

CONSTRUCTION PLANS FOR:

# CARTERSVILLE AIRPORT

MANAGED BY:

# PHOENIX AIR GROUP, INC. EROSION CONTROL PLAN

**LAND LOT(S) 853, 854, 875 & 876  
4TH DISTRICT, 3RD SECTION  
CARTERSVILLE, GEORGIA  
DATE: OCTOBER 2, 2020**

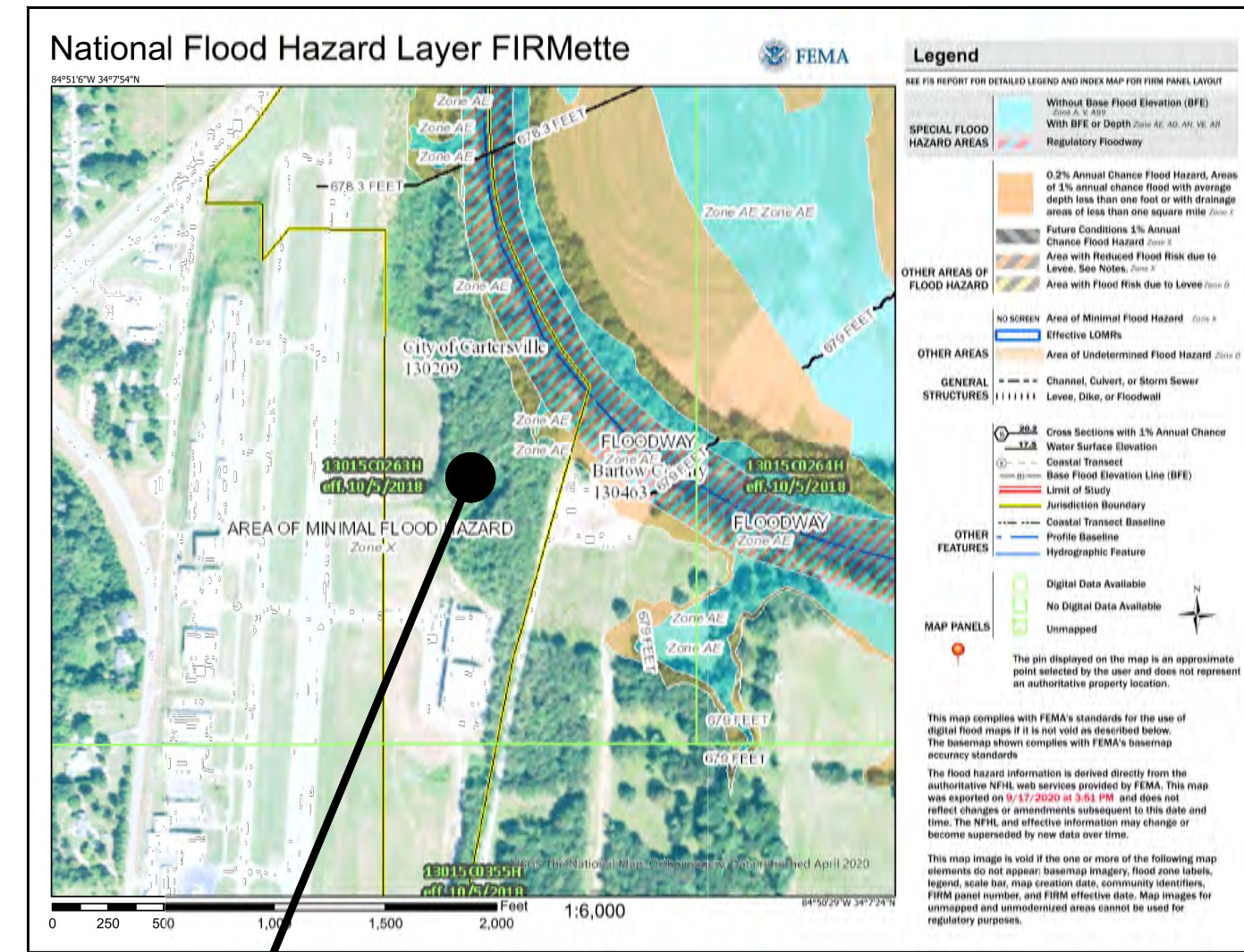
**OWNER / DEVELOPER:  
PHOENIX AIR GROUP, INC.  
100 PHOENIX AIR DRIVE, S.W.  
CARTERSVILLE, GA 30120  
TELEPHONE: (770) 387-2000  
FAX: (770) 387-4545**

SITE CONTACT INFORMATION			
COMPANY	CONTACT	DESCRIPTION	PHONE
Southland Engineering	Karl Lujens	Civil Engineering	770-387-0440
Georgia Power	Adi Patel	Power	770-387-5224
Bartow County Water Dept.	Gerardo Becera	Water	770-387-5170
Bartow County Sewer Dept.	Gerardo Becera	Sewer	770-387-5170
City of Cartersville Gas Dept.	Brian Friery	Gas	770-382-5642
City of Cartersville Public Works	Wade Wilson	Engineer	770-383-7432

PROJECT NO.:		18166
DATE:		10/2/2020
REVISIONS:	DATE	DESCRIPTION
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**SOUTHLAND ENGINEERING**  
CIVIL ENGINEERS - LAND SURVEYORS - LAND PLANNERS  
114 OLD MILL ROAD., CARTERSVILLE, GA 30120 PH: 770.387.0440 FAX: 770.607.6151

**CARTERSVILLE - BARTOW AIRPORT  
EXPANSION EAST**  
LOCATED IN LAND LOTS 853, 854, 875, 876  
4TH DISTRICT, 3RD SECTION  
CARTERSVILLE, GEORGIA



**FLOOD MAP**  
NOT TO SCALE

NOTE: THIS PROPERTY IS PARTIALLY LOCATED WITHIN THE 100 YEAR FLOOD PLAIN, AS PER FEMA FLOOD INSURANCE MAP 13015 C 0263 H, DATED OCT 5, 2018.

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- C506-C508 EROSION CONTROL DETAILS & VEGETATION PLAN
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- C510 SEDIMENT BASIN MAP
- C601 WALL PROFILE



**LOCATION MAP**  
NTS

**GENERAL NOTES**

ACCEPTED PLANS AND SUBSEQUENT ACCEPTED REVISIONS MUST BE ON-SITE AT ALL TIMES.

ACCEPTANCE OF THESE PLANS AND ISSUANCE OF A LAND DISTURBANCE PERMIT BY THE CITY CONSTITUTES APPROVAL FROM THE CITY COMMUNITY DEVELOPMENT DEPARTMENT DEPARTMENT ONLY. ACCEPTANCE OF THESE PLANS BY THE CITY DOES NOT RELIEVE PERMIT HOLDER FROM MEETING ALL REQUIREMENTS OF THE CITY ENGINEERING ORDINANCE, FLOOD DAMAGE PREVENTION ORDINANCE, SOIL EROSION AND SEDIMENTATION CONTROL ORDINANCE, THE RULES AND REGULATIONS OF THE CITY OF CARTERSVILLE HEALTH DEPARTMENT, WATER AND SEWER DEPARTMENT, ROAD DEPARTMENT, GA DOT, THE US ARMY CORPS OF ENGINEERS AND ANY OTHER LOCAL, STATE OR FEDERAL LAW AGENCY AS IT RELATES TO DEVELOPMENT IN THE CITY.

THE LOCATION OF EROSION AND SEDIMENT CONTROL DEVICES MAY HAVE TO BE ALTERED FROM THAT SHOWN ON THE ACCEPTED PLANS DUE TO CHANGES IN DRAINAGE PATTERNS CREATED DURING CONSTRUCTION. IT IS THE OWNER/DEVELOPERS RESPONSIBILITY TO ACCOMPLISH EROSION AND SEDIMENT CONTROL FOR ALL DRAINAGE PATTERNS CREATED AT VARIOUS STAGES DURING CONSTRUCTION. ANY DIFFICULTY IN CONTROLLING EROSION OR SEDIMENT DURING ANY PHASE OF CONSTRUCTION SHALL BE REPORTED TO THE PROJECT ENGINEER IMMEDIATELY. FAILURE TO PROPERLY INSTALL, OPERATE OR MAINTAIN ALL EROSION AND SEDIMENTATION CONTROL MEASURES MAY RESULT IN ALL CONSTRUCTION BEING STOPPED UNTIL SUCH MEASURES ARE CORRECTED TO THE SATISFACTION OF THE CITY INSPECTOR.

DETENTION/SEDIMENTATION PONDS AND DIVERSION DITCHES SHALL BE INSTALLED IMMEDIATELY AND PRIOR TO ANY OTHER WORK ON-SITE. DETENTION POND(S) SHALL BE RETROFITTED FOR SILTATION CONTROL. PROJECT ENGINEER SHALL IMMEDIATELY FOLLOW UP WITH AS-BUILT CERTIFICATION FOR DESIGN COMPLIANCE PRIOR TO ACCEPTANCE OF THE FINAL PLAT FOR RESIDENTIAL PROJECTS AND PRIOR TO FINAL INSPECTION, 60-DAY POWER INSPECTION AND/OR REQUEST FOR CERTIFICATE OF OCCUPANCY FOR COMMERCIAL AND INDUSTRIAL PROJECTS.

OWNER AGREES BY IMPLEMENTATION OF THESE PLANS THAT ALL LAND CLEARING, CONSTRUCTION, DEVELOPMENT AND DRAINAGE ACTIVITIES WILL BE DONE ACCORDING TO THESE ACCEPTED PLANS OR ACCEPTED REVISIONS. OWNER ACKNOWLEDGES THAT ACCEPTANCE OF PLANS BY THE CITY IN NO WAY RELIEVES OWNER RESPONSIBILITY NOT TO ADVERSELY IMPACT DOWNSTREAM PROPERTY REGARDING ANY LAND DISTURBING ACTIVITY, EROSION, EROSION AND SEDIMENT CONTROL MEASURE AND OR STORMWATER MANAGEMENT ACTIVITY DURING OR AFTER CONSTRUCTION. OWNER ACKNOWLEDGES THAT THE ACCEPTANCE OF THESE PLANS AND THE ISSUANCE OF THE LAND DISTURBANCE PERMIT DOES NOT IN ANY WAY SUGGEST THAT ALL OTHER REQUIREMENTS FOR THE LEGAL OR APPROPRIATE OPERATIONS FOR THIS ACTIVITY, WHICH MAY REQUIRE ADDITIONAL PERMITTING, HAVE BEEN MET. THE ONUS IS ON THE OWNER/DEVELOPER TO DISCOVER WHAT ADDITIONAL PERMITTING OR APPROVALS MAY BE NECESSARY IF ANY TO OPERATE FROM THIS POINT IN AN APPROPRIATE AND LEGAL MANNER. PLAN ACCEPTANCE OR PERMIT ISSUANCE DOES NOT ABSOLVE THE APPLICANT FROM COMPLYING WITH ALL APPLICABLE LAWS, POLICIES, STANDARDS OR OTHER PERMITS WHICH MAY BE REQUIRED FOR THIS PROJECT.

ANY AND ALL LAND DISTURBANCE PERMITS MAY BE REVOKED AND ANY TIME IF THE CONSTRUCTION OF PROJECT IS NOT IN STRICT ACCORDANCE WITH ACCEPTED PLANS.

DRAINAGE EASEMENTS WILL BE PROVIDED ALONG ALL CONCENTRATED DRAINAGE PATHS A MINIMUM WIDTH OF 20'. REQUIRED WIDTHS AND LOCATIONS WILL BE REFERENCED AND SHOWN ON FINAL PLAT IF APPLICABLE. PROPOSED DRAINAGE DITCHES WILL BE PROVIDED WITH PRIVATELY OWNED EASEMENTS AND ARE TO BE MAINTAINED AND PROTECTED BY INDIVIDUAL LOT OWNERS. NOTICE OF SAME SHALL BE INCLUDED ON FINAL PLAT AND SUBSEQUENT DEEDS OF CONVEYANCE FROM DEVELOPER TO THE INDIVIDUAL LOT OWNERS. OPEN DRAINAGE DITCHES SHALL HAVE 3:1 SIDE SLOPES OR FLATTER AND FALL ENTIRELY WITHIN EASEMENT. FLOW OBSTRUCTIONS ARE NOT ALLOWED WITHIN DRAINAGE EASEMENTS.

THE PERFORMANCE OF ALL STORM WATER DRAINAGE SYSTEMS INCLUDING DETENTION FACILITIES HAVE BEEN CHECKED USING THE 100-YEAR STORM (DEVELOPED CONDITION) FOR EVALUATION OF LOCAL FLOODING AND POSSIBLE FLOOD HAZARDS TO ADJACENT STRUCTURES AND/OR PROPERTY. THE CUMULATIVE EFFECT OF THE PROPOSED DEVELOPMENT, WHEN COMBINED WITH ALL OTHER EXISTING AND ANTICIPATED DEVELOPMENT WILL NOT INCREASE THE WATER SURFACE ELEVATION OF THE BASE FLOOD MORE THAN ONE FOOT AT ANY POINT WITHIN THE COMMUNITY.

IF ACTUAL SITE CONDITIONS VARY FROM ACCEPTED PLANS, IT IS THE OWNER/DEVELOPERS RESPONSIBILITY TO INFORM THE ENGINEER OF RECORD AND THE CITY ZONING ADMINISTRATOR FOR ASSESSMENT OF CONDITION. PROJECT CONSTRUCTION MAY BE DELAYED DURING ASSESSMENT PERIOD.

ACCEPTANCE AND/OR SUBSEQUENT ACCEPTANCE OF THESE PLANS DOES NOT CONSTITUTE APPROVAL BY THE CITY OF ANY LAND DISTURBING ACTIVITIES WITHIN WETLAND AREAS, JURISDICTIONAL WATERS OF THE STATE, AREAS OF THREATENED/ENDANGERED SPECIES, OR AREAS OF HISTORICAL SIGNIFICANCE. IT IS THE OWNERS RESPONSIBILITY TO CONTACT THE APPROPRIATE REGULATORY AGENCY FOR ANY REQUIRED APPROVALS.

DEVELOPER SHALL FURNISH, INSTALL AND MAINTAIN ALL NECESSARY TRAFFIC BARRICADES AND WARNING SIGNAGE TO THE SATISFACTION OF THE ROAD DEPARTMENT WHILE ROADWAY FRONTAGE IMPROVEMENTS ARE MADE.

OWNER/DEVELOPER IS RESPONSIBLE FOR MAINTAINING CONTROL OF SILT ON-SITE AT ALL TIMES. DEVELOPER IS ALSO RESPONSIBLE FOR CONTROL OF SILT THAT IS TRACKED ONTO CITY R/W OR SUBDIVISION STREETS BY BUILDERS, CONTRACTORS, SUBCONTRACTORS, UTILITY COMPANIES OR ANY OTHERS DURING CONSTRUCTION UNTIL STREET HAS BEEN ACCEPTED BY THE CITY OF CARTERSVILLE. ROAD DEPARTMENT.

MAINTAIN A MINIMUM 2' OF COVER OVER STORM PIPES BASED ON FINAL GRADE. PIPE GAUGE DETERMINED BASED ON DEPTH OF COVER AND LOADING CONDITIONS.

DEBRIS FILLS ARE PROHIBITED, INCLUDING DEBRIS FILLS AT ALL CONSTRUCTION SITES OR WITHIN ANY DEVELOPMENT, AND INCLUDING BURN AND BURY PITS. THE BURYING OF CONSTRUCTION DEBRIS, CLEARED TREES AND SHRUBS, AND SIMILAR BY-PRODUCTS OF DEVELOPMENT IS STRICTLY PROHIBITED. ALL SOLID WASTE, DEMOLITION DEBRIS AND CONSTRUCTION DEBRIS GENERATED FROM CONSTRUCTION MUST BE PROPERLY DISPOSED OF IN THE CITY LANDFILL.

OFF STREET PARKING MUST BE PROVIDED AND MAINTAINED THROUGHOUT CONSTRUCTION.

LAND DISTURBING ACTIVITIES UNDER THE PERMIT MUST BEGIN WITHIN 120 DAYS AFTER ISSUANCE OF THE LAND DISTURBANCE PERMIT.

THE OWNER/DEVELOPER IS RESPONSIBLE FOR ONGOING MAINTENANCE OF VEGETATION FOR THE STORMWATER MANAGEMENT FACILITY. EXISTING VEGETATIVE COVER IS TO BE PRESERVED WHENEVER POSSIBLE, AND ONGOING SEEDING AND/OR MULCH MAY BE NECESSARY FOR THE PREVENTION OF EROSION.

IT IS THE DEVELOPER'S RESPONSIBILITY TO ADDRESS ANY WETLANDS ISSUES TO THE SATISFACTION OF THE U.S. ARMY CORPS OF ENGINEERS.

IT IS THE DEVELOPER'S RESPONSIBILITY TO ADDRESS ANY ENDANGERED SPECIES ISSUES TO THE SATISFACTION OF THE U.S. FISH AND WILDLIFE SERVICE.

IT IS THE DEVELOPER'S RESPONSIBILITY TO ABIDE BY ALL THE RULES AND REGULATIONS PERTAINING TO THE STATE OF GEORGIA'S NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT REQUIREMENTS.

ALL STORMWATER MANAGEMENT FACILITIES LOCATED WITHIN THE GENERAL AREA OF THE LEASE AREA MUST BE CLEANED AND PROPERLY MAINTAINED BEFORE A CERTIFICATE OF OCCUPANCY CAN BE ISSUED FOR THE BUILDING.

Site Plan Approval Bartow County and the City of Cartersville	
In accordance with the City of Cartersville Development Regulations and Zoning Ordinance and the Bartow County Development Regulations, all requirements of approval have been fulfilled. These Site Plans were given final approval by the following:	
Cartersville Gas System	Date
Cartersville Electric System	Date
Fibercom	Date
Cartersville Fire Department	Date
Cartersville Planning and Development	Date
Cartersville Public Works	Date
Cartersville Water Dept.	Date
Bartow County Water Dept.	Date

**CONSTRUCTION EXIT GPS LOCATION:**  
LATITUDE: 34.129091 LONGITUDE: -84.84808

**24 HOUR CONTACT**  
**DAN PORTA**  
**770-387-5672**

TOTAL SITE AREA = 15.04 ACRES  
INITIAL DISTURBED AREA= 1.25 ACRES  
TOTAL DISTURBED AREA = 15.04 ACRES

**SITE NOTES**

1. AREA OF LAND DISTURBANCE: 15.04 ACRES
2. ZONING - H-1 (HEAVY INDUSTRIAL)
3. MINIMUM FRONT YARD: 20 FT
4. MINIMUM SIDE YARD: 15 FT
5. MINIMUM REAR YARD: 20 FT
6. MINIMUM LOT FRONTAGE: 175 FT
7. MAXIMUM BUILDING HEIGHT: 50 FT
8. THE SITE IS PARTIALLY LOCATED WITHIN THE FLOOD PLAIN PER FEMA F.I.R.M. PANEL NUMBER: 13015 C0263 H, DATED OCT. 5, 2018.
9. SIGNING AND STRIPING TO BE PROVIDED BY THE DEVELOPER ACCORDING TO THE CITY SPECIFICATIONS, AIRPORT AUTHORITY, OR AIRPORT SAFETY PLAN.
10. ON-SITE PARKING SHALL BE PROVIDED AND MAINTAINED THROUGHOUT CONSTRUCTION.
11. THERE ARE STATE WATERS, ETOWAH RIVER, ON SITE. THE ETOWAH RIVER IS LOCATED TO THE NORTH FROM THE NEAREST LAND DISTURBANCE ACTIVITY.
12. THERE ARE NO WETLANDS ON SITE.
13. DOMESTIC WATER PROVIDED BY BARTOW COUNTY.
14. SANITARY SEWER PROVIDED BY BARTOW COUNTY.
15. BOUNDARY INFORMATION TAKEN FROM SOUTHLAND ENGINEERING SURVEYING DEPARTMENT AND TOPOGRAPHIC INFORMATION TAKEN FROM BOTH SOUTHLAND ENGINEERING SURVEY AND BARTOW COUNTY GIS.
16. EXISTING UTILITY LOCATIONS ARE SHOWN FOR INFORMATION PURPOSES ONLY.
17. TOTAL FUTURE IMPERVIOUS AREA= 6.18 ACRES
18. THE SITE IS LOCATED WITHIN THE ETOWAH VALLEY HISTORIC DISTRICT AS DEPICTED ON THE BARTOW COUNTY ETOWAH VALLEY HISTORIC DISTRICT MAP.
19. CONTRACTOR TO REMOVE SEDIMENT FROM POND AFTER CONSTRUCTION IS COMPLETE AND SITE IS STABILIZED.
20. MINIMIZE CLEARING TO THE AMOUNT OF LAND MINIMALLY NECESSARY FOR THE FOOTPRINT OF THE STRUCTURE, RIGHTS OF WAY, REQUIRED DRAINAGE, AND OR REQUIRED PARKING.
21. ACCEPTED PLANS AND SUBSEQUENT ACCEPTED REVISIONS MUST BE PRESENTED ON-SITE AT ALL TIMES
22. LAND DISTURBING ACTIVITIES UNDER THE PERMIT MUST BEGIN WITHIN 120 DAYS AFTER ISSUANCE OF THE LAND DISTURBANCE PERMIT.
23. ALL ROADWAY AND ROADSIDE DESIGN MUST CONFORM TO AASHTO GUIDELINES.
24. ALL TRAFFIC CONTROL DEVICES, SIGNS, SIGNALS, AND MARKINGS TO BE USED MUST CONFORM TO THE REQUIREMENTS OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS (MUTCD) LATEST EDITION.

**GRADING NOTES**

BOUNDARY INFORMATION OBTAINED FROM SOUTHLAND ENGINEERING INC. TOPOGRAPHIC INFORMATION OBTAINED FROM SOUTHLAND ENGINEERING INC. AND BARTOW COUNTY GIS. EXISTING UTILITY LOCATIONS ARE SHOWN FOR INFORMATION PURPOSES ONLY. CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE EXACT LOCATIONS OF ALL UTILITIES AND FOR COORDINATING HIS OPERATIONS WITH ALL UTILITIES WHICH CONFLICT WITH HIS WORK. STORM DRAIN LOCATIONS AND INVERTS ARE TO BE FIELD VERIFIED. DISCREPANCIES ARE TO BE ADDRESSED TO THE ENGINEER. STORM DRAIN GRADES ARE TO MATCH EXISTING WATERCOURSE GRADES UNLESS NOTED OTHERWISE. ALL STREAMS, TRIBUTARIES, WETLANDS, DITCHES, OR DRAINS SHOWN HEREON HAVE BEEN VERIFIED IN THE FIELD AND ARE IDENTIFIED AS EITHER "JURISDICTIONAL" OR "NON-JURISDICTIONAL".

UNDERCUTTING IS REQUIRED IN ALL AREAS WHERE MATERIAL IS DETERMINED TO BE UNSUITABLE (BY A REGISTERED GEOTECHNICAL ENGINEER) FOR STRUCTURAL BACKFILL MATERIAL. ALL TREES, STUMPS, ROOTS, DEBRIS, AND OTHERWISE DELETERIOUS MATERIAL MAY NOT BE BURIED OR DISPOSED OF ON SITE. ALL SLOPES SHALL BE 2:1 MAXIMUM, UNLESS SPECIFIED OTHERWISE OR WITH WRITTEN APPROVAL FROM THE ENGINEER. STRIP TOPSOIL AND VEGETATION FROM ALL WORK AREAS PRIOR TO GRADING. COMPACT FILL TO 95% STD PROCTOR DENSITY. COMPACT TOP 12" IN BLDG AREAS TO 100% SPD FOR AN AREA EXTENDING 10' BEYOND SLAB IN ALL DIRECTIONS. STOCKPILES TO BE COMPACTED TO 90% SPD IN TOP 2' TO PREVENT INFILTRATION OF MOISTURE.

THIS DOCUMENT WAS PREPARED FOR THE EXCLUSIVE USE OF THE PERSON, PERSONS OR ENTITY NAMED HEREON. USE OF THIS DOCUMENT DOES NOT EXTEND TO ANY UNNAMED PERSON WITHOUT THE EXPRESS RECERTIFICATION BY THE ENGINEER. THE RECORD DRAWINGS AND DESIGN DOCUMENTS FOR THIS PROJECT ARE ON FILE AT THE OFFICES OF SOUTHLAND ENGINEERING, INC (SEI). ANY ALTERATION OR REVISION TO THESE DOCUMENTS BY PERSONS OTHER THAN PROFESSIONAL EMPLOYEES OF SEI SHALL NOT BE PERMITTED. SEI SHALL NOT BE HELD LIABLE FOR ANY CLAIMS MADE ARISING FROM UNAUTHORIZED ALTERATIONS, REVISIONS OR USE.

**CITY OF CARTERSVILLE DETENTION POND NOTES:**

- A. STORM WATER FACILITY(IES) SHALL REMAIN IN PLACE AS APPROVED AND AS-BUILT CERTIFIED IN PERPETUITY AND SHALL NOT ENCRROACHED UPON FOR ANY REASON.
- B. STORMWATER FACILITY(IES) SHALL BE INSPECTED ON A SEMI-ANNUAL BASIS BY OWNER. ANY ACCUMULATED TRASH, SEDIMENT, OR DEBRIS SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED MANNER.
- C. OWNER/DEVELOPER SHALL ACCEPT FULL LIABILITY FOR THE SAFETY OF ALL PERSONS IN OR AROUND THE STORMWATER FACILITY(IES) AT ALL TIMES.
- D. BARTOW/CARTERSVILLE AIRPORT AUTHORITY SHALL INDEMNIFY CITY AGAINST ALL SUITS BROUGHT ABOUT BY THE EXISTENCE OF THE DETENTION FACILITY(IES).
- E. BARTOW/CARTERSVILLE AIRPORT AUTHORITY SHALL PROVIDE THAT OBLIGATIONS BE TRANSFERRED TO ALL SUCCESSORS AND ASSIGNS OF PROPERTY, AND SHALL ACCEPT RESPONSIBILITY FOR INFORMING SUCH SUCCESSORS AND ASSIGNS OF SAID OBLIGATIONS.
- F. ALL EXISTING AND PROPOSED STORM DRAINAGE FEATURES AFFECTING THIS DEVELOPMENT HAVE BEEN EVALUATED AND/OR DESIGNED IN ACCORDANCE WITH CITY OF CARTERSVILLE REQUIREMENTS AND WILL NOT ADVERSELY IMPACT ANY PROPOSED ON-SITE IMPROVEMENTS OR UPSTREAM OR DOWNSTREAM PROPERTY.

**STORM PIPE NOTES:**

1. THE DEPARTMENT OF TRANSPORTATION, STATE OF GEORGIA STANDARD "PIPE CULVERTS" NUMBER 1030D, LATEST EDITION SHALL BE USED IN DETERMINING THE CLASS OF REINFORCED CONCRETE PIPE OR GAUGE OF CORRUGATED STEEL PIPE OR TYPE 2 CORRUGATED ALUMINUM PIPE UNDER FILL AND THE METHOD OF BACKFILLING.
2. FIELD JOINTS FOR CORRUGATED PIPE SHALL BE MADE WITH BANDS OF THE SAME BASE METAL AND COATING AS THE CORRUGATED PIPE. BANDS SHALL BE OF THE HUGGER TYPE DESIGNED TO FULLY ENGAGE AT LEAST ONE ANNULAR CORRUGATION AT THE END OF EACH CORRUGATED PIPE AROUND IT'S ENTIRE CIRCUMFERENCE. MINIMUM BAND WITH SHALL EQUAL THE CENTERLINE LENGTH OF FOUR (4) ANNULAR CORRUGATIONS. BANDS SHALL CONFORM TO CURRENT ASTM/AASHTO INDUSTRY STANDARDS AS TO SECURING BOLTS, THEIR NUMBER AND PLACEMENT.
3. CONCRETE PIPE SECTIONS MAY BE JOINED WITH BITUMINOUS PLASTIC CEMENT JOINTS, REBBER-TYPE GASKET JOINTS, O-RING GASKET JOINTS OR PRE-FORMED PLASTIC GASKET JOINTS. IN BITUMINOUS PLASTIC CEMENT JOINTS, THE ANNULAR SPACE SHALL BE FILLED WITH JOINT MATERIAL, AND THE INSIDE OF EACH JOINT WIPE SMOOTH. RUBBER-TYPE, O-RING, AND PRE-FORMED PLASTIC GASKET JOINTS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
4. ALL CATCH BASINS, DROP INLETS OR OTHER DRAINAGE STRUCTURES SHALL COMPLY WITH THE LATEST STANDARDS APPROVED AND PROMULGATED BY THE GEORGIA DEPARTMENT OF TRANSPORTATION IN "STANDARDS SPECIFICATIONS FOR CONSTRUCTION OF ROADS AND BRIDGES", LATEST EDITION.
5. HDPE PIPE SHALL BE ADVANCED DRAINAGE SYSTEMS, INC "N-12" SMOOTH INTERIOR DUAL WALL CORRUGATED PIPE OR APPROVED EQUAL. GRANULAR BACKFILL TO TOP OF PIPE. WATERTIGHT BELL AND SPIGOT GASKETED JOINTS MUST BE PROVIDED
6. PIPE LENGTHS ARE SCALED FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE. CONTRACTOR SHALL VERIFY PIPE LENGTH PRIOR TO ORDERING PIPE AND PRIOR TO CONSTRUCTION.
7. COMPACT ALL FILL AREAS ABOVE AND UNDER PIPE TO MIN. 98% STD. PROCTOR.
8. ALL ORGANICS AND TOP SOIL SHALL BE REMOVED FROM BACK FILL MATERIALS.

**UTILITY DISCLAIMER:**

INFORMATION REGARDING THE PRESENCE, SIZE, CHARACTER AND LOCATION OF EXISTING UNDERGROUND UTILITIES AND STRUCTURES SHOWN HEREON IS BASED ON INFORMATION READILY AVAILABLE AT THE TIME OF PLAN PREPARATION. THERE IS NO CERTAINTY OF THE ACCURACY OF THIS INFORMATION AND IT SHALL BE TAKEN INTO CONSIDERATION BY THOSE USING THIS DOCUMENT. THE LOCATION AND DISPOSITION OF UTILITIES SHOWN MAY BE INACCURATE AND UTILITIES AND STRUCTURES NOT SHOWN MAY BE ENCOUNTERED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UTILITIES AFFECTED BY HIS WORK PRIOR TO BEGINNING ANY CONSTRUCTION OR LAND DISTURBANCE.

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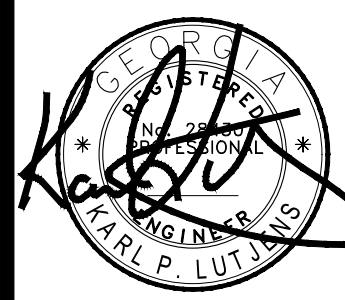
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**CARTERSVILLE - BARTOW AIRPORT EXPANSION EAST**  
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 4TH DISTRICT, 3RD SECTION  
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SHEET TITLE:

GENERAL NOTES

SHEET NO.:

C100

**24 HOUR CONTACT  
DAN PORTA  
770-387-5672**



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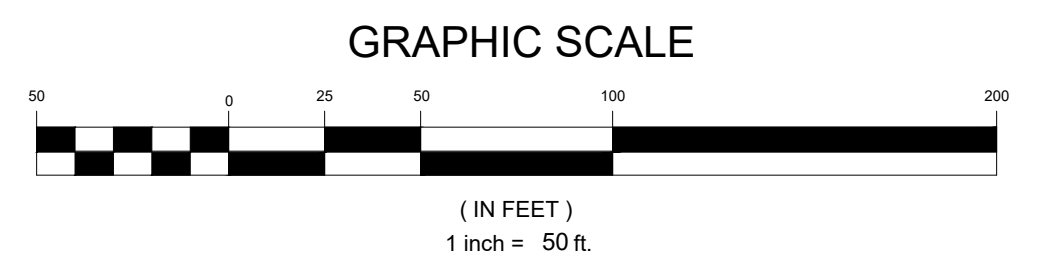
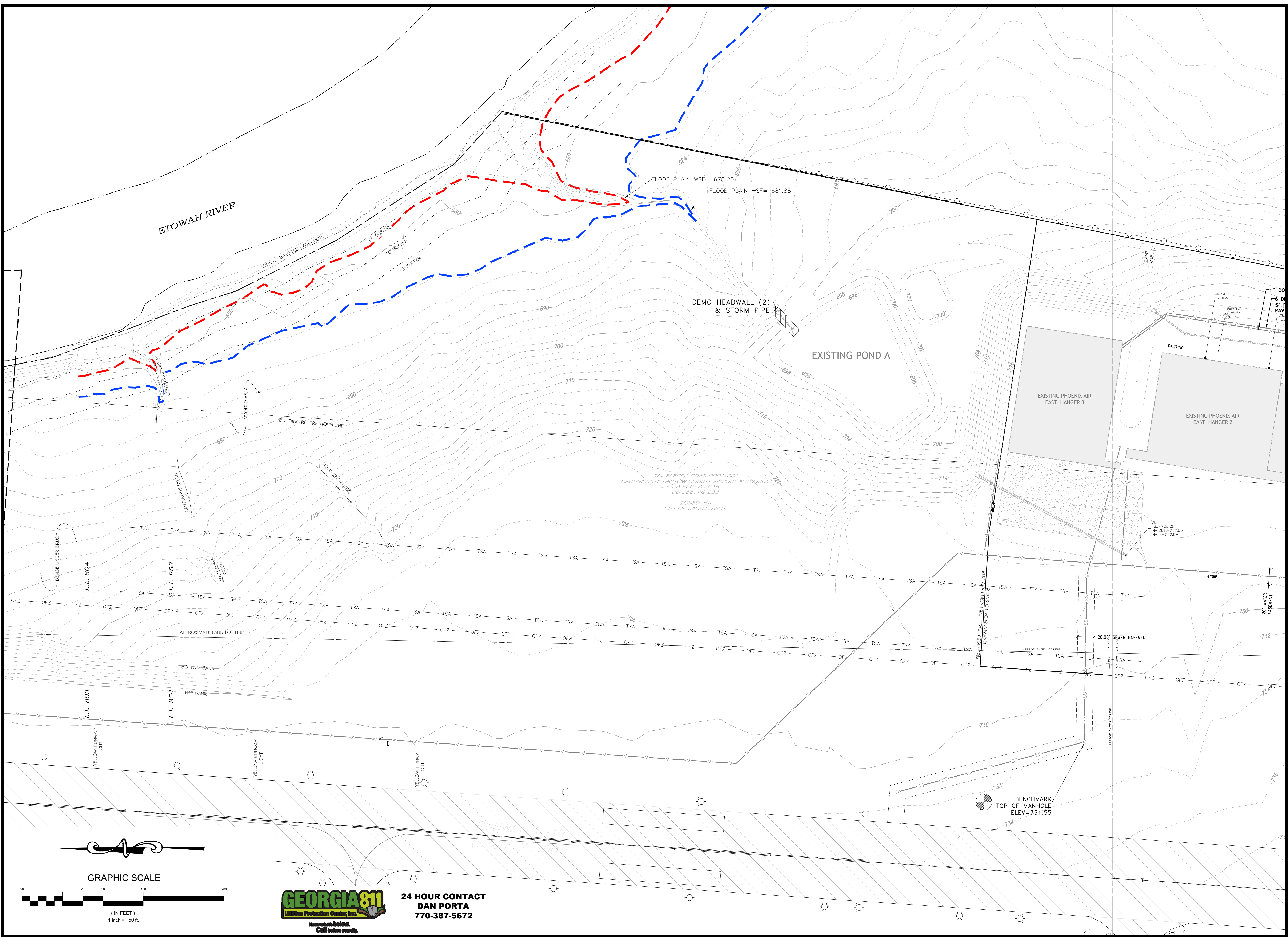
**SOUTHLAND ENGINEERING**  
 CIVIL ENGINEERS - LAND SURVEYORS - LAND PLANNERS  
 114 OLD MILL ROAD, CARTERSVILLE, GA 30120 PH: 770.387.0440 FAX: 770.607.5151

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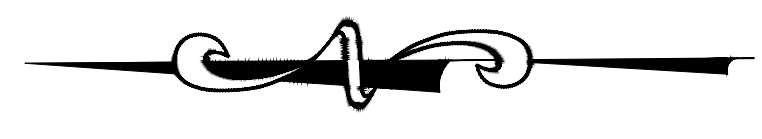
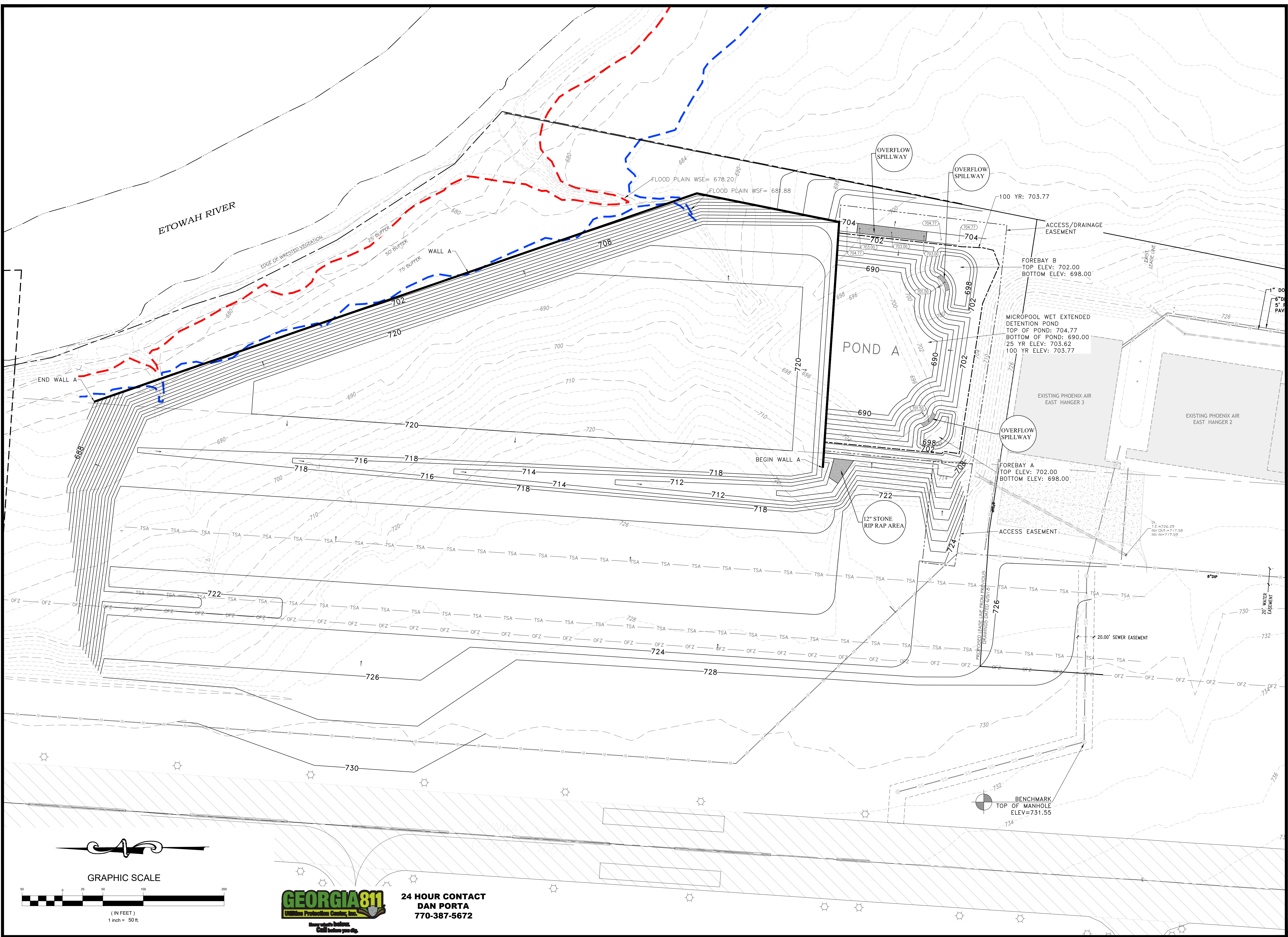
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**EXISTING CONDITIONS & DEMO PLAN**  
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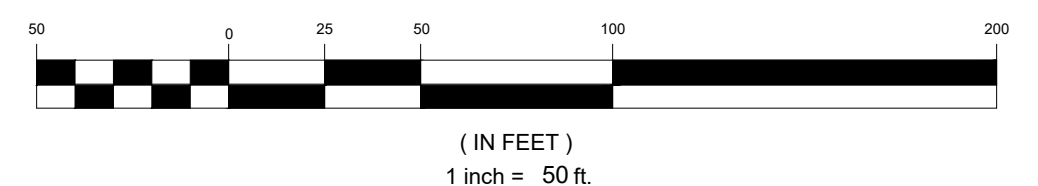


**GEORGIA811**  
 24 HOUR CONTACT  
 DAN PORTA  
 770-387-5672

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GRAPHIC SCALE



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DAN PORTA  
770-387-5672

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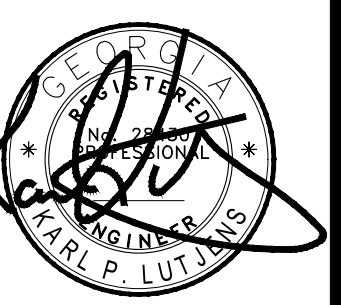
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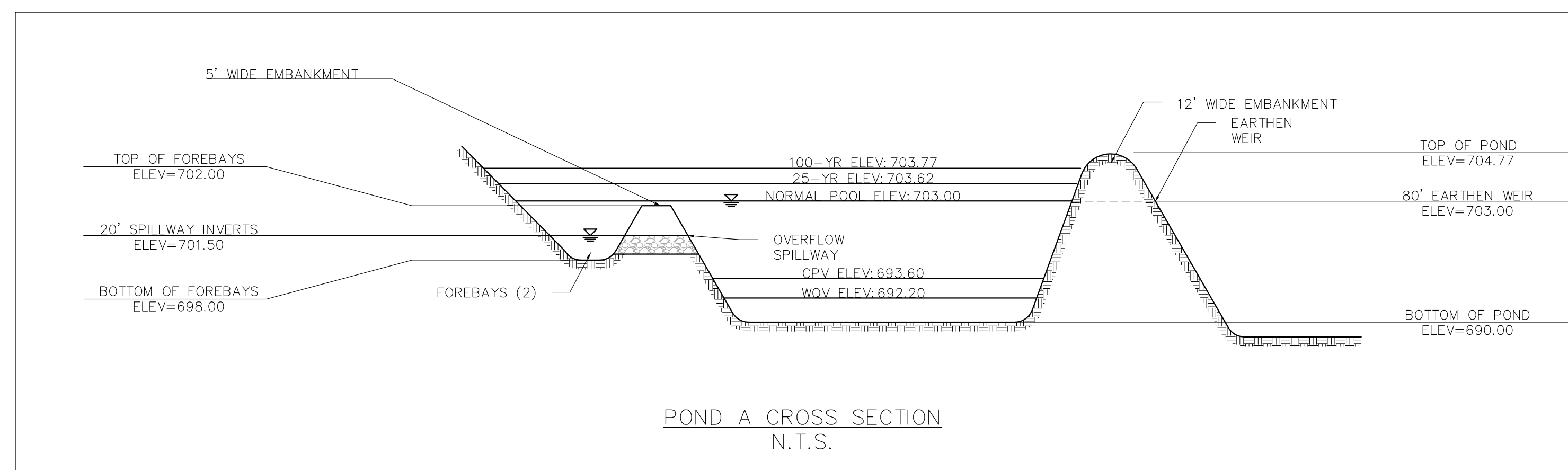
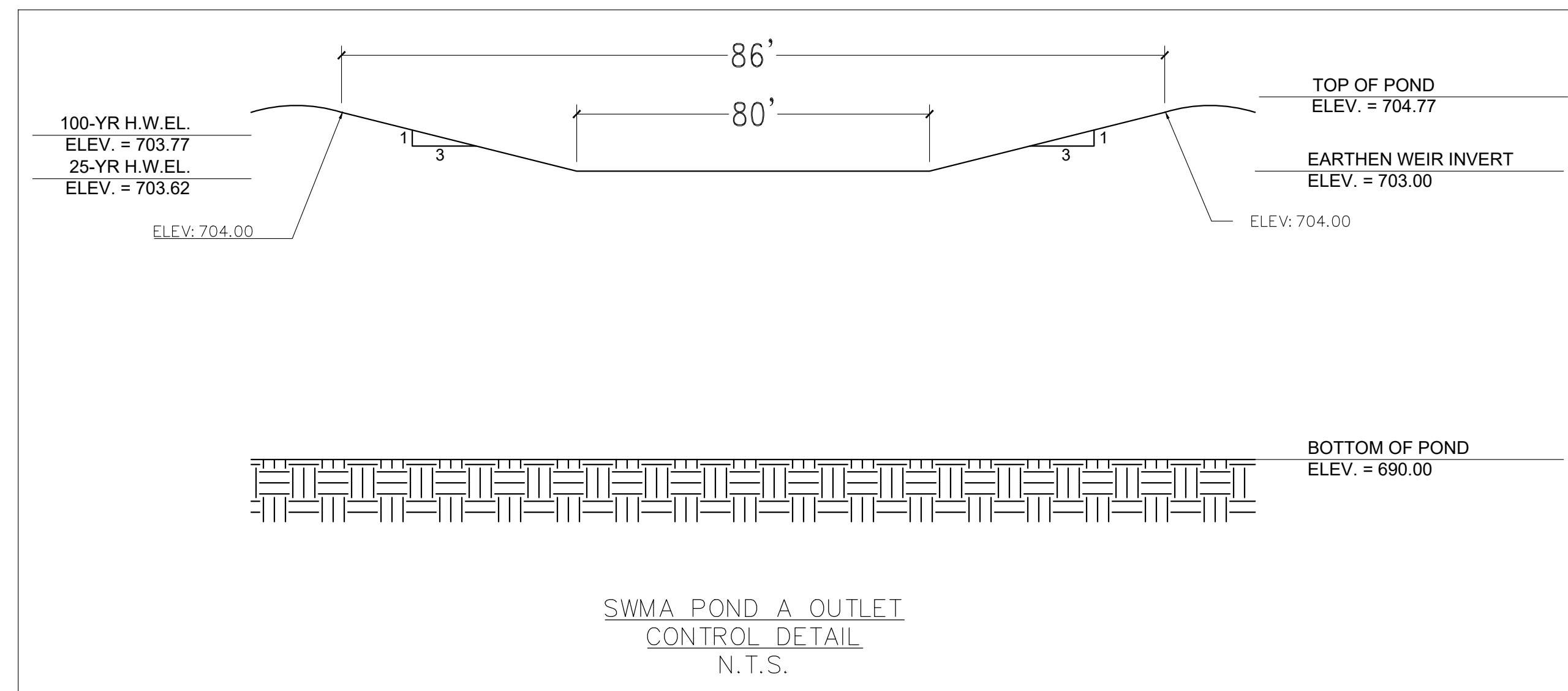
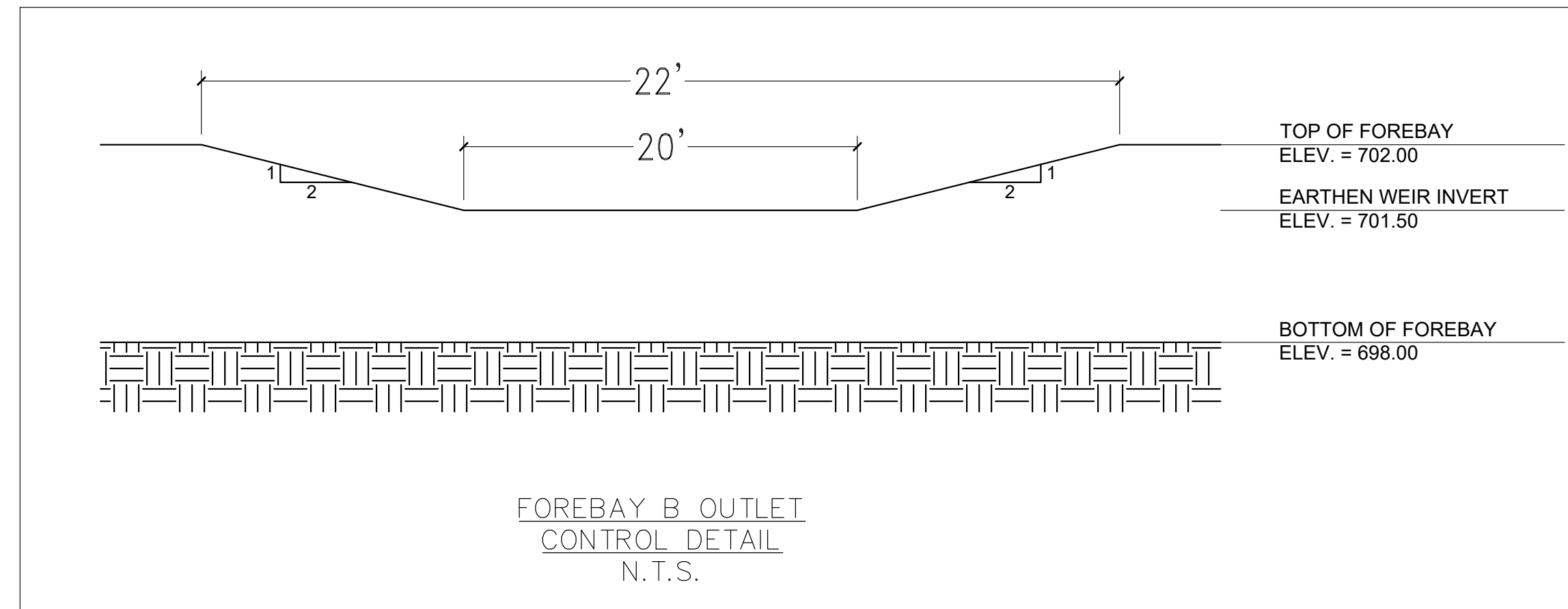
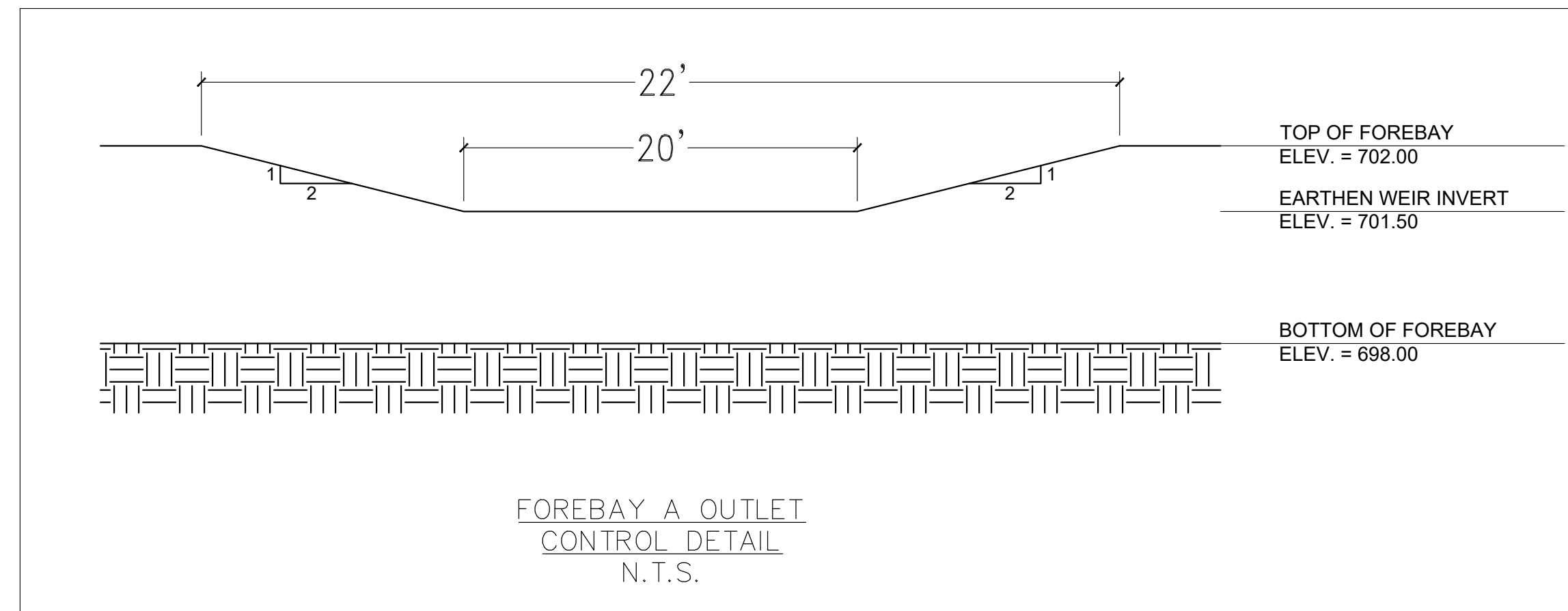
POND  
PLAN

SHEET NO.:

C508

**STORMWATER POND B MANAGEMENT INSPECTION AND MAINTENANCE SCHEDULE**

ACTIVITY	SCHEDULE
<ul style="list-style-type: none"> <li>INSPECT INLETS, OUTLETS AND OVERFLOW SPILLWAY TO ENSURE GOOD CONDITION AND NO EVIDENCE OF EROSION.</li> <li>CLEAN AND REMOVE DEBRIS FROM INLET AND OUTLET STRUCTURES.</li> <li>MOW SIDE SLOPES.</li> <li>INSPECT POND DAM FOR STRUCTURAL INTEGRITY.</li> <li>REMOVE TRASH FROM THE AREA AROUND THE POND.</li> </ul>	MONTHLY OR AS NEEDED
<ul style="list-style-type: none"> <li>IF WETLAND COMPONENTS ARE INCLUDED, INSPECT FOR INVASIVE VEGETATION.</li> </ul>	SEMIANNUAL INSPECTION
<ul style="list-style-type: none"> <li>INSPECT FOR DAMAGE, PAYING PARTICULAR ATTENTION TO THE CONTROL STRUCTURE.</li> <li>CHECK FOR SIGNS OF EUTROPHIC CONDITIONS (E.G., ALGAL BLOOMS AND FISH KILLS).</li> <li>NOTE SIGNS OF HYDROCARBON BUILD-UP (E.G., AN OIL SHEEN), AND REMOVE APPROPRIATELY.</li> <li>MONITOR FOR SEDIMENT ACCUMULATION IN THE FACILITY AND FOREBAY.</li> <li>CHECK ALL CONTROL GATES, VALVES, OR OTHER MECHANICAL DEVICES.</li> </ul>	ANNUAL INSPECTION
<ul style="list-style-type: none"> <li>REPAIR UNDERCUT OR ERODED AREAS.</li> </ul>	AS NEEDED
<ul style="list-style-type: none"> <li>PERFORM WETLAND PLANT MANAGEMENT AND HARVESTING.</li> </ul>	ANNUALLY (IF NEEDED)
<ul style="list-style-type: none"> <li>REMOVE SEDIMENT FROM THE FOREBAY.</li> </ul>	5 TO 7 YEARS OR AFTER 50% OF THE TOTAL FOREBAY CAPACITY HAS BEEN LOST
<ul style="list-style-type: none"> <li>MONITOR SEDIMENT ACCUMULATIONS, AND REMOVE SEDIMENT WHEN THE POOL VOLUME HAS BECOME REDUCED SIGNIFICANTLY, OR THE POND BECOMES EUTROPHIC.</li> </ul>	10 TO 20 YEARS OR AFTER 25% OF THE PERMANENT POOL VOLUME HAS BEEN LOST



GSWCC LEVEL II CERTIFICATION NUMBER  
GEORGIA REGISTRATION NO. GA #3422 (2)

24 HOUR CONTACT  
DAN PORTA  
770-387-5672



24 HOUR CONTACT  
**DAN PORTA**  
 770-387-5672

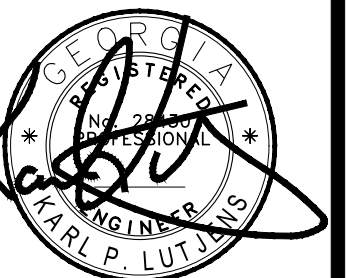
PROJECT NO.:  
 18166

DATE:  
 10/2/2020

REVISIONS:	DATE	DESCRIPTION
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**CARTERSVILLE - BARTOW AIRPORT  
 EXPANSION EAST**  
 LOCATED IN LAND LOTS 853, 854, 875, 876  
 4TH DISTRICT, 3RD SECTION  
 CARTERSVILLE, GEORGIA



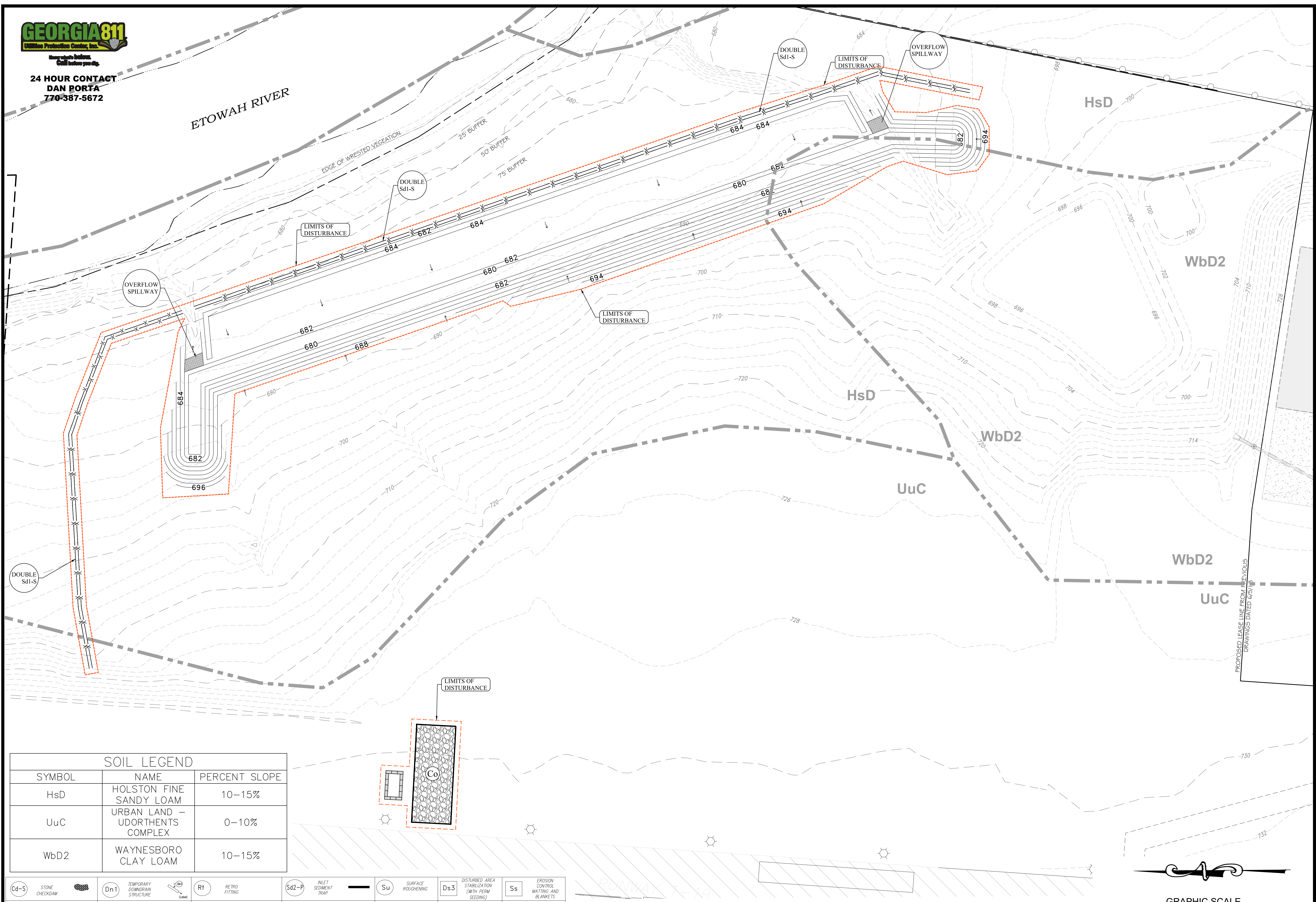
SHEET TITLE:

INITIAL  
 EROSION  
 CONTROL  
 PLAN

SHEET NO.:

C501

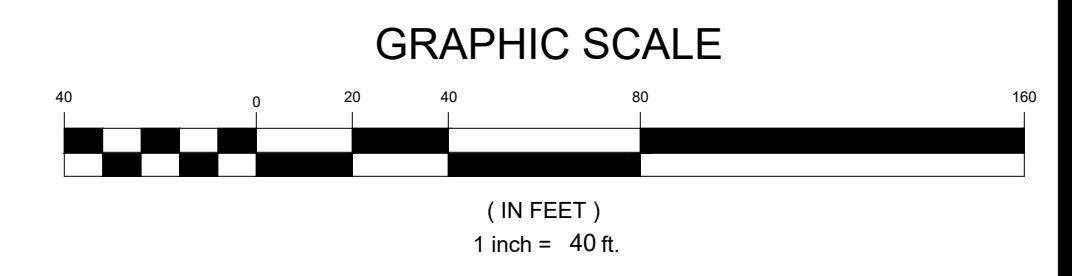
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SOIL LEGEND		
SYMBOL	NAME	PERCENT SLOPE
HsD	HOLSTON FINE SANDY LOAM	10-15%
UuC	URBAN LAND - UDORTHENTS COMPLEX	0-10%
WbD2	WAYNESBORO CLAY LOAM	10-15%

(Cd-S) STONE CHECKDAM	(Dn1) TEMPORARY DOWNDRAIN STRUCTURE	(Rt) RETRO FITTING	(Sd2-P) INLET SEDIMENT TRAP	(Su) SURFACE ROUGHENING	(Ds3) DISTURBED AREA STABILIZATION (WITH PERM SEEDING)	(Ss) EROSION CONTROL MATTING AND BLANKETS
(Co) CONSTRUCTION EXIT	(Dn2) PERMANENT DOWNDRAIN STRUCTURE	(Sd1) SEDIMENT BARRIER	(Sd3) TEMPORARY SEDIMENT BASIN	(Ds1) DISTURBED AREA STABILIZATION (WITH MULCHING ONLY)	(Ds4) DISTURBED AREA STABILIZATION (SOODING)	(Pm) POLY-ACRYLAMIDE (PAM)
(Di) DIVERSION	(Fr) FILTER RING	(Sd2-F) INLET SEDIMENT TRAP	(St) STORMDRAIN OUTLET PROTECTION	(Ds2) DISTURBED AREA STABILIZATION (WITH TEMP SEEDING)	(Du) DUST CONTROL ON DISTURBED AREAS	

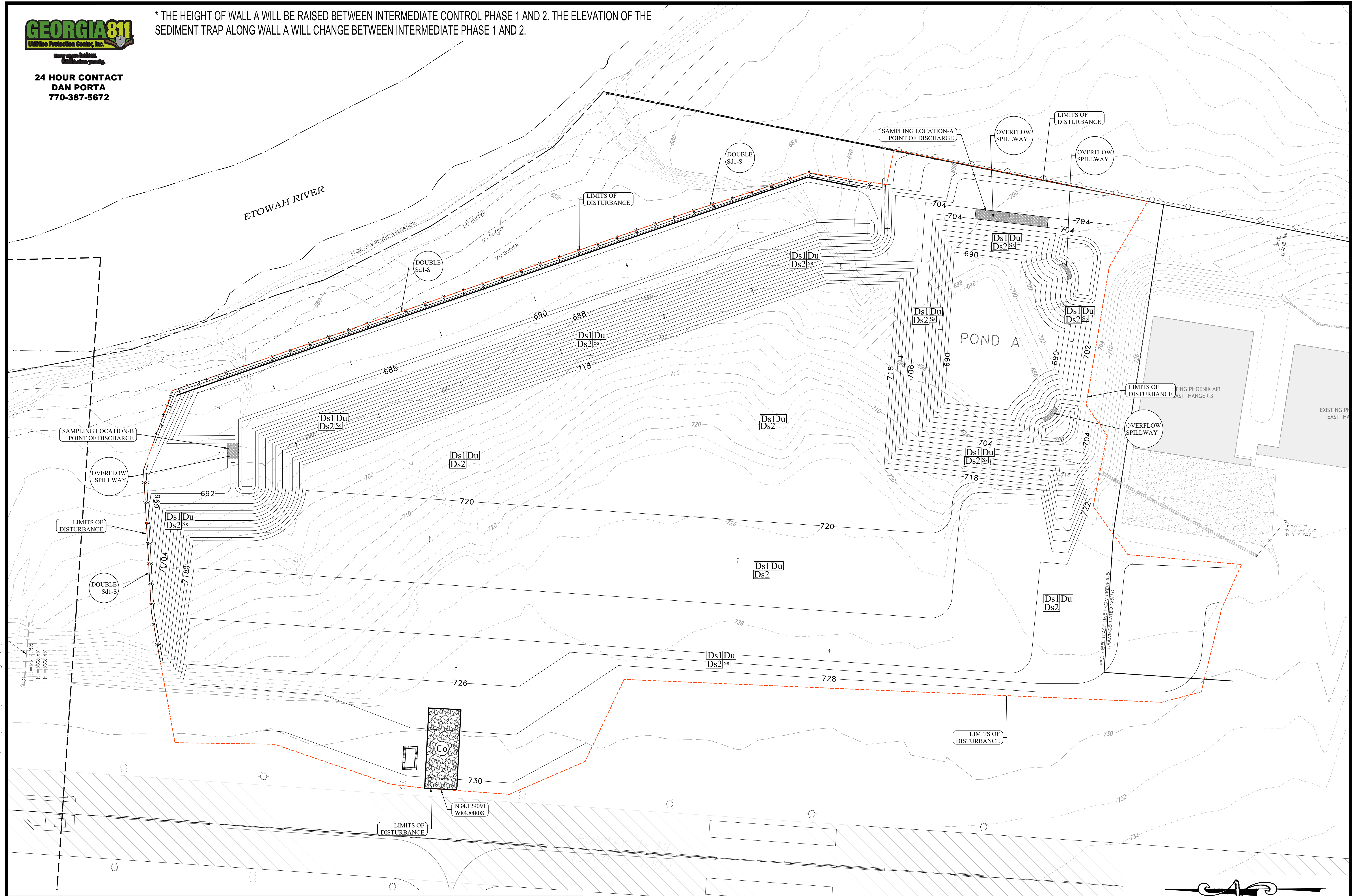
**GSWCC LEVEL II CERTIFICATION NUMBER**  
**GEORGIA REGISTRATION NO. GA #3422**  
 TOTAL SITE AREA = 15.04 ACRES  
 INITIAL DISTURBED AREA= 1.25 ACRES  
 TOTAL DISTURBED AREA = 15.04 ACRES





24 HOUR CONTACT  
**DAN PORTA**  
 770-387-5672

\* THE HEIGHT OF WALL A WILL BE RAISED BETWEEN INTERMEDIATE CONTROL PHASE 1 AND 2. THE ELEVATION OF THE SEDIMENT TRAP ALONG WALL A WILL CHANGE BETWEEN INTERMEDIATE PHASE 1 AND 2.

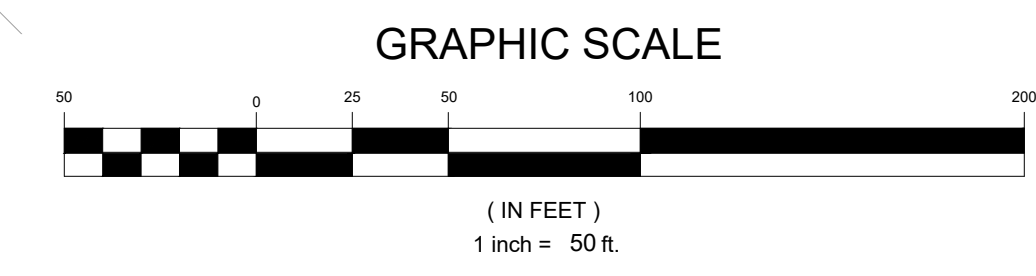


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<b>Cd-S</b> STONE CHECKDAM	<b>Dn1</b> TEMPORARY DOWNDRAIN STRUCTURE	<b>Rt</b> RETRO FITTING	<b>Sd2-P</b> INLET SEDIMENT TRAP	<b>Su</b> SURFACE ROUGHENING	<b>Ds3</b> DISTURBED AREA STABILIZATION (WITH PERM SEEDING)	<b>Ss</b> EROSION CONTROL MATTING AND BLANKETS
<b>Co</b> CONSTRUCTION EXIT	<b>Dn2</b> PERMANENT DOWNDRAIN STRUCTURE	<b>Sd1</b> SEDIMENT BARRIER	<b>Sd3</b> TEMPORARY SEDIMENT BASIN	<b>Ds1</b> DISTURBED AREA STABILIZATION (WITH MULCHING ONLY)	<b>Ds4</b> DISTURBED AREA STABILIZATION (SOODING)	<b>Pm</b> POLY-ACRYLAMIDE (PAM)
<b>Di</b> DIVERSION	<b>Fr</b> FILTER RING	<b>Sd2-F</b> INLET SEDIMENT TRAP	<b>Sf</b> STORMDRAIN OUTLET PROTECTION	<b>Ds2</b> DISTURBED AREA STABILIZATION (WITH TEMP SEEDING)	<b>Du</b> DUST CONTROL ON DISTURBED AREAS	

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**GEORGIA REGISTRATION NO. GA #3422**

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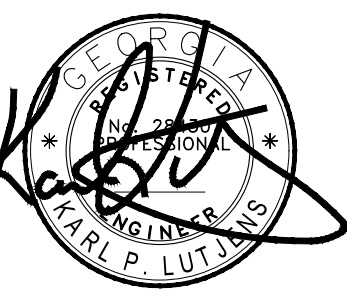


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**SOUTHLAND ENGINEERING**  
 CIVIL ENGINEERS - LAND SURVEYORS - LAND PLANNERS  
 114 OLD MILL ROAD., CARTERSVILLE, GA 30120 PH: 770.387.0440 FAX: 770.607.5151

**CARTERSVILLE - BARTOW AIRPORT EXPANSION EAST**  
 LOCATED IN LAND LOTS 853, 854, 875, 876  
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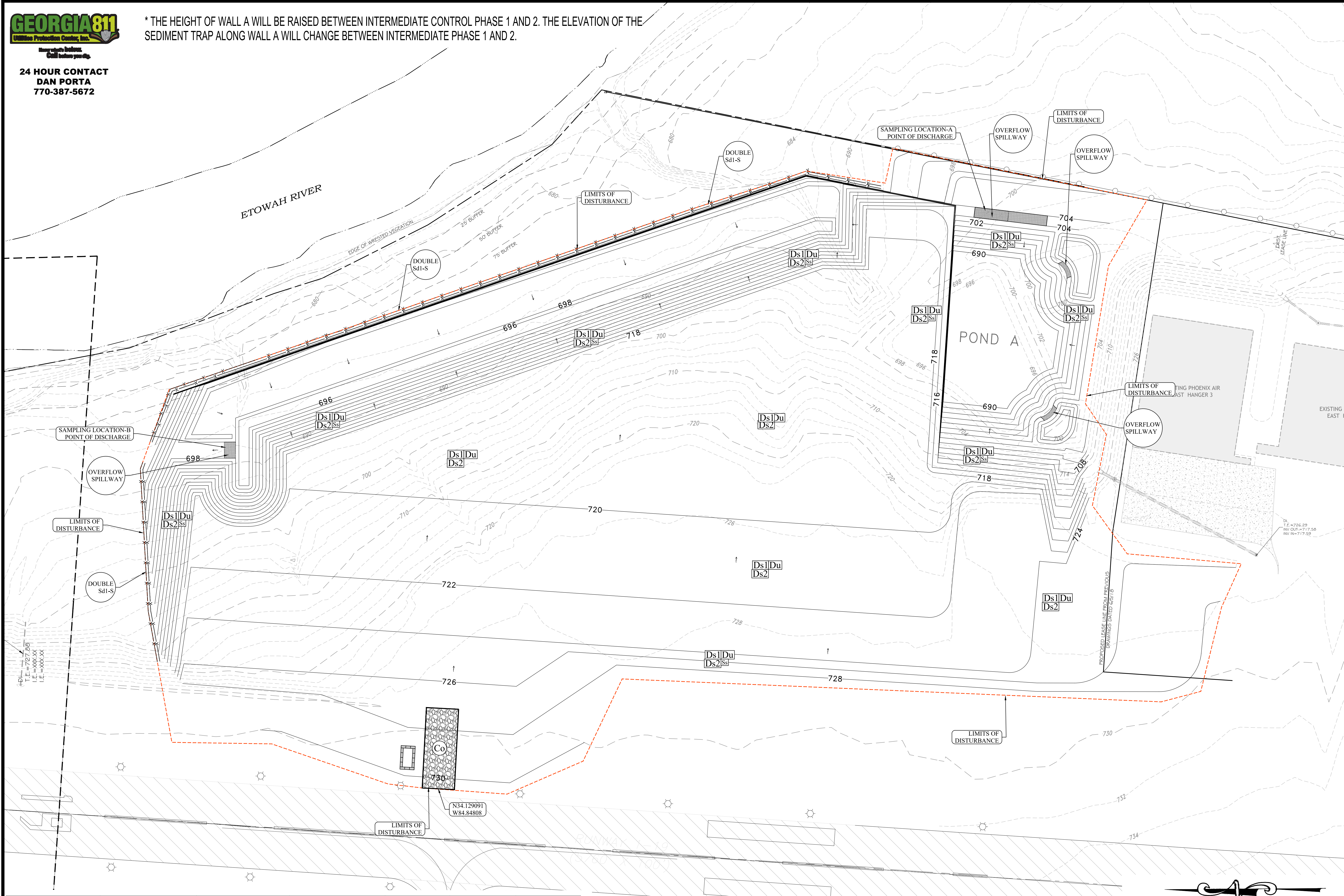
SHEET TITLE:  
 INTERMEDIATE EROSION CONTROL PLAN PHASE 1  
 SHEET NO.:  
**C502**

\* THE HEIGHT OF WALL A WILL BE RAISED BETWEEN INTERMEDIATE CONTROL PHASE 1 AND 2. THE ELEVATION OF THE SEDIMENT TRAP ALONG WALL A WILL CHANGE BETWEEN INTERMEDIATE PHASE 1 AND 2.

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DAN PORTA  
770-387-5672

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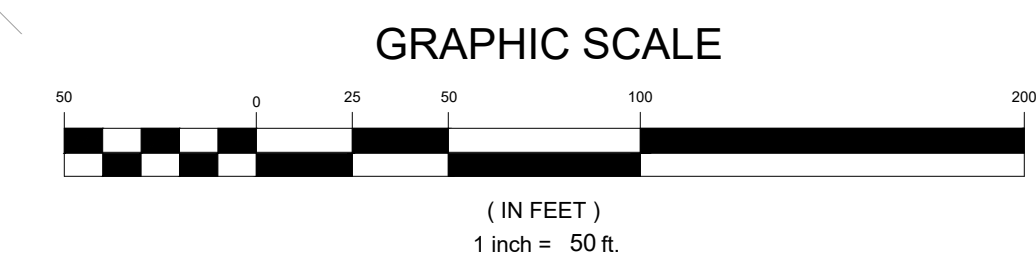


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<b>Co</b> CONSTRUCTION EXIT	<b>Dn2</b> PERMANENT DOWNDRAIN STRUCTURE	<b>Sd1</b> SEDIMENT BARRIER	<b>Sd3</b> TEMPORARY SEDIMENT BASIN	<b>Ds1</b> DISTURBED AREA STABILIZATION (WITH MULCHING ONLY)	<b>Ds4</b> DISTURBED AREA STABILIZATION (SOODING)	<b>Pm</b> POLYACRYLAMIDE (PAM)
<b>Di</b> DIVERSION	<b>Fr</b> FILTER RING	<b>Sd2-F</b> INLET SEDIMENT TRAP	<b>Sf</b> STORMDRAIN OUTLET PROTECTION	<b>Ds2</b> DISTURBED AREA STABILIZATION (WITH TEMP SEEDING)	<b>Du</b> DUST CONTROL ON DISTURBED AREAS	

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**GEORGIA REGISTRATION NO. GA #3422**

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**DAN PORTA**  
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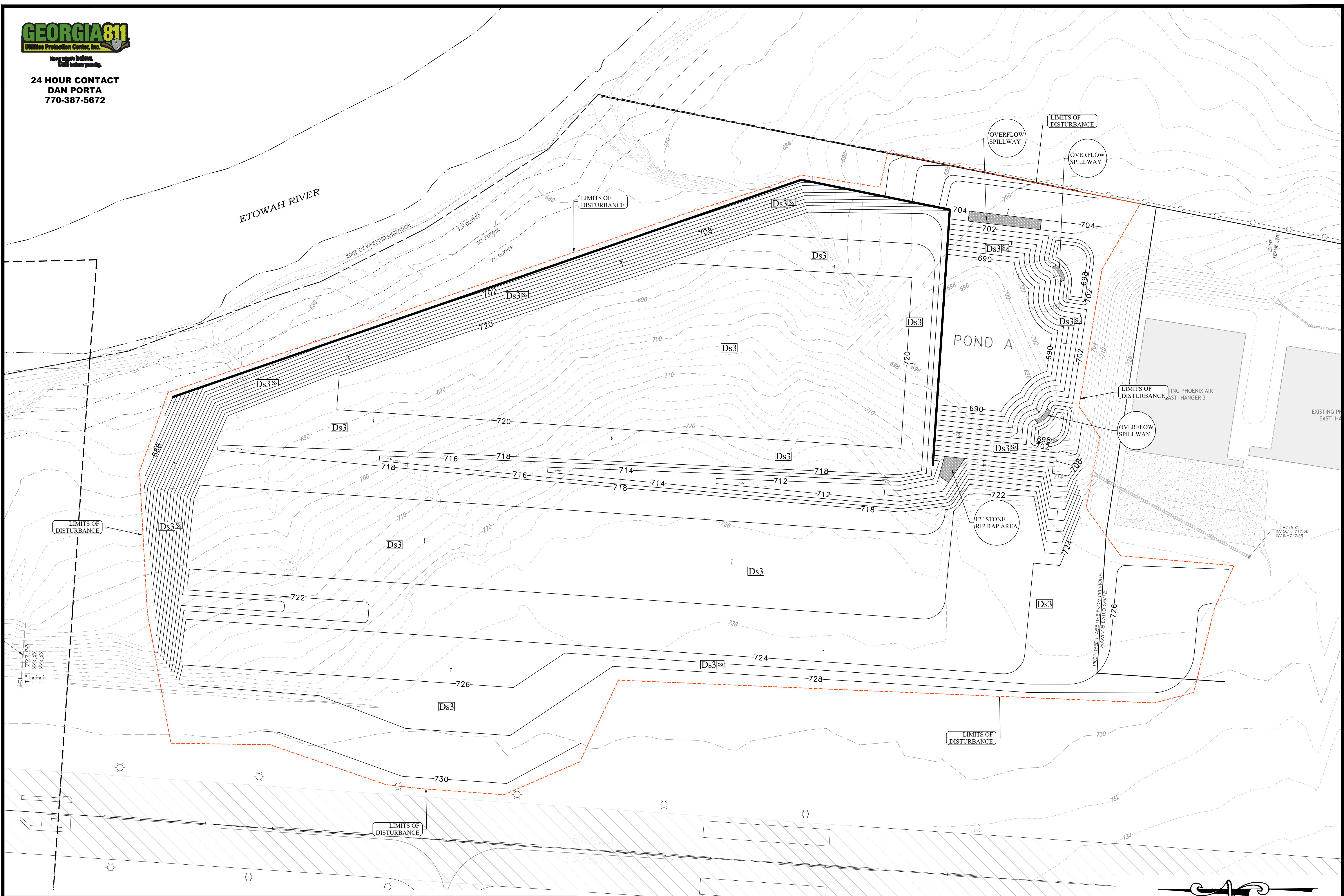
SHEET TITLE:

FINAL EROSION CONTROL PLAN

SHEET NO.:

C504

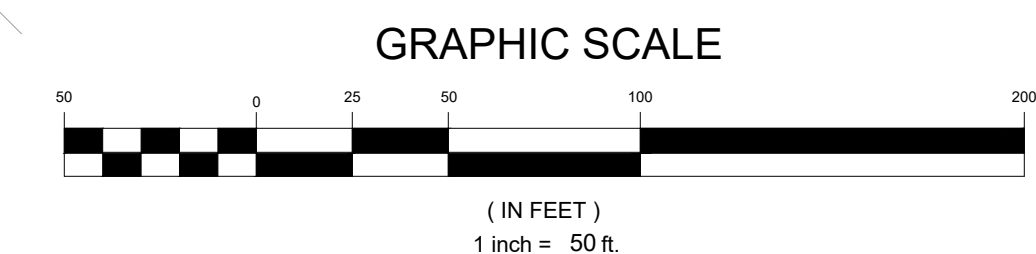
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<b>Cd-S</b> STONE CHECKDAM	<b>Dn1</b> TEMPORARY DOWNDRAIN STRUCTURE	<b>Rt</b> RETRO FITTING	<b>Sd2-P</b> INLET SEDIMENT TRAP	<b>Su</b> SURFACE ROUGHENING	<b>Ds3</b> DISTURBED AREA STABILIZATION (WITH PERM SEEDING)	<b>Ss</b> EROSION CONTROL MATTING AND BLANKETS
<b>Co</b> CONSTRUCTION EXIT	<b>Dn2</b> PERMANENT DOWNDRAIN STRUCTURE	<b>Sd1</b> SEDIMENT BARRIER	<b>Sd3</b> TEMPORARY SEDIMENT BASIN	<b>Ds1</b> DISTURBED AREA STABILIZATION (WITH MULCHING ONLY)	<b>Ds4</b> DISTURBED AREA STABILIZATION (SOODING)	<b>Pm</b> POLY-ACRYLAMIDE (PAM)
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## EROSION CONTROL NOTES

- 19 THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO LAND DISTURBING ACTIVITIES.

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.

- 20 ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING.

EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSPECTED AT LEAST WEEKLY, AFTER EACH RAIN, AND REPAIRED AS NECESSARY.

ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED IF DETERMINED NECESSARY BY ON-SITE INSPECTION.

ALL SILT FENCES MUST MEET THE REQUIREMENTS OF SECTION 171-TEMPORARY SILT FENCE FOR THE DEPARTMENT OF TRANSPORTATION, QUALIFIED PRODUCTS LIST #36.

SILT FENCES SHALL NOT BE PLACED IN STREAM BUFFER OR FLOODPLAINS, UNLESS UTILIZED FOR THE CONSTRUCTION OF AN EXEMPT ACTIVITY (I.E. ROADWAY DRAINAGE STRUCTURES, SEWER/WATER CROSSINGS, OR DRAINAGE STRUCTURES) PER THE APPROVED PLANS. FOR SUCH DISTURBANCES WITHIN THE BUFFER, THE AREA SHALL BE IMMEDIATELY STABILIZED USING EROSION CONTROL MATTING AND/OR BLANKETS ONCE THE ACTIVITY IS COMPLETE.

SEDIMENT STORAGE VOLUME (67 CY/ACRE) MUST BE INSTALLED PRIOR TO ANY OTHER LAND DISTURBANCE ACTIVITY AND IN PLACE UNTIL FINAL STABILIZATION OCCURS.

FOR EACH SITE ON WHICH LAND DISTURBING ACTIVITY OCCURS, EACH ENTITY OR PERSON ACTING AS EITHER A PRIMARY, SECONDARY, OR TERTIARY PERMITTEE, AS DEFINED IN THE STATE GENERAL PERMIT, SHALL HAVE AS A MINIMUM ONE PERSON WHO IS IN RESPONSIBLE CHARGE OF EROSION AND SEDIMENTATION CONTROL ACTIVITIES ON BEHALF OF SAID ENTITY OR PERSON AND MEETS THE APPLICABLE (LEVEL 1A) EDUCATION OR TRAINING CERTIFICATION REQUIREMENTS (O.C.G.A. 12-7-19(A)(2)).

ALL TEMPORARY AND PERMANENT SEEDING MUST BE PERFORMED AT THE APPROPRIATE SEASON. IN SUCH INSTANCES WHERE THE ESTABLISHMENT OF VEGETATION IS INOPPORTUNE DUE TO SEASON OR DROUGHT, DISTURBED AREAS SHALL BE TEMPORARILY STABILIZED USING 2"-4" OF MULCH (DS1). ADDITIONAL PLANTINGS WILL BE NECESSARY IF A SUFFICIENT STAND OF GRASS FAILS TO GROW.

A COPY OF THE APPROVED LAND DISTURBANCE PLAN AND PERMIT SHALL BE PRESENT ON THE SITE AT ALL TIMES.

PRIOR TO COMMENCING LAND DISTURBANCE ACTIVITY, THE LIMITS OF LAND DISTURBANCE AND ALL STREAM BUFFERS 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.

PRIOR TO ANY OTHER CONSTRUCTION, A STABILIZED CONSTRUCTION ENTRANCE SHALL BE CONSTRUCTED AT EACH POINT OF ENTRY TO OR EXIT FROM THE SITE OR ONTO ANY PUBLIC ROADWAY.

THE FOLLOWING INITIAL EROSION CONTROL MEASURES SHALL BE IMPLEMENTED PRIOR TO ANY OTHER CONSTRUCTION ACTIVITY.

1. THE CONSTRUCTION EXIT, CONSISTING OF A MINIMUM PAD SIZE OF 20 FEET BY 50 FEET WITH A MINIMUM OF 6" THICK STONE, SHALL BE PLACED AS SHOWN ON THE PLAN. THE STONE SIZE SHOULD CONSIST OF COURSE AGGREGATE BETWEEN 1-1/2" & 3-1/2" IN DIAMETER AND OVERLAID ON A GEOTEXTILE UNDERLINER. THE GEOTEXTILE UNDERLINER SHALL MEET THE REQUIREMENTS OF AASHTO M288-96, SECTION 7.3 SEPARATION REQUIREMENTS.
2. IMMEDIATELY AFTER THE ESTABLISHMENT OF CONSTRUCTION ENTRANCE/EXITS, ALL PERIMETER EROSION CONTROL AND TEMPORARY SEDIMENT BASINS SHALL BE INSTALLED AS SHOWN ON THE INITIAL PHASE EROSION CONTROL PLAN.
3. SILT FENCE SHOULD BE INSTALLED AT THE PERIMETER OF THE DISTURBED AREA AS SHOWN ON THE PLAN. THE SILT FENCE SHOULD BE PLACED IN ACCORDANCE WITH THE MANUAL FOR EROSION CONTROL IN GEORGIA, TABLE 6-27.1. THE SILT FENCE SHOULD BE KEPT ERECT AT ALL TIMES AND REPAIRED WHEN REQUESTED BY THE SITE INSPECTOR OR THE PROJECT DESIGN PROFESSIONAL OF RECORD. SILT SHOULD BE REMOVED WHEN ACCUMULATION REACHES 1/2 HEIGHT OF THE BARRIER. THE PERIMETER SILT FENCE SHOULD BE INSPECTED DAILY FOR ANY FAILURES. ANY FAILURES OF SAID FENCING SHOULD BE REPAIRED IMMEDIATELY.
4. INLET SEDIMENT PROTECTION MEASURES SHALL BE INSTALLED ON ALL EXISTING STORM STRUCTURES AS SHOWN ON THE PLAN. SEE SEPARATE DETAILS FOR SPECIFICS ON TYPE OF INLET PROTECTION SPECIFIED.
5. STONE CHECK DAMS SHALL BE INSTALLED IN AREAS OF CONCENTRATED FLOWS AS SHOWN ON THE PLAN.
6. TREE PROTECTION FENCING SHOULD BE INSTALLED PRIOR TO THE START OF ANY LAND DISTURBANCE ACTIVITY AND MAINTAINED UNTIL FINAL LANDSCAPE IS INSTALLED. THE TREE PROTECTION FENCING SHOULD BE INSPECTED DAILY. ANY FAILURES OF SAID FENCING SHOULD BE REPAIRED IMMEDIATELY.

ADDITIONAL SILT BARRIERS MUST BE PLACED AS SHOWN ON THE PLAN AS ACCESS IS OBTAINED DURING CLEARING. NO GRADING SHALL TAKE PLACE UNTIL SILT BARRIER INSTALLATION AND SEDIMENT PONDS ARE CONSTRUCTED AS SHOWN ON THE CLEARING PHASE EROSION CONTROL PLAN.

MULCH OR TEMPORARY GRASSING SHALL BE APPLIED TO ALL EXPOSED AREAS WITHIN 14 DAYS OF LAND DISTURBANCE.

SEDIMENT AND EROSION CONTROL MEASURES SHOULD BE CHECKED AFTER EACH RAIN EVENT. EACH DEVICE IS TO BE MAINTAINED OR REPLACED IF SEDIMENT ACCUMULATION HAS REACHED ONE HALF THE CAPACITY OF THE DEVICE.

THE CONSTRUCTION EXIT 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 1-3" OF STONE, AS CONDITIONS DEMAND. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLE ON TO PUBLIC ROADWAY OR INTO STORM DRAIN MUST BE REMOVED IMMEDIATELY.

CONTRACTOR SHALL INSPECT EROSION CONTROL MEASURES AT THE END OF EACH WORKING DAY TO ENSURE MEASURES ARE FUNCTIONING PROPERLY.

FAILURE TO INSTALL, OPERATE, OR MAINTAIN ALL EROSION CONTROL MEASURES WILL RESULT IN ALL CONSTRUCTION BEING STOPPED ON THE JOB UNTIL SUCH MEASURES ARE CORRECTED BACK TO THE APPROVED EROSION CONTROL PLANS.

THE SITE CONTRACTOR WILL BE RESPONSIBLE FOR MAINTENANCE OF ALL EROSION CONTROL MEASURES INCLUDING REPLACING OR REPAIRING ANY DAMAGED DEVICES DUE TO ANY CONSTRUCTION ACTIVITY BY OTHERS.

EARTHWORK OPERATIONS IN THE VICINITY OF STREAM BUFFERS SHALL BE CAREFULLY CONTROLLED TO AVOID DUMPING OR SLOUGHING INTO THE BUFFER AREAS.

SEDIMENT SHALL NOT BE WASHED INTO INLETS. IT SHALL BE REMOVED FROM THE SEDIMENT TRAPS AND DISPOSED OF AND STABILIZED SO THAT IT WILL NOT ENTER THE INLETS AGAIN.

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 PATTERNS DURING THE CONSTRUCTION ARE DIFFERENT FROM THE 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 BE REPORTED TO THE DESIGN PROFESSIONAL IMMEDIATELY.

THE CONTRACTOR SHALL FURNISH AND MAINTAIN ALL NECESSARY BARRICADES WHILE ROADWAY FRONTAGE IMPROVEMENTS ARE BEING MADE.

SILT FENCE SHOULD BE INSTALLED AT THE TOE OF ALL FILL SLOPES 10 FEET GREATER IN HEIGHT. THE SILT FENCE SHOULD BE PLACED IN ACCORDANCE WITH THE MANUAL FOR EROSION CONTROL IN GEORGIA, TABLE 6-20.0. THE SILT FENCE SHALL BE MAINTAINED UNTIL PERMANENT GROUND COVER IS ESTABLISHED ON THE SLOPE. SILT SHALL BE REMOVED WHEN ACCUMULATION REACHES 1/2 HEIGHT OF THE BARRIER. ADDITIONALLY, DIVERSION DIKES SHALL BE CONSTRUCTED ALONG THE TOP OF ALL SAID FILL SLOPES WITH THE USE OF TEMPORARY DOWN DRAINS TO CONTROL STORM WATER RUN OFF AS SHOWN ON THE PLANS. SEE SEPARATE DETAILS FOR ADDITIONAL INFORMATION.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING BARRIERS AT THE TOE OF SLOPES UNDER CONSTRUCTION. THESE BARRIERS SHALL BE AS SHOWN IN THE PLANS. THESE BARRIERS MAY BE RELOCATED AND REUSED AFTER PERMANENT SLOPE STABILIZATION BECOMES FULLY ESTABLISHED. AS THEY ARE RELOCATED, ANY DEFECTIVE MATERIALS IN THE BARRIER SHALL BE REPLACED. IN ADDITION, ALL DEBRIS AND SILT AT THE PREVIOUS LOCATION SHALL BE REMOVED. CUT AND FILL SLOPES ARE NOT TO EXCEED "2H:1V".

INLET SEDIMENT PROTECTION MEASURES SHALL BE INSTALLED ON ALL STORM STRUCTURES AS THEY ARE CONSTRUCTED. SEE PLAN VIEW FOR SPECIFIC TYPE AND SEPARATE DETAILS FOR ADDITIONAL INFORMATION ON TYPE OF INLET PROTECTION SPECIFIED.

STORM DRAIN OUTLET PROTECTION SHALL BE PLACED AT ALL OUTLET HEADWALLS AS SOON AS THE HEADWALL IS CONSTRUCTED. SEE SEPARATE DETAILS FOR ADDITIONAL INFORMATION.

## EROSION CONTROL NARRATIVE: (36) (37)

INITIAL PHASE CONSTRUCTION SCHEDULE NOTES:

- STAKE CLEARING LIMITS
- PRIOR TO BEGINNING MASS CLEARING CONTRACTOR TO INSTALL SILT FENCE, CONSTRUCTION ENTRANCE, SEDIMENT BASINS.
- CONTRACTOR TO DIRECT STORMWATER TO THE SEDIMENT BASINS.
- INSTALL ALL EROSION CONTROL MEASURES, DIVERSION DITCHES AS SHOWN ON THE INITIAL PHASE PLAN (EROSION CONTROL MEASURES TO BE CONSTRUCTED AND FULLY FUNCTIONAL PRIOR TO ANY GRADING).
- INSTALL CONCRETE WASHOUT AREA
- BEGIN CLEARING AND GRUBBING.

INTERMEDIATE PHASE CONSTRUCTION SCHEDULE NOTES:

- BEGIN GRADING SITE
- BEGIN INSTALLING STORM (IF APPLICABLE)
- DIRECT STORMWATER SEDIMENT BASINS DURING MASS GRADING OF THE PROPERTY.
- INSTALL INLET SEDIMENT PROTECTION (SD2-F) (IF APPLICABLE)
- INSTALL OUTLET PROTECTION AT STORM OUTFALLS
- PROVIDE DS1, DS2 & MB FOR AREAS THAT HAVE NOT BEEN DISTURBED FOR MORE THAN 14 DAYS.
- MAINTAIN BMP'S AS NEEDED.

FINAL PHASE CONSTRUCTION SCHEDULE NOTES:

- MAINTAIN BMP'S AS GRADING PROGRESSES.
- GRADE PARKING AREAS AND BUILDING PADS.
- BEGIN INSTALLING CURBING, SIDEWALKS, BASE AND PAVING.
- ONCE CURB IS IN PLACE AND STORM DRAIN TOPS HAVE BEEN INSTALLED INSTALL SD2-P.
- BEGIN INSTALL PERMANENT VEGETATION AND LANDSCAPING, DS3 & DS4.
- REMOVE TEMPORARY EROSION CONTROL MEASURES AFTER SITE IS 100% STABILIZED.
- REMOVE RETROFIT FROM DETENTION POND OUTLET AND FILL IN SEDIMENT BASIN (IF APPLICABLE).

## 52 VEGETATIVE PRACTICES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Bf	BUFFER ZONE			Strip of undisturbed original vegetation, enhanced or restored existing vegetation or the reestablishment of vegetation surrounding an area of disturbance or bordering streams.
Cs	COASTAL DUNE STABILIZATION (WITH VEGETATION)			Planting vegetation on dunes that are denuded, artificially constructed, or re-nourished.
DS1	DISTURBED AREA STABILIZATION (WITH MULCHING ONLY)			Establishing temporary protection for disturbed areas where seedlings may not have a suitable growing season to produce an erosion retarding cover.
DS2	DISTURBED AREA STABILIZATION (WITH TEMP. SEEDING)			Establishing a temporary vegetative cover with fast growing seedlings on disturbed areas.
DS3	DISTURBED AREA STABILIZATION (WITH PERM. SEEDING)			Establishing a permanent vegetative cover such as trees, shrubs, vines, grasses, or legumes on disturbed areas.
DS4	DISTURBED AREA STABILIZATION (WOODING)			A permanent vegetative cover using sods on highly erodible or critically eroded lands.
Du	DUST CONTROL ON DISTURBED AREAS			Controlling surface and air movement of dust on construction site, roadways and similar sites.
Fl-Cg	FLOCCULANTS AND COAGULANTS			Substance formulated to assist in the solids/liquid separation of suspended particles in solution.
Sb	STREAMBANK STABILIZATION (LONG TERM PROTECTION)			The use of readily available native plant materials to maintain and enhance streambanks, or to prevent, or restore and repair small streambank erosion problems.
Ss	SLOPE STABILIZATION			A protective covering used to prevent erosion and establish temporary or permanent vegetation on steep slopes, shore lines, or channels.
Tac	TACKERS AND BINDERS			Substance used to anchor straw or hay mulch by causing the organic material to bind together.

## GENERAL CONSTRUCTION SCHEDULE

Approx. Start Date: OCTOBER 2020 - Approx. Completion Date: JULY 2021

BEGIN CONSTRUCTION	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY
PLACE CONSTRUCTION ENTRANCE, INSTALL SILT FENCE & TREE PROTECTION FENCE										
BEGIN INITIAL CLEARING OF SITE, INSTALL TEMPORARY SEDIMENT TRAPS, USE BRUSH PILE FILTERS, SEED & MULCH BARE GROUND, BEGIN DEMOLITION OF EXISTING INFRASTRUCTURE										
BEGIN GRADING, INSTALL STORM SYSTEM WITH SD2 PROTECTION, SEED AND MULCH BARE AREAS.										
GRADE DRIVES AND BUILDING PADS, BEGIN INSTALLATION OF WATER AND SEWER, MAINTAIN TEMPORARY SEDIMENT TRAPS.										
FINAL GRADE PARKING AND BUILDING PADS, INSTALL CURBING & PAVING BASE, CONVERT SD2-F TO SD2-P, SEED ANY BARE AREAS, BEGIN BUILDING CONSTRUCTION.										
CONTINUE WITH BUILDING CONSTRUCTION, BEGIN PERMANENT LANDSCAPING IN AREAS AVAILABLE.										
INSTALL FINAL PAVING, INSTALL PERMANENT LANDSCAPING, FILL IN SEDIMENT TRAPS AND STABILIZE WITH PERMANENT VEGETATION, REMOVE SD2-P, REMOVE SILT FENCE AND TREE PROTECTION FENCE, REMOVE CONSTRUCTION EQUIPMENT.										
MAINTAIN CONSTRUCTION ENTRANCE, TREE SAVE FENCE, SILT FENCE, CHECK DAMS, FILTER BINS, INLET PROTECTION, DIVERSION DITCHES, AND TEMPORARY SEDIMENT TRAPS.										

\* SEDIMENT AND EROSION CONTROL MEASURES TO BE INSPECTED DAILY. MAINTAIN BMP'S THROUGHOUT LAND DISTURBANCE ACTIVITY.

## 51 STRUCTURAL PRACTICES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Cd	CHECKDAM			A small temporary barrier or dam constructed across a gully, drainage ditch or area of concentrated flow.
Ch	CHANNEL STABILIZATION			Improving, constructing or stabilizing an open channel, existing stream, or ditch.
Cc	CONSTRUCTION EXIT			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 STABILIZATION			A temporary structure as part of a construction plan including access roads, subdivision roads, parking areas and other on-site vehicle transportation routes.
Dc	STREAM DIVERSION CHANNEL			A temporary channel constructed to convey flow around a construction site while a permanent structure is being constructed.
Di	DIVERSION			An earth channel or dike located above, below, or across a slope to divert runoff. This may be a temporary or permanent structure.
Dn1	TEMPORARY DOWNDRAIN STRUCTURE			A flexible conduit of heavy-duty fabric or other material designed to safely conduct surface runoff down a slope. This is temporary and inexpensive.
Dn2	PERMANENT DOWNDRAIN STRUCTURE			A paved chute, pipe, sectioned conduit or similar material designed to safely conduct surface runoff down a slope.
Fr	FILTER BING			A temporary stone barrier constructed at storm drain inlets and pond outlets.
Ga	GARBAGE			Rock filter baskets which are hand-placed into position forming soil stabilizing structures.
Gr	GRADE STABILIZATION STRUCTURE			Permanent structures installed to protect channels or waterways where otherwise the slope would be sufficient for the running water to form gullies.
Lv	LEVEL SPREADER			A boom flow outlet device constructed at zero grade across the slope whereby concentrated runoff may be discharged at a non-erosive velocity into undisturbed areas stabilized by existing vegetation.
Rd	ROCK FILTER DAM			A temporary stone filter dam installed across drainage ways or in conjunction with a temporary sediment trap.
Re	RETAINING WALL			A wall installed to stabilize cut and fill slopes where maximum permissible slopes are not obtainable. Each situation will require special design.
Rt	RETRO FITTING			A device or structure placed in front of a permanent stormwater detention pond outlet structure to serve as a temporary sediment filter.
SD1	SEDIMENT BARRIER			A barrier to prevent sediment from leaving the construction site. It may be a sandbag, bales of straw or hay, brush, logs and poles, or a silt fence.
SD2	SILT SEDIMENT TRAP			A temporary protective device formed at or around an inlet to a storm drain to trap sediment.
SD3	TEMPORARY SEDIMENT BASIN			A basin created by excavation or a dam across a waterway. The surface water runoff is temporarily stored allowing the bulk of the sediment to drop out.
SD4	TEMPORARY SEDIMENT TRAP			A small temporary pond that drains a disturbed area so that sediment can settle out. The practice feature distinguishing a temporary sediment trap from a temporary sediment basin is the rock of a pipe or riser.
Sk	FLOATING SURFACE SEDIMENT TRAP			A buoyant device that releases/draws water from the surface of sediment ponds, traps, or basins of a controlled rate of flow.
SPB	SEEP BERM			A linear control device constructed as a diversion structure to the direction of the runoff to enhance dispersion and infiltration of runoff, while treating multiple sedimentation chambers with the employment of intermediate dikes.

## STRUCTURAL PRACTICES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Sr	TEMPORARY STREAM CROSSING			A temporary bridge or culvert-type structure protecting a stream or watercourse from damage by crossing construction equipment.
St	STORMDRAIN OUTLET PROTECTION			A paved or short section of riprap channel at the outlet of a storm drain system preventing erosion from the concentrated runoff.
Su	SURFACE ROUGHENING			A rough soil surface with horizontal depressions on a contour or slopes left in a roughened condition after grading.
Tc	TURBIDITY CURTAIN			A floating or staked barrier installed within the water (it may also be referred to as a floating boom, air barrier, or silt curtain).
Tp	TOPSOILING			The practice of stripping off the more fertile soil, storing it, then spreading it over the disturbed area after completion of construction activities.
Tr	TREE PROTECTION			To protect desirable trees from injury during construction activity.
Wl	VEGETATED WATERWAY OR STORMWATER CONDUIT CHANNEL			Paved or vegetative water outlets for diversions, access, booms, dikes or similar structures.

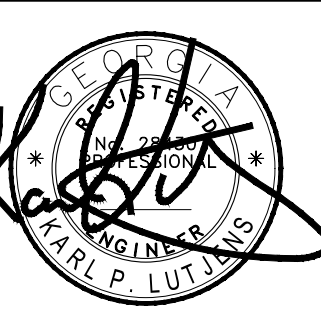
PROJECT NO.: 18166

DATE: 10/2/2020

REVISIONS:	DATE	DESCRIPTION
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4		
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6		

**SOUTH LAND ENGINEERING**  
CIVIL ENGINEERS - LAND SURVEYORS - LAND PLANNERS  
114 OLD MILL ROAD., CARTERSVILLE, GA 30120 PH: 770.387.0440 FAX: 770.607.5151

**CARTERSVILLE - BARTOW AIRPORT EXPANSION EAST**  
LOCATED IN LAND LOTS 853, 854, 875, 876  
4TH DISTRICT, 3RD SECTION  
CARTERSVILLE, GEORGIA



SHEET TITLE:

EROSION CONTROL NOTES

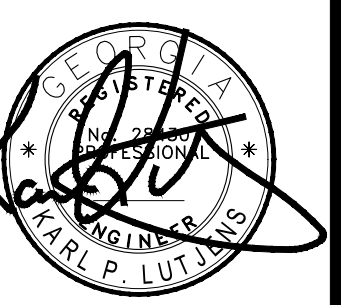
SHEET NO.:

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REVISIONS:	DATE	DESCRIPTION
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**SOUTHLAND**  
ENGINEERING  
CIVIL ENGINEERS - LAND SURVEYORS - LAND PLANNERS  
114 OLD MILL ROAD, CARTERSVILLE, GA 30120 PH: 770.387.0440 FAX: 770.607.5151

**CARTERSVILLE - BARTOW AIRPORT  
EXPANSION EAST**  
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4TH DISTRICT, 3RD SECTION  
CARTERSVILLE, GEORGIA



SHEET TITLE:

EROSION CONTROL DETAILS

SHEET NO.:

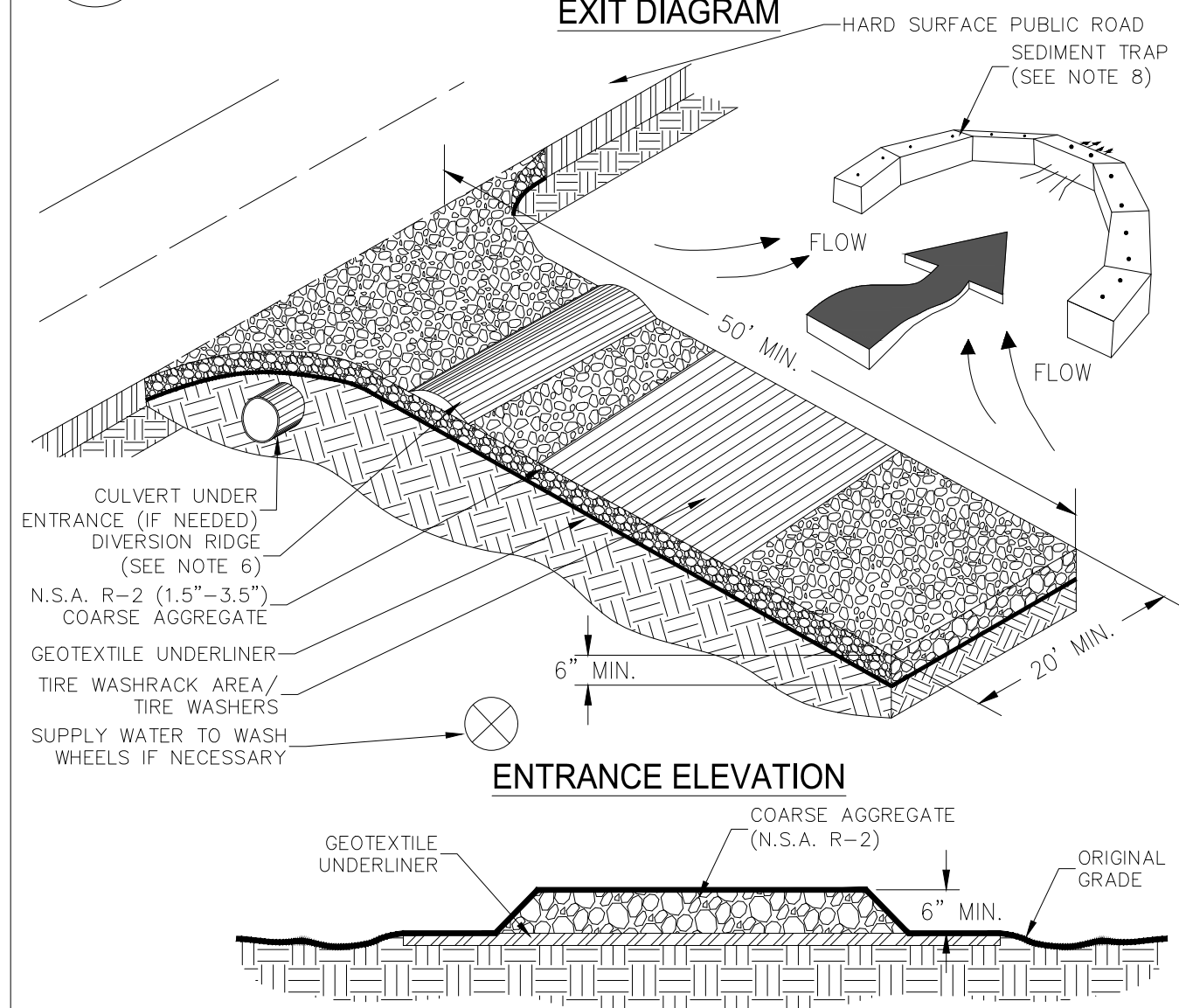
C506



24 HOUR CONTACT  
DAN PORTA  
770-387-5672

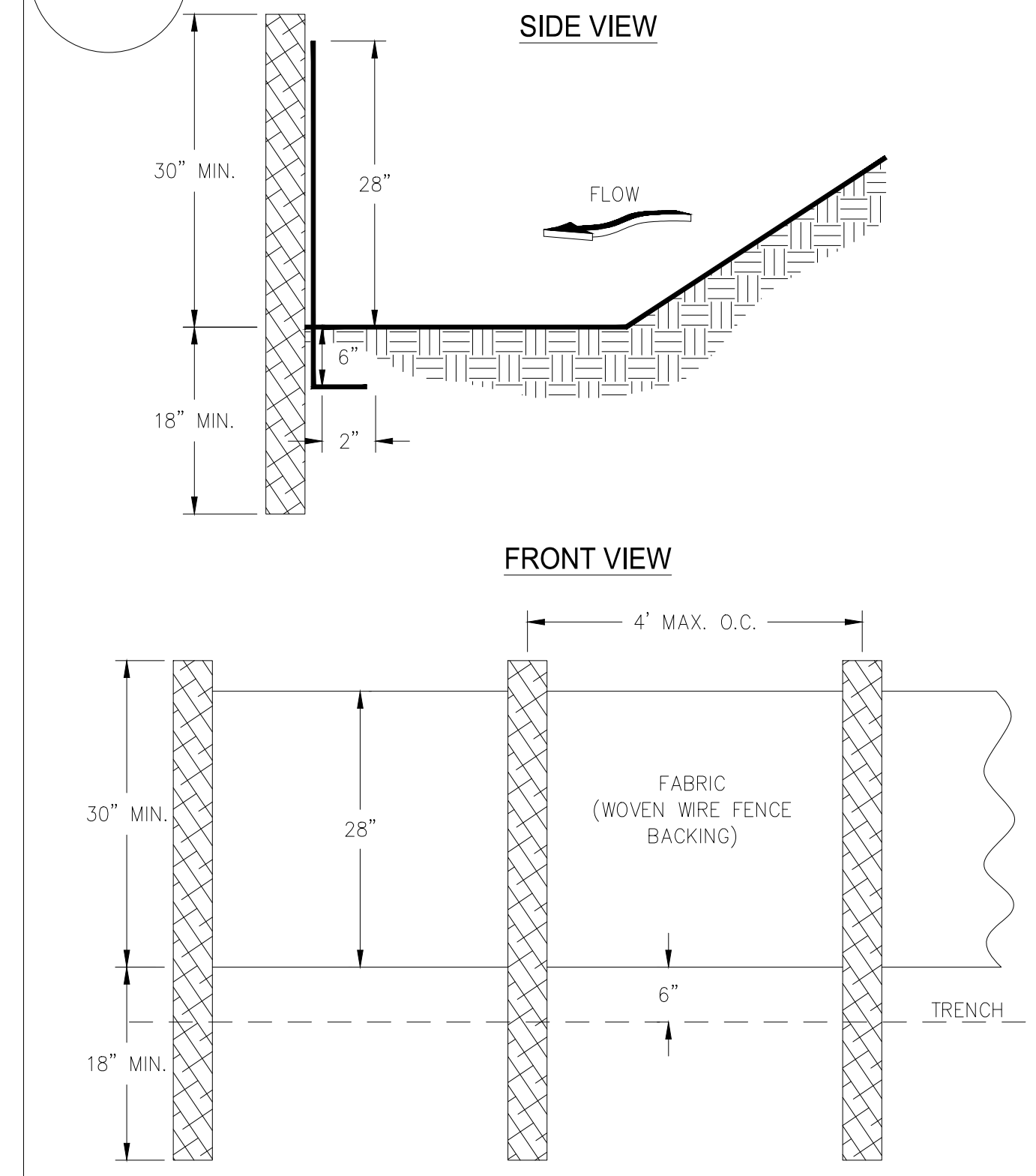
GSWCC LEVEL II CERTIFICATION NUMBER  
GEORGIA REGISTRATION NO. GA #3422 ②

**Co CRUSHED STONE CONSTRUCTION EXIT**

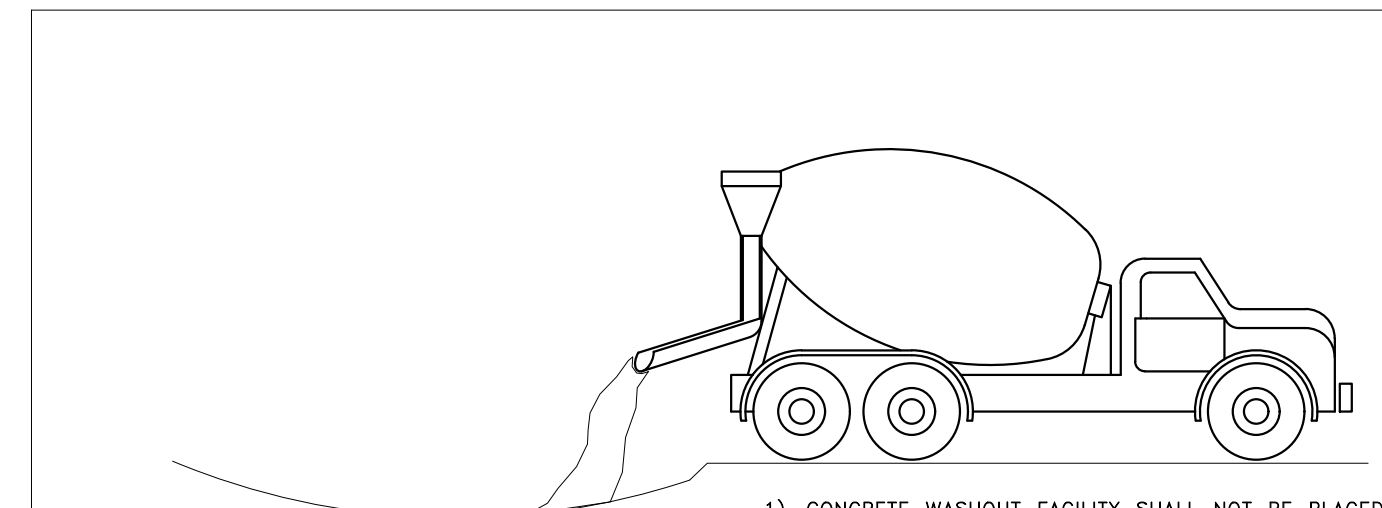


- NOTES:
1. AVOID LOCATING ON STEEP SLOPES OR AT CURVES ON PUBLIC ROADS.
  2. REMOVE ALL VEGETATION AND OTHER UNSUITABLE MATERIAL FROM THE FOUNDATION AREA, GRADE, AND CROWN FOR POSITIVE DRAINAGE.
  3. AGGREGATE SIZE SHALL BE IN ACCORDANCE WITH NATIONAL STONE ASSOCIATION R-2 (1.5"-3.5" STONE).
  4. GRAVEL PAD SHALL HAVE A MINIMUM THICKNESS OF 6".
  5. PAD WIDTH SHALL BE EQUAL FULL WIDTH AT ALL POINTS OF VEHICULAR EGRESS, BUT NO LESS THAN 20'.
  6. A DIVERSION RIDGE SHOULD BE CONSTRUCTED WHEN GRADE TOWARD PAVED AREA IS GREATER THAN 2%.
  7. INSTALL PIPE UNDER THE ENTRANCE IF NEEDED TO MAINTAIN DRAINAGE DITCHES.
  8. WHEN WASHING IS REQUIRED, IT SHOULD BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN (DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE ENTRANCE TO A SEDIMENT CONTROL DEVICE).
  9. WASHRACKS AND/OR TIRE WASHERS MAY BE REQUIRED DEPENDING ON SCALE AND CIRCUMSTANCE. IF NECESSARY, WASHRACK DESIGN MAY CONSIST OF ANY MATERIAL SUITABLE FOR TRUCK TRAFFIC THAT REMOVE MUD AND DIRT.
  10. 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.

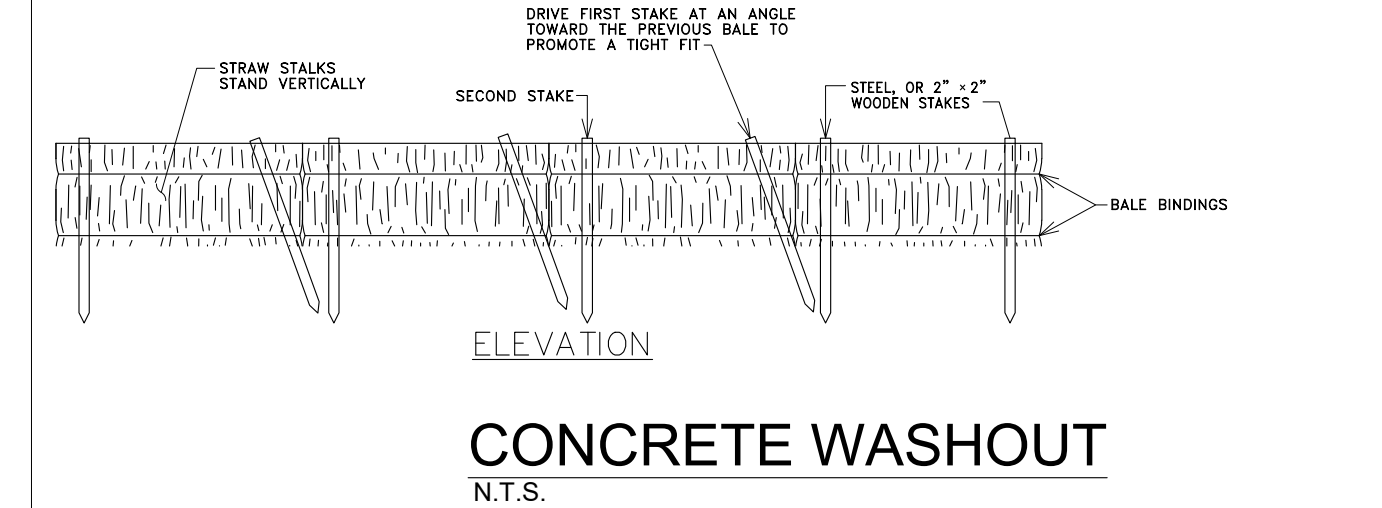
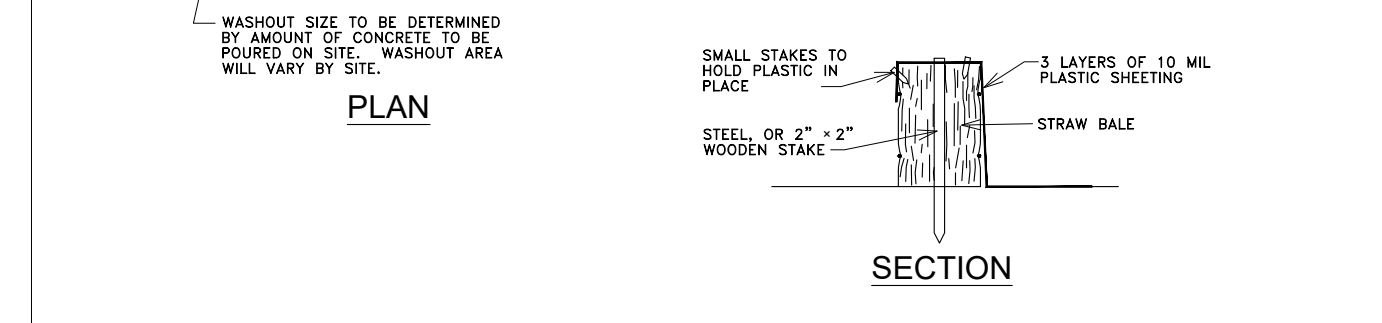
**Sd1-S SILT FENCE - TYPE SENSITIVE**



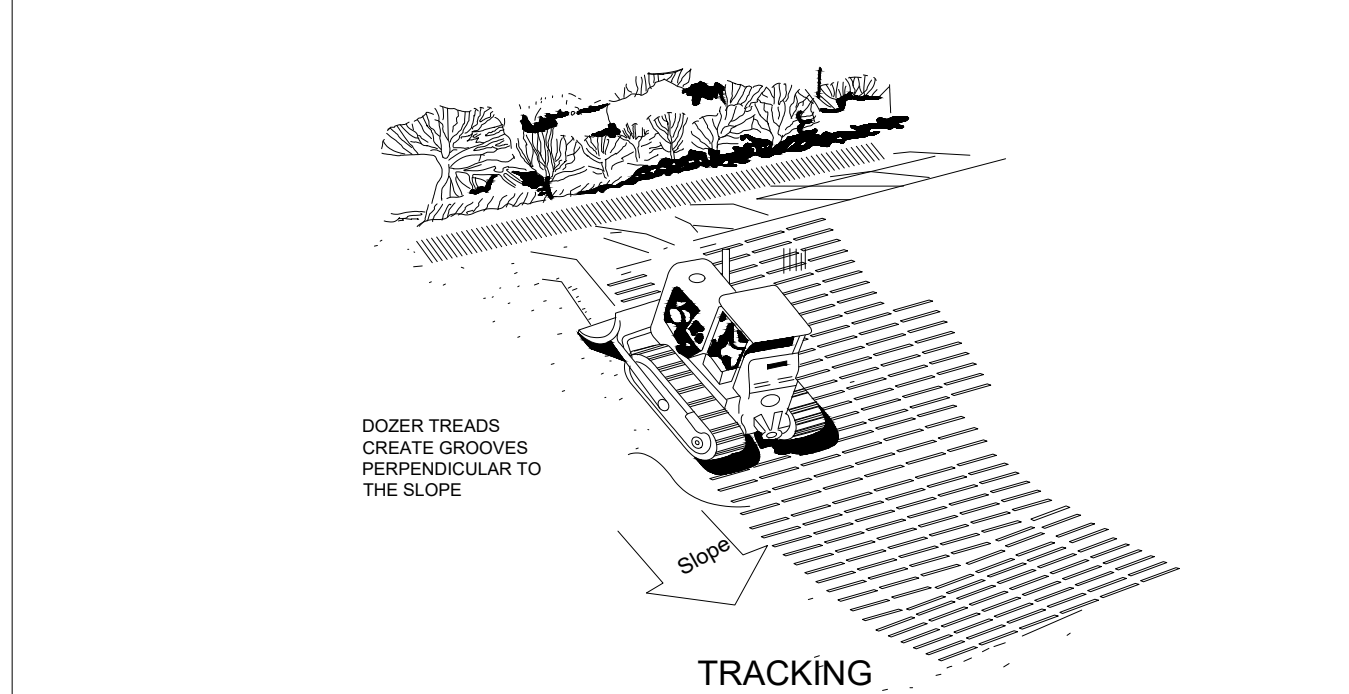
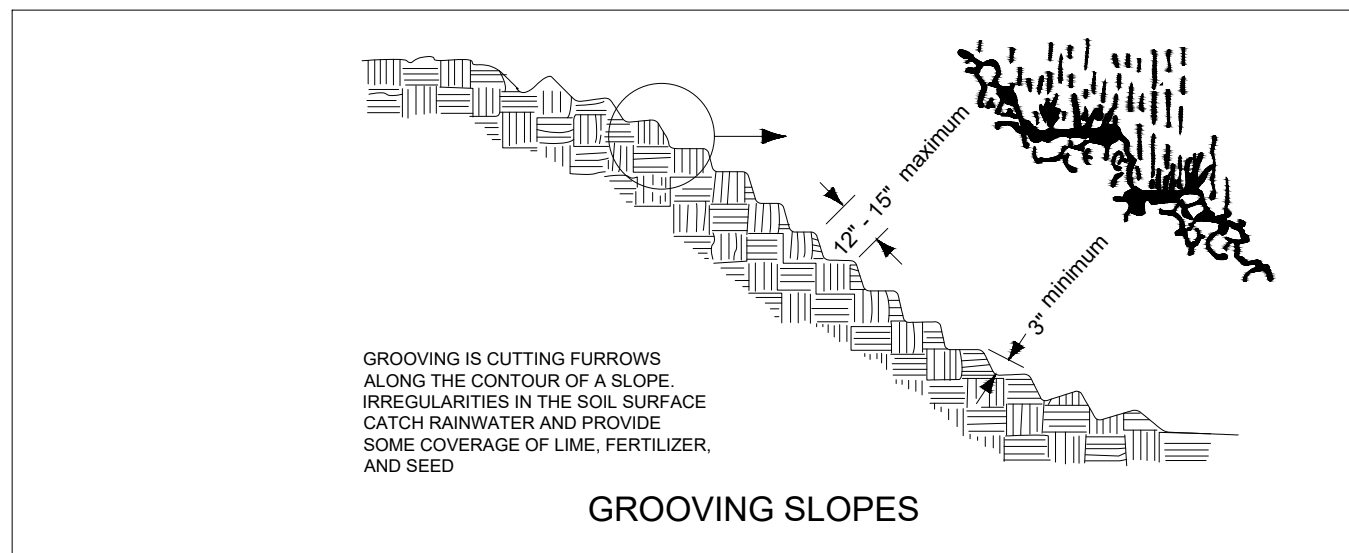
- NOTES:
1. USE STEEL OR WOOD POSTS OR AS SPECIFIED BY THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.
  2. HEIGHT (28") IS TO BE SHOWN ON THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.



- 1) CONCRETE WASHOUT FACILITY SHALL NOT BE PLACED WITHIN 50' OF STORM DRAINS, OPEN DITCHES OR WATER BODIES.
- 2) CONCRETE WASHOUT FACILITY SHALL BE PLACED IN AN AREA AS TO NOT INTERFERE WITH OTHER CONSTRUCTION ACTIVITY.
- 3) THE NUMBER OF WASHOUT AREAS IS DEPENDENT OF THE AMOUNT OF CONCRETE TO BE POURED ONSITE.
- 4) CONCRETE WASHOUT FACILITIES SHALL BE INSPECTED ON A DAILY BASIS TO ENSURE THAT NO LEAKS HAVE OCCURRED. INSPECT PLASTIC LINER AND SIDEWALLS TO ENSURE NO DAMAGE HAS OCCURRED. REPAIR AS NEEDED.
- 5) WASHOUT FACILITY SHALL BE CLEANED OUT WHEN IT HAS REACHED A 75% CAPACITY.
- 6) PLACE SIGN THAT READS "CONCRETE WASHOUT FACILITY" IN AN AREA THAT IS EASILY SEEN.
- 7) DESIGNATE WASHDOWN AREA AND EXCAVATE PIT LARGE ENOUGH TO CONTAIN WASHDOWN WATER. THIS MUST BE AWAY FROM STORM DRAINS AND WATERWAYS.
- 8) ADVISE CONCRETE TRUCK DRIVERS OF THE DESIGNATED WASH-OUT AREAS BEFORE THEY START THE JOB.
- 9) WASHDOWN CHUTE, HOPPER, AND REAR OF VEHICLE ONLY. DO NOT WASH OUT DRUM.
- 10) ENSURE THAT ALL WASHDOWN WATER STAYS IN PIT.
- 11) DISPOSE OF SETTLED, HARDENED CONCRETE IN GARBAGE WITH OTHER CONSTRUCTION DEBRIS.
- 12) NEVER DISPOSE OF WASHDOWN WATER IN STREETS, STORM DRAINS, OR STREAMS.



**CONCRETE WASHOUT**  
N.T.S.



- SURFACE ROUGHENING**
- THE PURPOSES OF SURFACE ROUGHENING ARE TO AID IN ESTABLISHMENT OF VEGETATIVE COVER WITH SEED, TO REDUCE RUNOFF VELOCITY AND INCREASE INFILTRATION, AND TO REDUCE EROSION AND PROVIDE FOR SEDIMENT TRAPPING.
- ALL SLOPES STEEPER THAN 3:1 REQUIRE SURFACE ROUGHENING, EITHER STAIR-STEP GRADING, GROOVING, FURROWING, OR TRACKING IF THEY ARE TO BE STABILIZED WITH VEGETATION. HOWEVER, IF THE SLOPE IS TO BE STABILIZED WITH EROSION CONTROL BLANKETS OR SOIL REINFORCEMENT MATTING, THE SOIL SURFACE SHOULD NOT BE ROUGHENED.
- AREAS WITH GRADES LESS STEEP THAN 3:1 SHOULD HAVE THE SOIL SURFACE LIGHTLY ROUGHENED AND LOOSENEED TO A DEPTH OF 2 TO 4 INCHES PRIOR TO SEEDING. AREAS WHICH HAVE BEEN GRADED AND WILL NOT BE STABILIZED IMMEDIATELY MAY BE ROUGHENED TO REDUCE RUNOFF VELOCITY UNTIL SEEDING TAKES PLACE. SLOPES WITH A STABLE ROCK FACE DO NOT REQUIRE ROUGHENING OR STABILIZATION.
- GROOVING**
- GROOVING CONSISTS OF USING MACHINERY TO CREATE A SERIES OF RIDGES AND DEPRESSIONS WHICH RUN PERPENDICULAR TO THE SLOPE (ON THE CONTOUR). GROOVES MAY BE MADE WITH ANY APPROPRIATE IMPLEMENT WHICH CAN BE SAFELY OPERATED ON THE SLOPE AND WHICH WILL NOT CAUSE UNDE QUOTE COMPACTION.
- SUGGESTED IMPLEMENTS INCLUDE DISCS, TILLERS, SPRING HARROWS, AND THE TEETH ON A FRONTEND LOADER BUCKET. SUCH GROOVES SHALL NOT BE LESS THAN 3 INCHES DEEP NOR FURTHER THAN 15 INCHES APART.
- ROUGHENING WITH TRACKED MACHINERY**
- ROUGHENING WITH TRACKED MACHINERY ON CLAY SOILS IS NOT RECOMMENDED UNLESS NO ALTERNATIVES ARE AVAILABLE. UNDE QUOTE COMPACTION OF SURFACE SOIL RESULTS FROM THIS PRACTICE. SANDY SOILS DO NOT COMPACT SEVERELY AND MAY BE TRACKED. IN NO CASE IS TRACKING AS EFFECTIVE AS THE OTHER ROUGHENING METHODS DESCRIBED.
- TRACKING SHALL BE DONE BY OPERATING TRACKED MACHINERY UP AND DOWN THE SLOPE TO LEAVE HORIZONTAL DEPRESSIONS IN THE SOIL. AS FEW PASSES OF THE MACHINERY AS POSSIBLE SHOULD BE MADE TO MINIMIZE COMPACTION.
- SEEDING**
- ROUGHENED AREAS SHALL BE SEEDED AND MULCHED AS SOON AS POSSIBLE TO OBTAIN OPTIMUM SEED GERMINATION AND SEEDING GROWTH. REFER TO SPECIFICATIONS D51, D52, D53, AND D54 - DISTURBED AREA STABILIZATION (WITH MULCHING ONLY, TEMPORARY SEEDING, PERMANENT VEGETATION, AND SOODING), RESPECTIVELY.

**Su SURFACE ROUGHENING**



**DEFINITION**  
APPLYING PLANT RESIDUES OR OTHER SUITABLE MATERIALS, PRODUCED ON THE SITE IF POSSIBLE, TO THE SOIL SURFACE.  
**CONDITIONS**

MULCH OR TEMPORARY GRASSING SHALL BE APPLIED TO ALL EXPOSED AREAS WITHIN 14 DAYS OF DISTURBANCE. MULCH CAN BE USED AS A SINGULAR EROSION CONTROL DEVICE FOR UP TO SIX MONTHS, BUT IT SHALL BE APPLIED AT THE APPROPRIATE DEPTH, DEPENDING ON THE MATERIAL USED, ANCHORED, AND HAVE A CONTINUOUS 90% COVER OR GREATER OF THE SOIL SURFACE. MAINTENANCE SHALL BE REQUIRED TO MAINTAIN APPROPRIATE DEPTH AND 90% COVER. TEMPORARY VEGETATION MAY BE EMPLOYED INSTEAD OF MULCH IF THE AREA WILL REMAIN UNDISTURBED FOR LESS THAN SIX MONTHS. IF AN AREA WILL REMAIN UNDISTURBED FOR GREATER THAN SIX MONTHS, PERMANENT VEGETATIVE TECHNIQUES SHALL BE EMPLOYED.

**SPECIFICATIONS**  
MULCHING WITHOUT SEEDING  
THIS STANDARD APPLIED TO GRADES OR CLEARED AREAS WHERE SEEDINGS MAY NOT HAVE A SUITABLE GROWING SEASON TO PRODUCE AN EROSION RETARDANT COVER, BUT CAN BE STABILIZED WITH A MULCH COVER.

**SITE PREPARATION**  
1. GRADE TO PERMIT THE USE OF EQUIPMENT FOR APPLYING AND ANCHORING MULCH.  
2. INSTALL NEEDED EROSION CONTROL MEASURES AS REQUIRED SUCH AS DIKES, DIVERSIONS, BERMS, TERRACES AND SEDIMENT BARRIERS.  
3. LOOSEN COMPACT SOIL TO A MINIMUM DEPTH OF 3 INCHES.

**MULCHING MATERIALS**  
SELECT ONE OF THE FOLLOWING MATERIALS AND APPLY AT THE DEPTH INDICATED:  
1. DRY STRAW OR HAY SHALL BE APPLIED AT A DEPTH OF 2 TO 4 INCHES PROVIDING COMPLETE SOIL COVERAGE. ONE ADVANTAGE OF THIS MATERIAL IS EASY APPLICATION.  
2. WOOD WASTE (CHIPS, SAWDUST OR BARK) SHALL BE APPLIED AT A DEPTH OF 2 TO 3 INCHES. ORGANIC MATERIAL FROM THE CLEARING STAGE OF DEVELOPMENT SHOULD REMAIN ON SITE, BE CHIPPED, AND APPLIED AS MULCH. THIS METHOD OF MULCHING CAN GREATLY REDUCE EROSION CONTROL COSTS.  
3. POLYETHYLENE FILM SHALL BE SECURED OVER BANKS OF STOCKPILED SOIL MATERIAL FOR TEMPORARY PROTECTION. THIS MATERIAL CAN BE SALVAGED AND REUSED.

**ANCHORING MULCH**  
WHEN MULCH IS USED WITHOUT SEEDING, MULCH SHALL BE APPLIED TO PROVIDE FULL COVERAGE OF THE EXPOSED AREA.  
1. DRY STRAW OR HAY MULCH AND WOOD CHIPS SHALL BE APPLIED UNIFORMLY BY HAND OR BY MECHANICAL EQUIPMENT.  
2. IF THE AREA WILL EVENTUALLY BE COVERED WITH PERENNIAL VEGETATION, 20-30 POUNDS OF NITROGEN PER ACRE IN ADDITION TO THE NORMAL AMOUNT SHALL BE APPLIED TO OFFSET THE UPTAKE OF NITROGEN CAUSED BY THE DECOMPOSITION OF THE ORGANIC MULCHES.  
3. APPLY POLYETHYLENE FILM ON EXPOSED AREAS.

**ANCHORING MULCH**  
1. STRAW OR HAY MULCH CAN BE PRESSED INTO THE SOIL WITH A DISK HARROW WITH THE DISK SET STRAIGHT OR WITH A SPECIAL "PACKER DISK." DISKS MAY BE SMOOTH OR SERRATED AND SHOULD BE 20 INCHES OR MORE IN DIAMETER AND 8 TO 12 INCHES APART. THE EDGES OF THE DISK SHOULD BE DULL ENOUGH NOT TO CUT THE MULCH BUT TO PRESS IT INTO THE SOIL LEAVING MUCH OF IT IN AN ERRECT POSITION. STRAW OR HAY MULCH SHALL BE ANCHORED IMMEDIATELY AFTER APPLICATION. TACKIFIERS AND BINDERS CAN BE USED. PLEASE REFER TO SPECIFICATION TB-TACKIFIERS AND BINDERS. PLASTIC MESH OR NETTING WITH MESH NO LARGER THAN ONE INCH BY ONE INCH SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS.  
2. NETTING OF THE APPROPRIATE SIZE SHALL BE USED TO ANCHOR WOOD WASTE. OPENINGS OF THE NETTING SHALL NOT BE LARGER THAN THE AVERAGE SIZE OF THE WOOD WASTE CHIPS.  
3. POLYETHYLENE FILM SHALL BE ANCHOR TRENCHED AT THE TOP AS WELL AS INCREMENTALLY AS NECESSARY.

## Ds1 DISTURBED AREA STABILIZATION WITH MULCHING

**DEFINITION**  
THE ESTABLISHMENT OF TEMPORARY VEGETATIVE COVER WITH FAST GROWING SEEDINGS FOR SEASONAL PROTECTION ON DISTURBED OR DENUDED AREA.  
**CONDITIONS**

TEMPORARY GRASSING, INSTEAD OF MULCH, CAN BE APPLIED TO ROUGH GRADED AREAS THAT WILL BE EXPOSED FOR LESS THAN SIX MONTHS. TEMPORARY VEGETATIVE MEASURES SHOULD BE COORDINATED WITH PERMANENT MEASURES TO ASSURE ECONOMIC AND EFFECTIVE STABILIZATION. MOST TYPES OF TEMPORARY VEGETATION ARE IDEAL TO USE AS COMPANION CROPS UNTIL THE PERMANENT VEGETATION IS ESTABLISHED.

### SEEDING RATES FOR TEMPORARY SEEDING

SPECIES	BROADCAST RATES		PLANTING DATES BY RESOURCE AREA	REMARKS
	RATE PER ACRE**	PURE LIVE SEED (PLS) PER 1000 S.F.		
BARLEY	3 BU (144 LBS)	3.3 LBS	8/15 - 11/15	14,000 SEED PER POUND. WINTER HARDY. USE ON PRODUCTIVE SOILS.
LESPEDEZA	40 LBS	0.9 LBS	5/1 - 5/1	200,000 SEED PER POUND. MAY VOLUNTEER FOR SEVERAL YEARS. USE INCLUSTERS.
LOVEGRASS WEEPIG	4 LBS	0.1 LBS	5/15 - 6/15	1,500,000 SEED PER POUND. MAY LAST FOR SEVERAL YEARS. MIX WITH SERICEA LESPEDEZA.
MILLET BROWNTOP	40 LBS	0.9 LBS	4/1 - 7/1	17,000,000 SEED PER POUND. QUICK GERMINATE COVER WILL PROVIDE EXCESSIVE COMPETITION IN MOISTURES IF SEEDED AT SEED RATE.
MILLET, HEAR.	50 LBS	1.1 LBS	4/1 - 8/1	8K,000 SEED PER POUND. QUICK GERMINATE COVER. MAY BEACH SPIN IN HEIGHT. NOT RECOMMENDED FOR MOISTURES.
OATS	4 BU (128 LBS)	2.9 LBS	5/1 - 12/1	13,000 SEED PER POUND. USE ON PRODUCTIVE SOILS. NOT AS WINTER HARDY AS RYE OR BARLEY.
RYE	3 BU (180 LBS)	3.8 LBS	7/15 - 12/1	18,000 SEED PER POUND. QUICK COVER. DROUGHT TOLERANT AND WINTER HARDY.
RYEGRASS, ANNUAL	40 LBS	0.9 LBS	8/1 - 5/1	27,000 SEED PER POUND. DENISE COVER. VERY COMPETITIVE AND NOT TO BE USED IN MOISTURES.
SUDANGRASS	60 LBS	1.4 LBS	4/1 - 5/1	35,000 SEED PER POUND. GOOD ON DRINKY/SHY SITES. NOT RECOMMENDED FOR MOISTURES.
WHEAT	3 BU (180 LBS)	4.1 LBS	5/15 - 1/1	15,000 SEED PER POUND. WINTER HARDY.

\*UNUSUAL SITE CONDITIONS MAY REQUIRE HEAVIER SEEDING RATES  
\*\*SEEDING DATES MAY NEED TO BE ALTERED TO FIT TEMPERATURE VARIATIONS AND CONDITIONS

**SPECIFICATIONS**  
**GRADING AND SHAPING**  
EXCESSIVE WATER RUN-OFF SHALL BE REDUCED BY PROPERLY DESIGNING AND INSTALLED EROSION CONTROL PRACTICES SUCH AS CLOSED DRAINS, DITCHES, DIKES, DIVERSIONS, SEDIMENT BARRIERS AND OTHERS.  
**NO SHAPING OR GRADING IS REQUIRED IF SLOPES CAN BE STABILIZED BY HAND-SEEDED VEGETATION OR IF HYDRAULIC SEEDING EQUIPMENT IS TO BE USED.**

**SEEDBED PREPARATION**  
WHEN A HYDRAULIC SEEDER IS USED, SEEDBED PREPARATION IS NOT REQUIRED. WHEN USING CONVENTIONAL OR HANDSEEDING, SEEDBED PREPARATION IS NOT REQUIRED IF THE SOIL MATERIAL IS LOOSE AND NOT SEALED BY RAINFALL. WHEN SOIL HAS BEEN SEALED BY RAINFALL OR CONSISTS OF SMOOTH CUT SLOPES, THE SOIL SHALL BE PITTED, TRENCHED OR OTHERWISE SCARIFIED TO PROVIDE A PLACE FOR SEED TO LODGE AND GERMINATE.

**LIME AND FERTILIZER**  
AGRICULTURAL LIME IS REQUIRED UNLESS SOIL TESTS INDICATE OTHERWISE. APPLY AGRICULTURAL LIME AT A RATE OF ONE TON PER ACRE. GRADED AREAS REQUIRE LIME APPLICATION. SOILS CAN BE TESTED TO DETERMINE IF FERTILIZER IS NEEDED. ON REASONABLY FERTILE SOILS OR SOIL MATERIAL, FERTILIZER IS NOT REQUIRED. FOR SOILS WITH VERY LOW FERTILITY, 500 TO 700 POUNDS OF 10-10-10 FERTILIZER OF THE EQUIVALENT PER ACRE (2-16 LBS./1,000 SQ. FT.) SHALL BE APPLIED. FERTILIZER SHOULD BE APPLIED BEFORE LAND PREPARATION AND INCORPORATED WITH A DISK, RIPPER OR CHISEL.

**SEEDING**  
SELECT A GRASS OR GRASS-LEGUME MIXTURE SUITABLE TO THE AREA AND SEASON OF THE YEAR. SEED SHALL BE APPLIED UNIFORMLY BY HAND, CYCLONE SEEDER, DRILL, CULTIPACKER SEEDER, OR HYDRAULIC SEEDER (SLURRY INCLUDING SEED AND FERTILIZER). DRILL OR CULTIPACKER SEEDER SHOULD NORMALLY PLACE SEED ONE-QUARTER TO ONE-HALF INCH DEEP. APPROPRIATE DEPTH OF PLANTING IS TEN TIMES THE SEED DIAMETER. SOIL SHOULD BE "RAKED" LIGHTLY TO COVER SEED WITH SOIL IF SEEDING.

**MULCHING**  
TEMPORARY VEGETATION CAN, IN MOST CASES, BE ESTABLISHED WITHOUT THE USE OF MULCH. MULCH WITHOUT SEEDING SHOULD BE CONSIDERED FOR SHORT TERM PROTECTION. REFER TO DS1 - DISTURBED AREA STABILIZATION (WITHOUT MULCHING ONLY).

**IRRIGATION**  
DURING TIMES OF DROUGHT, WATER SHALL BE APPLIED AT A RATE NOT CAUSING RUNOFF AND EROSION. THE SOIL SHALL BE THOROUGHLY WETTED TO A DEPTH THAT WILL INSURE GERMINATION OF THE SEED. SUBSEQUENT APPLICATIONS SHOULD BE MADE WHEN NEEDED.

## Ds2 DISTURBED AREA STABILIZATION WITH TEMPORARY SEEDING

**DEFINITION**  
THE PLANTING OF PERENNIAL VEGETATION SUCH AS TREES, SHRUBS, VINES, GRASSES, OR LEGUMES ON EXPOSED AREAS FOR FINAL PERMANENT STABILIZATION. PERMANENT PERENNIAL VEGETATION SHALL BE USED TO ACHIEVE FINAL STABILIZATION.  
**CONDITIONS**

PERMANENT PERENNIAL VEGETATION IS USED TO PROVIDE A PROTECTIVE COVER FOR EXPOSED AREAS INCLUDING CUTS, FILLS, DAMS, AND OTHER DENUDED AREAS.  
**SPECIFICATIONS**  
**GRADING AND SHAPING**  
GRADING AND SHAPING MAY NOT BE REQUIRED WHERE HYDRAULIC SEEDING AND FERTILIZER EQUIPMENT IS TO BE USED. VERTICAL BANKS SHALL BE SLOPED TO ENABLE PLANT ESTABLISHMENT.  
WHEN CONVENTIONAL SEEDING AND FERTILIZING ARE TO BE DONE GRADE AND SHAPE WHERE FEASIBLE AND PRACTICAL, SO THAT EQUIPMENT CAN BE USED SAFELY AND EFFICIENTLY DURING SEEDBED PREPARATION, SEEDING, MULCHING AND MAINTENANCE OF THE VEGETATION.

CONCENTRATIONS OF WATER THAT WILL CAUSE EXCESSIVE SOIL EROSION SHALL BE DIVERTED TO A SAFE OUTLET. DIVERSIONS AND OTHER TREATMENT PRACTICES SHALL CONFORM WITH THE APPROPRIATE STANDARDS AND SPECIFICATIONS.

**SEEDBED PREPARATION**  
SEEDBED PREPARATION MAY NOT BE REQUIRED WHERE HYDRAULIC SEEDING AND FERTILIZING EQUIPMENT IS TO BE USED. WHEN CONVENTIONAL SEEDING IS TO BE USED, SEEDBED PREPARATION WILL BE DONE AS FOLLOWS:  
BROADCAST PLANTINGS

1. TILLAGE AT A MINIMUM, SHALL ADEQUATELY LOOSEN THE SOIL TO A DEPTH OF 4 TO 6 INCHES. ALLEVATE COMPACTION; INCORPORATE LIME AND FERTILIZER; SMOOTH AND FIRM THE SOIL ALLOW FOR THE PROPER PLACEMENT OF SEED, SPRIGS, OR PLANTS AND ALLOW FOR THE ANCHORING OF STRAW OR HAY MULCH IF A DISK IS TO BE USED.  
2. TILLAGE MAY BE DONE WITH ANY SUITABLE EQUIPMENT.  
3. TILLAGE SHOULD BE DONE ON THE CONTOUR WHERE FEASIBLE.  
4. ON SLOPES TOO STEEP FOR THE SAFE OPERATION OF TILLAGE EQUIPMENT, THE SOIL SURFACE SHALL BE PITTED OR TRENCHED ACROSS THE SLOPE WITH APPROPRIATE HAND TOOLS TO PROVIDE TWO PLACES 6 TO 8 INCHES APART IN WHICH SEED MAY LODGE AND GERMINATE. HYDRAULIC SEEDING MAY ALSO BE USED.

**INDIVIDUAL PLANTS**  
1. WHERE INDIVIDUAL PLANTS ARE TO BE SET, THE SOIL SHALL BE PREPARED BY EXCAVATING HOLES, OR DIBBLE PLANTING.  
2. FOR NURSERY STOCK PLANTS, HOLES SHALL BE LARGE ENOUGH TO ACCOMMODATE ROOTS WITHOUT CROWDING.  
3. WHERE PINE SEEDLINGS ARE TO BE PLANTED, SUBSOIL UNDER THE ROW 36 INCHES DEEP ON THE CONTOUR. FOUR TO SIX MONTHS PRIOR TO PLANTING. SUBSOILING SHOULD BE DONE WHEN THE SOIL IS DRY, PREFERABLY IN AUGUST OR SEPTEMBER.

**PLANTING**  
**HYDRAULIC SEEDING**  
MIX THE SEED (INOCULATED IF NEEDED), FERTILIZER, AND WOOD CELLULOSE OR WOOD PULP FIBER MULCH WITH WATER AND APPLY AS A SLURRY UNIFORMLY OVER THE AREA TO BE TREATED. APPLY WITHIN ONE HOUR AFTER THE MIXTURE IS MADE.

**CONVENTIONAL SEEDING**  
SEEDING WILL BE DONE ON A FRESHLY PREPARED AND FIRMED SEEDBED. FOR BROADCAST PLANTING, USE A CULTIPACKER SEEDER, DRILL, ROTARY SEEDER, OTHER MECHANICAL SEEDER, OR HAND SEEDING TO DISTRIBUTE THE SEED UNIFORMLY OVER THE AREA TO BE TREATED. COVER THE SEED LIGHTLY WITH 1/8 TO 1/4 INCH OF SOIL FOR SMALL SEED AND 1/2 TO 1 INCH FOR LARGE SEED WHEN USING A CULTIPACKER OR OTHER SUITABLE EQUIPMENT.

**NO-TILL SEEDING**  
NO-TILL SEEDING IS A PERMISSIBLE INTO ANNUAL COVER CROPS WHEN PLANTING IS DONE FOLLOWING MATURITY OF THE COVER CROP OR IF THE TEMPORARY COVER STAND IS SPARSE ENOUGH TO ALLOW ADEQUATE GROWTH OF THE PERMANENT (PERENNIAL) SPECIES.  
NO-TILL SEEDING SHALL BE DONE WITH APPROPRIATE NO-TILL SEEDING EQUIPMENT. THE SEED MUST BE UNIFORMLY DISTRIBUTED AND PLANTED AT THE PROPER DEPTH.

**INDIVIDUAL PLANTS**  
SHRUBS, VINES AND SPRIGS MAY BE PLANTED WITH APPROPRIATE PLANTERS OR HAND TOOLS. PINE TREES SHALL BE PLANTED MANUALLY IN THE SUBSOIL FURROW. EACH PLANT SHALL BE SET IN A MANNER THAT WILL AVOID CROWDING THE ROOTS. NURSERY STOCK PLANTS SHALL BE PLANTED AT THE SAME DEPTH OR SLIGHTLY DEEPER THAN THEY GREW AT THE NURSERY. THE TIPS OF VINES AND SPRIGS MUST BE AT OR SLIGHTLY ABOVE THE GROUND SURFACE. WHERE INDIVIDUAL HOLES ARE DUG, FERTILIZER SHALL BE PLACED IN THE BOTTOM OF THE HOLE, TWO INCHES OF SOIL SHALL BE ADDED AND THE PLANT SHALL BE SET IN THE HOLE.

**MULCHING**  
MULCH IS REQUIRED FOR ALL PERMANENT VEGETATION APPLICATIONS. MULCH APPLIED TO SEEDED AREAS SHALL ACHIEVE 75% SOIL COVER. SELECT THE MULCHING MATERIAL FROM THE FOLLOWING AND APPLY AS INDICATED:  
1. DRY STRAW OR DRY HAY OF GOOD QUALITY AND FREE OF WEED SEEDS CAN BE USED. DRY STRAW SHALL BE APPLIED AT THE RATE OF 2 TONS PER ACRE. DRY HAY SHALL BE APPLIED AT A RATE OF 2 1/2 TONS PER ACRE.  
2. WOOD CELLULOSE MULCH OR WOOD PULP FIBER SHALL BE USED WITH HYDRAULIC SEEDING. IT SHALL BE APPLIED AT THE RATE OF 500 POUNDS PER ACRE. DRYSTRAW OR DRY HAY SHALL BE APPLIED (AT THE RATE INDICATED ABOVE) AFTER HYDRAULIC SEEDING.  
3. ONE THOUSAND POUNDS OF WOOD CELLULOSE OR WOOD PULP FIBER, WHICH INCLUDES A TACKIFIER, SHALL BE USED WITH HYDRAULIC SEEDING ON SLOPES OF 3/4 - 1 OR STEEPER.  
4. SERICEA LESPEDEZA HAY CONTAINING MATURE SEED SHALL BE APPLIED AT A RATE OF THREE TONS PER ACRE.  
5. PINE STRAW OR PINE BARK SHALL BE APPLIED AT A THICKNESS OF 3 INCHES FOR BEDDING PURPOSES. OTHER SUITABLE MATERIALS IN SUFFICIENT QUANTITY MAY BE USED WHERE ORNAMENTALS OR OTHER GROUND COVERS ARE PLANTED. THIS IS NOT APPROPRIATE FOR SEEDED AREAS.  
6. WHEN USING TEMPORARY EROSION CONTROL BLANKETS OR BLOCK SOD, MULCH IS NOT REQUIRED.  
7. BITUMINOUS TREATED ROVING MAY BE APPLIED ON PLANTED AREAS ON SLOPES, IN DITCHES OR DRY WATERWAYS TO PREVENT EROSION. BITUMINOUS TREATED ROVING SHALL BE APPLIED WITHIN 24 HOURS AFTER AN AREA HAS BEEN PLANTED. APPLICATION RATES AND MATERIALS MUST MEET GEORGIA DEPARTMENT OF TRANSPORTATION SPECIFICATIONS.

WOOD CELLULOSE AND WOOD PULP FIBERS SHALL NOT CONTAIN GERMINATION OR GROWTH INHIBITING FACTORS. THEY SHALL BE EVENLY DISPERSED WHEN AGITATED IN WATER. THE FIBERS SHALL CONTAIN A DYE TO ALLOW VISUAL METERING AND AID IN UNIFORM APPLICATION DURING SEEDING.

**APPLY MULCH**  
STRAW OR HAY MULCH WILL BE SPREAD UNIFORMLY WITHIN 24 HOURS AFTER SEEDING AND/OR PLANTING. THE MULCH MAY BE SPREAD BY BLOWER-TYPE SPREADING EQUIPMENT, OTHER SPREADING EQUIPMENT OR BY HAND. MULCH SHALL BE APPLIED TO COVER 75% OF THE SOIL SURFACE.

WOOD CELLULOSE OR WOOD FIBER MULCH SHALL BE APPLIED UNIFORMLY WITH HYDRAULIC SEEDING EQUIPMENT.

**ANCHORING MULCH**  
ANCHOR STRAW OR HAY MULCH IMMEDIATELY AFTER APPLICATION BY ONE OF THE FOLLOWING METHODS:  
1. HAY AND STRAW MULCH SHALL BE PRESSED INTO THE SOIL IMMEDIATELY AFTER THE MULCH IS SPREAD. A SPECIAL "PACKER DISK" OR DISK HARROW WITH THE DISKS SET STRAIGHT MAYBE USED. THE DISKS MAYBE SMOOTH OR SERRATED AND SHOULD BE 20 INCHES OR MORE IN DIAMETER AND 8 TO 12 INCHES APART. THE EDGES OF THE DISK SHALL BE DULL ENOUGH TO PRESS THE MULCH INTO THE GROUND WITHOUT CUTTING IT. LEAVING MUCH OF IT IN AN ERRECT POSITION. MULCH SHALL NOT BE PLOWED INTO THE SOIL.  
2. SYNTHETIC TACKIFIERS OR BINDERS APPROVED BY GOOT SHALL BE APPLIED IN CONJUNCTION WITH OR IMMEDIATELY AFTER THE MULCH IS SPREAD. SYNTHETIC TACKIFIERS SHALL BE MIXED AND APPLIED ACCORDING TO MANUFACTURER'S SPECIFICATIONS. REFER TO TB-TACKIFIERS AND BINDERS.  
3. RYE OR WHEAT CAN BE INCLUDED WITH FALL AND WINTER PLANTINGS TO STABILIZE THE MULCH. THEY SHALL BE APPLIED AT A RATE OF ONE-QUARTER TO ONE HALF BUSHEL PER ACRE.  
4. PLASTIC MESH OR NETTING WITH MESH NO LARGER THAN ONE INCH BY ONE INCH MAY BE NEEDED TO ANCHOR STRAW OR HAY MULCH ON UNSTABLE SOILS AND CONCENTRATED FLOW AREAS. THESE MATERIALS SHALL BE INSTALLED AND ANCHORED ACCORDING TO MANUFACTURER'S SPECIFICATIONS.

**IRRIGATION**  
IRRIGATION SHALL BE APPLIED AT A RATE THAT WILL NOT CAUSE RUNOFF.

### SEEDING RATE FOR PERMANENT SEEDING

SPECIES	BROADCAST RATES		PLANTING DATES BY RESOURCE AREA	REMARKS
	RATE PER ACRE**	PURE LIVE SEED (PLS) PER 1000 S.F.		
BAHA WILKINSON	60 LBS	1.4 LBS	1/1 - 12/31	116,000 SEED PER POUND. LOW GROWING. SOD FORMING. SLOW TO ESTABLISH. PLANT WITH A COMPANION CROP. WILL SPREAD INTO BEREMUDA PASTURES AND LAWNS. MIX WITH SERICEA LESPEDEZA OR WEEPIG LOVEGRASS.
BEREMUDA	40 DU, FT. OR 500 PLS/3FT X 3FT	0.81 FT. OR 300 PLS/3FT X 3FT	5/15 - 7/15	1.25 CUBIC FEET OR APPROXIMATELY 800 SPRIGS. DROUGHT TOLERANT. FULL SUN OR PARTIAL SHADE. EFFECTIVE ADJACENT TO CONCRETE AND IN CONCENTRATED FLOW AREAS. IRRIGATION IS HELDED UNTIL FULLY ESTABLISHED. DO NOT PLANT NEAR PASTURES, WINDSHROUDS AS FAR AS NORTH ATHENS AND ATLANTA.
CENTPEDE	BLOCK SOD ONLY		11/1 - 5/31	227,000 SEED PER POUND. USE ALONE ONLY ON BETTER SITES. MIX WITH PERENNIAL LESPEDEZA OR CROPNETCH. APPLY TOPDRESSING IN SPRING FOLLOWING FALL PLANTINGS. NOT FOR HEAVY USE AREAS OR ATHLETIC.
FESCUE, TALL	50 LBS	1.1 LBS	9/1 - 4/31 & 8/1 - 10/30	350,000 SEED PER POUND. WIDELY ADAPTED. LOW MAINTENANCE. MIX WITH WEEPIG LOVEGRASS, COMMON BEREMUDA, BAHIA, OR TALL FESCUE. TAKES 4 TO 5 YEARS TO BECOME FULLY ESTABLISHED. EXCELLENT ON ROADBANKS. INOCULATED SEED WITH EL INOCULANT.
LESPEDEZA SERICEA	75 LBS	1.7 LBS	1/1 - 12-31	350,000 SEED PER POUND. QUICK COVER. DROUGHT TOLERANT. GROWS WELL WITH SERICEA LESPEDEZA ON ROADBANKS.
LOVEGRASS, WEEPIG	4 LBS	0.1 LBS	4/15 - 6/15	1,500,000 SEED PER POUND. QUICK COVER. DROUGHT TOLERANT. GROWS WELL WITH SERICEA LESPEDEZA ON ROADBANKS.

\*Unusual site conditions may require heavier seeding rates  
\*\*Seeding dates may need to be altered to fit temperature variations and conditions

## Ds3 DISTURBED AREA STABILIZATION WITH PERMANENT SEEDING

### APPROPRIATE SOD VARIETIES FOR ATLANTA

GRASS	VARIETY	GROWING SEASON
BERMUDA	COMMON TIFWAY TIFGREEN, TIFLAWN	WARM WEATHER
BAHIA	PENSACOLA	WARM WEATHER
CENTPEDE	---	WARM WEATHER
ZOYSIA	EMERALD MEYER	WARM WEATHER
TALL FESCUE	KENTUCKY	COOL WEATHER

**SOIL PREPARATION**  
BRING SOIL SURFACE TO FINAL GRADE. CLEAR SURFACE OF TRASH, WOODY DEBRIS, STONES AND CLODS LARGER THAN 1". APPLY SOD TO SOIL SURFACES ONLY AND NOT FROZEN SURFACES, OR GRAVEL TYPE SOILS. MIX FERTILIZER INTO SOIL SURFACE. FERTILIZE BASED ON SOIL TESTS OR GENERAL APPLICATION OF 10-10-10 @ 1000 LBS PER ACRE (1 LB /40 SQ. FT.) AGRICULTURAL LIME SHOULD BE APPLIED BASED ON SOIL TESTS OR AT A RATE OF 1 TO 2 TONS / ACRE.

## Ds4 STABILIZATION WITH SODDING

GRASS TYPE	PLANTING YEAR	FERTILIZER (NPK)	RATE (LBS/ ACRE)	NITROGEN TOP DRESSING (LBS/ ACRE)
COOL SEASON GRASSES	1ST MAINTENANCE	6-12-12	1500	50-100
	2ND MAINTENANCE	6-12-12	1000	---
WARM SEASON GRASSES	1ST MAINTENANCE	6-12-12	1500	50-100
	2ND MAINTENANCE	6-12-12	800	50-100
			400	30

## FERTILIZER RATES FOR PERMANENT VEGETATION (Ds-3)

## Du DUST CONTROL



**TEMPORARY METHODS**  
MULCHES. SEE STANDARD DS1 - DISTURBED AREA STABILIZATION (WITH MULCHING ONLY). SYNTHETIC RESINS MAY BE USED INSTEAD OF ASPHALT TO BIND MULCH MATERIAL. REFER TO STANDARD TB-TACKIFIERS AND BINDERS. RESINS SUCH AS CURASOL OR TERRATAK SHOULD BE USED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.

**VEGETATIVE COVER.** SEE STANDARD DS2 - DISTURBED AREA STABILIZATION (WITH TEMPORARY SEEDING).

**SPRAY-ON ADHESIVES.** THESE ARE USED ON MINERAL SOILS (NOT EFFECTIVE ON MUCK SOILS). KEEP TRAFFIC OFF THESE AREAS. REFER TO STANDARD TB-TACKIFIERS AND BINDERS.

**TILLAGE.** THIS PRACTICE IS DESIGNED TO ROUGHEN AND BRING CLODS TO THE SURFACE. IT IS AN EMERGENCY MEASURE WHICH SHOULD BE USED BEFORE WIND EROSION STARTS.

**IRRIGATION.** THIS IS GENERALLY DONE AS AN EMERGENCY TREATMENT. SITE IS SPRINKLED WITH WATER UNTIL THE SURFACE IS WET. REPEAT AS NEEDED.

**BARRIERS.** SOLID BOARD FENCES, SNOWFENCES, BURLAP FENCES, CRATE WALLS, BALES OF HAY AND SIMILAR MATERIAL CAN BE USED TO CONTROL AIR CURRENTS AND SOIL BLOWING. BARRIERS PLACED AT RIGHT ANGLES TO PREVAILING CURRENTS AT INTERVALS OF ABOUT 15 TIMES THEIR HEIGHT ARE EFFECTIVE IN CONTROLLING WIND EROSION.

**CALCIUM CHLORIDE.** APPLY AT RATE THAT WILL KEEP SURFACE MOIST. MAY NEED RETREATMENT.

**PERMANENT METHODS**  
**PERMANENT VEGETATION.** SEE STANDARD DS3 -DISTURBED AREA STABILIZATION (WITH PERMANENT VEGETATION). EXISTING TREES AND LARGE SHRUBS MAY AFFORD VALUABLE PROTECTION IF LEFT IN PLACE.

**TOPSOILING.** THIS ENTAILS COVERING THE SURFACE WITH LESS EROSIIVE SOIL MATERIAL. SEE STANDARD TP - TOPSOILING.

**STONE.** COVER SURFACE WITH CRUSHED STONE OR COARSE GRAVEL. SEE STANDARD CR-CONSTRUCTION ROAD STABILIZATION.

### VEGETATION NOTES

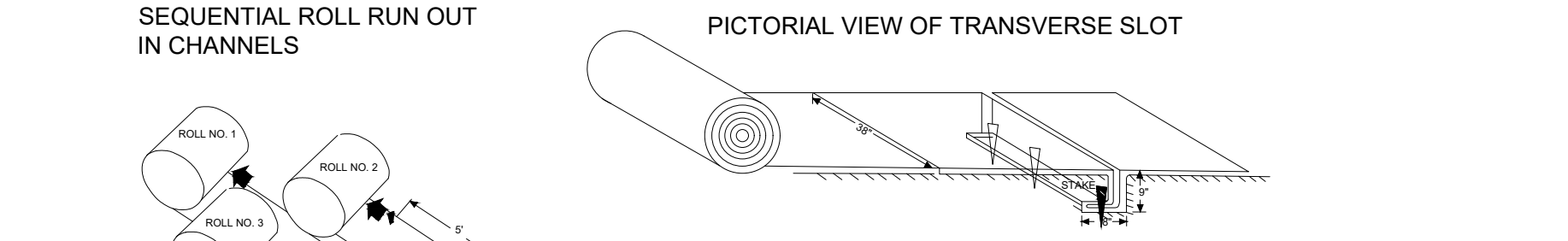
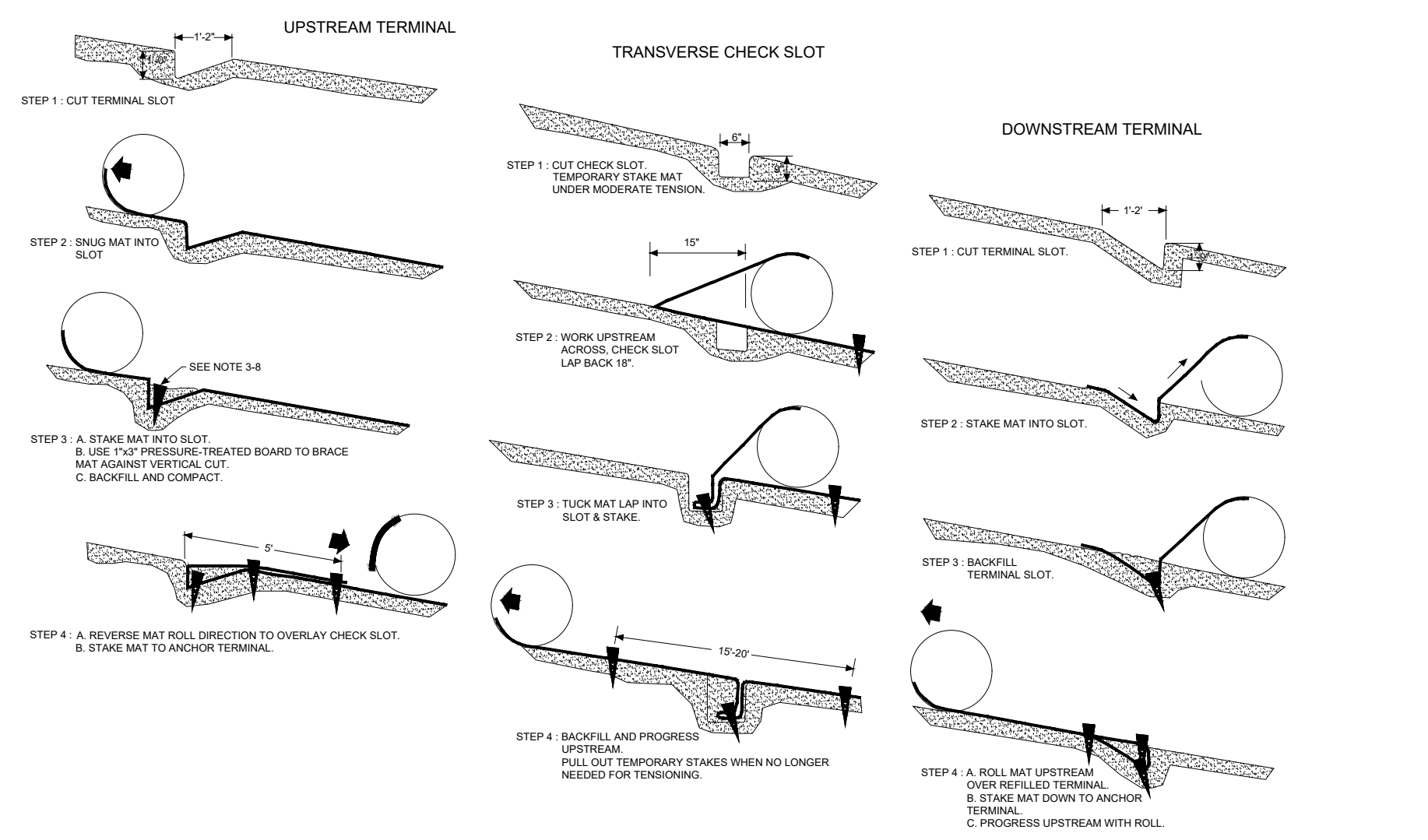
MULCH OR TEMPORARY GRASSING SHALL BE APPLIED TO ALL EXPOSED AREAS WITHIN 14 DAYS OF DISTURBANCE. TEMPORARY GRASSING, INSTEAD OF MULCH, CAN BE APPLIED TO ROUGH GRADED AREAS THAT WILL BE EXPOSED FOR LESS THAN SIX MONTHS. IF AN AREA IS EXPECTED TO BE UNDISTURBED FOR LONGER THAN SIX MONTHS, PERMANENT PERENNIAL VEGETATION SHALL BE USED. IF OPTIMUM PLANTING CONDITIONS FOR TEMPORARY GRASSING IS LACKING, MULCH CAN BE USED AS A SINGULAR EROSION CONTROL DEVICE FOR UP TO SIX MONTHS BUT IT SHALL BE APPLIED AT THE APPROPRIATE DEPTH, ANCHORED, AND HAVE A CONTINUOUS 90% COVER OR GREATER OF THE SOIL SURFACE. REFER TO SPECIFICATION DS1-DISTURBED AREA STABILIZATION (WITH MULCHING ONLY).

WHEN A HYDRAULIC SEEDER IS USED, SEEDBED PREPARATION IS NOT REQUIRED. WHEN USING CONVENTIONAL OR HANDSEEDING, SEEDBED PREPARATION IS NOT REQUIRED IF THE SOIL MATERIAL IS LOOSE AND NOT SEALED BY RAINFALL. WHEN SOIL HAS BEEN SEALED BY RAINFALL OR CONSISTS OF SMOOTH CUT SLOPES, THE SOIL SHALL BE PITTED, TRENCHED OR OTHERWISE SCARIFIED TO PROVIDE A PLACE FOR SEED TO LODGE AND GERMINATE.

**LIME AND FERTILIZER (TEMPORARY VEGETATION, DS-2)**  
AGRICULTURAL LIME IS REQUIRED UNLESS SOIL TESTS INDICATE OTHERWISE. APPLY AGRICULTURAL LIME AT A RATE OF ONE TON PER ACRE. GRADED AREAS REQUIRE LIME APPLICATION. SOILS CAN BE TESTED TO DETERMINE IF FERTILIZER IS NEEDED. ON REASONABLY FERTILE SOILS OR SOIL MATERIAL, FERTILIZER IS NOT REQUIRED. FOR SOILS WITH VERY LOW FERTILITY, 500 TO 700 POUNDS OF 10-10-10 FERTILIZER OR THE EQUIVALENT PER ACRE (12-16 LBS./1,000 SQ. FT.) SHALL BE APPLIED. FERTILIZER SHOULD BE APPLIED BEFORE LAND PREPARATION AND INCORPORATED WITH A DISK, RIPPER OR CHISEL.

**LIME AND FERTILIZER RATES AND ANALYSIS (PERMANENT VEGETATION, DS-3)**  
AGRICULTURAL LIME IS REQUIRED AT THE RATE OF ONE TO TWO TONS PER ACRE UNLESS SOIL TESTS INDICATE OTHERWISE. GRADED AREAS REQUIRE LIME APPLICATION. IF LIME IS APPLIED WITHIN SIX MONTHS OF PLANTING PERMANENT PERENNIAL VEGETATION, ADDITIONAL LIME IS NOT REQUIRED. AGRICULTURAL LIME SHALL BE WITHIN THE SPECIFICATIONS OF THE GEORGIA DEPARTMENT OF AGRICULTURE. INITIAL FERTILIZATION, NITROGEN, TOPDRESSING, AND MAINTENANCE FERTILIZER REQUIREMENTS FOR EACH SPECIES OR COMBINATION OF SPECIES ARE LISTED IN TABLE 6-5.1.

**MULCHING**  
MULCH IS REQUIRED FOR ALL PERMANENT VEGETATION APPLICATIONS. MULCH APPLIED TO SEEDED AREAS SHALL ACHIEVE 75% SOIL COVER. SELECT THE MULCHING MATERIAL FROM THE FOLLOWING AND APPLY AS INDICATED:  
1. DRY STRAW OR DRY HAY OF GOOD QUALITY AND FREE OF WEED SEEDS CAN BE USED. DRY STRAW SHALL BE APPLIED AT THE RATE OF 2 TONS PER ACRE. DRY HAY SHALL BE APPLIED AT A RATE OF 2 1/2 TONS PER ACRE.  
2. WOOD CELLULOSE MULCH OR WOOD PULP FIBER SHALL BE USED WITH HYDRAULIC SEEDING. IT SHALL BE APPLIED AT THE RATE OF 500 POUNDS PER ACRE. DRY STRAW OR DRY HAY SHALL BE APPLIED (AT THE RATE INDICATED ABOVE) AFTER HYDRAULIC SEEDING.  
3. ONE THOUSAND POUNDS OF WOOD CELLULOSE OR WOOD PULP FIBER, WHICH INCLUDES A TACKIFIER, SHALL BE USED WITH HYDRAULIC SEEDING ON SLOPES 3/4-1 OR STEEPER.  
4. SERICEA LESPEDEZA HAY CONTAINING MATURE SEED SHALL BE APPLIED AT A RATE OF THREE TONS PER ACRE.  
5. PINE STRAW OR PINE BARK SHALL BE APPLIED AT A THICKNESS OF 3 INCHES FOR BEDDING PURPOSES. OTHER SUITABLE MATERIALS IN SUFFICIENT QUANTITY MAY BE USED WHERE ORNAMENTALS OR OTHER GROUND COVERS ARE PLANTED. THIS IS NOT APPROPRIATE FOR SEEDED AREAS.  
6. WHEN USING TEMPORARY EROSION CONTROL BLANKETS OR BLOCK SOD, MULCH IS NOT REQUIRED.  
7. BITUMINOUS TREATED ROVING MAY BE APPLIED ON PLANTED AREAS ON SLOPES, IN DITCHES OR DRY WATERWAYS TO PREVENT EROSION. BITUMINOUS TREATED ROVING SHALL BE APPLIED WITHIN 24 HOURS AFTER AN AREA HAS BEEN PLANTED. APPLICATION RATES AND MATERIALS MUST MEET GEORGIA DEPARTMENT OF TRANSPORTATION SPECIFICATIONS.



**INSTALLATION INSTRUCTIONS**  
1. START AT DOWNSTREAM TERMINAL AND PROGRESS UPSTREAM.  
2. FIRST ROLL IS CENTERED LONGITUDINALLY IN MID CHANNEL AND PINNED WITH TEMPORARY STAKES TO MAINTAIN ALIGNMENT.  
3. SUBSEQUENT ROLLS FOLLOW IN STAGGERED SEQUENCE BEHIND FIRST ROLL. FOR ALIGNMENT TO CHANNEL CENTER.  
4. WORK OUTWARDS FROM CHANNEL CENTER TO EDGE.  
5. USE 3" OVERLAP AND STAKE AT 5' INTERVAL ALONG SEAMS.  
6. USE 3" OVERLAPS AND SHINGLE DOWNSTREAM TO CONNECT LINING AT ROLL ENDS.

### INSTALLATION NOTES

**SITE PREPARATION**  
AFTER THE SITE HAS BEEN SHAPED AND GRADED TO THE APPROVED DESIGN, PREPARE A FRIABLE SEEDBED RELATIVELY FREE FROM CLODS AND ROCKS MORE THAN ONE INCH IN DIAMETER, AND ANY FOREIGN MATERIAL THAT WILL PREVENT CONTACT OF THE SOIL STABILIZATION MAT WITH THE SOIL SURFACE. SURFACE MUST BE SMOOTH TO ENSURE PROPER CONTACT OF BLANKETS OR MATTING TO THE SOIL SURFACE. IF NECESSARY, REDIRECT ANY RUNOFF FROM THE DITCH OR SLOPE DURING INSTALLATION.

**STAPLES**  
THE FOLLOWING ARE CONSIDERED APPROPRIATE STAPLING AND STAKING MATERIALS.

**TEMPORARY BLANKETS**  
THIS INCLUDES STRAW, EXCELSIOR, COCONUT FIBER, AND WOOD FIBER BLANKETS. STAPLES SHALL BE USED TO ANCHOR TEMPORARY BLANKETS. U-SHAPED WIRE (11 GAUGE OR GREATER) STAPLES WITH LEGS AT LEAST 6 INCHES IN LENGTH AND A CROWN

**PROJECT NAME AND LOCATION**  
**OWNER**  
 CARTERSVILLE-BARTOW AIRPORT EXPANSION EAST  
 426 EAST AIRPORT DRIVE  
 CARTERSVILLE, GA 30120  
 PHONE: 770.382.1822

**STATE WATER /WETLAND** ②  
 THERE ARE STATE WATERS LOCATED WITHIN 200 FEET OF THE PROJECT SITE. THE ETOWAH RIVER RUNS ALONG THE NORTH EASTERN PROPERTY LINE. THERE WILL BE NO LAND DISTURBANCE IN THE 50' BUFFER AREA. THERE ARE NO TROUT STREAMS LOCATED ON OR WITHIN 200 FEET OF THE PROJECT SITE.

**RECEIVING WATER** ① ② ③ ④ ⑤  
 THE PROJECT'S INITIAL RECEIVING WATER IS THE ETOWAH RIVER A WARM WATER STREAM. IT IS NOT AN IMPAIRED STREAM SEGMENT. THERE WILL BE NO LAND DISTURBANCE IN THE 50' BUFFER AREA. NO OTHER ADJACENT AREAS WILL BE AFFECTED.

**SITE LOCATION** ⑦  
 THE SITE IS LOCATED WITHIN LAND LOT 853, 854, 875, AND 876 OF THE 4TH DISTRICT, 3RD SECTION, CARTERSVILLE, GA.  
 CONSTRUCTION EXIT GPS LOCATION: LAT: 34.129091 LONG: -84.84808

**OFFSITE VEHICLE TRACKING**  
 A STABILIZATION ENTRAPMENTARY WILL BE PROVIDED TO HELP REDUCE VEHICLE TRACKING OF SEDIMENTS. THE PAVED STREET ADJACENT TO THE SITE ENTRANCE WILL BE SWEEP DAILY TO REMOVE ANY EXCESS MUD, DIRT OR ROCK TRACKED FROM THE SITE. DUMP TRUCKS HAULING MATERIAL FROM THE CONSTRUCTION SITE WILL BE COVERED. IF DURING CONSTRUCTION THE GENERATION OF DUST BECOMES AN ISSUE THE CONTRACTOR IS TO PROVIDE "DU" DUST CONTROL.

**STATE STREAM BUFFERS** ⑩ ⑪  
 NON-EXEMPT ACTIVITIES SHALL NOT BE CONDUCTED WITHIN THE 25 OR 50-FOOT UNDISTURBED STREAM BUFFERS AS MEASURED FROM THE POINT OF WRESTED VEGETATION OR WITHIN 25-FEET OF THE COASTAL MARSHLAND BUFFER AS MEASURED FROM THE JURISDICTIONAL DETERMINATION LINE WITHOUT FIRST ACQUIRING THE NECESSARY VARIANCES AND PERMITS.

**HAZARDOUS WASTE** ⑫  
 A MINIMUM OF ONE PORTABLE SANITARY UNIT WILL BE PROVIDED FOR EVERY TEN (10) WORKERS ON THE SITE. ALL SANITARY WASTE WILL BE COLLECTED FROM THE PORTABLE UNITS A MINIMUM OF ONE TIME PER WEEK BY A LICENSED PORTABLE FACILITY PROVIDER IN COMPLETE COMPLIANCE WITH LOCAL STATE REGULATIONS. ALL SANITARY WASTE UNITS WILL BE LOCATED IN AN AREA WHERE THE LIKELIHOOD OF THE UNIT CONTRIBUTING TO STORMWATER DISCHARGE IS NEGLECTABLE. ADDITIONAL CONTAINMENT BMP'S MUST BE IMPLEMENTED SUCH AS GRAVEL BAGS OR SPECIALLY DESIGNED PLASTIC SKID CONTAINERS AROUND THE BASE, TO PREVENT WASTES FROM CONTRIBUTING TO STORM WATER DISCHARGES. THE LOCATION OF SANITARY WASTE UNITS MUST BE IDENTIFIED ON THE EROSION CONTROL PLAN GRADING PHASE. SANITARY SEWER WILL BE PROVIDED BY MUNICIPAL AUTHORITY SEWER SYSTEM AT THE COMPLETION OF THIS PROJECT.

DATE	DESCRIPTION
1	
2	
3	
4	
5	
6	

**INVENTORY FOR POLLUTION PREVENTION PLAN** ⑬

THE MATERIALS OR SUBSTANCES LISTED BELOW ARE EXPECTED TO BE PRESENT ONSITE DURING CONSTRUCTION:

<input checked="" type="checkbox"/> Concrete	<input checked="" type="checkbox"/> Fertilizers	<input checked="" type="checkbox"/> Wood
<input checked="" type="checkbox"/> Asphalt	<input checked="" type="checkbox"/> Petroleum Based Products	<input checked="" type="checkbox"/> Masonry Blocks
<input checked="" type="checkbox"/> Tar	<input checked="" type="checkbox"/> Cleaning Solvents	<input checked="" type="checkbox"/> Roofing Materials
<input checked="" type="checkbox"/> Detergents	<input checked="" type="checkbox"/> Paints	<input type="checkbox"/> Metal Studs
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**SPILL PREVENTION**

MATERIAL MANAGEMENT PRACTICES

THE FOLLOWING ARE THE MATERIAL MANAGEMENT PRACTICES THAT WILL BE USED TO REDUCE THE RISK OF SPILLS OR OTHER ACCIDENTAL EXPOSURE OF MATERIALS AND SUBSTANCES TO STORM WATER RUNOFF.

GOOD HOUSEKEEPING

THE FOLLOWING GOOD HOUSEKEEPING PRACTICES WILL BE FOLLOWED ONSITE DURING THE CONSTRUCTION PROJECT.

- AN EFFORT WILL BE MADE TO STORE ONLY ENOUGH PRODUCT REQUIRED TO DO THE JOB.
- ALL MATERIALS STORED ONSITE WILL BE STORED IN A NEAT, ORDERLY MANNER IN THEIR APPROPRIATE CONTAINERS AND, IF POSSIBLE, UNDER A ROOF OR OTHER ENCLOSURE.
- PRODUCTS WILL BE KEPT IN THEIR ORIGINAL CONTAINERS WITH THE ORIGINAL MANUFACTURER'S LABEL.
- SUBSTANCES WILL NOT BE MIXED WITH ONE ANOTHER UNLESS RECOMMENDED BY THE MANUFACTURER.
- THE SITE SUPERINTENDENT WILL INSPECT DAILY TO ENSURE MATERIALS ONSITE RECEIVE PROPER USE AND DISPOSAL.

**HAZARDOUS PRODUCTS** ⑭

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; IF THEY CONTAIN IMPORTANT PRODUCT INFORMATION.
- IF SURPLUS PRODUCT MUST BE DISPOSED OF, MANUFACTURER'S OR LOCAL AND STATE RECOMMENDED METHODS FOR PROPER DISPOSAL WILL BE FOLLOWED.
- HAZARDOUS WASTE PRACTICES THE FOLLOWING PRODUCT SPECIFIC PRACTICES WILL BE FOLLOWED ON-SITE:

**PETROLEUM SPECIFIC PRACTICES**

CONTAINERS FOR PRODUCTS SUCH AS FUELS, LUBRICANTS AND TARS WILL BE INSPECTED DAILY FOR LEAKS AND SPILLS. THIS INCLUDES ON-SITE VEHICLE AND MACHINERY DAILY INSPECTIONS AND REGULAR PREVENTATIVE MAINTENANCE OF SUCH EQUIPMENT. EQUIPMENT MAINTENANCE AREAS WILL BE LOCATED AWAY FROM STATE WATER, NATURAL DRAINS AND STORMWATER DISCHARGE INLETS. IN ADDITION, TEMPORARY FUELING TANKS SHALL HAVE A SECONDARY CONTAINMENT LINER TO PREVENT/MINIMIZE SITE CONTAMINATION. DISCHARGE OF OILS, FUELS AND DISPOSAL AS REQUIRED BY LOCAL AND STATE REGULATIONS.

**PETROLEUM SPECIFIC PRACTICES**

CONTAINERS FOR PRODUCTS SUCH AS FUELS, LUBRICANTS AND TARS WILL BE INSPECTED DAILY FOR LEAKS AND SPILLS. THIS INCLUDES ON-SITE VEHICLE AND MACHINERY DAILY INSPECTIONS AND REGULAR PREVENTATIVE MAINTENANCE OF SUCH EQUIPMENT. EQUIPMENT MAINTENANCE AREAS WILL BE LOCATED AWAY FROM STATE WATER, NATURAL DRAINS AND STORMWATER DISCHARGE INLETS. IN ADDITION, TEMPORARY FUELING TANKS SHALL HAVE A SECONDARY CONTAINMENT LINER TO PREVENT/MINIMIZE SITE CONTAMINATION. DISCHARGE OF OILS, FUELS AND DISPOSAL AS REQUIRED BY LOCAL AND STATE REGULATIONS.

**FERTILIZERS/HERBICIDES**

THESE PRODUCTS 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. ANY STORAGE OF THESE MATERIALS WILL BE UNDER ROOF IN SEALED CONTAINERS.

**PAINTS/FINISHES/SOLVENTS**

ALL PRODUCTS WILL BE STORED IN TIGHTLY SEALED ORIGINAL CONTAINERS WHEN NOT IN USE. EXCESS PRODUCT WILL NOT BE STORED IN STATE WATER COLLECTION SYSTEMS. EXCESS PRODUCT WILL BE STORED IN TIGHTLY SEALED ORIGINAL CONTAINERS WHEN NOT IN USE. EXCESS MATERIALS USED WITH THESE PRODUCTS AND PRODUCT CONTAINERS WILL BE DISPOSED OF ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.

**CONCRETE TRUCKS** ⑮

NO CONCRETE TRUCKS WILL BE ALLOWED TO WASH OUT OR DISCHARGE SURPLUS CONCRETE OR DRUM WASH WATER ONSITE. CONCRETE TRUCK CHUTE AND TOOLS MAY BE WASHED OUT IN THE DESIGNATED WASHOUT AREA ONLY.

**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.

**AMENDMENTS TO PLAN** ⑯

AMENDMENTS/REVISIONS TO THE ES&P PLAN WHICH HAVE A SIGNIFICANT EFFECT ON BMP'S WITH A HYDRAULIC COMPONENT MUST BE CERTIFIED BY THE DESIGN PROFESSIONAL.

THE PRIMARY PERMITTEE SHALL HAVE PLANS AMENDED BY THE DESIGN PROFESSIONAL WHENEVER THERE IS A CHANGE IN DESIGN, CONSTRUCTION, OPERATION, OR MAINTENANCE, WHICH HAS A SIGNIFICANT EFFECT ON BMP'S WITH A HYDRAULIC COMPONENT, I.E., THOSE BMP'S WHERE THE DESIGN IS BASED UPON RAINFALL INTENSITY, DURATION AND RETURN FREQUENCY OF STORMS OR ON THE POTENTIAL FOR THE DISCHARGE OF POLLUTANTS TO THE WATERS OF GEORGIA AND WHICH HAS NOT OTHERWISE BEEN ADDRESSED IN THE PLAN.

**PRE/POST DEVELOPED SITE CHARACTERISTICS/NARRATIVE:** ⑰

THE EXISTING SITE CONSISTS OF SLIGHT TO STEEP SLOPES ACROSS THE ENTIRE PROPERTY. THE EXISTING PROPERTY CONSISTS OF THREE EXISTING HANGERS, PARKING LOT, AND ACCESS ROAD. NEIGHBORING AREAS INCLUDE INDUSTRIAL AND AGRICULTURAL ZONED PROPERTIES. THE PROPOSED DEVELOPMENT IS A GRADING AND EROSION CONTROL PLAN FOR FUTURE HANGER DEVELOPMENTS. THE PROJECTS PROPERTY LINE BOUNDS 30.50 ACRES. THE PROPERTY IS ZONED H-1. THE SITE IS LOCATED IN LAND LOTS 853, 854, 875, AND 876 OF THE 4TH DISTRICT, 3RD SECTION, CARTERSVILLE, GEORGIA. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IN ACCORDANCE WITH THE BEST MANAGEMENT PRACTICES, AS NEEDED, TO PREVENT TRANSPORTATION OF SEDIMENT FROM THE SITE. THE SITE CONTAINS SEVERAL SOIL TYPES (SEE SOIL MAP, C501 FOR SOIL DELINEATION).

**ESTIMATED RUNOFF COEFFICIENT** ⑱

**ONSITE DRAINAGE BASIN**

PRE-DEVELOPED 68  
 POST-DEVELOPED 75

NOTE: SEE HYDROLOGY REPORT FOR DETAILED CALCULATIONS AND MAPS.

**WASTE DISPOSAL** ⑲

WASTE MATERIAL SHALL NOT BE DISCHARGED TO WATERS OF THE STATE, EXCEPT AS AUTHORIZED BY A SECTION 404 PERMIT.

ALL WASTE MATERIALS SHALL 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 OF IN THE DUMPSTER. THE DUMPSTER WILL BE EMPTIED A MINIMUM OF ONCE PER WEEK OR MORE OFTEN IF NECESSARY. TRASH AND WASTE WILL BE HAULED AS REQUIRED BY LOCAL REGULATIONS, TO A STATE APPROVED LANDFILL. NOT WASTE SHALL BE BURIED ON SITE. ALL PERSONNEL WILL BE INSTRUCTED REGARDING THE CORRECT PROCEDURE FOR WASTE DISPOSAL. NOTICES STATING THESE PRACTICES WILL BE POSTED AT THE CONSTRUCTION SITE BY THE CONSTRUCTION SUPERINTENDENT. THE INDIVIDUAL WHO MANAGES THE DAY-TO-DAY SITE OPERATIONS, WILL BE RESPONSIBLE FOR SEEING THAT THESE PROCEDURES ARE FOLLOWED.

**LIMITS OF DISTURBANCE:** ⑳

THE PROPOSED SITE CONSTRUCTION WILL NOT DISTURB MORE THAN 50 ACRES AT ONE TIME.

**ALTERNATIVE BMP:** ㉑ ㉒

NO ALTERNATIVE BMP'S HAVE BEEN SPECIFIED.

**POTENTIAL POLLUTION:** ㉓

THE MOVEMENT OF SOIL AND THE USE OF BUILDING MATERIALS, SUCH AS CONCRETE, PAINT, FORM OILS, FERTILIZER, ETC., WILL BE IMPLEMENTED DURING THE COURSE OF THE PROJECT. STRUCTURAL AND VEGETATIVE MEASURES WILL BE USED TO CONTROL THE ESCAPE OF SEDIMENT AND POLLUTION FROM THE SITE. SEE SHEET C501 AND C504 FOR SEDIMENT AND POLLUTION CONTROL MEASURES. IN ADDITION, LOCAL WASTE COLLECTION AREAS SHALL BE LOCATED AWAY FROM STREET, GUTTERS, WATER COURSE AND STORM DRAINS. THE USE OF CONTAINMENT DUMPSTERS AND PORTABLE SANITATION WASTE DEVICE SHALL BE ONSITE.

**STORM WATER MANAGEMENT AFTER CONSTRUCTION IS COMPLETE** ㉔

THE SITE HAS BEEN DESIGNED TO ACCOMMODATE POLLUTANTS IN STORMWATER AFTER CONSTRUCTION IS COMPLETE, BY PROVIDING A STORMWATER SYSTEM THAT ROUTES ALL STORMWATER INTO TWO STORMWATER PONDS. THE STORMWATER PONDS CONTAIN 100% OF THE WATER QUALITY VOLUME ASSOCIATED WITH THIS DEVELOPMENT. THE STORMWATER POND HAS A 1.5.3 (TOTAL SUSPENDED SOLIDS) REMOVAL OF 80%, WHICH MEETS THE MINIMUM STANDARDS.

**HAZARDOUS WASTE**

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 RESULT 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&P PLAN 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 AND COUNTERMEASURES (SPCC) PLAN FOUND WITHIN THE ES&P AND WILL TRAIN ALL PERSONNEL IN THE PROPER CLEANUP AND HANDLING OF SPILLED MATERIALS. NO SPILLED MATERIAL 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 AND 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.

**BUILDING COVER:** ㉕

ANY ERODED MATERIAL OR PRODUCT WILL BE PROPERLY PROTECTED WITH A COVER OR TARP KEEPING THE INTERIOR BUILDING IN ACCEPTABLE CONDITIONS ON SITE.

**INSPECTIONS:** ㉖

PERMITEE REQUIREMENTS

- 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.
- MEASURE AND RECORD RAINFALL WITHIN DISTURBED AREAS OF THE SITE THAT HAVE NOT MET FINAL STABILIZATION ONCE EVERY 24 HOURS EXCEPT ANY NON-WORKING SATURDAY, NON-WORKING SUNDAY AND NON-WORKING FEDERAL HOLIDAY. THE DATA COLLECTED FOR THE PURPOSE OF COMPLIANCE WITH THIS PERMIT SHALL BE REPRESENTATIVE OF THE MONITORED ACTIVITY. 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.
- CERTIFIED PERSONNEL (PROVIDED BY THE PRIMARY PERMITTEE) SHALL INSPECT THE FOLLOW AT LEAST EVERY SEVEN (7) 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 NON-WORKING 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 PERMITEE MUST COMPLY WITH PART IV.D.4.A.(4). THESE INSPECTIONS MUST BE CONDUCTED UNTIL A NOTICE OF TERMINATION IS SUBMITTED.
- 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 RECEIVED BY 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).
- 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.
- 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 IT 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 THE 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 DEFINED IN THIS PERMIT. THE REPORT DOES NOT IDENTIFY ANY INCIDENTS, THE INSPECTION REPORT SHALL CONTAIN A CERTIFICATION 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.C.2. OF THIS PERMIT.

**SAMPLING POINTS**

- FOR CONSTRUCTION ACTIVITIES THE PRIMARY PERMITTEE MUST SAMPLE ALL RECEIVING WATER(S), OR ALL OUTFALLS(S), OR A COMBINATION OF RECEIVING WATER(S) AND/OR OUTFALLS(S). 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:
  - 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 DISCHARGE 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.
  - 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.
  - IDEALLY THE SAMPLES SHOULD BE TAKEN FROM THE HORIZONTAL AND VERTICAL CENTER OF THE RECEIVING WATER(S) OR THE STORM WATER OUTFALL CHANNEL(S).
  - CARE SHOULD BE TAKEN TO AVOID STIRRING THE BOTTOM SEDIMENTS IN THE RECEIVING WATER(S) OR IN THE OUTFALL STORM WATER CHANNEL.
  - THE SAMPLING CONTAINER SHOULD BE HELD SO THAT THE OPENING FACES UPSTREAM.
  - THE SAMPLES SHOULD BE KEPT FREE FROM FLOATING DEBRIS.
  - PERMITEES DO NOT HAVE THE SAMPLE SHEETFLOW THAT FLOWS ONTO UNDISTURBED NATURAL AREAS OR ARE STABILIZED BY THE PROJECT. FOR PURPOSES OF THIS SECTION, STABILIZED SHALL MEAN, FOR UNPAVED AREAS AND AREAS NOT COVERED BY PERMANENT STRUCTURES AND AREAS LOCATED OUTSIDE THE WASTE DISPOSAL LIMITS OF A LANDFILL CELL THAT HAS BEEN CERTIFIED BY EPD FOR WASTE DISPOSAL, 100% OF THE SOIL SURFACE IS UNIFORMLY COVERED IN PERMANENT VEGETATION WITH DENSITY OF 70% OR GREATER, OR LANDSCAPED ACCORDING TO THE PLAN (UNIFORMLY COVERED WITH LANDSCAPING MATERIALS IN PLANNED LANDSCAPED AREAS), OR EQUIVALENT PERMANENT STABILIZATION MEASURES AS DEFINED IN THE MANUAL (EXCLUDING A CROP OF ANNUAL VEGETATION AND A SEEDING OF TARGET CROP PERENNIALS APPROPRIATE FOR THE REGION).
  - 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 III.D.3. OR III.D.4., WHICHEVER IS APPLICABLE.

**INSPECTIONS:** ㉖

PERMITEE REQUIREMENTS

- 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.
- MEASURE AND RECORD RAINFALL WITHIN DISTURBED AREAS OF THE SITE THAT HAVE NOT MET FINAL STABILIZATION ONCE EVERY 24 HOURS EXCEPT ANY NON-WORKING SATURDAY, NON-WORKING SUNDAY AND NON-WORKING FEDERAL HOLIDAY. THE DATA COLLECTED FOR THE PURPOSE OF COMPLIANCE WITH THIS PERMIT SHALL BE REPRESENTATIVE OF THE MONITORED ACTIVITY. 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.
- CERTIFIED PERSONNEL (PROVIDED BY THE PRIMARY PERMITTEE) SHALL INSPECT THE FOLLOW AT LEAST EVERY SEVEN (7) 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 NON-WORKING 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 PERMITEE MUST COMPLY WITH PART IV.D.4.A.(4). THESE INSPECTIONS MUST BE CONDUCTED UNTIL A NOTICE OF TERMINATION IS SUBMITTED.
- 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 RECEIVED BY 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).
- 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.
- 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 IT 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 THE 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 DEFINED IN THIS PERMIT. THE REPORT DOES NOT IDENTIFY ANY INCIDENTS, THE INSPECTION REPORT SHALL CONTAIN A CERTIFICATION 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.C.2. OF THIS PERMIT.

**SAMPLING FREQUENCY** ㉗

- THE PRIMARY PERMITTEE MUST SAMPLE IN ACCORDANCE WITH THE PLAN AT LEAST ONCE FOR EACH RAINFALL EVENT DESCRIBED BELOW. FOR A QUALIFYING EVENT, THE PERMITEE SHALL SAMPLE AT THE BEGINNING OF ANY STORM WATER DISCHARGE TO A MONITORED RECEIVING WATER AND/OR FROM A MONITORED OUTFALL LOCATION WITHIN IN FORTY-FIVE (45) MINUTES OR AS SOON AS POSSIBLE.
- HOWEVER, WHERE MANUAL AND AUTOMATIC SAMPLING ARE POSSIBLE (AS DEFINED IN THIS PERMIT), OR ARE BEYOND THE PERMITTEE'S CONTROL, THE PERMITEE SHALL TAKE SAMPLES AS SOON AS POSSIBLE, BUT IN NO CASE MORE THAN TWELVE (12) HOURS AFTER THE BEGINNING OF THE STORM WATER DISCHARGE.
- SAMPLING BY THE PERMITEE SHALL OCCUR FOR THE FOLLOWING QUALIFYING EVENTS:
  - 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 SAMPLING LOCATION;
  - 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 AFTER ALL CLEARING AND GRUBBING OPERATIONS HAVE BEEN COMPLETED, BUT PRIOR TO SUBMITTAL OF 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 SAMPLING LOCATION, WHICHEVER COMES FIRST;
  - AT THE TIME OF SAMPLING PERFORMED PURSUANT TO (A) AND (B) ABOVE, IF BMP'S 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, AND TURBIDITY SAMPLES SHALL BE TAKEN FROM DISCHARGES FROM THAT REA OF THE SITE FOR EACH SUBSEQUENT RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH DURING NORMAL BUSINESS HOURS. THE NATIONAL RESPONSE CENTER (NRC) WILL BE CONTACTED WITHIN 24 HOURS AT 1-800-426-2675, FOR SPILLS OF AN UNKNOWN AMOUNT. THE NATIONAL CENTER WILL BE CONTACTED WITHIN 24 HOURS AT 1800-425-2675. FOR SPILLS GREATER THAN 25 GALLONS AND NO SURFACE WATER IMPACTS, THE GEORGE EPD WILL BE CONTACTED WITHIN 24 HOURS. FOR SPILLS LESS THAN 25 GALLONS AND NO SURFACE WATER IMPACTS, THE SPILL WILL BE CLEANED UP AND LOCAL AGENCIES WILL BE CONTACTED AS REQUIRED. THE CONTRACTOR SHALL NOTIFY THE LICENSED PROFESSIONAL WHO PREPARED THIS PLAN IF MORE THAN 1320 GALLONS OF PETROLEUM IS STORED ONSITE (THIS INCLUDES CAPACITIES OF EQUIPMENT) OR IF ANY ONE PIECE OF EQUIPMENT HAS A CAPACITY GREATER THAN 1320 GALLONS. THE CONTRACTOR WILL NEED A SPILL PREVENTION CONTAMINATION AND COUNTERMEASURES PLAN PREPARED BY THAT LICENSED PROFESSIONAL.
- 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 PERMITEE MAY CHOOSE TO MEET THE REQUIREMENTS OF (A) AND (B) ABOVE BY COLLECTION TURBIDITY SAMPLES FROM THE SAMPLING POINT AND THE TYPE OF RECEIVING WATER(S) (I.E., TROUT STREAM OR SUPPORTING WARM WATER FISHERIES); AND

EXCEPT FOR FLOWS FROM FIRE FIGHTING ACTIVITIES, SOURCES OF NON-STORM WATER LISTED IN PART III.A.2. OF THIS PERMIT THAT ARE COMBINED WITH STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY MUST BE IDENTIFIED IN THE PLAN. IF IDENTIFIED, REPORTS MUST BE MADE. THE IMPLEMENTATION OF APPROPRIATE POLLUTION PREVENTION MEASURES FOR THE NON-STORM WATER COMPONENT(S) OF THE DISCHARGE.

**REPORTING**

- THE APPLICABLE PERMITEES 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 PERMITEE 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 SHALL BE CONSIDERED 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 USING ELECTRONIC SUBMITTAL SERVICE PROVIDED BY EPD. 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:
  - THE RAINFALL AMOUNT, DATE, EXACT PLACE AND TIME OF SAMPLING OR MEASUREMENTS.
  - THE NAME(S) OF THE CERTIFIED PERSONNEL WHO PERFORMED THE SAMPLING AND MEASUREMENTS.

**REPORTING (CONT.)**

- THE DATE(S) ANALYSES WERE PERFORMED;
- THE TIME(S) ANALYSES WERE INITIATED;
- THE NAME(S) OF THE CERTIFIED PERSONNEL WHO PERFORMED THE ANALYSES;
- REFERENCES AND WRITTEN PROCEDURES, WHEN AVAILABLE, FOR THE ANALYTICAL TECHNIQUES OR METHODS USED;
- THE RESULTS OF SUCH ANALYSES, INCLUDING THE BENCH SHEETS, INSTRUMENT READOUTS, COMPUTER DISKS OR TAPES, ETC., USED TO DETERMINE THESE RESULTS;
- RESULTS WHICH EXCEED 1000 NTU SHALL BE REPORTED AS "EXCEEDS 100 NTU;" AND
- 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 EPT ACCORDING TO THE SCHEDULE IN PART VI OF THIS PERMIT. THE PERMITEE SHALL RETAIN A COPY OF THE PROOF OF SUBMITTAL AT THE CONSTRUCTION SITE OR THE PROOF OF SUBMITTAL SHALL BE READILY AVAILABLE AT THE 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.

**RETENTION OF RECORDS** ㉘

- THE PRIMARY PERMITTEE SHALL RETAIN THE FOLLOWING RECORD 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;
  - 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.5. OF THIS PERMIT;
  - A COPY OF ALL SAMPLING INFORMATION, RESULTS, AND REPORTS REQUIRED BY THIS PERMIT;
  - A COPY OF ALL INSPECTION REPORTS GENERATED IN ACCORDANCE WITH PART IV.D.4.A.(6) OF THIS PERMIT;
  - A COPY OF ALL VIOLATION SUMMARIES AND VIOLATION SUMMARY REPORTS GENERATED IN ACCORDANCE WITH PART III.D.2. OF THIS PERMIT; AND
  - DAILY RAINFALL INFORMATION COLLECTED IN ACCORDANCE WITH PART IV.D.4.A.(2). OF THIS PERMIT.
- COPIES OF ALL NOTICES OF INTENT, NOTICES OF TERMINATION, INSPECTION REPORTS, SAMPLING REPORTS (INCLUDING ALL CALIBRATION AND MAINTENANCE RECORDS AND ALL ORIGINAL STRIP 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 PERMITEE, WHO EITHER PRODUCED OR USED IT FOR A PERIOD OF AT LEAST THREE YEARS FROM THE DATE THE NOT IS SUBMITTED IN ACCORDANCE WITH PART VI. OF THIS PERMIT. THESE RECORDS MUST BE MAINTAINED AT THE PERMITEE'S PRIMARY PLACE OF BUSINESS OR AT A DESIGNATED ALTERNATIVE LOCATION ONCE THE CONSTRUCTION ACTIVITY HAS CEASED AT THE PERMITTED SITE. THE PERIOD MAY BE EXTENDED BY REQUEST OF THE EPD AT ANY TIME UPON WRITTEN NOTIFICATION TO THE PERMITEE.

**REPORTING**

- THE APPLICABLE PERMITEES 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 PERMITEE 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 SHALL BE CONSIDERED 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 USING ELECTRONIC SUBMITTAL SERVICE PROVIDED BY EPD. 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:
  - THE RAINFALL AMOUNT, DATE, EXACT PLACE AND TIME OF SAMPLING OR MEASUREMENTS.
  - THE NAME(S) OF THE CERTIFIED PERSONNEL WHO PERFORMED THE SAMPLING AND MEASUREMENTS.

**REPORTING (CONT.)**

- THE DATE(S) ANALYSES WERE PERFORMED;
- THE TIME(S) ANALYSES WERE INITIATED;
- THE NAME(S) OF THE CERTIFIED PERSONNEL WHO PERFORMED THE ANALYSES;
- REFERENCES AND WRITTEN PROCEDURES, WHEN AVAILABLE, FOR THE ANALYTICAL TECHNIQUES OR METHODS USED;
- THE RESULTS OF SUCH ANALYSES, INCLUDING THE BENCH SHEETS, INSTRUMENT READOUTS, COMPUTER DISKS OR TAPES, ETC., USED TO DETERMINE THESE RESULTS;
- RESULTS WHICH EXCEED 1000 NTU SHALL BE REPORTED AS "EXCEEDS 100 NTU;" AND
- 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 EPT ACCORDING TO THE SCHEDULE IN PART VI OF THIS PERMIT. THE PERMITEE SHALL RETAIN A COPY OF THE PROOF OF SUBMITTAL AT THE CONSTRUCTION SITE OR THE PROOF OF SUBMITTAL SHALL BE READILY AVAILABLE AT THE 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.

**RETENTION OF RECORDS** ㉘

- THE PRIMARY PERMITTEE SHALL RETAIN THE FOLLOWING RECORD 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;
  - 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.5. OF THIS PERMIT;
  - A COPY OF ALL SAMPLING INFORMATION, RESULTS, AND REPORTS REQUIRED BY THIS PERMIT;
  - A COPY OF ALL INSPECTION REPORTS GENERATED IN ACCORDANCE WITH PART IV.D.4.A.(6) OF THIS PERMIT;
  - A COPY OF ALL VIOLATION SUMMARIES AND VIOLATION SUMMARY REPORTS GENERATED IN ACCORDANCE WITH PART III.D.2. OF THIS PERMIT; AND
  - DAILY RAINFALL INFORMATION COLLECTED IN ACCORDANCE WITH PART IV.D.4.A.(2). OF THIS PERMIT.
- COPIES OF ALL NOTICES OF INTENT, NOTICES OF TERMINATION, INSPECTION REPORTS, SAMPLING REPORTS (INCLUDING ALL CALIBRATION AND MAINTENANCE RECORDS AND ALL ORIGINAL STRIP CHART RECORDINGS FOR CONTINUOUS MONITORING INSTRUMENTATION) OR OTHER REPORTS REQUESTED BY THE EPD, EROSION, SEDIMENTATION AND POLLUTION

**SEDIMENT STORAGE CALCULATION  
PROPOSED SEDIMENT POND A BASIN A**

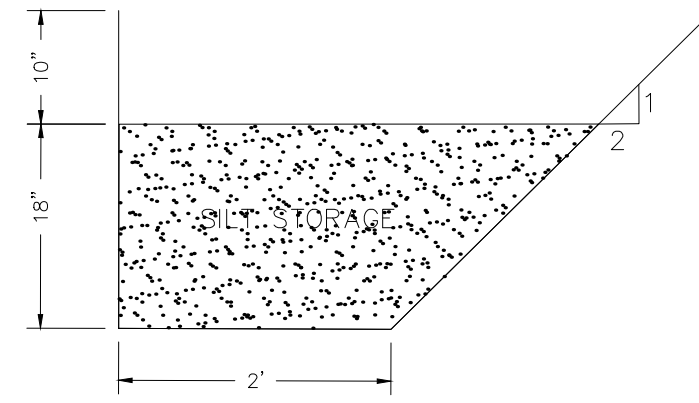
REQUIRED: 67 CY/AC  
14.01 AC x 67 CY = 938.67 CY  
SEDIMENT TRAP (CONIC METHOD)  
PROVIDED: 15681 CY OF STORAGE

**SEDIMENT STORAGE CALCULATION  
PROPOSED SEDIMENT BASIN B**

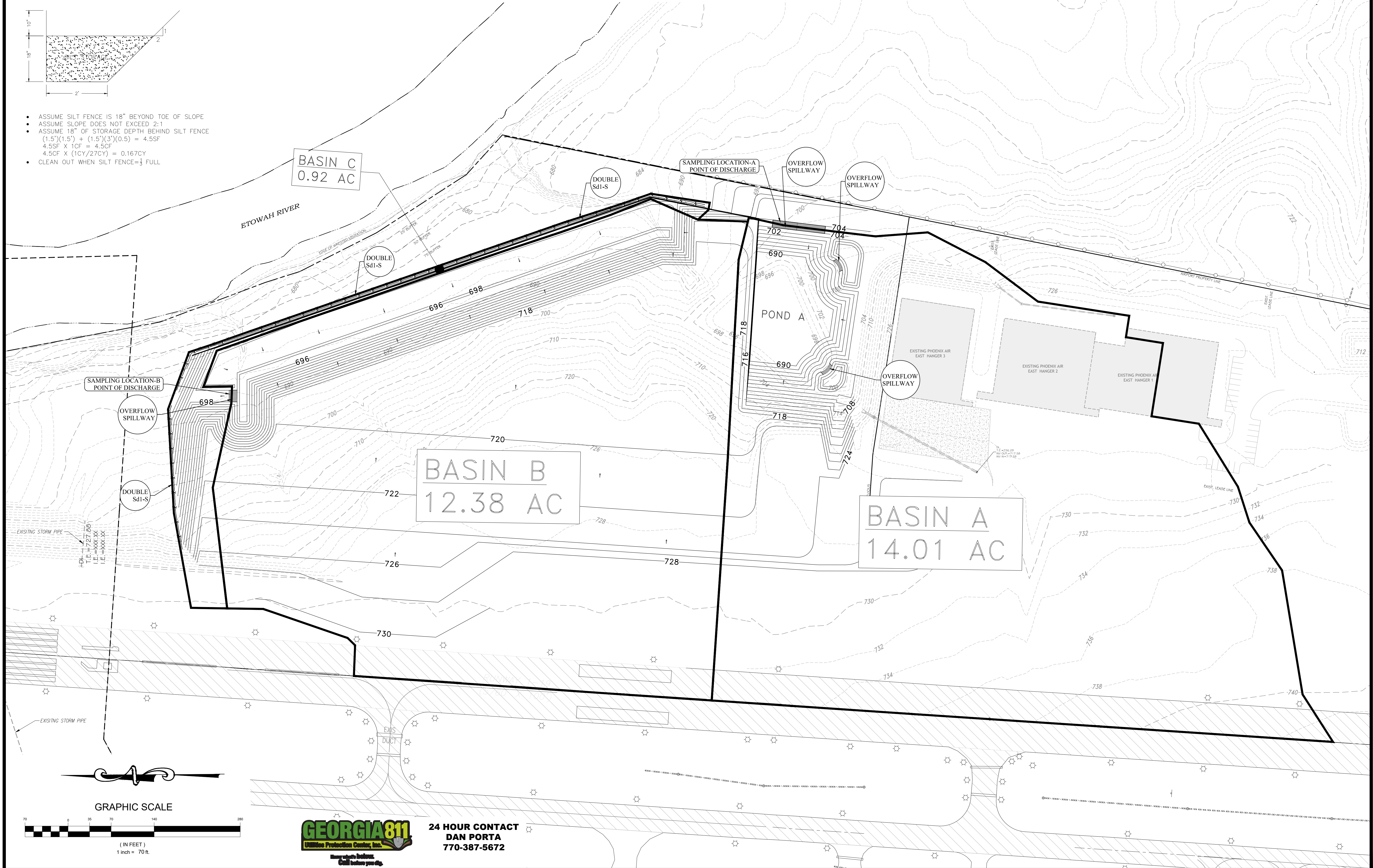
REQUIRED: 67 CY/AC  
12.38 AC x 67 CY = 829.46 CY  
TEMPORARY SEDIMENT TRAP (CONIC METHOD)  
PROVIDED: 948 CY OF STORAGE

**SEDIMENT STORAGE CALCULATION  
SILT FENCE BASIN C**

REQUIRED: 67 CY/AC  
0.92 AC x 67 CY = 61.64 CY  
  
SILT FENCE (0.1675 CY/FT)  
PROVIDED: 1196.23 LF x 0.1675 CY = 200.37 CY OF STORAGE



- ASSUME SILT FENCE IS 18" BEYOND TOE OF SLOPE
- ASSUME SLOPE DOES NOT EXCEED 2:1
- ASSUME 18" OF STORAGE DEPTH BEHIND SILT FENCE  
 $(1.5')(1.5') + (1.5')(3')(0.5) = 4.5SF$   
 $4.5SF \times 1CF = 4.5CF$   
 $4.5CF \times (1CY/27CY) = 0.1675CY$
- CLEAN OUT WHEN SILT FENCE =  $\frac{1}{3}$  FULL



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PROJECT NO.:		18166
DATE:		10/2/2020
REVISIONS:	DATE	DESCRIPTION
1		
2		
3		
4		
5		
6		

**SOUTHLAND ENGINEERING**  
CIVIL ENGINEERS - LAND SURVEYORS - LAND PLANNERS  
114 OLD MILL ROAD., CARTERSVILLE, GA 30120 PH: 770.387.0440 FAX: 770.607.5151

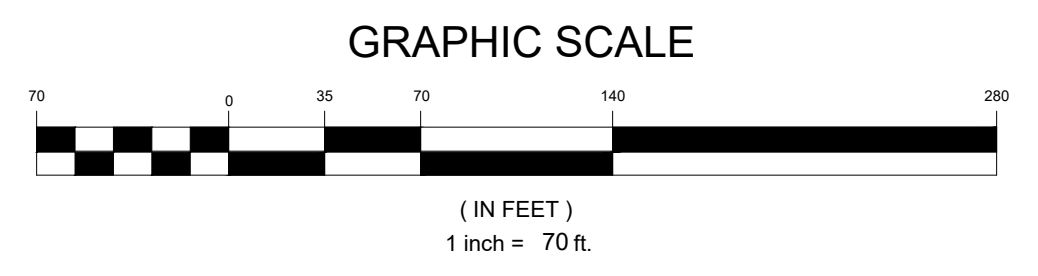
**CARTERSVILLE - BARTOW AIRPORT  
EXPANSION EAST**  
LOCATED IN LAND LOTS 853, 854, 875, 876  
4TH DISTRICT, 3RD SECTION  
CARTERSVILLE, GEORGIA



SHEET TITLE:  
**SEDIMENT  
BASIN  
MAP**

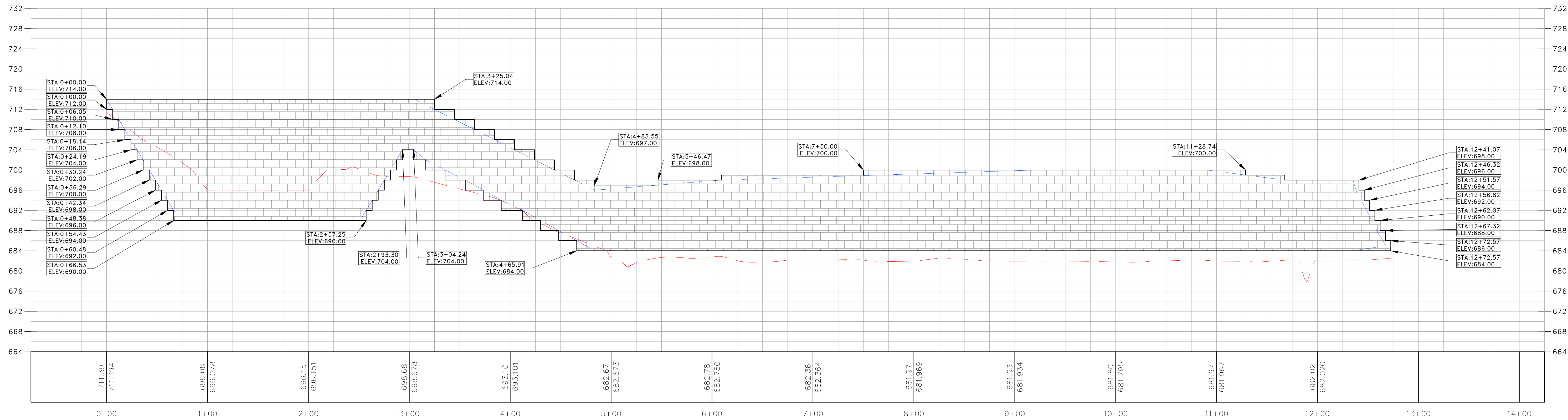
SHEET NO.:

**C510**



**GEORGIA811**  
24 HOUR CONTACT  
**DAN PORTA**  
770-387-5672

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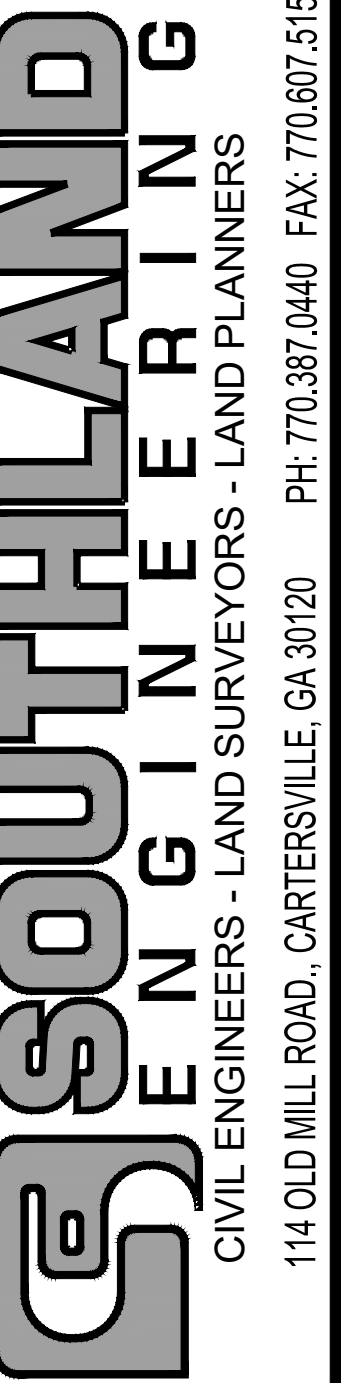


WALL A  
 VERTICAL SCALE: 10.00  
 HORIZONTAL SCALE: 50.00

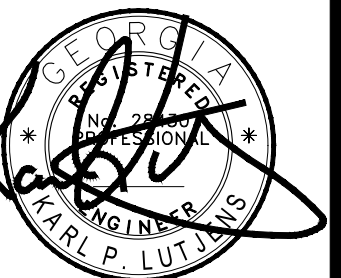
PROJECT NO.:  
18166

DATE:  
10/2/2020

REVISIONS:	DATE	DESCRIPTION
1		
2		
3		
4		
5		
6		



**CARTERSVILLE - BARTOW AIRPORT  
 EXPANSION EAST**  
 LOCATED IN LAND LOTS 853, 854, 875, 876  
 4TH DISTRICT, 3RD SECTION  
 CARTERSVILLE, GEORGIA



SHEET TITLE:

WALL  
 PROFILE

SHEET NO.:

C601



24 HOUR CONTACT  
**DAN PORTA**  
 770-387-5672