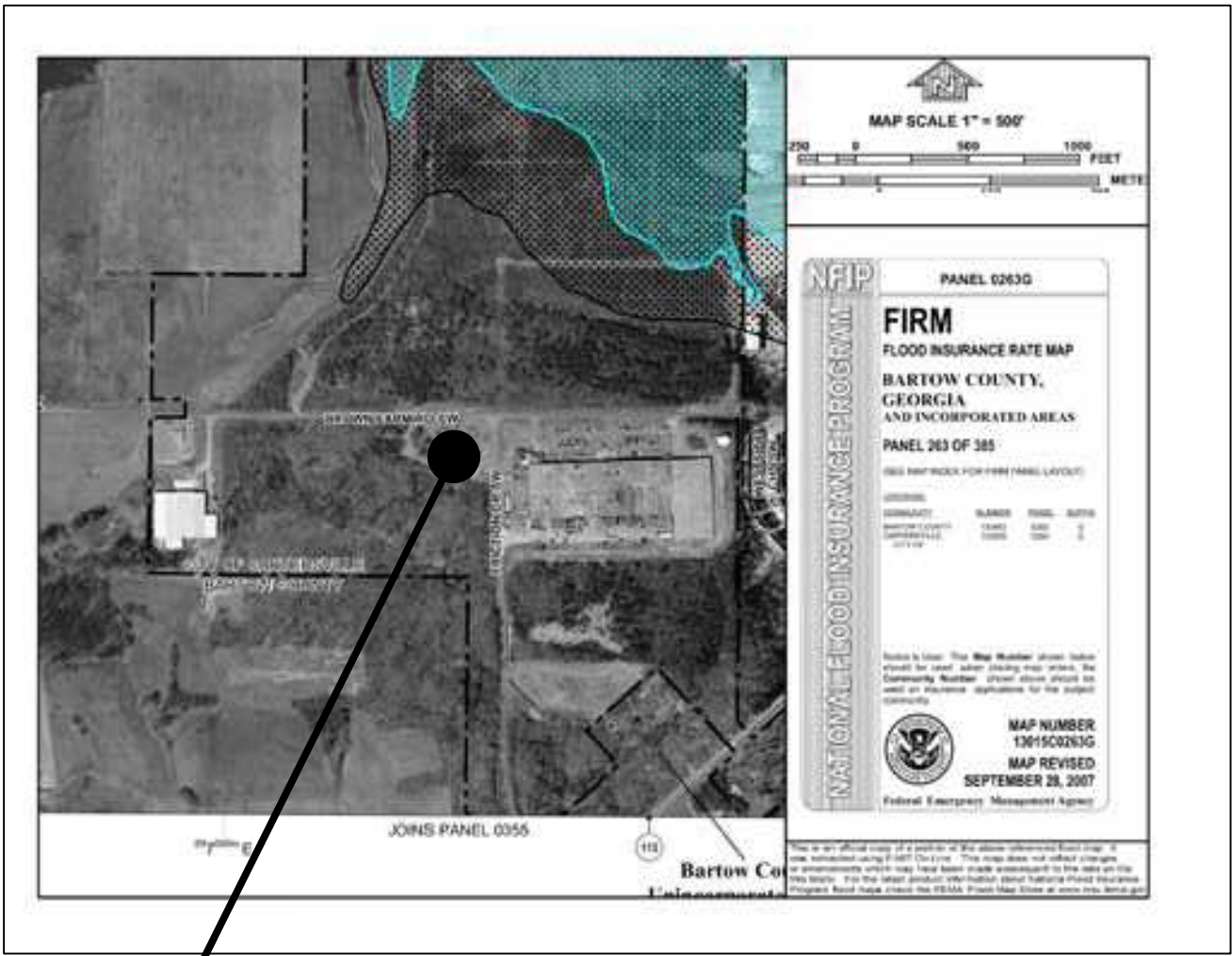


DEVELOPMENT PLANS FOR:  
  
BARTOW COUNTY  
FIRE STATION #9

OWNER / DEVELOPER:  
BARTOW COUNTY GOV.  
135 WEST CHEROKEE AVE.  
CARTERSVILLE, GEORGIA 30120  
TELEPHONE: 770-386-5151

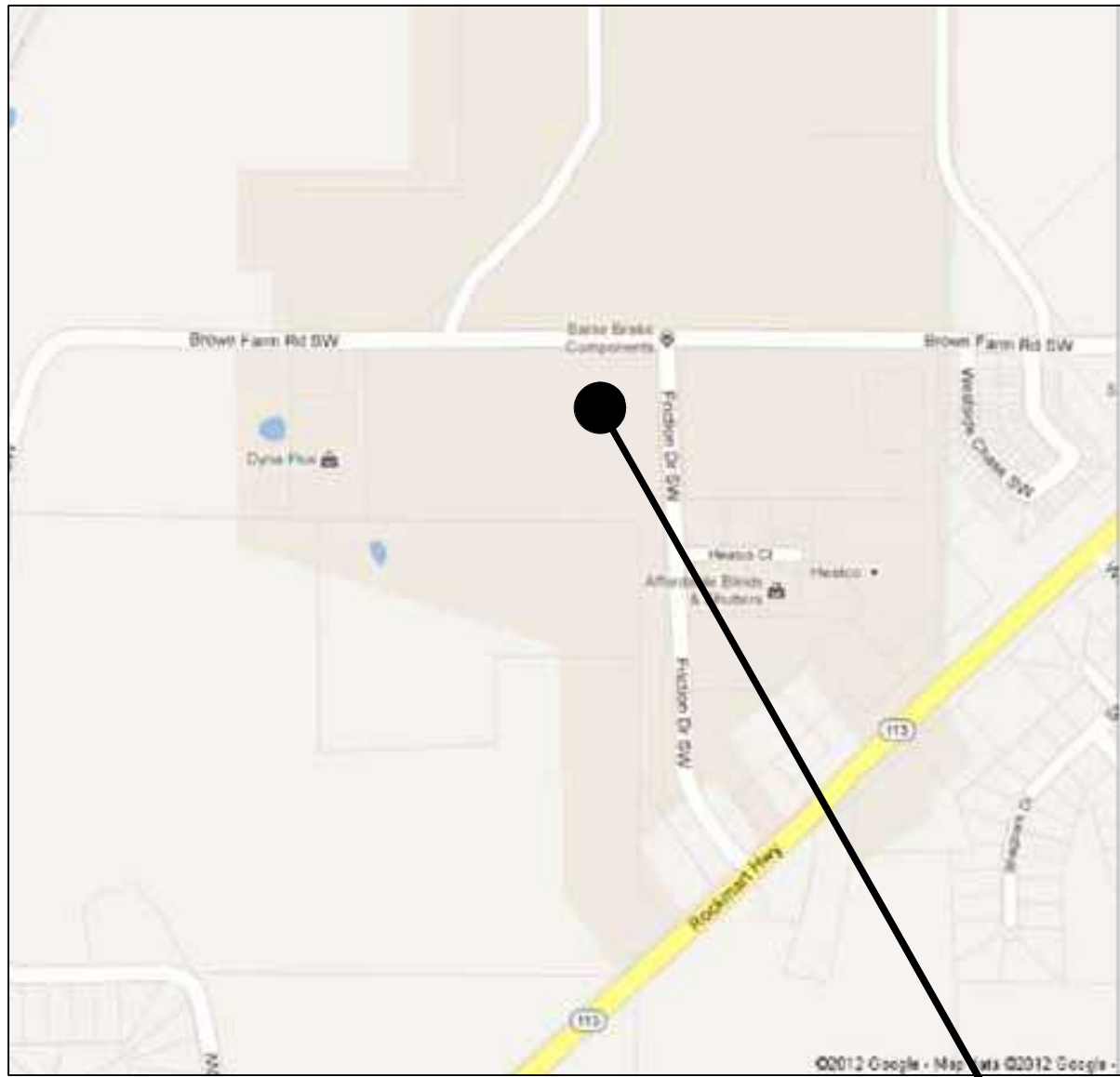
LAND LOTS 856 & 857  
4TH DISTRICT, 3RD SECTION  
CITY OF CARTERSVILLE, GEORGIA  
DATE: APRIL 28, 2015

SITE CONTACT INFORMATION			
COMPANY	KEVIN MILLS	DESCRIPTION	PHONE
Southland Engineering	Karl Lutjens	Civil Engineering	770-387-0440
Georgia Power	Adi Patel	Power	770-387-5224
Bartow County Water Dept.	Roger Ellis	Water	770-387-5169
City of Cartersville Sewer Dept.	Terry Jordan	Sewer	770-655-2740
City of Cartersville Gas Dept.	Brian Friery	Gas	770-382-5642



FLOOD MAP  
NOT TO SCALE

NOTE: THIS SITE IS NOT LOCATED WITHIN  
THE 100 YEAR FLOOD PLAIN AS PER FEMA FLOOD  
INSURANCE MAP 13015 C 0263 G, DATED SEPT 28 2007.



LOCATION MAP  
NTS

SHEET INDEX

- |            |   |
|------------|---|
| C-101      | EXISTING CONDITIONS                       |
| C-201      | SITE & LANDSCAPE PLAN                     |
| C-301      | UTILITY PLAN                              |
| C-401      | GRADING AND DRAINAGE PLAN                 |
| C-402      | POND PLAN                                 |
| C-501-C503 | EROSION CONTROL PLANS                     |
| C-504      | EROSION CONTROL NOTES                     |
| C-505-C507 | EROSION CONTROL DETAILS & VEGETATION PLAN |
| C-508      | STORM WATER POLLUTION PREVENTION PLAN     |
| C-601      | STORM & SANITARY SEWER SERVICE PROFILES   |
| C-701-C702 | CONSTRUCTION DETAILS                      |
| F1         | FLOOD CROSS SECTION MAP                   |

GENERAL NOTES

ALL SILT BARRIERS MUST BE PLACED AS ACCESS IS OBTAINED DURING CLEARING. NO GRADING SHALL BE DONE UNTIL SILT BARRIER INSTALLATION IS CONSTRUCTED. SILT BARRIERS TO BE PLACED AS SHOWN AND/OR AS DIRECTED BY PROJECT ENGINEER AND/OR CITY OF CARTERSVILLE INSPECTOR. NOTIFY INSPECTOR 24 HOURS PRIOR TO CONSTRUCTION. ALL EROSION AND SEDIMENTATION CONTROLS, AND TREE PROTECTION MEASURES SHALL BE INSTALLED PRIOR TO GRADING. ACCEPTED PLANS AND SUBSEQUENT ACCEPTED REVISIONS MUST BE PRESENT ON-SITE AT ALL TIMES.

ACCEPTANCE OF THESE PLANS BY THE CITY DOES NOT RELIEVE PERMIT HOLDER FROM MEETING ALL REQUIREMENTS OF THE 'CITY OF CARTERSVILLE ZONING ORDINANCE', 'FLOOD DAMAGE PREVENTION ORDINANCE', 'SOIL EROSION AND SEDIMENTATION CONTROL ORDINANCE', THE RULES AND REGULATIONS OF THE BARTOW COUNTY HEALTH DEPARTMENT, THE US ARMY CORPS OF ENGINEERS AND ANY OTHER LOCAL, STATE, OR FEDERAL LAW OR REGULATION AS IT RELATES TO DEVELOPMENT IN THE CITY OF CARTERSVILLE.

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/DEVELOPER'S RESPONSIBILITY TO ACCOMPLISH EROSION AND SEDIMENT CONTROL FOR ALL DRAINAGE PATTERNS CREATED AT VARIOUS STATES 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 OF CARTERSVILLE INSPECTOR.

EROSION CONTROL MEASURES WILL BE INSPECTED AT LEAST WEEKLY AND AFTER EACH RAIN, AND REPAIRED BY GENERAL CONTRACTOR.

DETENTION/SEDIMENT POND(S) AND DIVERSION DITCHES SHALL BE INSTALLED IMMEDIATELY AFTER CLEARING FOR ROADWAY CONSTRUCTION. DETENTION POND(S) SHALL BE RETROFITTED FOR SILTATION CONTROL. ENGINEER SHALL IMMEDIATELY FOLLOW-UP WITH AS-BUILT CERTIFICATION FOR DESIGN COMPLIANCE PRIOR TO ACCEPTANCE OF FINAL PLAT.

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 PREVIOUSLY ACCEPTED REVISIONS. OWNER ACKNOWLEDGES THAT ACCEPTANCE OF PLANS BY THE CITY IN NO WAY RELIEVES OWNER OF RESPONSIBILITY NOT TO ADVERSELY IMPACT DOWNSTREAM PROPERTY REGARDING ANY LAND DISTURBING ACTIVITY. 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 THIS 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 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 AT 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. 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 THE DEVELOPER TO THE INDIVIDUAL LOT OWNERS. OPEN DRAINAGE DITCHES SHALL BE 4:1 SIDE SLOPES OR FLATTER AND FALL ENTIRELY WITHIN EASEMENT. RESIDENTIAL FENCES AND OTHER 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 ON FOOT AT ANY POINT WITHIN THE COMMUNITY.

IF ACTUAL SITE CONDITIONS VARY FROM ACCEPTED PLANS, IT IS THE OWNER/DEVELOPER'S 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 OF THESE PLANS DOES NOT CONSTITUTE APPROVAL BY THE CITY OF CARTERSVILLE OF ANY LAND DISTURBING ACTIVITY WITHIN WETLAND AREAS. IT IS THE OWNER'S RESPONSIBILITY TO CONTACT THE APPROPRIATE REGULATORY AGENCY FOR APPROVAL OF ANY WETLAND AREA DISTURBANCE.

IT IS THE OWNER'S RESPONSIBILITY TO ENSURE THAT ALL RESIDENTIAL LOTS HAVE SUFFICIENT GRADE AND ADEQUATE DRAINAGE TO PREVENT FLOODING OF PROPOSED STRUCTURES AND PERTINENT IMPROVEMENTS SUCH AS ON-SITE SEPTIC SYSTEMS. DEVELOPER SHALL NOTIFY BUILDER OF ANY SPECIAL CONDITIONS RELATING TO LOT DRAINAGE AND FLOODING POTENTIAL.

DEED RESTRICTIONS ARE REQUIRED FOR LOTS AFFECTED BY DETENTION POND(S) TO PROTECT POND FROM UNAUTHORIZED USE OR ACTIVITY. THE OWNER SHALL GRANT TO THE CITY OF CARTERSVILLE, A PERPETUAL, NON-EXCLUSIVE EASEMENT WHICH ALLOWS FOR PUBLIC INSPECTION/MAINTENANCE AND EMERGENCY REPAIR FOR THE DETENTION POND(S). THE EASEMENTS SHALL BE RECORDED WITH THE CLERK OF SUPERIOR COURT OF BARTOW COUNTY PRIOR TO ACCEPTANCE OF FINAL PLAT.

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 PUBLIC WORKS DEPARTMENT.

MAINTAIN A MINIMUM 2' OF COVER OVER STORM PIPES. ALL CORRUGATED METAL PIPE TO BE MAINTAINED BY THE CITY SHALL BE FULLY ASPHALT COATED. PAVED INVERTS ARE REQUIRED IN PERENNIAL STREAMS. PIPE GAGE DETERMINED BASED ON DEPTH OF COVER AND LOADING CONDITIONS.

DEBRIS FILLS ARE STRICTLY PROHIBITED AT ALL CONSTRUCTION SITES OR WITHIN ANY DEVELOPMENT. ALL WASTE AND CONSTRUCTION DEBRIS GENERATED FROM CONSTRUCTION MUST BE PROPERLY DISPOSED OF IN THE BARTOW COUNTY LANDFILL. APPROVAL OF PERMIT-BY-RULE FOR INERT LANDFILLS IS REQUIRED BY STATE D.N.R.

ALL STREET AND STOP SIGNS MUST BE INSTALLED PRIOR TO ISSUANCE OF ANY BUILDING PERMITS.

DEEDS OF DEDICATION FOR PUBLIC RIGHTS-OF-WAY, DETENTION PONDS AND ACCESS TO DETENTION PONDS MUST BE SUBMITTED PRIOR TO ACCEPTANCE OF FINAL PLAT. THE OWNER/DEVELOPER IS RESPONSIBLE FOR RECORDING SAID DEEDS AFTER ACCEPTANCE BY THE COMMISSIONER. OWNER/DEVELOPER SHALL WARRANT THE ROADS AND/OR STREETS AND DETENTION PONDS FOR A PERIOD OF ONE YEAR FROM DATE OF ACCEPTANCE.

PROPERLY EXECUTED AND RECORDED EASEMENTS AND DEEDS OF DEDICATION MUST BE PROVIDED FOR STORM WATER MANAGEMENT FACILITIES OF SINGLE FAMILY RESIDENTIAL SUBDIVISIONS PRIOR TO THE RECORDING OF THE FINAL PLAT. FOR OTHER TYPES OF DEVELOPMENT THE RESPONSIBILITY FOR MAINTENANCE AND FUNCTIONAL INTEGRITY OF SAID FACILITIES WILL REMAIN THE RESPONSIBILITY OF THE OWNER.

BEFORE STARTING ANY WORK ON THE WATER AND SEWER SYSTEM, A PRECONSTRUCTION CONFERENCE MUST BE HELD AT THE OFFICE OF THE WATER DEPARTMENT WITH THE OWNER/DEVELOPER, WATER CONTRACTOR, SEWER CONTRACTOR, AND STORM DRAINAGE AND GRADING CONTRACTORS.

CONSTRUCTION EXIT GPS LOCATION: ⑦  
LATITUDE: 34.129483 LONGITUDE: -84.859909

24 HOUR CONTACT  
CRAIG MILSAP  
770-387-5151

TOTAL SITE AREA = 3.51 ACRES  
TOTAL AREA OF INITIAL DISTURBANCE = 1.89 ACRES  
TOTAL AREA OF TOTAL DISTURBANCE = 4.70 ACRES

PROJECT NO.:  
14137

DATE:  
04/28/15

REVISIONS:	DATE	DESCRIPTION
1	3/25/15	CITY SUB
2	4/01/15	OUTLET REV
3	4/27/15	2ND SUB CITY
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

BARTOW COUNTY  
FIRE STATION #9  
LOCATED IN LAND LOTS 856 & 857  
4TH DISTRICT, 3RD SECTION  
CARTERSVILLE, GEORGIA



SHEET TITLE:

COVER

SHEET NO.:

C001



LEGEND

721.00

PROPOSED GRADE

x 720.00

AS-BUILT GRADE

AS-BUILT SURVEY FOR:

FIRE STATION #9

LOCATED IN LAND LOT 856 & 857,  
4TH DISTRICT, 3RD SECTION,  
BARTOW COUNTY, GEORGIA

DATE: AUGUST 6, 2015

REV:

JOB NO:14167

DATE OF FIELDWORK: AUGUST 6, 2015

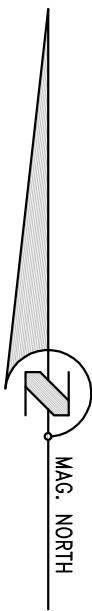
**SOUTHLAND**  
ENGINEERING

CIVIL ENGINEERS - LAND SURVEYORS - LAND PLANNERS

114 OLD MILL ROAD, CARTERSVILLE, GA 30120

PH: 770.387.0440 FAX: 770.607.5151

0 15 30 60 90  
SCALE: 1" = 30' GRAPHIC SCALE



PROPOSED  
FIRE STATION  
AREA = 8,616 SF  
F.F.E. = 721.00

PROPOSED LOW POINT  
INTENTIONALLY LEFT HIGH  
TO ELIMINATE PONDING

PROPOSED SWALE  
INTENTIONALLY LEFT HIGH  
TO ELIMINATE PONDING

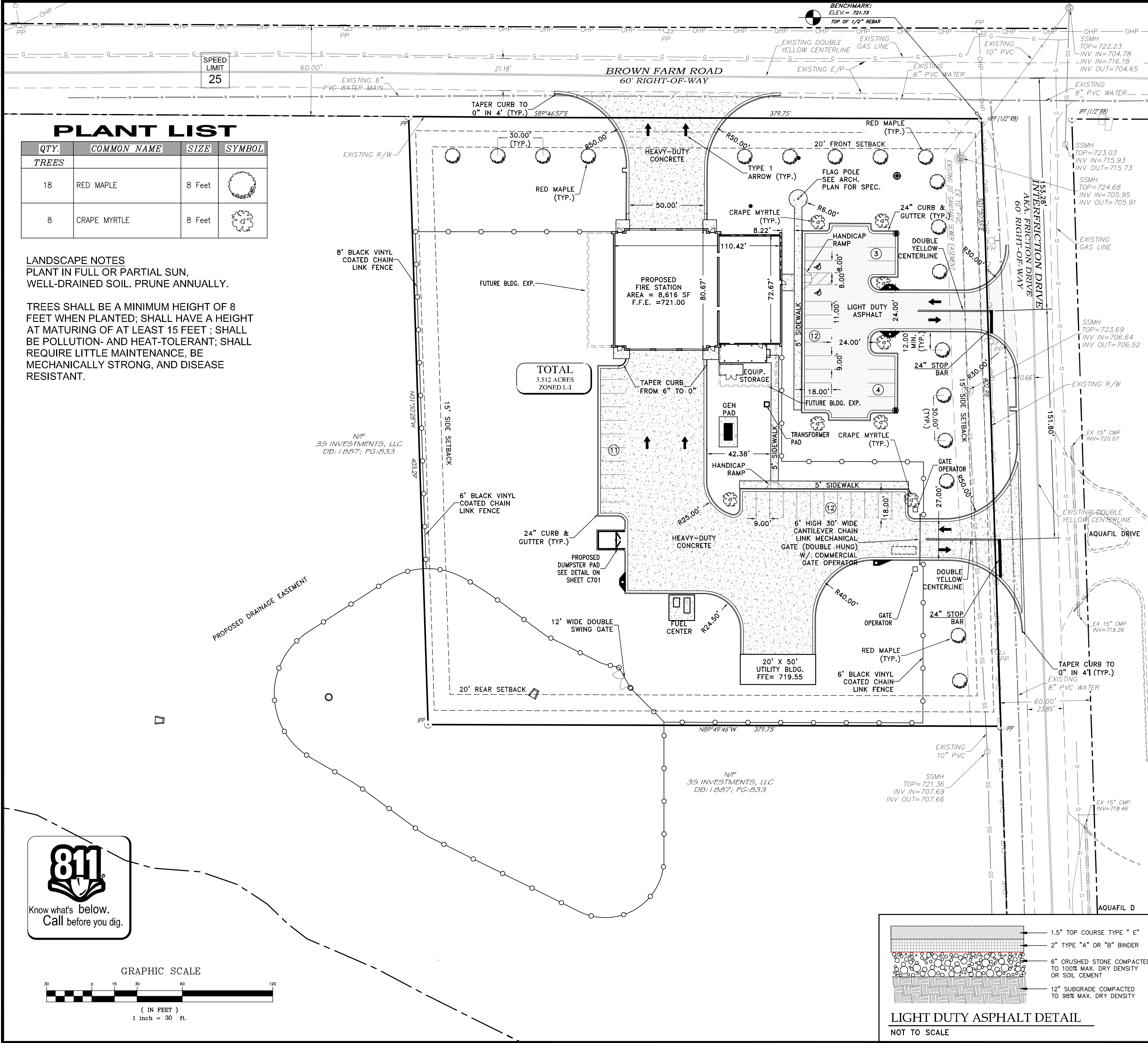
20' X 50'  
UTILITY BLDG.  
FFE= 719.55

ALL PROPOSED ELEVATIONS  
ARE COMMONLY SHOWN ON  
THE GUTTERLINE.









QTY.	COMMON NAME	SIZE	SYMBOL
TREES			
18	RED MAPLE	8 Feet	
8	CRAPE MYRTLE	8 Feet	

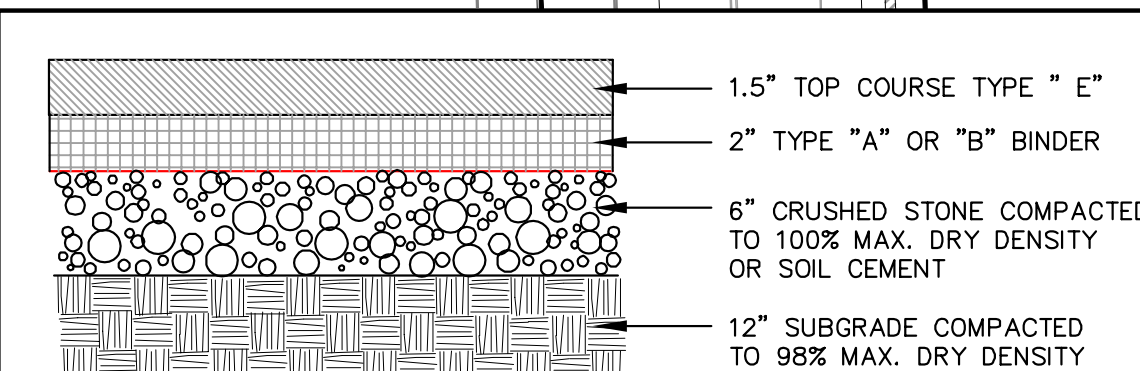
LANDSCAPE NOTES  
PLANT IN FULL OR PARTIAL SUN,  
WELL-DRAINED SOIL. PRUNE ANNUALLY.

TREES SHALL BE A MINIMUM HEIGHT OF 8  
FEET WHEN PLANTED; SHALL HAVE A HEIGHT  
AT MATURING OF AT LEAST 15 FEET ; SHALL  
BE POLLUTION- AND HEAT-TOLERANT; SHALL  
REQUIRE LITTLE MAINTENANCE, BE  
MECHANICALLY STRONG, AND DISEASE  
RESISTANT.

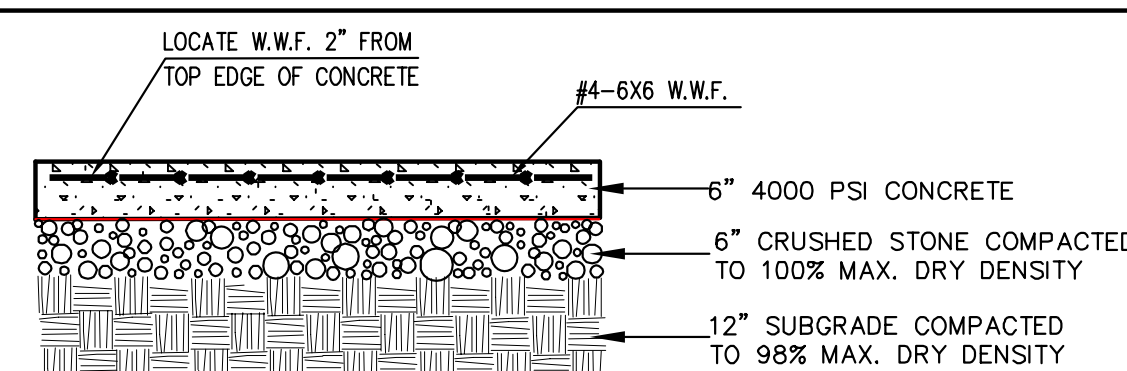
- SITE PLAN NOTES:**
1. ACREAGE OF SITE: 3.512 ACRES
  2. PROPERTY ADDRESS: 171 BROWN FARM ROAD, CARTERSVILLE, GA. 30120
  3. MINIMUM FRONT YARD: 20 FT
  4. MINIMUM SIDE YARD: 15 FT.
  5. MINIMUM REAR YARD: 20 FT.
  6. MINIMUM LOT AREA: NONE
  7. MINIMUM LOT FRONTAGE: 110 FT. ADJOINING A STREET.
  8. MINIMUM LOT WIDTH AT THE BUILDING LINE: 100 FT.
  9. ALL CONSTRUCTION MUST CONFORM TO THE CITY STANDARDS AND SPECIFICATIONS, WHETHER OR NOT REVIEW COMMENTS WERE MADE. NOTIFY INSPECTOR 24 HOURS PRIOR TO CONSTRUCTION.
  10. CURRENT ZONING L-1 (LIGHT INDUSTRIAL)
  11. SIGNING AND STRIPING TO BE PROVIDED BY THE CONTRACTOR ACCORDING TO THE CITY SPECIFICATIONS.
  12. ON-SITE PARKING SHALL BE PROVIDED AND MAINTAINED THROUGHOUT CONSTRUCTION.
  13. THERE ARE STATE WATERS WITHIN 200 FEET OF THE SITE.
  14. THERE ARE NO WETLANDS ON SITE.
  15. DOMESTIC WATER PROVIDED BY BARTOW COUNTY.
  16. SANITARY SEWER PROVIDED BY CITY OF CARTERSVILLE.
  17. TOPOGRAPHIC INFORMATION TAKEN FROM A FIELD RUN SURVEY BY SOUTHLAND ENGINEERING, INC. AND GIS TOPO.
  18. EXISTING UTILITY LOCATIONS ARE SHOWN FOR INFORMATION PURPOSES ONLY.
  19. CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE EXACT LOCATIONS OF ALL UTILITIES AND FOR COORDINATING HIS OPERATIONS WITH ALL UTILITIES WHICH CONFLICT WITH HIS WORK.
  20. 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.
  21. PARKING LOT OUTDOOR LIGHTING SHALL HAVE A MAXIMUM HEIGHT OF 45 FEET AND SHALL BE DIRECTED AWAY AND SHIELDED FROM ABUTTING RESIDENTIAL DISTRICTS AND USE.
  22. NOTE: THE SITE IS NOT LOCATED WITHIN THE ETOWAH VALLEY HISTORIC DISTRICT AS DEPICTED ON THE BARTOW COUNTY ETOWAH VALLEY HISTORIC DISTRICT MAP.
  23. ACCEPTANCE OF THESE PLANS DOES NOT CONSTITUTE APPROVAL BY THE CITY OF CARTERSVILLE OF ANY LAND DISTURBING ACTIVITIES WITHIN WETLAND AREAS. IT IS THE OWNER'S RESPONSIBILITY TO CONTACT THE APPROPRIATE REGULATORY AGENCY FOR APPROVAL OF ANY WETLAND AREA DISTURBANCE.
  24. IT IS THE DEVELOPERS RESPONSIBILITY TO ADDRESS ANY ENDANGERED SPECIES ISSUES TO THE SATISFACTION OF THE U.S. FISH AND WILDLIFE SERVICE.
  25. IT IS THE DEVELOPERS RESPONSIBILITY TO ABIDE BY ALL THE RULES AND REGULATIONS PERTAINING TO THE STATE OF GEORGIA NATION POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT REQUIREMENTS.
  26. ASBUILT DRAWINGS FOR STORMWATER MANAGEMENT SYSTEM MUST BE SUBMITTED PRIOR TO CERTIFICATE OF OCCUPANCY.
  27. LAND DISTURBING ACTIVITIES UNDER THE PERMIT MUST BEGIN WITHIN 120 DAYS AFTER ISSUANCE OF THE LAND DISTURBANCE PERMIT.
  28. ALL ROADWAY AND ROADSIDE DESIGN MUST CONFORM TO AASHTO GUIDELINES.
  29. OWNER/DEVELOPER TO CONTACT THE CITY OF CARTERSVILLE ZONING DEPARTMENT PRIOR TO INSTALLATION OF DEVELOPMENT SIGN.
  30. TOTAL IMPERVIOUS AREA = 47,484 S.F. (31%).

PARKING REQUIREMENTS	
1 SPACE FOR EACH 300 SQUARE FEET OF GROSS FLOOR SPACE	
GROSS FLOOR SPACE = 8,244 SF	
REQUIRED PARKING = 28 SPACES	
PROVIDED PARKING = 42 SPACES	
(INCLUDING 2 HANDICAPPED SPACES)	

**24 HOUR CONTACT**  
**CRAIG MILSAP**  
**770-387-5151**



**LIGHT DUTY ASPHALT DETAIL**  
NOT TO SCALE



**HEAVY DUTY CONCRETE DETAIL**  
NOT TO SCALE

PROJECT NO.:  
**14137**

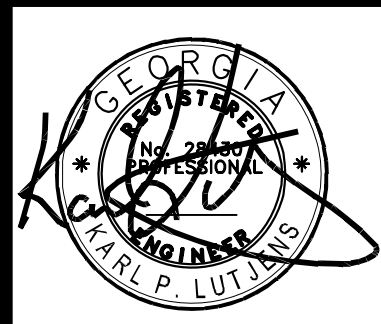
DATE:  
**04/28/15**

REVISIONS:

DATE	DESCRIPTION	CITY SUB	OUTLET REV	2ND SUB CITY
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2	4/01/15			
3	4/27/15			
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6				

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

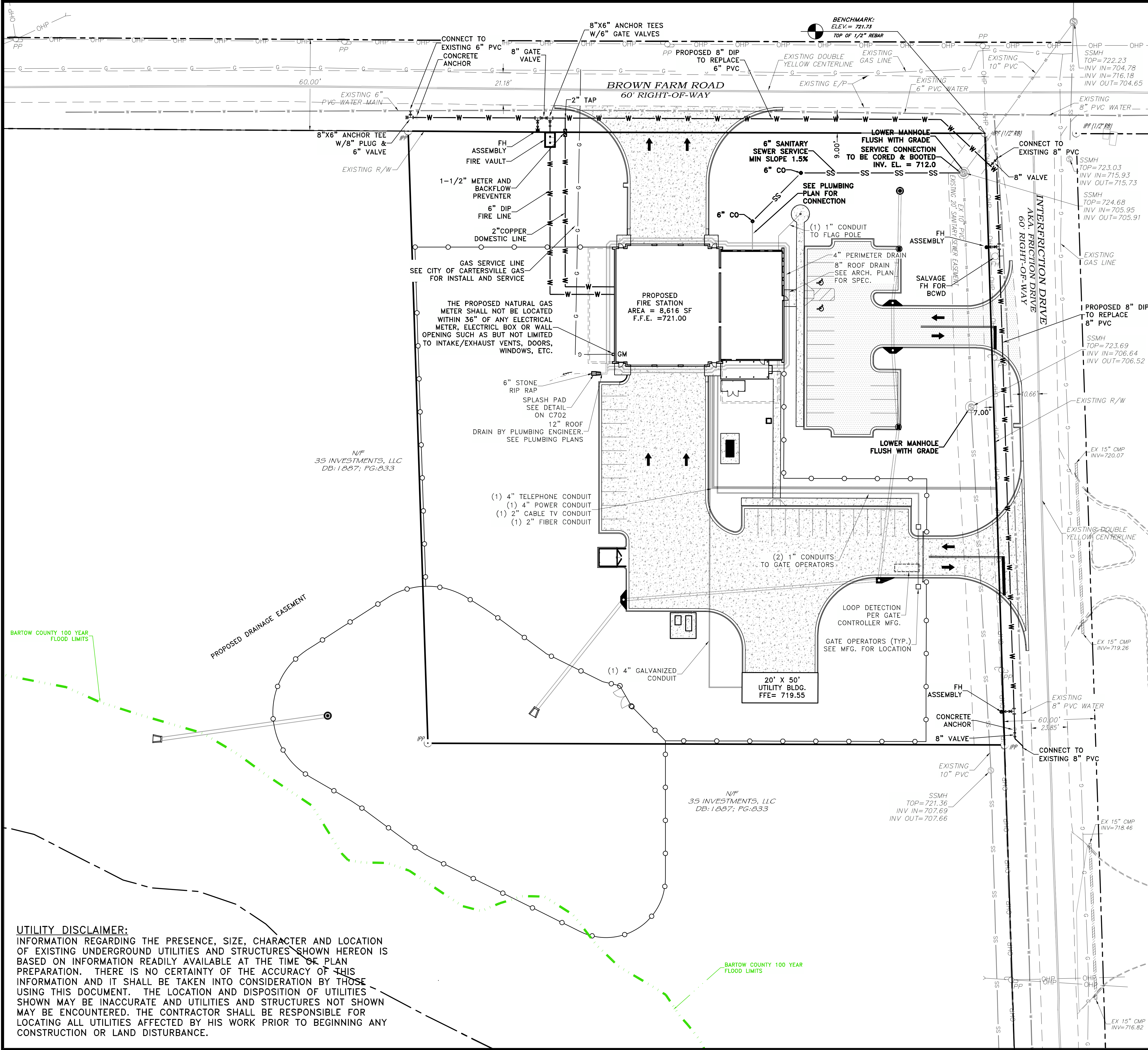
**BARTOW COUNTY**  
**FIRE STATION #9**  
LOCATED IN LAND LOTS 856 & 857  
4TH DISTRICT, 3RD SECTION  
CARTERSVILLE, GEORGIA



**SHEET TITLE:**  
**SITE & LANDSCAPE PLAN**

**SHEET NO.:**  
**C201**





- UTILITY NOTES:**  
CONTRACTOR TO FIELD VERIFY EXISTING UTILITY LOCATIONS PRIOR TO CONSTRUCTION AND SHALL INFORM THE ENGINEER OF ANY AND ALL DISCREPANCIES.
- GAS NOTES**
1. CONSTRUCTION STAKING FOR THE PROPOSED NATURAL GAS FACILITIES WILL BE PROVIDED BY AND AT THE EXPENSE OF THE DEVELOPER.
  2. ALL EARTHWORK AND CLEARING AND GRUBBING IN THE AREAS OF THE PROPOSED NATURAL GAS FACILITIES SHALL BE COMPLETED PRIOR TO THE INSTALLATION OF THE PROPOSED NATURAL GAS FACILITIES.
  3. NO PAVEMENT SHALL BE PLACED IN THE AREAS OF THE PROPOSED NATURAL GAS FACILITIES PRIOR TO INSTALLATION OF THE PROPOSED NATURAL GAS FACILITIES. ANY PAVEMENT PLACED IN THE AREAS OF THE PROPOSED NATURAL GAS FACILITIES PRIOR TO THE INSTALLATION OF THE NATURAL GAS FACILITIES SHALL BE REMOVED AND REPLACED BUY AND AT THE EXPENSE OF THE DEVELOPER.
  4. COORDINATE THE INSTALLATION AND COSTS OF THE PROPOSED NATURAL GAS FACILITIES WITH MICHAEL DICKSON OF THE GAS SYSTEM AT 770-387-5642.
  5. GAS SERVICE: TBD
  6. GAS METERS SHALL NOT BE WITHIN 36" OF ANY WALL OPENING (WINDOWS, VENTS, DOORS, ELECTRICAL BOXES ETC.)

- EROSION & SEDIMENT CONTROL-NATURAL GAS FACILITY INSTALLATIONS**
1. THE CITY OF CARTERSVILLE GAS SYSTEM WILL OR CAUSE TO PROVIDE AND APPLY STRAW OR HAY MULCH TO A DEPTH OF 6" OVER ALL AREAS DISTURBED SPECIFICALLY BY THE CONSTRUCTION OF THE NATURAL GAS FACILITIES WITHIN THE DEVELOPMENT PROVIDED NO FURTHER DISTURBANCE OF SUCH AREAS ARE PLANNED WITHIN 14 DAYS OF INITIAL DISTURBANCE.
  2. THE DEVELOPER WILL OR CAUSE TO MAINTAIN OR RE-APPLY SUCH EROSION AND SEDIMENT CONTROL MEASURES AS NECESSARY OR REQUIRED TO COMPLY WITH ALL LOCAL, STATE AND FEDERAL EROSION AND SEDIMENT CONTROL REQUIREMENTS AFTER INITIAL APPLICATION AS REQUIRED BY #1 ABOVE.
  3. THE DEVELOPER WILL OR CAUSE TO PROVIDE, INSTALL, MAINTAIN AND REMOVE ANY AND ALL EROSION AND SEDIMENT CONTROL MEASURES NECESSARY OR REQUIRED TO COMPLY WITH ALL LOCAL, STATE AND FEDERAL EROSION AND SEDIMENT CONTROL REQUIREMENTS WHICH MAY BE ASSOCIATED WITH THE CONSTRUCTION OF THE NATURAL GAS FACILITIES WITHIN THE DEVELOPMENT OTHER THAN #1 ABOVE.

**24 HOUR CONTACT  
CRAIG MILSAP  
770-387-5151**

**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.

PROJECT NO.:  
**14137**

DATE:  
**04/28/15**

REVISIONS:	DATE	DESCRIPTION
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CIVIL ENGINEERS - LAND SURVEYORS - LAND PLANNERS  
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**BARTOW COUNTY  
FIRE STATION #9**  
LOCATED IN LAND LOTS 856 & 857  
4TH DISTRICT, 3RD SECTION  
CARTERSVILLE, GEORGIA

**STATE OF GEORGIA**  
KARL P. LUTJES

**SHEET TITLE:**  
**UTILITY PLAN**

**SHEET NO.:**  
**C301**

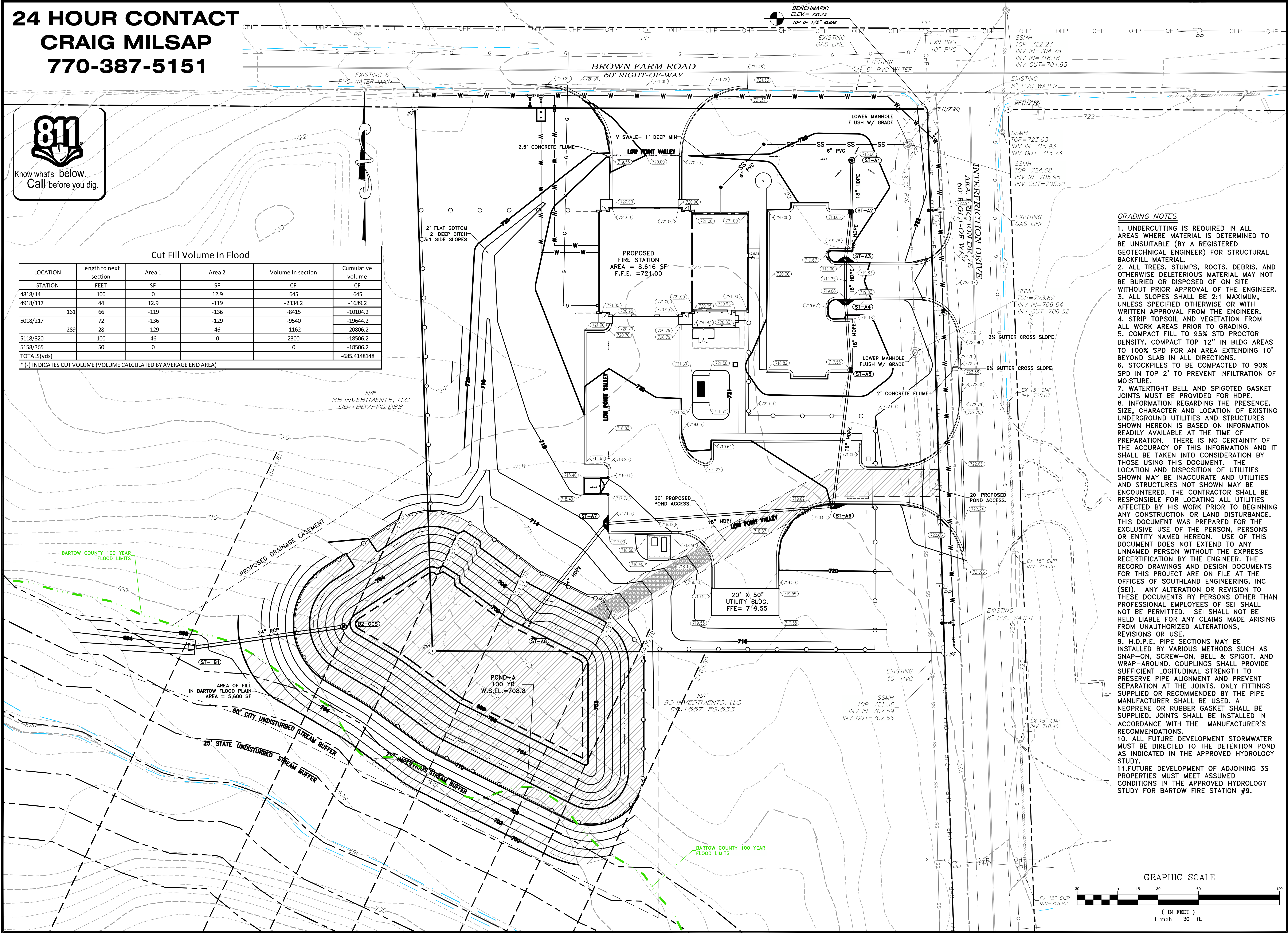


24 HOUR CONTACT  
CRAIG MILSAP  
770-387-5151

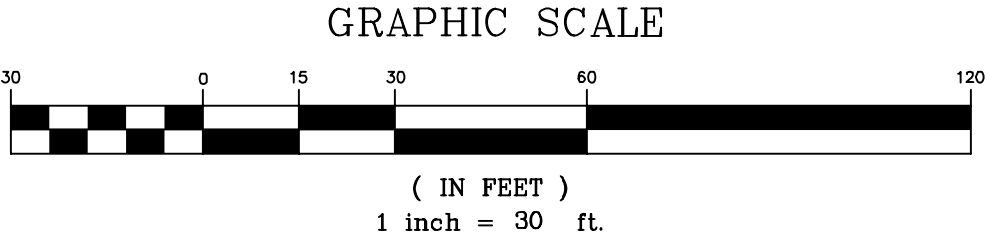


Cut Fill Volume in Flood					
LOCATION	Length to next section	Area 1	Area 2	Volume In section	Cumulative volume
STATION	FEET	SF	SF	CF	CF
4818/14	100	0	12.9	645	645
4918/117	44	12.9	-119	-2334.2	-1689.2
	161	66	-119	-8415	-10104.2
5018/217	72	-136	-129	-9540	-19644.2
	289	28	-129	-1162	-20806.2
5118/320	100	46	0	2300	-18506.2
5158/365	50	0		0	-18506.2
TOTALS(yds)					-685.4148148

\* (-) INDICATES CUT VOLUME (VOLUME CALCULATED BY AVERAGE END AREA)



- GRADING NOTES**
- 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 WITHOUT PRIOR APPROVAL OF THE ENGINEER.
  - 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.
  - WATERTIGHT BELL AND SPIGOTED GASKET JOINTS MUST BE PROVIDED FOR HDPE.
  - 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 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. 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.
  - H.D.P.E. PIPE SECTIONS MAY BE INSTALLED BY VARIOUS METHODS SUCH AS SNAP-ON, SCREW-ON, BELL & SPIGOT, AND WRAP-AROUND. COUPLINGS SHALL PROVIDE SUFFICIENT LOGITUDINAL STRENGTH TO PRESERVE PIPE ALIGNMENT AND PREVENT SEPARATION AT THE JOINTS. ONLY FITTINGS SUPPLIED OR RECOMMENDED BY THE PIPE MANUFACTURER SHALL BE USED. A NEOPRENE OR RUBBER GASKET SHALL BE SUPPLIED. JOINTS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
  - ALL FUTURE DEVELOPMENT STORMWATER MUST BE DIRECTED TO THE DETENTION POND AS INDICATED IN THE APPROVED HYDROLOGY STUDY.
  - FUTURE DEVELOPMENT OF ADJOINING 3S PROPERTIES MUST MEET ASSUMED CONDITIONS IN THE APPROVED HYDROLOGY STUDY FOR BARTOW FIRE STATION #9.



PROJECT NO.:  
14137

DATE:  
04/28/15

REVISIONS:

DATE	DESCRIPTION
1 3/25/15	CITY SUB
2 4/01/15	OUTLET REV
3 4/27/15	2ND SUB CITY
4	
5	
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114 OLD MILL ROAD., CARTERSVILLE, GA 30120  
PH: 770.387.0440 FAX: 770.607.5151

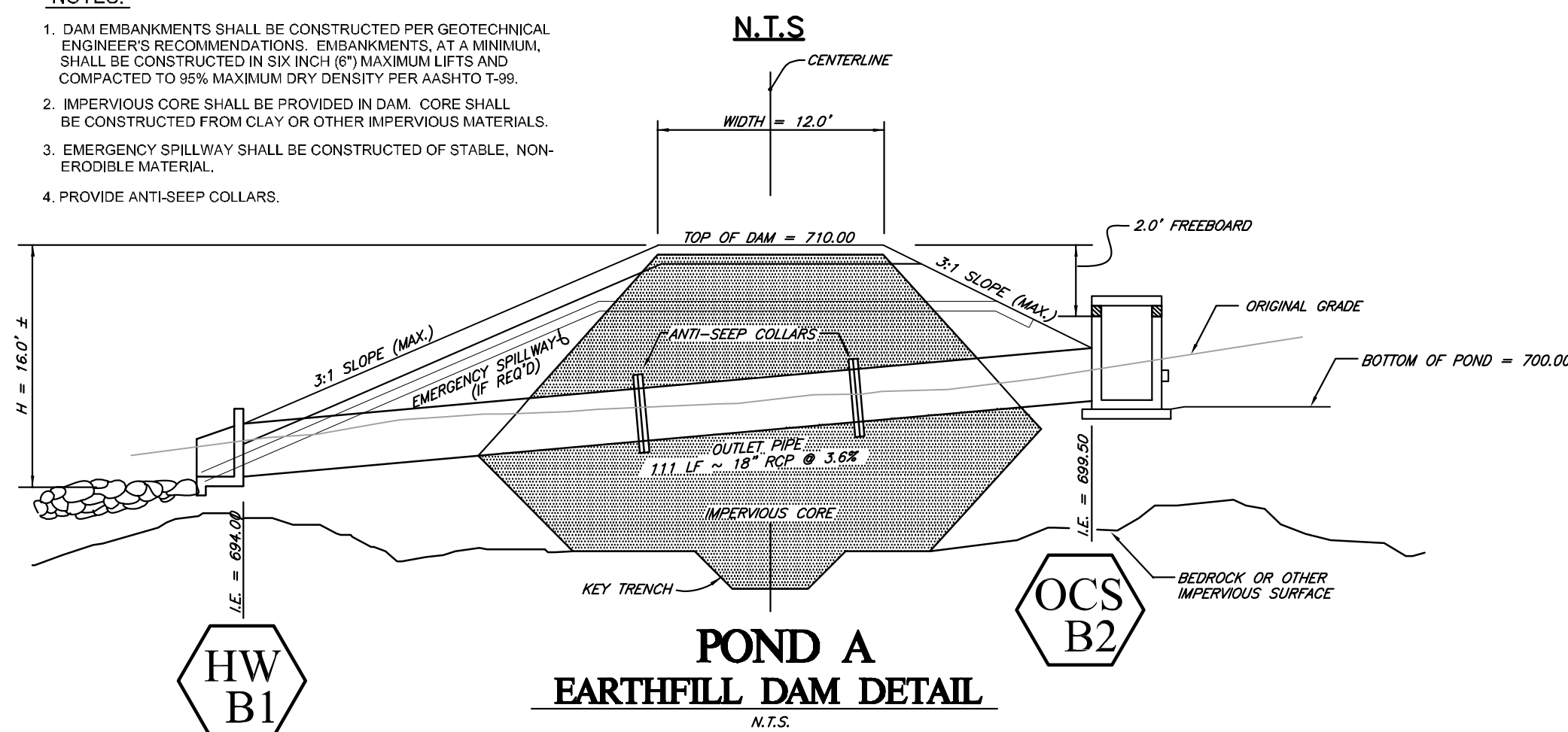
BARTOW COUNTY  
FIRE STATION #9  
LOCATED IN LAND LOTS 856 & 857  
4TH DISTRICT, 3RD SECTION  
CARTERSVILLE, GEORGIA



SHEET TITLE:  
GRADING  
PLAN  
SHEET NO.:  
C401



1. DAM EMBANKMENTS SHALL BE CONSTRUCTED PER GEOTECHNICAL ENGINEER'S RECOMMENDATIONS. EMBANKMENTS, AT A MINIMUM, SHALL BE CONSTRUCTED IN SIX INCH (6") MAXIMUM LIFTS AND COMPACTED TO 95% MAXIMUM DRY DENSITY PER AASHTO T-99.
2. IMPERVIOUS CORE SHALL BE PROVIDED IN DAM. CORE SHALL BE CONSTRUCTED FROM CLAY OR OTHER IMPERVIOUS MATERIALS.
3. EMERGENCY SPILLWAY SHALL BE CONSTRUCTED OF STABLE, NON-ERODIBLE MATERIAL.
4. PROVIDE ANTI-SHEEP COLLARS.



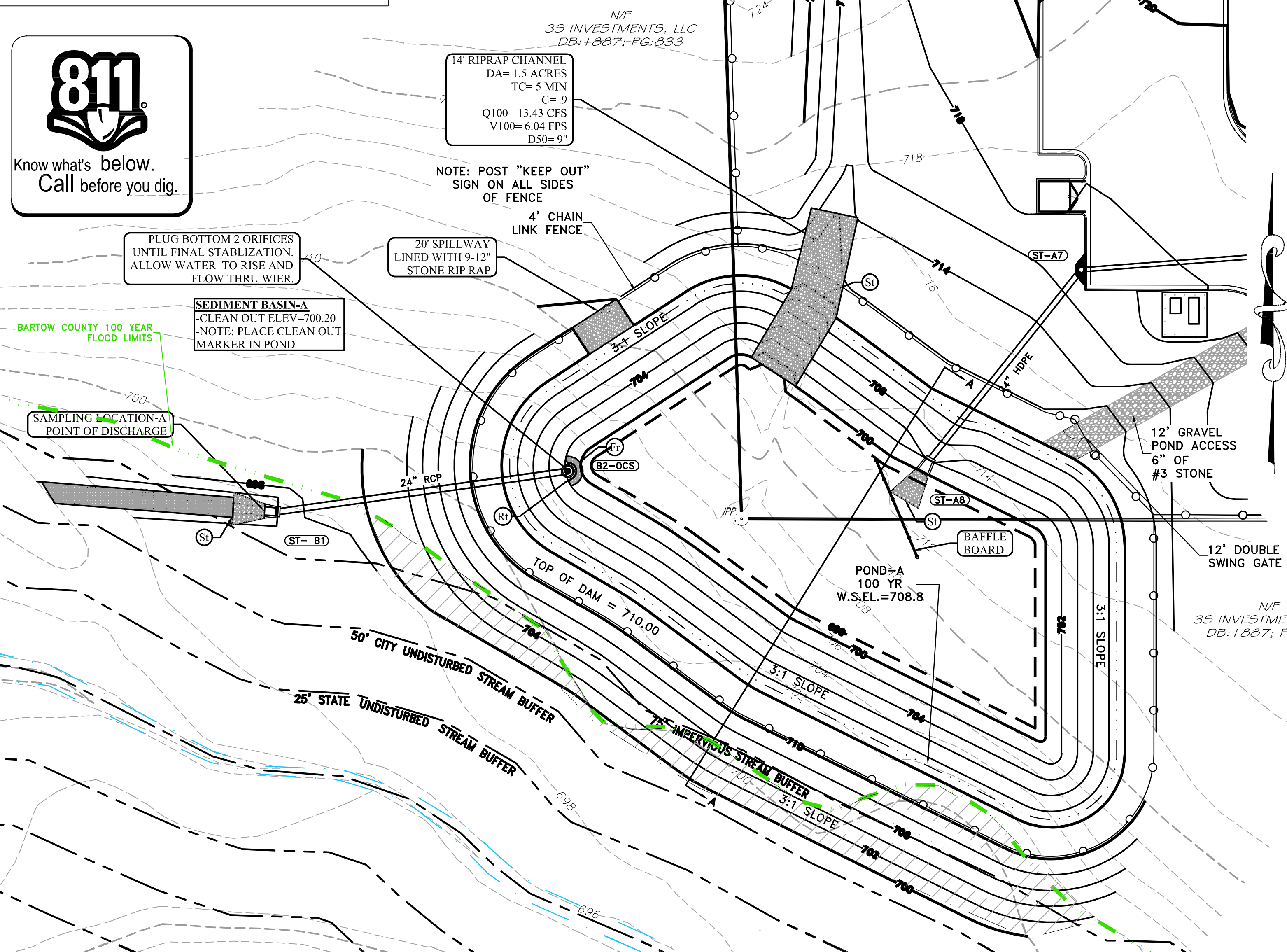
**FOR ALL STORM WATER MANAGEMENT FACILITY OR PRACTICE REMAINING PRIVATELY OWNED, THE APPLICANT MUST EXECUTE MAINTENANCE ACCESS EASEMENT AND AN INSPECTION AND MAINTENANCE AGREEMENT AND COVENANT BINDING ON ALL SUBSEQUENT OWNERS OF LAND SERVED BY AN ON-SITE STORM WATER MANAGEMENT FACILITY OR PRACTICE.**

**A FOUR FOOT (4') HIGH SECURITY FENCE WITH A TWELVE FOOT (12') ACCESS GATE AROUND THE PERIMETER OF ANY POND OVER 4' IN HEIGHT IS REQUIRED. OWNER/DEVELOPER TO POST 'KEEP OUT' AND OTHER WARNING SIGNS IF NECESSARY.**

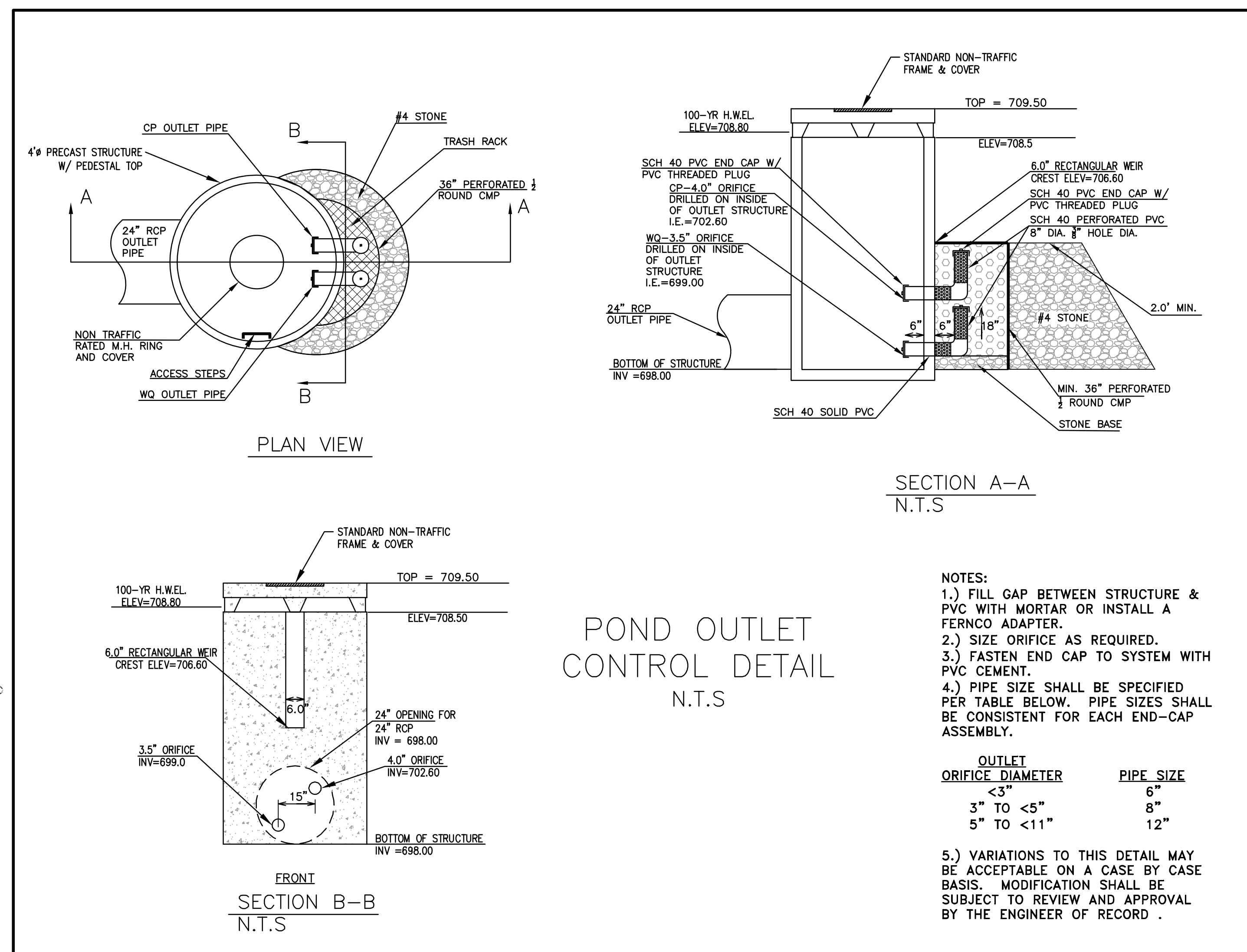
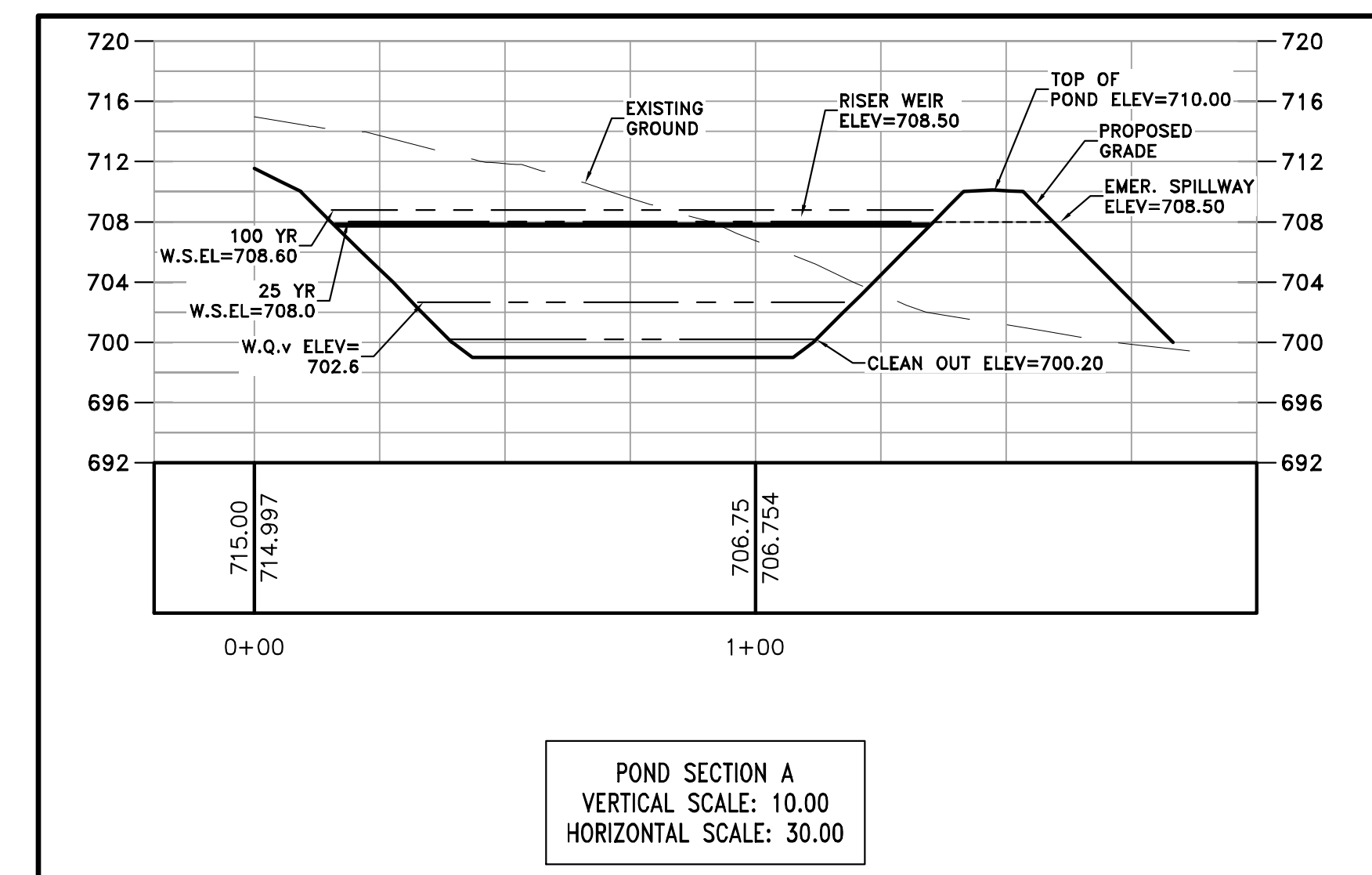
SEE RETROFIT CALCULATIONS ON SHEET C-506.



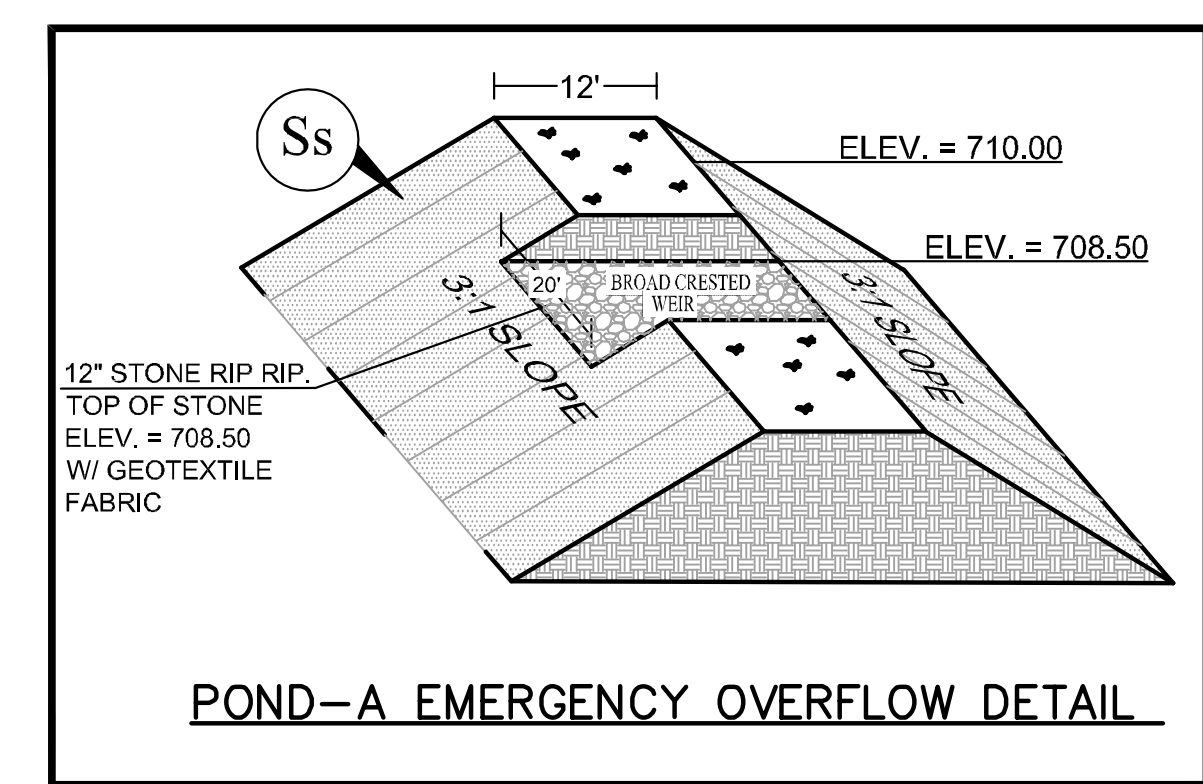
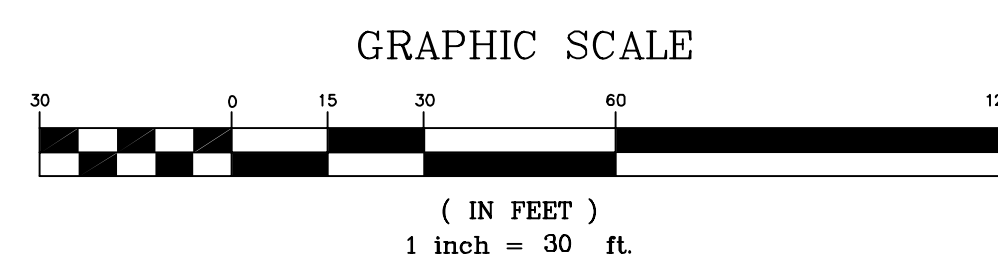
Know what's below.  
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ACTIVITY	SCHEDULE
<ul style="list-style-type: none"> <li>● CLEAN AND REMOVE DEBRIS FROM INLET AND OUTLET STRUCTURES.</li> <li>● MOW SIDE SLOPES</li> </ul>	MONTHLY
<ul style="list-style-type: none"> <li>● IF WETLAND COMPONENTS ARE INCLUDED, INSPECT FOR INVASIVE VEGETATION.</li> <li>● CHECK FOR SIGNS OF EUTROPHIC CONDITIONS.</li> <li>● NOTE SIGNS OF HYDROCARBON BUILD-UP, AND REMOVE APPROPRIATELY.</li> <li>● MONITOR FOR SEDIMENT ACCUMULATION IN THE FACILITY AND FOREBAY.</li> <li>● EXAMINE TO ENSURE THAT INLET AND OUTLET DEVICES ARE FREE OF DEBRIS AND OPERATIONAL.</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>● 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



**24 HOUR CONTACT  
CRAIG MILSAP  
770-387-5151**



	DATE	DESCRIPTION
1	3/25/15	CITY SUB
2	4/01/15	OUTLET REV
3	4/27/15	2ND SUB CITY
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**SOUTHLAND**  
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**BARTOW COUNTY  
FIRE STATION #9  
LOCATED IN LAND LOTS 856 & 857  
4TH DISTRICT, 3RD SECTION  
CARTERSVILLE, GEORGIA**

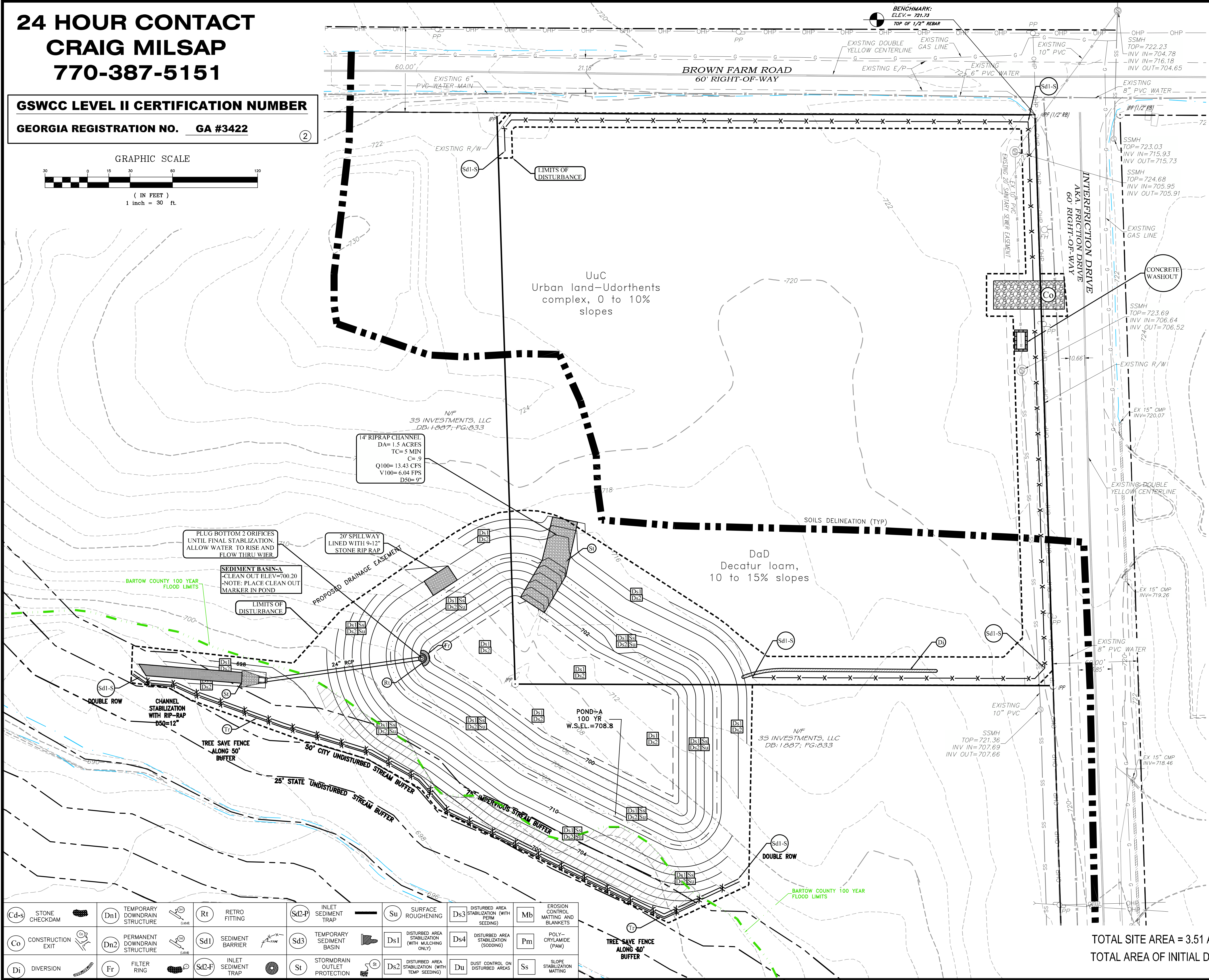




















## RESPOND PLAN

C402



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



(Cd-s)	STONE CHECKDAM		(Dn1)	TEMPORARY DOWNRAIN STRUCTURE		(Ld06)	(Rt)	RETRO FITTING		(Sd2-P)	INLET SEDIMENT TRAP		(Su)	SURFACE ROUGHENING		(D3s)	DISTURBED AREA STABILIZATION (WITH PERM SEEDING)		(Mb)	EROSION CONTROL MATTING AND BLANKETS
(Co)	CONSTRUCTION EXIT		(Dn2)	PERMANENT DOWNRAIN STRUCTURE		(Ld06)	(Sd1)	SEDIMENT BARRIER		(Sd3)	TEMPORARY SEDIMENT BASIN		(Ds1)	DISTURBED AREA STABILIZATION (WITH MULCHING ONLY)		(D4s)	DISTURBED AREA STABILIZATION (SODDING)		(Pm)	POLY-CRYLAMIDE (PAM)
(Di)	DIVERSION		(Fr)	FILTER RING		(Ld06)	(Sd2-F)	INLET SEDIMENT TRAP		(St)	STORMDRAIN OUTLET PROTECTION		(Ds2)	DISTURBED AREA STABILIZATION (WITH TEMP SEEDING)		(Du)	DUST CONTROL ON DISTURBED AREAS		(Ss)	SLOPE STABILIZATION MATTING



Know what's below.  
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**BARTOW COUNTY  
FIRE STATION #9  
LOCATED IN LAND LOTS 856 & 857  
4TH DISTRICT, 3RD SECTION  
CARTERSVILLE, GEORGIA**



SHEET TITLE:  
INITIAL  
EROSION  
CONTROL  
PLAN  
SHEET NO.:  
C501



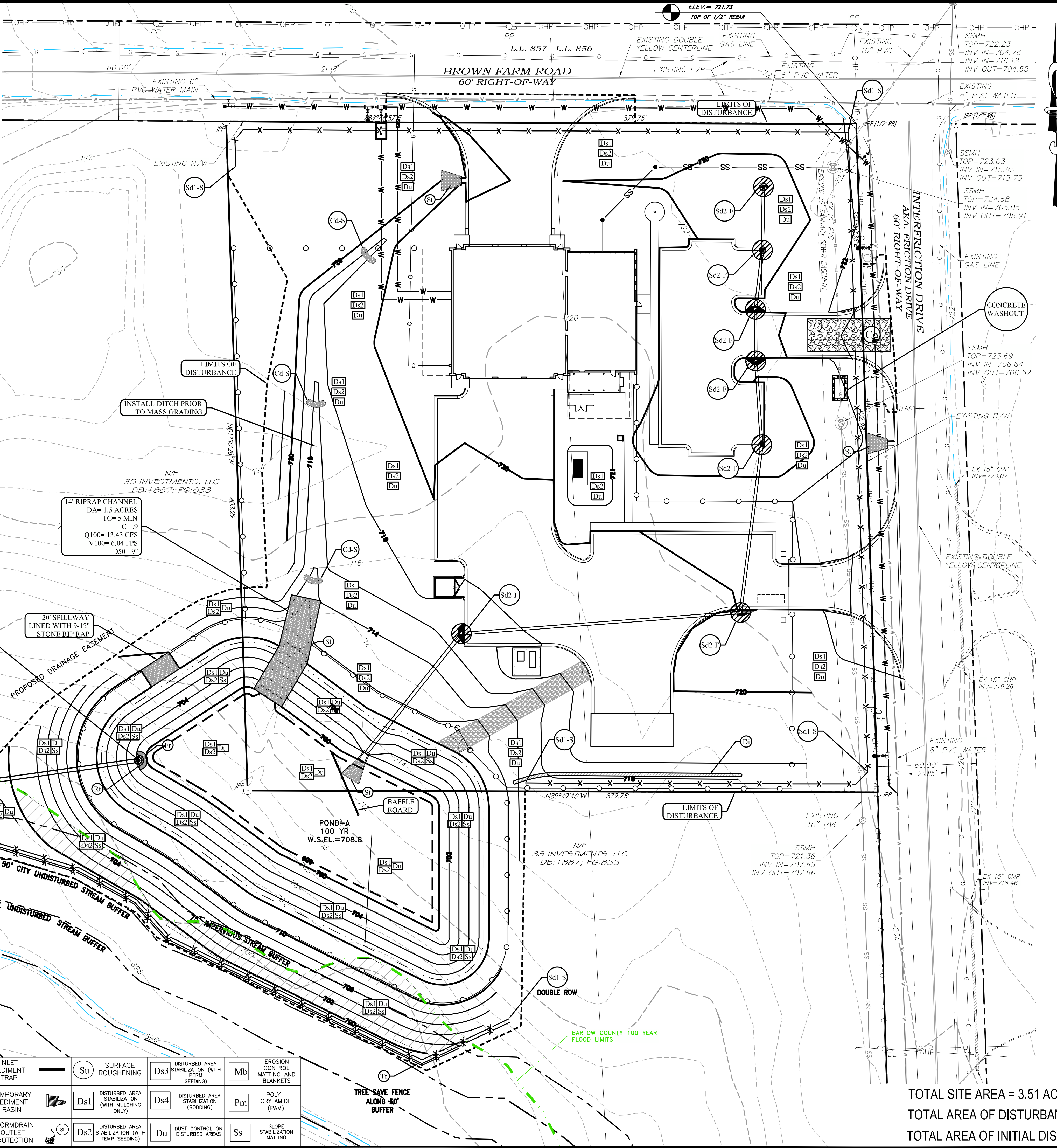
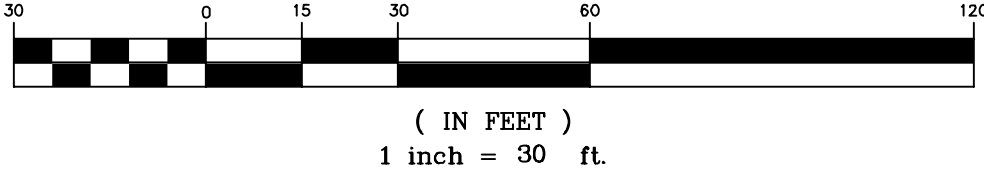
24 HOUR CONTACT  
CRAIG MILSAP  
770-387-5151

GSWCC LEVEL II CERTIFICATION NUMBER

GEORGIA REGISTRATION NO. GA #3422

2

GRAPHIC SCALE



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

TOTAL SITE AREA = 3.51 ACRES  
TOTAL AREA OF DISTURBANCE = 4.70 ACRES  
TOTAL AREA OF INITIAL DISTURBANCE = 1.89 ACRES

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BARTOW COUNTY  
FIRE STATION #9  
LOCATED IN LAND LOTS 856 & 857  
4TH DISTRICT, 3RD SECTION  
CARTERSVILLE, GEORGIA



SHEET TITLE:  
INTERMEDIATE  
EROSION  
CONTROL  
PLAN

SHEET NO.:  
C502



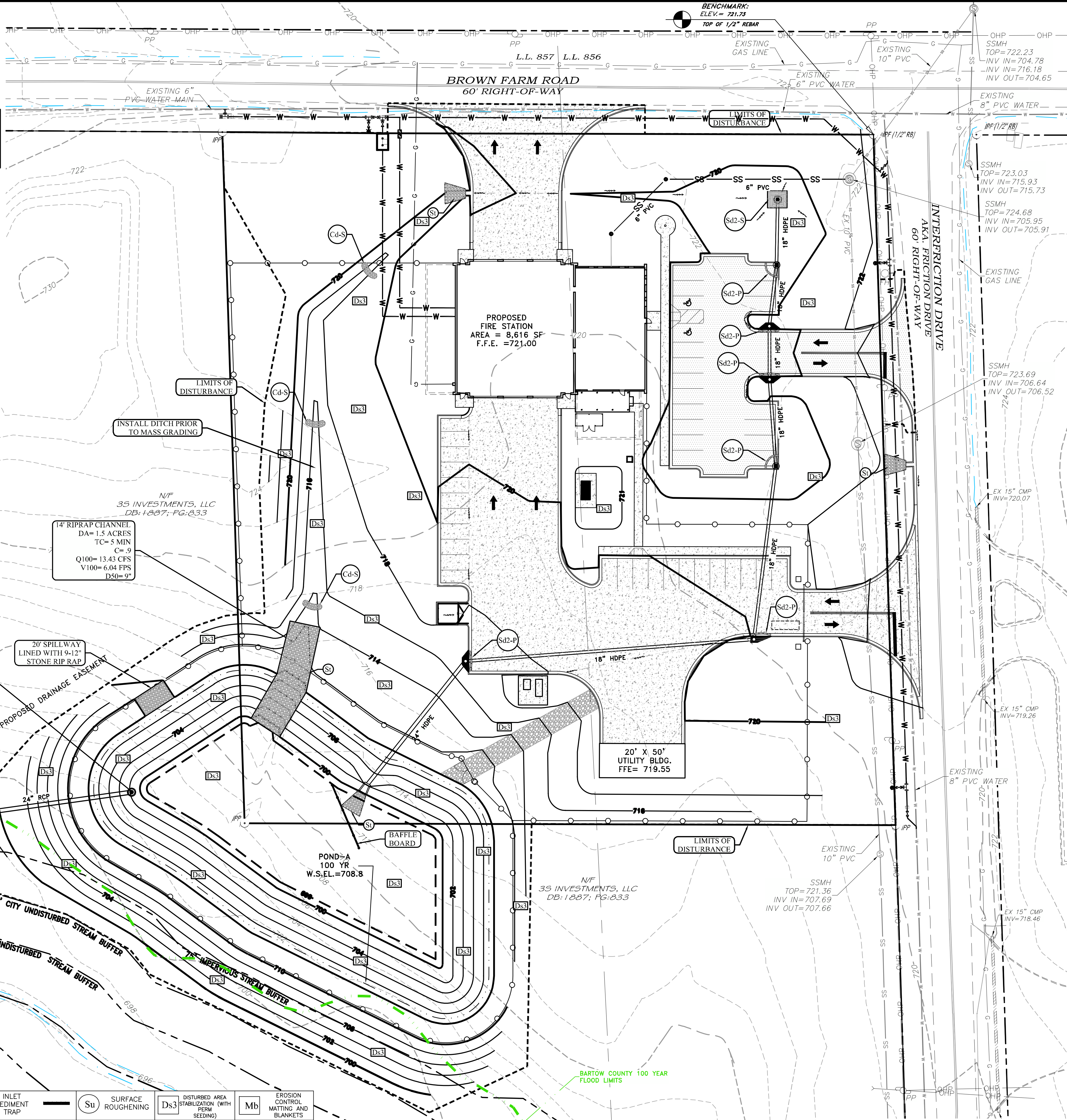
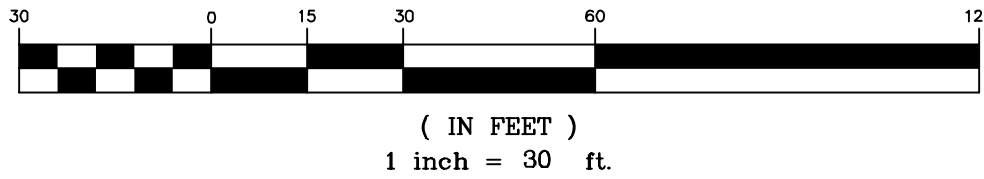
24 HOUR CONTACT  
CRAIG MILSAP  
770-387-5151

GSWCC LEVEL II CERTIFICATION NUMBER

GEORGIA REGISTRATION NO. GA #3422

2

GRAPHIC SCALE



BARTOW COUNTY 100 YEAR FLOOD LIMITS

PLUG BOTTOM 2 ORIFICES UNTIL FINAL STABILIZATION. ALLOW WATER TO RISE AND FLOW THRU WIER.

SEDIMENT BASIN-A  
-CLEAN OUT ELEV=700.20  
-NOTE: PLACE CLEAN OUT MARKER IN POND

20' SPILLWAY LINED WITH 9-12" STONE RIP RAP

PROPOSED DRAINAGE EASEMENT

50' CITY UNDISTURBED STREAM BUFFER

25' STATE UNDISTURBED STREAM BUFFER

POND-A  
100 YR  
W.S. EL.=708.8

BAFFLE BOARD

20' X 50' UTILITY BLDG.  
FFE= 719.55

LIMITS OF DISTURBANCE

EXISTING 10" PVC

SSMH  
TOP=721.36  
INV. IN=707.69  
INV. OUT=707.66

EXISTING 8" PVC WATER

EX 15" CMP  
INV=719.26

EX 15" CMP  
INV=718.46



TOTAL SITE AREA = 3.51 ACRES  
TOTAL AREA OF DISTURBANCE = 4.70 ACRES  
TOTAL AREA OF INITIAL DISTURBANCE = 1.89 ACRES

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

PROJECT NO.: 14137  
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BARTOW COUNTY  
FIRE STATION #9  
LOCATED IN LAND LOTS 856 & 857  
4TH DISTRICT, 3RD SECTION  
CARTERSVILLE, GEORGIA



SHEET TITLE: FINAL EROSION CONTROL PLAN  
SHEET NO.: C503



## EROSION CONTROL NOTES

- 18 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. TYPE "C" 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 5-20.2. 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 ½ 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.

TYPE "C" 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 ½ 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: 34

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 TO 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 & Ss 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.

## 24 HOUR CONTACT CRAIG MILSAP 770-387-5151



## 48 STRUCTURAL PRACTICES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Cd	CHECKDAM			A small temporary barrier or dam constructed across a creek, drainage ditch or area of concentrated flow.
Ch	CHANNEL STABILIZATION			Improving, constructing or stabilizing an open stream, or ditch.
Co	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 ROAD STABILIZATION			A driveway constructed 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 impervious.
Dn2	PERMANENT DOWNDRAIN STRUCTURE			A paved chute, pipe, sectional conduit or similar material designed to safely conduct surface runoff down a slope.
Fr	FILTER RING			A temporary stone barrier constructed at storm drain inlets and pond outlets.
Ga	GABION			Rock filter baskets which are hand-placed into position forming soil stabilizing structures.
Gr	GRADE STABILIZATION STRUCTURE			Permanent structures installed to protect channels or watersheds where otherwise the slope would be sufficient for the running water to form gullies.
Lv	LEVEL SPREADER			A structure to convert concentrated flow of water into less erosive sheet flow. This should be constructed only on undisturbed soils.
Rd	ROCK FILTER DAM			A permanent or temporary stone filter dam installed across small streams or drainageways.
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 sandbags, bales of straw or hay, brush, logs and poles, gravel, or a silt fence.
Sd2	INLET SEDIMENT TRAP			An impounding area created by excavating around a storm drain drop inlet. The excavated area will be filled and stabilized on completion of construction activities.
Sd3	TEMPORARY SEDIMENT BASIN			A basin created by excavation or a dike across a watershed. The surface water runoff is temporarily stored allowing the bulk of the sediment to drop out.
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 GRUBBING			A rough soil surface with horizontal depressions on a contour or slopes left in a roughened condition after grading.

## VEGETATIVE MEASURES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Ds1	STABILIZED AREA (WITH MULCH/SEEDING ONLY)			Establishing temporary protection for disturbed areas where seedlings may not have a suitable growing season to produce an erosion retaining cover.
Ds2	STABILIZED AREA (WITH MULCH/SEEDING AND SOFTWOOD)			Establishing a temporary vegetative cover with fast growing seedlings on disturbed areas.
Ds3	STABILIZED AREA (WITH MULCH/SEEDING AND SOFTWOOD)			Establishing a permanent vegetative cover such as trees, shrubs, vines, grasses, sod or legumes on disturbed areas.
Ds4	DISTURBED AREA STABILIZATION (SOFTWOOD)			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.
Mb	EROSION CONTROL MATTING AND BLENKETS			The installation of a protective covering (blanket) or soil stabilization mat on a prepared planting area of a steep slope, channel, or shoreline.
Pm	POLY-CHLORIDE (PAM)			The land application of product containing anionic polyacrylamide (PAM) as temporary soil binding agents to reduce soil erosion.
Sb	STREMBANK STABILIZATION (USING FERTILIZER/VEGETATION)			The use of readily available native plant materials to maintain and enhance streambanks, or to prevent or reduce and repair small streambank erosion problems.
Tb	TACKIFIERS AND BINDERS			Substance used to anchor straw or hay mulch by causing the organic material to bind together.

## GENERAL CONSTRUCTION SCHEDULE

Approx. Start Date: APRIL 2015 ; Approx. Completion Date: JANUARY 2016

BEGIN CONSTRUCTION	APRIL 2015	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY
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 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-P 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 ENTRANCE.										
MAINTAIN CONSTRUCTION ENTRANCE, TREE SAVE FENCE, SILT FENCE, CHECK DAMS, FILTER RINGS, INLET PROTECTION, DIVERSION DITCHES, AND TEMPORARY SEDIMENT TRAPS.										

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

GSWCC LEVEL II CERTIFICATION NUMBER

GEORGIA REGISTRATION NO. GA #3422

2

PROJECT NO.:

14137

DATE:

04/28/15

REVISIONS:

DATE	DESCRIPTION
3/25/15	CITY SUB
4/01/15	OUTLET REV
4/27/15	2ND SUB C
5	
6	

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

BARTOW COUNTY  
FIRE STATION #9  
LOCATED IN LAND LOTS 856 & 857  
4TH DISTRICT, 3RD SECTION  
CARTERSVILLE, GEORGIA



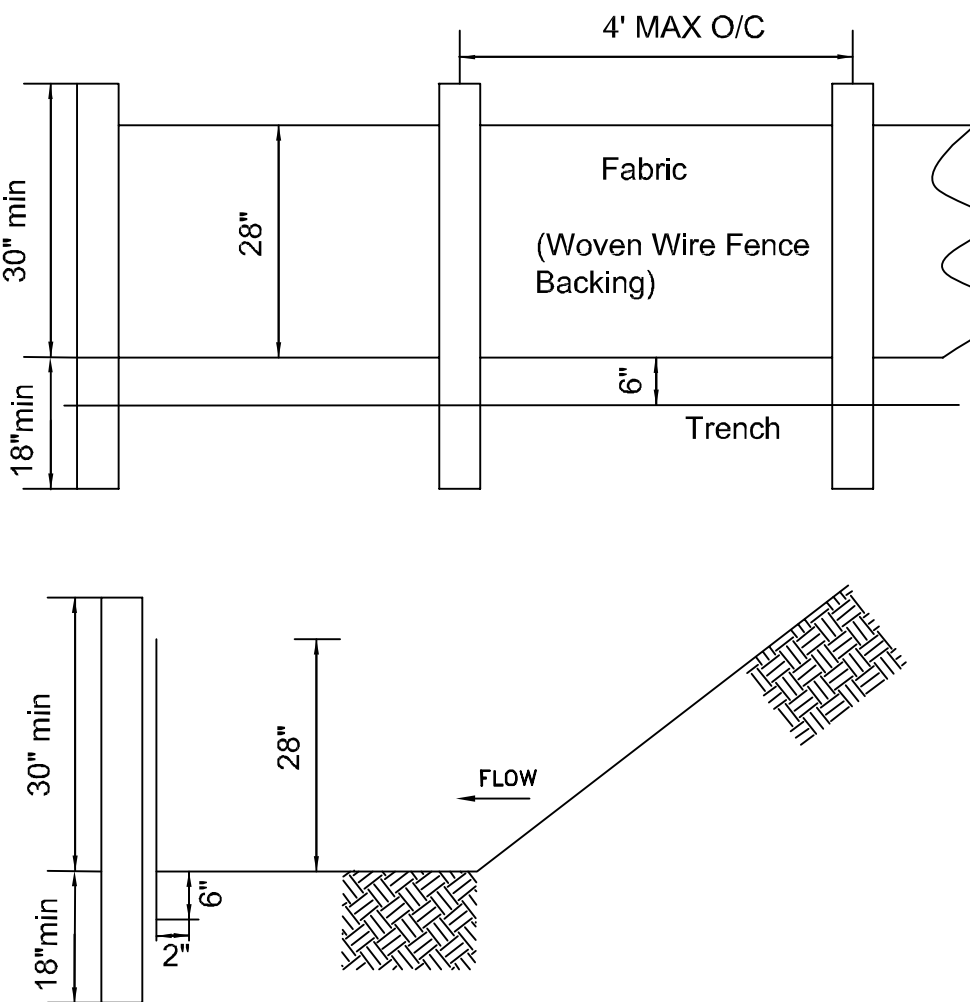
SHEET TITLE:

EROSION  
CONTROL  
NOTES

SHEET NO.:

C504

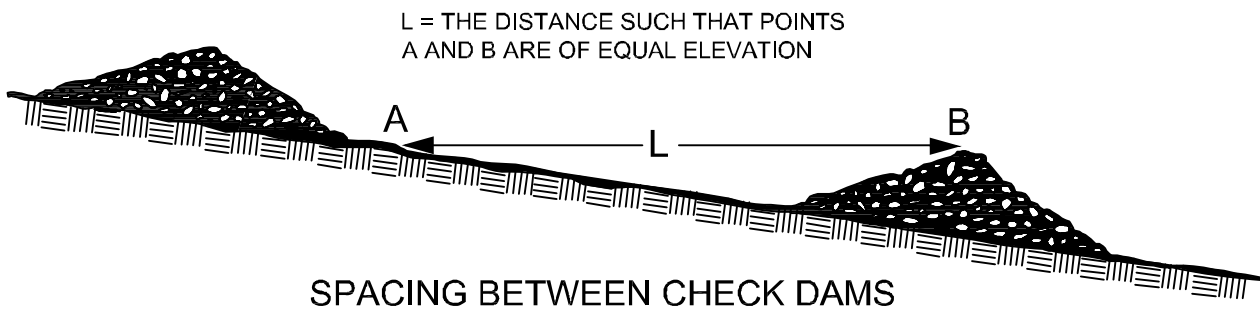




**SILT FENCE**  
THE MANUFACTURER SHALL HAVE EITHER AN APPROVED COLOR MARK YARN IN THE FABRIC OR LABEL THE FABRICATED SILT FENCE WITH BOTH THE MANUFACTURER AND FABRIC NAME EVERY 100 FEET.  
THE TEMPORARY SILT FENCE SHALL BE INSTALLED ACCORDING TO THIS SPECIFICATION, AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER. FOR POST INSTALLATION SHALL START AT THE CENTER OF THE LOW POINT (IF APPLICABLE) WITH THE REMAINING POSTS SPACED 4 FEET APART FOR TYPE SENSITIVE SILT FENCE. ONLY STEEL POST SHALL BE USED WITH TYPE SENSITIVE SILT FENCE. POSTS SHALL BE 4" IN LENGTH, 1.3 LBS/ FT.

**MAINTENANCE**  
SEDIMENT SHALL BE REMOVED ONCE IT HAS ACCUMULATED TO ONE-HALF THE ORIGINAL HEIGHT OF THE BARRIER. FILTER FABRIC SHALL BE REPLACED WHENEVER IT HAS DETERIORATED TO SUCH AN EXTENT THAT THE EFFECTIVENESS OF THE FABRIC IS REDUCED (APPROXIMATELY SIX MONTHS). TEMPORARY SEDIMENT BARRIERS SHALL REMAIN IN PLACE UNTIL DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED. ALL SEDIMENT ACCUMULATED AT THE BARRIER SHALL BE REMOVED AND PROPERLY DISPOSED OF BEFORE THE BARRIER IS REMOVED.

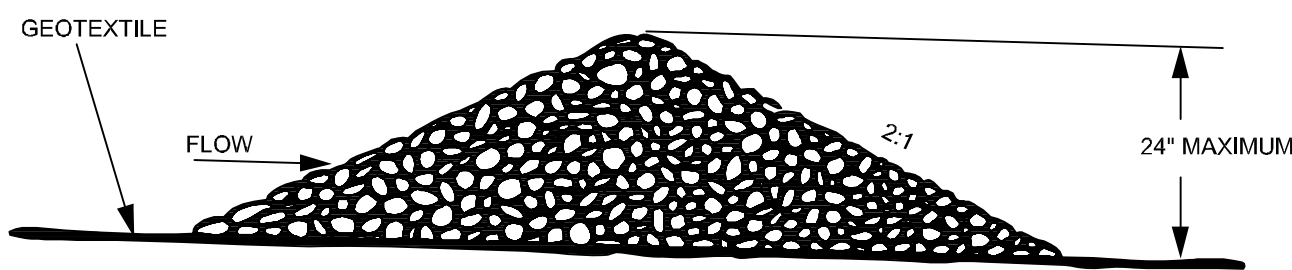
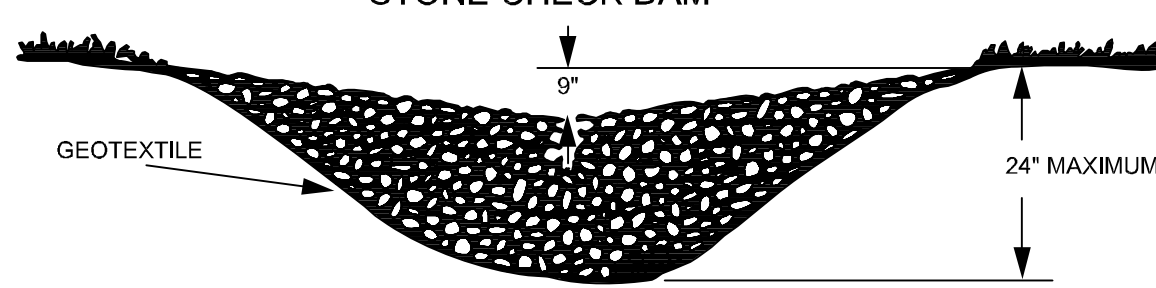
Sd1-S SILT FENCE-TYPE SENSITIVE



SPACING BETWEEN CHECK DAMS

**STONE CHECK DAMS**

STONE CHECK DAMS SHOULD BE CONSTRUCTED OF GRADED SIZE 2-10" STONE. MECHANICAL OR HAND PLACEMENT SHALL BE REQUIRED TO INSURE COMPLETE COVERAGE OF ENTIRE WIDTH OF DITCH OR SWALE, AND THAT CENTER OF DAM IS LOWER THAN EDGES.

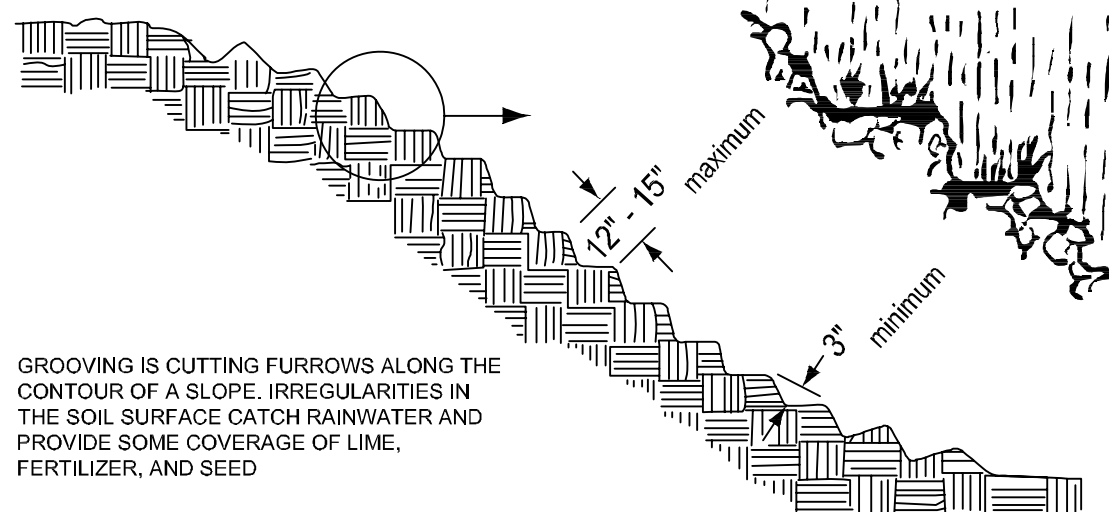


**MAINTENANCE**  
PERIODIC INSPECTION AND REQUIRED MAINTENANCE MUST BE PROVIDED. SEDIMENT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF ONE-HALF THE ORIGINAL DAM HEIGHT OR BEFORE, IF THE AREA IS TO BE MOVED. CHECK DAMS SHALL BE REMOVED ONCE FINAL STABILIZATION HAS OCCURRED. OTHERWISE, CHECK DAMS MAY REMAIN IN PLACE PERMANENTLY. AFTER REMOVAL, THE AREA BENEATH THE DAM SHALL BE SEEDED AND MULCHED IMMEDIATELY.

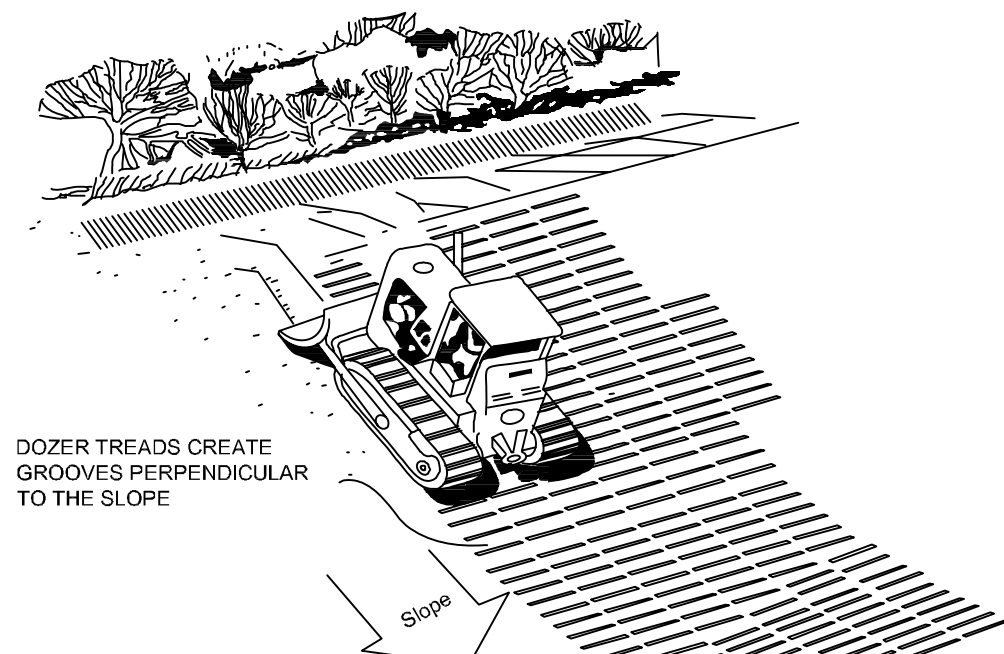
Cd-S CHECK DAM (STONE)

**24 HOUR CONTACT  
CRAIG MILSAP  
770-387-5151**

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



GROOVING SLOPES



TRACKING

**SURFACE ROUGHENING**

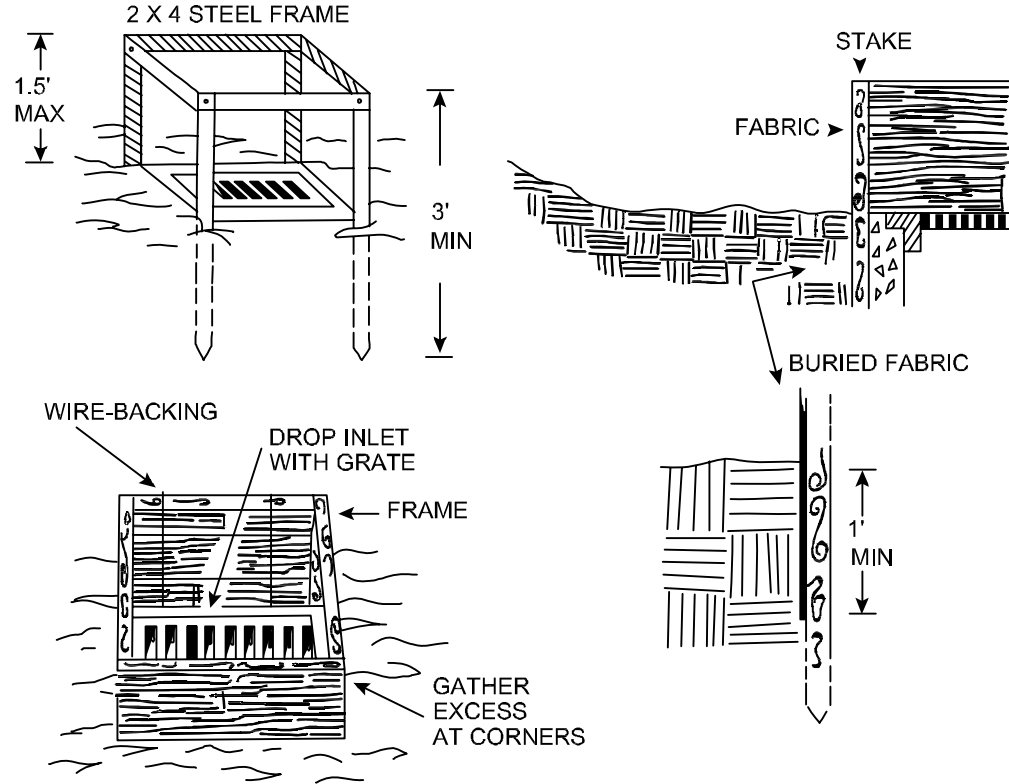
THE PURPOSES OF SURFACE ROUGHENING ARE TO AID IN ESTABLISHMENT OF VEGETATIVE COVER WITH SEED, TO REDUCE RUNOFF VELOCITY AND INCREASE INFILTRATION, AND TO REDUCE EROSION AND PROVIDE FOR SEDIMENT TRAPPING. ALL SLOPES STEEPER THAN 3:1 REQUIRE SURFACE ROUGHENING, EITHER STAIR-STEP GRADING, GROOVING, FURROWING, 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 UNDESIRABLE 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. UNDESIRABLE 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.

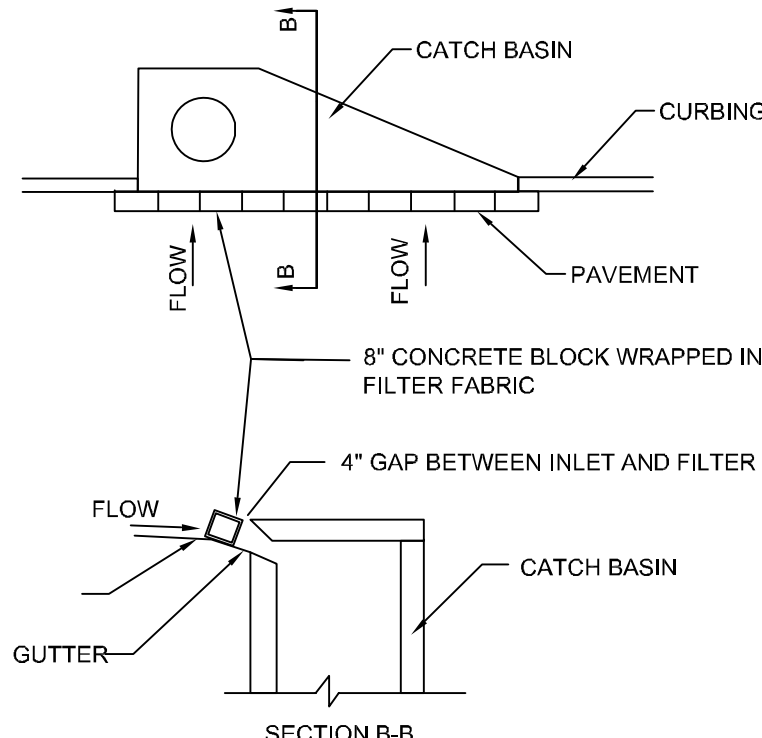
**SEEDING**  
ROUGHENED AREAS SHALL BE SEEDED AND MULCHED AS SOON AS POSSIBLE TO OBTAIN OPTIMUM SEED GERMINATION AND SEEDING GROWTH. REFER TO SPECIFICATIONS DS1, DS2, DS3, AND DS4 - DISTURBED AREA STABILIZATION (WITH MULCHING ONLY, TEMPORARY SEEDING, PERMANENT VEGETATION, AND SODDING), RESPECTIVELY.

Su SURFACE ROUGHENING



**FILTER FABRIC WITH SUPPORTING FRAME**  
THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE THE INLET DRAINS A RELATIVELY FLAT AREA (SLOPE NO GREATER THAN 5%) AND SHALL NOT APPLY TO INLETS RECEIVING CONCENTRATED FLOWS, SUCH AS IN STREET OR HIGHWAY MEDIANS. AS SHOWN IN DETAIL, TYPE C SILT FENCE SUPPORTED BY STEEL POSTS SHALL BE USED. THE STAKES SHALL BE SPACED EVENLY AROUND THE PERIMETER OF THE INLET A MAXIMUM OF 3 FEET APART, AND SECURELY DRIVEN IN TO THE GROUND, APPROXIMATELY 18 INCHES DEEP. THE FABRIC SHALL BE ENTRENCHED 12 INCHES AND BACKFILLED WITH CRUSHED STONE OR COMPACTED SOIL. FABRIC AND WIRE SHALL BE SECURELY FASTENED TO THE POSTS, AND FABRIC ENDS MUST BE OVERLAPPED A MINIMUM OF 18 INCHES OR WRAPPED TOGETHER AROUND A POST TO PROVIDE A CONTINUOUS FABRIC BARRIER AROUND THE INLET.

Sd2-F FILTER FABRIC WITH SUPPORTING FRAME

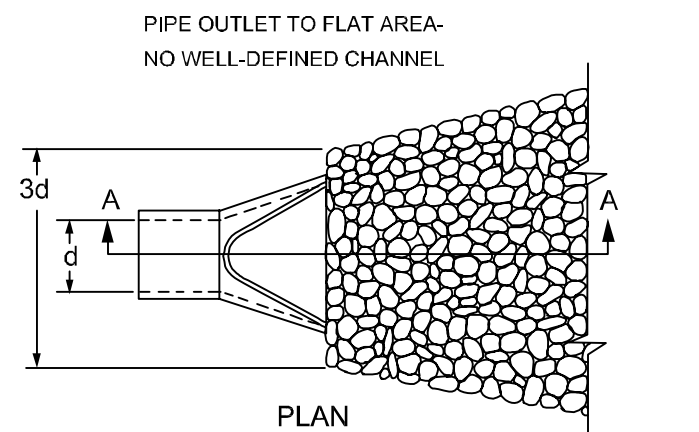


**CURB INLET PROTECTION**

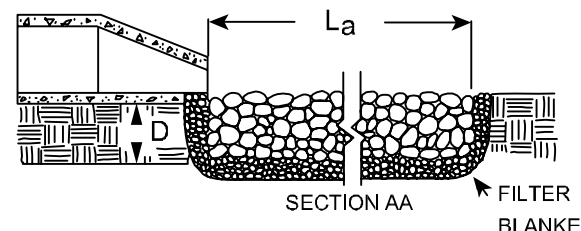
ONCE PAVEMENT HAS BEEN INSTALLED, A CURB INLET FILTER SHALL BE INSTALLED ON INLETS RECEIVING RUNOFF FROM DISTURBED AREAS. THIS METHOD OF INLET PROTECTION SHALL BE REMOVED IF A SAFETY HAZARD IS CREATED.

ONE METHOD OF CURB INLET PROTECTION USES "PIGS-IN-A-BALNKET": 8-INCH CONCRETE BLOCKS WRAPPED IN FILTER FABRIC. SEE DETAIL. ANOTHER METHOD USES GRAVEL BAGS CONSTRUCTED BY WRAPPING DOT #57 STONE WITH FILTER FABRIC, WIRE, PLASTIC MESH, OR EQUIVALENT MATERIAL. A GAP OF APPROXIMATELY 4 INCHES SHALL BE LEFT BETWEEN THE INLET FILTER AND THE INLET TO ALLOW FOR OVERFLOW AND PREVENT HAZARDOUS PONDING IN THE ROADWAY. PROPER INSTALLATION AND MAINTENANCE ARE CRUCIAL TO AVOID PONDING IN THE ROADWAY, RESULTING IN A HAZARDOUS CONDITION.

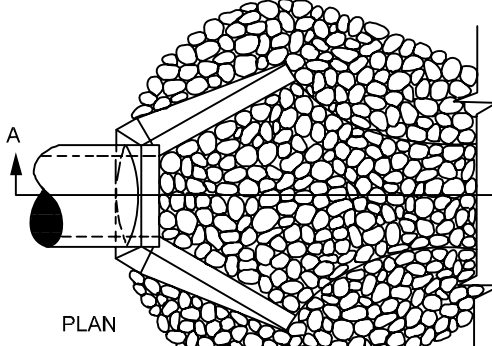
Sd2-P CURB INLET PROTECTION



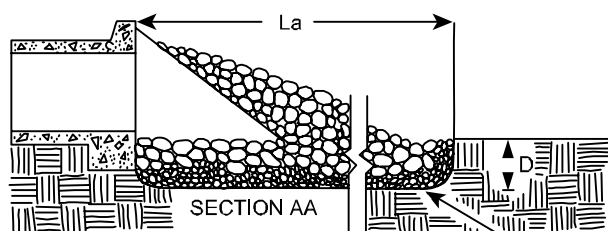
PLAN



PIPE OUTLET TO WELL-DEFINED CHANNEL



PLAN



DETAILS MODIFIED FROM VA SWCC

**NOTES ON DETAILS**

1.  $L_d$  IS THE LENGTH OF THE RIPRAP APRON.
2.  $D$  = 1.5 TIMES THE MAXIMUM STONE DIAMETER BUT NOT LESS THAN 6".
3. IN A WELL-DEFINED CHANNEL EXTEND THE APRON UP THE CHANNEL BANKS TO AN ELEVATION OF 6" ABOVE THE MAXIMUM TAILWATER DEPTH OF TO THE TOP OF THE BANK, WHICHEVER IS LESS.
4. A FILTER BLANKET OR FILTER FABRIC SHOULD BE INSTALLED BETWEEN THE RIPRAP AND SOIL FOUNDATION.

**APRON LENGTH AND THICKNESS**

THE APRON LENGTH AND  $d_{50}$  STONE MEDIAN SIZE, SHALL BE DETERMINED FROM THE CURVES ACCORDING TO THE TAILWATER CONDITIONS:  
MINIMUM TAILWATER- USE FIG. 6-24.1  
MAXIMUM TAILWATER- USE FIGURE 6-24.2  
MAXIMUM STONE SIZE=  $1.5 \times d_{50}$   
APRON THICKNESS=  $1.5 \times d_{max}$

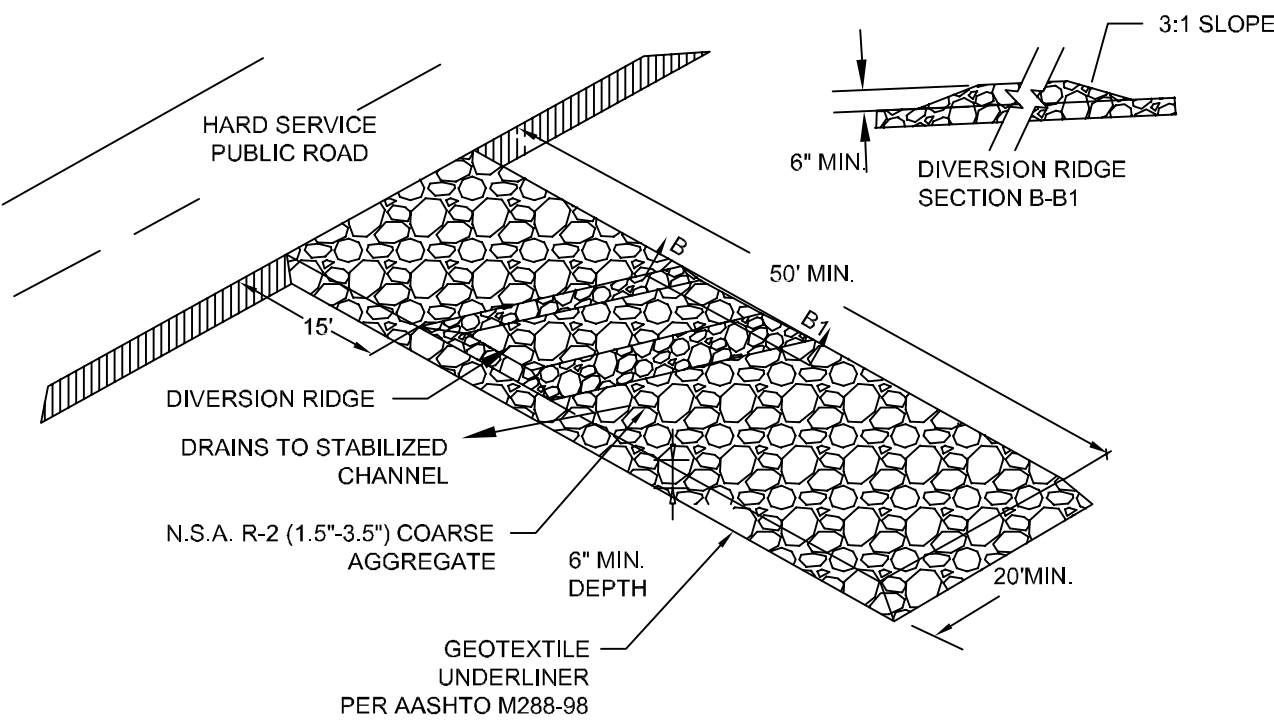
**CONSTRUCTION SPECIFICATIONS**

1. ENSURE THAT THE SUBGRADE FOR THE FILTER AND RIPRAP FOLLOWS THE REQUIRED LINES AND GRADES SHOWN IN THE PLAN. COMPACT ANY FILL REQUIRED IN THE SUBGRADE TO THE DENSITY OF THE SURROUNDING UNDISTURBED MATERIAL. LOW AREAS IN THE SUBGRADE ON UNDISTURBED SOIL MAY ALSO BE FILLED BY INCREASING THE RIPRAP THICKNESS.
2. THE RIPRAP AND GRAVEL FILTER MUST CONFORM TO THE SPECIFIED GRADING LIMITS SHOWN ON THE PLANS.
3. GEOTEXTILE MUST MEET DESIGN REQUIREMENTS AND BE PROPERLY PROTECTED FROM PUNCHING OR TEARING DURING INSTALLATION. REPAIR ANY DAMAGE BY REMOVING THE RIPRAP AND PLACING ANOTHER PIECE OF FILTER FABRIC OVER THE DAMAGED AREA. ALL CONNECTING JOINTS SHOULD OVERLAP A MINIMUM OF 1 FT. IF THE DAMAGE IS EXTENSIVE, REPLACE THE ENTIRE FILTER FABRIC.
4. RIPRAP MAY BE PLACED BY EQUIPMENT, BUT TAKE CARE TO AVOID DAMAGING THE FILTER FABRIC.
5. THE MINIMUM THICKNESS OF THE RIPRAP SHOULD BE 1.5 TIMES THE MAXIMUM STONE DIAMETER.
6. CONSTRUCT THE APRON ON ZERO GRADE WITH NO OVERFALL AT THE END. MAKE THE TOP OF THE RIPRAP AT THE DOWNSTREAM END LEVEL WITH THE RECEIVING AREA OR SLIGHTLY BELOW IT.
7. ENSURE THAT THE APRON IS PROPERLY ALIGNED WITH THE RECEIVING STREAM AND PREFERABLY STRAIGHT THROUGHOUT ITS LENGTH. IF A CURVE IS NEEDED TO FIT SITE CONDITIONS, PLACE IT IN THE UPPER SECTION OF THE APRON.
8. IMMEDIATELY AFTER CONSTRUCTION, STABILIZE ALL DISTURBED AREAS WITH VEGETATION.
9. STONE QUALITY - SELECT STONE FOR RIPRAP FROM FIELD STONE OR QUARRY STONE. THE STONE SHOULD BE HARD, ANGULAR, AND HIGHLY WEATHER-RESISTANT. THE SPECIFIC GRAVITY OF THE INDIVIDUAL STONES SHOULD BE AT LEAST 2.5.
10. FILTER - INSTALL A FILTER TO PREVENT SOIL MOVEMENT THROUGH THE OPENINGS IN THE RIPRAP. THE FILTER SHOULD CONSIST OF A GRADED GRAVEL LAYER OR A SYNTHETIC FILTER CLOTH. SEE APPENDIX C; P. C-1.

**MAINTENANCE**

INSPECT RIPRAP OUTLET STRUCTURES AFTER HEAVY RAINS TO SEE IF ANY EROSION AROUND OR BELOW THE RIPRAP HAS TAKEN PLACE OR IF STONES HAVE BEEN DISLODGED. IMMEDIATELY MAKE ALL NEEDED REPAIRS TO PREVENT FURTHER DAMAGE.

St STORM DRAIN OUTLET PROTECTION



**CONSTRUCTION EXIT**

A STONE STABILIZED PAD SHALL BE LOCATED AT ANY POINT WHERE TRAFFIC WILL BE LEAVING A CONSTRUCTION SITE TO A PUBLIC RIGHT-OF-WAY, STREET, ALLEY, SIDEWALK, PARKING AREA, OR ANY OTHER AREA WHERE THERE IS A TRANSITION FROM BARE SOIL TO A PAVED AREA.

**AGGREGATE SIZE**  
STONE WILL BE IN ACCORDANCE WITH NATIONAL STONE ASSOCIATION R-2 (1.5 TO 3.5 INCH STONE).

**PAD THICKNESS**  
THE GRAVEL PAD SHALL HAVE A MINIMUM THICKNESS OF 6 INCHES.

**PAD WIDTH**  
AT A MINIMUM, THE WIDTH SHOULD EQUAL FULL WIDTH OF ALL POINTS OF VEHICULAR EGRESS, BUT NOT LESS THAN 20 FEET WIDE.

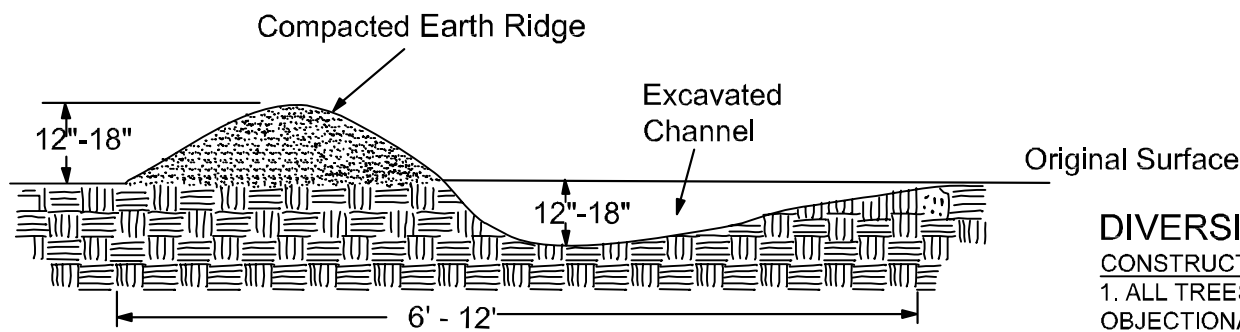
**DIVERSION RIDGE**

ON SITES WHERE THE GRADE TOWARD THE PAVED AREA IS GREATER THAN 2%, A DIVERSION RIDGE 6 TO 8 INCHES HIGH WITH 3:1 SIDE SLOPES SHALL BE CONSTRUCTED ACROSS THE FOUNDATION APPROXIMATELY 15 FEET ABOVE THE ROAD.

**MAINTENANCE**

THE EXIT SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH 1.5-3.5 INCH STONE, AS CONDITIONS DEMAND, AND REPAIR AND/OR CLEANOUT OF ANY STRUCTURES TO TRAP SEDIMENT. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES OR SITE ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.

Co CONSTRUCTION EXIT



TYPICAL DIVERSION DITCH

STABLE OUTLETS SHALL BE PROVIDED FOR EACH DIVERSION.

Di DIVERSION

**DIVERSION**  
CONSTRUCTION SPECIFICATIONS  
1. ALL TREES, BRUSH, STUMPS, OBSTRUCTIONS, AND OTHER OBJECTIONABLE MATERIAL SHALL BE REMOVED AND DISPOSED OF SO AS NOT TO INTERFERE WITH THE PROPER FUNCTIONING OF THE DIVERSION.  
2. THE DIVERSION SHALL BE EXCAVATED OR SHAPED TO LINE, GRADE, AND CROSS SECTION AS REQUIRED TO MEET THE CRITERIA SPECIFIED HEREIN AND FREE OF IRREGULARITIES WHICH WILL IMPEDE NORMAL FLOW.  
3. ALL FILLS SHALL BE MACHINE COMPACTED AS NEEDED TO PREVENT UNEQUAL SETTLEMENT THAT WOULD CAUSE DAMAGE IN THE COMPLETED DIVERSION.  
4. ALL EARTH REMOVED AND NOT NEEDED IN CONSTRUCTION SHALL BE SPREAD OR DISPOSED OF SO THAT IT WILL NOT INTERFERE WITH THE FUNCTIONING OF THE DIVERSION.  
5. DIVERSION CHANNEL SHALL BE STABILIZED IN ACCORDANCE WITH SPECIFICATION CH - CHANNEL STABILIZATION.

PROJECT NO.:  
14137

DATE:  
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REVISIONS:	DATE	DESCRIPTION
1	3/25/15	CITY SUB
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**SOUTHLAND**  
ENGINEERING  
CIVIL ENGINEERS - LAND SURVEYORS - LAND PLANNERS  
114 OLD MILL ROAD., CARTERSVILLE, GA 30120  
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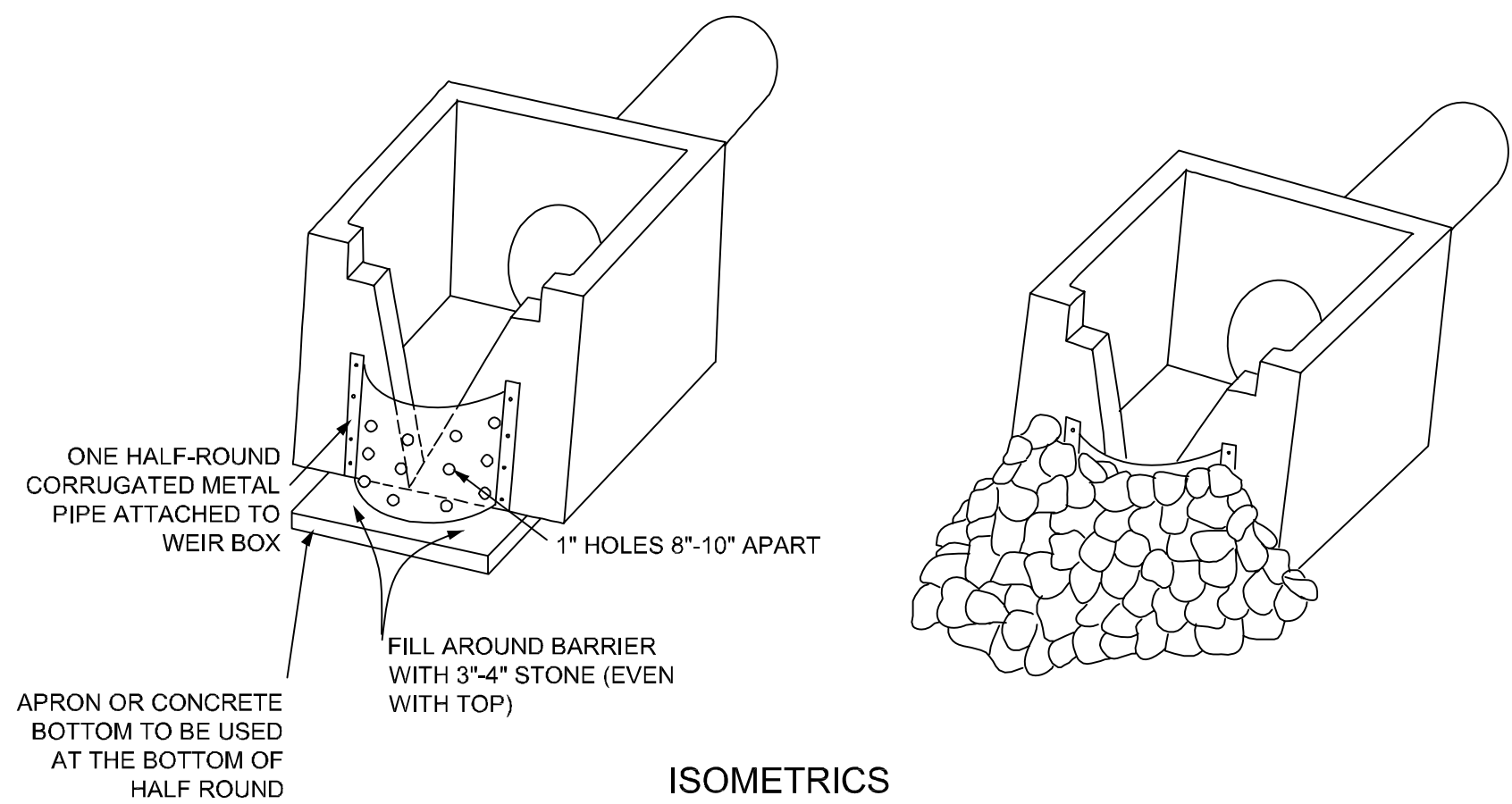
SHEET TITLE:

EROSION  
CONTROL  
NOTES

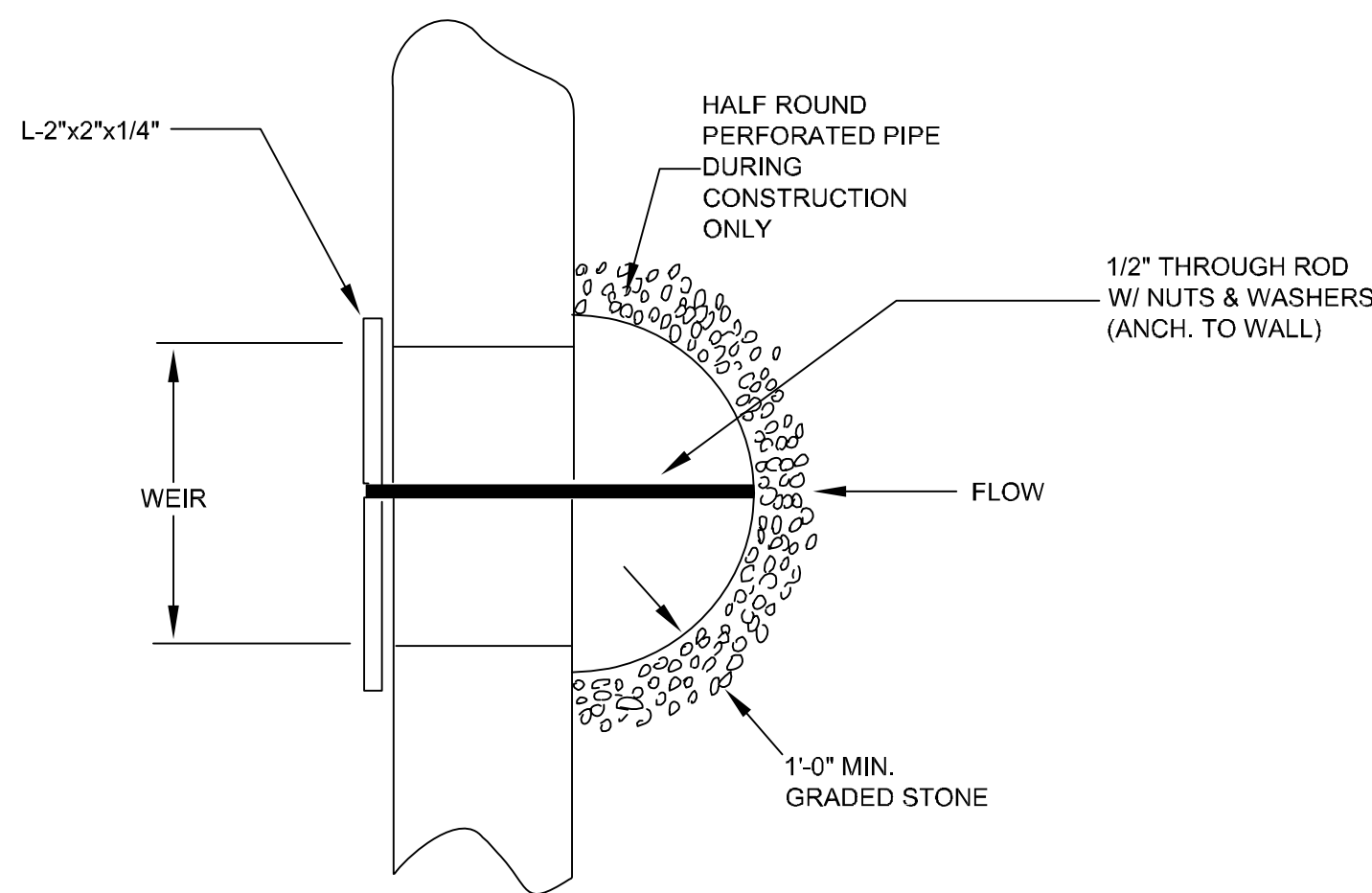
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ISOMETRICS



PLAN

Rt-P PERFORATED HALF ROUND PIPE WITH STONE FILTER

THE FOLLOWING TYPES OF STRUCTURES ARE ACCEPTABLE UNDER THE DESIGNATED CONDITIONS:

PERFORATED HALF-ROUND PIPE WITH STONE FILTER: Rt-P

- SHOULD BE USED ONLY IN DETENTION PONDS WITH LESS THAN 30 ACRE TOTAL DRAINAGE AREA.
- NEVER TO BE USED ON EXPOSED PIPE END OR WINGED HEADWALL.
- DIAMETER OF HALF-ROUND PIPE SHOULD BE 1.5 TIME THE DIAMETER OF THE PRINCIPAL PIPE OUTLET OR WIDER THAN THE GREATEST WIDTH OF THE CONCRETE WEIR.
- PERFORATIONS AND STONE SIZES ARE SHOWN IN DETAIL.
- SHALL BE FIXED BY SPECIFIED MEANS (BOLTS, ETC) TO CONCRETE OUTLET STRUCTURE.

SLOTTED BOARD DAM WITH STONE: RLB

- CAN BE USED IN DETENTION PONDS WITH DRAINAGE AREAS UP TO 100 ACRES.
- CAN BE USED WITH OPEN END PIPE OUTLETS, WINGED HEADWALLS, OR CONCRETE WEIR OUTLETS.
- SHOULD BE INSTALLED WITH MINIMUM SIZE 4X4 INCH POSTS.
- BOARDS SHOULD HAVE 0.5-1.0 INCH SPACE BETWEEN THEM.

MAINTENANCE

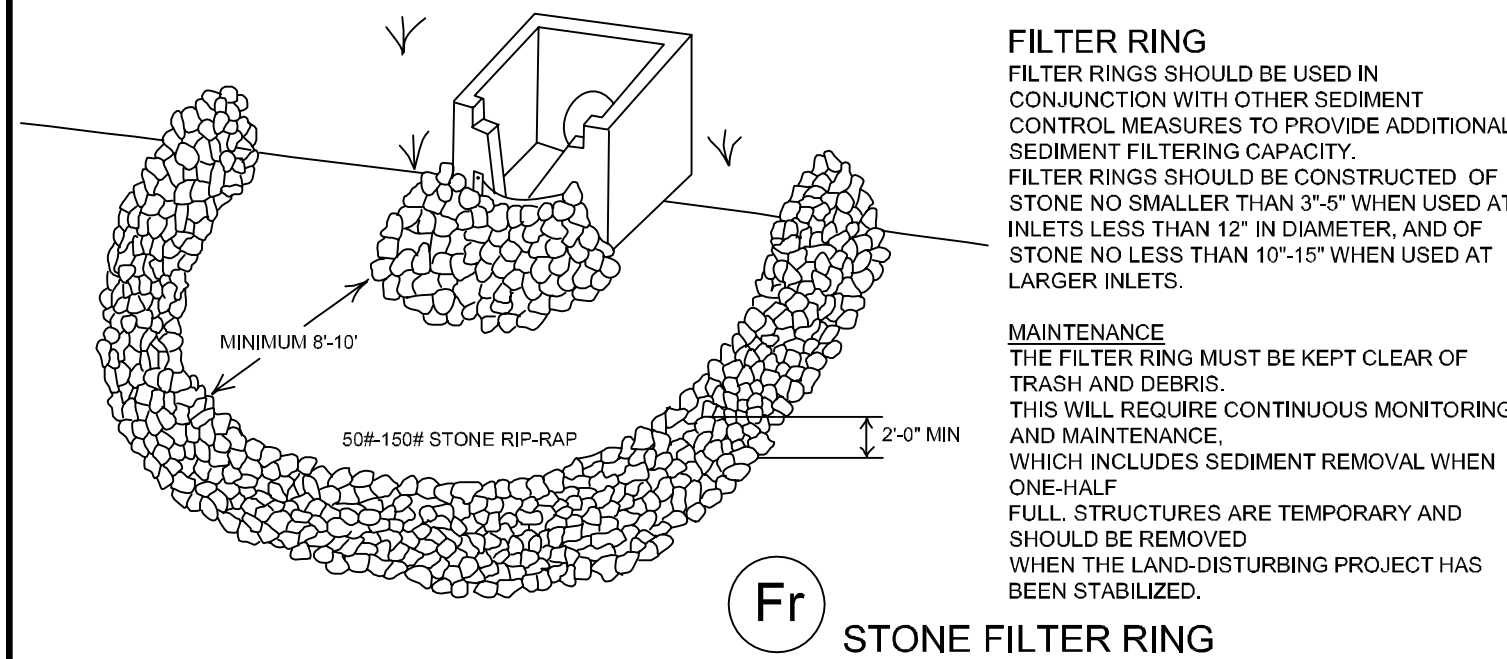
RETROFIT STRUCTURES SHALL BE KEPT CLEAR OF TRASH AND DEBRIS. THIS WILL REQUIRE CONTINUOUS MONITORING AND MAINTENANCE, WHICH INCLUDES SEDIMENT REMOVAL WHEN ONE THIRD OF THE SEDIMENT STORAGE CAPACITY HAS BEEN LOST. STRUCTURES ARE TEMPORARY AND SHALL BE REMOVED WHEN DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED.

RETROFIT CALCULATION

STORAGE CALCULATIONS

- REQUIRED STORMWATER STORAGE = 2400 CY (AS DETERMINED BY LOCAL ORDINANCE)
  - REQUIRED SEDIMENT STORAGE = 315 CY (67 CY/AC \* 4.7 AC DISTURBED AREA)
  - TOTAL REQUIRED STORAGE = 2400 + 315 = 2715 CY
  - AVAILABLE STORAGE = 5442 CY
  - IS THE AVAILABLE STORAGE (4) GREATER THAN THE TOTAL REQUIRED STORAGE (3)?  
X YES NO
  - IF "NO", THE SEDIMENT STORAGE CAPACITY OF THE POND MUST BE INCREASED. CHOOSE THE METHOD TO BE USED:  
RAISE THE INVERT OF THE OUTLET STRUCTURE \_\_\_\_\_ INCHES  
UNDERCUT THE POND \_\_\_\_\_ FEET  
OTHER \_\_\_\_\_
  - CLEAN-OUT ELEVATION = 700.20 FT (ELEVATION CORRESPONDING TO 22 CY/AC \* 4.7 AC DISTURBED AREA)
  - IS THE LENGTH-WIDTH RATIO 2:1 OR GREATER?  
YES X NO
  - IF "NO", THE LENGTH OF FLOW MUST BE INCREASED. CHOOSE THE METHOD TO BE USED:  
X BAFFLES (TYPE OF BAFFLE: BOARD )  
OTHER \_\_\_\_\_
- NOTE THE CMP DIAMETER AND HEIGHT IF A HALF-ROUND CMP RETROFIT IS TO BE USED.  
DIAMETER = 12 INCHES HEIGHT = 6 FEET

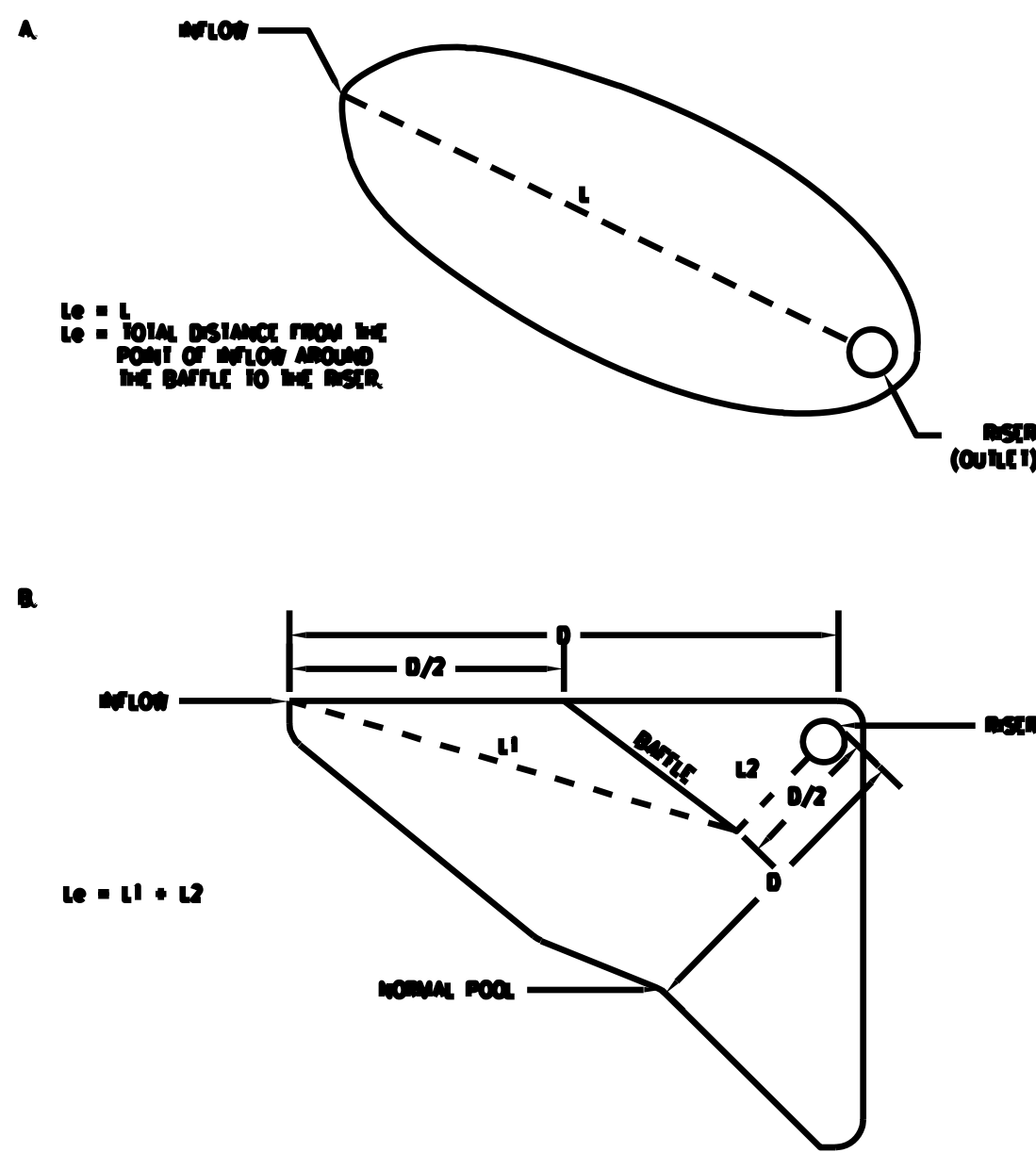
Rt-P RETROFIT



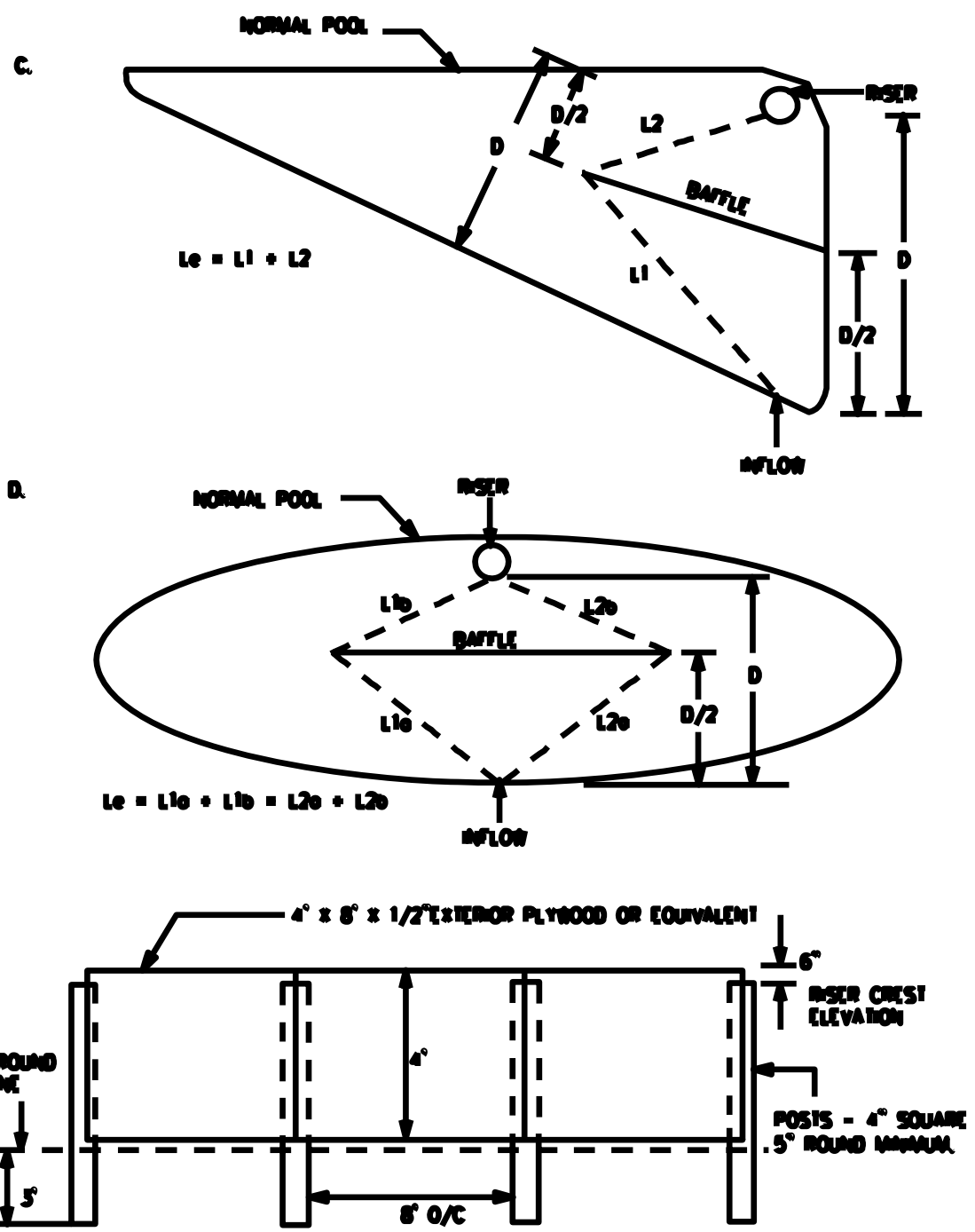
Fr STONE FILTER RING

SEDIMENT BASIN BAFFLES

EXAMPLES: PLAN VIEWS (NOT TO SCALE)



SEDIMENT BASIN BAFFLES CONT'D



24 HOUR CONTACT  
CRAIG MILSAP  
770-387-5151



Know what's below.  
Call before you dig.

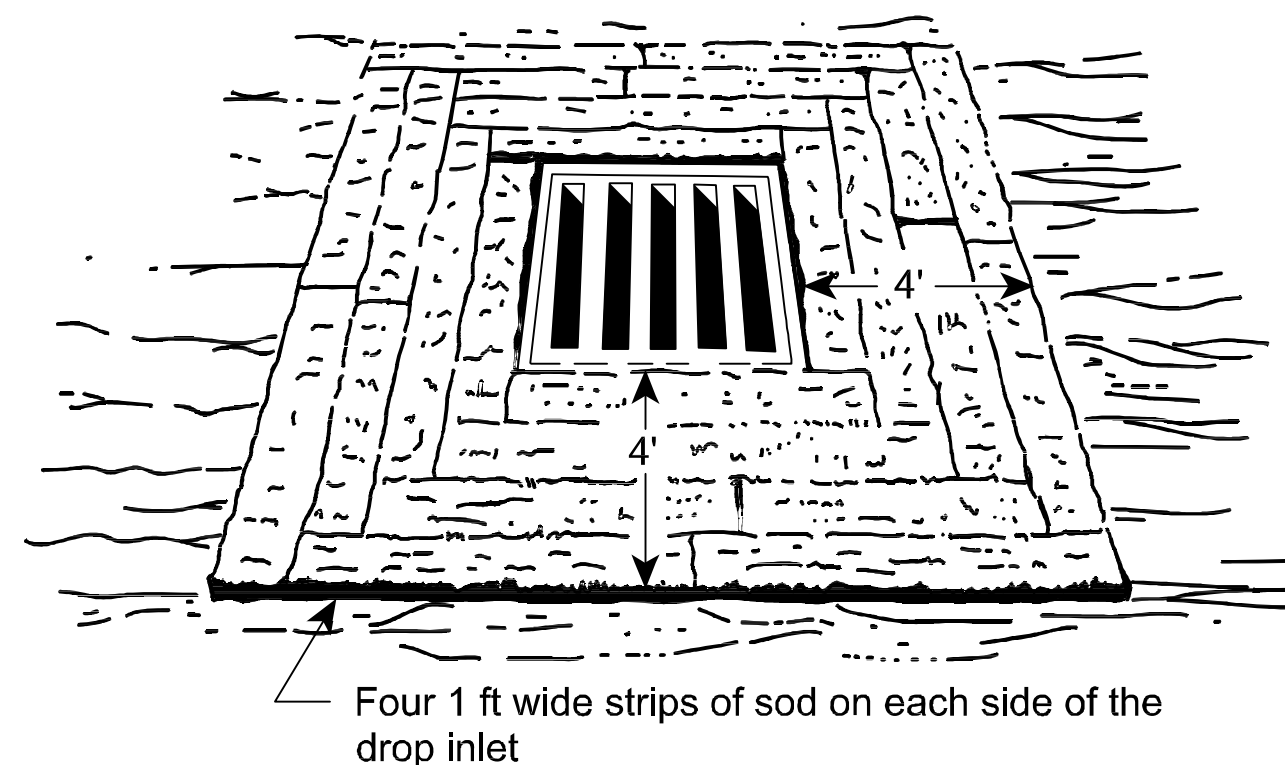
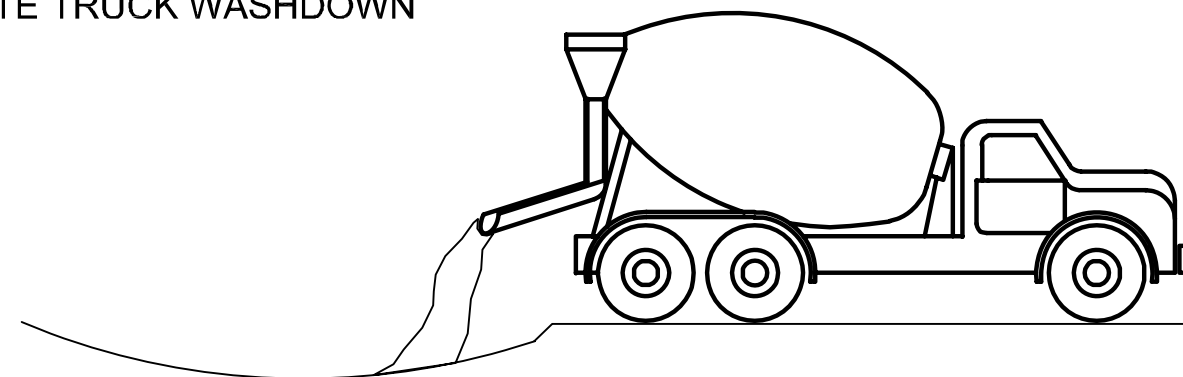
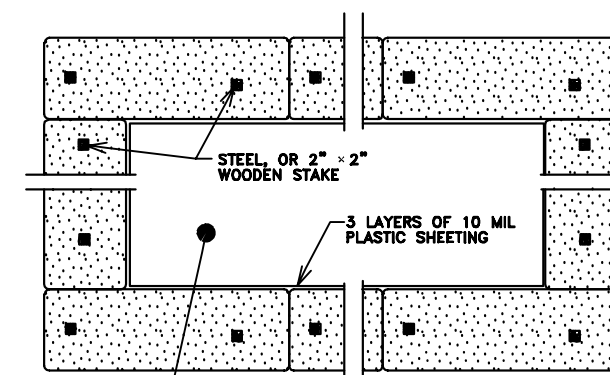


Figure 6-21.6 - Sod Strips Protect Inlet Area From Erosion (source: Va SWCC)

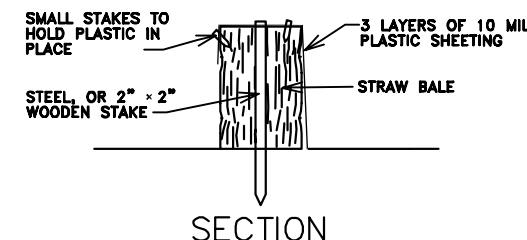
CONCRETE TRUCK WASHDOWN



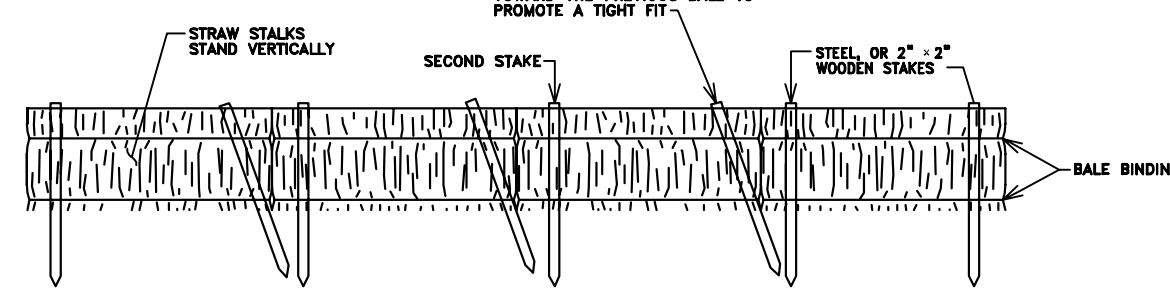
- DESIGNATE WASHDOWN AREA AND EXCAVATE PIT LARGE ENOUGH TO CONTAIN WASHDOWN WATER. THIS MUST BE AWAY FROM STORM DRAINS AND WATERWAYS.
- ADVISE CONCRETE TRUCK DRIVERS OF THE DESIGNATED WASH-OUT AREAS BEFORE THEY START THE JOB.
- WASHDOWN CHUTE, HOPPER, AND REAR OF VEHICLE ONLY. DO NOT WASH OUT DRUM
- ENSURE THAT ALL WASHDOWN WATER STAYS IN PIT.
- DISPOSE OF SETTLED, HARDENED CONCRETE IN GARBAGE WITH OTHER CONSTRUCTION DEBRIS.
- NEVER DISPOSE OF WASHDOWN WATER IN STREETS, STORM DRAINS, OR STREAMS.



PLAN



SECTION



ELEVATION

CONCRETE WASHOUT  
N.T.S.

- CONCRETE WASHOUT FACILITY SHALL NOT BE PLACED WITHIN 50' OF STORM DRAINS, OPEN DITCHES OR WATER BODIES.
- CONCRETE WASHOUT FACILITY SHALL BE PLACED IN AN AREA AS TO NOT INTERFERE WITH OTHER CONSTRUCTION ACTIVITY.
- THE NUMBER OF WASHOUT AREAS IS DEPENDENT OF THE AMOUNT OF CONCRETE TO BE POURED ONSITE.
- 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.
- WASHOUT FACILITY SHALL BE CLEANED OUT WHEN IT HAS REACHED A 75% CAPACITY.
- PLACE SIGN THAT READS "CONCRETE WASHOUT FACILITY" IN AN AREA THAT IS EASILY SEEN.

DESIGNATE WASHDOWN AREA AND EXCAVATE PIT LARGE ENOUGH TO CONTAIN WASHDOWN WATER. THIS MUST BE AWAY FROM STORM DRAINS AND WATERWAYS.

ADVISE CONCRETE TRUCK DRIVERS OF THE DESIGNATED WASH-OUT AREAS BEFORE THEY START THE JOB.

WASHDOWN CHUTE, HOPPER, AND REAR OF VEHICLE ONLY. DO NOT WASH OUT DRUM

ENSURE THAT ALL WASHDOWN WATER STAYS IN PIT.

DISPOSE OF SETTLED, HARDENED CONCRETE IN GARBAGE WITH OTHER CONSTRUCTION DEBRIS.

NEVER DISPOSE OF WASHDOWN WATER IN STREETS, STORM DRAINS, OR STREAMS.

PROJECT NO.:  
14137

DATE:  
04/28/15

REVISIONS:

DATE	DESCRIPTION
3/25/13	CITY SUB
4/01/13	OUTLET REV
4/22/13	2ND SUB CITY
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

BARTOW COUNTY  
FIRE STATION #9  
LOCATED IN LAND LOTS 856 & 857  
4TH DISTRICT, 3RD SECTION  
CARTERSVILLE, GEORGIA



SHEET TITLE:

EROSION  
CONTROL  
DETAILS

SHEET NO.:

C506



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 APPLYING 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 CLEANING STAGE OF DEVELOPMENT SHOULD REMAIN ON SITE, BE CHIPPED, AND APPLIED AS MULCH. THIS METHOD OF MULCHING CAN GREATLY REDUCE EROSION CONTROL COSTS.  
3. CUTBACK ASPHALT (SLOW CURING) SHALL BE APPLIED AT 1200 GALLONS PER ACRE (OR 1/4 GALLON PER SQ.YD.).  
4. 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. CUTBACK ASPHALT SHALL BE APPLIED UNIFORMLY. CARE SHOULD BE TAKEN IN AREAS OF PEDESTRIAN TRAFFIC DUE TO PROBLEMS OF "TRACKING IN" OR DAMAGE TO SHOES, CLOTHES, ETC.  
4. 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 MUST 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 ERECT POSITION. STRAW OR HAY MULCH SHALL BE ANCHORED IMMEDIATELY AFTER APPLICATION. STRAW OR HAY MULCH SPREAD WITH SPECIAL BLOWER-TYPE EQUIPMENT MAY BE ANCHORED WITH EMULSIFIED ASPHALT (GRADE AE-5 OR SS-1). THE ASPHALT EMULSION SHALL BE SPRAYED ONTO THE MULCH AS IT IS EJECTED FROM THE MACHINE. USE 100 GALLONS OF EMULSIFIED ASPHALT AND 100 GALLONS OF WATER PER TON OF MULCH. TACKIFIERS AND BINDERS CAN BE SUBSTITUTED FOR EMULSIFIED ASPHALT. 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 ECONOMICAL AND EFFECTIVE STABILIZATION. MOST TYPES OF TEMPORARY VEGETATION ARE IDEAL TO USE AS COMPAION CROPS UNTIL THE PERMANENT VEGETATION IS ESTABLISHED.

### SEEDING RATES FOR TEMPORARY SEEDING

SPECIES	RATE PER 1,000 SQ.FT.	RATE PER ACRE *	PLANTING DATES **
RYE	3.9 POUNDS	3 BU.	9/1-3/1
RYEGRASS	0.9 POUND	40 LBS.	8/15-4/1
ANNUAL LESPEDEZA	0.9 POUND	40 LBS.	1/15-3/15
WEEPING LOVEGRASS	0.1 POUND	4 LBS.	2/15-6/15
SUNDOGGRASS	1.4 POUNDS	60 LBS.	3/1-8/1
BROWNTOP MILLET	0.9 POUND	40 LBS.	4/1-7/15
WHEAT	4.1 POUNDS	3 BU.	9/15-2/1

\*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 DESIGNED 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 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.

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 SEEDERS 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 SEED BY HAND.

MULCHING  
TEMPORARY VEGETATION CAN, IN MOST CASES, IN 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. ALLEViate 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, OPENING FURROWS, 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 IN 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. 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 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. EMULSIFIED ASPHALT CAN BE (A) SPRAYED UNIFORMLY ONTO THE MULCH AS IT IS EJECTED FROM THE BLOWER MACHINE OR (B) SPRAYED ON THE MULCH IMMEDIATELY FOLLOWING MULCH APPLICATION WHEN STRAW OR HAY IS SPREAD BY METHODS OTHER THAN SPECIAL BLOWER EQUIPMENT.  
THE EQUIPMENT OF ASPHALT EMULSION AND WATER SHALL CONSIST OF A HOMOGENEOUS MIXTURE SATISFACTORY FOR SPRAYING. THE MIXTURE SHALL CONSIST OF 100 GALLONS OF GRADE SS-1H OR CSS-1H EMULSIFIED ASPHALT AND 100 GALLONS OF WATER PER TON OF MULCH.

CARE SHALL BE TAKEN AT ALL TIMES TO PROTECT STATE WATER, THE PUBLIC, ADJACENT PROPERTY, PAVEMENTS, CURBS, SIDEWALKS, AND ALL OTHER STRUCTURES FROM ASPHALT DISCOLORATION.  
2. 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 DISKS SHALL BE DULL ENOUGH TO PRESS THE MULCH INTO THE GROUND WITHOUT CUTTING IT, LEAVING MUCH OF IT IN AN ERECT POSITION. MULCH SHALL NOT BE PLOWED INTO THE SOIL.  
3. SYNTHETIC TACKIFIERS OR BINDERS APPROVED BY GDOT SHALL BE APPLIED IN CONJUNCTION WITH OR IMMEDIATELY AFTER THE MULCH IS PREAD. SYNTHETIC TACKIFIERS SHALL BE MIXED AND APPLIED ACCORDING TO MANUFACTURER'S SPECIFICATIONS. REFER TO TB-TACKIFIERS AND BINDERS.  
4. 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.  
5. 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	RATE PER 1,000 sq.ft.	RATE per Acre *	PLANTING DATES **
BAHIA	1.4 POUNDS	60 LBS.	1/1-12/31
BERMUDA	0.2 POUND	10 LBS.	2/15-7/1
CENTPEDE	BLOCK SOD ONLY	BLOCK SOD ONLY	4/1-7/1
LESPEDEZA	1.7 POUNDS	75 LBS.	1/1-12/31
WEEPING LOVE GRASS	0.1 POUND	4 LBS.	2/1-6/15
FESCUE	1.1 POUNDS	50 LBS.	3/1-4/15 & 9/1-10/15
SWITCH GRASS	0.9 POUND	40 LBS.	3/15-8/1

\*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

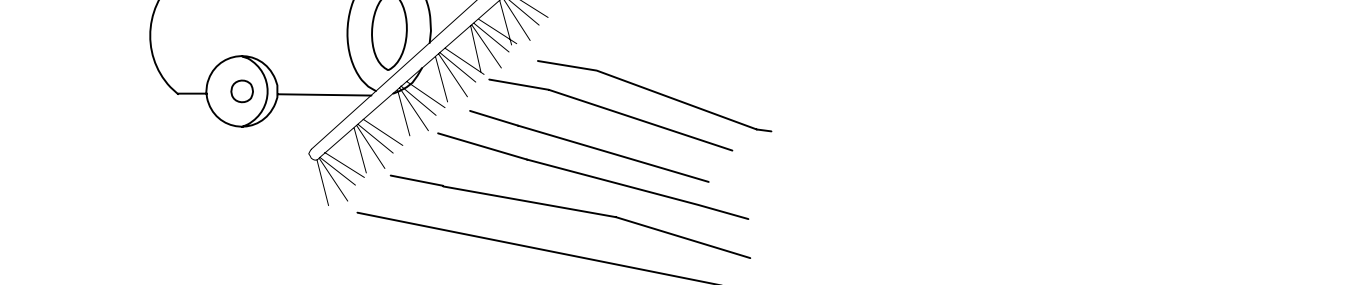
GRASS	VARIETY	GROWING SEASON
BERMUDA	COMMON TIFWAY TIFGREEN, TIFLAWN	WARM WEATHER
BAHIA	PENSACOLA	WARM WEATHER
CENTPEDE	---	WARM WEATHER
ZOYSIA	EMERALD MEYER	WARM WEATHER
FALL FESCUE	KENTUCKY	COOL WEATHER

## Ds4 STABILIZATION WITH SODDING

GRASS TYPE	PLANTING YEAR	FERTILIZER (NPK)	RATE (LBS/ ACRE)	NITROGEN TOP DRESSING (LBS/ ACRE)
COOL SEASON GRASSES	1ST	6-12-12	1500	50-100
	2ND	6-12-12	1000	---
	MAINTENANCE	10-10-10	400	30
WARM SEASON GRASSES	1ST	6-12-12	1500	50-100
	2ND	6-12-12	800	50-100
	MAINTENANCE	10-10-10	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)

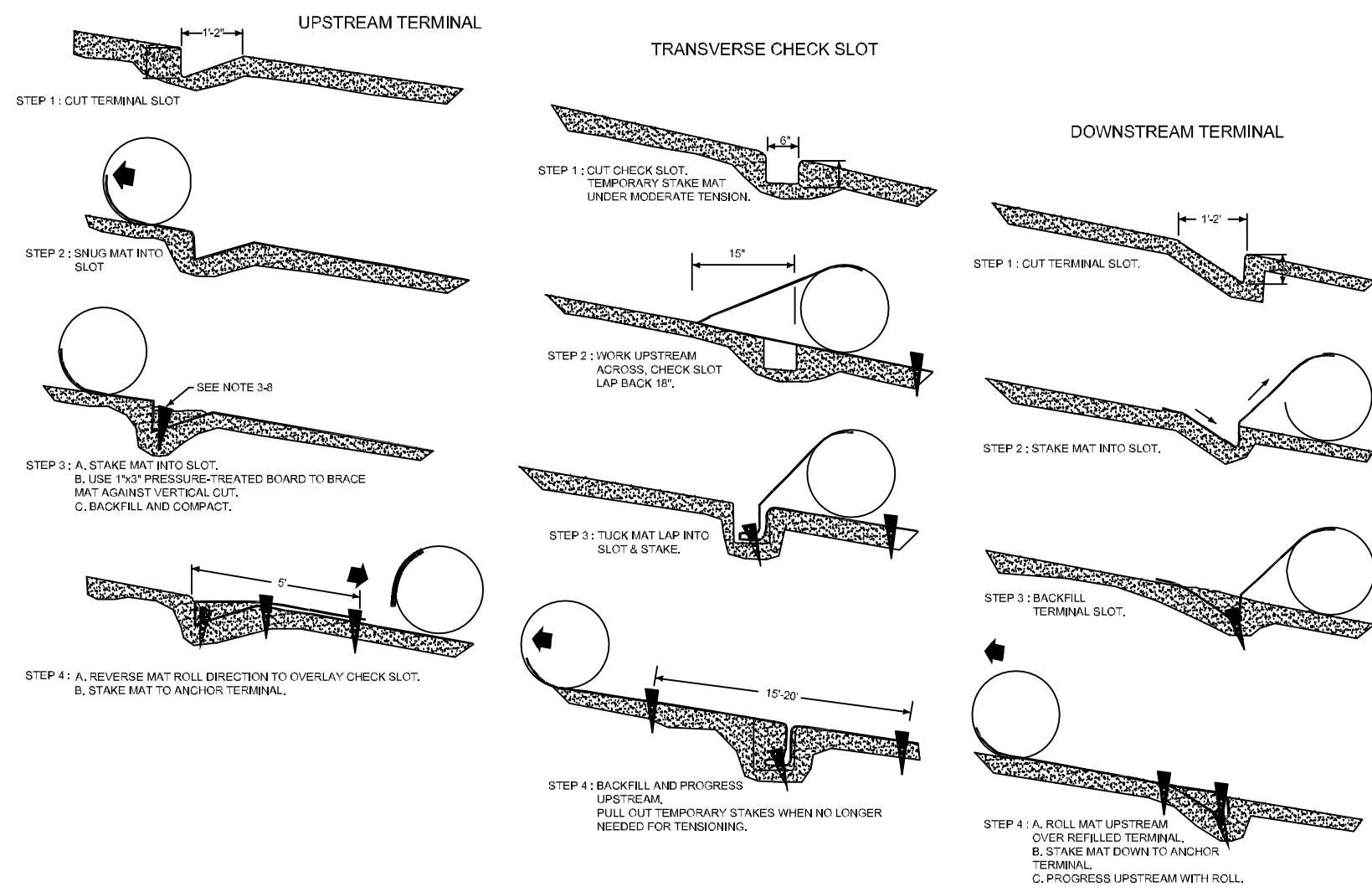
AGRICULTURAL LIME IS REQUIRED UNLESS SOIL TESTS INDICATE OTHERWISE. APPLY AGRICULTURAL LIME AT A RATE OF ONE TON PER ACRE. GRADED AREAS REQUIRE LIME APPLICATION. SOILS CAN BE TESTED TO DETERMINE IF FERTILIZER IS NEEDED, ON REASONABLY FERTILE SOILS OR SOIL MATERIAL, FERTILIZER IS NOT REQUIRED. FOR SOILS 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)

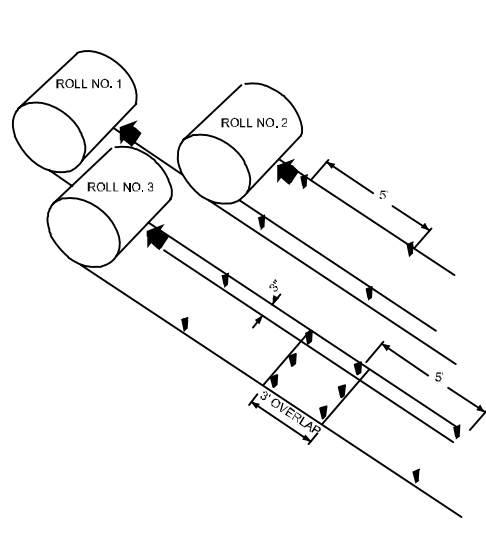
AGRICULTURAL LIME IS REQUIRED AT THE RATE OF ONE TO TWO TONS PER ACRE UNLESS SOIL TESTS INDICATE OTHERWISE. GRADED AREAS REQUIRE LIME APPLICATION. IF LIME IS APPLIED WITHIN SIX MONTHS OF PLANTING PERMANENT PERENNIAL VEGETATION, ADDITIONAL LIME IS NOT REQUIRED. AGRICULTURAL LIME SHALL BE WITHIN THE SPECIFICATIONS 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

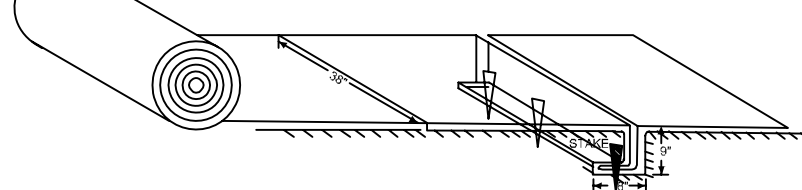
MULCH IS REQUIRED FOR ALL PERMANENT VEGETATION APPLICATIONS. MULCH APPLIED TO SEEDED AREAS SHALL ACHIEVE 75% SOIL COVER. SELECT THE MULCHING MATERIAL FROM THE FOLLOWING AND APPLY AS INDICATED:  
1. DRY STRAW OR DRY HAY OF GOOD QUALITY AND FREE OF WEED SEEDS CAN BE USED. DRY STRAW SHALL BE APPLIED AT 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.



#### SEQUENTIAL ROLL RUN OUT IN CHANNELS



#### PICTORIAL VIEW OF TRANSVERSE SLOT



#### 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 DIAM -ETER, 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 OF ONE INCH OR APPROPRIATE BIODEGRADABLE STAPLES CAN BE USED. STAPLES SHALL BE OF SUFFICIENT THICKNESS FOR SOIL PENETRATION WITHOUT UNDUE DISTORTION.

#### PERMANENT MATTING

SOUND WOOD STAKES, 1X3 INCHES STOCK SAWN IN A TRIANGULAR SHAPE, SHALL BE USED. DEPENDING ON THE COMPACTION OF THE SOIL, SELECT STAKES WITH A LENGTH FROM 12 TO 18 INCHES. U-SHAPED STAPLES SHALL BE 11 GAUGE STEEL OR GREATER, WITH LEGS AT A MINIMUM OF 8 INCHES LENGTH WITH A 2 INCH CROWN.

#### PLANTING

LIME, FERTILIZER, AND SEED SHALL BE APPLIED IN ACCORDANCE WITH SEEDING OR OTHER TYPE OF PLANTING PLAN COMPLETED PRIOR TO INSTALLATION OF TEMPORARY COMBINATION BLANKETS OR JUTE MESH. FOR PERMANENT MATS, THE AREA MUST BE BROUGHT TO FINAL GRADE, PLOWED, LIMED, AND FERTILIZED. AFTER THE PERMANENT MAT HAS BEEN INSTALLED AND BACKFILLED, THE ENTIRE AREA SHALL BE GRASSED. REFER TO SPECIFICATION DS3 - DISTURBED AREA STABILIZATION ET(WITH PERMANENT VEGETATION).

#### MAINTENANCE

ALL EROSION CONTROL BLANKETS AND MATTING SHOULD BE INSPECTED PERIODICALLY FOLLOWING INSTALLATION. PARTICULARLY AFTER RAINSTORMS TO CHECK FOR EROSION AND UNDERMINING. ANY DISLOCATION OR FAILURE SHOULD BE REPAIRED IMMEDIATELY. IF WASHOUTS OR BREAKAGE OCCURS, REINSTALL THE MATERIAL AFTER REPAIRING DAMAGE TO THE SLOPE OR DITCH. CONTINUE TO MONITOR THESE AREAS UNTIL THEY BECOME PERMANENTLY STABILIZED.

## Ss SLOPE STABILIZATION EROSION CONTROL MATTING AND BLANKETS

**24 HOUR CONTACT**  
**CRAIG MILSAP**  
**770-387-5151**

GSWCC LEVEL II CERTIFICATION NUMBER

GEORGIA REGISTRATION NO. GA #3422 ②



<p><b>PROJECT NAME AND LOCATION</b>          BARTOW COUNTY FIRE STATION #9          171 BROWN FARM ROAD          CARTERSVILLE, GEORGIA 30120</p>	<p><b>CITY</b>          CITY OF CARTERSVILLE          1 NORTH ERWIN STREET          CARTERSVILLE, GEORGIA 30120          PHONE: 770-387-5616</p>
<p><b>STATE WATER /WETLAND</b> ③ ③⑧</p> <p>THE STATE WATER WATERS LOCATED WITHIN 200 FEET OF THE PROJECT SITE. THERE ARE NO TROUT STREAMS LOCATED ON OR WITHIN 200 FEET OF THE PROJECT SITE. SEE SHEET C501 FOR STATE WATERS DELINEATION.</p>	
<p><b>RECEIVING WATER</b> ① ② ③ ④④</p> <p>THE PROJECT'S INITIAL RECEIVING WATER IS AN UNNAMED TRIBUTARY OF THE ETOWAH RIVER, A WARM WATER STREAM. IT IS NOT AN IMPAIRED STREAM. THERE ARE NO SENSITIVE AREAS ON SITE, INCLUDING STREAMS, LAKES, RESIDENTIAL AREAS, WETLANDS, ETC. NO ADJACENT AREAS WILL BE AFFECTED.</p>	
<p><b>SITE LOCATION</b> ⑦</p> <p>THE SITE IS LOCATED WITHIN LAND LOTS 856 &amp; 857, OF THE 4TH DISTRICT, 3RD SECTION, CITY OF CARTERSVILLE, BARTOW COUNTY, GA.          CONSTRUCTION EPT GPS LOCATION: LAT: 34.129483 LONG: -84.859909</p>	
<p><b>OFFSITE VEHICLE TRACKING</b></p> <p>A STABILIZED CONSTRUCTION ENTRANCE 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 "DUST" DUST CONTROL.</p>	
<p><b>STATE STREAM BUFFERS</b> ①⑤</p> <p>NON-EXEMPT ACTIVITIES SHALL NOT BE CONDUCTED WITHIN A 25 OR 50 FOOT UNDISTURBED STREAM BUFFERS AS MEASURED FROM THE POINT OF WRESTED VEGETATION WITHOUT FIRST ACQUIRING THE NECESSARY VARIANCES AND PERMITS.</p>	
<p><b>PETROLEUM SPECIFIC PRACTICES</b></p> <p>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.</p>	
<p><b>FERTILIZERS/HERBICIDES</b></p> <p>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.</p>	
<p><b>PAINTS/FINISHES/SOLVENTS</b></p> <p>ALL PRODUCTS WILL BE STORED IN TIGHTLY SEALED ORIGINAL CONTAINERS WHEN NOT IN USE. EXCESS PRODUCT WILL NOT BE DISCHARGED TO THE STORM WATER COLLECTION SYSTEM. EXCESS PRODUCT, MATERIALS USED WITH THESE PRODUCTS AND PRODUCT CONTAINERS WILL BE DISPOSED OF ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.</p>	
<p><b>CONCRETE TRUCKS</b> ②</p> <p>NO CONCRETE TRUCKS WILL BE ALLOWED TO WASH OUT OR DISCHARGE SURPLUS CONCRETE OR DRUM WASH WATER ON SITE. CONCRETE TRUCK CHUTE AND TOOLS MAY BE WASHED OUT IN THE DESIGNATED WASHOUT AREA ONLY.</p>	
<p><b>BUILDING MATERIALS</b></p> <p>NO BUILDING OR CONSTRUCTION MATERIALS WILL BE BURIED OR DISPOSED OF ONSITE. ALL SUCH MATERIAL WILL BE DISPOSED OF IN PROPER WASTE DISPOSAL PROCEDURES.</p>	
<p><b>AMENDMENTS TO PLAN</b> ①⑤</p> <p>AMENDMENTS/REVISIONS TO THE ES&amp;PC PLAN WHICH HAVE A SIGNIFICANT EFFECT ON BMP'S WITH A HYDRAULIC COMPONENT MUST BE CERTIFIED BY THE DESIGN PROFESSIONAL.</p> <p>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.</p> <p>AMENDMENTS TO THE PLAN MUST BE CERTIFIED BY A DESIGN PROFESSIONAL. SECONDARY PERMITTEES MUST NOTIFY THE PRIMARY PERMITTEE WITHIN 24 HOURS OF BECOMING AWARE OF ANY SUSPECTED OR DESIGN DEFICIENCIES WHICH ARE NOT EFFECTIVE IN CONTROLLING THE DISCHARGE OF POLLUTANTS FROM THE SITE.</p>	
<p><b>PRE/POST DEVELOPED SITE CHARACTERISTICS/NARRATIVE:</b> ⑨ ④④</p> <p>THE EXISTING SITE CONSISTS OF A RELATIVELY FLAT AREA ON THE NORTH WEST PORTION OF THE LOT, TO AN AVERAGE SLOPE OF +/-4% TO THE SOUTH WEST. THE PROPERTY HAS NO STRUCTURES AND CONSISTS OF GRASSLAND, BUSH AND TREES. RUN-OFF FROM THE SITE CONTRIBUTES TO AN UNNAMED TRIBUTARY OF THE ETOWAH RIVER. NEIGHBORING AREAS INCLUDE PRIMARILY INDUSTRIAL AND COMMERCIAL WITH SOME RESIDENTIAL PROPERTY. THE PROPOSED DEVELOPMENT IS THE CONSTRUCTION OF A FIRE STATION WITH ASPHALT ACCESS DRIVES AND PARKING FACILITIES. THE PROPERTY IS ZONED L-1, LIGHT INDUSTRIAL. THE SITE IS LOCATED IN LAND LOTS 856 &amp; 857 OF THE 4TH DISTRICT, 3RD SECTION, CARTERSVILLE, GA. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IN ACCORDANCE WITH BEST MANAGEMENT PRACTICES AS NEEDED, TO PREVENT TRANSPORTATION OF SEDIMENT FROM THE SITE. THE SITE CONTAINS TWO SOIL TYPES (SEE SOIL MAP, C501 FOR SOIL DELINEATION)</p>	
<p><b>ESTIMATED RUNOFF COEFFICIENT</b> ④②</p> <div style="border: 1px solid black; padding: 10px; margin-top: 10px;"> <p><b>ONSITE DRAINAGE BASIN</b></p> <p>PRE-DEVELOPED 55          POST-DEVELOPED 88</p> <p>NOTE: SEE HYDROLOGY REPORT FOR DETAILED CALCULATIONS AND MAPS.</p> </div>	
<p><b>WASTE DISPOSAL</b> ①⑦</p> <p>WASTE MATERIAL SHALL BE DISCHARGED TO WATERS OF THE STATE, EXCEPT AS AUTHORIZED BY A SECTION 404 PERMIT.</p> <p>ALL WASTE MATERIALS SHALL BE COLLECTED AND STORED IN A SECURELY UDDER 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. AND TRASH 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.</p>	
<p><b>LIMITS OF DISTURBANCE:</b> ③</p> <p>THE PROPOSED SITE CONSTRUCTION WILL NOT DISTURB MORE THAN 50 ACRES AT ONE TIME.</p>	
<p><b>ALTERNATIVE BMP:</b> ③⑦</p> <p>NO ALTERNATIVE BMP'S HAVE BEEN SPECIFIED.</p>	
<p><b>POTENTIAL POLLUTION:</b> ②⑥</p> <p>NO POTENTIAL SOURCES OF STORMWATER POLLUTION IS EXPECTED TO BE PRESENT ONSITE.</p>	
<p><b>STORM WATER MANAGEMENT AFTER CONSTRUCTION IS COMPLETE</b> ②⑨</p> <p>THE SITE HAS BEEN DESIGNED TO ACCOMMODATE POLLUTANTS IN STORMWATER AFTER CONSTRUCTION IS COMPLETE, BY PROVIDING A STORMWATER SYSTEM THAT ROUTES ALL STORMWATER INTO AN EXISTING STORMWATER POND. THE STORMWATER POND CONTAINS 100% OF THE WATER QUALITY VALUE ASSOCIATED WITH THIS DEVELOPMENT. THE STORMWATER POND HAS A T.S.S. (TOTAL SUSPENDED SOLIDS) REMOVAL OF 80%, WHICH MEETS THE MINIMUM STANDARDS.</p>	

<b>SANITARY WASTE</b> 29		
<p>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 SANITARY OPERATOR 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 NEGLIGIBLE. ADDITIONAL CONTAINMENT BMP'S MUST BE IMPLEMENTED SUCH AS GRAVEL BASINS OR SPECIALLY DESIGNED PLASTIC SUD 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.</p>		
<b>INVENTORY FOR POLLUTION PREVENTION PLAN</b> 29		
<p>THE MATERIALS OR SUBSTANCES LISTED BELOW ARE EXPECTED TO BE PRESENT ONSITE DURING CONSTRUCTION:</p>		
<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 type="checkbox"/> Roofing Materials
<input checked="" type="checkbox"/> Deletgers	<input checked="" type="checkbox"/> Paints	<input type="checkbox"/> Metal Studs
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>SPILL PREVENTION</b>		
<b>MATERIAL MANAGEMENT PRACTICES</b>		
<p>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.</p>		
<b>GOOD HOUSEKEEPING</b>		
<p>THE FOLLOWING GOOD HOUSEKEEPING PRACTICES WILL BE FOLLOWED ONSITE DURING THE CONSTRUCTION PROJECT.</p>		
<ul style="list-style-type: none"><li>* AN EFFORT WILL BE MADE TO STORE ONLY ENOUGH PRODUCT REQUIRED TO DO THE JOB.</li><li>* 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.</li><li>* PRODUCTS WILL BE KEPT IN THEIR ORIGINAL CONTAINERS WITH THE ORIGINAL MANUFACTURER'S LABEL.</li><li>* SUBSTANCES WILL NOT BE MIXED WITH ONE ANOTHER UNLESS RECOMMENDED BY THE MANUFACTURER.</li><li>* THE SITE SUPERINTENDENT WILL INSPECT DAILY TO ENSURE MATERIALS ONSITE RECEIVE PROPER USE AND DISPOSAL.</li></ul>		
<b>29 HAZARDOUS PRODUCTS</b>		
<p>THESE PRACTICES ARE USED TO REDUCE THE RISKS ASSOCIATED WITH HAZARDOUS MATERIALS.</p>		
<ul style="list-style-type: none"><li>* PRODUCTS WILL BE KEPT IN ORIGINAL CONTAINERS UNLESS THEY ARE NOT RESEALABLE.</li><li>* ORIGINAL LABELS AND MATERIAL SAFETY DATA WILL BE RETAINED; THEY CONTAIN IMPORTANT PRODUCT INFORMATION.</li><li>* IF SURPLUS PRODUCT MUST BE DISPOSED OF, MANUFACTURER'S OR LOCAL AND STATE RECOMMENDED METHODS FOR PROPER DISPOSAL WILL BE FOLLOWED.</li><li>* SPECIFIC PRACTICES THE FOLLOWING PRODUCT SPECIFIC PRACTICES WILL BE FOLLOWED ON-SITE:</li></ul>		
<b>PETROLEUM SPECIFIC PRACTICES</b>		
<p>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 UNLIER TO PREVENT/MINIMIZE SITE CONTAMINATION. DISCHARGE OF OILS, FUELS AND DISPOSAL AS REQUIRED BY LOCAL AND STATE REGULATIONS.</p>		
<b>SPILL CLEANUP AND CONTROL PRACTICES</b>		
<p>LOCAL, STATE AND MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP WILL BE CLEARLY POSTED AND PROCEDURES WILL BE MADE AVAILABLE TO SITE PERSONNEL. MATERIALS AND EQUIPMENT NECESSARY FOR SPILL CLEANUP WILL BE KEPT IN THE MATERIAL STORAGE AREA ON-SITE. EQUIPMENT AND MATERIALS WILL INCLUDE BUT NOT BE LIMITED TO BROOMS, DUST PANS, MOPS, RAGS, GLOVES, GOGGLES, CAT LITTER, SAND, SANDSTRIK, AND PROPERLY LABELED PLASTIC AND METAL WASTE CONTAINERS. SPILL PREVENTION PRACTICES AND PROCEDURES WILL BE REVIEWED AFTER A SPILL AND ADJUSTED AS NECESSARY TO PREVENT FUTURE SPILLS. ALL SPILLS WILL BE CLEANED UP IMMEDIATELY UPON DISCOVERY. ALL SPILLS WILL BE REPORTED AS REQUIRED BY LOCAL, STATE AND FEDERAL REGULATIONS. FOR SPILLS THAT IMPACT SURFACE WATER (LEAVE A SHEEN ON SURFACE WATER), THE NATIONAL RESPONSE CENTER (NRC) WILL BE CONTACTED WITHIN 24 HOURS AT 1-800-426-2675. 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 GEORGIA 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 VESSEL OF EQUIPMENT HAS A CAPACITY GREATER THAN 660 GALLONS. THE CONTRACTOR WILL NEED A SPILL PREVENTION CONTAINMENT AND COUNTERMEASURES PLAN PREPARED BY THAT LICENSED PROFESSIONAL.</p>		
<p>THE SPILL AREA WILL BE KEPT WELL VENTILATED AND PERSONNEL WILL WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT INJURY FROM CONTACT WITH A HAZARDOUS SUBSTANCE.</p>		
<p>THE SITE SUPERINTENDENT RESPONSIBLE FOR THE DAY-TO-DAY SITE OPERATIONS, WILL BE THE SPILL PREVENTION AND CLEANUP COORDINATOR. HE/SHE WILL DESIGNATE AT LEAST ONE OTHER SITE PERSONNEL, WHO WILL RECEIVE SPILL PREVENTION AND CLEANUP TRAINING. THESE INDIVIDUALS WILL EACH BECOME RESPONSIBLE FOR A PARTICULAR PHASE OF PREVENTION AND CLEANUP. THE NAMES OF RESPONSIBLE SPILL PERSONNEL WILL BE POSTED IN THE MATERIAL STORAGE AREA AND IF APPLICABLE, IN THE OFFICE TRAILER ONSITE.</p>		
<b>HAZARDOUS WASTE</b>		
<p>ALL HAZARDOUS WASTE MATERIALS WILL BE DISPOSED OF IN THE MANNER SPECIFIED BY LOCAL, STATE, AND/OR FEDERAL REGULATIONS AND BY THE MANUFACTURER OF SUCH PRODUCTS. THE JOB SITE SUPERINTENDENT, WHO WILL ALSO BE RESPONSIBLE FOR SEEING THAT THESE PRACTICES ARE FOLLOWED, WILL INSTRUCT SITE PERSONNEL IN THESE PROCESSES. MATERIAL SAFETY DATA SHEETS (MSDS'S) FOR EACH SUBSTANCE WITH CONTROL AND COUNTERMEASURES (SPCC) PLAN FOUND WITHIN THE EROSION 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 EROSION 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 EROSION AND WILL TRAIN ALL PERSONNEL IN THE PROPER CLEANUP AND HANDLING OF SPILLED MATERIAL. 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.</p>		

## INSPECTIONS: ②

a. PERMITTEE REQUIREMENTS

1. EACH DAY WHEN ANY TYPE OF CONSTRUCTION ACTIVITY HAS TAKEN PLACE AT A PRIMARY PERMITTEE'S SITE, CERTIFIED PERSONNEL PROVIDED BY THE PRIMARY PERMITTEE SHALL INSPECT: (A) ALL AREAS AT THE PRIMARY PERMITTEE'S SITE WHERE PETROLEUM PRODUCTS ARE DISBURSED OR RAINFALL OR ANY OTHER SPILLS OR LEAKS FROM VEHICLES AND EQUIPMENT AND (B) ALL LOCATIONS AT THE PRIMARY PERMITTEE'S SITE WHERE VEHICLES ENTER OR EXIT THE SITE FOR EVIDENCE OF OFF-SITE SEDIMENT TRACKING. THESE INSPECTIONS MUST BE CONDUCTED UNTIL A NOTICE OF TERMINATION IS SUBMITTED.
2. MEASURE RAINFALL ONLY EVERY 24 HOURS EXCEPT ANY NON-WORKING SATURDAY, NON-WORKING SUNDAY AND NON-WORKING FEDERAL HOLIDAY UNTIL A NOTICE OF TERMINATION IS SUBMITTED. MEASURE RAINFALL ONLY ON ANY NON-WORKING DAY AT ALL AREAS OF THE SITE HAVE UNDERGONE FINAL STABILIZATION OR ESTABLISHED A CROP OF ANNUAL VEGETATION AND A SEEDING OF TARGET PERENNIALS APPROPRIATE FOR THE REGION.
3. CERTIFIED PERSONNEL (PROVIDED BY THE PRIMARY PERMITTEE) SHALL INSPECT THE FOLLOW AT LEAST ONCE EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM THAT IS 0.5 INCHES RAINFALL OR GREATER (UNLESS THE STORM ENDS AFTER 5:02 PM ON A FRIDAY OR ON ANY NON-WORKING DAY). ON 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 IDENTIFIABLE, THESE SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO RECEIVING WATER(S). FOR AREAS OF A SITE THAT HAVE UNDERGONE FINAL STABILIZATION OR ESTABLISHED A CROP OF ANNUAL VEGETATION AND A SEEDING OF TARGET PERENNIALS APPROPRIATE FOR THE REGION, THE PERMITTEE MUST COMPLY WITH PART IV.D.4.A.(4). THESE INSPECTIONS MUST BE CONDUCTED UNTIL A NOTICE OF TERMINATION IS SUBMITTED.
4. CERTIFIED PERSONNEL (PROVIDED BY THE PRIMARY PERMITTEE) SHALL INSPECT AT LEAST ONCE PER MONTH DURING THE TERM OF THIS PERMIT (I.E., UNTIL A NOTICE OF TERMINATION IS 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, EROSION AND SEDIMENT TRACKING. EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY. WHERE DISCHARGE LOCATIONS OR POINTS ARE ACCESSIBLE, THEY SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO RECEIVING WATER(S).
5. BASED ON THE RESULTS OF EACH INSPECTION, THE SITE DESCRIPTION AND THE POLLUTION PREVENTION AND CONTROL MEASURES IDENTIFIED IN THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN, THE PLAN SHALL BE REVISED AS APPROPRIATE NOT LATER THAN SEVEN (7) CALENDAR DAYS FOLLOWING EACH INSPECTION. IMPLEMENTATION OF SUCH CHANGES SHALL BE MADE AS SOON AS PRACTICABLE BUT IN NO CASE LATER THAN SEVEN (7) CALENDAR DAYS FOLLOWING EACH INSPECTION.
6. A REPORT OF EACH INSPECTION THAT INCLUDES THE NAME(S) OF CERTIFIED PERSONNEL MAKING EACH INSPECTION, THE DATE(S) OF EACH INSPECTION, CONSTRUCTION PHASE (I.E., INITIAL, INTERMEDIATE OR FINAL), MAJOR OBSERVATIONS RELATING TO THE IMPLEMENTATION OF THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN, AND ACTIONS TAKEN IN ACCORDANCE WITH PART IV.D.4.A.(5), OF THE PERMIT SHALL BE MADE AND RETAINED AT THE SITE OR BE READILY AVAILABLE AT A DESIGNATED ALTERNATE LOCATION UNTIL THE ENTIRE SITE OR THAT PORTION OF A CONSTRUCTION PROJECT THAT HAS BEEN PHASED HAS UNDERGONE FINAL STABILIZATION AND A NOTICE OF TERMINATION IS SUBMITTED TO EPD. SUCH REPORTS SHALL BE READILY AVAILABLE BY END OF THE SECOND BUSINESS DAY AND/OR WORKING DAY AFTER EACH IDENTIFIABLE INCIDENTS OF BEST MANAGEMENT PRACTICES THAT HAVE NOT BEEN PROPERLY INSTALLED AND/OR MAINTAINED AS DESCRIBED IN THE PLAN. WHERE THE REPORT DOES NOT IDENTIFY ANY INCIDENTS, THE INSPECTION REPORT SHALL CONTAIN A 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.G.2. OF THIS PERMIT.

## MAINTENANCE.

THE PLAN SHALL INCLUDE A DESCRIPTION OF PROCEDURES TO ENSURE THE TIMELY MAINTENANCE OF VEGETATION, EROSION AND SEDIMENT CONTROL MEASURES AND OTHER PROTECTIVE MEASURES IDENTIFIED IN THE SITE PLAN.

## SAMPLING REQUIREMENTS ③

THIS PERMIT REQUIRES THE MONITORING OF NEPHELOMETRIC TURBIDITY IN RECEIVING WATER(S) OR OUTFALLS IN ACCORDANCE WITH THIS PERMIT. THE PARAGRAPH SHALL NOT APPLY TO ANY LAND DISTURBANCE ASSOCIATED WITH THE CONSTRUCTION OF SINGLE-FAMILY HOMES WHICH ARE NOT PART OF A SUBDIVISION OR PLANNED COMMON DEVELOPMENT UNLESS FIVE (5) ACRES OR MORE WILL BE DISTURBED. THE FOLLOWING PROCEDURES CONSTITUTE EPD'S GUIDELINES FOR SAMPLING TURBIDITY.

a. SAMPLING REQUIREMENTS SHALL INCLUDE THE FOLLOWING:

1. A USGS TOPOGRAPHIC MAP, A TOPOGRAPHIC MAP OR A DRAWING (REFERRED TO AS A TOPOGRAPHIC MAP) THAT IS A SCALE EQUAL TO OR MORE DETAILED THAN A 1:24,000 MAP SHOWING THE LOCATION OF THE SITE OR THE STAND ALONE CONSTRUCTION; (A) THE LOCATION OF ALL PERENNIAL AND INTERMITTENT STREAMS AND/OR WATER BODIES AND (B) IDENTIFIABLE INCIDENTS OF BEST MANAGEMENT PRACTICES THAT HAVE NOT BEEN PROPERLY INSTALLED AND/OR MAINTAINED AS DESCRIBED IN THE PLAN. WHERE THE REPORT DOES NOT IDENTIFY ANY INCIDENTS, THE INSPECTION REPORT SHALL CONTAIN A 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.G.2. OF THIS PERMIT.
2. A WRITTEN NARRATIVE OF SITE SPECIFIC ANALYTICAL METHODS USED TO COLLECT, HANDLE AND ANALYZE THE SAMPLES INCLUDING QUALITY CONTROL/QUALITY ASSURANCE PROCEDURES. THIS NARRATIVE MUST INCLUDE PRECISE SAMPLING METHODOLOGY FOR EACH SAMPLING LOCATION;
3. WHEN THE PERMITTEE HAS DETERMINED THAT SOME OR ALL OUTFALLS WILL BE SAMPLED, A RATIONALE MUST BE INCLUDED ON THE PLAN FOR THE NTU LIMIT(S) SELECTED FROM APPENDIX B. THIS RATIONALE MUST INCLUDE THE SIZE OF THE CONSTRUCTION SITE, THE CALCULATION OF THE SIZE OF THE SURFACE WATER DRAINAGE AREA, AND THE TYPE OF RECEIVING WATER(S) (I.E., TROUT STREAM OR SUPPORTING WARM WATER FISHERIES); AND
4. ANY ADDITIONAL INFORMATION EPD DETERMINES NECESSARY TO BE PART OF THE PERMIT. EPD WILL USE THE WRITTEN RATIONALE TO THE PERMITTEE OF THE INFORMATION NECESSARY AND THE TIME LINE FOR SUBMITTAL.

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

1. SAMPLE CONTAINERS SHOULD BE LABELED PRIOR TO COLLECTING THE SAMPLES.
2. SAMPLES SHOULD BE WELL MIXED BEFORE TRANSFERRING TO A SECONDARY CONTAINER.
3. LARGE MOUTH, WELL CLEANED AND RINSED GLASS OR PLASTIC JARS SHOULD BE USED FOR COLLECTING SAMPLES. THE JARS SHOULD BE CLEANED THOROUGHLY TO AVOID CONTAMINATION.
4. MANUAL, AUTOMATIC OR RISING STAKE SAMPLING MAY BE UTILIZED. SAMPLES REQUIRED BY THIS PERMIT SHOULD BE COLLECTED IMMEDIATELY, BUT IN NO CASE LATER THAN 48 HOURS AFTER COLLECTION. HOWEVER, SAMPLES FROM AUTOMATIC SAMPLERS MUST BE COLLECTED NO LATER THAN THE NEXT BUSINESS DAY AFTER THEIR ACCUMULATION, UNLESS FLOW THROUGH AUTOMATIC ANALYSIS IS USED. AUTOMATIC SAMPLING WITH A PROPERLY CALIBRATED AUTOMATIC SAMPLER IS NOT ACTIVATED DURING THE QUALIFYING EVENT. THE PERMITTEE MUST UTILIZE MANUAL SAMPLING OR RISING STAKE SAMPLING DURING THE NEXT QUALIFYING EVENT. DILUTION OF SAMPLES IS NOT REQUIRED. SAMPLES MAY BE COLLECTED DIRECTLY WITH A PROPERLY CALIBRATED TUBIDIMETER. SAMPLES ARE NOT REQUIRED TO BE COOLED.

5. SAMPLING AND ANALYSIS OF THE RECEIVING WATER(S) OR OUTFALLS BEYOND THE MINIMUM FREQUENCY STATED IN THIS PERMIT MUST BE REPORTED TO EPD AS SPECIFIED IN PART IV.E.

## SAMPLING POINTS

1. FOR CONSTRUCTION ACTIVITIES THE PRIMARY PERMITTEE MUST SAMPLE ALL RECEIVING WATER(S), OR ALL OUTFALL(S), OR A COMBINATION OF RECEIVING WATER(S) AND OUTFALL(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:

- a. THE UPSTREAM SAMPLE FOR EACH RECEIVING WATER(S) MUST BE TAKEN IMMEDIATELY UPSTREAM OF THE CONFLUENCE OF THE FIRST STORM WATER DISCHARGE FROM THE PERMITTED ACTIVITY (I.E., THE DISCHARGE FARTHEST UPSTREAM AT THE SITE) BUT DOWNSTREAM OF ANY OTHER STORM WATER DISCHARGES NOT ASSOCIATED WITH THE PERMITTED ACTIVITY. WHERE APPROPRIATE, SEVERAL DOWNSTREAM SAMPLES FROM THE RECEIVING WATER(S) MAY NEED TO BE TAKEN AND THE ARITHMETIC AVERAGE OF THE TURBIDITY OF THESE SAMPLES USED FOR THE UPSTREAM TURBIDITY VALUE.
- b. THE DOWNSTREAM SAMPLE FOR EACH RECEIVING WATER(S) MUST BE TAKEN DOWNSTREAM OF THE CONFLUENCE OF THE LAST STORM WATER DISCHARGE FROM THE PERMITTED ACTIVITY (I.E., THE DISCHARGE FARTHEST DOWNSTREAM AT THE SITE) BUT UPSTREAM OF ANY OTHER STORM WATER DISCHARGE NOT ASSOCIATED WITH THE PERMITTED ACTIVITY. WHERE APPROPRIATE, SEVERAL DOWNSTREAM SAMPLES FROM ACROSS THE RECEIVING WATER(S) MAY NEED TO BE TAKEN AND THE ARITHMETIC AVERAGE OF THE TURBIDITY OF THESE SAMPLES USED FOR THE DOWNSTREAM TURBIDITY VALUE.
- c. IDEALLY THE SAMPLES SHOULD BE TAKEN FROM THE HORIZONTAL AND VERTICAL CENTER OF THE RECEIVING WATER(S) OR THE STORM WATER OUTFALL CHANNEL(S).
- d. CARE SHOULD BE TAKEN TO AVOID STIRRING THE BOTTOM SEDIMENTS IN THE RECEIVING WATER(S) OR IN THE OUTFALL STORM WATER CHANNEL.
- e. THE SAMPLING CONTAINER SHOULD BE HELD SO THAT THE OPENING FACES UPSTREAM.
- f. THE SAMPLES SHOULD BE KEPT FREE FROM FLOATING DEBRIS.
- g. PERMITTEES DO NOT HAVE THE SAMPLE SHEETFLOW THAT FLOWS INTO UNDISTURBED NATURAL AREAS OR AREAS STABILIZED BY THE PROJECT. FOR PURPOSES OF THIS SECTION, STABILIZED SHALL MEAN, FOR UNPAVED AREAS AND AREAS NOT COVERED BY PERMANENT STRUCTURES AND AREAS LOCATED OUTSIDE THE WASTE DISPOSAL LIMITS OF A LANDFILL CELL THAT HAS BEEN CERTIFIED BY EPO FOR WASTE DISPOSAL, 100% OF THE SOIL SURFACE IS UNIFORMED BY 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).
- h. ALL SAMPLING PURSUANT TO THIS PERMIT MUST BE DONE IN SUCH A WAY (INCLUDING GENERALLY ACCEPTED SAMPLING METHODS, LOCATIONS, TIMING, AND FREQUENCY) AS TO ACCURATELY REFLECT WHETHER STORM WATER RUNOFF FROM THE CONSTRUCTION SITE IS IN COMPLIANCE WITH THE STANDARD SET FORTH IN PARTS III.D.3. OR III.D.4., WHICHEVER IS APPLICABLE.

## SAMPLING FREQUENCY<sup>26</sup>

1. THE PRIMARY PERMITTEE MUST SAMPLE IN ACCORDANCE WITH THE PLAN AT LEAST ONCE FOR EACH RAINFALL EVENT DESCRIBED BELOW. FOR A RAINFALL EVENT, THE PERMITTEE SHALL IDENTIFY AND MONITOR THE LOCATION 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.

2. HOWEVER, WHERE MANUAL AND AUTOMATIC SAMPLING ARE IMPOSSIBLE (AS DEFINED IN THIS PERMIT), OR ARE BEYOND THE PERMITTEE'S CONTROL, THE PERMITTEE SHALL TAKE SAMPLES AS SOON AS POSSIBLE, BUT IN NO CASE MORE THAN TWELVE (12) HOURS AFTER THE BEGINNING OF THE STORM WATER DISCHARGE.

3. SAMPLING BY THE PERMITTEE SHALL OCCUR FOR THE FOLLOWING QUALIFYING EVENTS:

- a. FOR EACH AREA OF THE SITE THAT DISCHARGES TO A RECEIVING WATER OR FROM AN OUTFALL, THE FIRST RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH WITH A STORM WATER DISCHARGE THAT OCCURS DURING NORMAL BUSINESS HOURS AS DEFINED IN THIS PERMIT AFTER ALL CLEARING AND GRUBBING OPERATIONS HAVE BEEN COMPLETED, BUT PRIOR TO COMPLETION OF MASS GRADING OPERATIONS. IN THE DRAINAGE AREA OF THE LOCATION SELECTED AS THE SAMPLING LOCATION;
- b. IN ADDITION TO (A) ABOVE, FOR EACH AREA OF THE SITE THAT DISCHARGES TO A RECEIVING WATER OR FROM AN OUTFALL, THE FIRST RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH WITH A STORM WATER DISCHARGE THAT OCCURS DURING NORMAL BUSINESS HOURS AS DEFINED IN THIS PERMIT AFTER ALL CLEARING AND GRUBBING 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;
- c. AT THE TIME OF SAMPLING PERFORMED PURSUANT TO (A) AND (B) ABOVE, IF BMPs IN ANY AREA OF THE SITE THAT DISCHARGES TO A RECEIVING WATER OR FROM AN OUTFALL ARE NOT PROPERLY DESIGNED, INSTALLED AND MAINTAINED, CORRECTIVE ACTION SHALL BE DEFINED AND IMPLEMENTED WITHIN TWO (2) BUSINESS DAYS, 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. IF THE PLAN SELECTED TURBIDITY STANDARD IS ATTAINED, OR UNTIL POST-STORM EVENT INSPECTIONS DETERMINE THAT BMPs ARE PROPERLY DESIGNED, INSTALLED AND MAINTAINED;
- d. WHERE SAMPLING PURSUANT TO (A), (B) OR (C) ABOVE IS REQUIRED BUT NOT POSSIBLE (OR NOT REQUIRED BECAUSE THERE WAS NO DISCHARGE), THE PERMITTEE, IN ACCORDANCE WITH PART IV.D.4.A.(6), MUST INCLUDE A WRITTEN JUSTIFICATION IN THE INSPECTION REPORT OF WHY SAMPLING WAS NOT PERFORMED. PROVIDING THIS JUSTIFICATION DOES NOT RELIEVE THE PERMITTEE OF ANY SUBSEQUENT SAMPLING OBLIGATIONS UNDER (A), (B) OR (C) ABOVE; AND
- e. EXISTING CONSTRUCTION ACTIVITIES, I.E., THOSE THAT ARE OCCURRING ON OR BEFORE THE EFFECTIVE DATE OF THIS PERMIT, THAT HAVE MET THE SAMPLING REQUIRED BY (A) ABOVE SHALL SAMPLE IN ACCORDANCE WITH (B). THOSE EXISTING CONSTRUCTION ACTIVITIES THAT HAVE MET THE SAMPLING REQUIRED BY (B) ABOVE SHALL NOT BE REQUIRED TO CONDUCT ADDITIONAL SAMPLING OTHER THAN AS REQUIRED BY (C) ABOVE.
  - NOTE THAT THE PERMITTEE MAY CHOOSE TO MEET THE REQUIREMENTS OF THIS SECTION BY COLLECTING TURBIDITY SAMPLES FROM ANY RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH AND ALLOWS FOR SAMPLING AT ANY TIME OF THE DAY OR WEEK.

NON-STORM WATER DISCHARGES.


EXCEPT FOR FLOWS FROM FIRE FIGHTING ACTIVITIES, SOURCES OF NON-STORM WATER LISTED IN PART II.A.2.2. OF THIS PERMIT THAT ARE COMBINED WITH STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY MUST BE IDENTIFIED IN THE PLAN. THE PLAN SHALL IDENTIFY AND ENSURE THE IMPLEMENTATION OF APPROPRIATE POLLUTION PREVENTION MEASURES FOR THE NON-STORM WATER COMPONENT(S) OF THE DISCHARGE.

## REPORTING

1. THE APPLICABLE PERMITTEES 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 THE PERMIT. THE REPORTING PERIODS SHALL BE IN A CLEARLY LEGIBLE FORMAT. UPON WRITTEN NOTIFICATION, EPD MAY REQUEST THE APPLICABLE PERMITTEE TO SUBMIT THE SAMPLING RESULTS ON A MORE FREQUENT BASIS. SAMPLING AND ANALYSIS OF ANY STORM WATER DISCHARGE(S) OR THE RECEIVING WATER(S) BEYOND THE MINIMUM FREQUENCY STATED IN THIS PERMIT MUST BE REPORTED IN A SIMILAR MANNER TO THE EPD. THE SAMPLING REPORTS MUST BE SIGNED IN ACCORDANCE WITH PART V.6.2. SAMPLING REPORTS MUST BE SUBMITTED TO EPD UNTIL SUCH TIME AS A NOT IS SUBMITTED IN ACCORDANCE WITH PART VI.

2. ALL SAMPLING REPORTS SHALL INCLUDE THE FOLLOWING INFORMATION:

- a. THE RAINFALL, AMOUNT, DATE, EXACT PLACE AND TIME OF SAMPLING OR MEASUREMENTS;
- b. THE NAME(S) OF THE CERTIFIED PERSONNEL WHO PERFORMED THE SAMPLING AND MEASUREMENTS;

<p>I CERTIFY THAT THE PERMITTEE'S EROSION AND SEDIMENTATION APPROPRIATE AND COMPREHENSIVE SYSTEM OF BEST MANAGEMENT QUALITY CONTROL ACT AND THE DOCUMENT "MANUAL FOR EROSION CONTROL" BY THE STATE SOIL AND WATER CONSERVATION COMMISSION AS LAND-DISTURBING ACTIVITY WAS PERMITTED, PROVIDES FOR THE SAMPLING OF THE STORM WATER OUTFALLS AND THAT THE DESIGNATED SAMPLING METHODS IS EXPECTED TO MEET REQUIREMENTS CONFORMING TO 1000001, GAR 1000002, AND GAR 1000003".</p> <p><i>K. K. K.</i> SIGNATURE</p>	
<p>I CERTIFY UNDER PENALTY OF LAW THAT THIS PLAN WAS PREPARED AND DESCRIBED HERE-IN BY MYSELF OR MY AUTHORIZED AGENT UNDER THE PERMIT.</p> <p><i>K. K. K.</i> SIGNATURE</p>	
<p><b>7-DAY INSPECTION:</b></p> <p>THE DESIGN PROFESSIONAL WHO PREPARED THE ES&amp;PC PLAN HAS CONDUCTED THE INITIAL SEDIMENT STORAGE REQUIREMENTS AND PERIMETER INSPECTION.</p> <p>DESIGN PROFESSIONAL 7-DAY VISIT CERTIFICATION</p> <p>DATE OF INSPECTION: _____</p> <p>I CERTIFY THE SITE WAS IN COMPLIANCE WITH THE ES&amp;PC PLAN.</p> <p>GSWCC LEVEL II DESIGN PROFESSIONAL</p> <p>INSPECTION REVEALED THE FOLLOWING DISCREPANCIES FROM THE PERMIT:</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>THESE DISCREPANCIES MUST BE ADDRESSED IMMEDIATELY AND THE PERMITTEE SHALL NOT PROCEED ON THE SITE UNTIL DESIGN PROFESSIONAL HAS REVIEWED AND APPROVED THE CORRECTIVE ACTION PLAN.</p>	
<p><b>REPORTING (CONT.)</b></p> <p>a. THE DATE(S) ANALYSES WERE PERFORMED;</p> <p>d. THE TIME(S) ANALYSES WERE INITIATED;</p> <p>e. THE NAME(S) OF THE CERTIFIED PERSONNEL WHO PERFORMED THE ANALYSES;</p> <p>f. REFERENCES AND WRITTEN PROCEDURES, WHEN AVAILABLE, FOR THE ANALYTICAL TECHNIQUES OR METHODS USED;</p> <p>g. THE RESULTS OF SUCH ANALYSES, INCLUDING THE BENCH SHEETS, INSTRUMENT READOUTS, COMPUTER DISKS OR TAPES, ETC., USED TO DETERMINE THESE RESULTS;</p> <p>h. RESULTS WHICH EXCEED 1000 NTU SHALL BE REPORTED AS "EXCEEDS 1000 NTU"; AND</p> <p>i. CERTIFICATION STATEMENT THAT SAMPLING WAS CONDUCTED AS PER THE PLAN.</p> <p>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 APPENDIX A OF THIS PERMIT. THE PERMITTEE SHALL RETAIN A COPY OF THE PROOF OF SUBMITTAL AT THE CONSTRUCTION SITE OR THE PROOF OF SUBMITTAL SHALL BE READILY AVAILABLE AT THE DESIGNATED LOCATION FROM THE COMMENCEMENT OF CONSTRUCTION UNTIL SUCH TIME AS A NOT IS SUBMITTED IN ACCORDANCE WITH PART VI. IF AN ELECTRONIC SUBMITTAL IS PROVIDED BY EPT 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.</p>	
<p><b>RETENTION OF RECORDS (30)</b></p> <p>1. 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:</p> <p>a. A COPY OF ALL NOTICES OF INTENT SUBMITTED TO EPD;</p> <p>b. A COPY OF THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN REQUIRED BY THIS PERMIT;</p> <p>c. THE DESIGN PROFESSIONAL'S REPORT OF THE RESULTS OF THE INSPECTION CONDUCTED IN ACCORDANCE WITH PART IV.A.5. OF THIS PERMIT;</p> <p>d. A COPY OF ALL SAMPLING INFORMATION, RESULTS, AND REPORTS REQUIRED BY THIS PERMIT;</p> <p>e. A COPY OF ALL INSPECTION REPORTS GENERATED IN ACCORDANCE WITH PART IV.D.4.A. OF THIS PERMIT;</p> <p>f. A COPY OF ALL VIOLATION SUMMARIES AND VIOLATION SUMMARY REPORTS GENERATED IN ACCORDANCE WITH PART III.D.2. OF THIS PERMIT; AND</p> <p>g. DAILY RAINFALL INFORMATION COLLECTED IN ACCORDANCE WITH PART IV.D.4.A.(2). OF THIS PERMIT.</p> <p>2. COPIES OF ALL NOTICES OF INTENT, NOTICES OF TERMINATION, INSPECTION REPORTS, SAMPLING REPORTS (INCLUDING ALL CALIBRATION AND MAINTENANCE RECORDS AND ALL ORIGINAL STOP CHART RECORDINGS FOR CONTINUOUS MONITORING INSTRUMENTATION) OR OTHER REPORTS REQUESTED BY THE EPD, EROSION, SEDIMENTATION AND POLLUTION CONTROL PLANS, RECORDS OF ALL DATA USED TO COMPLETE THE NOTICE OF INTENT TO BE COVERED BY THIS PERMIT AND ALL OTHER RECORDS REQUIRED BY THIS PERMIT SHALL BE RETAINED BY THE PERMITTEE WHO EITHER PRODUCED OR USED IT FOR A PERIOD OF AT LEAST THREE YEARS FROM THE DATE THAT THE NOT IS SUBMITTED IN ACCORDANCE WITH PART VI. OF THIS PERMIT. THESE RECORDS MUST BE MAINTAINED AT THE PERMITTEE'S PRIMARY PLACE OF BUSINESS OR AT A DESIGNATED ALTERNATIVE LOCATION ONCE THE CONSTRUCTION ACTIVITY HAS CEASED AT THE PERMITTED SITE. THIS PERIOD MAY BE EXTENDED BY REQUEST OF THE EPD AT ANY TIME UPON WRITTEN NOTIFICATION TO THE PERMITTEE.</p>	
<p> Know what's below. Call before you dig.</p> <p><b>GSWCC</b> <b>GEORGIA</b></p>	

AND POLLUTION CONTROL PLAN, PROVIDES FOR AN  
 ENMENT PRACTICES REQUIRED BY THE GEORGIA WATER  
 AND SEDIMENT CONTROL IN GEORGIA, PUBLISHED  
 S OF JANUARY 1 OF THE YEAR IN WHICH THE  
 E SAMPLING OF THE RECEIVING WATER(S) OR THE  
 IIGNED SYSTEM OF BEST MANAGEMENT PRACTICES AND  
 TAINED IN THE GENERAL NPDES PERMIT NOS. GAR

4-28-15  
DATE

PREPARED AFTER A SITE VISIT TO THE LOCATIONS  
UNDER MY DIRECT SUPERVISION.

4-28-15  
DATE

N IS TO INSPECT THE INSTALLATION OF  
ER CONTROL BMP'S WITHIN 7 DAYS AFTER

PLAN ON THE DATE OF INSPECTION.

CERTIFICATION # \_\_\_\_\_  
 \_\_\_\_\_  
 THE ES&LC PLAN:  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

ID A RE-INSPECTION SCHEDULED. WORK  
 NAL CERTIFICATION IS OBTAINED.

(32)

State of Georgia  
Department of Natural Resources  
Environmental Protection Division

Page 36 of 36  
Permit No. GAR100003

APPENDIX B  
Nephelometric Turbidity Unit (NTU) TABLES

Cold Water (Trout Stream)  
Surface Water Drainage Area, square miles

	0-4.99	5-9.99	10-24.99	25-49.99	50-99.99	100-249.99	250-499.99	500+
1:20:10	25	50	75	150	300	500	500	500
Site Size, acres	10:01:25	25	25	50	75	150	300	500
25:01:50	25	25	25	50	75	100	300	500
50:01:100	20	25	25	36	59	75	100	300
100:0+	20	20	25	25	25	50	60	100

Warm Water (Supporting Warm Water Fisheries)  
Surface Water Drainage Area, square miles

	0-4.99	5-9.99	10-24.99	25-49.99	50-99.99	100-249.99	250-499.99	500+
1:00:10	50	100	200	400	750	750	750	750
Site Size, acres	10:01:25	50	100	100	200	300	500	750
25:01:50	50	50	100	100	200	300	750	750
50:01:100	50	50	50	100	100	150	300	600
100:0+	50	50	50	50	100	100	200	100

To use these tables, select the site (acre) of the facility or proposed development. Then, select the surface water drainage area (square miles). The NTU value shown arrived at from the above tables is the one to use in Part II C.4.

Example 1: For a site size of 12.5 acres and a cold water drainage area of 37.5 square miles, the NTU value to use in Part II C.4 is 150 NTU.

Example 2: For a site size of 51.7 acres and a warm water drainage area of 77 square miles, the NTU value to use in Part II C.4 is 100 NTU.

(6) (45)  
TOTAL SITE AREA = 3.51 ACRES  
INITIAL DISTURBED AREA= 1.89 ACRES  
TOTAL DISTURBED AREA = 4.70 ACRES  
(SEE SHEET C501-C503 FOR EACH PHASE OF THE LIMITS OF DISTURBANCE)


PRIMARY PERMITTEE (5)  
BARTOW COUNTY GOV.  
135 WEST CHEROKEE AVE.  
CARTERSVILLE, GA 30120  
TELEPHONE: 770-386-5151

24 HOUR CONTACT  
CRAIG MILSAP  
770-387-5151

CC LEVEL II CERTIFICATION NUMBER  
GIA REGISTRATION NO. GA #3422 (2)

PROJECT NO.:		1 4 1 3 7	
DATE:		04/28/15	
REV:	DATE	DESCRIPTION	CITY SUB
1	3/25/15	CITY SUB	CITY SUB
2	4/30/15	OUTLET REV	OUTLET REV
3	4/27/15	2ND SUB CITY	2ND SUB CITY
4			
5			
6			

**BARTOW COUNTY**  
**FIRE STATION #9**  
 LOCATED IN LAND LOTS 856 & 857  
 4TH DISTRICT, 3RD SECTION  
 CARTERSVILLE, GEORGIA

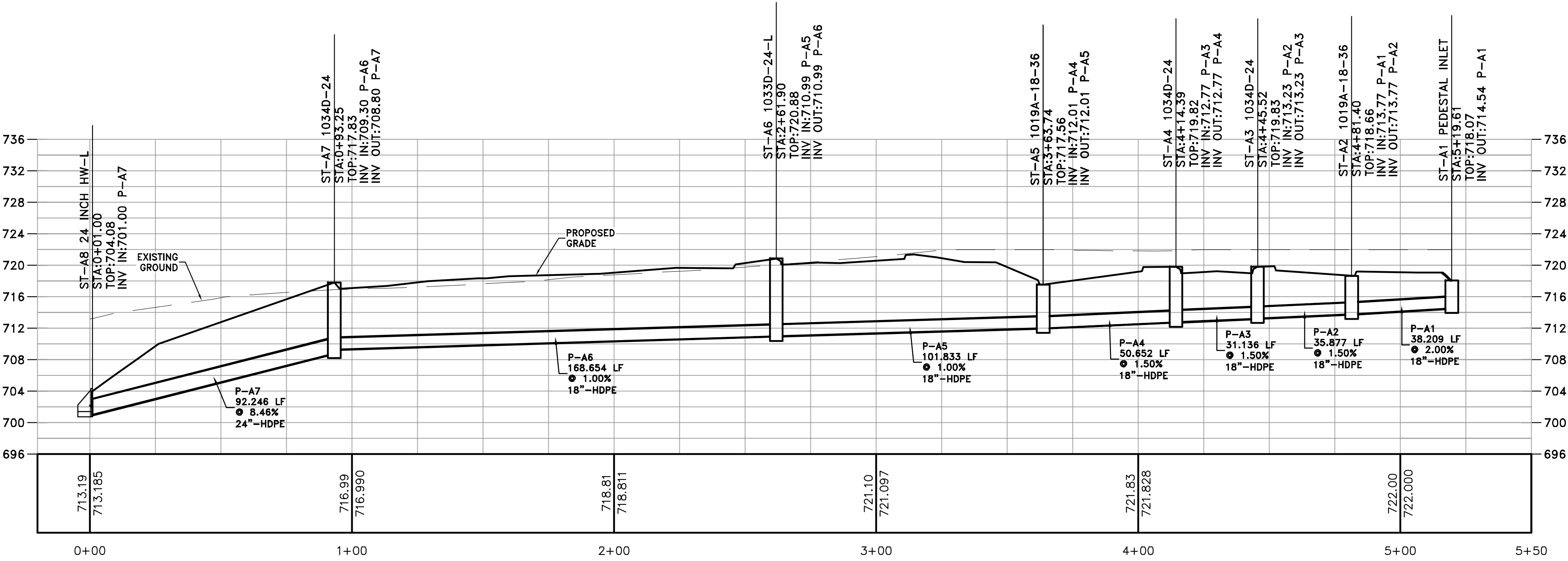


**SOUTHLAND**  
**ENGINEERING**  
 CIVIL ENGINEERS - LAND SURVEYORS - LAND PLANNERS  
 114 OLD MILL ROAD, CARTERSVILLE, GA 30120  
 PH: 770.387.0440 FAX: 770.607.5151

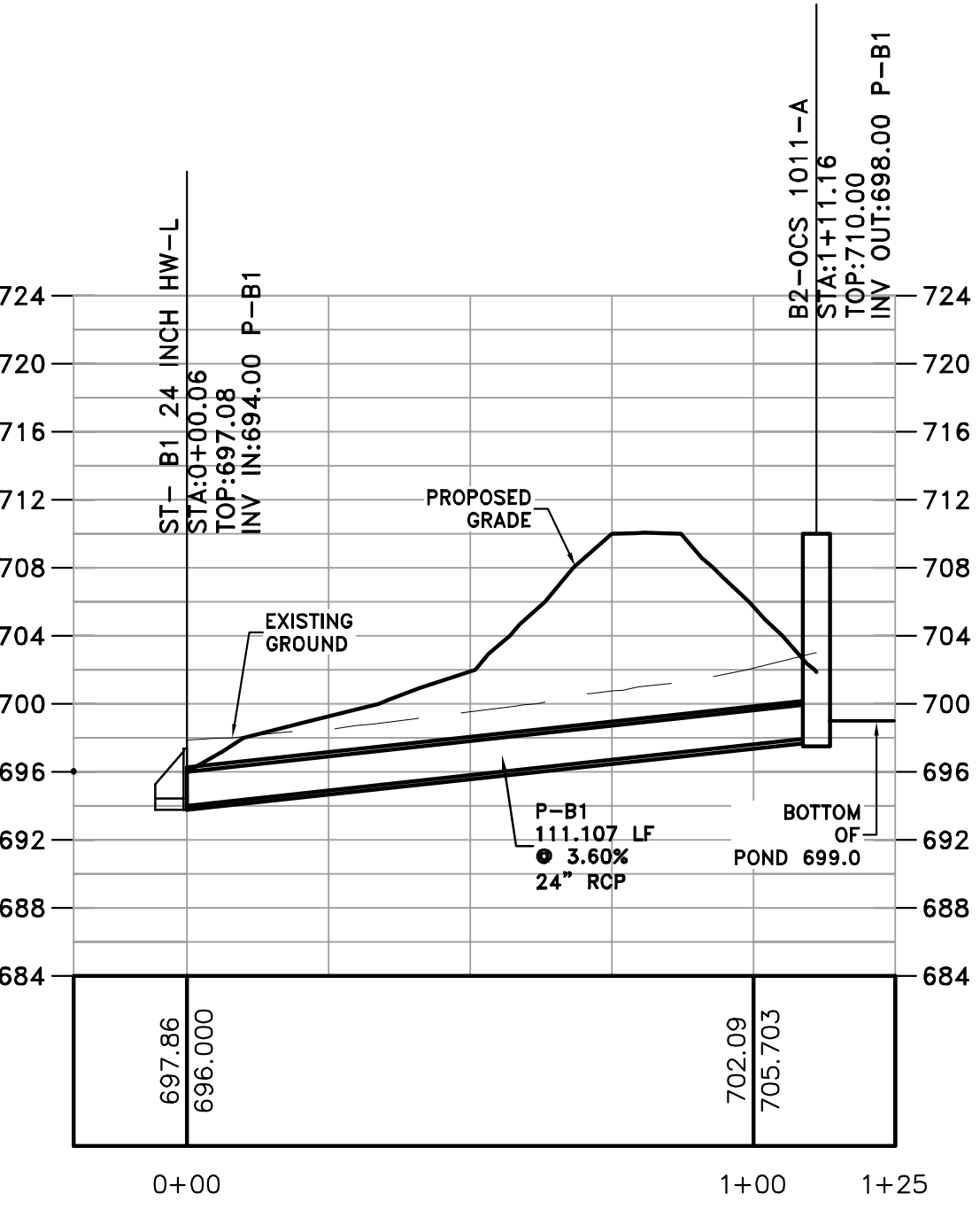
<b>SHEET TITLE:</b> STORM WATER POLLUTION PREVENTION PLAN	<b>SHEET NO.:</b> C508
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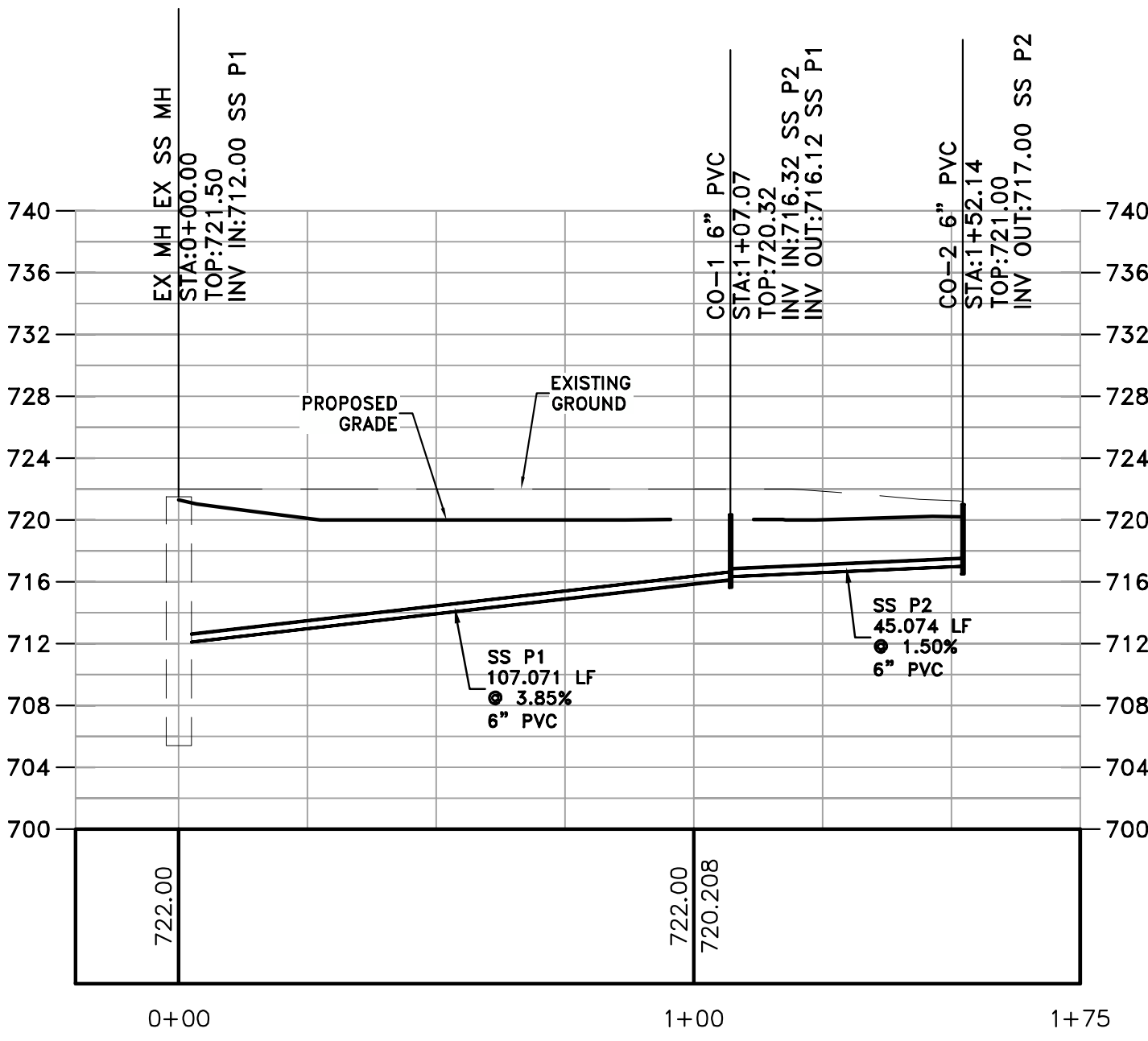
24 HOUR CONTACT  
CRAIG MILSAP  
770-387-5151



STORM A  
VERTICAL SCALE: 10.00  
HORIZONTAL SCALE: 30.00



STORM B  
VERTICAL SCALE: 10.00  
HORIZONTAL SCALE: 30.00



SANITARY SEWER SERVICE  
VERTICAL SCALE: 10.00  
HORIZONTAL SCALE: 30.00

25-YEAR STORM																			
Line	ToLine	Line Length(ft)	Incr.Area (ac)	TotalArea (ac)	RunoffCoeff. (C)	IncrC x A	TotalC x A	InletTime (min)	TimeConc (min)	RnfallInt (in/hr)	TotalRunoff (cfs)	AdnlFlow (cfs)	TotalFlow (cfs)	CapacFull (cfs)	2 yr Veloc (ft/s)	25 yr Veloc (ft/s)	PipeSize (in)	PipeSlope (%)	Inv ElevDn (ft)
1	Outfall	92.24	0.66	1.75	0.95	0.63	1.53	5	7.1	7.8	11.9	0	11.9	71.25	3.69	4.81	24	8.46	701
2	1	168.654	0.14	1.09	0.95	0.13	0.91	5	6.4	7.9	7.2	0	7.2	11.39	5.4	6.17	18	1	709.3
3	2	101.833	0.3	0.95	0.95	0.29	0.77	5	6	8.1	6.25	0	6.25	11.39	4.28	4.99	18	1	710.99
4	3	50.652	0.06	0.65	0.95	0.06	0.49	5	5.6	8.2	4	0	4	13.94	3.39	3.87	18	1.5	712.01
5	4	31.136	0.06	0.59	0.95	0.06	0.43	5	5.3	8.3	3.56	0	3.56	13.83	3.62	4.09	18	1.48	712.77
6	5	35.877	0.1	0.53	0.95	0.1	0.37	5	5	8.4	3.13	0	3.13	13.96	3.48	3.91	18	1.51	713.23
7	6	38.209	0.43	0.43	0.65	0.28	0.28	3	3	8.4	2.34	0	2.34	20.98	3.02	3.38	18	3.4	713.77
8	Outfall	111	0.1	0.1	0.35	0.04	0.04	0	0	0	0	4.69	4.69	21.6	1.94	3.66	18	3.6	694
																			698
																			696.62
																			698.83
																			702
																			697.08
																			P-B1

PROJECT NO.:  
14137

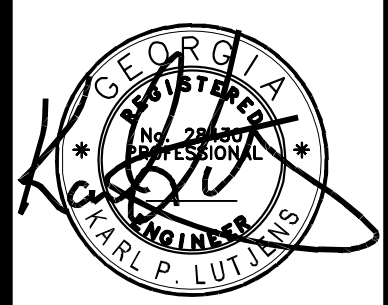
DATE:  
04/28/15

REVISIONS:

DATE	DESCRIPTION
3/25/15	CITY SUB
4/01/15	OUTLET REV
4/27/15	2ND SUB CITY
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

BARTOW COUNTY  
FIRE STATION #9  
LOCATED IN LAND LOTS 856 & 857  
4TH DISTRICT, 3RD SECTION  
CARTERSVILLE, GEORGIA

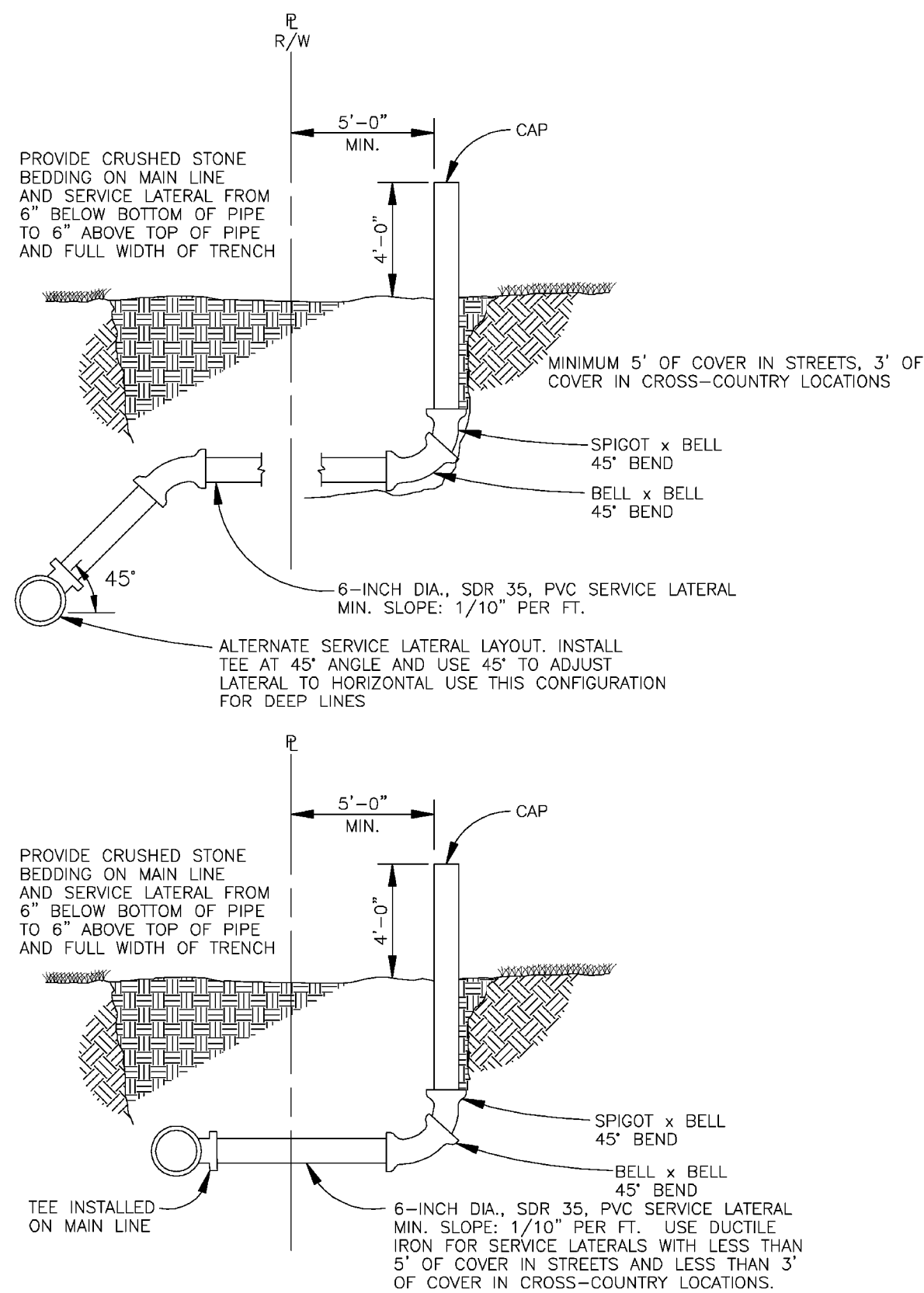


SHEET TITLE:  
STORM  
AND  
SANITARY  
SEWER  
PROFILES  
SHEET NO.:  
C601





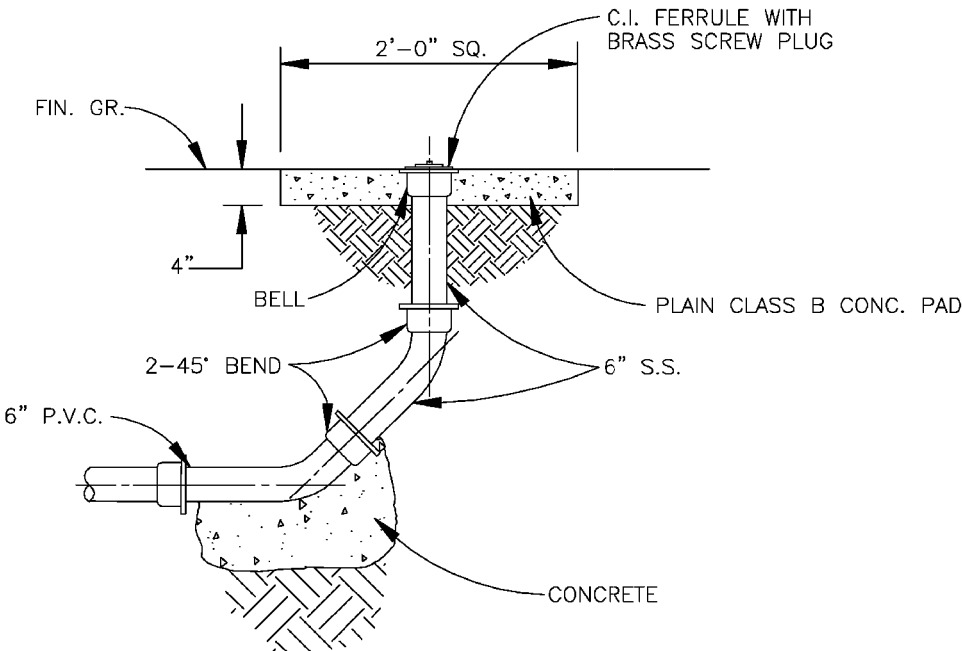




CITY OF  
CARTERSVILLE

SEWER SERVICE  
LATERAL

DATE:	MAR. '96	STANDARD NO.
APPROVED:		4.6.06

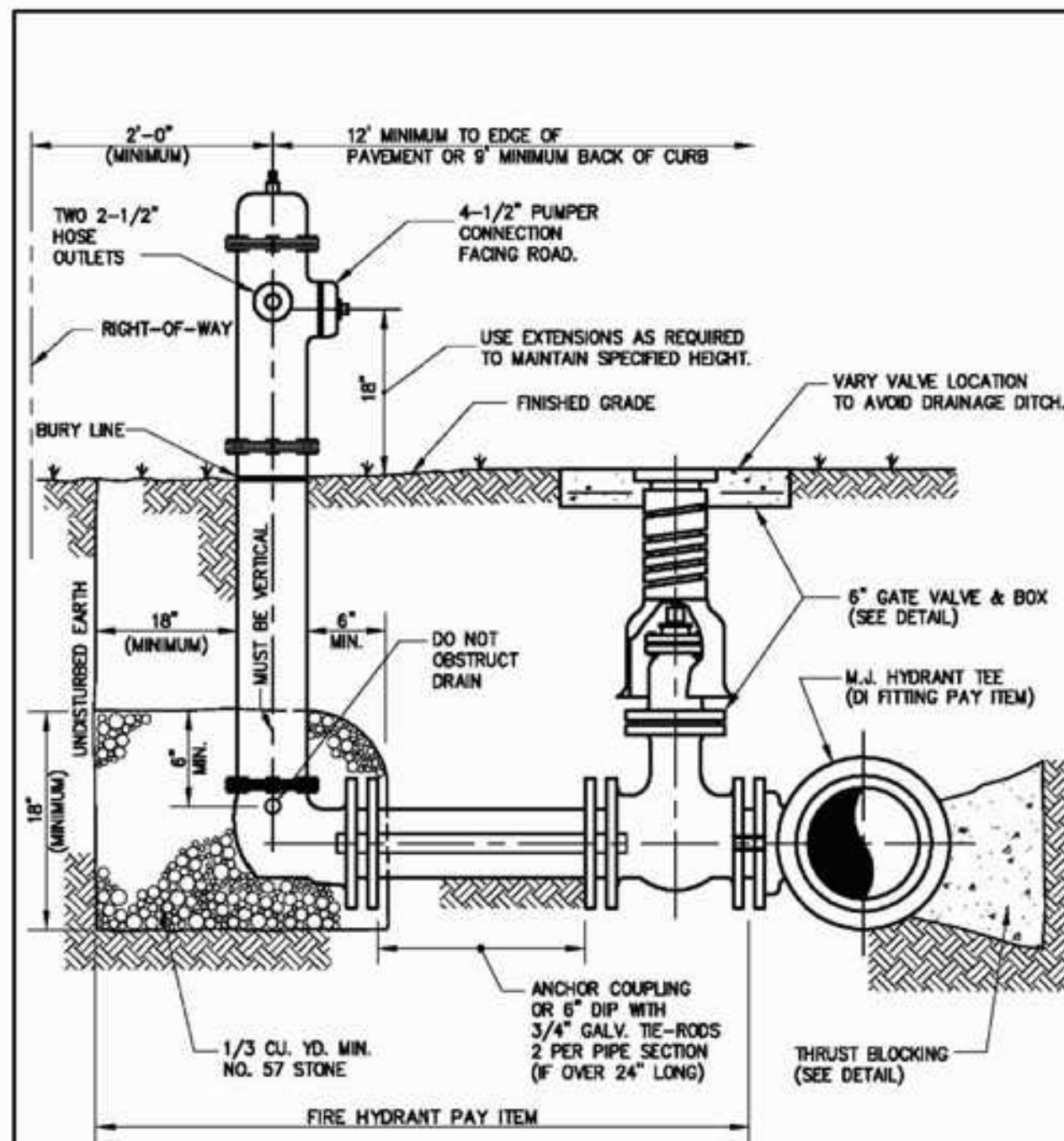


CLEANOUT DETAIL

CITY OF  
CARTERSVILLE

CLEANOUT  
DETAIL

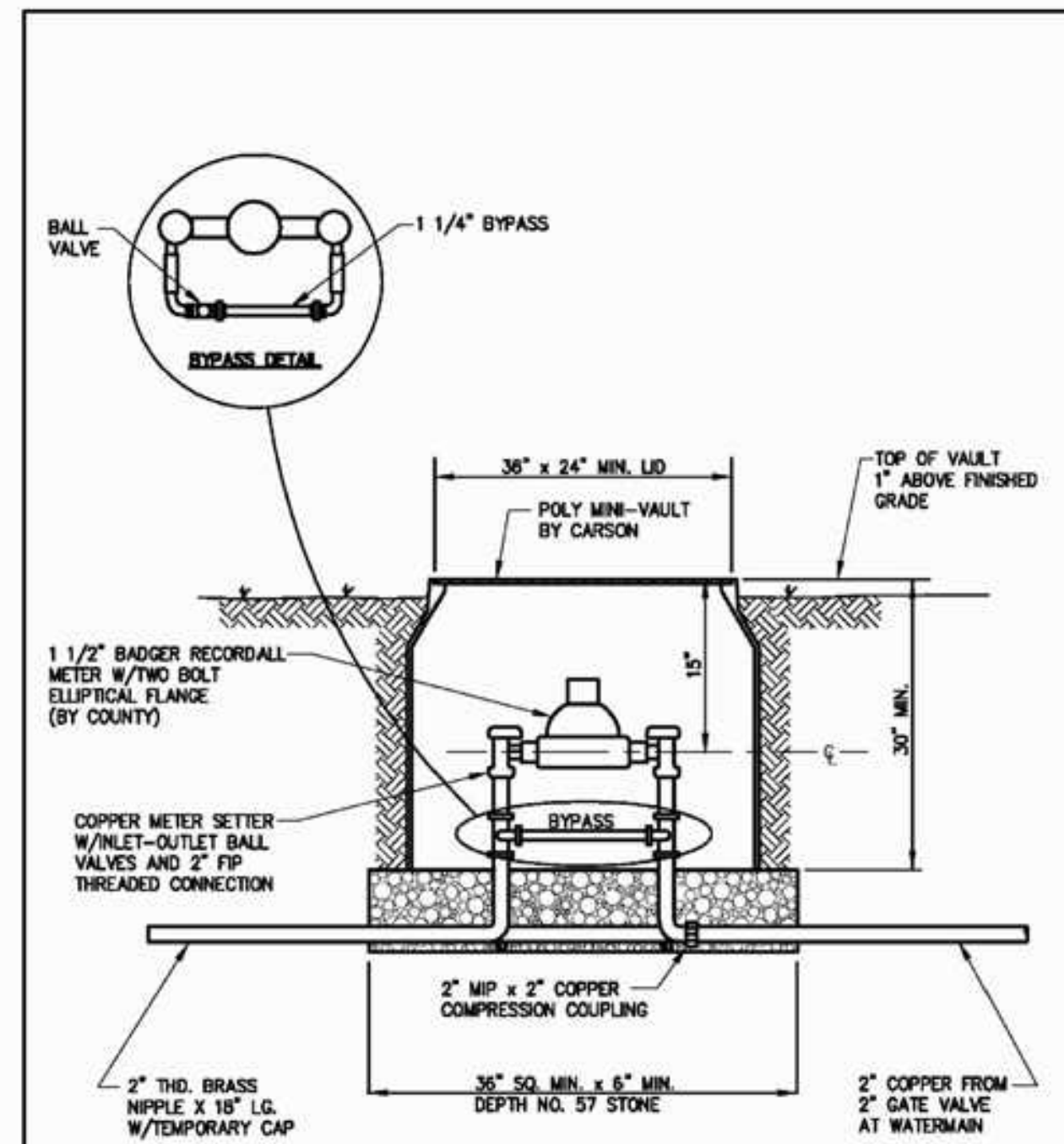
DATE:	MAR. '96	STANDARD NO.
APPROVED:		4.6.05



BARTOW COUNTY, GEORGIA  
BARTOW COUNTY WATER SYSTEM  
TELEPHONE (770) 387-5170

WATER DETAILS  
FIRE HYDRANT

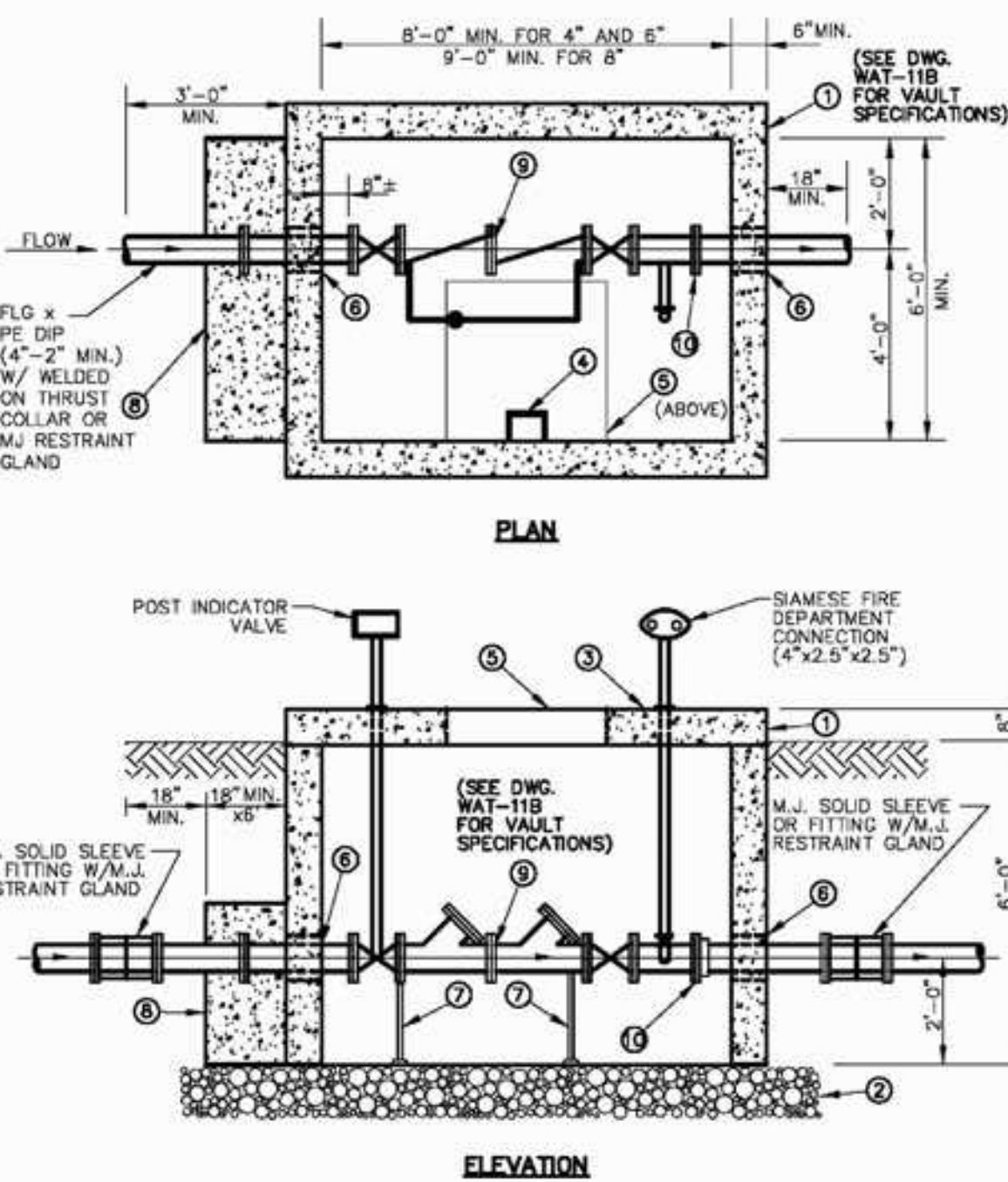
DRAWN BY:	DJH	SCALE:	NTS	DATE:	NOVEMBER 15, 1996	DWG. NO.:	WAT-4
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BARTOW COUNTY, GEORGIA  
BARTOW COUNTY WATER SYSTEM  
TELEPHONE (770) 387-5170

WATER DETAILS  
1-1/2" & 2" METER AND VAULT

DRAWN BY:	DL	SCALE:	NTS	DATE:	DEC. 6, 2001	DWG. NO.:	WAT-5A
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BARTOW COUNTY, GEORGIA  
BARTOW COUNTY WATER SYSTEM  
TELEPHONE (770) 387-5170

WATER DETAILS  
4"-8" DOUBLE CHECK DETECTOR  
ASSEMBLY & FIRE CONNECTION

DRAWN BY:	DVK	SCALE:	NTS	DATE:	DEC. 20, 2003	DWG. NO.:	WAT-11A
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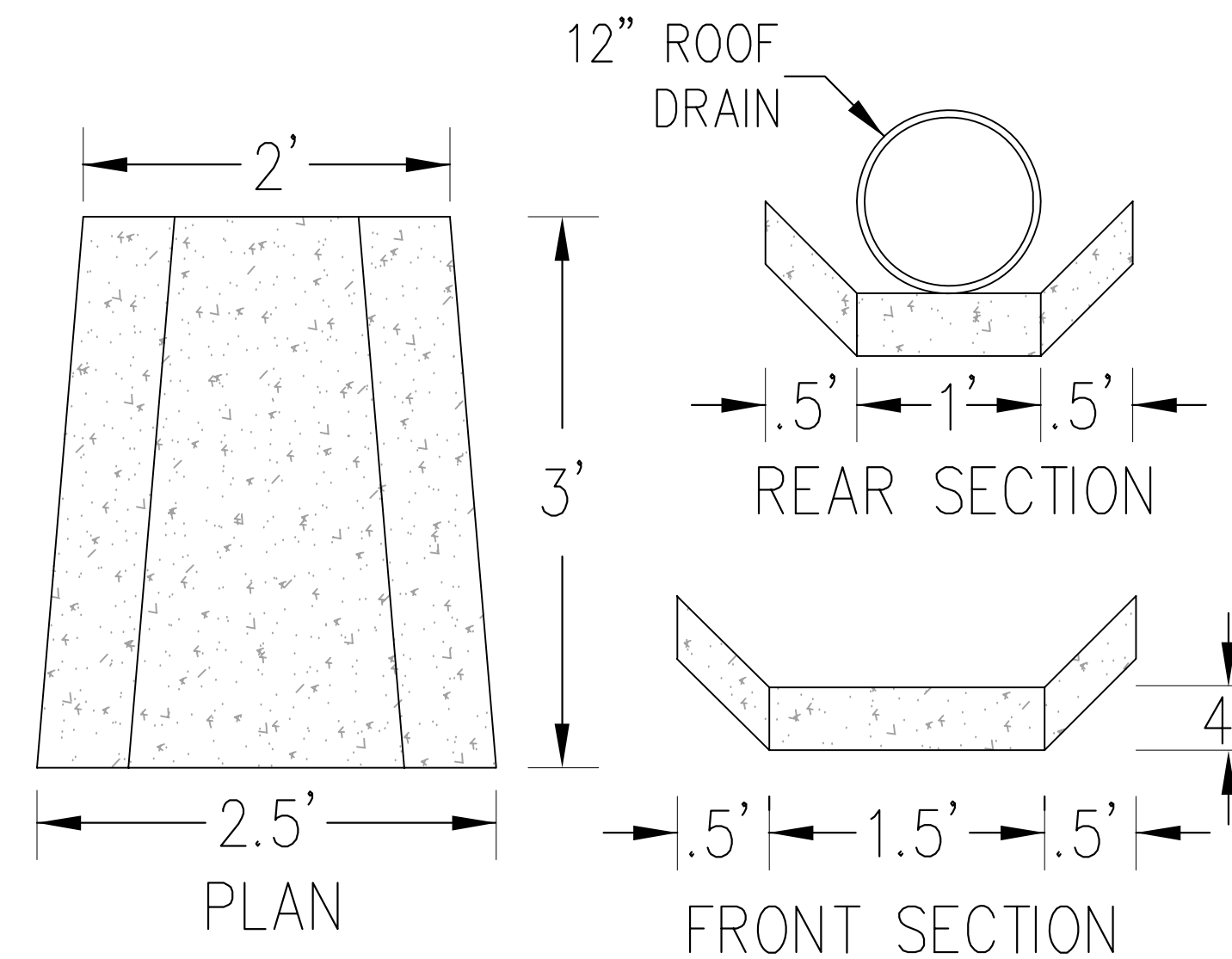
#### VAULT SPECIFICATIONS

1. VAULT SHALL BE PRECAST REINFORCED CONCRETE WITH A MINIMUM WALL THICKNESS OF 6".
2. 12" OF NO. 57 COMPACTED STONE.
3. VAULT TOP SHALL BE 8" MINIMUM REINFORCED CONCRETE WITH 36"x36" ACCESS OPENING OFFSET TO ONE SIDE.
4. ALUMINUM ACCESS LADDER DOWNED TO WALL OR MANHOLE STEPS CENTERED AT ACCESS OPENING.
5. HATCH COVER 36"x36" BILCO-ALUMINUM SINGLE MODEL J-4AL OR EQUIVALENT.
6. VAULT INLET/OUTLET PIPE OPENINGS TO BE SEALED WITH GROUT OR MORTAR, PIPE MUST NOT SUPPORT VAULT.
7. BFP DEVICES TO BE SUPPORTED AT TWO POINTS WITH PIPE STAND OR SOLID MASONARY SUPPORT.
8. THRUST BLOCKING.
9. 4" TO 8" DOUBLE CHECK DETECTOR ASSEMBLY (WATTS REGULATOR SERIES 709DCA-OSY-GPM BADGER METER).
10. RESTRAINED FLANGE ADAPTER, SERIES 2100 MEGAFLANGE BY EBAA IRON, INC. OR APPROVED EQUAL.
11. DEVICE TESTING: ALL DCD ASSEMBLIES SHALL BE TESTED AT TIME OF INSTALLATION AND AT LEAST ANNUALLY THERE AFTER BY AN APPROVED AND CERTIFIED TESTING SERVICE AND COPY OF TEST SUBMITTED TO BARTOW COUNTY WATER DEPARTMENT.
12. THRUST TIE RODS IF USED SHALL BE GALVANIZED AND ALL PIPE AND FITTING OF DUCTILE IRON.
13. VAULT TO BE INSTALLED ON OWNER'S PRIVATE PROPERTY, PROVIDE FOR A 15'x30' EASEMENT AND/OR RIGHT OF ENTRY CLAUSE.
14. ALL MATERIALS TO BE FURNISHED AND INSTALLED BY THE CUSTOMER/OWNER.

BARTOW COUNTY, GEORGIA  
BARTOW COUNTY WATER SYSTEM  
TELEPHONE (770) 387-5170

WATER DETAILS  
4"-8" DOUBLE CHECK DETECTOR  
ASSEMBLY & FIRE CONNECTION NOTES

DRAWN BY:	DVK	SCALE:	NTS	DATE:	DEC. 20, 2003	DWG. NO.:	WAT-11B
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CONCRETE SPLASH PAD  
NTS

PROJECT NO.:  
14137

DATE:  
04/28/15

REVISIONS:	DATE	DESCRIPTION
1	3/25/13	CITY SUB
2	4/01/13	OUTLET REV
3	4/22/13	END SUB CITY
4		
5		
6		

**SOUTHLAND**  
ENGINEERING  
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114 OLD MILL ROAD., CARTERSVILLE, GA 30120  
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BARTOW COUNTY  
FIRE STATION #9  
LOCATED IN LAND LOTS 856 & 857  
4TH DISTRICT, 3RD SECTION  
CARTERSVILLE, GEORGIA



SHEET TITLE:  
CONSTRUCTION  
DETAILS

SHEET NO.:  
C702