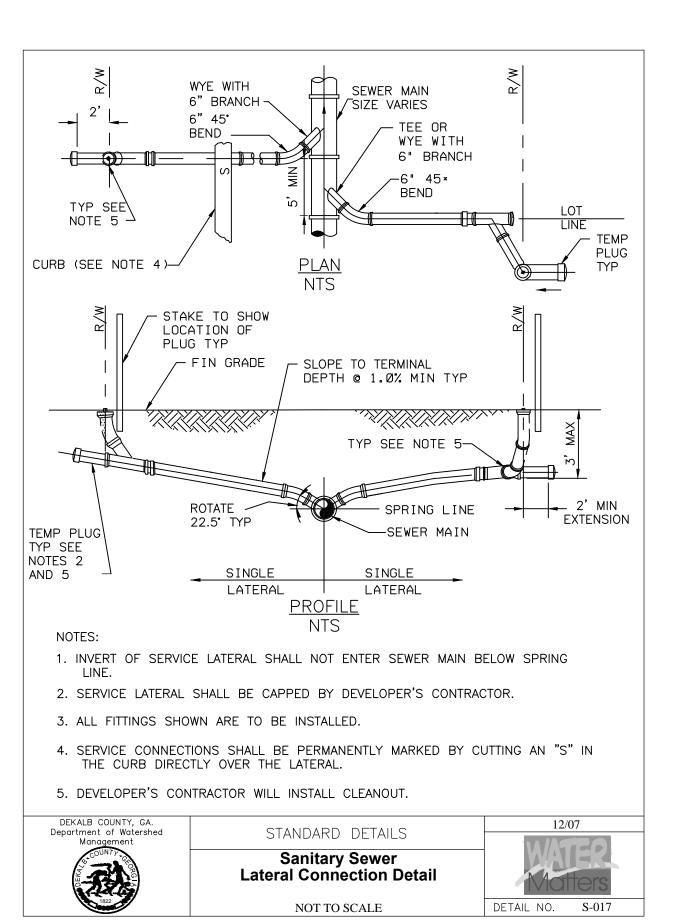




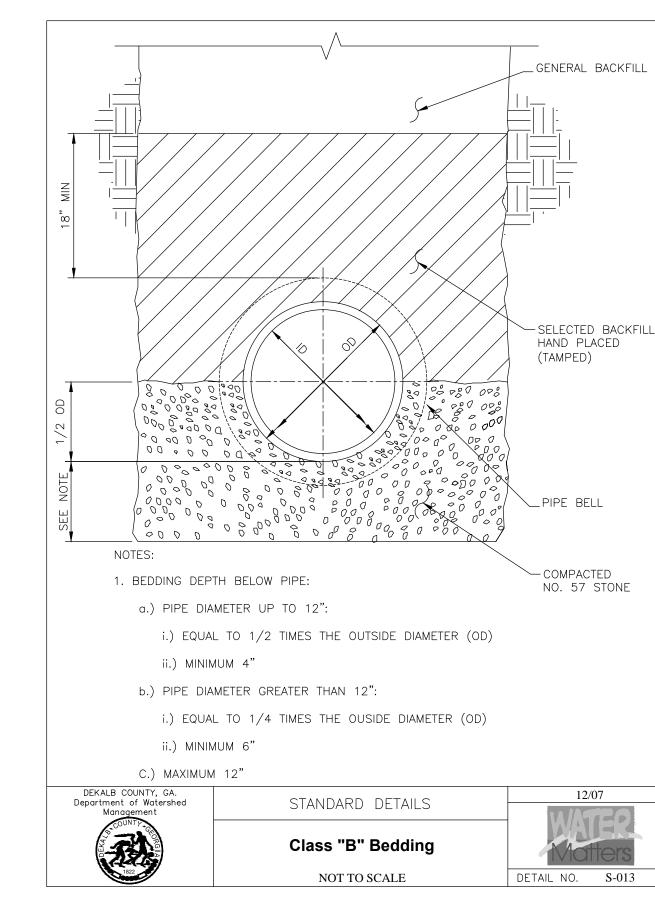


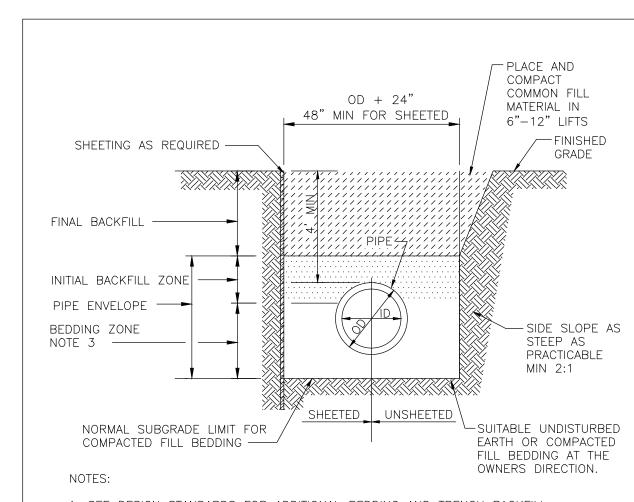












CLASS "B" BEDDING

- 1. SEE DESIGN STANDARDS FOR ADDITIONAL BEDDING AND TRENCH BACKFILL REQUIREMENTS.
- AS MEASURED FROM TOP OF PAVEMENT TO TOP OF PIPE.

2. MINIMUM DEPTH OF COVER OVER GRAVITY SANITARY SEWER LINES SHALL BE 4'-0"

- 3. SEE STANDARD DETAILS S-012, S-013 AND S-014 FOR BEDDING REQUIREMENTS.
- 4. NO ROCK IN BACKFILL FOR FIRST 2'-0" ABOVE TOP OF PIPE.
- 5. TRENCH BASE SHALL PROVIDE A CONTINUOUS BEARING AND SUPPORT FOR THE PIPE ON SUITABLE UNDISTURBED EARTH.
- 6. BEDDING TO BE GDOT TYPE I OR II FOUNDATION BACKFILL.
- 7. BACKFILL TO BE FREE OF ORGANICS, OBJECTIONABLE MATERIAL AND STONES LARGER THAN 6" IN ITS LONGEST DIMENSION.



STANDARD DETAILS **Backfill and Allowable Trench Widths Detail** NOT TO SCALE

BACKFILL AND ALLOWABLE

TRENCH WIDTHS DETAIL

DETAIL NO. S-018

ESIGNED BY: J.J. RAWN BY: J.J.

1841 PEELER RD. UNIT C ATLANTA, GA 30338 PHONE: (678) 336-5732 WWW.R2TINC.COM DEKALB COUNTY
DEPARTMENT OF
WATERSHED
MANAGEMENT

STAMP:

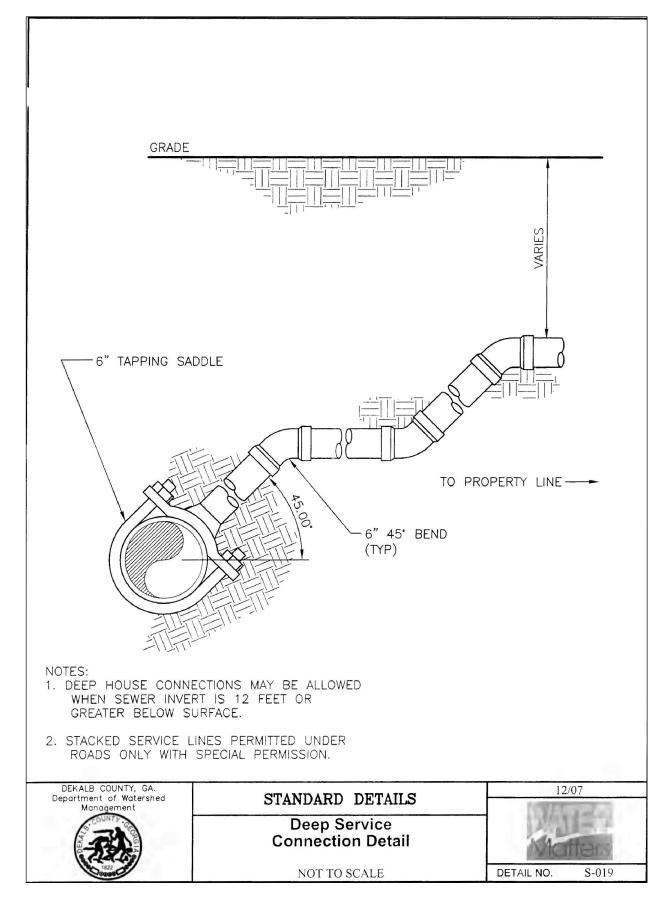
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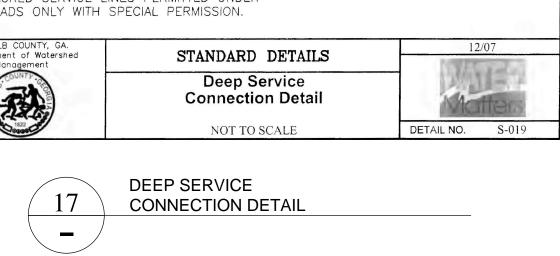
SHEET TITLE: 37 of 65

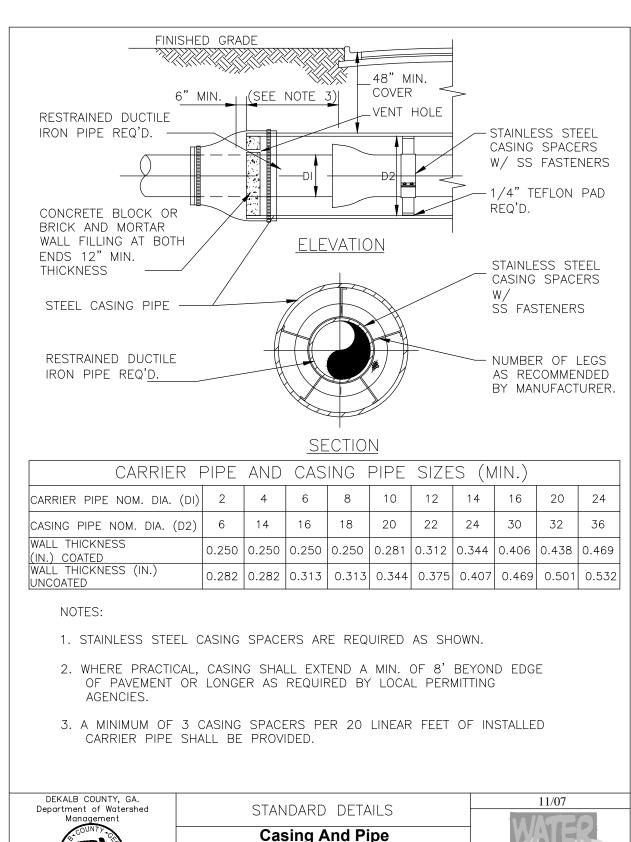
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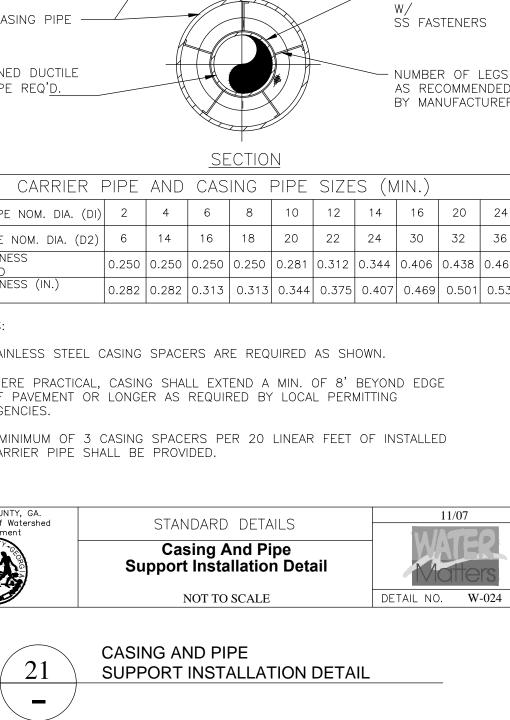
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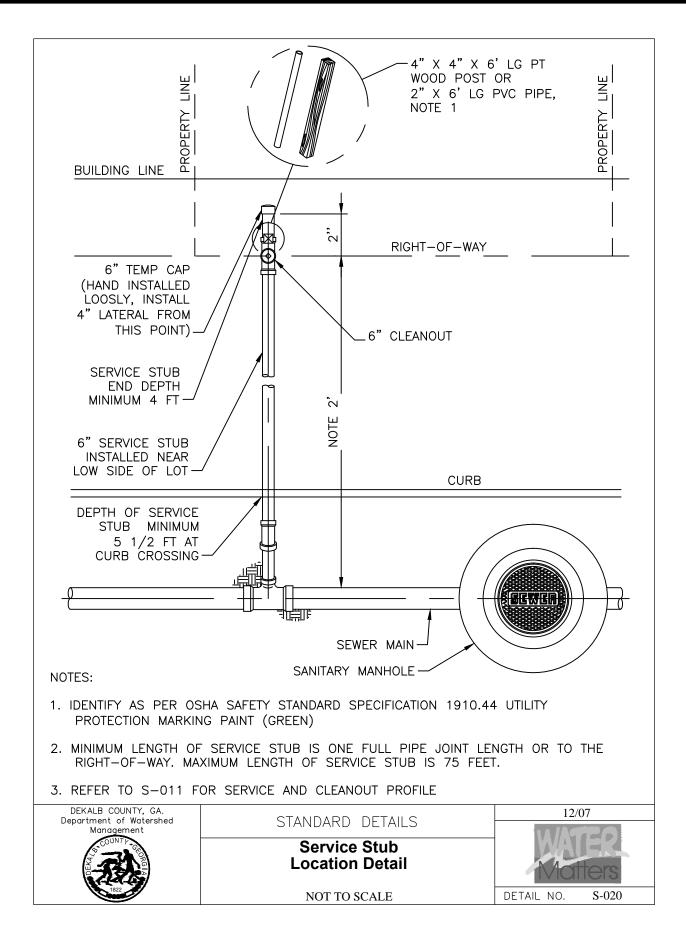
CALE: NONE CHKD BY: A.R.

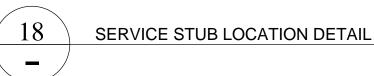


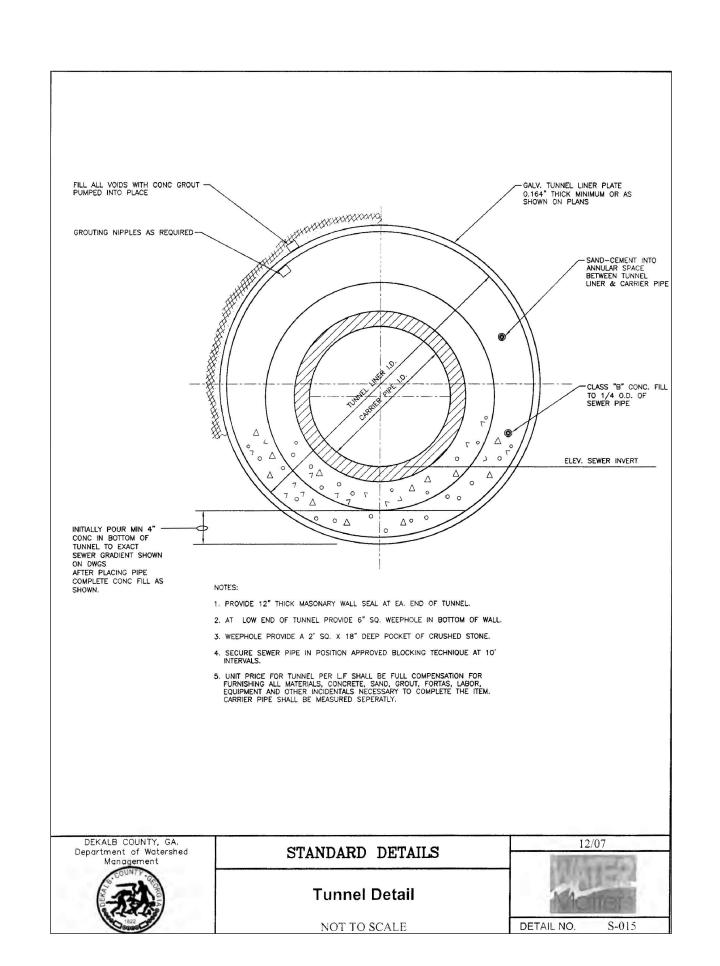




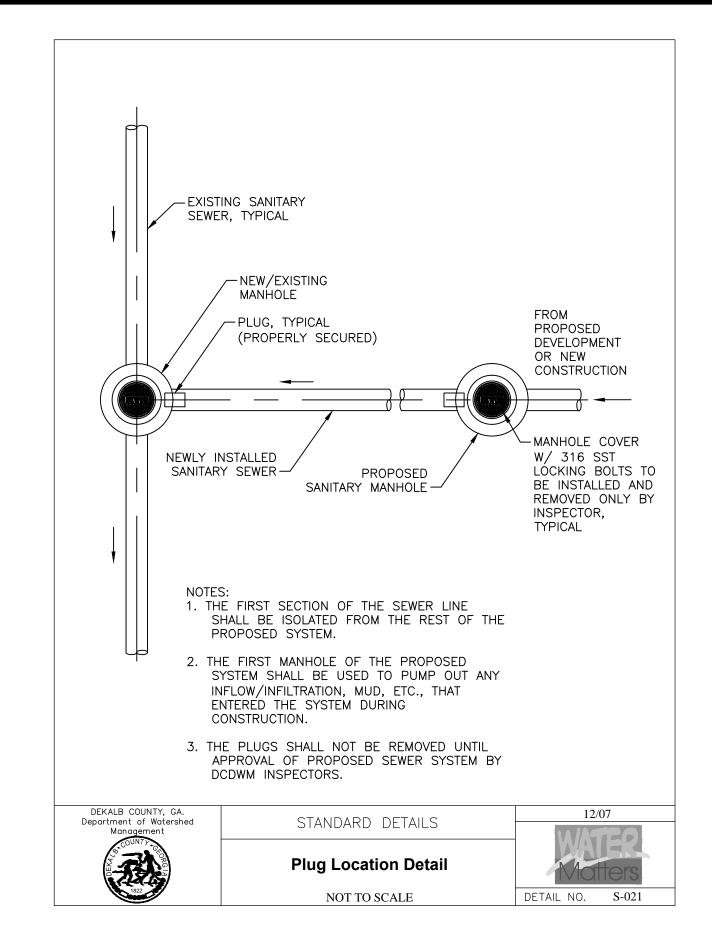




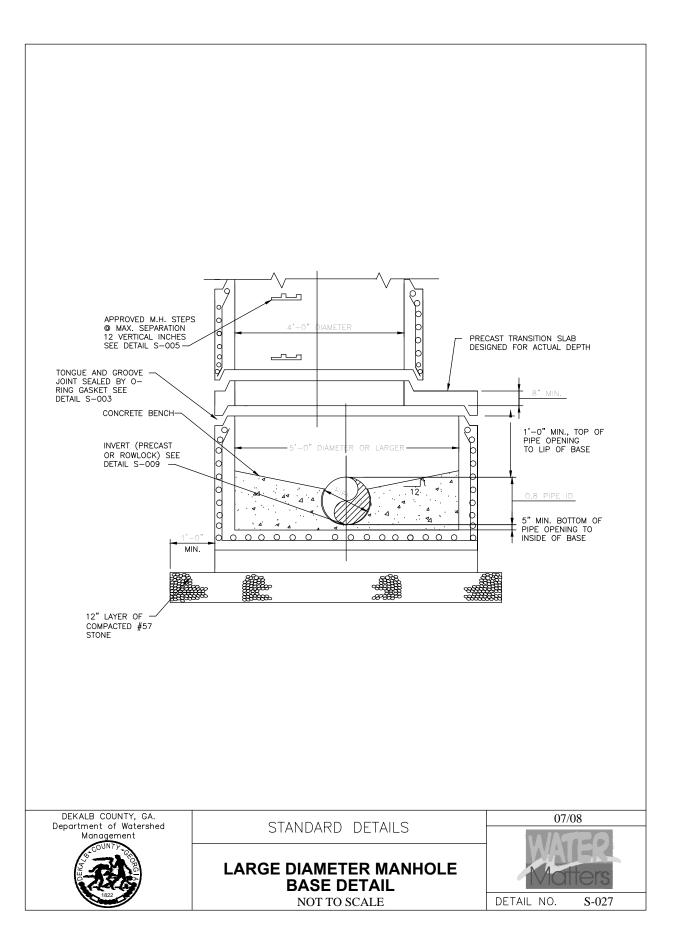




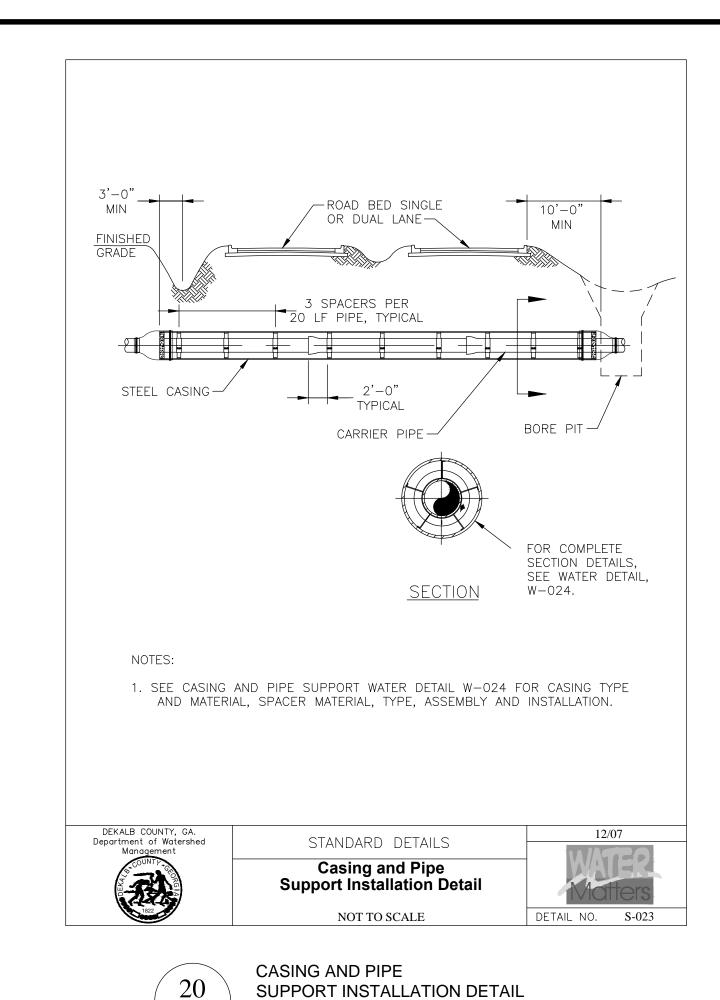


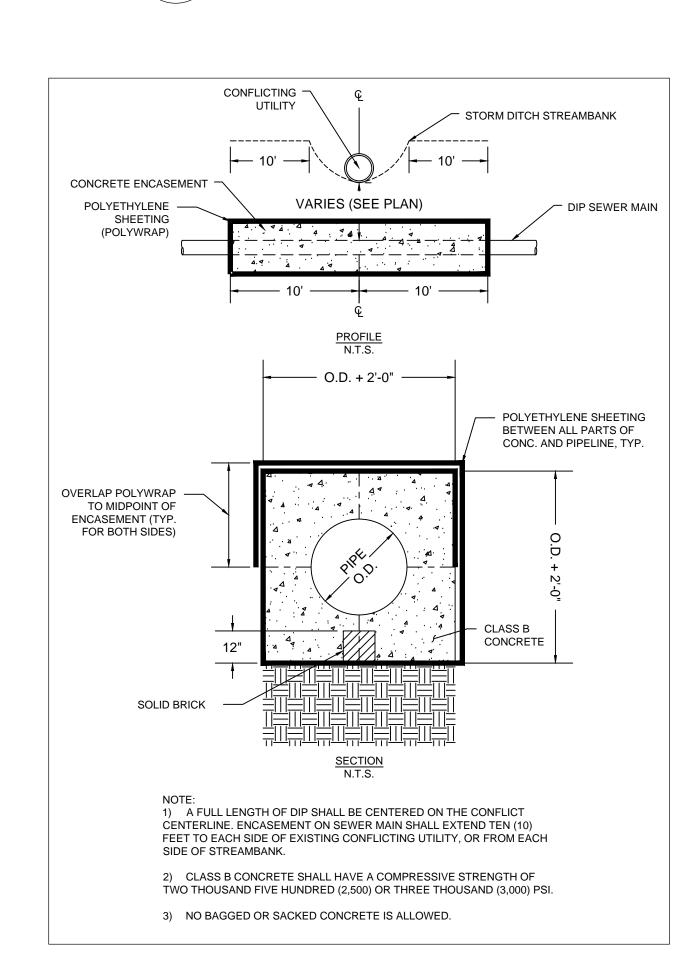










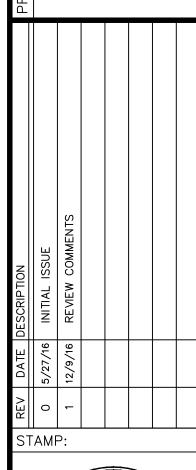








SOUTH FORK
EACHTREE CREEK
SANITARY SEWER
REPLACEMENT
REPLACEMENT



PROFESSIONAL

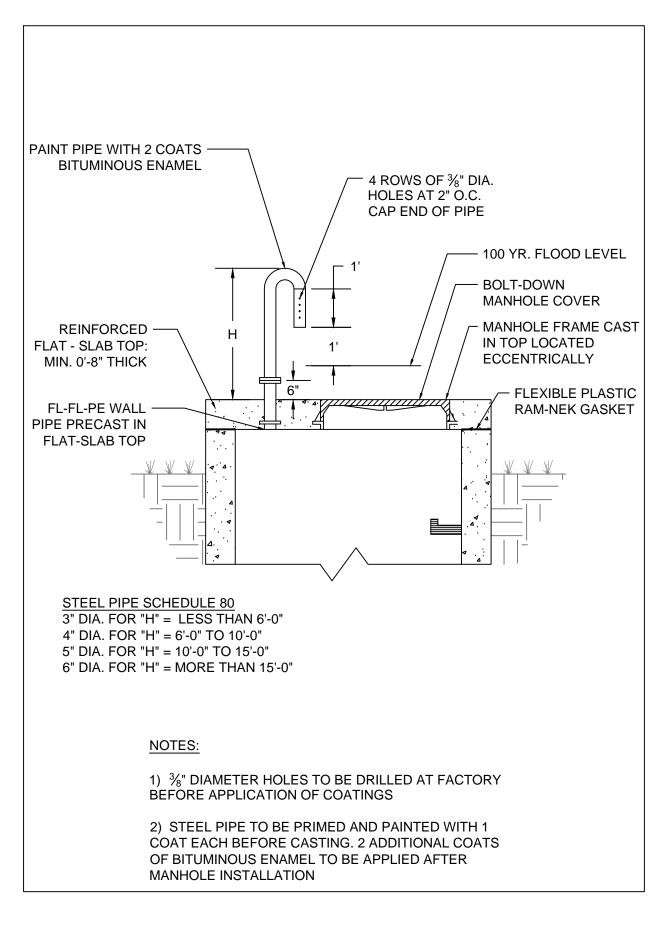
SHEET TITLE: 38 of 65

TYPICAL DETAILS

SSUED: 5.27.16 ROJECT NO. CALE: NONE

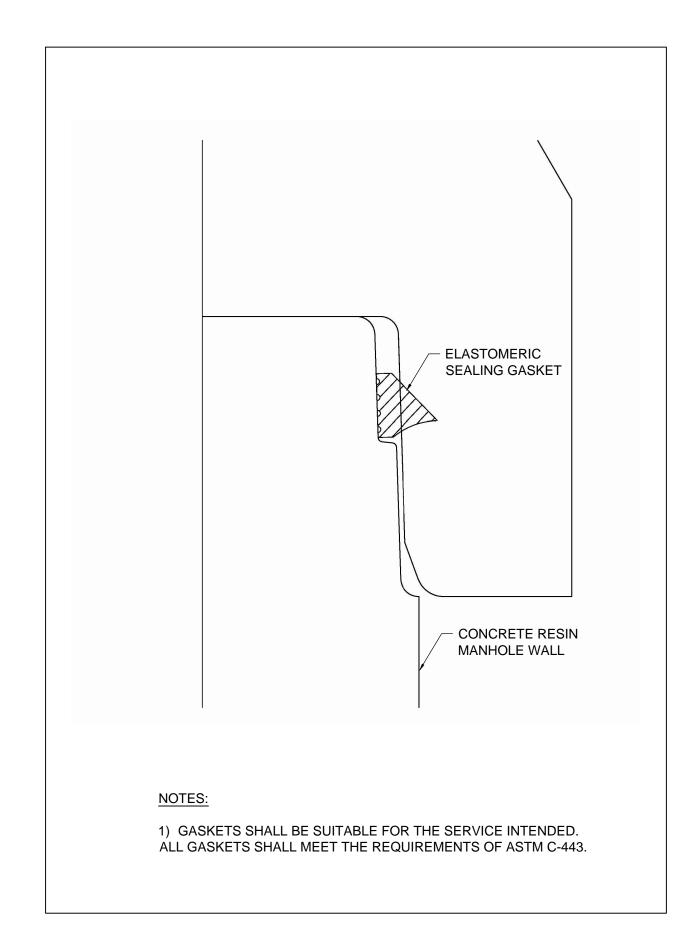
CHKD BY: A.R. ESIGNED BY: J.J.

RAWN BY: J.J.



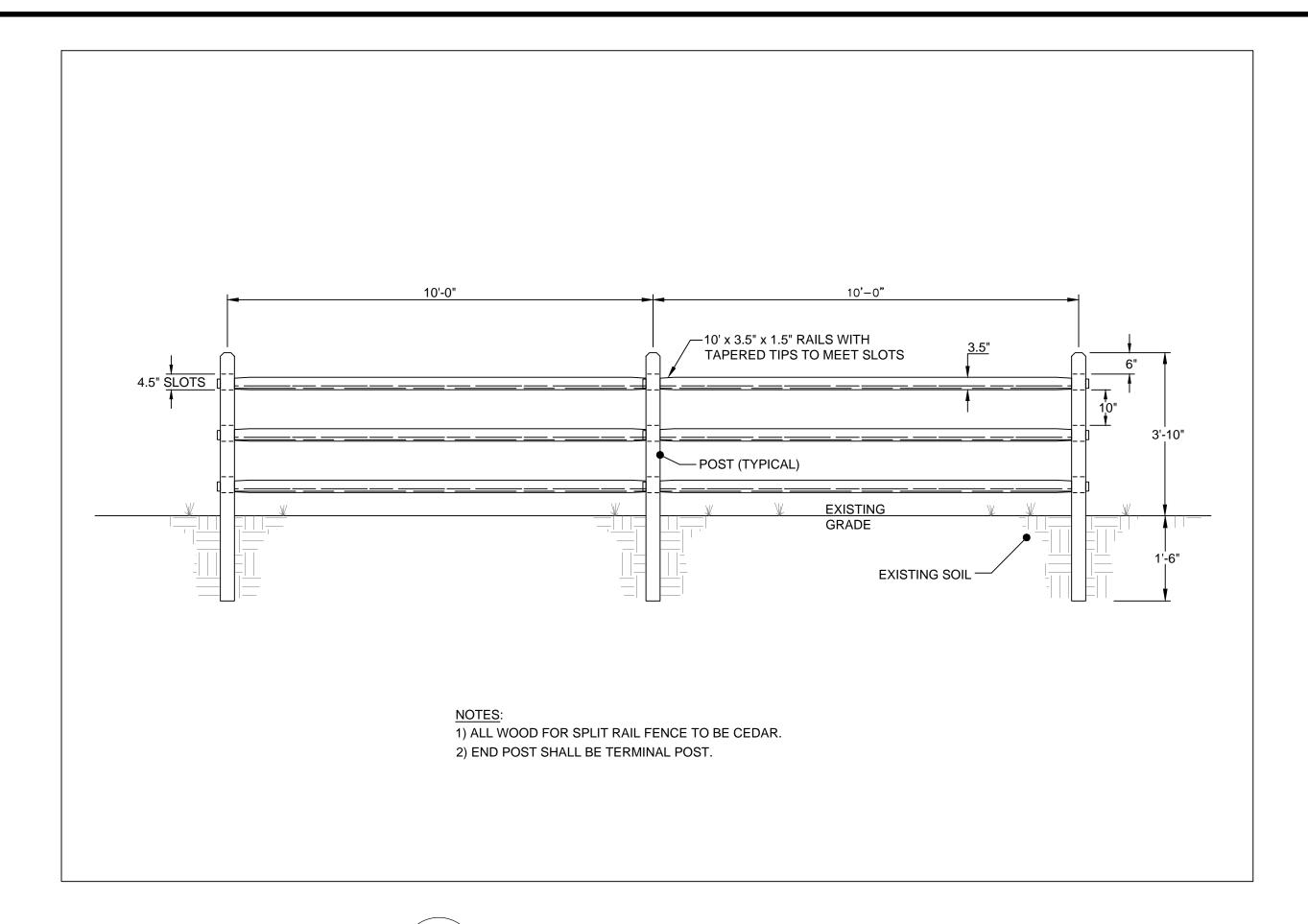
25

MANHOLE VENTING DETAIL





CONCRETE RESIN MANHOLE ELASTOMERIC GASKETS



<u>26</u>

HORSE RATED FENCING DETAIL



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DEKALB COUNTY
DEPARTMENT OF
WATERSHED
MANAGEMENT

UTH FORK

HTREE CREEK

DE

TARY SEWER

PROJECT:
SOUTH
PEACHTRE
SANITARY
REPLACE
LAND LOTS 63, 100, 102, 1

REV DATE DESCRIPTION

O 5/27/16 INITIAL ISSUE

1 12/9/16 REVIEW COMMENTS

No. 26889
PROFESSIONAL
5/27/16
ENGINEER

CORGE
No. 26889
PROFESSIONAL
5/27/16

SHEET TITLE: 39 of 65

TYPICAL DETAILS

ISSUED: 5.27.16

PROJECT NO.

SCALE: NONE

CHKD BY: A.R.

DESIGNED BY: J.J.

DRAWN BY: J.J.

24 HOUR CONTACT: WILLIAM T. ROBERTS, P.E.

580 W. CROSSVILLE RD, STE 101 STONE MOUNTAIN, GA 30083 ROSWELL, GA 30075 PHONE (770) 414-2383 PHONE (770) 569-7038

SECONDARY/TERTIARY PERMITTEE: NONE

SITE PURPOSE AND CONSTRUCTION ACTIVITY

SITE 1 IS FOR THE DESIGN OF A SEWER MAIN REPLACEMENT WITHIN THE SOUTH FORK PEACHTREE CREEK WATERSHED. MAJOR CONSTRUCTION ACTIVITY WILL INCLUDE INSTALLATION OF REPLACEMENT SEWER MAIN PIPING. BEST MANAGEMENT PRACTICES WILL BE CONSTRUCTED AND MAINTAINED THROUGHOUT LAND DISTURBING ACTIVITIES.

SITE DESCRIPTION AND LOCATION

SITE 1 (ORION DRIVE IN DECATUR, GA) PROJECT START - LATITUDE N33.8039; LONGITUDE W84.2743 PROJECT END - LATITUDE N33.8051; LONGITUDE W84.2721 TOTAL SITE AREA - ±1.0 AC. TOTAL AREA OF DISTURBANCE - ±1.0 AC.

SITE 1 IS LOCATED ON DEKALB COUNTY OWNED LITTLE CREEK FARM NEAF THE INTERSECTION OF ORION DRIVE AND LAWRENCEVILLE HIGHWAY (US 29, SR 78). THE PROJECT SITE IS LOCATED IN LAND LOTS 63 & 100 OF THE 18TH DISTRICT IN DEKALB, GEORGIA.

THE EXISTING SITE IS PASTURELAND WITH MEDIUM VEGETATION. THE STREAMBANK LIES WITHIN 20' OF THE EXISTING TRENCHBED. THE EXISTING 30" RCP PIPE ROUTES THROUGH MILD FORESTATION WITH MULTIPLE STORM TRENCH CROSSINGS.

THE PROPOSED SITE CONDITIONS WILL INCLUDE THE INSTALLATION OF A 30" DIP SEWER MAIN UTILIZING THE SAME ROUTE AND ALIGNMENT AT THE NORTHERN END. THE ALIGNMENT IS REROUTED AT THE SOUTHERN END TO AVOID CONFLICTING WITH THE STREAMBANK. ALL DISTURBED LANDSCAPING WILL BE REPLACED IN KIND.

ADJACENT PROPERTIES

THE ADJACENT PROPERTIES TO THIS AREA CONSIST OF RESIDENTIAL AND COMMERCIAL AREAS. THE CONSTRUCTED SITE WILL BE STABILIZED WITH VEGETATION AND TEMPORARY BMP'S WILL BE REMOVED UPON COMPLETION

RECEIVING WATERS

THE STORMWATER RUNOFF FLOWS INTO THE SOUTH FORK PEACHTREE CREEK WATERSHED DIRECTLY THROUGH SOUTH FORK PEACHTREE CREEK. THE TRIBUTARY IS A WARM WATER FISHERY THAT DISCHARGES INTO THE CHATTAHOOCHEE RIVER VIA PEACHTREE CREEK

CRITICAL AREAS

SITE 1 CONTAINS FEDERALLY RECOGNIZED WETLANDS AND STATE WATERS WITHIN 200' OF THE LIMITS OF DISTURBANCE. ALL SENSITIVE AREAS WILL BE DELINEATED ON THE PLANS AND PROTECTED BY DOUBLE ROWS OF SILT FENCE.

SITE PURPOSE AND CONSTRUCTION ACTIVITY

SITE 2 IS FOR THE DESIGN OF A SEWER MAIN REPLACEMENT WITHIN THE SOUTH FORK PEACHTREE CREEK WATERSHED. MAJOR CONSTRUCTION ACTIVITY WILL INCLUDE INSTALLATION OF REPLACEMENT SEWER MAIN PIPING. BEST MANAGEMENT PRACTICES WILL BE CONSTRUCTED AND MAINTAINED THROUGHOUT LAND DISTURBING ACTIVITIES.

SITE DESCRIPTION AND LOCATION

SITE 2 (MONTREAL ROAD IN CLARKSTON, GA) PROJECT START - LATITUDE N33.8140; LONGITUDE W84.2437 PROJECT END - LATITUDE N33.8158; LONGITUDE W84.2398 TOTAL SITE AREA - ±2.2 AC.

TOTAL AREA OF DISTURBANCE - ±2.2 AC.

SITE 2 IS LOCATED ADJACENT TO SOUTH FORK PEACHTREE CREEK NEAR THE INTERSECTION OF MONTREAL ROAD AND MONTREAL CREEK COURT THE PROJECT SITE IS LOCATED IN LAND LOTS 118 & 119 OF THE 18TH DISTRICT IN DEKALB, GEORGIA.

THE EXISTING SITE RUNS PARALLEL TO THE CREEK AND PRIVATE RESIDENTIAL PROPERTY. THE EXISTING 24" RCP PIPE ROUTES THROUGH DENSELY VEGETATED AREAS AND MULTIPLE STORM TRENCH CROSSINGS. THE STREAMBANK LIES WITHIN 20' OF THE EXISTING TRENCHBED WITH EXPOSED PIPE AT THE NORTHERN END OF THE ALIGNMENT.

THE PROPOSED SITE CONDITIONS WILL INCLUDE THE INSTALLATION OF A 24" DIP SEWER MAIN UTILIZING THE SAME ROUTE AND ALIGNMENT AT THE SOUTHERN END. THE ALIGNMENT IS REROUTED AT THE NORTHERN END TO AVOID CONFLICTING WITH THE STREAMBANK. ALL DISTURBED PAVEMENT, CURB, SIDEWALK AND LANDSCAPING WILL BE REPLACED IN

ADJACENT PROPERTIES

THE ADJACENT PROPERTIES TO THIS AREA CONSIST OF RESIDENTIAL AND COMMERCIAL AREAS. THE CONSTRUCTED SITE WILL BE STABILIZED WITH VEGETATION AND TEMPORARY BMP'S WILL BE REMOVED UPON COMPLETION.

RECEIVING WATERS

THE STORMWATER RUNOFF FLOWS INTO THE SOUTH FORK PEACHTREE CREEK WATERSHED DIRECTLY THROUGH SOUTH FORK PEACHTREE CREEK. THE TRIBUTARY IS A WARM WATER FISHERY THAT DISCHARGES INTO THE CHATTAHOOCHEE RIVER VIA PEACHTREE CREEK.

CRITICAL AREAS

SITE 2 DOES NOT CONTAIN FEDERALLY RECOGNIZED WETLANDS WITHIN 200' OF THE LIMITS OF DISTURBANCE, HOWEVER THE SITE DOES CONTAIN STATE WATERS. ALL SENSITIVE AREAS WILL BE DELINEATED ON THE PLANS AND PROTECTED BY DOUBLE ROWS OF SILT FENCE.

SITE PURPOSE AND CONSTRUCTION ACTIVITY SITE 3 IS FOR THE DESIGN OF A SEWER MAIN REPLACEMENT WITHIN THE SOUTH FORK PEACHTREE CREEK WATERSHED. MAJOR CONSTRUCTION ACTIVITY WILL INCLUDE INSTALLATION OF REPLACEMENT SEWER MAIN PIPING. BEST MANAGEMENT PRACTICES WILL BE CONSTRUCTED AND

MAINTAINED THROUGHOUT LAND DISTURBING ACTIVITIES.

SITE DESCRIPTION AND LOCATION

SITE 3 (NORTH DRUID HILLS ROAD TO MASON MILL PARK IN DECATUR, GA) PROJECT START - LATITUDE N33.8063; LONGITUDE W84.3017 PROJECT END - LATITUDE N33.8136; LONGITUDE W84.2940 TOTAL SITE AREA - ±6.4 AC TOTAL AREA OF DISTURBANCE - ±6.4 AC.

SITE 3 IS LOCATED ADJACENT TO BURNT FORK CREEK. THE ALIGNMENT BEGINS NEAR THE INTERSECTION OF NORTH DRUID HILLS ROAD AND SPRING CREEK ROAD WITHIN PRIVATE RESIDENTIAL PROPERTY. AFTER TRAVERSING NORTH DRUID HILLS ROAD, THE ALIGNMENT RUNS PARALLEL TO THE CREEK THROUGH FORESTED DEKALB COUNTY OWNER PROPERTY AND NAVIGATES BETWEEN PRIVATELY OWNED MULTI-RESIDENTIAL HOMES BEFORE TIEING INTO THE EXISTING SANITAR SEWER SYSTEM IMMEDIATELY NORTH OF SOUTH FORK PEACHTREE CREEK. THE PROJECT SITE IS LOCATED IN LAND LOTS 102, 103, & 113 OF THE 18TH DISTRICT IN DEKALB, GEORGIA

THE EXISTING SITE RUNS PARALLEL TO THE CREEK THROUGH PRIVATE RESIDENTIAL PROPERTY AS WELL AS THROUGH CSX AND GA POWER EASEMENTS. THE EXISTING 30" RCP ROUTES THROUGH THICK VEGETATION AND MULTIPLE STREAM/STORM TRENCH CROSSINGS. THE STREAMBANK LIES WITHIN 20' OF THE EXISTING TRENCHBED.

THE PROPOSED SITE CONDITIONS WILL INCLUDE THE INSTALLATION OF 30" DIP SEWER MAIN UTILIZING THE SAME ROUTE AND ALIGNMENT FOR THE NORTHERN AND SOUTHERN PORTIONS. THE ALIGNMENT IS REROUTED BETWEEN THE MULTI-RESIDENTIAL HOMES TO AVOID EASEMENT ENCROACHMENTS ON THE EXISTING BUILDINGS. THE ALIGNMENT IS ALSO REROUTED WITHIN CSX RIGHT-OF-WAY TO FACILITATE ABANDONMENT OF THE EXISTING PIPE PER CSX SPECIFICATIONS. ALL DISTURBED PAVEMENT, CURB, SIDEWALK AND LANDSCAPING WILL BE REPLACED IN KIND.

ADJACENT PROPERTIES

THE ADJACENT PROPERTIES TO THIS AREA CONSIST OF RESIDENTIAL AND COMMERCIAL AREAS. THE CONSTRUCTED SITE WILL BE STABILIZED WITH VEGETATION AND TEMPORARY BMP'S WILL BE REMOVED UPON COMPLETION.

THE STORMWATER RUNOFF FLOWS INTO THE SOUTH FORK PEACHTREE CREEK WATERSHED DIRECTLY THROUGH BURNT FORK CREEK. THE TRIBUTARY IS A WARM WATER FISHERY THAT DISCHARGES INTO THE CHATTAHOOCHEE RIVER VIA PEACHTREE CREEK.

CRITICAL AREAS

SITE 3 CONTAINS FEDERALLY RECOGNIZED WETLANDS AND STATE WATERS WITHIN 200' OF THE LIMITS OF DISTURBANCE. ALL SENSITIVE AREAS WILL BE DELINEATED ON THE PLANS AND PROTECTED BY DOUBLE ROWS OF SILT FENCE.

HYDRAULIC CONDITIONS

NO ADDITIONAL IMPERVIOUS AREA IS PROPOSED. NO HYDROLOGIC STUDY WAS PERFORMED. AND NO ADDITIONAL STORMWATER INFRASTRUCTURE IS PROPOSED. RUNOFF COEFFICIENTS WILL NOT CHANGE.

THE NRCS SOIL TYPES ARE SHOWN ON SHEET C-28, C-29 & C-30.

BEST MANAGEMENT PRACTICES TO BE IMPLEMENTED

- 1) BUFFER ZONE: Bf
- 2) MULCHING: Ds1
- TEMPORARY SEEDING: Ds2
- 4) PERMANENT SEEDING: Ds3
- 5) STREAMBANK STABILIZATION: Sb
- 6) CONSTRUCTION EXIT: Co 7) CONSTRUCTION ROAD STABILIZATION: Cr
- 8) ROCK FILTER DAM: Rd
- 9) SEDIMENT BARRIER: Sd1-BB, Sd1-NS, Sd1-S
- 10) INLET SEDIMENT TRAP: Sd2-F, Sd2-P
- 11) TEMPORARY STREAM CROSSING: Sr-C
- 12) TURBIDITY CURTAIN: To
- 13) TREE PROTECTION: Tr

EROSION CONTROL NOTES

IMMEDIATELY.

 UNLESS OTHERWISE INDICATED, ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL CONFORM WITH THE GUIDELINES OF THE "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA". 2) THE DISTURBED AREA IS WITHIN THE 100 YEAR FLOOD HAZARD ZONE

(REFERENCE FEMA FLOOD INSURANCE RATE MAPS (FIRM) 13089C0058J,

- 13089C0066J, 13089C0067J, & 13089C0078J, DATED MAY 16, 2013) 3) EROSION CONTROL AND TREE PROTECTION MEASURES SHALL BE INSTALLED PRIOR TO ANY OTHER CONSTRUCTION ACTIVITY AND
- MAINTAINED UNTIL PERMANENT GROUND COVER IS ESTABLISHED. 4) EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES TO BE INSPECTED DAILY TO ENSURE PROPER FUNCTIONING. ANY NECESSARY REPAIRS TO MAINTAIN THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES AND CLEANUP OF SEDIMENTATION ARE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE MADE
- 5) THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH LAND-DISTURBING **ACTIVITIES.**

EROSION CONTROL NOTES (CONTINUED)

- 6) THE DESIGN PROFESSIONAL OR AN AUTHORIZED AGENT WHO PREPARED THE ES&PC PLAN IS TO INSPECT THE INSTALLATION OF THE INITIAL SEDIMENT STORAGE REQUIREMENTS, PERIMETER CONTROL BMP'S AND SEDIMENT BASINS WITHIN (7) SEVEN DAYS AFTER INITIAL CONSTRUCTION ACTIVITY BEGINS.
- 7) EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.
- 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING.
- 9) WHERE APPLICABLE, NON-EXEMPT ACTIVITIES SHALL NOT BE CONDUCTED WITH THE 25 OR 50 FOOT UNDISTURBED STREAM BUFFERS AS MEASURED FROM THE POINT OF WRESTED VEGETATION WITHOUT FIRST ACQUIRING THE NECESSARY VARIANCES AND PERMITS.
- 10) WITHIN (7) SEVEN DAYS OF FINISHING INSTALLATION OF INITIAL EROSION CONTROL MEASURES, THE SITE CONTRACTOR SHALL SCHEDULE AN INSPECTION BY THE PROJECT DESIGN PROFESSIONAL. NO OTHER CONSTRUCTION ACTIVITIES SHALL OCCUR UNTIL THE PROJECT DESIGN PROFESSIONAL APPROVES THE INSTALLATION OF SAID EROSION CONTROL MEASURES. FAILURE OF OBTAINING THIS INSPECTION IS A DIRECT VIOLATION OF THE NPDES PERMIT
- 11) WEEKLY EROSION AND CONTROL REPORTS SHALL BE SUBMITTED TO THE DEVELOPMENT DEPARTMENT STARTING WITH THE ISSUANCE OF THE DEVELOPMENT PERMIT AND ENDING WHEN THE PROJECT IS RELEASED BY THE INSPECTOR.
- 12) DISTURBED AREA STABILIZATION SHALL BE ACHIEVED UTILIZING SEED MIX AND APPLICATION RATE AS DIRECTED BY OWNER.
- 13) SILT FENCE MUST MEET THE REQUIREMENTS OF SECTION 171 SILT FENCE OF THE GEORGIA D.O.T. STANDARD SPECIFICATIONS, LATEST EDITION.
- 14) THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION AND MAINTENANCE OF ANY ADDITIONAL CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION IF DEEMED NECESSARY BY ON-SITE INSPECTOR.
- 15) THE CONSTRUCTION OF THE SITE WILL INITIATE WITH INSTALLATION OF EROSION CONTROL MEASURES SUFFICIENT TO CONTROL SEDIMENT DEPOSITS AND EROSION. ALL SEDIMENT CONTROL WILL BE MAINTAINED UNTIL ALL UPSTREAM GROUND WITHIN THE CONSTRUCTION AREA HAS BEEN COMPLETELY STABILIZED WITH PERMANENT VEGETATION.
- 16) PERMANENT VEGETATION AND STREAMBANK STABILIZATION SHALL WORK IN CONJUNCTION WITH THE STREAM BUFFERS TO PERMANENTLY STABILIZE THE CONSTRUCTION SITE AND LIMIT POLLUTANTS ENTERING ADJACENT STATE WATERS AFTER CONSTRUCTION OPERATIONS HAVE
- 17) THE CONTRACTOR SHALL REMOVE ACCUMULATED SILT WHEN THE SILT IS HALF THE HEIGHT OF THE EROSION CONTROL MEASURE 18) ALL STRUCTURAL MEASURES MUST BE CLEANED OUT OR RECONSTRUCTED WHEN SEDIMENT VOLUMES EXCEED 1/3 THE STORAGE CAPACITY OF THE MEASURE. SEDIMENT CLEANED OUT SHOULD BE SPREAD IN UPLAND AREAS, MIXED WITH TOPSOIL, AND MULCHED OR SEEDED IMMEDIATELY. DO NOT SPOIL IN AREAS WHERE STRUCTURAL FILLS ARE REQUIRED (SUCH AS PAVEMENT, BUILDING FOOTPRINTS, ETC.) 19) FAILURE TO INSTALL. OPERATE OR MAINTAIN ALL EROSION CONTROL MEASURES WILL RESULT IN ALL CONSTRUCTION BEING STOPPED ON THE JOB SITE UNTIL SUCH MEASURES ARE CORRECTED BACK TO DEKALB
- COUNTY STANDARDS. 20) ANY IMPERVIOUS WATER RUNOFF FROM LOTS BY-PASSING WATER QUALITY POND MUST BE TREATED ON A LOT BY LOT BASIS. 21) A COPY OF THE APPROVED LAND DISTURBANCE PLAN AND PERMIT SHALL BE PRESENT ON THE SITE WHENEVER LAND DISTURBANCE
- ACTIVITY IS IN PROGRESS. 22) ALL EROSION AND SEDIMENT CONTROL MEASURES WILL BE CHECKED DAILY AND ANY DEFICIENCIES NOTED WILL BE CORRECTED BY THE END OF EACH DAY. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES WILL BE INSTALLED IF DEEMED NECESSARY BY ON-SITE INSPECTION BY THE ISSUING AUTHORITY.
- 23) WHEN ANY CONSTRUCTION BORDERS A DRAINAGE COURSE:
- A) THE CONTRACTOR IS RESPONSIBLE FOR REMOVING ANY OTHER EXCAVATION SPOIL DIRT, CONSTRUCTION TRASH OR DEBRIS, ETC. FROM THE DRAINAGE AREAS SHOWN HEREON IN AN EXPEDITIOUS MANNER AS CONSTRUCTION PROGRESSES.
- B) THE CONTRACTOR HEREBY AGREES TO STOP ALL WORK AND RESTORE THESE AREAS IMMEDIATELY UPON NOTIFICATION BY THE DEKALB COUNTY INSPECTOR AND/OR THE PROFESSIONAL ENGINEER. 23) INSPECTIONS BY QUALIFIED PERSONNEL PROVIDED BY THE PRIMARY PERMITTEE AND THE ASSOCIATED RECORDS SHALL BE KEPT ON SITE IN COMPLIANCE WITH GAR100002.
- 24) CONTRACTOR TO SELECT PLANTINGS FOR WETLANDS AND OTHER SENSITIVE AREAS IN COMPLIANCE WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL STANDARDS. NATIONAL WETLAND PLANTING LIST CAN BE VIEWED ON THE USACE WEBSITE.

GENERAL NOTES

- 1) ALL WORK SHALL COMPLY WITH APPLICABLE STATE, FEDERAL, AND LOCAL CODES AND ALL NECESSARY LICENSES AND PERMITS SHALL BY THE CONTRACTOR AT HIS EXPENSE UNLESS PREVIOUSLY OBTAINED BY THE OWNER.
- 2) DEVIATIONS FROM THESE PLANS AND SPECIFICATIONS WITHOUT THE PRIOR CONSENT OF THE ENGINEER MAY BE CAUSE FOR THE WORK TO BE UNACCEPTABLE TO THE ENGINEER.
- 3) THE CONTRACTOR WARRANTS THAT HIS EMPLOYEES, AGENTS, AND SUBCONTRACTORS POSSESS THE EXPERIENCE, KNOWLEDGE AND CHARACTER NECESSARY TO QUALIFY THE INDIVIDUAL FOR THE PARTICULAR CONSTRUCTION TECHNIQUES THEY PERFORM IN CONNECTION WITH THE TASKS TO BE PERFORMED UNDER THIS CONTRACT

GENERAL NOTES (CONTINUED)

- THE CONTRACTOR SHALL INSURE THAT ALL CONSTRUCTION IS PERFORMED IN STRICT COMPLIANCE WITH ALL OSHA. STATE AND LOCAL HEALTH AND SAFETY CODES
- 4) THE CONTRACTOR OR OTHER RESPONSIBLE PARTY IS TO TAKE IMMEDIATE ACTION UPON DISCOVERY OF DEFICIENCIES, WHETHER INCLUDED IN AN INSPECTION REPORT OR NOT. CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY IF ANY DISCREPANCIES ARE FOUND
- BETWEEN SURVEY DATA AND ACTUAL FIELD CONDITIONS. 5) CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES BEFORE CONSTRUCTION STARTS. EXISTING UTILITIES ARE SHOWN USING 8) ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN THE BEST AVAILABLE INFORMATION. THE CONTRACTOR IS EXPECTED TO COORDINATE ALL WORK WITH THE OWNER AND UTILITY COMPANIES TO MINIMIZE DISRUPTION AND DAMAGE TO THE PROPERTY.
 - 6) CONSTRUCTION STAGING AREAS, SITE ACCESS AND LIMITS OF CONSTRUCTION SHALL BE COORDINATED WITH ANY SECONDARY OR TERTIARY PERMITTEES.

BEST MANAGEMENT PRACTICES

- STRIPPING OF VEGETATION, REGRADING, AND OTHER DEVELOPMENT ACTIVITIES SHALL BE CONDUCTED IN SUCH A MANNER SO AS TO MINIMIZE
- CUT AND FILL OPERATIONS SHALL BE KEPT TO A MINIMUM. 3) DEVELOPMENT PLANS MUST CONFORM TO TOPOGRAPHY AND SOIL TYPE, SO AS TO CREATE THE LOWEST PRACTICABLE EROSION POTENTIAL.
- 4) WHENEVER FEASIBLE, NATURAL VEGETATION SHALL BE RETAINED. PROTECTED, AND SUPPLEMENTED.
- 5) DISTURBED SOIL SHALL BE STABILIZED AS QUICKLY AS PRACTICABLE 6) TEMPORARY VEGETATION OR MULCHING SHALL BE EMPLOYED TO PROTECT EXPOSED CRITICAL AREAS DURING DEVELOPMENT.
- 7) PERMANENT VEGETATION AND STRUCTURAL EROSION CONTROL MEASURES SHALL BE INSTALLED AS SOON AS PRACTICABLE
- 8) TO THE EXTENT NECESSARY, SEDIMENT IN RUNOFF WATER SHALL BE TRAPPED BY THE USE OF DEBRIS BASINS, SILT TRAPS, OR SIMILAR MEASURES UNTIL THE DISTURBED AREA IS STABILIZED. ADEQUATE PROVISIONS SHALL BE PROVIDED TO MINIMIZE DAMAGE
- FROM SURFACE WATER TO THE CUT FACE OF EXCAVATIONS OR THE SLOPING SURFACES OF FILLS; ALL FILL SLOPES SHALL HAVE SILT FENCING AT THE TOE.
- 10) GRADING EQUIPMENT SHALL CROSS FLOWING STREAMS BY THE MEANS OF BRIDGES OR CULVERTS, EXCEPT WHEN SUCH METHODS ARE NOT FEASIBLE, PROVIDED IN ANY CASE THAT SUCH CROSSINGS SHALL BE KEPT TO A MINIMUM. 11) FILLS SHALL NOT ENCROACH UPON NATURAL WATER COURSES OR
- CONSTRUCTED CHANNELS IN A MANNER SO AS TO ADVERSELY AFFECT OTHER PROPERTY OWNERS. 12) PROVISIONS SHALL BE PROVIDED FOR TREATMENT OR CONTROL OF
- ANY SOURCE OF SEDIMENTS AND ADEQUATE SEDIMENTATION CONTROL FACILITIES TO RETAIN SEDIMENTS ON SITE OR PRECLUDE SEDIMENTATION OF ADJACENT WATERS BEYOND THE LEVELS SPECIFIED IN THIS PERMIT.
- 13) OFF-SITE VEHICLE TRACKING OF DIRT, SOILS, AND SEDIMENTS AND THE GENERATION OF DUST SHALL BE MINIMIZED OR ELIMINATED TO THE MAXIMUM EXTENT PRACTICAL. THE PLAN SHALL INCLUDE THE BEST MANAGEMENT PRACTICE TO BE IMPLEMENTED AT THE SITE OR COMMON DEVELOPMENT.
- 14) VELOCITY DISSIPATION DEVICES SHALL BE PLACED AT DISCHARGE LOCATIONS AND ALONG THE LENGTH OF ANY OUTFALL CHANNEL FOR THE PURPOSE OF PROVIDING A NON-EROSIVE VELOCITY FLOW FROM THE STRUCTURE TO A WATER COURSE SO THAT THE NATURAL PHYSICAL AND BIOLOGICAL CHARACTERISTICS AND FUNCTIONS ARE MAINTAINED AND PROTECTED (E.G., NO SIGNIFICANT CHANGES IN THE HYDROLOGICAL
- REGIME OF THE RECEIVING WATERS.) 15) DETENTION FACILITIES AND EROSION AND SEDIMENT CONTROL DEVICES MUST BE INSTALLED PRIOR TO START OF OTHER CONSTRUCTION AND MAINTAINED UNTIL PERMANENT GROUND COVER IS ESTABLISHED. THE DEVICES SHALL BE MOVED AND ADJUSTED AS NEEDEI TO KEEP A FUNCTIONING SYSTEM THROUGHOUT CONSTRUCTION. EROSION CONTROL MEASURES INCLUDE (BUT ARE NOT LIMITED TO): CONSTRUCTION EXITS, SILT FENCE, STORM INLET/OUTLET PROTECTION MULCH BERMS, AND TEMPORARY GRASSING.

THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH, LAND DISTURBING ACTIVITIES.

EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLANS DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.

ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING. NO WASTE MATERIALS INCLUDING BUILDING MATERIALS, SHALL BE DISCHARGED TO WATERS OF THE STATE, EXCEPT AS AUTHORIZED BY A SECTION 404 PERMIT.

ES&PC CERTIFICATION STATEMENT

"I CERTIFY THAT THE PERMITTEE'S EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN PROVIDES FOR AN APPROPRIATE AND COMPREHENSIVE SYSTEM OF BEST MANAGEMENT PRACTICES REQUIRED BY THE GEORGIA WATER QUALITY CONTROL ACT AND THE DOCUMENT "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA" (MANUAL) PUBLISHED BY THE STATE SOIL AND WATER CONSERVATION COMMISSION AS OF JANUARY 1 OF THE YEAR IN WHICH THE LAND-DISTURBING ACTIVITY WAS PERMITTED, PROVIDES FOR THE SAMPLING OF THE RECEIVING WATER(S) OR THE SAMPLING OF THE STORM WATER OUTFALLS AND THAT THE DESIGNED SYSTEM OF BEST MANAGEMENT PRACTICES AND SAMPLING METHODS IS EXPECTED TO MEET THE REQUIREMENTS CONTAINED IN THE GENERAL NPDES PERMIT NO. GAR 100002."

GASWCC LEVEL II DESIGN PROFESSIONAL CERTIFICATION # DATE



CERTIFICATION NUMBER

ISSUED: 01/31/2014

DATE OF INSPECTION

DETAILS OF THE DRAINAGE.

ES&PC CERTIFICATION STATEMENT

GSWCC LEVEL II DESIGN PROFESSIONAL

GEORGIA SOIL AND WATER CONSERVATION COMMISSION

0000070272

EXPIRES: 01/31/2017

William T. Roberts

Level II Certified Design Professional

24 HOUR CONTACT

(770) 270-6243

DESIGN PROFESSIONAL 7-DAY VISIT CERTIFICATION

I certify the site was in compliance with the ES&PC Plan on the date of inspection.

Inspection included the following discrepancies from the ES&PC Plan

These deficiencies must be addressed immediately and a re-inspection scheduled.

Work shall not proceed on the site until design Professional Certification is obtained

NON-STORM WATER DISCHARGE

MADE TO ANY OFF-SITE WATERS. IF IT IS DETERMINED THAT NON-STORM WATER

IT IS NOT ANTICIPATED THAT ANY NON-STORM WATER DISCHARGES WILL BE

DISCHARGES WILL BE MADE, INCLUDING DISCHARGES FROM FIRE FIGHTING

INLINE FLUSHING, IRRIGATION DRAINAGE, AIR CONDITIONING CONDENSATE,

SPRINGS, UNCONTAMINATED GROUND WATER, FOUNDATION OR FOOTING

DRAWINGS WHERE FLOWS ARE TO BE CONTAMINATED WITH PROCESS

MATERIALS OR POLLUTANTS, THIS SECTION WILL BE AMENDED WITH THE

ACTIVITIES, FIRE HYDRANT FLUSHING, POTABLE WATER SOURCES INCLUDING

RIVER TO TAF

1841 PEELER RD UNIT C ATLANTA, GA 30338 PHONE: (678) 336-5732

WWW.R2TINC.COM

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CERTIFICATION #

SOUTH EACHTRE ANITARY REPLAC МQ

"I CERTIFY THAT THE PERMITTEE'S EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN PROVIDES FOR THE MONITORING OF: (A) ALL PERENNIAL AND INTERMITTENT STREAMS AND OTHER WATER BODIES SHOWN ON THE USGS TOPOGRAPHIC MAP AND ALL OTHER FIELD VERIFIED PERENNIAL AND INTERMITTENT STREAMS AND OTHER WATER BODIES, OR (B) WHERE ANY SUCH SPECIFIC IDENTIFIED PERENNIAL OR INTERMITTENT STREAM AND OTHER WATER BODY IS NOT PROPOSED TO BE SAMPLED, I HAVE DETERMINED IN MY PROFESSIONAL JUDGEMENT, UTILIZING THE FACTORS REQUIRED IN THE GENERAL NPDES PERMIT NO. GAR 100002, THAT THE INCREASE IN TURBIDITY OF EACH SPECIFIC IDENTIFIED SAMPLED RECEIVING WATER WILL BE REPRESENTATIVE OF THE INCREASE IN THE TURBIDITY OF A SPECIFIC IDENTIFIED UN-SAMPLED RECEIVING WATER."

DATE

DATE

CERTIFICATION #

GASWCC LEVEL II DESIGN PROFESSIONAL

PERMIT NO. GAR100002 CERTIFICATION

"I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL

ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT CERTIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR

NAME (OWNER)

KNOWING VIOLATIONS."

SITE VISIT CERTIFICATION

I CERTIFY UNDER PENALTY OF LAW THAT THIS PLAN WAS PREPARED AFTER A SITE VISIT TO THE LOCATIONS DESCRIBED HEREIN BY MYSELF OR MY AUTHORIZED AGENT, UNDER MY DIRECT SUPERVISION."

GASWCC LEVEL II DESIGN PROFESSIONAL DATE CERTIFICATION #

COUI IMEN 3RS'

TAMP:

ORG No. 26889 PROFESSIONAL 5/27/16

HEET TITLE: 40 of 65

ES&PC NARRATIVE PLAN

SSUED: 5.27.16 ROJECT NO.

CALE: NONE HKD BY: A.R.

> ESIGNED BY: J.J. RAWN BY: J.J.

17) ALL PERMITTEES SHALL ENSURE AND DEMONSTRATE THAT THEIR PLAN IS IN COMPLIANCE WITH APPLICABLE STATE AND/OR LOCAL WASTE DISPOSAL.

18) THE PRIMARY PERMITTEE SHALL AMEND THEIR PLANS WHENEVER THERE IS A CHANGE IN DESIGN, CONSTRUCTION, OPERATION, OR MAINTENANCE, WHICH HAS A SIGNIFICANT EFFECT ON BMP'S WITH A HYDRAULIC COMPONENT. AMENDMENTS TO THE PLANS MUST MUST BE CERTIFIED BY THE DESIGN PROFESSIONAL. ALL REVISIONS OR AMENDMENTS SHALL BE SUBMITTED TO THE LOCAL ISSUING AUTHORITY FOR REVIEW.

CONSTRUCTION ENTRANCE NOTES:

1) THE CONTRACTOR SHALL LIMIT SITE ACCESS BY CONSTRUCTION VEHICLES TO ENTRANCES PROTECTED BY A STONE CONSTRUCTION ENTRANCE OR AN APPROVED COMPARABLE MEASURE. SEDIMENT SHALL BE REMOVED FROM PAVED AREAS ON A DAILY BASIS.

2) CONTRACTOR TO FIELD LOCATE CONSTRUCTION ENTRANCES TO FACILITATE ACCESS WITH MINIMAL DISTURBANCE TO THE EXISTING SITE AS APPROVED BY OWNER. SITE IS TO BE RESTORED TO PRE-EXISTING CONDITIONS UPON COMPLETION.

3) THE CONSTRUCTION EXITS SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH STONE, AS CONDITIONS DEMAND, AND REPAIR AND/OR CLEAN-OUT OF ANY STRUCTURES USED TO TRAP SEDIMENT. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLE OR SITE ONTO PUBLIC ROADWAY OR INTO STORM DRAIN MUST BE REMOVED.

SILT FENCE NOTES:

- 1) SILT CONTROL SHALL BE IN EFFECT PRIOR TO ANY GRADING OR CONSTRUCTION.
- 2) SEDIMENT BARRIERS SHALL BE INSTALLED ALONG CONTOURS TO THE MAXIMUM EXTENT PRACTICAL.
- 3) SPLICED JOINTS SHALL OVERLAP 18" MIN. WITH MATCHING POST.
 4) DRIVE 48" MIN. POSTS 18" MIN. INTO THE SOIL.
- 5) DIG DITCH 2"-6" WIDE & 6" DEEP. LAY FABRIC 6"-8" DEEP, THEN BACKFILL.
- 6) ALONG ALL STATE WATERS AND OTHER SENSITIVE AREAS, TWO
- ROWS OF TYPE-S SEDIMENT BARRIERS SHALL BE USED.

 7) SEDIMENT SHALL BE REMOVED ONCE IT HAS ACCUMULATED TO
- 8) ALL SEDIMENT ACCUMULATED AT THE BARRIER SHALL BE REMOVED AND PROPERLY DISPOSED OF BEFORE THE BARRIER IS REMOVED.

ONE-HALF THE ORIGINAL HEIGHT OF THE BARRIER

- 9) SEDIMENT BARRIERS SHALL BE REPLACED WHENEVER IT HAS DETERIORATED TO SUCH AN EXTENT THAT THE EFFECTIVENESS OF THE FABRIC IS REDUCED (APPROXIMATELY SIX MONTHS), OR THE HEIGHT OF THE PRODUCT IS NOT MAINTAINING 80% OF IT PROPERLY INSTALLED HEIGHT.
- 10) TEMPORARY SEDIMENT BARRIERS SHALL REMAIN IN PLACE UNTIL DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED.

LAND DISTURBANCE CONSTRUCTION ACTIVITY SEQUENCE

THE FOLLOWING SEQUENCES ARE TO BE IMPLEMENTED IN THE ORDER SHOWN, UNLESS INCLEMENT WEATHER, SITE CONDITIONS, REVISIONS, PRE-CONSTRUCTION CONFERENCE, ETC., DICTATES A DEVIATION FROM THIS SCHEDULE. IF A DEVIATION IS UNDERTAKEN OR ANTICIPATED, THE ENGINEER SHALL BE NOTIFIED AND THE CHANGE OF SEQUENCE SHALL BE RECORDED IN THE DAILY LOG.

CLEARING & GRUBBING PLAN (PHASE I)

- 1) OBTAIN AND POST COPY OF LAND DISTURBANCE PERMIT ON SITE.
- 2) PRIOR TO LAND DISTURBING ACTIVITY, THE CONTRACTOR SHALL SCHEDULE A PRECONSTRUCTION MEETING AT THE SITE. THE CONTRACTOR, OWNER'S REPRESENTATIVE, PROJECT DESIGN TEAM, AND COUNTY/CITY INSPECTOR SHALL REVIEW THE EROSION CONTROL REQUIREMENTS AND SITE WORK CONSTRUCTION DOCUMENTS.
- 3) SET UP A DAILY INSPECTION LOG FOR THE BMP INSPECTIONS TO BE KEPT IN THE CONSTRUCTION TRAILER OR AT A NEARBY ACCESSIBLE LOCATION (SALES OFFICE, ETC.)
- 4) PRIOR TO COMMENCING LAND DISTURBANCE ACTIVITY, THE LIMITS OF LAND DISTURBANCE SHALL BE CLEARLY AND ACCURATELY DEMARCATED WITH STAKES, RIBBONS, OR OTHER APPROPRIATE MEANS. THE LOCATION AND EXTENT OF ALL AUTHORIZED LAND DISTURBANCE ACTIVITY SHALL BE DEMARCATED FOR THE DURATION OF THE CONSTRUCTION ACTIVITY. NO LAND DISTURBANCE SHALL OCCUR OUTSIDE THE APPROVED LIMITS INDICATED ON THE APPROVED PLANS.
- 5) PRIOR TO ANY OTHER CONSTRUCTION, A STABILIZED CONSTRUCTION ENTRANCE WILL BE CONSTRUCTED AT EACH POINT OF ENTRY TO OR EXIT FROM THE SITE.
- 6) IMMEDIATELY AFTER THE ESTABLISHMENT OF CONSTRUCTION ENTRANCES/EXITS, ALL PERIMETER EROSION CONTROL DEVICES AND STORM WATER MANAGEMENT DEVICES SHALL BE INSTALLED PRIOR TO ANY OTHER CONSTRUCTION.

CLEARING & GRUBBING PLAN (PHASE I) (CONTINUED)

- 7) TREE PROTECTION FENCING SHALL BE INSTALLED PRIOR TO THE START OF ANY LAND DISTURBING ACTIVITY.
- 8) WITHIN SEVEN (7) DAYS AFTER INSTALLATION OF INITIAL EROSION CONTROL MEASURES, THE CONTRACTOR SHALL SCHEDULE AN INSPECTION BY THE DESIGN PROFESSIONAL. NO OTHER CONSTRUCTION ACTIVITIES SHALL OCCUR UNTIL THE DESIGN PROFESSIONAL APPROVES THE INSTALLATIONS.
- 9) AFTER APPROVAL OF INITIAL EROSION CONTROL INSTALLATION. CONTRACTOR MAY PROCEED WITH CLEARING AND GRUBBING ACTIVITIES. ALL CLEARED MATERIAL TO BE HAULED OFF SITE OR STOCKPILED FOR CHIPPING OR TUB GRINDING, IF PERMITTED.
 10) THE CONTRACTOR CAN UTILIZE CLEARED TREES AS BARRIER BRUSH SEDIMENT CONTROL WHERE INITIAL GRADING ACTIVITIES WILL NOT OCCUR
- 11) MULCH OR TEMPORARY GRASSING SHALL BE APPLIED TO ALL EXPOSED AREAS WITHIN SEVEN (7) DAYS OF LAND DISTURBANCE. ALL DISTURBED AREAS LEFT MULCH MORE THAN THIRTY (30) DAYS SHALL BE STABILIZED WITH TEMPORARY VEGETATION.
- 12) CONSTRUCT ALL REMAINING STRUCTURAL BMP'S SHOWN ON ES&PC CONCURRENT WITH CLEARING AND GRUBBING OPERATIONS

INTERMEDIATE GRADING AND TEMPORARY VEGETATIVE PLAN (PHASE II)

- 1) THE CONSTRUCTION EXIT, SILT FENCE, OUTLET PROTECTION, MULCHING, TEMPORARY GRASSING, AND PERMANENT GRASSSING SHALL ALL BE MAINTAINED AND REPAIRED DURING THE GRADING PHASE OF CONSTRUCTION.
- 2) DURING CONSTRUCTION, THE CONTRACTOR SHALL MAINTAIN CAREFUL SCHEDULE AND PERFORMANCE TO ENSURE THAT LAND STRIPPED OF ITS NATURAL GROUND COVER IS EXPOSED ONLY IN SMALL QUANTITIES, AND THEREFORE LIMITED DURATIONS, BEFORE PERMANENT EROSION PROTECTION IS ESTABLISHED.
- STREAMBANK STABILIZATION SHALL BE INSTALLED PRIOR TO DISTURBANCE ON ANY STREAM BANK DURING CONSTRUCTION.
 EARTHWORK OPERATIONS IN THE VICINITY OF STREAM BUFFERS SHALL BE CAREFULLY CONTROLLED TO AVOID DUMPING OR SLOUGHING INTO THE BUFFER AREAS.
- 5) TOPSOIL SHALL BE REMOVED TO SUITABLE SUBGRADE MATERIAL. TOPSOIL MAY BE UTILIZED TO CONSTRUCT BERMS AS REQUIRED.
- 6) STOCK PILES OF SOIL AND OTHER ERODIBLE MATERIALS SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES. THE CONTRACTOR IS RESPONSIBLE FOR THE TEMPORARY PROTECTION AND PERMANENT STABILIZATION FOR STOCKPILES ON SITE AS WELL AS FOR MATERIALS TRANSPORTED FROM THE PROJECT SITE.
- 7) EROSION CONTROL DEVICES SHALL BE INSTALLED IMMEDIATELY AFTER GROUND DISTURBANCE OCCURS. THE LOCATION OF SOME OF THE EROSION CONTROL DEVICES MAY HAVE TO BE ALTERED FROM THAT SHOWN ON THE APPROVED PLANS IF DRAINAGE PATTERS DURING CONSTRUCTION ARE DIFFERENT FROM THE FINAL PROPOSED DRAINAGE PATTERNS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ACCOMPLISH EROSION CONTROL FOR ALL DRAINAGE PATTERNS CREATED AT VARIOUS STAGES DURING CONSTRUCTION. ANY DIFFICULTY IN CONTROLLING EROSION DURING ANY PHASE OF CONSTRUCTION SHALL IMMEDIATELY BE REPORTED TO THE ENGINEER.
- 8) TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES ARE NOT TO BE REMOVED UNTIL ALL DISTURBED AREAS ARE STABILIZED. AFTER STABILIZATION IS COMPLETE, ALL MEASURES SHALL BE REMOVED WITHIN (30) THIRTY DAYS. TRAPPED SEDIMENT SHALL BE SPREAD AND SEEDED.
- 9) ALL CUT AND FILL SLOPES MUST BE SURFACE ROUGHED AND VEGETATED WITHIN SEVEN (7) DAYS OF THEIR CONSTRUCTION.
 10) THE CONTRACTOR SHALL ESTABLISH BARRIERS AT THE TOP OF ALL SLOPES UNDER CONSTRUCTION. CUT AND FILL SLOPES SHALL NOT EXCEED 3H:1V ON RESIDENTIAL PROJECTS AND SHALL NOT EXCEED 2H:1V ON ALL OTHER PROJECTS.
- 11) ALL GRADED SLOPES 3:1 OR GREATER MUST BE HYDRO SEEDED AND COVERED WITH GDOT APPROVED WHEAT OR WOOD FIBER MATTING. IF NOT HYDRO-SEEDED, GDOT APPROVED MATTING THAT HAS BEEN IMPREGNATED WITH SEED AND FERTILIZER MUST BE USED. ALL SLOPES MUST BE PROPERLY PROTECTED UNTIL PERMANENT VEGETATIVE COVER IS ESTABLISHED.
- 12) ALL DRAINAGE SWALES AND GRADED AREAS SHALL BE APPLIED WITH VEGETATIVE COVER AS SOON AS FINAL GRADE IS ACHIEVED.

 13) MULCH OR TEMPORARY GRASSING SHALL BE APPLIED TO ALL EXPOSED AREAS WITHIN SEVEN (7) DAYS OF LAND DISTURBANCE. ALL DISTURBED AREAS LEFT MULCH MORE THAN THIRTY (30) DAYS SHALL BE STABILIZED WITH TEMPORARY VEGETATION.
- 14) EROSION AND SEDIMENT CONTROL MEASURES MUST BE INSPECTED AFTER EACH RAIN EVENT. EACH DEVICE IS TO BE MAINTAINED OR REPLACED IF SEDIMENT ACCUMULATION HAS REACHED HALF THE CAPACITY OF THE DEVICE. ADDITIONAL DEVICES MUST BE INSTALLED IF NEW CHANNELS DEVELOP.
- 15) CONSTRUCT TEMPORARY AND PERMANENT DRAINAGE STRUCTURES AS NECESSARY FOR PROPER SITE DRAINAGE AND CONVEYANCE TO THE PROPER BEST MANAGEMENT PRACTICES SHOWN ON THE SITE PLAN. INSTALL ALL OUTLET PROTECTION BMP'S CONCURRENT WITH DRAINAGE OUTFALLS.
- 16) STORM DRAIN OUTLET PROTECTION SHALL BE PLACED AT ALL OUTLET HEADWALLS AS SOON AS THE HEADWALL IS CONSTRUCTED.

 17) THE CONTRACTOR SHALL MAINTAIN ANY SEDIMENT PONDS UNTIL PERMANENT GROUNDCOVER IS ESTABLISHED. SEDIMENT SHALL BE CLEANED OUT OF THE POND WHEN IT REACHES ONE THIRD (1/3) OF THE BASIN.

FINAL GRADING AND PERMANENT VEGETATIVE PLAN (PHASE III)

- 1) SMOOTH GRADES AND PERMANENTLY VEGETATE DISTURBED AREAS AT COMPLETION OF CONSTRUCTION.
- 2) THE CONTRACTOR SHALL APPLY PERMANENT OR TEMPORARY SOIL STABILIZATION TO ALL DENUDED OR DISTURBED AREAS WITHIN (7) SEVEN DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. SOIL STABILIZATION MUST ALSO BE APPLIED TO DENUDED OR DISTURBED AREAS WHICH MAY NOT BE AT FINAL GRADE BUT WHICH WILL REMAIN UNDISTURBED FOR LONGER THAN (30) THIRTY DAYS. SOIL STABILIZATION MEASURES INCLUDED VEGETATIVE ESTABLISHMENT, MULCHING AND THE EARLY APPLICATION OF GRAVEL BASE MATERIAL ON AREAS TO BE PAVED.
- 3) INSTALLATION OF WATER QUALITY DEVICES SHALL BE CONCURRENT WITH FINAL STABILIZATION AND/OR PRIOR TO MAINTENANCE/PERFORMANCE BOND EXPIRATION.
- 4) PERIMETER SILT FENCING TO REMAIN THROUGHOUT CONSTRUCTION. AT COMPLETION OF CONSTRUCTION, ALL AREAS ARE TO BE PERMANENTLY VEGETATED.
- 5) AS SOON AS PRACTICALLY POSSIBLE, PERMANENT LANDSCAPING SHALL BE INSTALLED ALONG ALL STREETS AND THROUGHOUT THE SITE TO PROTECT THE LAND AND HELP MINIMIZE THE EFFECTS OF SEDIMENT RUNOFF INTO STATE BUFFERS OR ONTO ADJACENT PROPERTIES.
- 6) WHEN THE SITE IS STABILIZED AND AT THE DIRECTION OF THE COUNTY ENGINEER, THE CONTRACTOR IS TO REMOVE THE SEDIMENT BASINS AND STABILIZE THE DISTURBED AREAS.
- 7) THE CONSTRUCTION EXIT CAN BE REMOVED ONCE FINAL PAVING AND FINAL VEGETATION IS ESTABLISHED.
- 8) THE STREAMBANK PROTECTION WILL REMAIN AS PERMANENT STRUCTURES.
- 9) UPON COMPLETION OF THE PROJECT AND RECEIPT OF THE CERTIFICATE OF COMPLETION, THE CONTRACTOR SHALL REMOVE ALL TEMPORARY EROSION CONTROL MEASURES AND DISPOSE OF THEM UNLESS NOTED OTHERWISE ON THE PLANS.

COMPLIANCE WITH FEDERAL, STATE, AND LOCAL REGULATIONS

THE CONTRACTOR WILL OBTAIN COPIES OF ANY AND ALL LOCAL AND STATE REGULATIONS WHICH ARE APPLICABLE TO STORM WATER MANAGEMENT, EROSION CONTROL, AND POLLUTION MINIMIZATION AT THIS JOB SITE AND WILL COMPLY FULLY WITH SUCH REGULATIONS. THE CONTRACTOR WILL SUBMIT WRITTEN EVIDENCE OF SUCH COMPLIANCE IF REQUESTED BY THE OPERATOR OR ANY AGENT OF A REGULATORY BODY. THE CONTRACTOR WILL COMPLY WILL ALL CONDITIONS OF ANY AND ALL LOCAL, STATE, AND FEDERAL AGENCIES THAT HAVE GOVERNING AUTHORITY, INCLUDING CONDITIONS RELATED TO MAINTAINING THE ES&PC PLAN AND EVIDENCE OF COMPLIANCE WITH THE ES&PC PLAN AT THE JOB SITE AND ALLOWING REGULATORY PERSONNEL ACCESS TO THE JOB SITE TO RECORDS IN ORDER TO DETERMINE COMPLIANCE.

NO WASTE MATERIALS INCLUDING BUILDING MATERIALS SHALL BE DISCHARGED TO WATERS OF THE STATE, EXCEPT AS AUTHORIZED BY A SECTION 404 PERMIT.

WASTE MATERIALS

ALL WASTE MATERIALS WILL BE COLLECTED AND STORED IN A SECURELY LIDDED METAL DUMPSTER. THE DUMPSTER WILL MEET ALL SOLID WASTE MANAGEMENT REGULATIONS. ALL TRASH AND CONSTRUCTION DEBRIS FROM THE SITE WILL BE DEPOSITED IN THE DUMPSTER. THE DUMPSTER WILL BE EMPTIED A MINIMUM OF ONCE PER WEEK OR MORE OFTEN IF NECESSARY AND TRASH WILL BE HAULED AS REQUIRED BY LOCAL REGULATIONS. NO CONSTRUCTION WASTE WILL BE BURIED ON-SITE.

ALL PERSONNEL WILL BE INSTRUCTED ON PROPER PROCEDURES FOR WASTE DISPOSAL. A NOTICE STATING THESE PRACTICES WILL BE POSTED AT THE JOBSITE AND THE CONTRACTOR WILL BE RESPONSIBLE FOR SEEING THAT THESE PROCEDURES ARE FOLLOWED.

POLLUTION PREVENTION MEASURES

ALL POLLUTION FROM WASTE DISPOSAL PRACTICES, SOIL ADDITIVES, REMEDIATION OF SPILLS AND LEAKS OF PETROLEUM PRODUCTS, CONCRETE TRUCK WASHOUT, ETC., SHOULD ANY OF THESE OCCUR, WILL BE CONTROLLED BY THE IMPLEMENTATION OF APPROPRIATE BMP'S. THE SITE WILL BE IN COMPLIANCE WITH ALL APPLICABLE STATE AND LOCAL WASTE DISPOSAL AND SANITARY SEWER REGULATIONS.

POTENTIAL POLLUTANTS INCLUDE BUT ARE NOT LIMITED TO: PETROLEUM, FERTILIZER, PAINT, CONCRETE, DETERGENTS, TAR, CLEANING SOLVENTS, AND OTHER HAZARDOUS MATERIALS.

SPILL PREVENTION PRACTICES

LOCAL, STATE, AND MANUFACTURER'S RECOMMENDED
METHODS FOR SPILL CLEANUP WILL BE CLEARLY POSTED AND
PROCEDURES WILL BE MADE AVAILABLE TO SITE PERSONNEL.
 MATERIAL AND EQUIPMENT NECESSARY FOR SPILL CLEANUP
WILL BE KEPT IN THE MATERIAL STORAGE AREAS. TYPICAL
MATERIALS AND EQUIPMENT INCLUDE, BUT IS NOT LIMITED TO,
BROOMS, DUSTPANS, MOPS, RAGS, GLOVES, GOGGLES, CAT LITTER,
SAND, SAWDUST, AND PROPERLY LABELED PLASTIC AND METAL
WASTE CONTAINERS.

SPILL PREVENTION PRACTICES (CONTINUED)

- 3) THE OPERATOR WILL DESIGNATE A SPILL PREVENTION AND CLEANUP COORDINATOR. HE WILL DESIGNATE AT LEAST THREE OTHER SITE PERSONNEL WHO WILL RECEIVE SPILL PREVENTION AND CLEANUP TRAINING. THESE INDIVIDUALS WILL EACH BECOME RESPONSIBLE FOR A PARTICULAR PHASE OF PREVENTION AND CLEANUP. THE NAMES OF RESPONSIBLE SPILL PERSONNEL WILL BE POSTED IN THE MATERIAL STORAGE AREA AND IN THE OFFICE TRAILER ONSITE.
- 4) SPILL PREVENTION PRACTICES AND PROCEDURES WILL BE REVIEWED AFTER A SPILL AND ADJUSTED AS NECESSARY TO PREVENT FUTURE SPILLS.
- 5) ALL SPILLS WILL BE CLEANED UP IMMEDIATELY UPON DISCOVERY. ALL SPILLS WILL BE REPORTED AS REQUIRED BY LOCAL, STATE AND FEDERAL REGULATIONS.
- 6) FOR SPILLS THAT IMPACT SURFACE WATER (LEAVE A SHEEN ON SURFACE WATER), THE NATIONAL RESPONSE CENTER (NRC) WILL BE CONTACTED WITHIN 24 HOURS AT 1-800-426-2675.
- 7) FOR SPILLS OF AN UNKNOWN AMOUNT, THE NATIONAL RESPONSE CENTER (NRC) WILL BE CONTACTED WITHIN 24 HOURS AT 1-800-426-2675.
- 8) FOR SPILLS GREATER THAN 25 GALLONS AND NO SURFACE WATER IMPACTS OCCUR, THE GEORGIA EPD WILL BE CONTACTED WITHIN 24 HOURS.
- 9) FOR SPILLS LESS THAN 25 GALLONS AND NO SURFACE WATER IMPACTS OCCUR, THE SPILL WILL BE CLEANED UP AND LOCAL AGENCIES WILL BE CONTACTED AS REQUIRED.
- 10) THE CONTRACTOR SHALL NOTIFY THE LICENSED PROFESSIONAL WHO PREPARED THIS PLAN IF MORE THAN 1,320 GALLONS OF PETROLEUM IS STORED ONSITE (THIS INCLUDES CAPACITIES OF EQUIPMENT) OR IF ANY ONE PIECE OF EQUIPMENT HAS A CAPACITY GREATER THAN 660 GALLONS. THE CONTRACTOR WILL NEED A SPILL PREVENTION CONTAINMENT AND COUNTER MEASURERS PLAN PREPARED BY A LICENSED PROFESSIONAL.

HAZARDOUS WASTES

ALL HAZARDOUS WASTE MATERIALS WILL BE DISPOSED OF IN THE MANNER SPECIFIED BY LOCAL, STATE, AND/OR FEDERAL REGULATIONS AND BY THE MANUFACTURER OF SUCH PRODUCTS. THE JOB SITE SUPERINTENDENT, WHO WILL ALSO BE RESPONSIBLE FOR SEEING THAT THESE PRACTICES ARE FOLLOWED, WILL INSTRUCT SITE PERSONNEL IN THESE PRACTICES. MATERIAL SAFETY DATA SHEETS (MSDS'S) FOR EACH SUBSTANCE WITH HAZARDOUS PROPERTIES THAT IS USED ON THE JOB SITE WILL BE OBTAINED AND USED FOR THE PROPER MANAGEMENT OF POTENTIAL WASTES THAT MAY RESULTS FROM THESE PRODUCTS. AN MSDS WILL BE POSTED IN THE IMMEDIATE AREA WHERE SUCH PRODUCT IS STORED AND/OR USED AND ANOTHER COPY OF EACH MSDS WILL BE MAINTAINED IN THE ES&PC PLAN FILE AT THE JOB SITE CONSTRUCTION TRAILER OFFICE. EACH EMPLOYEE WHO MUST HANDLE A SUBSTANCE WITH HAZARDOUS PROPERTIES WILL BE INSTRUCTED ON THE USE OF MSDS SHEETS AND THE SPECIFIC INFORMATION IN THE APPLICABLE MSDS FOR THE PRODUCT HE/SHE IS USING, PARTICULARLY REGARDING SPILL CONTROL TECHNIQUES.

THE CONTRACTOR WILL IMPLEMENT THE SPILL PREVENTION CONTROL PLAN AND COUNTERMEASURERS (SPCC) PLAN FOUND WITHIN THIS ES&PC PLAN AND WILL TRAIN ALL PERSONNEL IN THE PROPER CLEANUP AND HANDLING OF SPILLED MATERIALS. NO SPILLED HAZARDOUS MATERIALS OR HAZARDOUS WASTES WILL BE ALLOWED TO COME IN CONTACT WITH STORMWATER DISCHARGES. IF SUCH CONTACT OCCURS, THE STORMWATER DISCHARGE WILL BE CONTAINED ON SITE UNTIL APPROPRIATE MEASURES IN COMPLIANCE WITH STATE AND FEDERAL REGULATIONS ARE TAKEN TO DISPOSE OF SUCH CONTAMINATED STORMWATER. IT SHALL BE THE RESPONSIBILITY OF THE JOB SITE SUPERINTENDENT TO PROPERLY TRAIN ALL PERSONNEL IN THE USE OF THE SPCC PLAN.

HAZARDOUS PRODUCTS

THESE PRACTICES ARE USED TO REDUCE THE RISKS ASSOCIATED WITH HAZARDOUS MATERIALS.

PRODUCTS WILL BE KEPT IN ORIGINAL CONTAINERS UNLESS THEY ARE NOT RESEALABLE. ORIGINAL LABELS AND MATERIAL SAFETY DATA WILL BE RETAINED; THEY CONTAIN IMPORTANT INFORMATION. IF SURPLUS PRODUCT MUST BE DISPOSED OF, MANUFACTURERS' OR LOCAL AND STATE RECOMMENDED METHODS FOR PROPER DISPOSAL WILL BE FOLLOWED.

BANK AND SHORE

- 1) AN APPROPRIATE GEOTEXTILE FABRIC SHALL BE PLACED BETWEEN THE RIPRAP AND SOIL BASE. USE NRCS, GDOT, OR THE MANUFACTURER'S SPECIFICATIONS FOR TYPE AND WEIGHT OF FABRIC.
- 2) THE TOE OF THE REVETMENT SHALL BE ENTRENCHED IN STABLE CHANNEL BOTTOMS FOR A DEPTH OF 1.5 TO 3 FEET DEPENDING ON THE SIZE OF THE RIPRAP.
 3) RIPRAP SHALL EXTEND UP THE BANK TO AN ELEVATION WHERE
- VEGETATION WILL PROVIDE ADEQUATE PROTECTION.

 4) RIPRAP SHALL NOT BE PLACED ON SLOPES STEEPER THAN 1.5 HORIZONTAL TO 1.0 VERTICAL.
- 5) FILTER MATERIAL AND RIPRAP SHALL BE PLACED IN SUCCESSION TO THE REQUIRED THICKNESSES AND ELEVATIONS. RIPRAP SHALL BE HANDPLACED AROUND STRUCTURES TO PREVENT DAMAGE TO THE STRUCTURES.
- 6) IMMEDIATELY AFTER CONSTRUCTION, STABILIZE ALL DISTURBED AREAS WITH VEGETATION.



GEORGIA SOIL AND WATER CONSERVATION COMMISSION

William T. Roberts

Level II Certified Design Professional

CERTIFICATION NUMBER 0000070272

ISSUED: 01/31/2014

EXPIRES: 01/31/2017

24 HOUR CONTACT

(770) 270-6243

NOTES:

THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH, LAND DISTURBING ACTIVITIES.

EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLANS DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALI BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.

ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL

BE STABILIZED WITH MULCH OR TEMPORARY SEEDING.

NO WASTE MATERIALS INCLUDING BUILDING MATERIALS, SHALL BE DISCHARGED TO WATERS OF THE STATE, EXCEPT AS AUTHORIZED BY A SECTION 404 PERMIT.

GENERAL EROSION CONTROL PRACTICES

CODE	PRACTICE	DET	AIL	DESCRIPTION	SYMBOL
Bf	BUFFER ZONE		SHEET C-45 DETAIL 1	STRIP OF UNDISTURBED ORIGINAL VEGETATION, ENHANCED OR RESTORED EXISTING VEGETATION, OR THE REESTABLISHMENT OF VEGETATION SURROUNDING AN AREA OF DISTURBANCE OR BORDERING STREAMS.	Bf
Ds1	DISTURBED AREA STABILIZATION (MULCHING)		SHEET C-45 DETAIL 2	ESTABLISHING TEMPORARY PROTECTION FOR DISTURBED AREAS WHERE SEEDINGS MAY NOT HAVE A SUITABLE GROWING SEASON TO PRODUCE AN EROSION RETARDING COVER.	Ds1
Ds2	DISTURBED AREA STABILIZATION (TEMPORARY SEEDING)		SHEET C-45 DETAIL 3	ESTABLISHING A TEMPORARY VEGETATIVE COVER WITH FAST GROWING SEEDINGS ON DISTURBED AREAS.	Ds2
Ds3	DISTURBED AREA STABILIZATION (PERMANENT SEEDING)	**************************************	SHEET C-45 DETAIL 4 & 5	ESTABLISHING A PERMANENT VEGETATIVE COVER SUCH AS TREES, SHRUBS, VINES, GRASSES, SOD, OR LEGUMES ON DISTURBED AREAS.	Ds3
Sb	STREAM BANK STABILIZATION (PERMANENT VEGETATION)		SHEET C-45 DETAIL 6	THE USE OF READILY AVAILABLE NATIVE PLANT MATERIALS TO MAINTAIN AND ENHANCE STREAM BANKS, OR TO PREVENT, OR RESTORE AND REPAIR SMALL STREAM BANK EROSION PROBLEMS.	Sb
Co	CONSTRUCTION EXIT		SHEET C-46 DETAIL 1	A CRUSHED STONE PAD LOCATED AT THE CONSTRUCTION SITE EXIT TO PROVIDE A PLACE FOR REMOVING MUD FROM TIRES THEREBY PROTECTING PUBLIC STREETS.	
Cr	CONSTRUCTION ROAD STABILIZATION		SHEET C-46 DETAIL 8	A TRAVELWAY CONSTRUCTED AS PART OF A CONSTRUCTION PLAN INCLUDING ACCESS ROADS, SUBDIVISION ROADS, PARKING AREAS, AND OTHER ON-SITE VEHICLE TRANSPORTATION ROUTES.	Cr Z
Rd	ROCK FILTER DAM		SHEET C-46 DETAIL 2	A TEMPORARY STONE FILTER DAM INSTALLED ACROSS DRAINAGEWAYS OR IN CONJUNCTION WITH A TEMPORARY SEDIMENT TRAP.	Rd
Sd1	SEDIMENT BARRIER		SHEET C-46 DETAIL 3, 4, 5 & 6	A BARRIER TO PREVENT SEDIMENT FROM LEAVING THE CONSTRUCTION SITE. IT MAY BE SANDBAGS, BALES OF STRAW OR HAY, BRUSH, LOGS OR POLES, GRAVEL, OR A SILT FENCE.	\$ 2 (Sd1-S)
Sd2	INLET SEDIMENT TRAP		SHEET C-46 DETAIL 7 SHEET C-47 DETAIL 1	AN IMPOUNDING AREA CREATED BY EXCAVATING AROUND A STORM DRAIN DROP INLET. THE EXCAVATED AREA WILL BE FILLED AND STABILIZED ON COMPLETION OF CONSTRUCTION ACTIVITIES.	\$32 \$32
Sr	TEMPORARY STREAM CROSSING		SHEET C-47 DETAIL 2	A TEMPORARY BRIDGE OR CULVERT-TYPE STRUCTURE PROTECTING A STREAM OR WATERCOURSE FROM DAMAGE BY CROSSING CONSTRUCTION EQUIPMENT.	- 1 (81-0)
Тс	TURBIDITY CURTAIN		SHEET C-47 DETAIL 3	A FLOATING OR STAKED BARRIER INSTALLED WITHIN THE WATER (IT MAY ALSO BE REFERRED TO AS A FLOATING BOOM, SILT BARRIER, OR SILT CURTAIN).	Tc
Tr	TREE PROTECTION	0	SHEET C-47 DETAIL 4	TO PROTECT DESIRABLE TREES FROM INJURY DURING CONSTRUCTION ACTIVITY.	(DENOTE THEE CENTERS)

NOTE: THIS LEGEND DEPICTS THE GENERAL PRACTICES. SOME OF THESE PRACTICES HAVE SPECIFIC METHODS THAT APPLY TO CERTAIN CIRCUMSTANCES. THESE SPECIFIC MEASURES ARE CALLED OUT IN THE PLANS BY USING THE EROSION CONTROL SYMBOL, FOLLOWED BY A SUFFIX. PLEASE REFER TO THE EROSION DETAILS FOR SPECIFIC EROSION CONTROL PRACTICE CLARIFICATIONS.

ANTICIPATED BEGINNING OF CONSTRUCTION: ANTICIPATED END OF INITIAL CONSTRUCTION:

	МС	MO. 1 MO. 2 MO. 3		М	O. 4	MO. 5		MO.				
DESCRIPTION			(WEE	(S AF	TER E	BEGIN	NING	CONS	TRUC	TION)	,	
<u>DESCRIPTION</u>	2	4	6	8	10	12	14	16	18	20	22	2
INSTALLATION & MAINTENANCE OF PERIMETER EROSION CONTROLS												
ENGINEER'S INSPECTION												
PHASE I - CLEARING AND GRUBBING												
PHASE II - TEMPORARY VEGETATION												
SEWER MAIN INSTALLATION												
PHASE III - PERMANENT VEGETATION												
MAINTENANCE OF EROSION CONTROLS DEVICES												
FINAL LANDSCAPING												
REMOVE SEDIMENT CONTROL STRUCTURES												

*SEDIMENT AND EROSION CONTROL MEASURES TO BE INSPECTED DAILY. MAINTAIN BMP'S THROUGHOUT LAND DISTURBING ACTIVITIES.



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STAMP:

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No. 26889

PROFESSIONAL

SHEET TITLE: 41 of 65

5/27/16

ES&PC
NARRATIVE PLAN

ISSUED: 5.27.16

PROJECT NO.

SCALE: NONE

CHKD BY: A.R.

PESIGNED BY: J.J.

PRODUCT SPECIFIC PRACTICES

1) PETROLEUM PRODUCTS:

ALL ONSITE VEHICLES, AND CONTAINERS FOR PRODUCTS SUCH AS FUELS, LUBRICANTS, AND TARS WILL BE MONITORED FOR LEAKS AND RECEIVE DAILY PREVENTIVE MAINTENANCE TO REDUCE THE CHANCE OF LEAKAGE. PETROLEUM PRODUCTS WILL BE STORED IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED.

EQUIPMENT MAINTENANCE AREAS WILL BE LOCATED AWAY FROM STATE WATER, NATURAL DRAINS, AND STORMWATER INLETS. IN ADDITION, TEMPORARY FUELING TANKS SHALL HAVE A SECONDARY CONTAINMENT LINER TO PREVENT/MINIMIZE SITE CONTAMINATION. DISCHARGE OF OILS, FUELS AND LUBRICANTS IS PROHIBITED. PROPER DISPOSAL METHODS WILL INCLUDE COLLECTION IN A SUITABLE CONTAINER AND DISPOSAL AS REQUIRED BY LOCAL AND STATE REGULATIONS.

2) PAINTS:

ALL CONTAINERS WILL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE. EXCESS PRODUCT WILL NOT BE DISCHARGED TO THE STORM SEWER SYSTEM. EXCESS PRODUCT, PRODUCT CONTAINERS, AND MATERIALS USED WITH THESE PRODUCTS WILL BE PROPERLY DISPOSED OF ACCORDING TO MANUFACTURER'S INSTRUCTIONS AND STATE AND LOCAL REGULATIONS.

3) CONCRETE TRUCKS:

WASHOUT OF THE DRUM OF A CONCRETE TRUCK AT THE CONSTRUCTION SITE IS PROHIBITED. CONCRETE WASHDOWN OF TOOLS, CONCRETE MIXER CHUTES, HOPPERS AND THE REAR OF VEHICLES WILL ONLY BE ALLOWED IN A DESIGNATED AREA PROVIDED FOR THIS PURPOSE. THE FOLLOWING BMP'S WILL BE FOLLOWED:

- A) CONTAIN ALL WASHWATER ON SOIL, IN A BOWL SHAPED AREA CREATED IN THE DESIGNATED WASH AREA TO PREVENT THE WASH WATER FROM FLOWING FROM THE WASHOUT AREA
- B) USE THE MINIMUM AMOUNT OF WATER TO WASH DOWN THE TOOLS, CONCRETE MIXER CHUTES, HOPPERS AND THE REAR OF VEHICLES
- C) REMOVE ANY CONCRETE SEDIMENT FROM THE AREA SURROUNDING THE WASHOUT AREA BEFORE IT HARDENS
 D) REMOVE ALL CONCRETE RESIDUE FROM THE DESIGNATED AREAS ONCE IT HARDENS.

4) FERTILIZERS:

FERTILIZER WILL BE APPLIED AT RATES THAT DO NOT EXCEED THE MANUFACTURER'S SPECIFICATIONS OR ABOVE THE GUIDELINES SET FORTH IN THE CROP ESTABLISHMENT OR IN THE GSWCC MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA. ONCE APPLIED, FERTILIZER WILL BE WORKED INTO THE SOIL TO LIMIT EXPOSURE TO STORM WATER. STORAGE WILL BE IN A COVERED SHED. THE CONTENTS OF ANY PARTIALLY USED BAGS OF FERTILIZER WILL BE TRANSFERRED TO A SEALABLE PLASTIC BIN TO AVOID SPILLS.

5) WASTE DISPOSAL

A MINIMUM OF ONE PORTABLE SANITARY UNIT WILL BE PROVIDED TO EVERY TEN (10) WORKERS ON THE SITE. ALL SANITARY WASTE WILL E COLLECTED FROM THE PORTABLE UNITS A MINIMUM OF ONE TIME PER WEEK BY A LICENSED PORTABLE FACILITY PROVIDER IN COMPLETE COMPLIANCE WITH LOCAL AND STATE REGULATIONS.

ALL SANITARY WASTE UNITS WILL BE LOCATED IN AN AREA WHERE THE LIKELIHOOD OF THE UNIT CONTRIBUTING TO STORMWATER DISCHARGE IS NEGLIGIBLE. ADDITIONAL CONTAINMENT BMP'S MUST BE IMPLEMENTED, SUCH AS GRAVEL BAGS OR SPECIFICALLY DESIGNED PLASTIC SKID CONTAINERS AROUND THE BASE, TO PREVENT WASTES FROM CONTRIBUTING TO STORM WATER DISCHARGES. THE LOCATION OF WASTE UNITS MUST BE IDENTIFIED ON THE EROSION CONTROL PLAN BY THE CONTRACTOR ONCE THE LOCATIONS HAVE BEEN DETERMINED.

6) BUILDING MATERIALS:

NO BUILDING OR CONSTRUCTION MATERIALS WILL BE BURIED OR DISPOSED OF ONSITE. ALL SUCH MATERIAL WILL BE DISPOSED OF IN PROPER WASTE DISPOSAL PROCEDURES.

7) MULCH:

MULCH STORAGE MUST COMPLY WITH THE FOLLOWING SECTION OF THE STANDARD FIRE PREVENTION CODE. SECTION 502.31 - NO PERSON SHALL STORE IN ANY BUILDING OR UPON ANY PREMISES IN EXCESS OF 2,500 CU.FT. GROSS VOLUME OF COMBUSTIBLE EMPTY PACKING CASES, BOXES, BARRELS OR SIMILAR CONTAINERS, OR RUBBER TIRES, OR RUBBER OR OTHER SIMILARLY COMBUSTIBLE MATERIALS WITHOUT A PERMIT.

GOOD HOUSEKEEPING PRACTICES

1) AN EFFORT WILL BE MADE TO STORE ONLY ENOUGH PRODUCT TO DO THE JOB.

 ALL MATERIALS ONSITE WILL BE STORED IN THEIR APPROPRIATE CONTAINER AND, IF POSSIBLE, UNDER ONE ROOF ON ENCLOSURE.
 PRODUCTS WILL BE KEPT IN THEIR ORIGINAL CONTAINER WITH ORIGINAL MANUFACTURER'S LABEL.

4) SUBSTANCES WILL NOT BE MIXED WITH ONE ANOTHER UNLESS RECOMMENDED BY THE MANUFACTURER.

5) WHENEVER POSSIBLE, ALL OF A PRODUCT WILL BE USED UP BEFORE DISPOSING OF THE CONTAINER.

INSPECTION

1) EACH DAY WHEN ANY TYPE OF CONSTRUCTION ACTIVITY HAS TAKEN PLACE AT A PRIMARY PERMITTEE'S SITE, CERTIFIED PERSONNEL PROVIDED BY THE PRIMARY PERMITTEE SHALL INSPECT: (A) ALL AREAS AT THE PRIMARY PERMITTEE'S SITE WHERE PETROLEUM PRODUCTS ARE STORED, USED, OR HANDLED FOR SPILLS AND LEAKS FROM VEHICLES AND EQUIPMENT AND (B) ALL LOCATIONS AT THE PRIMARY PERMITTEE'S SITE WHERE VEHICLES ENTER OR EXIT THE SITE FOR EVIDENCE OF OFF-SITE SEDIMENT TRACKING. THESE INSPECTIONS MUST BE CONDUCTED UNTIL A NOTICE OF TERMINATION IS SUBMITTED.

2) MEASURE RAINFALL ONCE EVERY 24 HOURS EXCEPT ANY NON-WORKING SATURDAY, NON-WORKING SUNDAY AND NON-WORKING FEDERAL HOLIDAY UNTIL A NOTICE OF TERMINATION IS SUBMITTED. MEASUREMENT OF RAINFALL MAY BE SUSPENDED IF ALL AREAS OF THE SITE HAVE UNDERGONE FINAL STABILIZATION OR ESTABLISHED A CROP OF ANNUAL VEGETATION AND A SEEDING OF TARGET PERENNIALS APPROPRIATE FOR THE REGION.

3) CERTIFIED PERSONNEL (PROVIDED BY THE PRIMARY PERMITTEE) SHALL INSPECT THE FOLLOWING AT LEAST ONCE EVERY FOURTEEN (14) CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM THAT IS 0.5 INCHES RAINFALL OR GREATER (UNLESS SUCH STORM ENDS AFTER 5:00 PM ON ANY FRIDAY OR ON ANY NONWORKING

ENDS AFTER 5:00 PM ON ANY FRIDAY OR ON ANY NONWORKING SATURDAY, NON-WORKING SUNDAY OR ANY NON-WORKING FEDERAL HOLIDAY IN WHICH CASE THE INSPECTION SHALL BE COMPLETED BY THE END OF THE NEXT BUSINESS DAY AND/OR WORKING DAY, WHICHEVER OCCURS FIRST): (A) DISTURBED AREAS OF THE PRIMARY PERMITTEE'S CONSTRUCTION SITE; (B) AREAS USED BY THE PRIMARY PERMITTEE FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION: AND (C) STRUCTURAL CONTROL MEASURES. EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN APPLICABLE TO THE PRIMARY PERMITTEE'S SITE SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY. WHERE DISCHARGE LOCATIONS OR POINTS ARE ACCESSIBLE, THEY SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO RECEIVING WATER(S). FOR AREAS OF A SITE THAT HAVE UNDERGONE FINAL STABILIZATION OR ESTABLISHED A CROP OF ANNUAL VEGETATION AND A SEEDING OF TARGET PERENNIALS APPROPRIATE FOR THE REGION, THE PERMITTEE MUST

COMPLY WITH PART IV.D.4.A.(4). THESE INSPECTIONS MUST BE

CONDUCTED UNTIL A NOTICE OF TERMINATION IS SUBMITTED.

4) CERTIFIED PERSONNEL (PROVIDED BY THE PRIMARY PERMITTEE) SHALL INSPECT AT LEAST ONCE PER MONTH DURING THE TERM OF THIS PERMIT (I.E., UNTIL A NOTICE OF TERMINATION IS SUBMITTED TO EPD) THE AREAS OF THE SITE THAT HAVE UNDERGONE FINAL STABILIZATION OR ESTABLISHED A CROP OF ANNUAL VEGETATION AND A SEEDING OF TARGET PERENNIALS APPROPRIATE FOR THE REGION. THESE AREAS SHALL BE INSPECTED FOR EVIDENCE OF, OR THE POTENTIAL FOR, POLLUTANTS ENTERING THE DRAINAGE SYSTEM AND THE RECEIVING WATER(S). EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY. WHERE DISCHARGE LOCATIONS OR POINTS ARE ACCESSIBLE, THEY SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO

RECEIVING WATER(S).

5) BASED ON THE RESULTS OF EACH INSPECTION, THE SITE DESCRIPTION AND THE POLLUTION PREVENTION AND CONTROL MEASURES IDENTIFIED IN THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN, THE PLAN SHALL BE REVISED AS APPROPRIATE NOT LATER THAN SEVEN (7) CALENDAR DAYS FOLLOWING EACH INSPECTION. IMPLEMENTATION OF SUCH CHANGES SHALL BE MADE AS SOON AS PRACTICAL BUT IN NO CASE LATER THAN SEVEN (7) CALENDAR DAYS FOLLOWING EACH INSPECTION.

6) A REPORT OF EACH INSPECTION THAT INCLUDES THE NAME(S) OF CERTIFIED PERSONNEL MAKING EACH INSPECTION, THE DATE(S) OF EACH INSPECTION, CONSTRUCTION PHASE (I.E., INITIAL INTERMEDIATE OR FINAL). MAJOR OBSERVATIONS RELATING TO THE IMPLEMENTATION OF THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN, AND ACTIONS TAKEN IN ACCORDANCE WITH PART IV.D.4.A.(5). OF THE PERMIT SHALL BE MADE AND RETAINED AT THE SITE OR BE READILY AVAILABLE AT A DESIGNATED ALTERNATE LOCATION UNTIL THE ENTIRE SITE OR THAT PORTION OF A CONSTRUCTION PROJECT THAT HAS BEEN PHASED HAS UNDERGONE FINAL STABILIZATION AND A NOTICE OF TERMINATION IS SUBMITTED TO EPD. SUCH REPORTS SHALL BE READILY AVAILABLE BY END OF THE SECOND BUSINESS DAY AND/OR WORKING DAY AND SHALL IDENTIFY ALL INCIDENTS OF BEST MANAGEMENT PRACTICES THAT HAVE NOT BEEN PROPERLY INSTALLED AND/OR MAINTAINED AS DESCRIBED IN THE PLAN. WHERE THE REPORT DOES NOT IDENTIFY ANY INCIDENTS, THE INSPECTION REPORT SHALL CONTAIN A STATEMENT THAT THE BEST MANAGEMENT PRACTICES ARE IN COMPLIANCE WITH THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN. THE REPORT SHALL BE SIGNED IN ACCORDANCE WITH PART V.G.2. OF THIS PERMIT.

SAMPLING REQUIREMENTS

THIS PERMIT REQUIRES THE MONITORING OF NEPHELOMETRIC TURBIDITY IN RECEIVING WATER(S) OR OUTFALLS IN ACCORDANCE WITH THIS PERMIT. THIS SECTION IS APPLICABLE TO PRIMARY PERMITTEES WITH A TOTAL PLANNED DISTURBANCE EQUAL TO OR GREATER THAN FIVE (5) ACRES. THE FOLLOWING PROCEDURES CONSTITUTE EPD'S GUIDELINES FOR SAMPLING TURBIDITY.

STORM WATER SAMPLING

STORM WATER SAMPLES ARE TO BE ANALYZED IN ACCORDANCE WITH METHODOLOGY AND TEST PROCEDURES ESTABLISHED BY 40 CFR PART 136 AND THE GUIDANCE DOCUMENT TITLED "NPDES STORM WATER SAMPLING GUIDANCE DOCUMENT, EPA 833-8-92-001".

STORM WATER IS TO BE SAMPLED FOR NEPHELOMETRIC TURBIDITY UNITS (NTU) AT THE OUTFALL LOCATION. A DISCHARGE OF STORM WATER RUNOFF FROM DISTURBED AREAS WHERE BEST MANAGEMENT PRACTICES HAVE NOT BEEN PROPERLY DESIGNED, INSTALLED, AND MAINTAINED SHALL CONSTITUTE A SEPARATE VIOLATION FOR EACH DAY ON WHICH SUCH CONDITION RESULTS IN THE TURBIDITY OF THE DISCHARGE EXCEEDING THE APPLICABLE VALUE SELECTED FROM APPENDIX B IN PERMIT NO. GAR100002. THE NTU LIMIT IS BASED UPON THE DISTURBED ACREAGE OF THE PROJECT SITE AND THE SURFACE WATER DRAINAGE AREA DRAINING TO THE RECEIVING WATER WHICH SUPPORTS WARM WATER FISHERIES.

SAMPLE TYP

ALL SAMPLING SHALL BE COLLECTED BY "GRAB SAMPLES" AND THE ANALYSIS OF THESE SAMPLES MUST BE CONDUCTED IN ACCORDANCE WITH METHODOLOGY AND TEST PROCEDURES ESTABLISHED BY 40 CFR PART 136 (UNLESS OTHER TEST PROCEDURES HAVE BEEN APPROVED); THE GUIDANCE DOCUMENT TITLED "NPDES STORM WATER SAMPLING GUIDANCE DOCUMENT, EPA 833-B-92-001" AND GUIDANCE DOCUMENTS THAT MAY BE PREPARED BY THE EPD.

- 1) SAMPLE CONTAINERS SHOULD BE LABELED PRIOR TO COLLECTING THE SAMPLES.
- SAMPLES SHOULD BE WELL MIXED BEFORE TRANSFERRING TO A SECONDARY CONTAINER.
- 3) LARGE MOUTH, WELL CLEANED AND RINSED GLASS OR PLASTIC JARS SHOULD BE USED FOR COLLECTING SAMPLES. THE JARS SHOULD BE CLEANED THOROUGHLY TO AVOID CONTAMINATION. 4) MANUAL, AUTOMATIC OR RISING STAGE SAMPLING MAY BE UTILIZED. SAMPLES REQUIRED BY THIS PERMIT SHOULD BE ANALYZED IMMEDIATELY, BUT IN NO CASE LATER THAN 48 HOURS AFTER COLLECTION. HOWEVER, SAMPLES FROM AUTOMATIC SAMPLERS MUST BE COLLECTED NO LATER THAN THE NEXT BUSINESS DAY AFTER THEIR ACCUMULATION, UNLESS FLOW THROUGH AUTOMATED ANALYSIS IS UTILIZED. IF AUTOMATIC SAMPLING IS UTILIZED AND THE AUTOMATIC SAMPLER IS NOT ACTIVATED DURING THE QUALIFYING EVENT, THE PERMITTEE MUST UTILIZE MANUAL SAMPLING OR RISING STAGE SAMPLING DURING THE NEXT QUALIFYING EVENT. DILUTION OF SAMPLES IS NOT REQUIRED. SAMPLES MAY BE ANALYZED DIRECTLY WITH A PROPERLY CALIBRATED TURBIDIMETER. SAMPLES ARE NOT REQUIRED TO BE COOLED.
- 5) SAMPLING AND ANALYSIS OF THE RECEIVING WATER(S) OR OUTFALLS BEYOND THE MINIMUM FREQUENCY STATED IN THIS PERMIT MUST BE REPORTED TO EPD AS SPECIFIED IN PART IV. E.

SAMPLE POINTS

FOR CONSTRUCTION ACTIVITIES THE PRIMARY PERMITTEE MUST SAMPLE ALL PERENNIAL AND INTERMITTENT STREAMS AND OTHER WATER BODIES SHOWN ON THE USGS TOPOGRAPHIC MAP AND ALL OTHER FIELD VERIFIED PERENNIAL AND INTERMITTENT STREAMS AND OTHER WATER BODIES, OR ALL OUTFALLS INTO SUCH STREAMS AND OTHER WATER BODIES, OR A COMBINATION THEREOF. HOWEVER, PROVIDED FOR IN AND IN ACCORDANCE WITH PART IV.D.6.C.(2). OF THIS PERMIT, PRIMARY PERMITTEE'S ON AN INFRASTRUCTURE CONSTRUCTION PROJECT MAY SAMPLE THE REPRESENTATIVE PERENNIAL AND INTERMITTENT STREAMS, OTHER WATER BODIES OR OUTFALLS, OR A COMBINATION THEREOF. SAMPLES TAKEN FOR THE PURPOSE OF COMPLIANCE WITH THIS PERMIT SHALL BE REPRESENTATIVE OF THE MONITORED ACTIVITY AND REPRESENTATIVE OF THE WATER QUALITY OF THE RECEIVING WATER(S) AND/OR THE STORM WATER OUTFALLS USING THE **FOLLOWING MINIMUM GUIDELINES:**

A) THE UPSTREAM SAMPLE FOR EACH RECEIVING WATER(S) MUST BE TAKEN IMMEDIATELY UPSTREAM OF THE CONFLUENCE OF THE FIRST STORM WATER DISCHARGE FROM THE PERMITTED ACTIVITY (I.E., THE DISCHARGE FARTHEST UPSTREAM AT THE SITE) BUT DOWNSTREAM OF ANY OTHER STORM WATER DISCHARGES NOT ASSOCIATED WITH THE PERMITTED ACTIVITY. WHERE APPROPRIATE, SEVERAL UPSTREAM SAMPLES FROM ACROSS THE RECEIVING WATER(S) MAY NEED TO BE TAKEN AND THE ARITHMETIC AVERAGE OF THE TURBIDITY OF THESE SAMPLES USED FOR THE UPSTREAM TURBIDITY VALUE.

B) THE DOWNSTREAM SAMPLE FOR EACH RECEIVING WATER(S) MUST BE TAKEN DOWNSTREAM OF THE CONFLUENCE OF THE LAST STORM WATER DISCHARGE FROM THE PERMITTED ACTIVITY (I.E., THE DISCHARGE FARTHEST DOWNSTREAM AT THE SITE) BUT UPSTREAM OF ANY OTHER STORM WATER DISCHARGE NOT ASSOCIATED WITH THE PERMITTED ACTIVITY. WHERE APPROPRIATE, SEVERAL DOWNSTREAM SAMPLES FROM ACROSS THE RECEIVING WATER(S) MAY NEED TO BE TAKEN AND THE ARITHMETIC AVERAGE OF THE TURBIDITY OF THESE SAMPLES USED FOR THE DOWNSTREAM TURBIDITY VALUE.

- C) IDEALLY THE SAMPLES SHOULD BE TAKEN FROM THE HORIZONTAL AND VERTICAL CENTER OF THE RECEIVING WATER(S) OR THE STORM WATER OUTFALL CHANNEL(S).
- D) CARE SHOULD BE TAKEN TO AVOID STIRRING THE BOTTOM SEDIMENTS IN THE RECEIVING WATER(S) OR IN THE OUTFALL STORM WATER CHANNEL.
- E) THE SAMPLING CONTAINER SHOULD BE HELD SO THAT THE OPENING FACES UPSTREAM.

SAMPLE POINTS (CONTINUED)

- F) THE SAMPLES SHOULD BE KEPT FREE FROM FLOATING DEBRIS G) PERMITTEE'S DO NOT HAVE TO SAMPLE SHEET FLOW THAT FLOWS ONTO UNDISTURBED NATURAL AREAS OR AREAS STABILIZED BY THE PROJECT. FOR PURPOSES OF THIS SECTION, STABILIZED SHALL MEAN, FOR UNPAVED AREAS AND AREAS NOT COVERED BY PERMANENT STRUCTURES, 100% OF THE SOIL SURFACE IS UNIFORMLY COVERED IN PERMANENT VEGETATION WITH A DENSITY OF 70% OR GREATER, OR LANDSCAPED ACCORDING TO THE PLAN (UNIFORMLY COVERED WITH LANDSCAPING MATERIALS IN THE MANUAL (EXCLUDING A CROP OF ANNUAL VEGETATION AND A SEEDING OF TARGET CROP PERENNIALS APPROPRIATE FOR THE REGION). FOR INFRASTRUCTURE CONSTRUCTION PROJECTS ON LAND USED FOR AGRICULTURAL OR SILVICULTURAL PURPOSES, FINAL STABILIZATION MAY BE ACCOMPLISHED BY STABILIZING THE DISTURBED LAND FOR ITS AGRICULTURAL OR SILVICULTURAL USE. H) ALL SAMPLING PURSUANT TO THIS PERMIT MUST BE DONE IN SUCH A WAY (INCLUDING GENERALLY ACCEPTED SAMPLING METHODS, LOCATIONS, TIMING, AND FREQUENCY) AS TO ACCURATELY REFLECT WHETHER STORM WATER RUNOFF FROM THE CONSTRUCTION SITE IS IN COMPLIANCE WITH THE STANDARD SET FORTH IN PARTS 111.0 .3. OR 111.0.4., WHICHEVER IS APPLICABLE.
- I) A DISCHARGE OF STORM WATER RUNOFF FROM DISTURBED AREAS WHERE BEST MANAGEMENT PRACTICES HAVE NOT BEEN PROPERLY DESIGNED, INSTALLED, AND MAINTAINED SHALL CONSTITUTE A SEPARATE VIOLATION FOR EACH DAY ON WHICH SUCH DISCHARGE RESULTS IN THE TURBIDITY OF RECEIVING WATER(S) BEING INCREASED BY MORE THAN TEN (10) NEPHELOMETRIC TURBIDITY UNITS FOR WATERS CLASSIFIED AS TROUT STREAMS OR MORE THAN TWENTY-FIVE (25) NEPHELOMETRIC TURBIDITY UNITS FOR WATERS SUPPORTING WARM WATER FISHERIES, REGARDLESS OF A PERMITTEE'S CERTIFICATION UNDER PART 11.8.1.I.
- J) WHEN THE PERMITTEE HAS ELECTED TO SAMPLE OUTFALL(S), THE DISCHARGE OF STORM WATER RUNOFF FROM DISTURBED AREAS WHERE BEST MANAGEMENT PRACTICES HAVE NOT BEEN PROPERLY DESIGNED, INSTALLED, AND MAINTAINED SHALL CONSTITUTE A SEPARATE VIOLATION FOR EACH DAY ON WHICH SUCH CONDITION RESULTS IN THE TURBIDITY OF THE DISCHARGE EXCEEDING THE VALUE SELECTED FROM APPENDIX 8 APPLICABLE TO THE CONSTRUCTION SITE. AS SET FORTH THEREIN, THE NEPHELOMETRIC TURBIDITY UNIT (NTU) VALUE SHALL BE SELECTED FROM APPENDIX B BASED UPON THE SIZE OF THE CONSTRUCTION SITE, THE SURFACE WATER DRAINAGE AREA AND WHETHER THE RECEIVING WATER(S) SUPPORTS WARM WATER FISHERIES OR IS A TROUT STREAM AS INDICATED IN THE RULES AND REGULATIONS FOR WATER QUALITY CONTROL, CHAPTER 391-3-6 AT WWW.GAEPD.ORG.

SAMPLING FREQUENCY

- 1) THE PRIMARY PERMITTEE MUST SAMPLE IN ACCORDANCE WITH THE PLAN AT LEAST ONCE FOR EACH RAINFALL EVENT DESCRIBED BELOW. FOR A QUALIFYING EVENT, THE PERMITTEE SHALL SAMPLE AT THE BEGINNING OF ANY STORM WATER DISCHARGE TO MONITORED RECEIVING WATER AND/OR FROM A MONITORED OUTFALL LOCATION WITHIN FORTY-FIVE (45) MINUTES OR AS SOON AS POSSIBLE.
- 2) HOWEVER, WHERE MANUAL AND AUTOMATIC SAMPLING ARE IMPOSSIBLE (AS DEFINED IN THIS PERMIT), OR ARE BEYOND THE PERMITTEE'S CONTROL, THE PERMITTEE SHALL TAKE SAMPLES AS SOON AS POSSIBLE, BUT IN NO CASE MORE THAN TWELVE (12) HOURS AFTER THE BEGINNING OF THE STORM WATER DISCHARGE.
- 3) SAMPLING BY THE PERMITTEE SHALL OCCUR FOR THE FOLLOWING QUALIFYING EVENTS:
- A) FOR EACH AREA OF THE SITE THAT DISCHARGES TO A RECEIVING WATER OR FROM AN OUTFALL, THE FIRST RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH WITH A STORM WATER DISCHARGE THAT OCCURS DURING NORMAL BUSINESS HOURS AS DEFINED IN THIS PERMIT. AFTER ALL CLEARING AND GRUBBING OPERATIONS HAVE BEEN COMPLETED, BUT PRIOR TO COMPLETION OF MASS GRADING OPERATIONS, IN THE DRAINAGE AREA OF THE LOCATION SELECTED AS THE REPRESENTATIVE SAMPLING LOCATION;
- B) IN ADDITION TO (A) ABOVE, FOR EACH AREA OF THE SITE THAT DISCHARGES TO A RECEIVING WATER OR FROM AN OUTFALL, THE FIRST RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH WITH A STORM WATER DISCHARGE THAT OCCURS DURING NORMAL BUSINESS HOURS AS DEFINED IN THIS PERMIT EITHER 90 DAYS AFTER THE FIRST SAMPLING EVENT OR AFTER ALL MASS GRADING OPERATIONS HAVE BEEN COMPLETED, BUT PRIOR TO SUBMITTAL OF A NOT, IN THE DRAINAGE AREA OF THE LOCATION SELECTED AS THE REPRESENTATIVE SAMPLING LOCATION, WHICHEVER COMES FIRST;

 C) AT THE TIME OF SAMPLING PERFORMED PURSUANT TO (A) AND (B) ABOVE, IF BMPS IN ANY AREA OF THE SITE THAT DISCHARGES TO A RECEIVING WATER OR FROM AN OUTFALL ARE NOT PROPERLY DESIGNED, INSTALLED AND MAINTAINED, CORRECTIVE ACTION SHALL BE DEFINED AND IMPLEMENTED WITHIN TWO (2) BUSINESS DAYS
- DESIGNED, INSTALLED AND MAINTAINED, CORRECTIVE ACTION SHALL BE DEFINED AND IMPLEMENTED WITHIN TWO (2) BUSINESS DAYS, AND TURBIDITY SAMPLES SHALL BE TAKEN FROM DISCHARGES FROM THAT AREA OF THE SITE FOR EACH SUBSEQUENT RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH DURING NORMAL BUSINESS HOURS* UNTIL THE SELECTED TURBIDITY STANDARD IS ATTAINED, OR UNTIL POST-STORM EVENT INSPECTIONS DETERMINE THAT BMPS ARE PROPERLY DESIGNED, INSTALLED AND MAINTAINED;
- D) WHERE SAMPLING PURSUANT TO (A), (B) OR (C) ABOVE IS REQUIRED BUT NOT POSSIBLE (OR NOT REQUIRED BECAUSE THERE WAS NO DISCHARGE), THE PERMITTEE, IN ACCORDANCE WITH PART IV.D.4.A.(6), MUST INCLUDE A WRITTEN JUSTIFICATION IN THE INSPECTION REPORT OF WHY SAMPLING WAS NOT PERFORMED. PROVIDING THIS JUSTIFICATION DOES NOT RELIEVE THE PERMITTEE OF ANY SUBSEQUENT SAMPLING OBLIGATIONS UNDER (A), (B) OR (C) ABOVE; AND

SAMPLING FREQUENCY (CONTINUED)

E) EXISTING CONSTRUCTION ACTIVITIES, I.E., THOSE THAT ARE OCCURRING ON OR BEFORE THE EFFECTIVE DATE OF THIS PERMIT, THAT HAVE MET THE SAMPLING REQUIRED BY (A) ABOVE SHALL SAMPLE IN ACCORDANCE WITH (B). THOSE EXISTING CONSTRUCTION ACTIVITIES THAT HAVE MET THE SAMPLING REQUIRED BY (B) ABOVE SHALL NOT BE REQUIRED TO CONDUCT ADDITIONAL SAMPLING OTHER THAN AS REQUIRED BY (C) ABOVE.

*NOTE THAT THE PERMITTEE MAY CHOOSE TO MEET THE REQUIREMENTS OF (A) AND (B) ABOVE BY COLLECTING TURBIDITY SAMPLES FROM ANY RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH AND ALLOWS FOR SAMPLING AT ANY TIME OF THE DAY OR WEEK.

REPORTIN

- 1) THE APPLICABLE PERMITTEE'S ARE REQUIRED TO SUBMIT THE SAMPLING RESULTS TO THE EPD AT THE ADDRESS SHOWN IN PART II.C. BY THE FIFTEENTH DAY OF THE MONTH FOLLOWING THE REPORTING PERIOD. REPORTING PERIODS ARE MONTHS DURING WHICH SAMPLES ARE TAKEN IN ACCORDANCE WITH THIS PERMIT. SAMPLING RESULTS SHALL BE IN A CLEARLY LEGIBLE FORMAT. UPON WRITTEN NOTIFICATION, EPD MAY REQUIRE THE APPLICABLE PERMITTEE TO SUBMIT THE SAMPLING RESULTS ON A MORE FREQUENT BASIS. SAMPLING AND ANALYSIS OF ANY STORM WATER DISCHARGE(S) OR THE RECEIVING WATER(S) BEYOND THE MINIMUM FREQUENCY STATED IN THIS PERMIT MUST BE REPORTED IN A SIMILAR MANNER TO THE EPD. THE SAMPLING REPORTS MUST BE SIGNED IN ACCORDANCE WITH PART V.G.2. SAMPLING REPORTS MUST BE SUBMITTED TO EPD UNTIL SUCH TIME AS A NOT IS SUBMITTED IN ACCORDANCE WITH PART VI.
- ALL SAMPLING REPORTS SHALL INCLUDE THE FOLLOWING INFORMATION:
- A) THE RAINFALL AMOUNT, DATE, EXACT PLACE AND TIME OF SAMPLING OR MEASUREMENTS;
- B) THE NAME(S) OF THE CERTIFIED PERSONNEL WHO PERFORMED THE SAMPLING AND MEASUREMENTS;
- C) THE DATE(S) ANALYSES WERE PERFORMED;
- D) THE TIME(S) ANALYSES WERE INITIATED;
- E) THE NAME(S) OF THE CERTIFIED PERSONNEL WHO PERFORMED THE ANALYSES;
- F) REFERENCES AND WRITTEN PROCEDURES, WHEN AVAILABLE,
- FOR THE ANALYTICAL TECHNIQUES OR METHODS USED;

 G) THE RESULTS OF SUCH ANALYSES, INCLUDING THE BENCH

SHEETS, INSTRUMENT READOUTS, COMPUTER DISKS OR TAPES.

- ETC., USED TO DETERMINE THESE RESULTS;

 H) RESULTS WHICH EXCEED 1000 NTU SHALL BE REPORTED AS
- "EXCEEDS 1000 NTU;" AND

 I) CERTIFICATION STATEMENT THAT SAMPLING WAS CONDUCTED AS PER THE PLAN.
- 3) ALL WRITTEN CORRESPONDENCE REQUIRED BY THIS PERMIT SHALL BE SUBMITTED BY RETURN RECEIPT CERTIFIED MAIL (OR SIMILAR SERVICE) TO THE APPROPRIATE DISTRICT OFFICE OF THE EPD ACCORDING TO THE SCHEDULE IN APPENDIX A OF THIS PERMIT. THE PERMITTEE SHALL RETAIN A COPY OF THE PROOF OF SUBMITTAL AT THE CONSTRUCTION SITE OR THE PROOF OF SUBMITTAL SHALL BE READILY AVAILABLE AT A DESIGNATED LOCATION FROM COMMENCEMENT OF CONSTRUCTION UNTIL SUCH TIME AS A NOT IS SUBMITTED IN ACCORDANCE WITH PART VI. IF AN ELECTRONIC SUBMITTAL IS PROVIDED BY EPD THEN THE WRITTEN CORRESPONDENCE MAY BE SUBMITTED ELECTRONICALLY; IF REQUIRED, A PAPER COPY MUST ALSO BE SUBMITTED BY RETURN RECEIPT CERTIFIED MAIL OR SIMILAR SERVICE.



GEORGIA SOIL AND WATER CONSERVATION COMMISSION

William T. Roberts

Level II Certified Design Professional

CERTIFICATION NUMBER

0000070272

ISSUED: 01/31/2014

EXPIRES: 01/31/2017

24 HOUR CONTACT

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1841 PEELER RD. UNIT C ATLANTA, GA 30338 PHONE: (678) 336-5732 WWW.R2TINC.COM

KALB COUNTY
PARTMENT OF
WATERSHED
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REV DATE DESCRIPTION

0 5/27/16 INITIAL ISSUE

1 12/9/16 REVIEW COMMENTS



SHEET TITLE: 42 of 65

ES&PC NARRATIVE PLAN

ISSUED: 5.27.16

PROJECT NO.

SCALE: NONE

CHKD BY: A.R.

ESIGNED BY: J.J.

RETENTION OF RECORDS

- 1) THE PRIMARY PERMITTEE SHALL RETAIN THE FOLLOWING RECORDS AT THE CONSTRUCTION SITE OR THE RECORDS SHALL BE READILY AVAILABLE AT A DESIGNATED ALTERNATE LOCATION FROM COMMENCEMENT OF CONSTRUCTION UNTIL SUCH TIME AS A NOT IS SUBMITTED IN ACCORDANCE WITH PART VI:
- A COPY OF ALL NOTICES OF INTENT SUBMITTED TO EPD;
- B) A COPY OF THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN REQUIRED BY THIS PERMIT
- THE DESIGN PROFESSIONAL'S REPORT OF THE RESULTS OF THE INSPECTION CONDUCTED IN ACCORDANCE WITH PART IV.A.S. OF THIS PERMIT
- D) A COPY OF ALL SAMPLING INFORMATION, RESULTS, AND REPORTS REQUIRED BY THIS PERMIT;
- E) A COPY OF ALL INSPECTION REPORTS GENERATED IN ACCORDANCE WITH PART IV.D.4.A. OF THIS PERMIT;
- F) A COPY OF ALL VIOLATION SUMMARIES AND VIOLATION SUMMARY REPORTS GENERATED IN ACCORDANCE WITH PART III.D.2. OF THIS PERMIT; AND
- G) DAILY RAINFALL INFORMATION COLLECTED IN ACCORDANCE WITH PART IV.D.4.A.(2).OF THIS PERMIT
- 2) COPIES OF ALL NOTICES OF INTENT, NOTICES OF TERMINATION, INSPECTION REPORTS, SAMPLING REPORTS (INCLUDING ALL CALIBRATION AND MAINTENANCE RECORDS AND ALL ORIGINAL STRIF CHART RECORDINGS FOR CONTINUOUS MONITORING INSTRUMENTATION), OR OTHER REPORTS REQUESTED BY THE EPD EROSION, SEDIMENTATION AND POLLUTION CONTROL PLANS, RECORDS OF ALL DATA USED TO COMPLETE THE NOTICE OF INTENT TO BE COVERED BY THIS PERMIT AND ALL OTHER RECORDS REQUIRED BY THIS PERMIT SHALL BE RETAINED BY THE PERMITTEE WHO EITHER PRODUCED OR USED IT FOR A PERIOD OF AT LEAST THREE YEARS FROM THE DATE THAT THE NOT IS SUBMITTED IN ACCORDANCE WITH PART VI OF THIS PERMIT. THESE RECORDS MUST BE MAINTAINED AT THE PERMITTEE'S PRIMARY PLACE OF BUSINESS OR AT A DESIGNATED ALTERNATIVE LOCATION ONCE THE

CONSTRUCTION ACTIVITY HAS CEASED AT THE PERMITTED SITE. THIS

PERIOD MAY BE EXTENDED BY REQUEST OF THE EPD AT ANY TIME

UPON WRITTEN NOTIFICATION TO THE PERMITTEE.

ACTIVITIES WITHIN A BUFFER

- EXCEPT AS PROVIDED IN PART IV.(III). IN THE GAR100002 PERMIT NO CONSTRUCTION ACTIVITIES SHALL BE CONDUCTED WITHIN A 25 FOOT BUFFER ALONG THE BANKS OF ALL STATE WATERS, AS MEASURED HORIZONTALLY FROM THE POINT WHERE VEGETATION HAS BEEN WRESTED BY NORMAL STREAM FLOW OR WAVE ACTION EXCEPT WHERE THE DIRECTOR HAS DETERMINED TO ALLOW A VARIANCE THAT IS AT LEAST AS PROTECTIVE OF NATURAL RESOURCES AND THE ENVIRONMENT IN ACCORDANCE WITH THE PROVISIONS OF O.C.G.A. 12-7-6, OR WHERE A DRAINAGE STRUCTURE OR A ROADWAY DRAINAGE STRUCTURE MUST BE CONSTRUCTED, PROVIDED THAT ADEQUATE EROSION CONTROL MEASURES ARE INCORPORATED IN THE PROJECT PLANS AND SPECIFICATIONS AND ARE IMPLEMENTED, OR ALONG ANY EPHEMERAL STREAM, OR WHERE BULKHEADS AND SEAWALLS MUST BE CONSTRUCTED TO PREVENT THE EROSION OF THE SHORELINE ON LAKE OCONEE AND LAKE SINCLAIR. THE BUFFER SHALL NOT APPLY TO THE FOLLOWING ACTIVITIES PROVIDED THAT ADEQUATE EROSION CONTROL MEASURES ARE INCORPORATED INTO THE PROJECT PLANS AND SPECIFICATIONS ARE IMPLEMENTED:
- A) PUBLIC DRINKING WATER SYSTEM RESERVOIRS.
- B) FENCES,
- C) STREAM CROSSINGS FOR WATER LINES AND SEWER LINES. PROVIDED THAT THE STREAM CROSSINGS OCCUR AT AN ANGLE, AS MEASURED FROM THE POINT OF CROSSING, WITHIN 25 DEGREES OF PERPENDICULAR TO THE STREAM AND CAUSE A WIDTH OF DISTURBANCE OF NOT MORE THAN 50 FEET WITHIN THE BUFFER, AND NATIVE RIPARIAN VEGETATION IS RE-ESTABLISHED IN ANY BARE OR DISTURBED AREAS WITHIN THE BUFFER
- D) STREAM CROSSINGS FOR ANY UTILITY LINES OF ANY ELECTRIC MEMBERSHIP CORPORATION OR MUNICIPAL ELECTRICAL SYSTEM OR ANY PUBLIC UTILITY UNDER THE REGULATORY JURISDICTION OF THE PUBLIC SERVICE COMMISSION, ANY UTILITY UNDER THE REGULATORY JURISDICTION OF THE FEDERAL ENERGY REGULATORY COMMISSION, ANY CABLE TELEVISION SYSTEM AS DEFINED IN CODE SECTION 36-18-1, OR ANY AGENCY OR INSTRUMENTALITY OF THE UNITED STATES ENGAGED IN THE GENERATION, TRANSMISSION OR DISTRIBUTION OF POWER, PROVIDED THAT:
- a) THE STREAM CROSSINGS OCCUR AT AN ANGLE, AS MEASURED FROM THE POINT OF CROSSING, WITHIN 25 DEGREES OF PERPENDICULAR TO THE STREAM AND CAUSE A WIDTH OF
- DISTURBANCE OF NOT MORE THAN 50 FEET WITHIN THE BUFFER, b) NATIVE RIPARIAN VEGETATION IS RE-ESTABLISHED IN ANY BARE OR DISTURBED AREAS WITHIN THE BUFFER AND
- THE ENTITY IS NOT A SECONDARY PERMITTEE FOR A PROJECT LOCATED WITHIN A COMMON DEVELOPMENT OR SALE UNDER THIS PERMIT.
- E) STREAM CROSSINGS FOR AERIAL UTILITY LINES, PROVIDED
- a) THE NEW UTILITY LINE RIGHT-OF-WAY WIDTH DOES NOT EXCEED 200 LINEAR FEET,
- b) UTILITY LINES ARE ROUTED AND CONSTRUCTED SO AS TO MINIMIZE THE NUMBER OF STREAM CROSSINGS AND DISTURBANCES TO THE BUFFER
- c) ONLY TREES AND TREE DEBRIS ARE REMOVED FROM WITHIN THE BUFFER RESULTING IN ONLY MINOR SOIL EROSION (I.E., DISTURBANCE TO UNDERLYING VEGETATION IS MINIMIZED), AND

ACTIVITIES WITHIN A BUFFER (CONTINUED)

- d) NATIVE RIPARIAN VEGETATION IS RE-ESTABLISHED IN ANY BARE OR DISTURBED AREAS WITHIN THE BUFFER. THE PLAN SHALL INCLUDE A DESCRIPTION OF THE STREAM CROSSINGS WITH DETAILS OF THE BUFFER DISTURBANCE INCLUDING AREA AND LENGTH OF BUFFER DISTURBANCE, ESTIMATED LENGTH OF TIME OF BUFFER DISTURBANCE, AND JUSTIFICATION;
- F) RIGHT-OF-WAY POSTS, GUY-WIRES, ANCHORS, SURVEY MARKERS AND THE REPLACEMENT OR MAINTENANCE OF EXISTING UTILITY STRUCTURES WITHIN THE CURRENT RIGHT-OF-WAY UNDERTAKEN OR FINANCED IN WHOLE OR IN PART BY THE DEPARTMENT OF TRANSPORTATION, THE GEORGIA HIGHWAY AUTHORITY OR THE STATE ROAD AND TOLLWAY AUTHORITY OR UNDERTAKEN BY ANY COUNTY OR MUNICIPALITY, PROVIDED THAT:
- a) THE AREA OF LAND DISTURBANCE DOES NOT EXCEED 1 00 SQUARE FEET PER STRUCTURE,
- b) THE AREA OF BUFFER VEGETATION TO BE CUT (NOT GRUBBED) DOES NOT EXCEED 1,000 SQUARE FEET PER STRUCTURE,
- c) NATIVE RIPARIAN VEGETATION IS RE-ESTABLISHED IN ANY BARE OR DISTURBED AREAS WITHIN THE BUFFER AND d) THE ENTITY IS NOT A SECONDARY PERMITTEE FOR A PROJECT
- LOCATED WITHIN A COMMON DEVELOPMENT OR SALE UNDER THIS PERMIT; AND
- G) RIGHT-OF-WAY POSTS, GUY-WIRES, ANCHORS, SURVEY MARKERS AND THE REPLACEMENT OR MAINTENANCE OF EXISTING UTILITY STRUCTURES WITHIN THE CURRENT RIGHT-OF-WAY UNDERTAKEN BY ANY ELECTRIC MEMBERSHIP CORPORATION OR MUNICIPAL ELECTRICAL SYSTEM OR ANY PUBLIC UTILITY UNDER THE REGULATORY JURISDICTION OF THE PUBLIC SERVICE COMMISSION, ANY UTILITY UNDER THE REGULATORY JURISDICTION OF THE FEDERAL ENERGY REGULATORY COMMISSION, ANY CABLE TELEVISION SYSTEM AS DEFINED IN CODE SECTION 36-18-1, OR ANY AGENCY OR INSTRUMENTALITY OF THE UNITED STATES ENGAGED IN THE GENERATION, TRANSMISSION OR DISTRIBUTION OF POWER, PROVIDED THAT:
- a) THE AREA OF LAND DISTURBANCE DOES NOT EXCEED 100 SQUARE FEET PER STRUCTURE.
- b) THE AREA OF BUFFER VEGETATION TO BE CUT (NOT GRUBBED) DOES NOT EXCEED 1,000 SQUARE FEET PER STRUCTURE,
- c) NATIVE RIPARIAN VEGETATION IS RE-ESTABLISHED IN ANY BARE OR DISTURBED AREAS WITHIN THE BUFFER AND
- d) THE ENTITY IS NOT A SECONDARY PERMITTEE FOR A PROJECT LOCATED WITHIN A COMMON DEVELOPMENT OR SALE UNDER THIS
- 2) NO CONSTRUCTION ACTIVITIES SHALL BE CONDUCTED WITHIN A 50 FOOT BUFFER, AS MEASURED HORIZONTALLY FROM THE POINT WHERE VEGETATION HAS BEEN WRESTED BY NORMAL STREAM FLOW OR WAVE ACTION, ALONG THE BANKS OF ANY STATE WATERS CLASSIFIED AS 'TROUT STREAMS' EXCEPT WHEN APPROVAL IS GRANTED BY THE DIRECTOR FOR ALTERNATE BUFFER REQUIREMENTS IN ACCORDANCE WITH THE PROVISIONS OF O.C.G.A. 12-7-6, OR WHERE A ROADWAY DRAINAGE STRUCTURE MUST BE CONSTRUCTED; PROVIDED, HOWEVER, THAT SMALL SPRINGS AND STREAMS CLASSIFIED AS 'TROUT STREAMS' WHICH DISCHARGE AN AVERAGE ANNUAL FLOW OF 25 GALLONS PER MINUTE OR LESS SHALL HAVE A 25 FOOT BUFFER OR THEY MAY BE PIPED, AT THE DISCRETION OF THE PERMITTEE, PURSUANT TO THE TERMS OF A RULE PROVIDING FOR A GENERAL VARIANCE PROMULGATED BY THE BOARD OF NATURAL RESOURCES INCLUDING NOTIFICATION OF SUCH TO EPD AND THE LOCAL ISSUING AUTHORITY OF THE LOCATION AND EXTENT OF THE PIPING AND PRESCRIBED METHODOLOGY FOR MINIMIZING THE IMPACT OF SUCH PIPING AND FOR MEASURING THE VOLUME OF WATER DISCHARGED BY THE STREAM. ANY SUCH PIPE MUST STOP SHORT OF THE DOWNSTREAM PERMITTEE'S PROPERTY AND THE PERMITTEE MUST COMPLY WITH THE BUFFER REQUIREMENT FOR ANY ADJACENT TROUT STREAMS. THE BUFFER SHALL NOT APPLY TO THE FOLLOWING ACTIVITIES PROVIDED THAT ADEQUATE EROSION CONTROL MEASURES ARE INCORPORATED INTO THE PROJECT PLANS AND SPECIFICATIONS ARE IMPLEMENTED:
- A) PUBLIC DRINKING WATER SYSTEM RESERVOIRS,
- B) FENCES.
- C) STREAM CROSSINGS FOR WATER LINES AND SEWER LINES, PROVIDED THAT THE STREAM CROSSINGS OCCUR AT AN ANGLE, AS MEASURED FROM THE POINT OF CROSSING, WITHIN 25 DEGREES OF PERPENDICULAR TO THE STREAM AND CAUSE A WIDTH OF DISTURBANCE OF NOT MORE THAN 50 FEET WITHIN THE BUFFER, AND NATIVE RIPARIAN VEGETATION IS RE-ESTABLISHED IN ANY BARE OR DISTURBED AREAS WITHIN THE BUFFER
- D) STREAM CROSSINGS FOR ANY UTILITY LINES OF ANY ELECTRIC MEMBERSHIP CORPORATION OR MUNICIPAL ELECTRICAL SYSTEM OR ANY PUBLIC UTILITY UNDER THE REGULATORY JURISDICTION OF THE PUBLIC SERVICE COMMISSION, ANY UTILITY UNDER THE REGULATORY JURISDICTION OF THE FEDERAL ENERGY REGULATORY COMMISSION, ANY CABLE TELEVISION SYSTEM AS DEFINED IN CODE SECTION 36-18-1, OR ANY AGENCY OR INSTRUMENTALITY OF THE UNITED STATES ENGAGED IN THE GENERATION, TRANSMISSION OR DISTRIBUTION OF POWER, PROVIDED THAT:
- a) THE STREAM CROSSINGS OCCUR AT AN ANGLE, AS MEASURED FROM THE POINT OF CROSSING, WITHIN 25 DEGREES OF PERPENDICULAR TO THE STREAM AND CAUSE A WIDTH OF DISTURBANCE OF NOT MORE THAN 50 FEET WITHIN THE BUFFER, b) NATIVE RIPARIAN VEGETATION IS RE-ESTABLISHED IN ANY BARE OR DISTURBED AREAS WITHIN THE BUFFER AND
- c) THE ENTITY IS NOT A SECONDARY PERMITTEE FOR A PROJECT LOCATED WITHIN A COMMON DEVELOPMENT OR SALE UNDER THIS PERMIT.
- E) STREAM CROSSINGS FOR AERIAL UTILITY LINES, PROVIDED
- a) THE NEW UTILITY LINE RIGHT-OF-WAY WIDTH DOES NOT EXCEED 200 LINEAR FEET,

ACTIVITIES WITHIN A BUFFER (CONTINUED)

- b) UTILITY LINES ARE ROUTED AND CONSTRUCTED SO AS TO MINIMIZE THE NUMBER OF STREAM CROSSINGS AND DISTURBANCES TO THE BUFFER,
- c) ONLY TREES AND TREE DEBRIS ARE REMOVED FROM WITHIN THE BUFFER RESULTING IN ONLY MINOR SOIL EROSION (I.E. DISTURBANCE TO UNDERLYING VEGETATION IS MINIMIZED), AND
- d) NATIVE RIPARIAN VEGETATION IS RE-ESTABLISHED IN ANY BARE OR DISTURBED AREAS WITHIN THE BUFFER. THE PLAN SHALL INCLUDE A DESCRIPTION OF THE STREAM CROSSINGS WITH DETAILS OF THE BUFFER DISTURBANCE INCLUDING AREA AND LENGTH OF BUFFER DISTURBANCE, ESTIMATED LENGTH OF TIME OF BUFFER DISTURBANCE, AND JUSTIFICATION: AND
- F) RIGHT-OF-WAY POSTS, GUY-WIRES, ANCHORS, SURVEY MARKERS AND THE REPLACEMENT OR MAINTENANCE OF EXISTING UTILITY STRUCTURES WITHIN THE RIGHT-OF-WAY UNDERTAKEN OR FINANCED IN WHOLE OR IN PART BY THE DEPARTMENT OF TRANSPORTATION, THE GEORGIA HIGHWAY AUTHORITY OR THE STATE ROAD AND TOLLWAY AUTHORITY OR UNDERTAKEN BY ANY COUNTY OR MUNICIPALITY, PROVIDED THAT:
- a) THE AREA OF LAND DISTURBANCE DOES NOT EXCEED 100 SQUARE FEET PER STRUCTURE,
- b) THE AREA OF BUFFER VEGETATION TO BE CUT (NOT GRUBBED) DOES NOT EXCEED 1,000 SQUARE FEET PER STRUCTURE.
- c) NATIVE RIPARIAN VEGETATION IS RE-ESTABLISHED IN ANY BARE OR DISTURBED AREAS WITHIN THE BUFFER AND
- d) THE ENTITY IS NOT A SECONDARY PERMITTEE FOR A PROJECT LOCATED WITHIN A COMMON DEVELOPMENT OR SALE UNDER THIS PERMIT; AND
- G) RIGHT-OF-WAY POSTS, GUY-WIRES, ANCHORS, SURVEY MARKERS AND THE REPLACEMENT OR MAINTENANCE OF EXISTING UTILITY STRUCTURES WITHIN THE CURRENT RIGHT-OF-WAY UNDERTAKEN BY ANY ELECTRIC MEMBERSHIP CORPORATION OR MUNICIPAL ELECTRICAL SYSTEM OR ANY PUBLIC UTILITY UNDER THE REGULATORY JURISDICTION OF THE PUBLIC SERVICE COMMISSION, ANY UTILITY UNDER THE REGULATORY JURISDICTION OF THE FEDERAL ENERGY REGULATORY COMMISSION, ANY CABLE TELEVISION SYSTEM AS DEFINED IN CODE SECTION 36-18-1, OR ANY AGENCY OR INSTRUMENTALITY OF THE UNITED STATES ENGAGED IN THE GENERATION, TRANSMISSION OR DISTRIBUTION OF POWER, PROVIDED THAT:
- a) THE AREA OF LAND DISTURBANCE DOES NOT EXCEED 100 SQUARE FEET PER STRUCTURE,
- b) THE AREA OF BUFFER VEGETATION TO BE CUT (NOT GRUBBED) DOES NOT EXCEED 1,000 SQUARE FEET PER STRUCTURE, c) NATIVE RIPARIAN VEGETATION IS RE-ESTABLISHED IN ANY BARE OR DISTURBED AREAS WITHIN THE BUFFER AND
- d) THE ENTITY IS NOT A SECONDARY PERMITTEE FOR A PROJECT LOCATED WITHIN A COMMON DEVELOPMENT OR SALE UNDER THIS PERMIT.
- 3) EXCEPT AS PROVIDED ABOVE, FOR BUFFERS REQUIRED PURSUANT TO PART IV.(I). AND (II)., NO CONSTRUCTION ACTIVITIES SHALL BE CONDUCTED WITHIN A BUFFER AND A BUFFER SHALL REMAIN IN ITS NATURAL, UNDISTURBED, STATE OF VEGETATION UNTIL ALL LAND DISTURBING ACTIVITIES ON THE CONSTRUCTION SITE ARE COMPLETED. DURING COVERAGE UNDER THIS PERMIT, A BUFFER CANNOT BE THINNED OR TRIMMED OF VEGETATION AND A PROTECTIVE VEGETATIVE COVER MUST REMAIN TO PROTECT WATER QUALITY AND AQUATIC HABITAT AND A NATURAL CANOPY MUST BE LEFT IN SUFFICIENT QUANTITY TO KEEP SHADE ON THE STREAM BED.

IMPAIRED STREAM SEGMENT

CATEGORY - 4A, 5

ANY PERMITTEE WHO INTENDS TO OBTAIN COVERAGE UNDER THE GAR1000002 PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY INTO AN IMPAIRED STREAM SEGMENT, OR WITHIN ONE (1) LINEAR MILE UPSTREAM OF AND WITHIN THE SAME WATERSHED AS, ANY PORTION OF AN IMPAIRED STREAM SEGMENT IDENTIFIED AS "NOT SUPPORTING" ITS DESIGNATED USE(S), AS SHOWN ON GEORGIA'S MOST CURRENT "305(B)/303(D) LIST DOCUMENTS (FINAL)" AT THE TIME OF NOI SUBMITTAL, MUST SATISFY THE REQUIREMENTS OF PART III.C. OF THIS PERMIT IF THE IMPAIRED STREAM SEGMENT HAS BEEN LISTED FOR CRITERIA VIOLATED, "BIO F" (IMPAIRED FISH COMMUNITY) AND/OR "BIO M" (IMPAIRED MACROINVERTEBRATE COMMUNITY) WITHIN CATEGORY 4A, 4B OR 5, AND THE POTENTIAL CAUSE IS EITHER "NP" (NONPOINT SOURCE) OR "UR" (URBAN RUNOFF). THOSE DISCHARGES THAT ARE LOCATED WITHIN ONE (1) LINEAR MILE OF AN IMPAIRED STREAM SEGMENT, BUT ARE NOT LOCATED WITHIN THE WATERSHED OF ANY PORTION OF THAT STREAM SEGMENT, ARE EXCLUDED FROM THIS REQUIREMENT. GEORGIA'S 305(B)/303(D) LIST DOCUMENTS (FINAL)" CAN BE VIEWED ON THE EPD WEBSITE

IMPAIRED STREAM - SOUTH FORK PEACHTREE CREEK LOCATION - HEADWATERS TO PEACHTREE CREEK, ATLANTA WATERBODY ID - GAR031300011207 RIVERBASIN / USE - UPPER CHATTAHOOCHEE / FISHING CRITERION VIOLATED - FECAL COLIFORMS (FC), BIOTA IMPACTED (BIO F, BIO M) POTENTIAL CAUSES - URBAN RUNOFF (UR)

IMPAIRED STREAM - BURNT FORK CREEK LOCATION - HEADWATERS TO SOUTH FORK PEACHTREE CREEK WATERBODY ID - GAR031300011211 RIVERBASIN / USE - UPPER CHATTAHOOCHEE / FISHING CRITERION VIOLATED - FECAL COLIFORMS (FC) POTENTIAL CAUSES - URBAN RUNOFF (UR) CATEGORY - 4A

IMPAIRED STREAM SEGMENT (CONTINUED)

IN ORDER TO ENSURE THAT THE PERMITTEE'S DISCHARGE(S) DO NOT CAUSE OR CONTRIBUTE TO A VIOLATION OF STATE WATER QUALITY STANDARDS, THE PLAN MUST INCLUDE FOUR (4) OF THE FOLLOWING BEST MANAGEMENT PRACTICES (BMPS) FOR THOSE AREAS OF THE SITE WHICH DISCHARGE INTO OR WITHIN ONE (1) LINEAR MILE UPSTREAM AND WITHIN THE SAME WATERSHED AS THE IMPAIRED STREAM SEGMENT:

- 1) DURING ALL CONSTRUCTION ACTIVITIES DOUBLE THE WIDTH OF THE 25 FOOT UNDISTURBED VEGETATED BUFFER ALONG ALL STATE WATER REQUIRING A BUFFER AND THE 50 FOOT UNDISTURBED VEGETATED BUFFER ALONG ALL STATE WATERS CLASSIFIED AS "TROUT STREAMS" REQUIRING A BUFFER.
- 2) A LARGE SIGN (MINIMUM FOUR (4) FEET X EIGHT (8) FEET) MUST BE ON THE SITE ON THE ACTUAL START DATE OF CONSTRUCTION VISIBLE FROM A PUBLIC ROADWAY IDENTIFYING THE CONSTRUCTION SITE, THE PERMITEE(S), AND THE CONTACT PERSON(S) AND TELEPHONE NUMBER(S) UNTIL A NOTICE OF TERMINATION HAS BEEN SUBMITTED.
- 3) CONDUCT TURBIDITY SAMPLING AFTER EVERY RAIN EVENT OF 0.5 INCH OR GREATER WITHIN ANY TWENTY FOUR (24) PERIOD.
- 4) CERTIFIED PERSONNEL SHALL CONDUCT INSPECTIONS AT LEAST ONCE EVERY SEVEN (7) CALENDAR DAYS AND WITHIN TWENTY FOUR (24) HOURS OF THE END OF THE STORM THAT IS 0.5 INCHES RAINFALL OR GREATER.

TREE PROTECTION

- 1) TREES OUTSIDE OF THE PERMANENT AND/OR TEMPORARY EASEMENTS ARE PROTECTED.
- 2) ANY ACTIVITIES WHICH COULD ADVERSELY IMPACT THE CRITICAL ROOT ZONE INSIDE A TREE'S DRIP LINE SHALL NOT BE PERMITTED.
- 3) ADDITIONAL TREE PROTECTION BARRIERS FOR TREES LOCATED OUTSIDE OF THE LIMITS OF DISTURBANCE SHALL BE INSTALLED IN A GIVEN RADIUS FROM A PROTECTED TREE'S TRUNK AS DETERMINED BY THE DIAMETER AT BREAST HEIGHT (DBH). TREE PROTECTION SHALL BE PROVIDED WHERE TREES WITH A DBH LESS THAN EIGHTEEN (18) INCHES ARE LOCATED THAN A TWENTY (20) FEET RADIUS TO THE LIMITS OF DISTURBANCE, AND TREES WITH A DBH GREATER THAN EIGHTEEN (18) INCHES ARE LOCATED CLOSER THAN A THIRTY (30) FEET RADIUS TO THE LIMITS OF DISTURBANCE.
- 4) TREES PROVISIONALLY INDICATED FOR REMOVAL SHALL ONLY BE REMOVED UPON APPROVAL OF DEKALB COUNTY, AND THE CONTRACTOR MUST DEMONSTRATE PROTECTION OF THE TREE WILL ADVERSELY IMPACT SCHEDULED CONSTRUCTION ACTIVITIES
- 5) TREES OUTSIDE OF THE PERMANENT EASEMENT BOUNDARY DAMAGED OR REMOVED BY CONSTRUCTION ACTIVITIES SHALL BE TREATED OR REPLACED IN ACCORDANCE TO THE REQUIREMENTS DESCRIBED IN ORDINANCE 14-39 SECTION (G), SUBSECTION (9), PARAGRAPH (D) OF THE DEKALB COUNTY CODE OF ORDINANCES DEKALB COUNTY'S PREFERENCE IS TO REIMBURSE PROPERTY OWNERS FOR THE RETAIL COST OF REPLACEMENT TREES DAMAGED BY CONSTRUCTION BASED UPON THE REQUIREMENTS FOR SIZE, NUMBER, AND SPECIES AS DETAILED IN THE ORDINANCE. THE PRICE SHALL BE EQUAL TO THE RETAIL COST PLUS SALES TAX AND DELIVERY WITHIN FIVE MILES AS FOUND AT PIKE NURSERIES AS OF THE NOTICE TO PROCEED DATE.



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STAMP: ORG No. 26889 PROFESSIONAL 5/27/16

HEET TITLE: 43 of 65

ES&PC NARRATIVE PLAN

SSUED: 5.27.16 ROJECT NO.

GEORGIA SOIL AND WATER

0000070272

EXPIRES: 01/31/2017

CONSERVATION COMMISSION

GSWCC

CERTIFICATION NUMBER

ISSUED: 01/31/2014

William T. Roberts

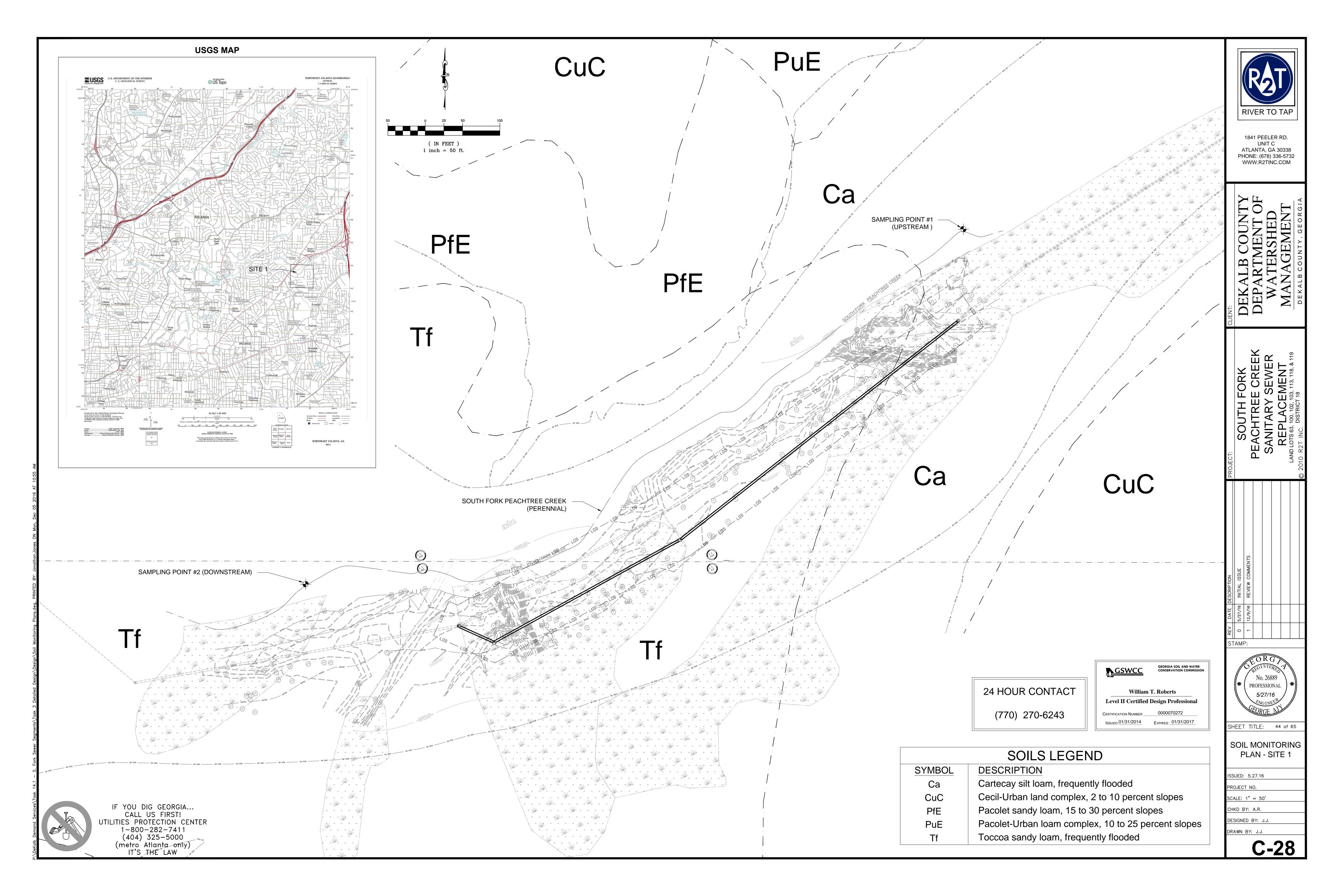
Level II Certified Design Professional

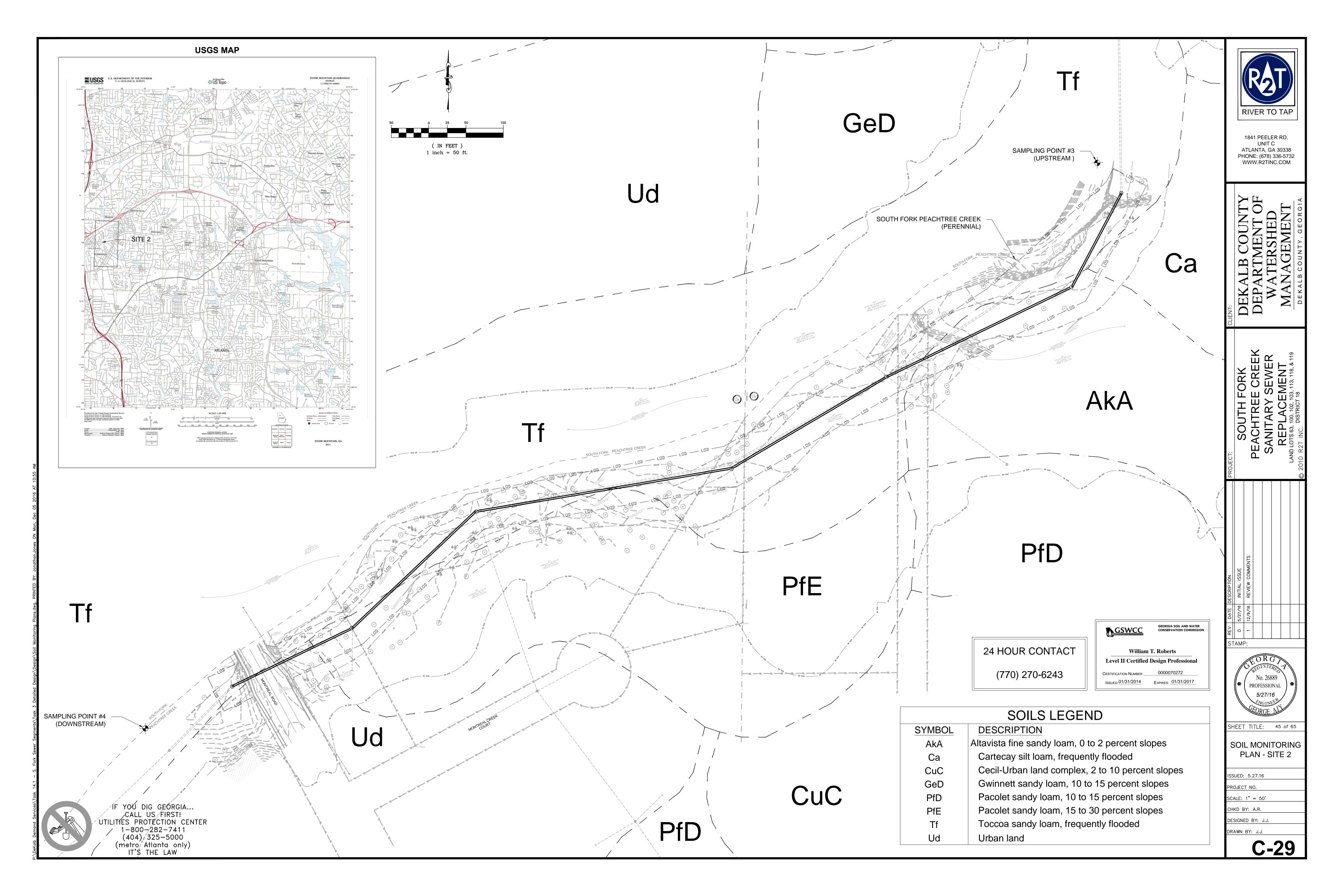
24 HOUR CONTACT

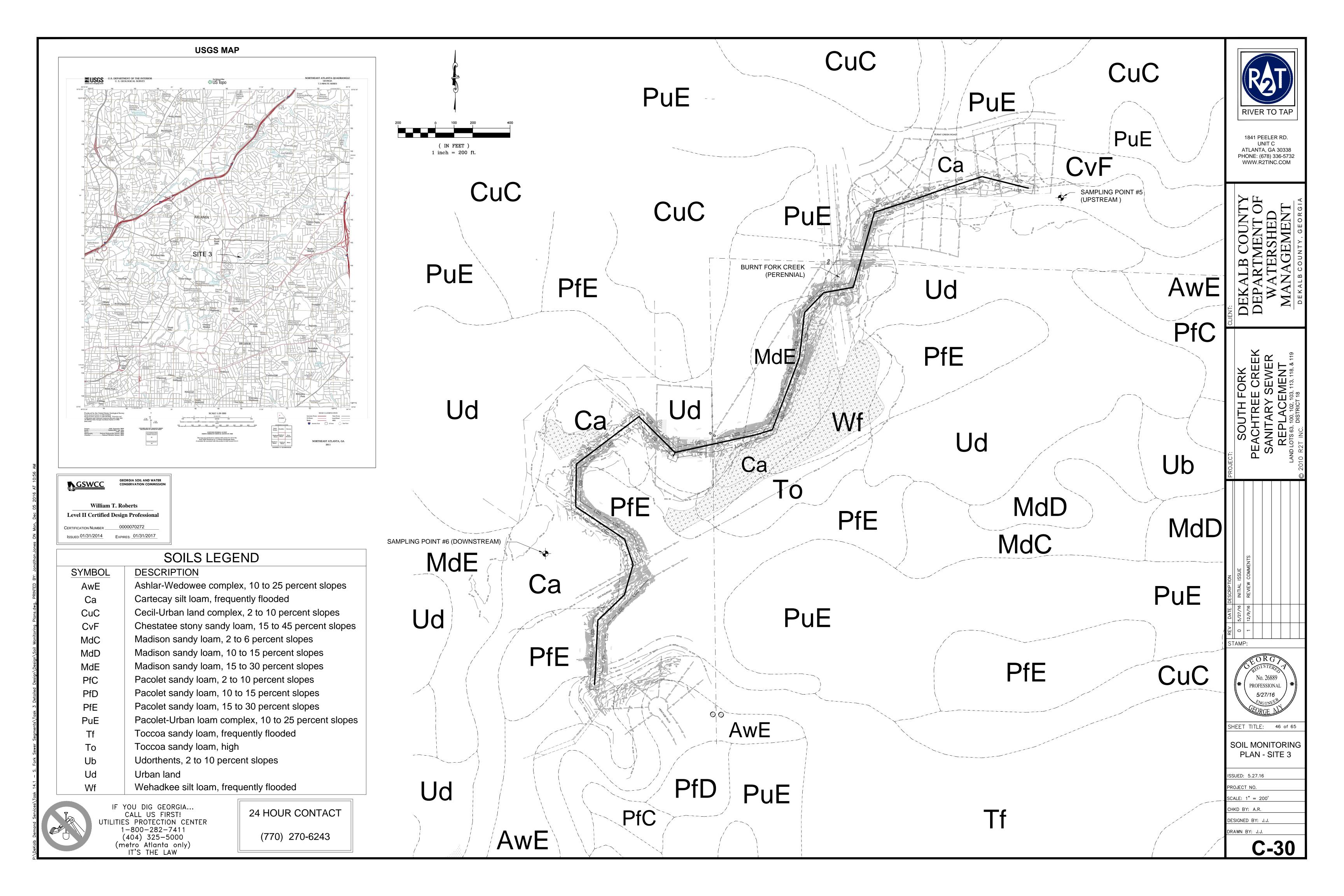
(770) 270-6243

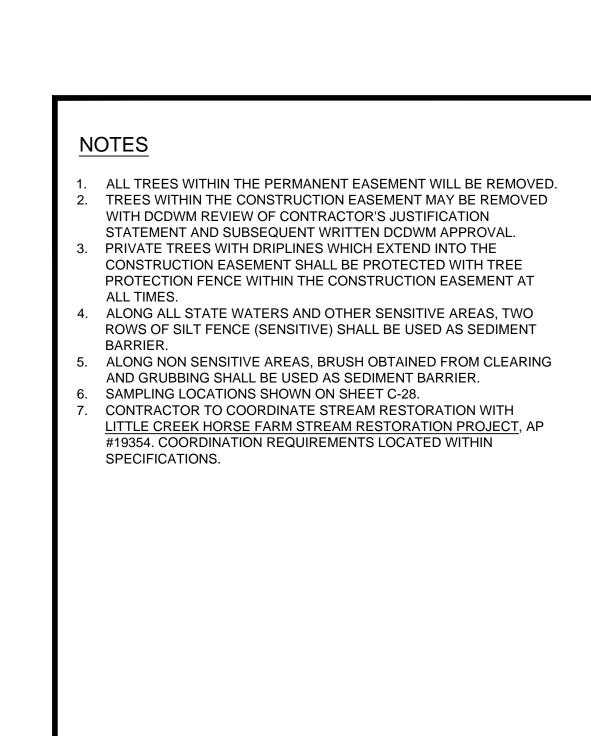
CALE: NONE CHKD BY: A.R. ESIGNED BY: J.J.

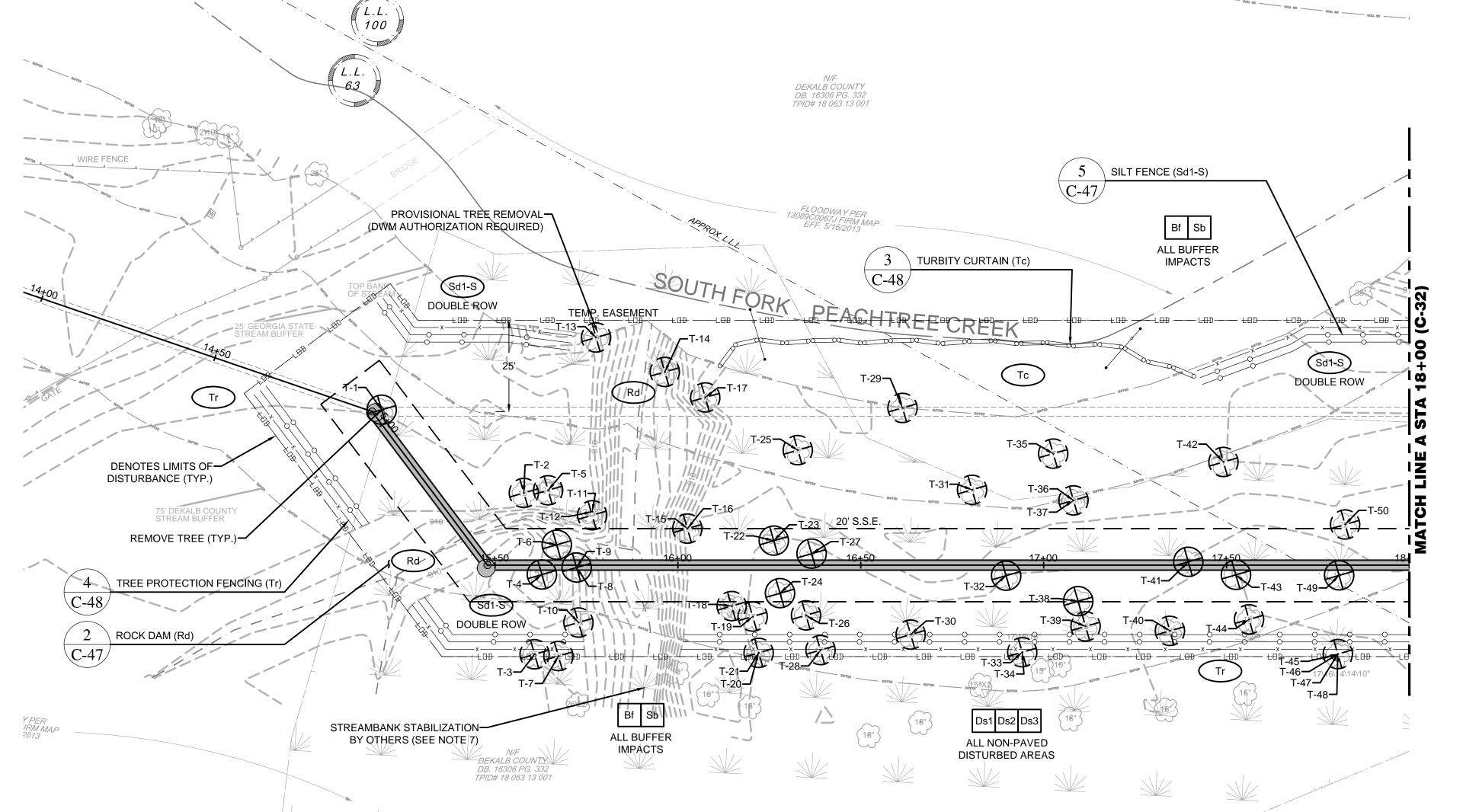
RAWN BY: J.J.













GRAPHIC SCALE

(IN FEET) 1 inch = 20 ft.

RECOMMENDED POINT OF ENTRY AT EXISTING GATE ALONG ORION DRIVE. CONTRACTOR TO OBTAIN RIGHT OF ENTRY OR TEMPORARY EASEMENT AS APPLICABLE FOR SITE ACCESS.



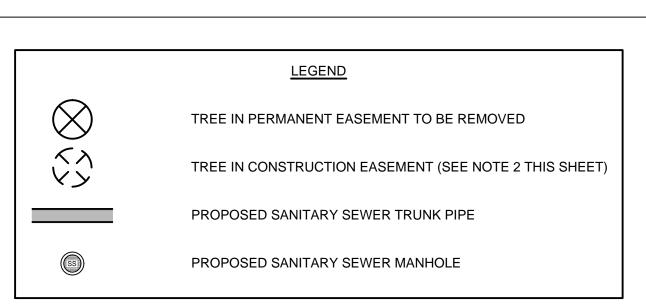
SITE 1 ACCESS PLAN

SCALE 1" = 200'

	TRE	ES TO E	BE REM	OVED		
NAME	TREE TYPE	SIZE	NORTHING	EASTING	STATION	COUNT
T-1	DECIDUOUS	12"	1383741.90	2263888.85	14+97	1
T-2	DECIDUOUS (P)	18"	1383740.73	2263933.89	15+58	1
T-3	DECIDUOUS (P)	25"	1383703.50	2263957.75	15+61	1
T-4	DECIDUOUS	10"	1383723.55	2263948.98	15+63	1
T-5	DECIDUOUS (P)	24"	1383744.57	2263939.35	15+65	1
T-6	DECIDUOUS	15"	1383732.64	2263948.60	15+67	1
T-7	DECIDUOUS (P)	12"	1383706.22	2263963.68	15+67	1
T-8	DECIDUOUS	10"	1383729.81	2263956.36	15+72	1
T-9	DECIDUOUS	15"	1383729.81	2263956.36	15+72	1
T-10	DECIDUOUS (P)	13"	1383716.89	2263964.07	15+73	1
T-11	DECIDUOUS (P)	8"	1383745.25	2263952.73	15+77	1
T-12	DECIDUOUS (P)	24"	1383745.25	2263952.73	15+77	1
T-13	DECIDUOUS (P)	10"	1383787.49	2263930.69	15+78	1
T-14	DECIDUOUS (P)	10"	1383788.31	2263951.69	15+96	1
T-15	DECIDUOUS (P)	10"	1383753.76	2263977.76	16+03	2
T-16	DECIDUOUS (P)	12"	1383753.76	2263977.76	16+03	1
T-17	DECIDUOUS (P)	10"	1383787.53	2263964.73	16+08	1
T-18	DECIDUOUS (P)	11"	1383741.04	2263998.58	16+15	1
T-19	DECIDUOUS (P)	17"	1383741.30	2264005.00	16+20	1
T-20	DECIDUOUS (P)	8"	1383733.39	2264011.22	16+22	1
T-21	DECIDUOUS (P)	10"	1383733.39	2264011.22	16+22	1
T-22	DECIDUOUS	9"	1383762.25	2264000.04	16+26	1
T-23	DECIDUOUS	13"	1383762.25	2264000.04	16+26	1
T-24	DECIDUOUS	14"	1383750.50	2264008.46	16+28	1
T-25	DECIDUOUS (P)	20"	1383787.12	2263993.85	16+33	1
T-26	DECIDUOUS (P)	16"	1383748.62	2264017.61	16+35	1
T-27	DECIDUOUS	13"	1383764.13	2264010.81	16+37	1
T-28	DECIDUOUS (P)	17"	1383742.22	2264025.67	16+39	1

	TREES TO	BE REN	OVED (CONTIN	UED)	
NAME	TREE TYPE	SIZE	NORTHING	EASTING	STATION	COUNT
T-29	DECIDUOUS (P)	11"	1383811.04	2264013.36	16+61	1
T-30	DECIDUOUS (P)	13"	1383757.83	2264045.22	16+64	1
T-31	DECIDUOUS (P)	24"	1383800.60	2264040.82	16+80	1
T-32	DECIDUOUS	17"	1383784.51	2264060.30	16+90	1
T-33	DECIDUOUS (P)	15"	1383768.31	2264074.27	16+94	1
T-34	DECIDUOUS (P)	17"	1383768.31	2264074.27	16+94	2
T-35	DECIDUOUS (P)	17"	1383819.97	2264055.49	17+03	1
T-36	DECIDUOUS (P)	16"	1383811.44	2264066.51	17+08	1
T-37	DECIDUOUS (P)	20"	1383811.44	2264066.51	17+08	2
T-38	DECIDUOUS	10"	1383787.88	2264080.93	17+09	1
T-39	DECIDUOUS (P)	10"	1383782.86	2264086.03	17+12	1
T-40	DECIDUOUS (P)	18"	1383792.91	2264106.82	17+35	1
T-41	DECIDUOUS	10"	1383811.86	2264102.10	17+40	1
T-42	DECIDUOUS (P)	17"	1383840.43	2264097.35	17+49	1
T-43	DECIDUOUS	12"	1383815.02	2264115.23	17+53	1
T-44	DECIDUOUS (P)	12"	1383806.09	2264124.26	17+56	1
T-45	DECIDUOUS (P)	10"	1383809.49	2264150.09	17+80	1
T-46	DECIDUOUS (P)	14"	1383809.49	2264150.09	17+80	2
T-47	DECIDUOUS (P)	16"	1383809.49	2264150.09	17+80	1
T-48	DECIDUOUS (P)	17"	1383809.49	2264150.09	17+80	1
T-49	DECIDUOUS	11"	1383828.49	2264140.02	17+81	1
T-50	DECIDUOUS (P)	22"	1383841.50	2264134.74	17+82	1

(P) TREES TO BE PROVISIONALLY REMOVED. SEE NOTE 2 THIS SHEET.



<u>GSWCC</u> William T. Roberts **Level II Certified Design Professional** CERTIFICATION NUMBER ______0000070272 ISSUED.01/31/2014 EXPIRES: 01/31/2017

> 24 HOUR CONTACT (770) 270-6243



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DEK. DEP.

STAMP: PROFESSIONAL

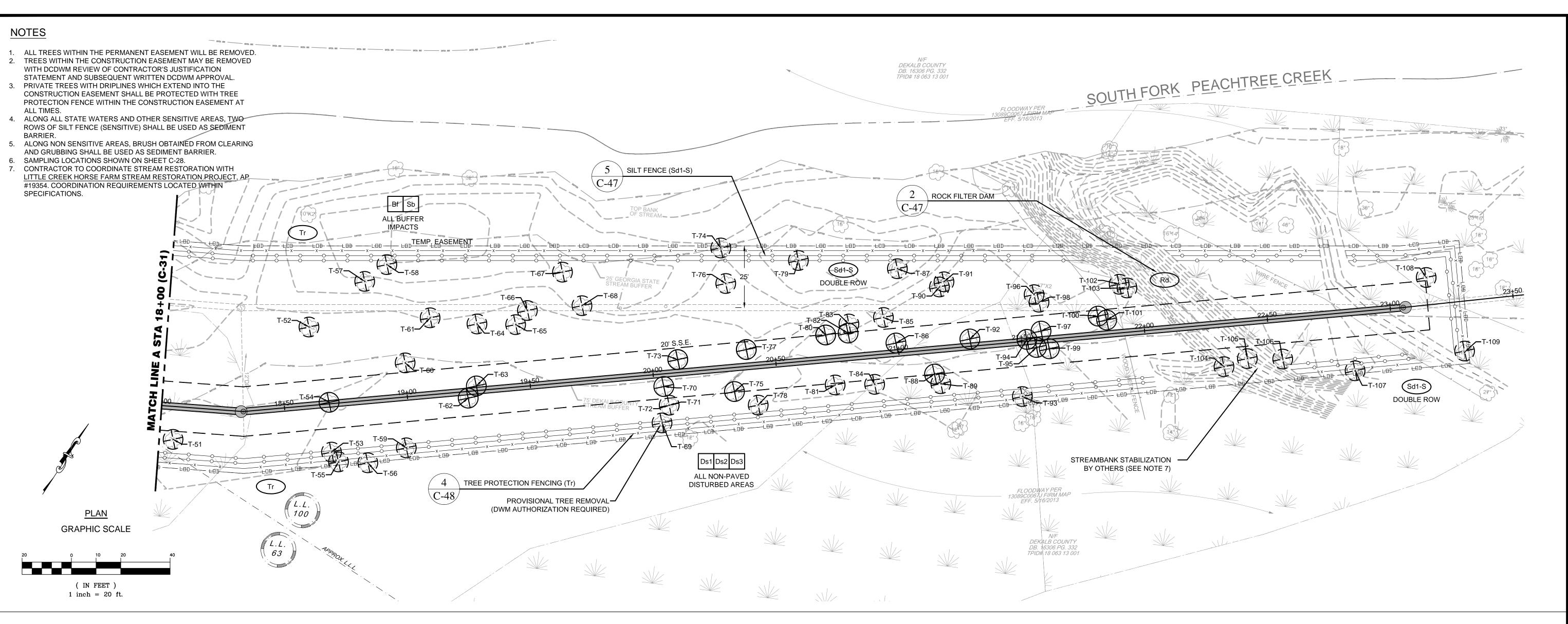
HEET TITLE: 47 of 65 ES&PC PLAN

SITE 1 STA 14+00 - 18+00

SSUED: 5.27.16

PROJECT NO. CALE: 1" = 20'

HKD BY: A.R. DESIGNED BY: J.J. DRAWN BY: J.J.



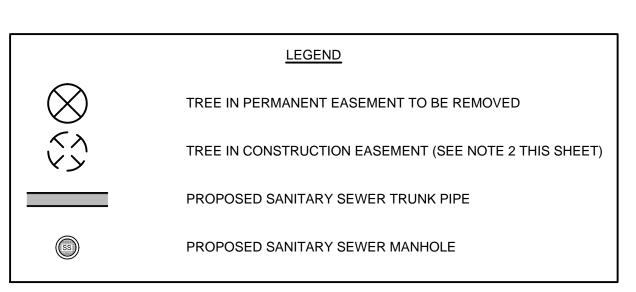
NAME	TREE TYPE	SIZE	NORTHING	EASTING	STATION	COUN
T-51	DECIDUOUS (P)	20"	1383831.27	2264166.87	18+06	1
T-52	DECIDUOUS (P)	22"	1383899.48	2264188.17	18+63	2
T-53	DECIDUOUS (P)	10"	1383861.99	2264223.48	18+67	1
T-54	DECIDUOUS	18"	1383878.34	2264211.67	18+68	1
T-55	DECIDUOUS (P)	14"	1383860.23	2264228.03	18+70	1
T-56	DECIDUOUS (P)	20"	1383866.40	2264238.21	18+82	1
T-57	DECIDUOUS (P)	15"	1383927.31	2264197.01	18+87	1
T-58	DECIDUOUS (P)	10"	1383937.91	2264200.83	18+97	1
T-59	DECIDUOUS (P)	14"	1383879.99	2264247.95	18+98	1
T-60	DECIDUOUS (P)	17"	1383908.59	2264228.76	19+00	1
T-61	DECIDUOUS (P)	12"	1383929.41	2264227.29	19+12	1
T-62	DECIDUOUS	14"	1383910.54	2264257.98	19+25	1
T-63	DECIDUOUS	17"	1383916.49	2264258.06	19+28	1
T-64	DECIDUOUS (P)	15"	1383937.70	2264244.56	19+31	1
T-65	DECIDUOUS (P)	15"	1383946.03	2264257.84	19+46	1
T-66	DECIDUOUS (P)	11"	1383953.41	2264258.72	19+52	1
T-67	DECIDUOUS (P)	10"	1383974.21	2264262.14	19+67	1
T-68	DECIDUOUS (P)	18"	1383967.14	2264276.18	19+74	1
T-69	DECIDUOUS (P)	17"	1383945.04	2264329.30	20+02	1
T-70	DECIDUOUS	17"	1383957.77	2264321.87	20+04	1
T-71	DECIDUOUS (P)	9"	1383952.63	2264327.81	20+05	1
T-72	DECIDUOUS (P)	10"	1383952.63	2264327.81	20+05	1
T-73	DECIDUOUS	15"	1383970.01	2264320.63	20+11	1
T-74	DECIDUOUS (P)	30"	1384017.44	2264310.55	20+32	1
T-75	DECIDUOUS	10"	1383971.69	2264346.97	20+32	1
T-76	DECIDUOUS (P)	10"	1384006.48	2264320.10	20+33	1
T-77	DECIDUOUS	12"	1383988.58	2264341.70	20+39	1

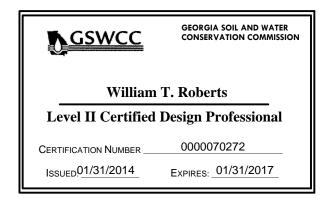
TREES TO BE REMOVED (CONTINUED)											
NAME	TREE TYPE	SIZE	NORTHING	EASTING	STATION	COUNT					
T-79	DECIDUOUS (P)	10"	1384030.37	2264339.71	20+63	1					
T-80	DECIDUOUS	25"	1384011.09	2264365.42	20+71	1					
T-81	DECIDUOUS (P)	8"	1383996.23	2264379.70	20+73	1					
T-82	DECIDUOUS	12"	1384016.69	2264372.61	20+80	1					
T-83	DECIDUOUS (P)	10"	1384019.96	2264370.90	20+81	1					
T-84	DECIDUOUS (P)	13"	1384005.18	2264392.98	20+89	1					
T-85	DECIDUOUS (P)	11"	1384029.84	2264381.18	20+95	1					
T-86	DECIDUOUS	11"	1384023.89	2264391.08	20+99	1					
T-87	DECIDUOUS (P)	15"	1384049.46	2264375.13	20+02	1					
T-88	DECIDUOUS	11"	1384021.86	2264411.05	21+14	1					
T-89	DECIDUOUS (P)	14"	1384020.03	2264415.31	21+16	1					
T-90	DECIDUOUS (P)	10"	1384052.57	2264393.46	21+19	1					
T-91	DECIDUOUS (P)	15"	1384055.34	2264393.85	21+21	1					
T-92	DECIDUOUS	10"	1384041.61	2264415.28	21+29	1					
T-93	DECIDUOUS (P)	10"	1384033.71	2264445.85	21+48	1					
T-94	DECIDUOUS	11"	1384054.11	2264434.77	21+52	1					
T-95	DECIDUOUS	14"	1384053.48	2264439.79	21+56	1					
T-96	DECIDUOUS (P)	17"	1384070.91	2264427.31	21+57	2					
T-97	DECIDUOUS	13"	1384060.06	2264437.71	21+58	1					
T-98	DECIDUOUS (P)	22"	1384069.43	2264430.64	21+58	1					
T-99	DECIDUOUS	19"	1384055.89	2264444.43	21+61	1					
T-100	DECIDUOUS	12"	1384077.75	2264453.79	21+82	1					
T-101	DECIDUOUS	13"	1384078.32	2264457.55	21+85	1					
T-102	DECIDUOUS (P)	12"	1384093.26	2264453.90	21+91	1					
T-103	DECIDUOUS (P)	13"	1384093.74	2264457.37	21+94	1					
T-104	DECIDUOUS (P)	12"	1384088.47	2264507.74	22+31	1					
T-105	DECIDUOUS (P)	10"	1384096.36	2264513.88	22+41	1					
T-106	DECIDUOUS (P)	17"	1384104.05	2264525.99	22+55	1					

	TREES TO BE REMOVED (CONTINUED)								
NAME	TREE TYPE	SIZE	NORTHING	EASTING	STATION	COUNT			
T-107	DECIDUOUS (P)	14"	1384116.08	2264553.15	22+84	1			
T-108	DECIDUOUS (P)	14"	1384163.48	2264556.68	23+16	1			
T-109	DECIDUOUS (P)	27"	1384146.59	2264586.26	23+28	1			

SUMMARY OF	TREES TO BE REMO	OVED (SITE 1)
TREE TYPE	SIZE	COUNT
DECIDUOUS (P)	0 - 12"	32
DECIDUOUS	0 - 12"	16
DECIDUOUS (P)	13" - 24"	47
DECIDUOUS	13" - 24"	15
DECIDUOUS (P)	25" - 36"	4
DECIDUOUS	25" - 36"	1
(P) TREES TO BE	PROVISIONALLY REMOVED. SEE NO	TE 2 THIS SHEET

(P) TREES TO BE PROVISIONALLY REMOVED. SEE NOTE 2 THIS SHEET.





24 HOUR CONTACT (770) 270-6243



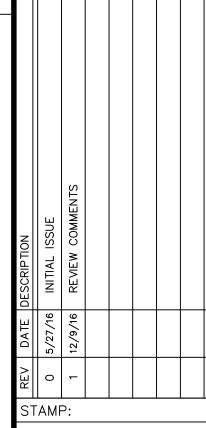
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DEKALB COUNTY
DEPARTMENT OF
WATERSHED

SOUTH FORK
PEACHTREE CREEK
SANITARY SEWER
REPLACEMENT





SHEET TITLE: 48 of 65

ES&PC PLAN
SITE 1

SITE 1 STA 18+00 - 23+25

ISSUED: 5.27.16

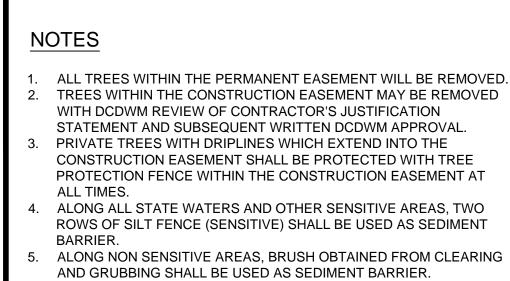
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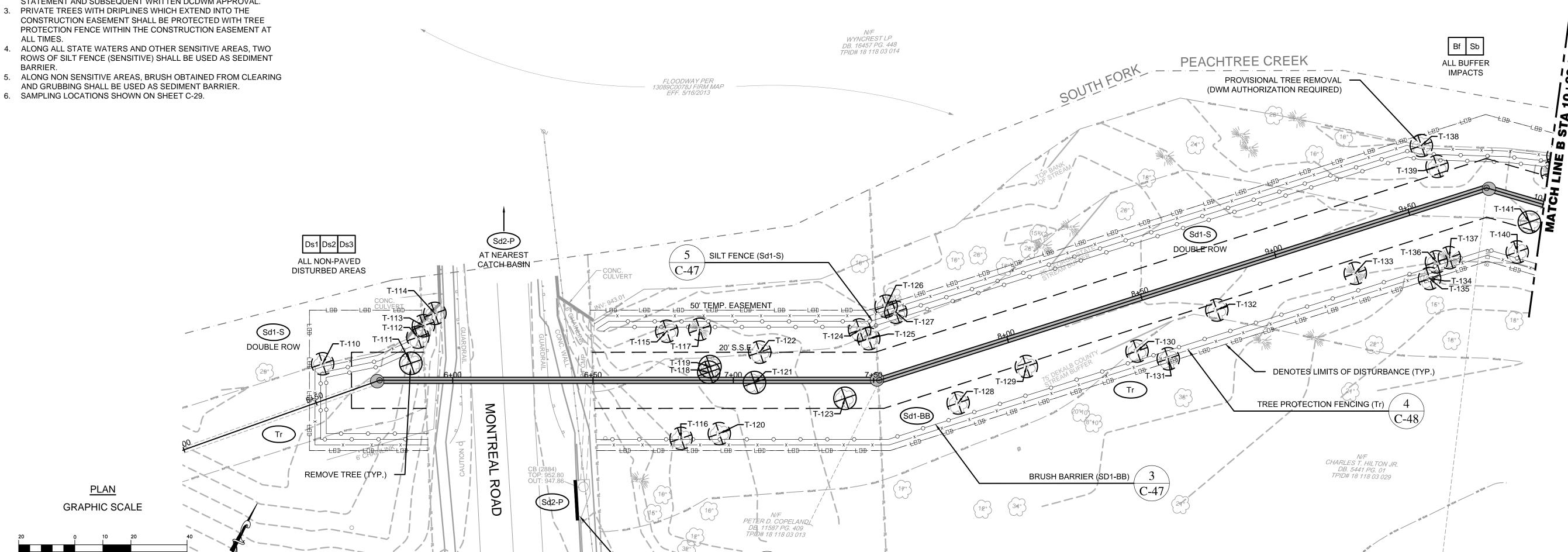
SCALE: 1" = 20'

CHKD BY: A.R.

DESIGNED BY: J.J.

DRAWN BY: J.J.

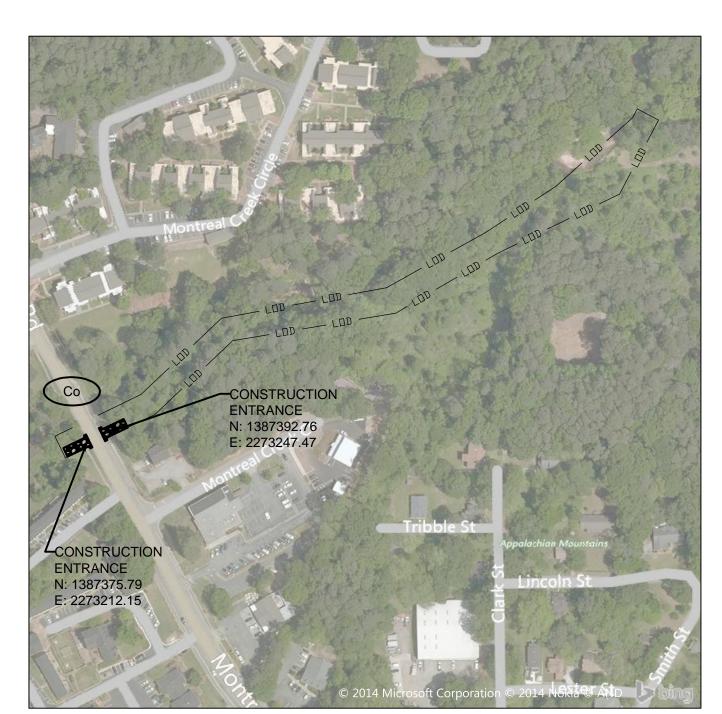




NOTES

(IN FEET) 1 inch = 20 ft.

RECOMMENDED POINTS OF ENTRY ALONG MONTREAL ROAD. CONTRACTOR TO OBTAIN RIGHT OF ENTRY OR TEMPORARY EASEMENT AS APPLICABLE FOR SITE ACCESS.



SITE 2 ACCESS PLAN

SCALE 1" = 200'

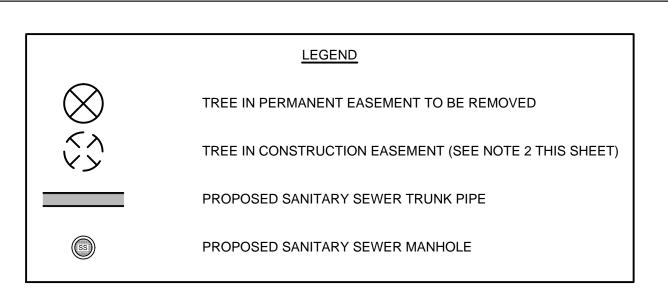
NAME	TREE TYPE	SIZE	NORTHING	EASTING	STATION	COUNT
T-110	DECIDUOUS (P)	18"	1387372.62	2273156.98	5+57	1
T-111	DECIDUOUS	13"	1387386.47	2273185.18	5+85	1
T-112	DECIDUOUS (P)	13"	1387395.95	2273183.36	5+88	1
T-113	DECIDUOUS (P)	16"	1387400.46	2273183.37	5+90	1
T-114	DECIDUOUS (P)	10"	1387406.22	2273185.14	5+94	1
T-115	DECIDUOUS (P)	24"	1387436.52	2273262.29	6+76	1
T-116	DECIDUOUS (P)	13"	1387404.40	2273283.51	6+81	1
T-117	CONIFEROUS (P)	18"	1387442.29	2273272.55	6+88	1
T-118	DECIDUOUS	20"	1387429.91	2273282.12	6+91	1
T-119	DECIDUOUS	20"	1387431.88	2273281.65	6+92	1
T-120	DECIDUOUS (P)	12"	1387411.89	2273295.02	6+95	1
T-121	DECIDUOUS	14"	1387433.71	2273298.38	7+08	1
T-122	DECIDUOUS (P)	13"	1387444.25	2273295.35	7+09	1
T-123	DECIDUOUS	15"	1387442.69	2273329.85	7+40	1
T-124	DECIDUOUS (P)	19"	1387466.90	2273323.92	7+45	1
T-125	DECIDUOUS (P)	18"	1387465.51	2273328.20	7+48	1
T-126	DECIDUOUS (P)	16"	1387478.66	2273328.72	7+62	1
T-127	DECIDUOUS (P)	15"	1387478.23	2273332.75	7+65	1
T-128	DECIDUOUS (P)	10"	1387458.79	2273366.86	7+76	1
T-129	DECIDUOUS (P)	10"	1387481.09	2273383.08	8+03	1
T-130	DECIDUOUS (P)	12"	1387503.23	2273416.17	8+43	1
T-131	DECIDUOUS (P)	10"	1387505.63	2273427.37	8+53	1
T-132	DECIDUOUS (P)	12"	1387528.79	2273435.38	8+74	1
T-133	CONIFEROUS (P)	25"	1387562.08	2273474.06	9+25	1
T-134	DECIDUOUS (P)	9"	1387571.97	2273498.69	9+50	1
T-135	DECIDUOUS (P)	10"	1387571.97	2273498.69	9+50	1

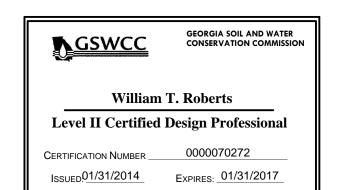
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TREES TO BE REMOVED

	TREES TO BE REMOVED (CONTINUED)											
NAME	TREE TYPE	SIZE	NORTHING	EASTING	STATION	COUNT						
T-136	DECIDUOUS (P)	23"	1387578.35	2273498.31	9+54	1						
T-137	CONIFEROUS (P)	22"	1387581.72	2273501.80	9+59	1						
T-138	DECIDUOUS (P)	31"	1387613.28	2273475.42	9+61	1						
T-139	DECIDUOUS (P)	22"	1387609.05	2273483.70	9+65	1						
T-140	DECIDUOUS (P)	10"	1387594.07	2273522.69	9+96	1						
T-141	DECIDUOUS	19"	1387605.51	2273521.91	9+97	1						

(P) TREES TO BE PROVISIONALLY REMOVED. SEE NOTE 2 THIS SHEET.





24 HOUR CONTACT

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DEKALB COUNTY
DEPARTMENT OF
WATERSHED
MANAGEMENT

STAMP: PROFESSIONAL

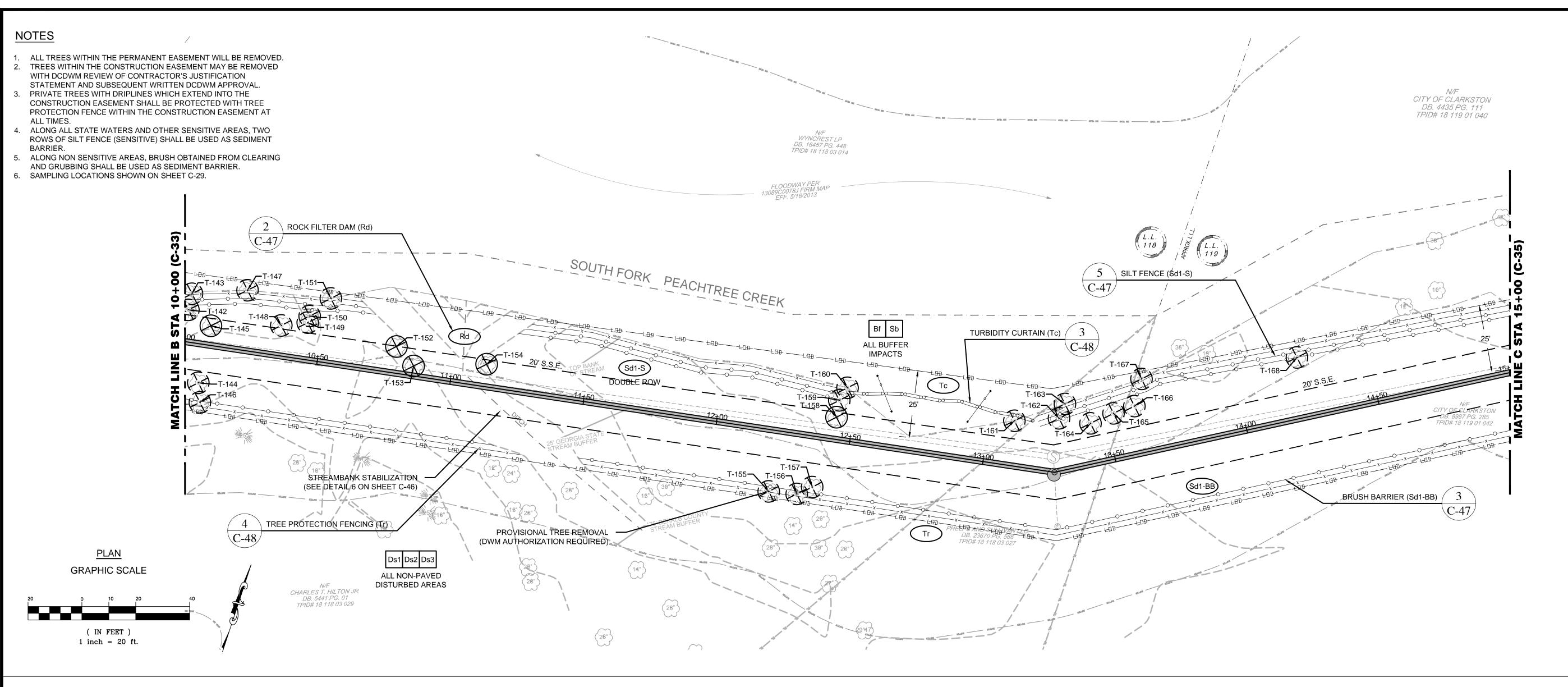
HEET TITLE: 49 of 65 **ES&PC PLAN**

SITE 2 STA 5+00 - 10+00

SSUED: 5.27.16

ROJECT NO. CALE: 1" = 20'

HKD BY: A.R. ESIGNED BY: J.J. DRAWN BY: J.J.

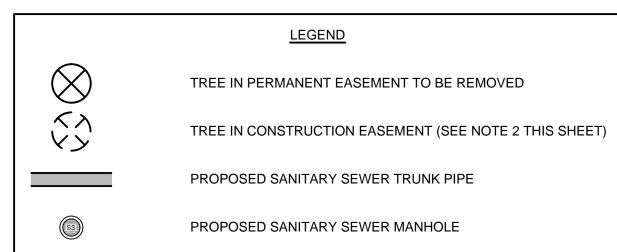


				• • – –		
NAME	TREE TYPE	SIZE	NORTHING	EASTING	STATION	COUNT
T-142	CONIFEROUS (P)	26"	1387625.05	2273521.48	10+00	1
T-143	DECIDUOUS (P)	20"	1387631.14	2273520.88	10+00	1
T-144	DECIDUOUS (P)	10"	1387600.47	2273533.41	10+08	1
T-145	DECIDUOUS	10"	1387622.02	2273531.25	10+09	1
T-146	DECIDUOUS (P)	11"	1387593.74	2273536.23	10+09	1
T-147	DECIDUOUS (P)	22"	1387638.80	2273540.08	10+21	1
T-148	DECIDUOUS (P)	20"	1387630.30	2273556.06	10+35	1
T-149	DECIDUOUS (P)	14"	1387634.34	2273565.06	10+44	1
T-150	DECIDUOUS (P)	12"	1387636.88	2273564.99	10+45	1
T-151	DECIDUOUS (P)	11"	1387645.56	2273570.42	10+52	1
T-152	DECIDUOUS	11"	1387636.17	2273599.11	10+78	1
T-153	DECIDUOUS	10"	1387631.28	2273607.42	10+86	1
T-154	DECIDUOUS	16"	1387640.37	2273633.01	11+12	1
T-155	DECIDUOUS (P)	28"	1387628.16	2273747.24	12+23	1
T-156	DECIDUOUS (P)	20"	1387630.51	2273757.42	12+33	1
T-157	DECIDUOUS (P)	11"	1387634.72	2273762.09	12+39	1
T-158	DECIDUOUS	13"	1387662.17	2273762.58	12+44	1
T-159	DECIDUOUS (P)	18"	1387668.44	2273761.62	12+44	1
T-160	DECIDUOUS (P)	18"	1387673.83	2273763.07	12+46	1
T-161	DECIDUOUS (P)	18"	1387681.50	2273825.77	13+09	1
T-162	DECIDUOUS (P)	10"	1387687.53	2273841.24	13+32	1
T-163	DECIDUOUS (P)	17"	1387693.27	2273841.68	13+35	1
T-164	DECIDUOUS (P)	20"	1387689.39	2273852.93	13+43	1
T-165	DECIDUOUS (P)	20"	1387695.58	2273859.90	13+52	1
T-166	DECIDUOUS (P)	10"	1387700.57	2273866.42	13+60	1
T-167	DECIDUOUS (P)	37"	1387710.95	2273865.79	13+65	1

1387736.52 2273918.15

(P) TREES TO BE PROVISIONALLY REMOVED. SEE NOTE 2 THIS SHEET.

TREES TO BE REMOVED



GEORGIA SOIL AND WATER CONSERVATION COMMISSION

William T. Roberts

Level II Certified Design Professional

 CERTIFICATION NUMBER
 0000070272

 ISSUED 01/31/2014
 EXPIRES: 01/31/2017

24 HOUR CONTACT

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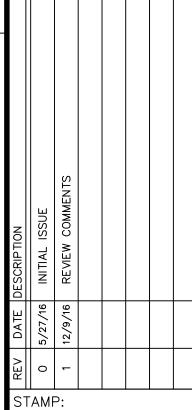
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5/27/16

ENGINEER

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SHEET TITLE: 50 of 65

ES&PC PLAN

SITE 2

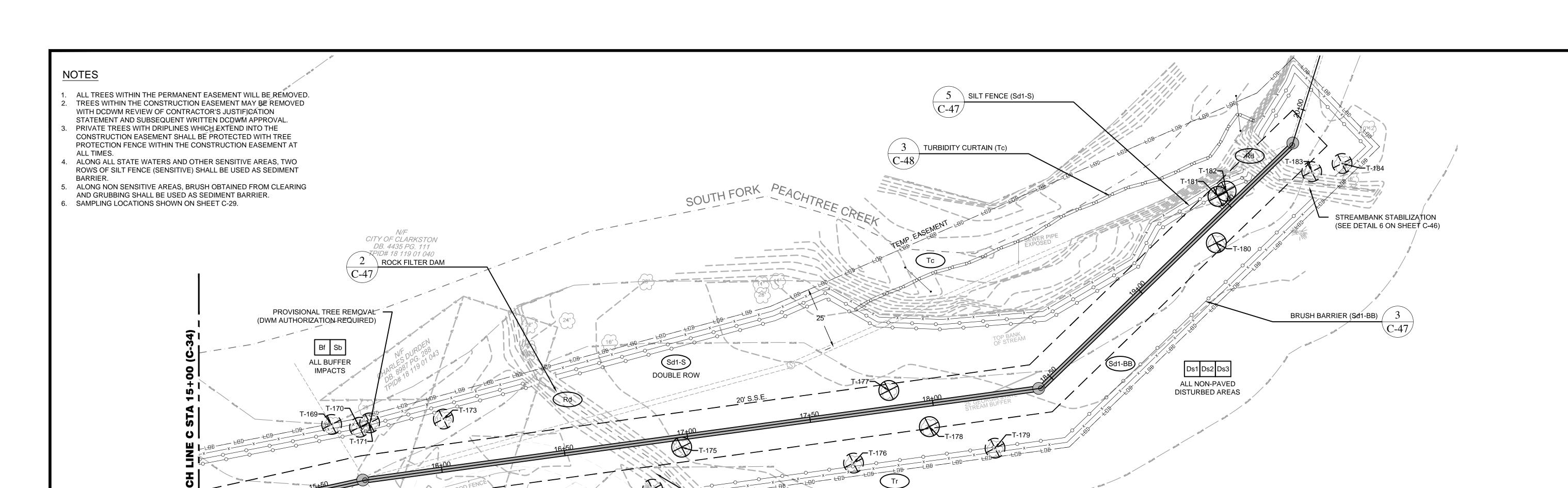
STA 10+00 - 15+00

STA 10+00

SSUED: 5.27.16
PROJECT NO.

SCALE: 1" = 20'
CHKD BY: A.R.
DESIGNED BY: J.J.

DRAWN BY: J.J.



STREAMBANK STABILIZATION (SEE DETAIL 6 ON SHEET C-46)

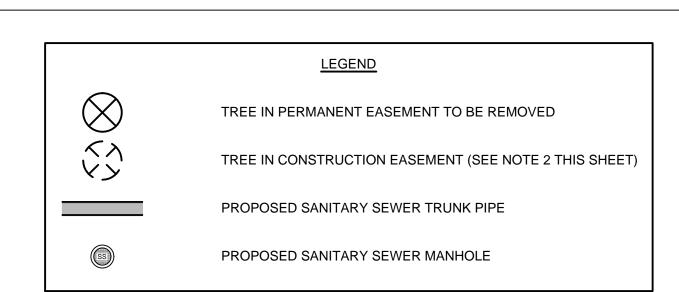
CITY OF CLARKSTON DB. 4435 PG. 111 TPID# 18 119 01 040

	TREES TO BE REMOVED									
NAM	Е	TREE TYPE	SIZE	NORTHING	EASTING	STATION	COUNT			
T-16	9	DECIDUOUS (P)	14"	1387807.86	2274034.44	15+59	1			
T-17	0	DECIDUOUS (P)	15"	1387810.28	2274045.47	15+69	1			
T-17	'1	DECIDUOUS (P)	15"	1387813.23	2274048.81	15+74	1			
T-17	2	DECIDUOUS (P)	10"	1387788.78	2274075.15	15+87	1			
T-17	3	DECIDUOUS (P)	11"	1387823.97	2274076.61	16+03	2			
T-17	4	CONIFEROUS (P)	27"	1387823.41	2274165.65	16+83	1			
T-17	5	DECIDUOUS	13"	1387843.15	2274171.51	16+97	1			
T-17	6	DECIDUOUS (P)	30"	1387858.68	2274239.45	17+65	1			
T-17	7	DECIDUOUS	32"	1387890.94	2274243.87	17+83	1			
T-17	8	DECIDUOUS	28"	1387882.16	2274263.96	17+97	1			
T-17	9	DECIDUOUS (P)	25"	1387882.19	2274291.85	18+22	1			
T-18	0	DECIDUOUS	10"	1387988.67	2274350.94	19+54	1			
T-18	31	DECIDUOUS	16"	1388006.72	2274345.72	19+49	1			
T-18	2	CONIFEROUS	20"	1388009.77	2274348.17	19+53	1			
T-18	3	DECIDUOUS (P)	18"	1388028.00	2274378.57	19+83	1			
T-18	4	DECIDUOUS (P)	17"	1388034.96	2274389.19	19+85	1			

SUMMARY OF	TREES TO BE REMO	OVED (SITE 2)
TREE TYPE	SIZE	COUNT
DECIDUOUS (P)	0 - 12"	20
DECIDUOUS	0 - 12"	4
DECIDUOUS (P)	13" - 24"	28
DECIDUOUS	13" - 24"	10
CONIFEROUS (P)	13" - 24"	2
CONIFEROUS	13" - 24"	1
DECIDUOUS (P)	25" - 36"	4
DECIDUOUS	25" - 36"	2
CONIFEROUS	25" - 36"	3
DECIDUOUS (P)	37" - 48"	2

TREE PROTECTION FENCING (Tr) / 4

(P) TREES TO BE PROVISIONALLY REMOVED. SEE NOTE 2 THIS SHEET.



<u>PLAN</u>

GRAPHIC SCALE

1 inch = 20 ft.

<u>GSWCC</u> William T. Roberts **Level II Certified Design Professional**

CERTIFICATION NUMBER ______0000070272 ISSUED 01/31/2014 EXPIRES: 01/31/2017

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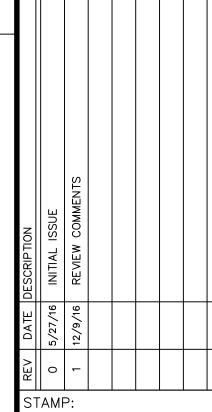
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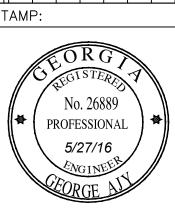


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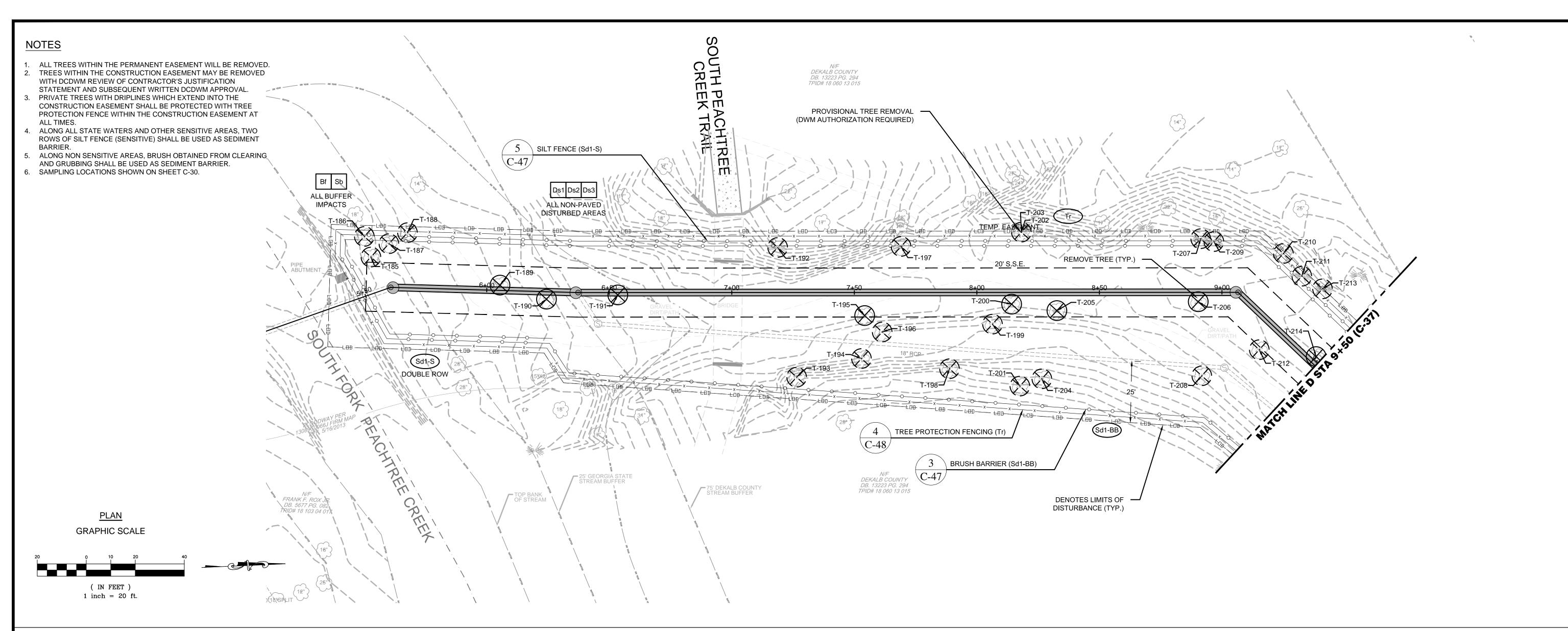
HEET TITLE: 51 of 65 ES&PC PLAN

SITE 2 STA 15+00 - 20+00

ISSUED: 5.27.16

PROJECT NO. CALE: 1" = 20'HKD BY: A.R.

DESIGNED BY: J.J. DRAWN BY: J.J.



NOTES

RECOMMENDED POINT OF ENTRY AT EXISTING ACCESS ROAD ALONG WILLIVEE PLACE. CONTRACTOR TO OBTAIN RIGHT OF ENTRY OR TEMPORARY EASEMENT AS APPLICABLE FOR SITE ACCESS.



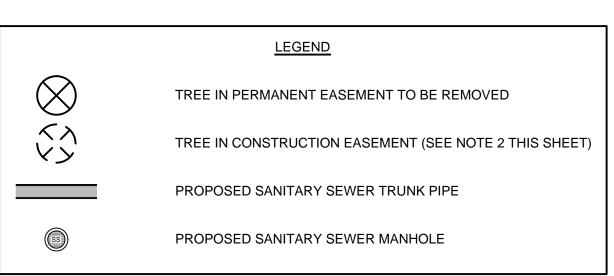
SITE 3 ACCESS PLAN

SCALE 1" = 200'

	TRE	EES TO E	BE REMO	OVED		
NAME	TREE TYPE	SIZE	NORTHING	EASTING	STATION	COUNT
T-185	DECIDUOUS (P)	16"	1384595.53	2255565.30	5+57	1
T-186	DECIDUOUS (P)	12"	1384593.23	2255556.78	5+58	1
T-187	DECIDUOUS (P)	27"	1384603.11	2255560.20	5+59	1
T-188	DECIDUOUS (P)	15"	1384610.89	2255556.04	5+67	1
T-189	DECIDUOUS	42"	1384647.59	2255579.18	6+05	1
T-190	DECIDUOUS	17"	1384666.29	2255585.75	6+24	1
T-191	DECIDUOUS	22"	1384695.43	2255585.37	6+53	1
T-192	CONIFEROUS (P)	24"	1384761.50	2255568.99	7+19	1
T-193	DECIDUOUS (P)	18"	1384766.81	2255622.21	7+26	1
T-194	DECIDUOUS (P)	12"	1384793.57	2255615.82	7+53	1
T-195	DECIDUOUS	20"	1384795.69	2255598.38	7+54	1
T-196	DECIDUOUS (P)	14"	1384802.53	2255605.39	7+61	1
T-197	DECIDUOUS (P)	29"	1384811.82	2255570.88	7+69	1
T-198	DECIDUOUS (P)	31"	1384829.27	2255621.61	7+89	1
T-199	DECIDUOUS (P)	17"	1384847.63	2255604.23	8+06	1
T-200	DECIDUOUS	24"	1384855.78	2255596.47	8+14	1
T-201	DECIDUOUS (P)	22"	1384857.63	2255630.02	8+18	1
T-202	DECIDUOUS (P)	15"	1384861.11	2255567.27	8+18	1
T-203	DECIDUOUS (P)	16"	1384861.11	2255567.27	8+18	1
T-204	DECIDUOUS (P)	30"	1384866.72	2255627.45	8+27	1
T-205	DECIDUOUS	20"	1384874.10	2255599.95	8+33	1
T-206	DECIDUOUS	26"	1384931.89	2255598.97	8+90	1
T-207	DECIDUOUS (P)	17"	1384934.08	2255573.30	8+91	1
T-208	CONIFEROUS (P)	17"	1384931.96	2255629.20	8+92	1

TREES TO BE REMOVED (CONTINUED)										
NAME	TREE TYPE	SIZE	NORTHING	EASTING	STATION	COUNT				
T-209	CONIFEROUS (P)	19"	1384939.40	2255574.73	8+97	1				
T-210	DECIDUOUS (P)	24"	1384967.52	2255580.88	9+09	1				
T-211	CONIFEROUS (P)	15"	1384974.60	2255590.49	9+21	1				
T-212	DECIDUOUS (P)	26"	1384955.90	2255619.64	9+29	1				
T-213	CONIFEROUS (P)	26"	1384982.79	2255596.02	9+31	1				
T-214	DECIDUOUS	16"	1384978.92	2255623.53	9+48	1				

(P) TREES TO BE PROVISIONALLY REMOVED. SEE NOTE 2 THIS SHEET.



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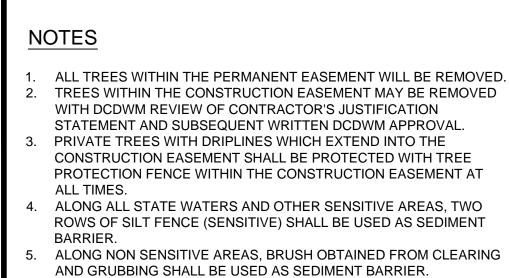
HEET TITLE: 52 of 65 ES&PC PLAN

SITE 3 STA 5+00 - 9+50

SSUED: 5.27.16

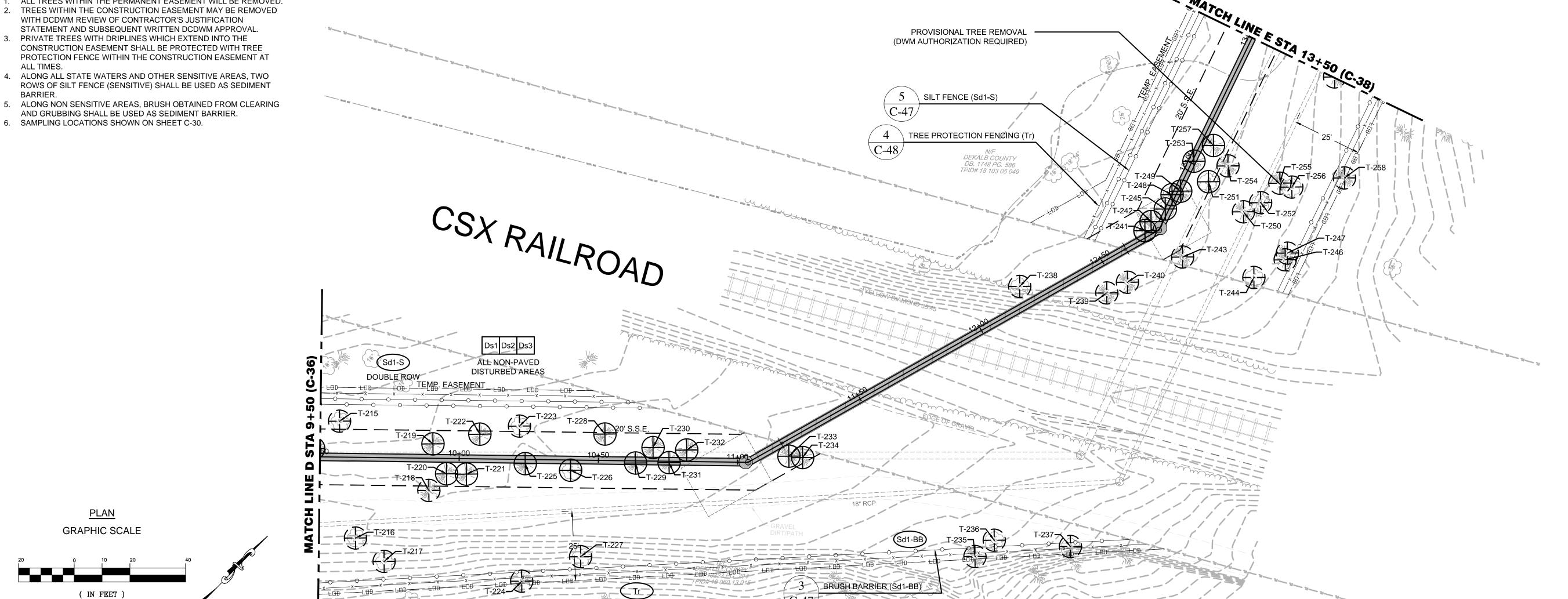
ROJECT NO. CALE: 1" = 20'

HKD BY: A.R. DESIGNED BY: J.J. DRAWN BY: J.J.



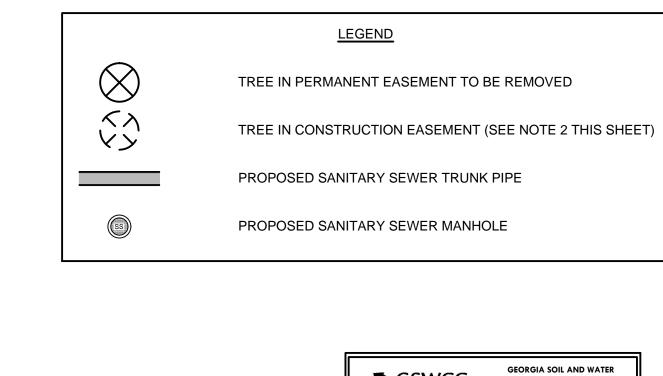
<u>PLAN</u>

1 inch = 20 ft.



	TRE	EES TO E	BE REM	OVED		
NAME	TREE TYPE	SIZE	NORTHING	EASTING	STATION	COUNT
T-215	DECIDUOUS (P)	20"	1384992.41	2255623.29	9+57	1
T-216	DECIDUOUS (P)	24"	1384966.47	2255656.77	9+63	1
T-217	DECIDUOUS (P)	15"	1384967.68	2255669.98	9+74	1
T-218	CONIFEROUS (P)	17"	1384997.12	2255663.60	9+89	1
T-219	CONIFEROUS	15"	1385010.09	2255652.93	9+91	1
T-220	CONIFEROUS	17"	1385005.83	2255663.96	9+96	1
T-221	CONIFEROUS	15"	1385010.73	2255669.10	10+03	1
T-222	CONIFEROUS	13"	1385024.35	2255662.51	10+07	1
T-223	DECIDUOUS (P)	16"	1385036.42	2255670.63	10+22	1
T-224	CONIFEROUS (P)	10"	1384997.22	2255710.22	10+23	1
T-225	CONIFEROUS	27"	1385028.22	2255681.56	10+24	1
T-226	DECIDUOUS	15"	1385037.95	2255694.83	10+40	1
T-227	DECIDUOUS (P)	14"	1385018.34	2255719.15	10+44	1
T-228	CONIFEROUS	20"	1385055.87	2255694.52	10+52	1
T-229	CONIFEROUS	13"	1385056.15	2255709.66	10+63	1
T-230	CONIFEROUS	17"	1385064.48	2255710.27	10+70	1
T-231	CONIFEROUS	12"	1385064.68	2255718.16	10+75	1
T-232	CONIFEROUS	24"	1385072.35	2255719.51	10+82	1
T-233	CONIFEROUS	14"	1385096.47	2255747.24	11+18	1
T-234	CONIFEROUS	11"	1385099.59	2255751.09	11+22	1
T-235	CONIFEROUS (P)	15"	1385117.59	2255820.18	11+58	1
T-236	DECIDUOUS (P)	16"	1385126.61	2255821.01	11+67	1
T-237	DECIDUOUS (P)	10"	1385144.17	2255842.11	11+90	1
T-238	DECIDUOUS (P)	21"	1385198.08	2255763.67	12+20	1
T-239	CONIFEROUS (P)	13"	1385218.32	2255787.62	12+46	1
T-240	CONIFEROUS (P)	10"	1385226.26	2255790.23	12+54	1
T-241	DECIDUOUS	17"	1385243.87	2255781.73	12+69	1

	TREES TO	RF KFM	IOVED (CONTIN	UED)	
NAME	TREE TYPE	SIZE	NORTHING	EASTING	STATION	COUNT
T-242	CONIFEROUS	22"	1385247.75	2255781.02	12+72	1
T-243	CONIFEROUS (P)	25"	1385246.59	2255798.02	12+73	1
T-244	DECIDUOUS (P)	11"	1385259.29	2255821.43	12+73	1
T-245	DECIDUOUS	10"	1385254.54	2255781.49	12+81	1
T-246	CONIFEROUS (P)	15"	1385271.69	2255825.01	12+83	1
T-247	CONIFEROUS (P)	15"	1385273.98	2255823.89	12+86	1
T-248	DECIDUOUS	11"	1385259.90	2255779.63	12+87	1
T-249	CONIFEROUS	15"	1385262.99	2255780.96	12+89	1
T-250	CONIFEROUS (P)	13"	1385273.50	2255802.23	12+92	1
T-251	DECIDUOUS	10"	1385272.42	2255785.71	12+97	1
T-252	DECIDUOUS (P)	22"	1385280.17	2255804.32	12+98	1
T-253	CONIFEROUS	17"	1385274.00	2255776.81	13+01	1
T-254	CONIFEROUS (P)	13"	1385281.37	2255786.72	13+05	1
T-255	CONIFEROUS (P)	16"	1385290.00	2255804.35	13+07	1
T-256	DECIDUOUS (P)	10"	1385292.01	2255808.40	13+08	1
T-257	CONIFEROUS	14"	1385282.93	2255777.85	13+09	1
T-258	CONIFEROUS (P)	13"	1385307.60	2255819.59	13+19	1



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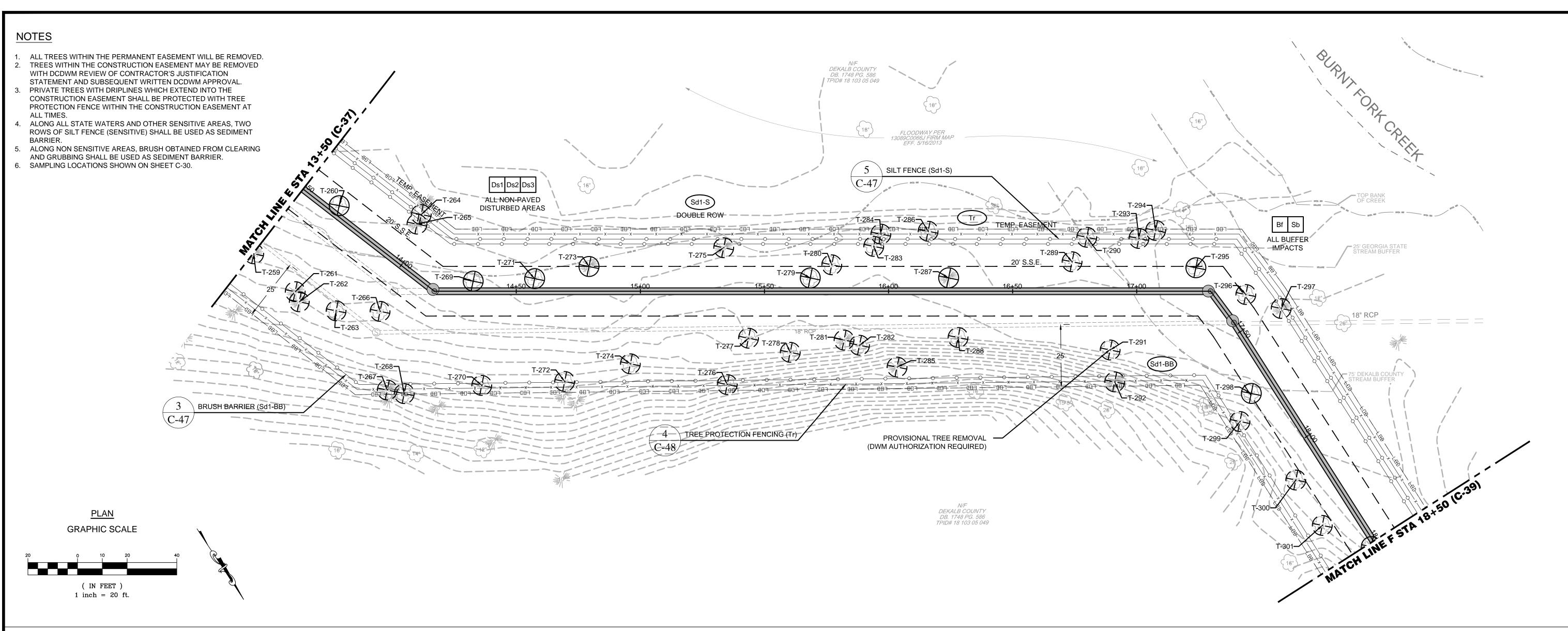
HEET TITLE: 53 of 65 ES&PC PLAN SITE 3

STA 9+50 - 13+50 SSUED: 5.27.16

PROJECT NO.

CALE: 1" = 20'HKD BY: A.R. DESIGNED BY: J.J.

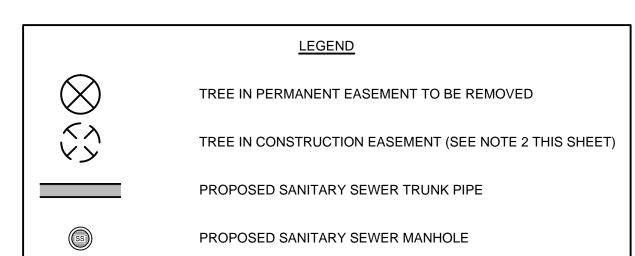
DRAWN BY: J.J.



	TRE	EES TO	BE REM	OVED		
NAME	TREE TYPE	SIZE	NORTHING	EASTING	STATION	COUNT
T-259	CONIFEROUS (P)	18"	1385330.99	2255791.64	13+50	1
T-260	DECIDUOUS	21"	1385333.86	2255752.25	13+66	1
T-261	CONIFEROUS (P)	17"	1385352.94	2255786.11	13+73	1
T-262	CONIFEROUS (P)	13"	1385357.25	2255787.01	13+77	1
T-263	DECIDUOUS (P)	16"	1385368.47	2255776.64	13+91	1
T-264	DECIDUOUS (P)	12"	1385355.09	2255726.63	13+94	1
T-265	CONIFEROUS (P)	18"	1385357.35	2255730.18	13+95	1
T-266	DECIDUOUS (P)	25"	1385378.44	2255761.99	14+05	1
T-267	CONIFEROUS (P)	16"	1385406.46	2255777.07	14+17	1
T-268	DECIDUOUS (P)	10"	1385411.44	2255772.17	14+17	1
T-269	DECIDUOUS	17"	1385389.03	2255724.00	14+33	1
T-270	DECIDUOUS (P)	17"	1385425.93	2255744.30	14+36	1
T-271	DECIDUOUS	28"	1385401.85	2255702.78	14+57	1
T-272	DECIDUOUS (P)	19"	1385443.06	2255715.56	14+70	1
T-273	CONIFEROUS	18"	1385409.87	2255681.83	14+79	1
T-274	DECIDUOUS (P)	18"	1385451.75	2255689.57	14+96	1
T-275	CONIFEROUS (P)	25"	1385433.54	2255632.40	15+34	1
T-276	DECIDUOUS (P)	10"	1385480.26	2255661.63	15+35	1
T-277	DECIDUOUS (P)	10"	1385469.43	2255644.18	15+44	1
T-278	DECIDUOUS (P)	18"	1385483.47	2255633.30	15+60	1
T-279	DECIDUOUS	22"	1385462.96	2255610.04	15+68	1
T-280	DECIDUOUS (P)	13"	1385463.32	2255599.89	15+77	1
T-281	CONIFEROUS (P)	17"	1385491.33	2255612.49	15+82	1
T-282	DECIDUOUS (P)	12"	1385496.51	2255608.45	15+88	1
T-283	DECIDUOUS (P)	15"	1385466.47	2255581.69	15+94	1
T-284	DECIDUOUS (P)	21"	1385463.92	2255576.57	15+97	1
T-285	CONIFEROUS (P)	21"	1385512.19	2255600.69	16+03	1

	TREES TO	BE REM	IOVED (CONTIN	UED)	
NAME	TREE TYPE	SIZE	NORTHING	EASTING	STATION	COUN
T-286	DECIDUOUS (P)	21"	1385473.49	2255560.05	16+16	1
T-287	CONIFEROUS	16"	1385493.72	2255563.54	16+24	1
T-288	DECIDUOUS (P)	20"	1385515.83	2255573.62	16+28	1
T-289	DECIDUOUS (P)	27"	1385515.77	2255518.48	16+74	1
T-290	DECIDUOUS (P)	16"	1385510.81	2255508.09	16+80	1
T-291	DECIDUOUS (P)	11"	1385553.86	2255525.30	16+89	1
T-292	CONIFEROUS (P)	14"	1385565.60	2255530.86	16+91	1
T-293	DECIDUOUS (P)	28"	1385522.82	2255490.83	17+01	1
T-294	DECIDUOUS (P)	27"	1385523.84	2255483.44	17+08	1
T-295	DECIDUOUS	10"	1385545.32	2255478.22	17+24	1
T-296	DECIDUOUS (P)	20"	1385565.44	2255467.38	17+39	1
T-297	CONIFEROUS (P)	15"	1385577.98	2255458.61	17+51	1
T-298	DECIDUOUS	18"	1385599.87	2255487.58	17+73	1
T-299	DECIDUOUS (P)	27"	1385606.76	2255497.61	17+80	1
T-300	DECIDUOUS (P)	28"	1385638.84	2255491.86	18+12	1
T-301	DECIDUOUS (P)	14"	1385659.97	2255493.05	18+34	1

(P) TREES TO BE PROVISIONALLY REMOVED. SEE NOTE 2 THIS SHEET.



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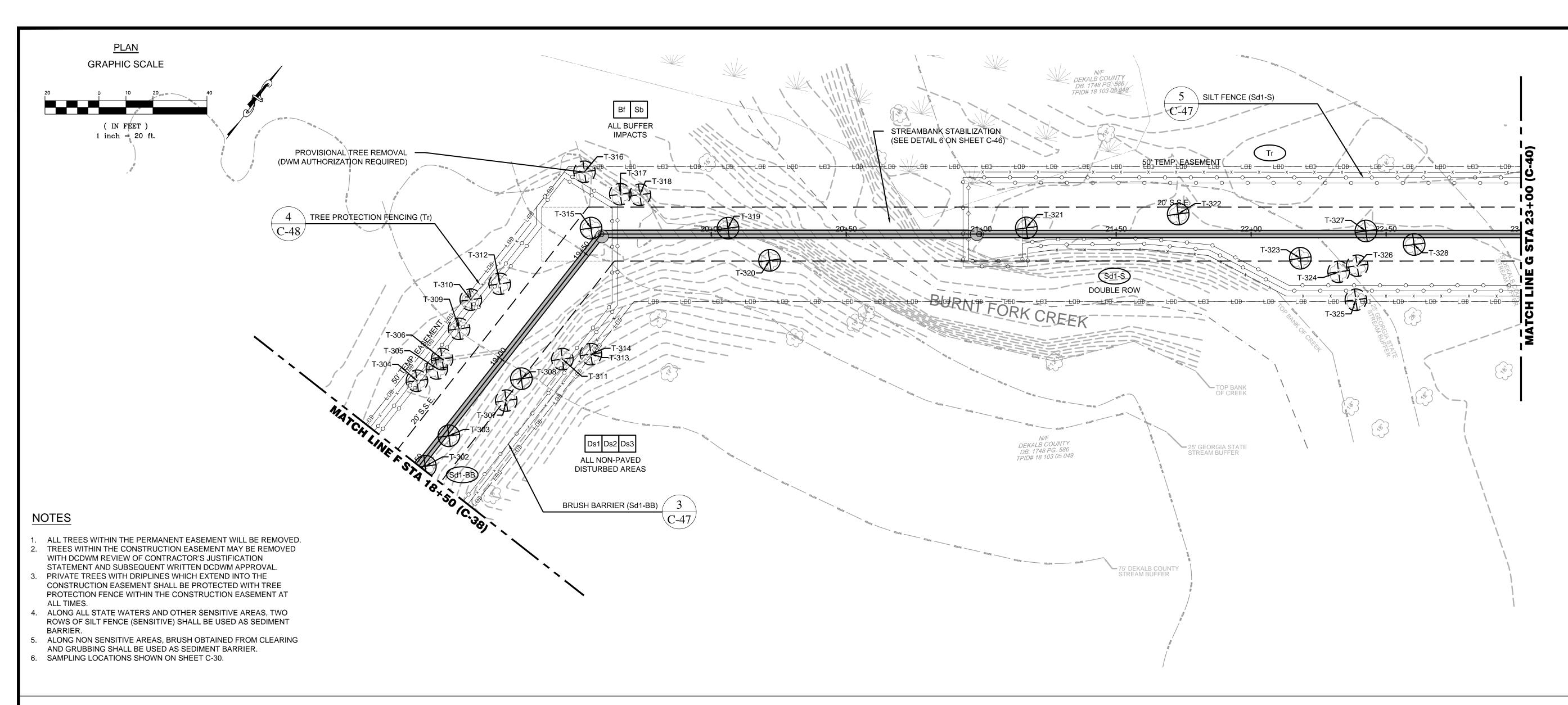
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STA 13+50 - 18+50

ISSUED: 5.27.16 PROJECT NO.

CALE: 1" = 20'HKD BY: A.R. DESIGNED BY: J.J. DRAWN BY: J.J.



NOTES

RECOMMENDED POINT OF ENTRY AT MASON MILL DOG PARK. CONTRACTOR TO OBTAIN RIGHT OF ENTRY OR TEMPORARY EASEMENT AS APPLICABLE FOR SITE ACCESS.



SITE 3 ACCESS PLAN

SCALE 1" = 200'

TREES TO BE REMOVED										
NAME	TREE TYPE	SIZE	NORTHING	EASTING	STATION	COUNT				
T-302	DECIDUOUS	18"	1385678.01	2255481.31	18+51	1				
T-303	DECIDUOUS	16"	1385692.26	2255481.46	18+66	1				
T-304	DECIDUOUS (P)	20"	1385701.36	2255459.70	18+74	1				
T-305	DECIDUOUS (P)	12"	1385709.44	2255462.84	18+82	1				
T-306	DECIDUOUS (P)	21"	1385713.42	2255462.25	18+86	1				
T-307	DECIDUOUS (P)	17"	1385715.52	2255490.49	18+89	1				
T-308	DECIDUOUS	13"	1385725.36	2255490.03	18+99	1				
T-309	DECIDUOUS (P)	24"	1385726.14	2255460.48	18+99	1				
T-310	DECIDUOUS (P)	18"	1385737.34	2255457.41	19+10	1				
T-311	DECIDUOUS (P)	13"	1385740.34	2255497.75	19+14	1				
T-312	DECIDUOUS (P)	24"	1385748.51	2255462.42	19+22	1				
T-313	DECIDUOUS (P)	15"	1385748.19	2255505.04	19+22	1				
T-314	DECIDUOUS (P)	16"	1385748.19	2255505.04	19+22	1				
T-315	DECIDUOUS	18"	1385785.38	2255476.84	19+59	1				
T-316	DECIDUOUS (P)	18"	1385800.56	2255462.29	19+59	1				
T-317	DECIDUOUS (P)	18"	1385801.97	2255477.87	19+66	1				
T-318	DECIDUOUS (P)	18"	1385806.18	2255483.78	19+74	1				
T-319	DECIDUOUS	14"	1385816.04	2255517.25	20+06	1				
T-320	DECIDUOUS	14"	1385815.87	2255536.75	20+22	1				
T-321	DECIDUOUS	17"	1385882.95	2255605.19	21+17	1				
T-322	DECIDUOUS	20"	1385921.07	2255646.88	21+73	1				
T-323	DECIDUOUS	12"	1385935.38	2255692.82	22+18	1				
T-324	DECIDUOUS (P)	10"	1385939.97	2255707.16	22+32	1				
T-325	DECIDUOUS (P)	21"	1385935.60	2255718.51	22+39	1				
T-326	DECIDUOUS (P)	10"	1385945.95	2255711.27	22+39	1				
T-327	DECIDUOUS	46"	1385958.14	2255706.05	22+42	1				
T-328	DECIDUOUS	13"	1385964.95	2255723.30	22+60	1				

(P) TREES TO BE PROVISIONALLY REMOVED. SEE NOTE 2 THIS SHEET.

TEMPORARY STREAM CROSSING									
BEST MANAGEMENT PRACTICE DRAINAGE AREA (AC) AVERAGE SLOPE OF WATERSHED (%) STREAM FLOW RATE AT BANKFULL FLOW (CFS) CORRUGATI METAL PIP DIAMETER (I									
Sr-C	3124	0.58	4.75	72					

	<u>LEGEND</u>
\otimes	TREE IN PERMANENT EASEMENT TO BE REMOVED
ぐ〉	TREE IN CONSTRUCTION EASEMENT (SEE NOTE 2 THIS SHEET)
	PROPOSED SANITARY SEWER TRUNK PIPE
(55)	PROPOSED SANITARY SEWER MANHOLE

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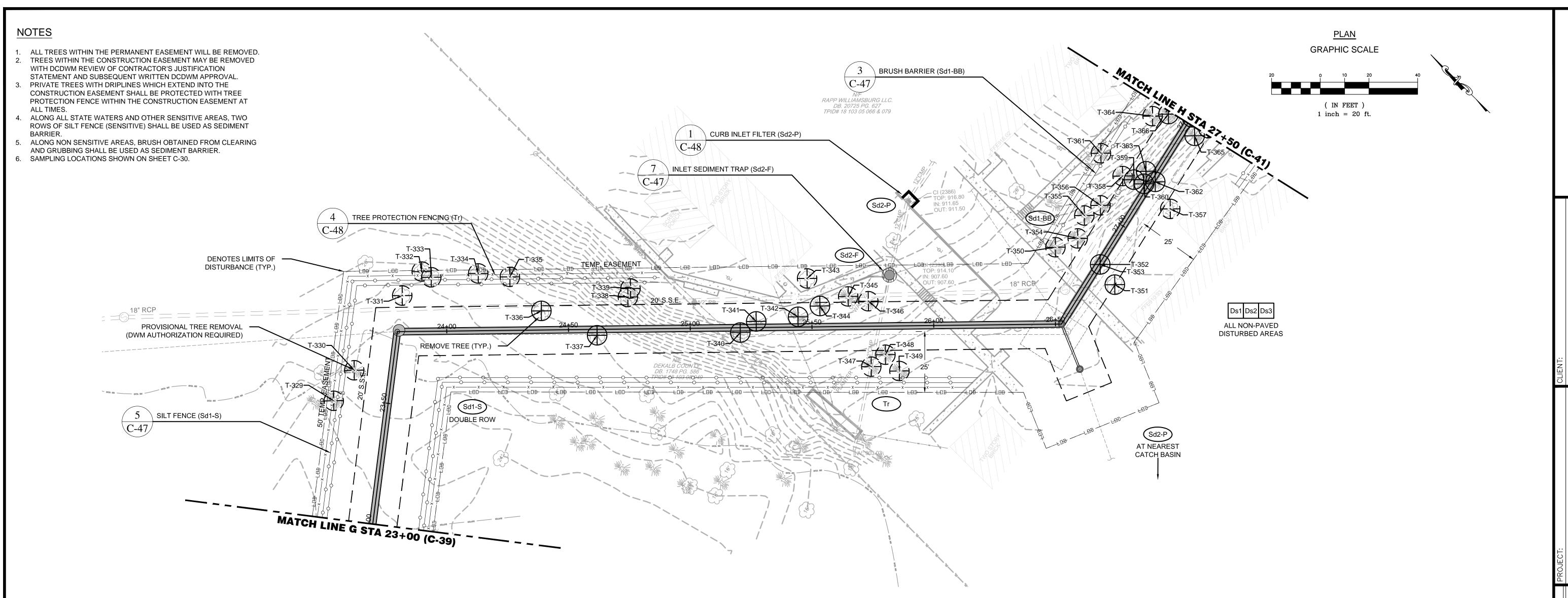
HEET TITLE: 55 of 65

ES&PC PLAN SITE 3 STA 18+50 - 23+00

SSUED: 5.27.16

PROJECT NO. CALE: 1" = 20'

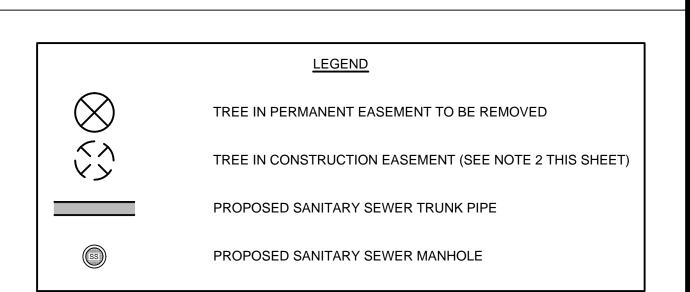
HKD BY: A.R. DESIGNED BY: J.J. DRAWN BY: J.J.



	TRI	EES TO E	BE REM	OVED		
NAME	TREE TYPE	SIZE	NORTHING	EASTING	STATION	COUNT
T-329	CONIFEROUS (P)	20"	1386038.90	2255777.47	23+48	1
T-330	CONIFEROUS (P)	23"	1386041.69	2255792.31	23+62	1
T-331	DECIDUOUS (P)	17"	1386049.13	2255828.00	23+82	1
T-332	DECIDUOUS (P)	15"	1386050.32	2255840.66	23+90	1
T-333	DECIDUOUS (P)	16"	1386045.88	2255841.73	23+94	1
T-334	DECIDUOUS (P)	13"	1386033.24	2255856.36	24+13	1
T-335	DECIDUOUS (P)	12"	1386022.97	2255864.46	24+26	1
T-336	DECIDUOUS	23"	1386003.96	2255863.55	24+39	1
T-337	DECIDUOUS	20"	1385980.59	2255872.45	24+62	1
T-338	DECIDUOUS (P)	16"	1385982.61	2255892.52	24+75	1
T-339	CONIFEROUS (P)	16"	1385984.28	2255895.77	24+76	1
T-340	DECIDUOUS	8"	1385939.45	2255914.46	25+21	2
T-341	CONIFEROUS	18"	1385937.98	2255922.30	25+27	1
T-342	CONIFEROUS	21"	1385927.04	2255935.69	25+44	1
T-343	DECIDUOUS (P)	18"	1385935.43	2255949.54	25+48	1
T-344	CONIFEROUS	12"	1385923.74	2255945.14	25+53	1
T-345	CONIFEROUS (P)	19"	1385918.21	2255956.10	25+65	1
T-346	CONIFEROUS (P)	16"	1385910.95	2255960.49	25+73	1
T-347	CONIFEROUS (P)	12"	1385891.24	2255942.17	25+74	1
T-348	CONIFEROUS (P)	19"	1385890.53	2255949.74	25+80	1
T-349	CONIFEROUS (P)	17"	1385881.75	2255948.98	25+86	1
T-350	DECIDUOUS	20"	1385871.66	2256030.14	26+78	1
T-351	CONIFEROUS (P)	20"	1385843.50	2256036.27	26+78	1
T-352	DECIDUOUS	13"	1385853.60	2256037.98	26+82	1
T-353	DECIDUOUS	14"	1385853.60	2256037.98	26+82	1
T-354	CONIFEROUS (P)	10"	1385867.68	2256039.14	26+86	1
T-355	CONIFEROUS (P)	16"	1385872.34	2256047.77	26+95	1

TREES TO BE REMOVED (CONTINUED)										
NAME	TREE TYPE	SIZE	NORTHING	EASTING	STATION	COUNT				
T-356	CONIFEROUS (P)	15"	1385870.51	2256055.38	27+02	1				
T-357	DECIDUOUS (P)	13"	1385849.06	2256074.42	27+16	2				
T-358	CONIFEROUS (P)	15"	1385872.46	2256070.33	26+17	1				
T-359	CONIFEROUS	10"	1385868.11	2256072.54	27+19	1				
T-360	CONIFEROUS	24"	1385863.96	2256074.21	27+19	1				
T-361	CONIFEROUS (P)	17"	1385885.37	2256070.77	27+20	1				
T-362	CONIFEROUS	12"	1385861.24	2256077.99	27+22	1				
T-363	CONIFEROUS	21"	1385866.98	2256078.46	27+24	1				
T-364	CONIFEROUS (P)	17"	1385880.91	2256096.51	27+45	1				
T-365	CONIFEROUS	20"	1385862.95	2256102.88	27+47	1				
T-366	CONIFEROUS	17"	1385876.87	2256101.67	27+49	1				

(P) TREES TO BE PROVISIONALLY REMOVED. SEE NOTE 2 THIS SHEET.



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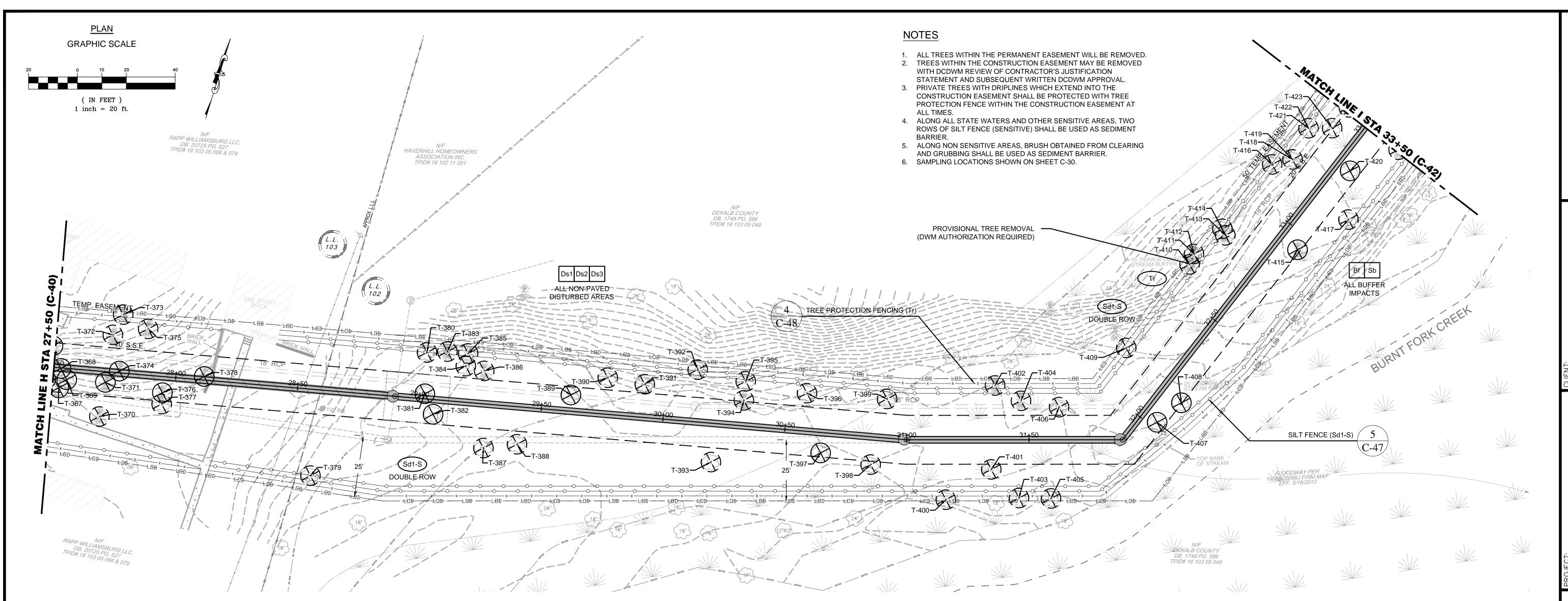
HEET TITLE: 56 of 65 ES&PC PLAN

SITE 3 STA 23+00 - 27+50

SSUED: 5.27.16

PROJECT NO.

CALE: 1" = 20'HKD BY: A.R. DESIGNED BY: J.J. DRAWN BY: J.J.

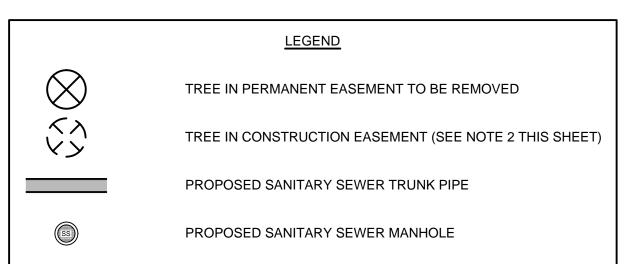


NAME	TREE TYPE	SIZE	NORTHING	EASTING	STATION	COUN
T-367	DECIDUOUS	13"	1385861.17	2256108.99	27+53	1
T-368	DECIDUOUS	12"	1385869.00	2256107.51	27+53	1
T-369	DECIDUOUS	11"	1385865.32	2256111.13	27+56	1
T-370	CONIFEROUS (P)	24"	1385854.90	2256128.36	27+70	1
T-371	CONIFEROUS	17"	1385868.94	2256126.57	27+71	1
T-372	CONIFEROUS (P)	24"	1385888.40	2256123.76	27+73	1
T-373	CONIFEROUS (P)	16"	1385897.59	2256125.36	27+76	1
T-374	CONIFEROUS	14"	1385875.03	2256130.67	27+77	1
T-375	CONIFEROUS (P)	18"	1385895.03	2256136.83	27+87	1
T-376	CONIFEROUS	18"	1385871.79	2256150.10	27+95	1
T-377	DECIDUOUS (P)	13"	1385867.30	2256151.20	27+95	1
T-378	CONIFEROUS	25"	1385883.21	2256164.48	28+12	1
T-379	DECIDUOUS (P)	24"	1385857.32	2256217.96	28+58	1
T-380	DECIDUOUS (P)	15"	1385919.53	2256248.62	29+02	1
T-381	DECIDUOUS	16"	1385903.10	2256252.74	29+02	1
T-382	DECIDUOUS	17"	1385896.10	2256258.45	29+06	1
T-383	CONIFEROUS (P)	16"	1385922.32	2256256.48	29+10	1
T-384	DECIDUOUS (P)	12"	1385918.87	2256265.43	29+18	1
T-385	DECIDUOUS (P)	20"	1385924.11	2256264.78	29+18	1
T-386	CONIFEROUS (P)	13"	1385919.24	2256273.19	29+25	1
T-387	DECIDUOUS (P)	15"	1385889.00	2256282.20	29+28	1
T-388	DECIDUOUS (P)	13"	1385894.54	2256294.87	29+41	1
T-389	DECIDUOUS	17"	1385920.29	2256309.94	29+62	1
T-390	DECIDUOUS (P)	25"	1385931.50	2256322.29	29+76	1
T-391	DECIDUOUS (P)	17"	1385933.43	2256337.55	29+91	1
T-392	DECIDUOUS (P)	17"	1385945.55	2256356.44	30+12	1
T-393	DECIDUOUS (P)	13"	1385911.03	2256372.78	30+21	1

TREES TO BE REMOVED (CONTINUED)									
NAME	TREE TYPE	SIZE	NORTHING	EASTING	STATION	COUNT			
T-394	CONIFEROUS (P)	26"	1385939.11	2256378.19	30+32	1			
T-395	DECIDUOUS (P)	22"	1385946.79	2256376.61	30+32	1			
T-396	DECIDUOUS (P)	13"	1385949.56	2256401.97	30+58	1			
T-397	DECIDUOUS	12"	1385927.85	2256414.52	30+65	1			
T-398	DECIDUOUS (P)	12"	1385929.37	2256435.49	30+86	1			
T-399	DECIDUOUS (P)	24"	1385956.99	2256433.96	30+91	1			
T-400	DECIDUOUS (P)	22"	1385924.73	2256469.09	31+16	1			
T-401	DECIDUOUS (P)	13"	1385942.05	2256483.18	31+35	1			
T-402	CONIFEROUS (P)	13"	1385975.32	2256474.53	31+36	1			
T-403	DECIDUOUS (P)	12"	1385934.21	2256497.47	31+46	1			
T-404	CONIFEROUS (P)	23"	1385972.47	2256486.52	31+47	1			
T-405	DECIDUOUS (P)	16"	1385937.94	2256510.04	31+59	1			
T-406	DECIDUOUS (P)	16"	1385974.58	2256502.13	31+62	1			
T-407	DECIDUOUS	16"	1385980.50	2256542.24	32+03	1			
T-408	DECIDUOUS	19"	1385991.04	2256549.39	32+15	1			
T-409	DECIDUOUS (P)	17"	1386005.83	2256521.23	32+19	1			
T-410	CONIFEROUS (P)	16"	1386046.14	2256535.87	32+62	1			
T-411	DECIDUOUS (P)	15"	1386050.75	2256536.32	32+66	1			
T-412	DECIDUOUS (P)	17"	1386050.75	2256536.32	32+66	1			
T-413	CONIFEROUS (P)	15"	1386061.81	2256546.32	32+80	1			
T-414	DECIDUOUS (P)	10"	1386064.00	2256544.38	32+81	1			
T-415	CONIFEROUS	32"	1386064.88	2256576.25	32+93	1			
T-416	DECIDUOUS (P)	14"	1386095.19	2256556.05	33+15	1			
T-417	DECIDUOUS (P)	22"	1386082.85	2256592.53	33+16	1			
T-418	DECIDUOUS (P)	18"	1386099.59	2256563.39	33+21	1			
T-419	DECIDUOUS (P)	23"	1386099.59	2256563.39	33+21	1			
T-420	DECIDUOUS	16"	1386102.04	2256587.25	33+32	1			

	TREES TO BE REMOVED (CONTINUED)									
NAME	TREE TYPE	SIZE	NORTHING	EASTING	STATION	COUNT				
T-421	DECIDUOUS (P)	7"	1386113.72	2256565.85	33+36	1				
T-422	DECIDUOUS (P)	16"	1386113.72	2256565.85	33+36	1				
T-423	DECIDUOUS (P)	14"	1386116.60	2256575.09	33+41	1				

(P) TREES TO BE PROVISIONALLY REMOVED. SEE NOTE 2 THIS SHEET.



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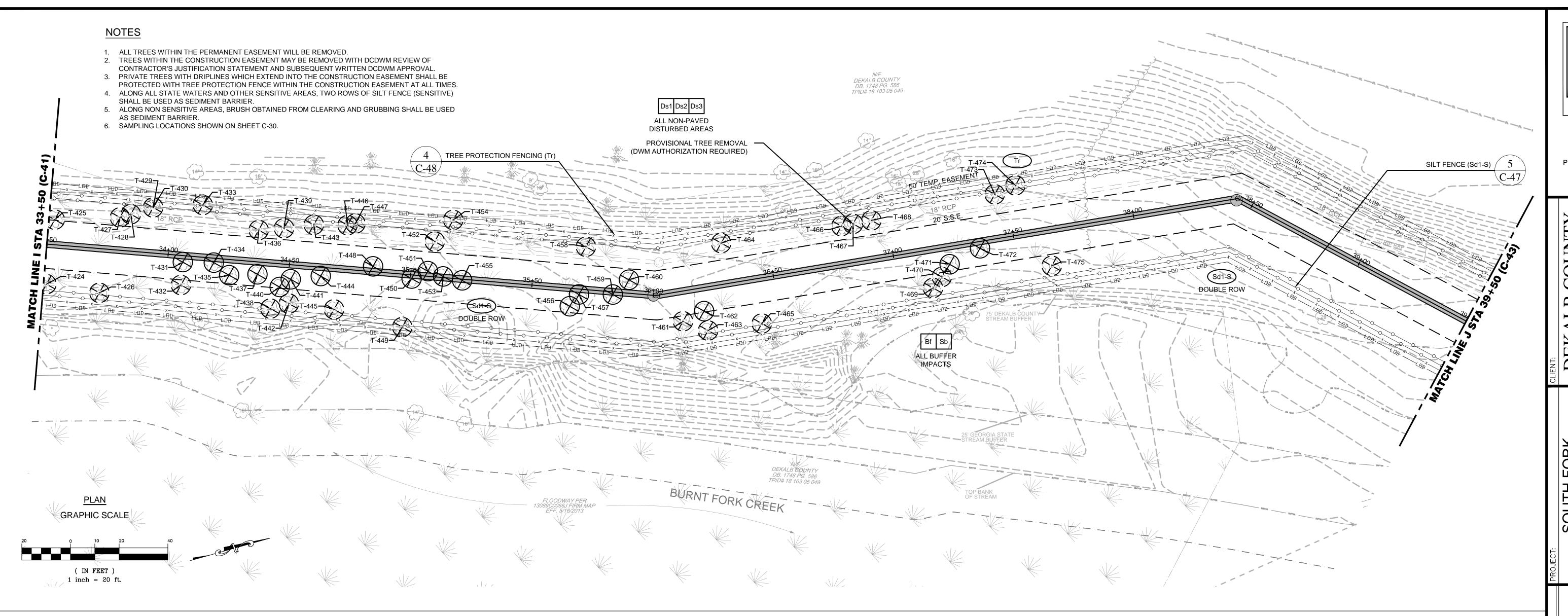
HEET TITLE: 57 of 65

ES&PC PLAN SITE 3 STA 27+50 - 33+50

ISSUED: 5.27.16

PROJECT NO. CALE: 1" = 20'

HKD BY: A.R. DESIGNED BY: J.J. DRAWN BY: J.J.



	TREES TO BE REMOVED									
NAME	TREE TYPE	SIZE	NORTHING	EASTING	STATION	COUN				
T-424	CONIFEROUS (P)	28"	1386116.23	2256603.65	33+51	1				
T-425	DECIDUOUS (P)	13"	1386126.75	2256579.08	33+52	1				
T-426	DECIDUOUS (P)	18"	1386136.21	2256613.00	33+73	1				
T-427	DECIDUOUS (P)	21"	1386152.77	2256585.51	33+79	1				
T-428	DECIDUOUS (P)	10"	1386157.43	2256585.45	33+83	1				
T-429	DECIDUOUS (P)	10"	1386166.99	2256585.28	33+92	1				
T-430	DECIDUOUS (P)	20"	1386166.99	2256585.28	33+92	1				
T-431	DECIDUOUS	15"	1386172.60	2256610.20	34+06	1				
T-432	DECIDUOUS (P)	16"	1386169.33	2256619.05	34+06	1				
T-433	DECIDUOUS (P)	14"	1386186.91	2256589.86	34+12	1				
T-434	DECIDUOUS	10"	1386184.79	2256613.88	34+19	1				
T-435	DECIDUOUS	13"	1386189.44	2256620.55	34+26	1				
T-436	DECIDUOUS (P)	23"	1386206.20	2256606.03	34+36	1				
T-437	DECIDUOUS	16"	1386200.75	2256623.38	34+37	1				
T-438	DECIDUOUS (P)	20"	1386202.03	2256638.37	34+44	1				
T-439	DECIDUOUS (P)	17"	1386216.40	2256608.15	34+47	1				
T-440	DECIDUOUS	12"	1386208.12	2256630.88	34+47	1				
T-441	DECIDUOUS	10"	1386213.31	2256629.08	34+51	1				
T-442	DECIDUOUS (P)	20"	1386209.89	2256638.47	34+51	1				
T-443	DECIDUOUS (P)	13"	1386228.57	2256610.11	34+59	1				
T-444	DECIDUOUS	16"	1386225.57	2256631.15	34+63	1				
T-445	DECIDUOUS (P)	26"	1386227.10	2256645.81	34+70	1				
T-446	DECIDUOUS (P)	14"	1386241.87	2256614.03	34+72	1				
T-447	DECIDUOUS (P)	15"	1386245.15	2256614.25	34+76	1				
T-448	DECIDUOUS	22"	1386247.32	2256633.18	34+84	1				
T-449	DECIDUOUS (P)	18"	1386252.10	2256660.44	34+98	1				
T-450	DECIDUOUS	13"	1386261.20	2256642.31	35+00	1				

NAME	TREE TYPE	SIZE	NORTHING	EASTING	STATION	COUNT
T-451	DECIDUOUS	20"	1386268.46	2256641.21	35+07	1
T-452	DECIDUOUS (P)	17"	1386274.52	2256630.25	35+09	1
T-453	DECIDUOUS	19"	1386273.91	2256645.00	35+13	1
T-454	DECIDUOUS (P)	16"	1386284.23	2256623.79	35+16	1
T-455	DECIDUOUS	22"	1386280.97	2256648.67	35+21	1
T-456	DECIDUOUS	30"	1386320.62	2256670.98	35+66	1
T-457	DECIDUOUS	27"	1386325.60	2256667.34	35+70	1
T-458	DECIDUOUS (P)	23"	1386333.68	2256649.24	35+71	1
T-459	DECIDUOUS	30"	1386338.95	2256671.14	35+83	1
T-460	DECIDUOUS	30"	1386347.00	2256667.11	35+90	1
T-461	DECIDUOUS (P)	15"	1386363.72	2256689.57	36+10	1
T-462	DECIDUOUS	26"	1386373.16	2256687.91	36+20	1
T-463	DECIDUOUS (P)	28"	1386372.60	2256696.02	36+20	1
T-464	DECIDUOUS (P)	20"	1386387.54	2256662.91	36+31	1
T-465	DECIDUOUS (P)	21"	1386394.62	2256699.26	36+42	1
T-466	DECIDUOUS (P)	15"	1386436.98	2256669.66	36+81	1
T-467	DECIDUOUS (P)	14"	1386441.83	2256670.08	36+86	1
T-468	DECIDUOUS (P)	23"	1386449.47	2256670.77	36+93	1
T-469	DECIDUOUS (P)	17"	1386466.27	2256704.36	37+14	1
T-470	DECIDUOUS (P)	22"	1386470.98	2256700.99	37+18	1
T-471	DECIDUOUS	27"	1386475.49	2256696.87	37+22	1
T-472	DECIDUOUS	17"	1386489.28	2256693.94	37+36	1
T-473	DECIDUOUS (P)	24"	1386501.15	2256674.25	37+45	1
T-474	DECIDUOUS (P)	22"	1386510.30	2256673.03	37+54	1
T-475	DECIDUOUS (P)	13"	1386515.69	2256708.89	37+64	1

<u>LEGEND</u> TREE IN PERMANENT EASEMENT TO BE REMOVED イン TREE IN CONSTRUCTION EASEMENT (SEE NOTE 2 THIS SHEET) PROPOSED SANITARY SEWER TRUNK PIPE PROPOSED SANITARY SEWER MANHOLE

<u>GSWCC</u>

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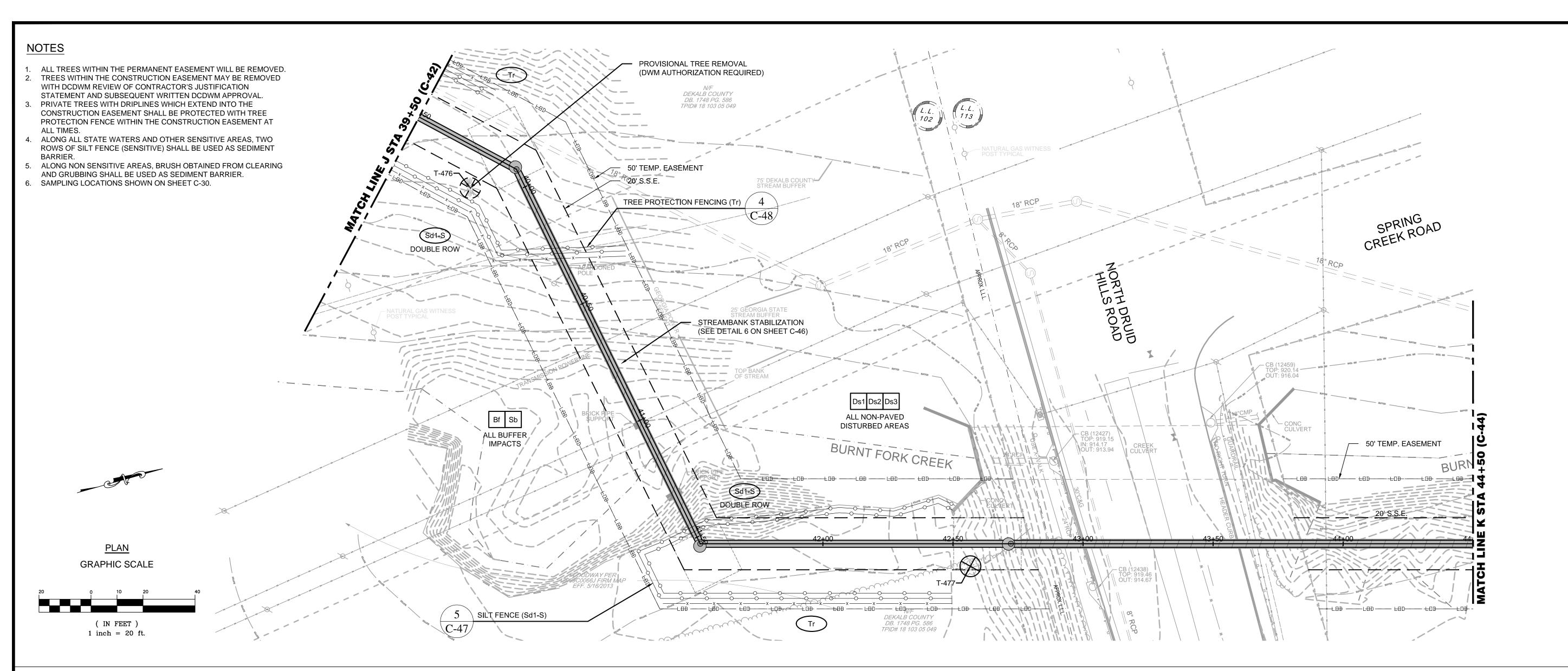
SHEET TITLE: 58 of 65 **ES&PC PLAN**

SITE 3 STA 33+50 - 39+50

ISSUED: 5.27.16

PROJECT NO.

CALE: 1" = 20' HKD BY: A.R. DESIGNED BY: J.J. DRAWN BY: J.J.

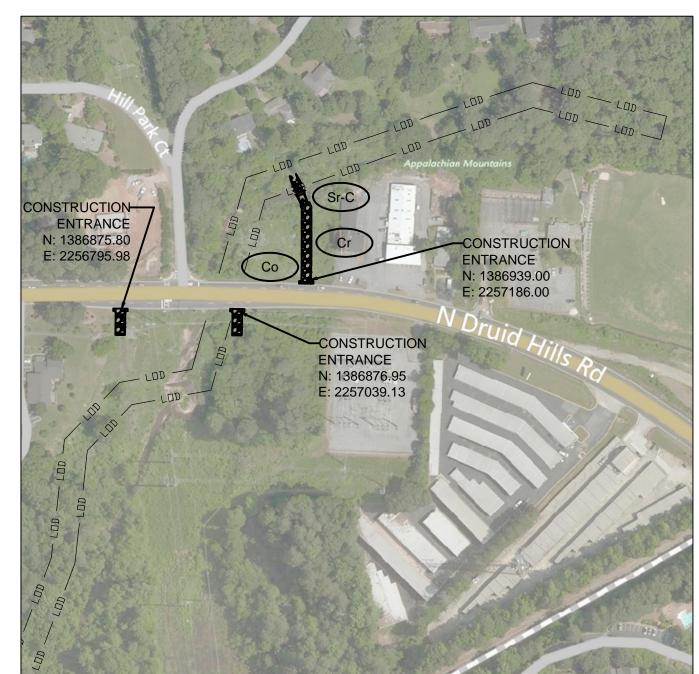


CORRUGATED METAL PIPE DIAMETER (IN)

72

<u>NOTES</u>

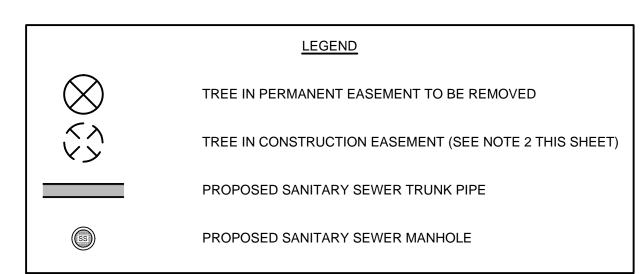
1. RECOMMENDED POINTS OF ENTRY ALONG NORTH DRUID HILLS ROAD. CONTRACTOR TO OBTAIN RIGHT OF ENTRY OR TEMPORARY EASEMENT AS APPLICABLE FOR SITE ACCESS.

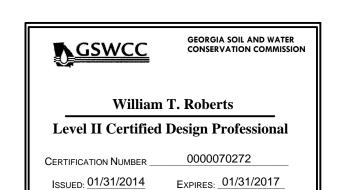


TREES TO BE REMOVED								
NAME	NAME TREE TYPE SIZE NORTHING EASTING STATION COUNT							
T-476	CONIFEROUS (P)	25"	1386684.84	2256808.76	39+80	1		
T-477	T-477 DECIDUOUS 12" 1386830.29 2257001.01 42+57 1							

(P) TREES TO BE PROVISIONALLY REMOVED. SEE NOTE 2 THIS SHEET.

	TEMPORAI	RY STREAM	CROSSING
BEST MANAGEMENT PRACTICE	DRAINAGE AREA (AC)	AVERAGE SLOPE OF WATERSHED (%)	STREAM FLOW RATE AT BANKFULL FLOW (CFS)
Sr-C	3124	0.58	4.77





EXPIRES: OTHER DESTRICTION OF THE PROPERTY OF

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DEKALB COUNTY DEPARTMENT OF WATERSHED MANAGEMENT

SOUTH FORK
PEACHTREE CREEK
SANITARY SEWER
REPLACEMENT

REV DATE DESCRIPTION

0 5/27/16 INITIAL ISSUE

1 12/9/16 REVIEW COMMENTS

STAMP:

ORG

No. 26889

PROFESSIONAL

5/27/16

ENGINEER

GEORGE

ES&PC PLAN
SITE 3

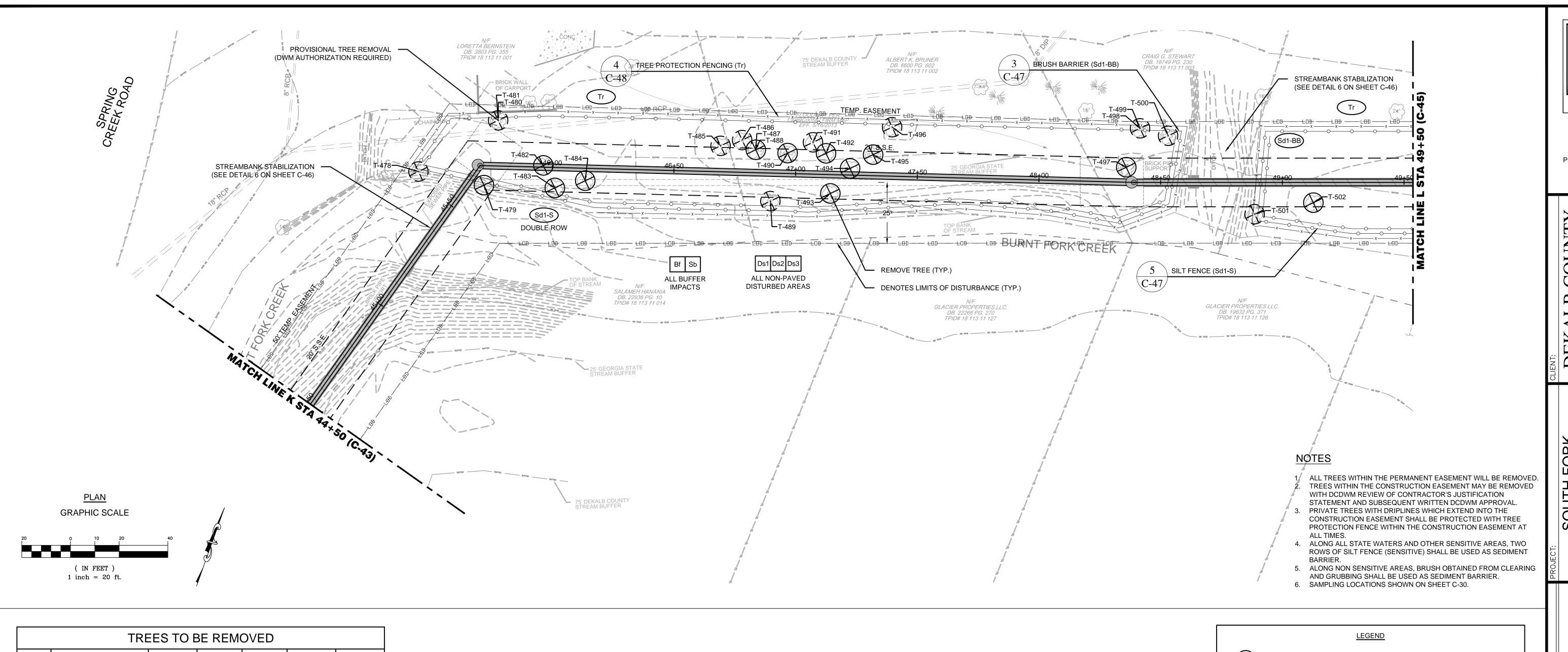
STA 39+50 - 44+50 ISSUED: 5.27.16

ROJECT NO.

CALE: 1" = 20'
CHKD BY: A.R.
DESIGNED BY: J.J.

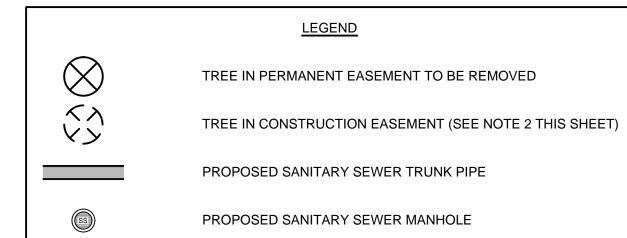
DRAWN BY: J.J.

5 SITE 3 ACCESS PLAN
SCALE 1" = 200'



111231312									
NAME	TREE TYPE	SIZE	NORTHING	EASTING	STATION	COUNT			
T-478	DECIDUOUS (P)	10"	1387123.63	2257055.10	45+54	2			
T-479	DECIDUOUS	10"	1387127.35	2257082.32	45+68	1			
T-480	DECIDUOUS (P)	8"	1387154.40	2257078.91	45+77	1			
T-481	DECIDUOUS (P)	10"	1387154.40	2257078.91	45+77	1			
T-482	DECIDUOUS	10"	1387143.16	2257102.59	45+96	1			
T-483	DECIDUOUS	10"	1387136.05	2257110.12	46+01	1			
T-484	DECIDUOUS	12"	1387143.02	2257120.91	46+14	1			
T-485	DECIDUOUS (P)	17"	1387175.18	2257168.49	46+69	1			
T-486	DECIDUOUS (P)	10"	1387180.37	2257176.04	46+78	1			
T-487	DECIDUOUS	7"	1387178.48	2257182.65	46+83	2			
T-488	DECIDUOUS	8"	1387178.48	2257182.65	46+83	2			
T-489	DECIDUOUS (P)	10"	1387160.64	2257195.38	46+90	1			
T-490	DECIDUOUS	14"	1387181.56	2257195.42	46+96	2			
T-491	DECIDUOUS (P)	12"	1387189.27	2257203.77	47+07	1			
T-492	DECIDUOUS	20"	1387186.78	2257210.33	47+12	1			
T-493	DECIDUOUS	11"	1387171.84	2257217.52	47+14	1			
T-494	DECIDUOUS	10"	1387184.25	2257221.71	47+22	1			
T-495	DECIDUOUS	9"	1387192.75	2257228.72	47+32	2			
T-496	DECIDUOUS (P)	15"	1387206.01	2257232.32	47+39	1			
T-497	DECIDUOUS	14"	1387222.74	2257328.43	48+36	1			
T-498	DECIDUOUS (P)	8"	1387239.71	2257328.43	48+42	1			
T-499	DECIDUOUS (P)	10"	1387239.71	2257328.43	48+42	1			
T-500	DECIDUOUS (P)	9"	1387240.68	2257340.31	48+53	3			
T-501	DECIDUOUS (P)	15"	1387222.26	2257384.60	48+89	1			
T-502	DECIDUOUS	40"	1387234.79	2257405.74	49+13	1			
		-		•					

(P) TREES TO BE PROVISIONALLY REMOVED. SEE NOTE 2 THIS SHEET.



GSWCC William T. Roberts **Level II Certified Design Professional**

CERTIFICATION NUMBER 0000070272 ISSUED: 01/31/2014 EXPIRES: 01/31/2017

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STAMP: PROFESSIONAL

HEET TITLE: 60 of 65 ES&PC PLAN

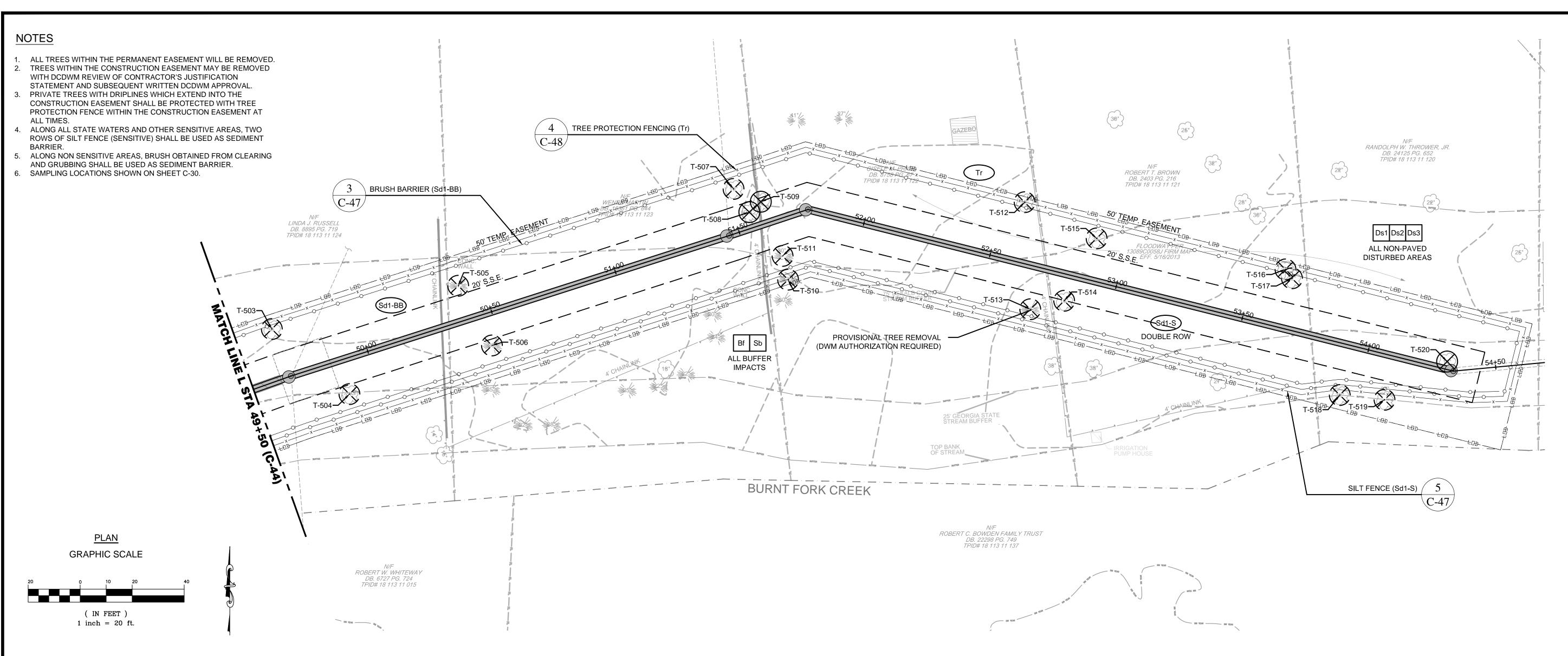
SITE 3 STA 44+50 - 49+50

SSUED: 5.27.16

PROJECT NO.

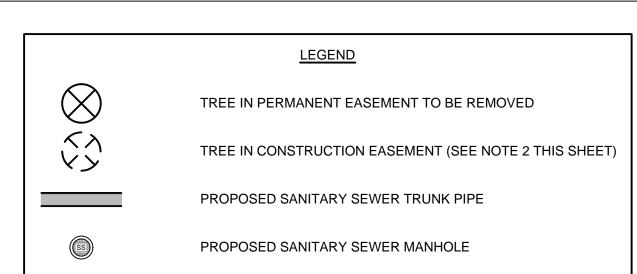
CALE: 1" = 20'HKD BY: A.R. DESIGNED BY: J.J.

DRAWN BY: J.J.



	TREES TO BE REMOVED								
NAME	TREE TYPE	SIZE	NORTHING	EASTING	STATION	COUN			
T-503	DECIDUOUS (P)	38"	1387279.56	2257448.59	49+68	1			
T-504	DECIDUOUS (P)	13"	1387254.54	2257478.44	49+88	2			
T-505	CONIFEROUS (P)	27"	1387296.20	2257520.26	50+41	1			
T-506	CONIFEROUS (P)	25"	1387273.25	2257533.23	50+46	1			
T-507	DECIDUOUS (P)	10"	1387333.43	2257626.12	51+53	1			
T-508	DECIDUOUS	10"	1387324.49	2257632.19	51+56	2			
T-509	DECIDUOUS	10"	1387328.50	2257636.60	51+62	1			
T-510	CONIFEROUS (P)	13"	1387298.55	2257647.09	51+62	1			
T-511	CONIFEROUS (P)	30"	1387307.67	2257644.98	51+63	1			
T-512	DECIDUOUS (P)	12"	1387328.33	2257738.04	52+58	1			
T-513	CONIFEROUS (P)	23"	1387287.16	2257740.21	52+70	1			
T-514	DECIDUOUS (P)	13"	1387290.42	2257753.26	52+82	1			
T-515	DECIDUOUS (P)	34"	1387314.41	2257765.72	52+88	1			
T-516	DECIDUOUS (P)	32"	1387302.49	2257838.34	53+62	1			
T-517	DECIDUOUS (P)	32"	1387299.07	2257840.83	53+65	1			
T-518	DECIDUOUS (P)	32"	1387254.19	2257859.20	53+94	1			
T-519	DECIDUOUS (P)	37"	1387252.36	2257876.43	54+11	1			
T-520	DECIDUOUS	10"	1387267.05	2257900.49	54+30	1			

SOMMAN OF	TREES TO BE REMO	JVED (SITE 3)
TREE TYPE	SIZE	COUNT
DECIDUOUS (P)	0 - 12"	36
DECIDUOUS	0 - 12"	30
CONIFEROUS (P)	0 - 12"	4
CONIFEROUS	0 - 12"	5
DECIDUOUS (P)	13" - 24"	111
DECIDUOUS	13" - 24"	47
CONIFEROUS (P)	13" - 24"	47
CONIFEROUS	13" - 24"	24
DECIDUOUS (P)	25" - 36"	18
DECIDUOUS	25" - 36"	8
CONIFEROUS (P)	25" - 36"	9
CONIFEROUS	25" - 36"	3
DECIDUOUS (P)	37" - 48"	2
DECIDUOUS	37" - 48"	3



<u>GSWCC</u> William T. Roberts **Level II Certified Design Professional** CERTIFICATION NUMBER ______0000070272

ISSUED:01/31/2014 EXPIRES: 01/31/2017

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SHEET TITLE: 61 of 65 **ES&PC PLAN**

SITE 3 STA 49+50 - 54+50

ISSUED: 5.27.16

PROJECT NO. CALE: 1" = 20'

HKD BY: A.R. DESIGNED BY: J.J. DRAWN BY: J.J.

1) ALL BUFFER RESTORATION SHALL COMPLY WITH APPLICABLE SPECIFICATIONS SET FORTH IN THE GSWCC MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA, LATEST EDITION. SEE DETAILS 5/C-48, 6/C-48, & 7/C-48 FOR TYPICAL TREE, SHRUB, AND PERENNIAL PLANTING DETAILS.

2) ALL PLANTS SHALL BE HEALTHY, VIGOROUS MATERIAL AND FREE OF PESTS AND DISEASE. 3) CONTRACTOR IS TO VERIFY LOCATION OF ALL TREES WITH DEKALB COUNTY PRIOR TO INSTALLATION. 4) ALL PLANTS MUST BE CONTAINER GROWN OR BALLED AND BURLAPPED AS INDICATED IN THE PLANT

5) CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETE COVERAGE OF ALL PLANTING BEDS. 6) ALL PLANTS ARE SUBJECT TO APPROVAL OF THE OWNER BEFORE, DURING, AND AFTER INSTALLATION. 7) ALL SHRUBS, GROUND COVER, AND PLANTING BEDS ARE TO BE COMPLETELY COVERED WITH AGED SHREDDED HARDWOOD MULCH TO A MINIMUM OF THREE (3) INCHES. 8) THE CONTRACTOR IS TO LOCATE ALL UNDERGROUND UTILITIES AND SHALL AVOID DAMAGE TO ALL

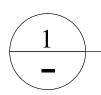
UTILITIES DURING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE TO ANY UTILITIES, STRUCTURES, OR OTHER DAMAGED ITEMS WHICH OCCURS AS A RESULT OF THE 9) THE CONTRACTOR IS RESPONSIBLE FOR FULLY MAINTAINING ALL PLANTING AND LAWNS UNTIL THE

WORK IS ACCEPTED BY THE OWNER. MAINTENANCE INCLUDES BUT NOT LIMITED TO: WATERING, SPRAYING, 10) THE CONTRACTOR SHALL GUARANTEE ALL PLANT MATERIAL FOR A PERIOD OF ONE YEAR BEGINNING AT THE DATE OF FINAL ACCEPTANCE. THE CONTRACTOR SHALL PROMPTLY MAKE ALL REPLACEMENTS BEFORE THE END OF THE GUARANTEE PERIOD (PER DIRECTION OF OWNER).

11) ANY PLANT MATERIAL THAT DIES, TURNS BROWN OR DEFOLICATES PRIOR TO FINAL ACCEPTANCE SHALL BE REMOVED AND REPLACED WITH MATERIAL OF THE SAME SPECIES, QUANTITY AND SIZE. 12) THE CONTRACTOR SHALL SUPPLY ALL PLANTING MIX: 50% TOP SOIL AND 50% ORGANIC SOIL

13) NO TREES AND SHRUBS SHALL BE LOCATED WITHIN THE PERMANENT SEWER EASEMENT. 14) SHRUBS SHALL BE PLANTED ALTERNATIVELY.

15) BUFFER RESTORATION SHALL NOT RESULT IN FURTHER DISTURBANCE OF THE SITE.



BUFFER RESTORATION ZONE Bf

MULCHING REQUIREMENTS

		<u> </u>
MATERIAL	RATE	<u>DEPTH</u>
STRAW OR HAY		2" - 4"
WOOD WASTE, CHIPS, SAWDUST, BARK		2" - 3"
CUTBACK ASPHALT	1200 GAL./AC, ¼ GAL./SQ. YD. OR SEE MANUFACTURER'S RECOMMENDATIONS	
POLYETHYLENE FILM	SECURE WITH SOIL, ANCHORS, WEIGHTS	
GEOTEXTILES, JUTE MATTING, NETTING, ETC.	SEE MANUFACTURER'S RECOMMENDATIONS	

NOTE: STRAW OR HAY MULCH SHALL BE ANCHORED IMMEDIATELY AFTER APPLICATION. MULCH MAY BE ANCHORED BY MECHANICALLY PRESSING INTO SURFACE. IF SPREAD WITH BLOWER EQUIPMENT, MULCH SHALL BE ANCHORED WITH EMULSIFIED ASPHALT (GRADE AE-5 OR SS-1)--100 GAL. ASPHALT + 100 GAL. WATER PER TON OF MULCH. NETTING SHALL BE USED TO ANCHOR WOOD WASTE AND CHIPS. POLYETHYLENE SHALL BE TRENCHED IN AT EDGES.



DISTURBED AREA STABILIZATION FOR TEMPORARY SEEDINGS

					PLANTING DATES			
SPECIES	<u>s</u>	RATE/1000 SF	RATE PER AC	MTS- L'STONE	PIEDMONT	COASTAL		
RYE	(ALONE)	3.9 LBS	168 LBS	8/1-11/30	8/15-12/1	9/1-2/28		
	(IN MIXTURES)	0.6 LBS	28 LBS	6/1-11/30	6/13-12/1	9/1-2/20		
ANNUAL RYEGRASS	(ALONE)	0.9 LBS	40 LBS	8/1-11/30	9/1-12/15	9/15-1/1		
ANNUAL LESPEDEZA	(ALONE)	0.6 LBS	28 LBS	3/1-4/1	2/1-3/1	2/1-3/1		
	(IN MIXTURES)	0.2 LBS	10 LBS	3/ I - 1 / I	2/1-3/1	2/1-3/1		
WEEPING LOVEGRASS	(ALONE)	0.1 LBS	4 LBS	3/15-6/15	3/15-7/15	3/15-7/15		
	(IN MIXTURES)	0.05 LBS	2 LBS	3/13-0/13	3/13-7/13	3/15-7/15		
SUDANGRASS	(ALONE)	1.0 LBS	60 LBS	4/1-8/31	4/1-8/31	3/15-8/1		
BROWNTOP MILLET	(ALONE)	1.1 LBS	50 LBS	4/1-6/30	4/1-7/15	4/1-7/15		
	(IN MIXTURES)	0.2 LBS	10 LBS	4/1-0/30	4/1-7/13	4/1-7/13		
WHEAT	(ALONE)	3.9 LBS	168 LBS	9/1-12/31	9/1-12/31	9/15-1/31		
		<u> </u>			<u> </u>	<u> </u>		

1) DISTURBED AREAS IDLE FOR GREATER THAN 7 DAYS WILL BE SEEDED WITH TEMPORARY VEGETATION. AREAS SHOULD NOT BE EXPOSED GREATER THAN 14 DAYS AFTER LAST CONSTRUCTION ACTIVITY WITHOUT SEEDING. THE SURFACE WILL BE ROUGHENED PRIOR TO PLANTING TO PROMOTE GOOD SEED INFILTRATION. HAND-PLANTED SEED WILL BE STABILIZED WITH APPROPRIATE MULCH (E.G., HAY, STRAW) WITHIN 24-HOURS OF PLANTING. SLOPES GREATER THAN 3:1 WILL BE UNDERLAIN WITH A DOT APPROVED MATTING AND HYDROSEEDED.

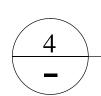
2) TEMPORARY COVER CROPS ARE VERY COMPETITIVE AND WILL CROWN OUT PERENNIALS IF SEEDED TOO HEAVILY. 3) UNUSUAL SITE CONDITIONS MAY REQUIRE HEAVIER SEEDING RATES. SEEDING DATES MAY NEED TO BE ALTERED TO FIT TEMPERATURE VARIATIONS AND LOCAL CONDITIONS.

4) REDUCE SEEDING RATES BY 50% WHEN DRILLED.

DISTURBED AREA STABILIZATION FOR PERMANENT VEGETATION

			PLANTING DATES		
<u>SPECIES</u>	RATE/1000 SF	RATE PER AC	MTS- L'STONE	PIEDMONT	COASTAL
WEEPING LOVEGRASS	0.1 LBS	4 LBS	3/15-6/15	3/1-6/15	2/1-6/15
AND					
VIRGATA OR SERICEA LESPEDEZA	1.4 LBS	40 LBS	3/15-6/15	3/1-6/15	2/15-6/1
SERICEA LESPEDEZA SEEDBEARING HAY	138 LBS	3 TONS	10/1-3/1	10/1-3/1	10/15-2/1
WITH					
OVERSEEDED WEEPING LOVEGRASS	0.05 LBS	2 LBS	3/15-6/15	3/1-6/15	2/1-6/15
HULLED COMMON BERMUDAGRASS	0.2 LBS	10 LBS	3/1-7/1	2/15-7/1	
AND					
SERICEA LESPEDEZA	1.4 LBS	60 LBS	3/15-6/15	3/1-6/15	2/1-6/15
UNHULLED COMMON BERMUDAGRASS	0.2 LBS	10 LBS	10/1-3/1	11/1-2/1	
AND					
VIRGATA OR SERICEA LESPEDEZA	1.4 LBS	40 LBS	3/15-6/15	3/1-6/15	2/1-6/1
SEED HAY	140 LBS	3 TONS	10/1-3/1	10/1-3/1	10/15-2/1
TALL FESCUEGRASS	1.1 LBS	50 LBS	8/1-11/1,	8/15-11/1	
AND			3/1-4/15		
CLEAN COMBINE RUN VIRGATA OR	1.4 LBS	40 LBS	3/15-6/15	3/1-6/15	2/15-6/1
SERICEA LESPEDEZA	1.4 LD3	40 LBS	3/13-0/13		Z/ 13-0/ I
HULLED COMMON BERMUDAGRASS	0.2 LBS	10 LBS	3/1-7/1	2/15-7/1	

1) AGRICULTURAL LIME IS REQUIRED FOR ALL GRADED AREAS AT THE RATE OF ONE TO TWO TONS PER ACRE UNLESS SOIL TESTS DETERMINE OTHERWISE. 2) UNUSUAL SITE CONDITIONS MAY REQUIRE HEAVIER SEEDING RATES. SEEDING DATES MAY NEED TO BE ALTERED TO FIT TEMPERATURE VARIATIONS AND LOCAL CONDITIONS.

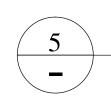


3) REDUCE SEEDING RATES BY 50% WHEN DRILLED.

PERMANENT SEEDING Ds3

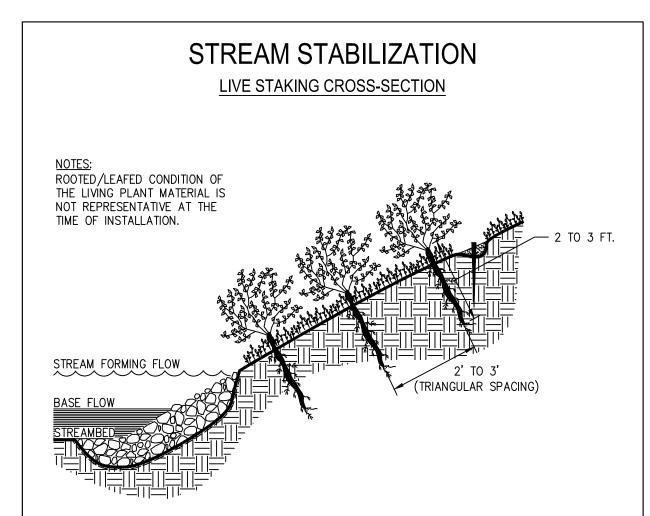
FERTILIZER REQUIREMENTS FOR PERMANENT VEGETATION

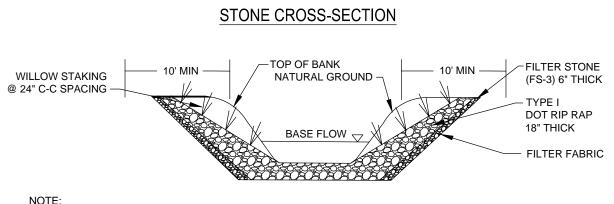
			PLANTING DATES				
	TYPES OF SPECIES	PLANTING YEAR	FERTILIZER (N-P-K)	RATE (LBS/AC)	N TOP DRESSING RATE (LBS/AC)		
rmanent Ds3	COOL SEASON GRASSES	FIRST	6-12-12	1500	50-100		
		SECOND	6-12-12	1000			
		MAINTENANCE	10-10-10	400	30		
	WARM SEASON GRASSES	FIRST	6-12-12	1500	50-100		
		SECOND	6-12-12	800	50-100		
		MAINTENANCE	10-10-10	400	30		



Sb

FERTILIZER RATES Ds3



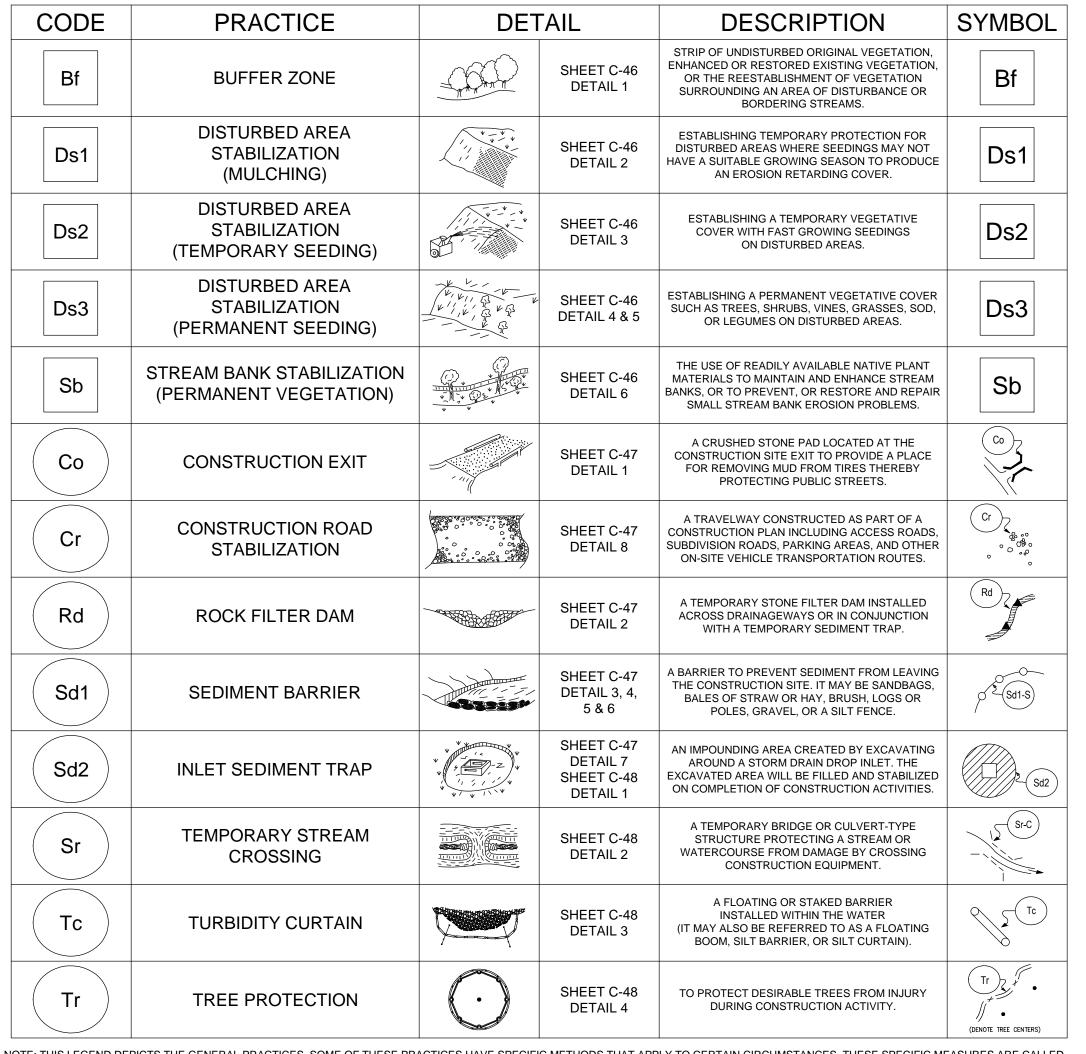


1) FEATHER LAID BACK SLOPES BACK INTO ADJACENT NATURAL BANK SLOPES. 2) INSTALL RIP-RAP (DOT TYPE I) OVER DISTURBED AREA AND TO FILL EXTEND OF TIE-IN AREAS ADJACENT TO CROSSING 3) INSTALL PLANT STAKINGS THROUGH STONE TO ELEVATION OF BASE FLOW

8) INSTALL ONLY ON ONE SIDE OF THE CREEK IMPACTED. BUFFER ENCROACHMENT ONLY

4) TIE IN SLOPES SHALL NOT EXCEED 2:1 5) RIP-RAP ON THE CREEK SLOPES SHALL BE 18" MIN. THICK LAYER OVER ENCASED PIPE SHALL EXTEND TO ENCASEMENT OR 18" MIN. THICKNESS WHERE NOT OVER ENCASEMENT 6) SET STONE SUCH THAT TOP OF STONE PAD IS FLUSH WITH ADJACENT NATURAL CREEK CHANNEL 7) STONE TO BE HAND PLACED TO MINIMIZE STREAM IMPACTS





NOTE: THIS LEGEND DEPICTS THE GENERAL PRACTICES. SOME OF THESE PRACTICES HAVE SPECIFIC METHODS THAT APPLY TO CERTAIN CIRCUMSTANCES. THESE SPECIFIC MEASURES ARE CALLED OUT IN THE PLANS BY USING THE EROSION CONTROL SYMBOL, FOLLOWED BY A SUFFIX. PLEASE REFER TO THE CONSTRUCTION DETAILS FOR SPECIFIC EROSION CONTROL PRACTICE CLARIFICATIONS.

GENERAL EROSION CONTROL PRACTICES



GEORGIA SOIL AND WATER CONSERVATION COMMISSION

William T. Roberts Level II Certified Design Professional

0000070272 **CERTIFICATION NUMBER** ISSUED: 01/31/2014 EXPIRES: 01/31/2017

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DEKALB COUNTY
DEPARTMENT OF
WATERSHED
MANAGEMENT

SOUTH FORK
EACHTREE CREEK
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HEET TITLE: 62 of 65

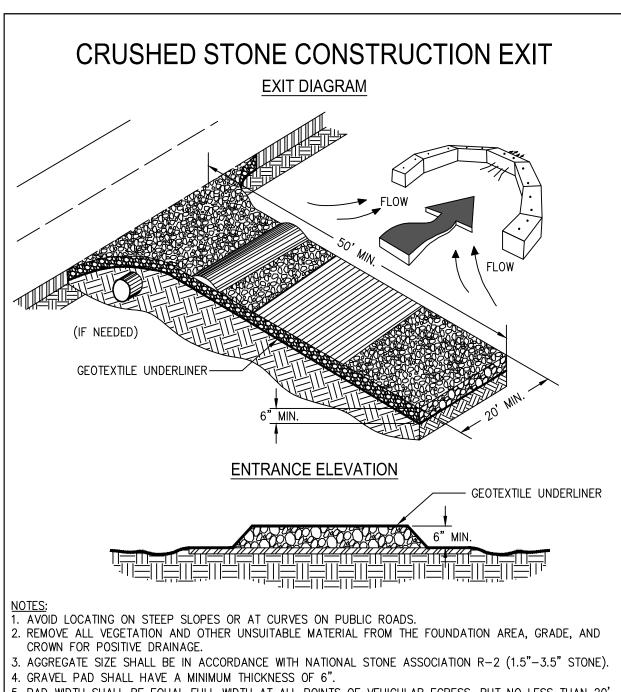
EROSION CONTROL **DETAILS**

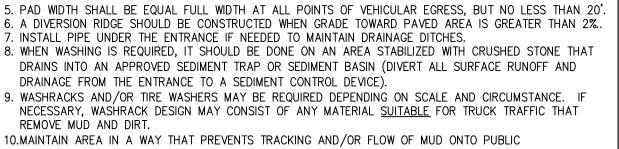
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RAWN BY: J.J.



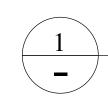
TEMPORARY SEEDING Ds2



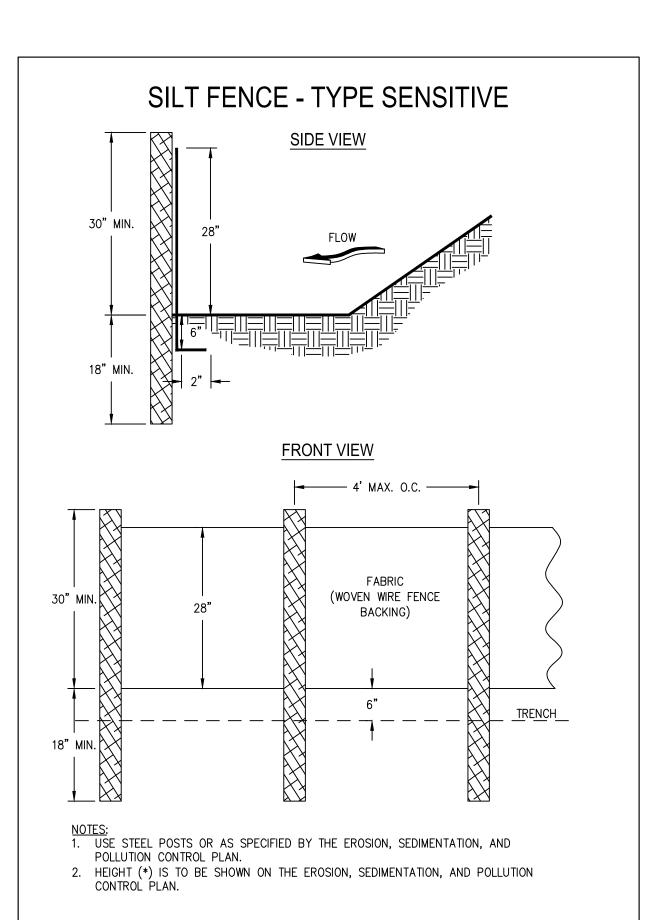


REMOVE MUD AND DIRT.

O.MAINTAIN AREA IN A WAY THAT PREVENTS TRACKING AND/OR FLOW OF MUD ONTO PUBLIC
RIGHTS-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES
USED TO TRAP SEDIMENT.

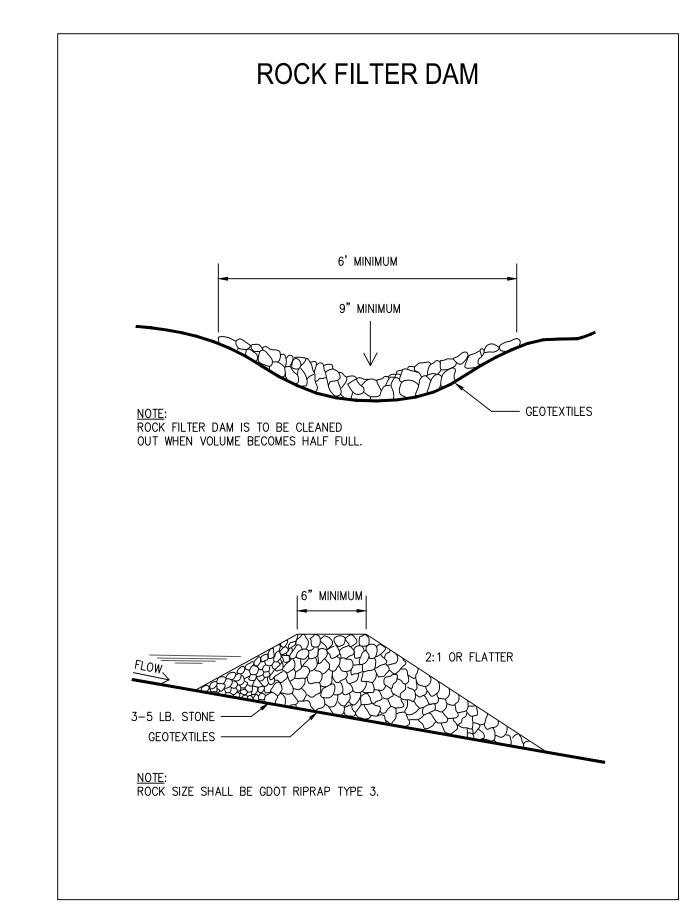


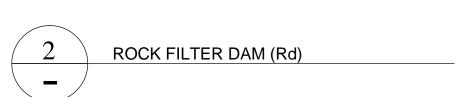
CONSTRUCTION EXIT Co

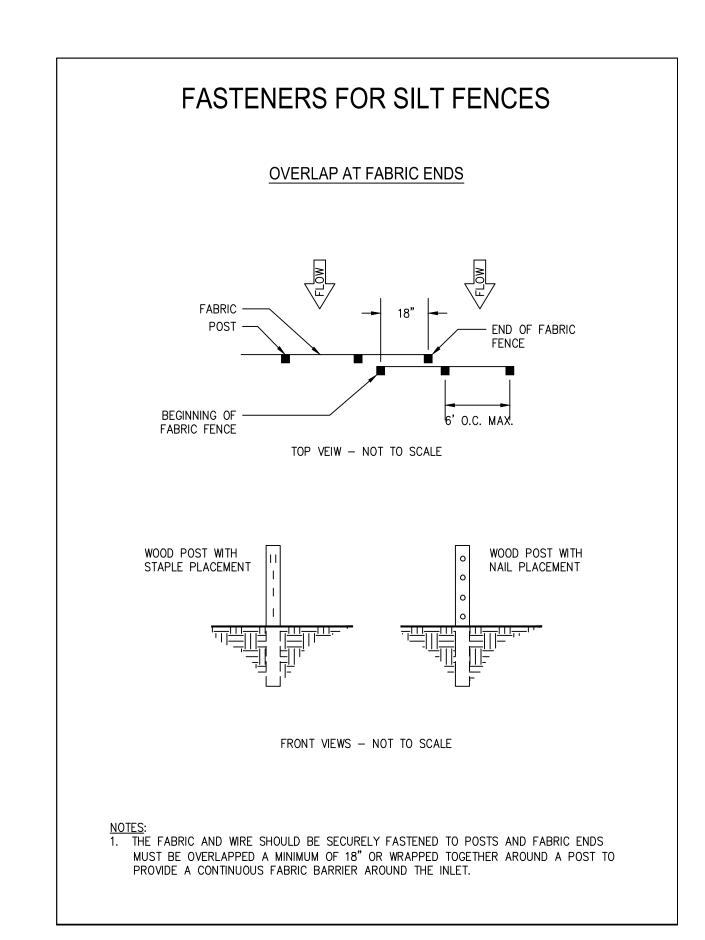


SEDIMENT BARRIER

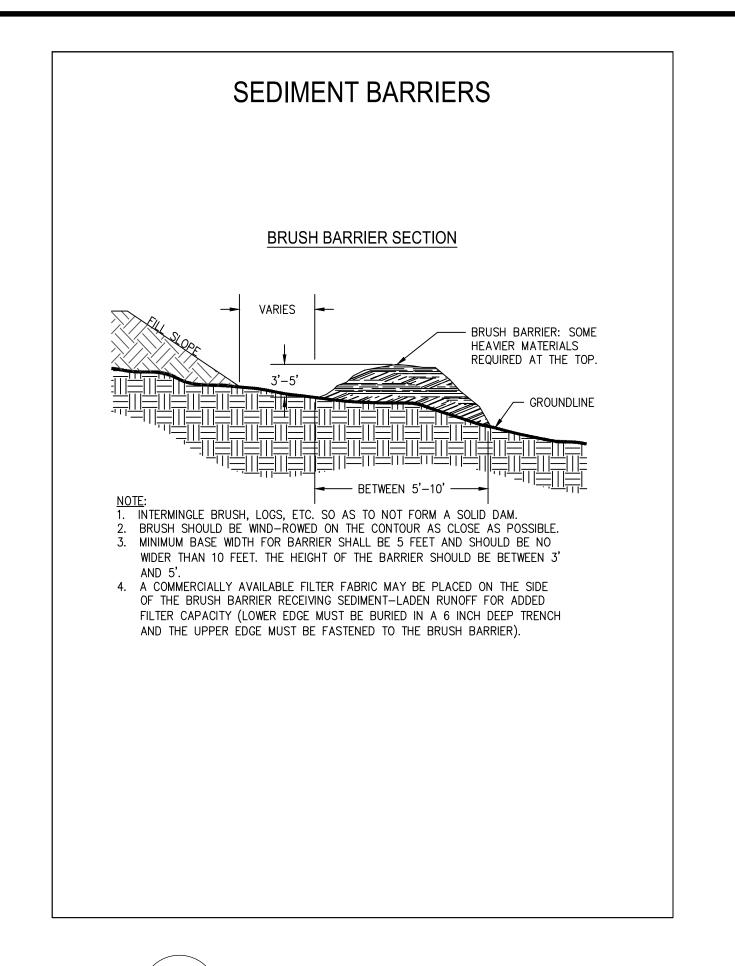
(SENSITIVE) Sd1-S

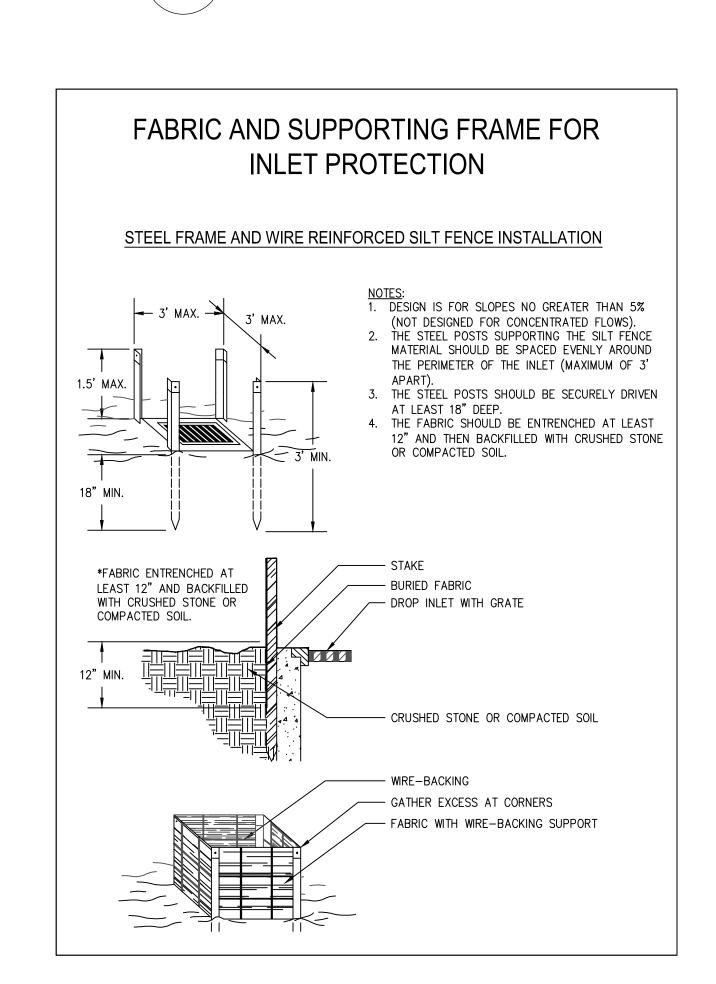








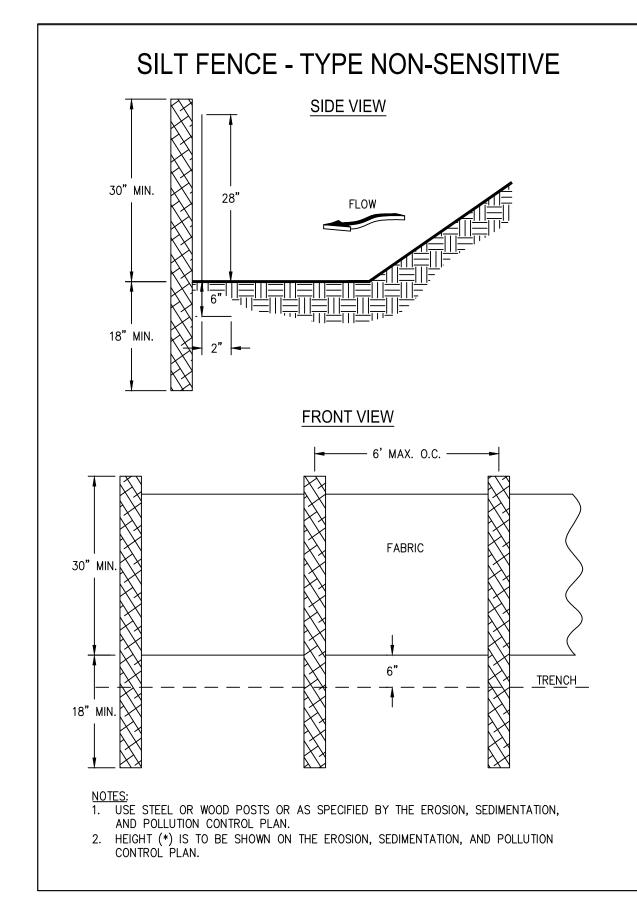


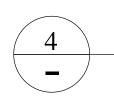


SEDIMENT BARRIER

(BRUSH BARRIER) Sd1-BB







SEDIMENT BARRIER
(NON-SENSITIVE) Sd1-NS

NOTE:

1) ALL TEMPORARY CONSTRUCTION ROADS SHALL COMPLY WITH SPECIFICATIONS SET FORTH IN THE GSWCC MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA, LATEST EDITION, AS WELL AS ALL APPLICABLE STATE, FEDERAL, AND LOCAL CODES.

2) CONTRACTOR TO DESIGN TEMPORARY CONSTRUCTION ROAD AS NEEDED TO FACILITATE TRANSPORTATION OF CONSTRUCTION EQUIPMENT TO PROJECT SITE. ROADS SHALL BE LAID OUT ACCORDING TO GOOD LANDSCAPE MANAGEMENT PRINCIPLES AND TO KEEP LAND DISTURBANCE TO A

MINIMUM.
3) TEMPORARY ROADBEDS SHALL BE AT LEAST FOURTEEN (14) FEET WIDE FOR ONE-WAY TRAFFIC AND TWENTY (20) FEET WIDE FOR TWO-WAY TRAFFIC. THE WIDTH FOR TWO-WAY TRAFFIC SHALL BE INCREASED APPROXIMATELY FOUR (4) FEET FOR TRAILER TRAFFIC. A MINIMUM SHOULDER WIDTH SHALL BE TWO (2) FEET ON EACH SIDE. WHERE TURNOUTS ARE USED, ROAD WIDTH SHALL BE INCREASED TO A MINIMUM OF TWENTY (20) FEET FOR A DISTANCE OF THIRTY (30) FEET.
4) TEMPORARY ROAD SHALL FOLLOW THE CONTOURS OF THE NATURAL TERRAIN TO MINIMIZE

DISTURBANCE OF DRAINAGE PATTERNS.
5) TREES, STUMPS, ROOTS, BRUSH, WEEDS, AND OTHER OBJECTIONABLE MATERIALS SHALL BE REMOVED FROM THE WORK AREA.
6) ROADS AND PARKING AREAS MAY REQUIRE A PERIODIC TOP DRESSING OF GRAVEL TO MAINTAIN THE GRAVEL DEPTH AT SIX (6) INCHES.

7) VEGETATED AREAS SHOULD BE CHECKED PERIODICALLY TO ENSURE A GOOD STAND OF VEGETATION IS MAINTAINED.

8) REMOVE ANY SILT OR OTHER DEBRIS CAUSING CLOGGING OF ROADSIDE DITCHES OR OTHER DEBRIS CAUSING CLOGGING OF ROADSIDE DEBRIS CAUSING CLOGGING COUSING CLOGGING COUSING CLOGGING COUSING CLOGGING CLOGGING COUSING CLOGGING CLOGGING





GEORGIA SOIL AND WATER
CONSERVATION COMMISSION

William T. Roberts

Level II Certified Design Professional

 CERTIFICATION NUMBER
 0000070272

 ISSUED:
 01/31/2014
 EXPIRES:
 01/31/2017

24 HOUR CONTACT

(770) 270-6243



1841 PEELER RD. UNIT C ATLANTA, GA 30338 PHONE: (678) 336-5732 WWW.R2TINC.COM

DEKALB COUNTY
DEPARTMENT OF
WATERSHED
MANAGEMENT

SOUTH FORK
PEACHTREE CREEK
SANITARY SEWER
REPLACEMENT

WA DATE DESCRIPTION

TO 5/27/16 INITIAL ISSUE

1 12/9/16 REVIEW COMMENTS

No. 26889
PROFESSIONAL
5/27/16
ENGINEER

CEORGE

SHEET TITLE: 63 of 65

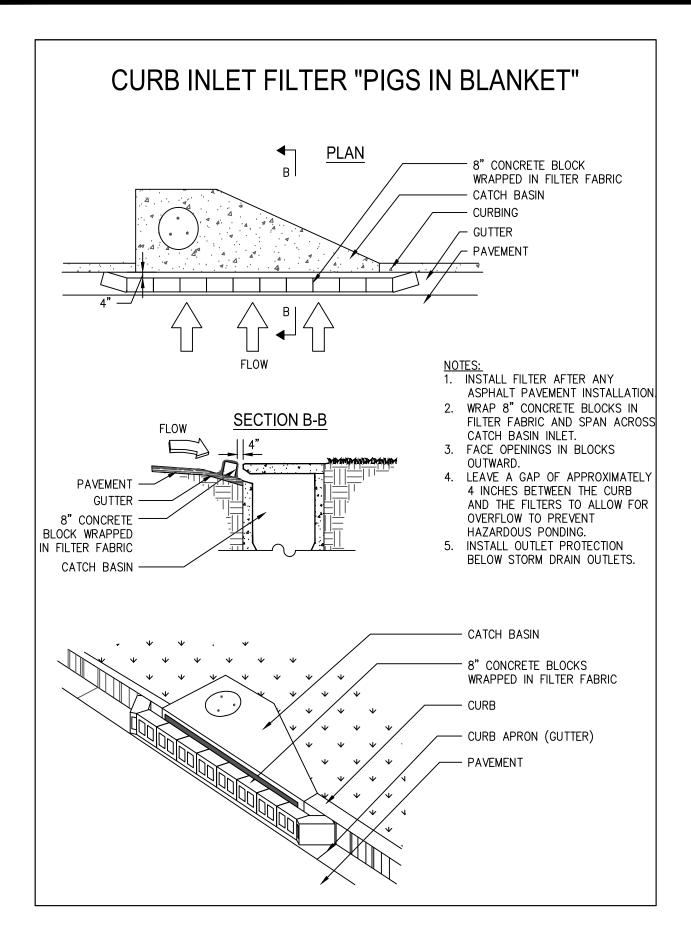
EROSION

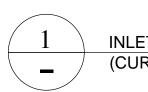
CONTROL DETAILS

SSUED: 5.27.16

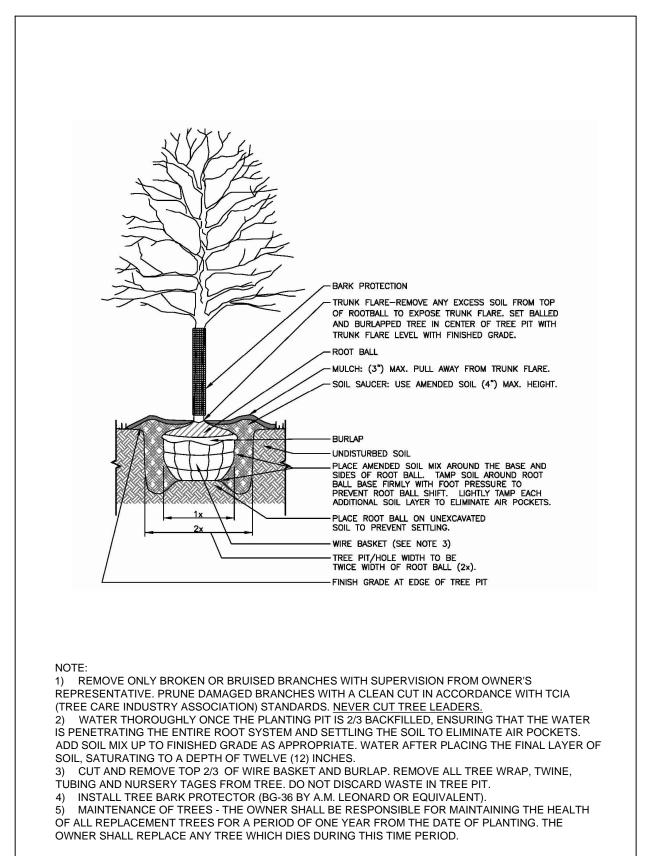
PROJECT NO.

CALE: NONE
CHKD BY: A.R.
DESIGNED BY: J.J.
DRAWN BY: J.J.

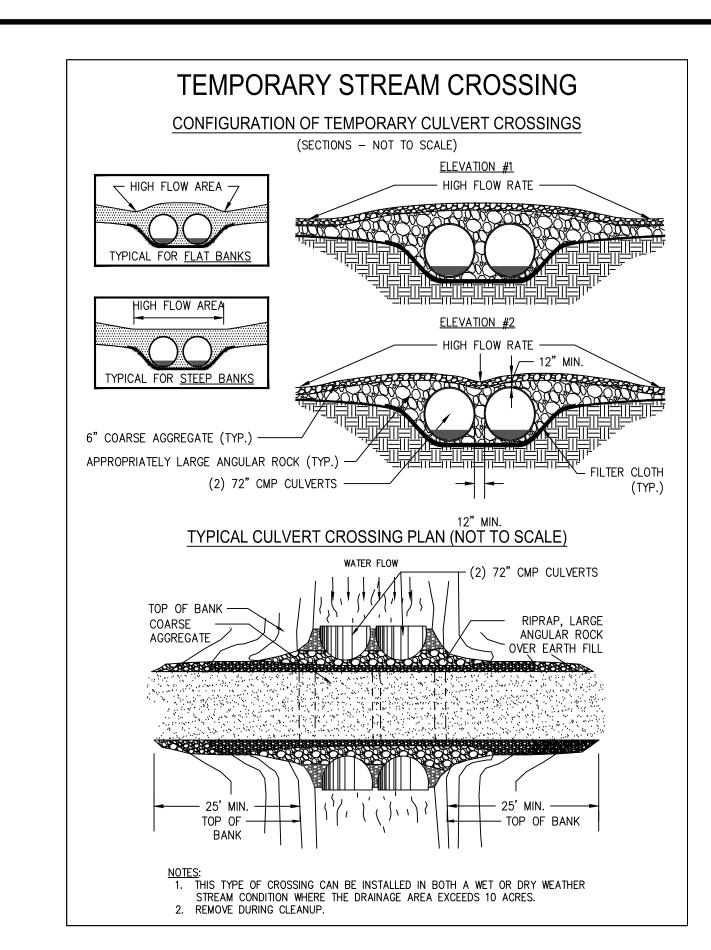




INLET SEDIMENT TRAP
(CURB INLET PROTECTION) Sd2-P

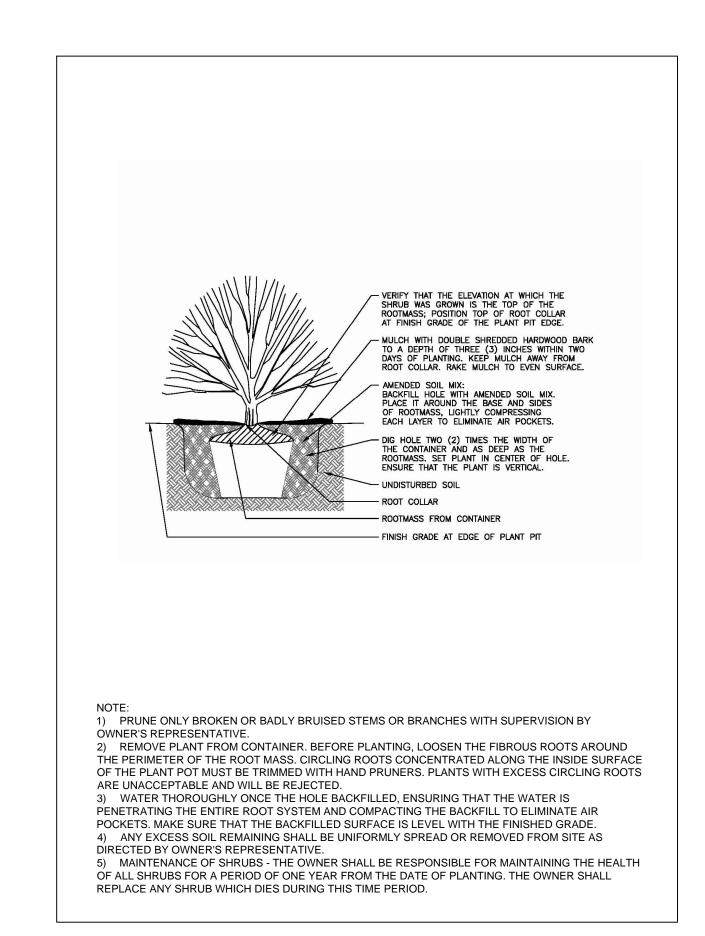




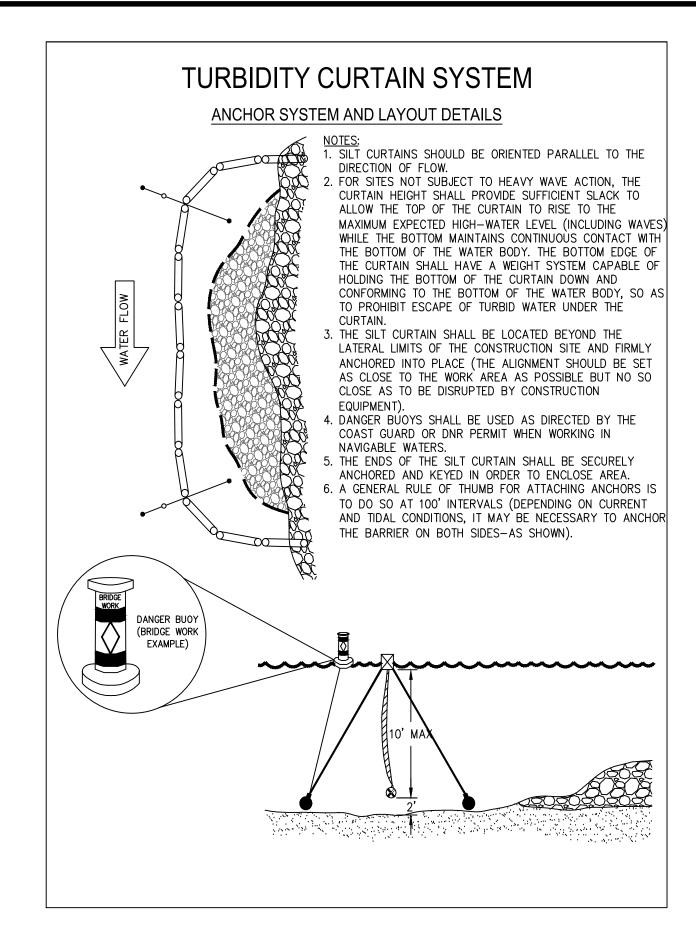


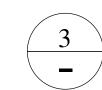


TEMPORARY STREAM CROSSING (CULVERT) Sr-C

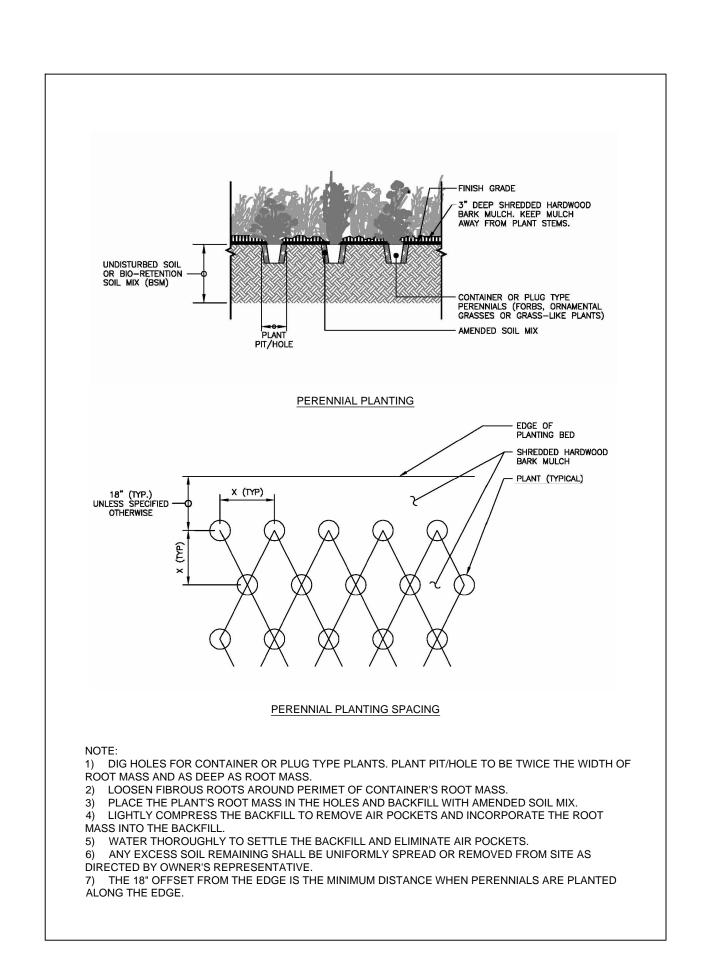




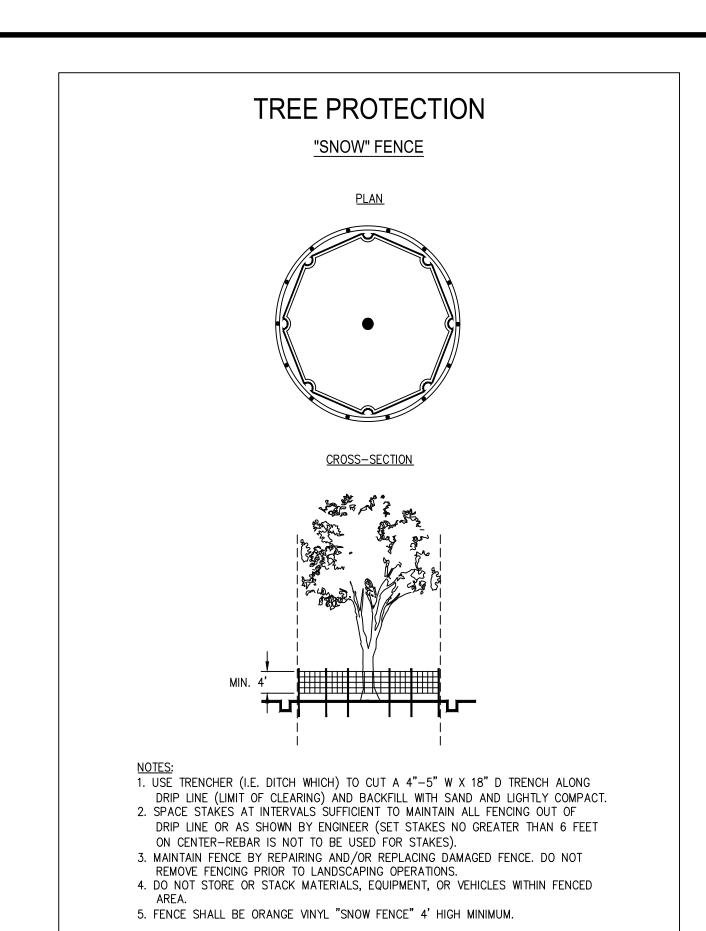


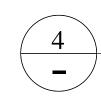


TURBIDITY CURTAIN To









TREE PROTECTION FENCING Tr



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OUNTY INT OF HED MENT

DEKALB COUNT DEPARTMENT O

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REPLACEMENT
LAND LOTS 63, 100, 102, 103, 113, 118, & 119

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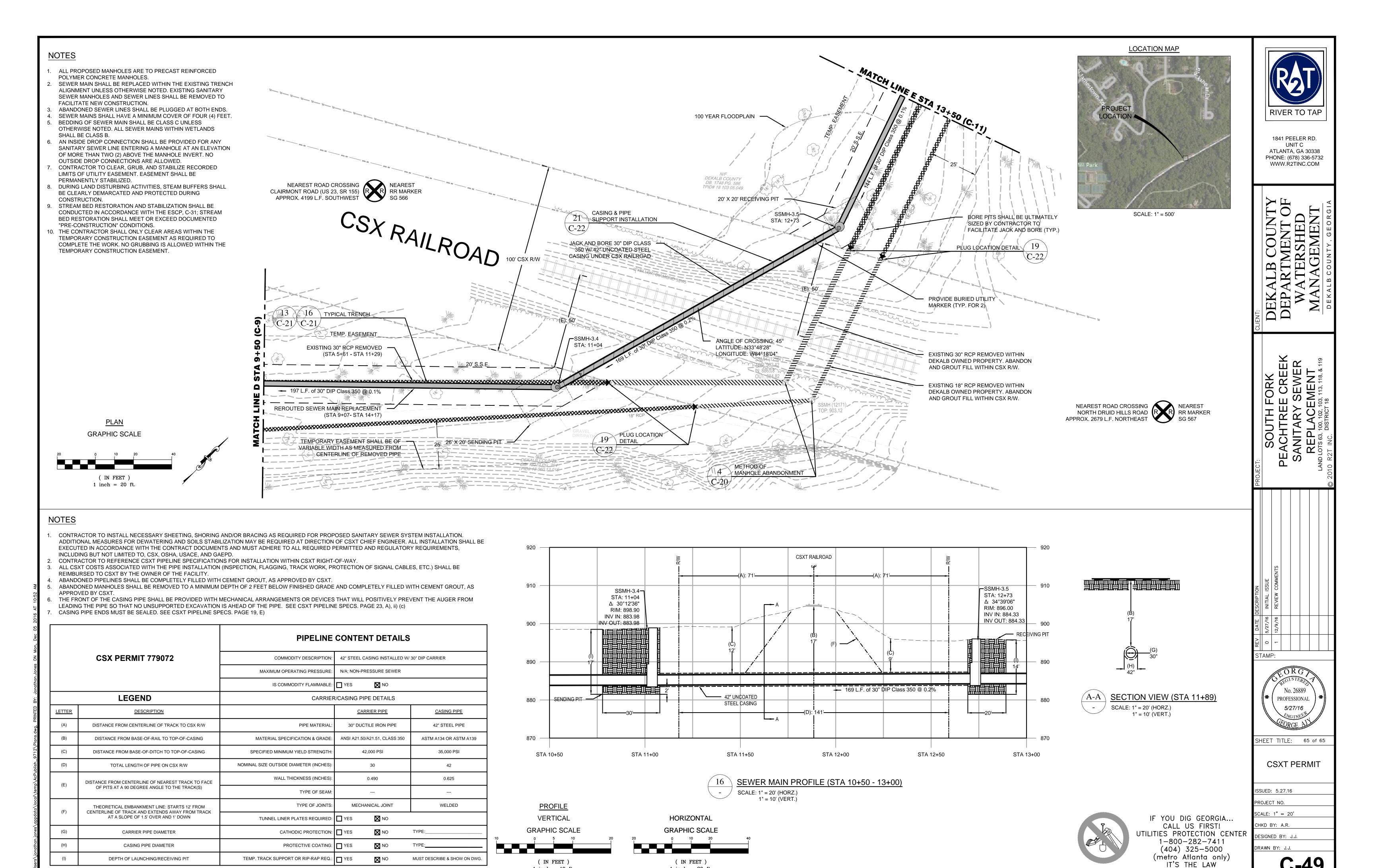
SHEET TITLE: 64 of 65

EROSION CONTROL DETAILS

ISSUED: 5.27.16

CALE: NONE
CHKD BY: A.R.

PESIGNED BY: J.J.



1 inch = 20 ft.

1 inch = 10 ft.