

Security gates shall have an approved means of



National Flood Hazard Laver FIRMette

CUMMING DISTRIBUTION STORAGE YARD

MOUNTAIN ROAD CITY OF CUMMING FORSYTH COUNTY, GEORGIA Tax Map PARCEL 171-008 Zoned: A1

Owner, Developer, 24-Hour Contact:
CITY OF CUMMING
JON HEARD
100 MAIN STREET
CUMMING, GEORGIA 30041
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770-781-2020
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REVISION 8/17/2023

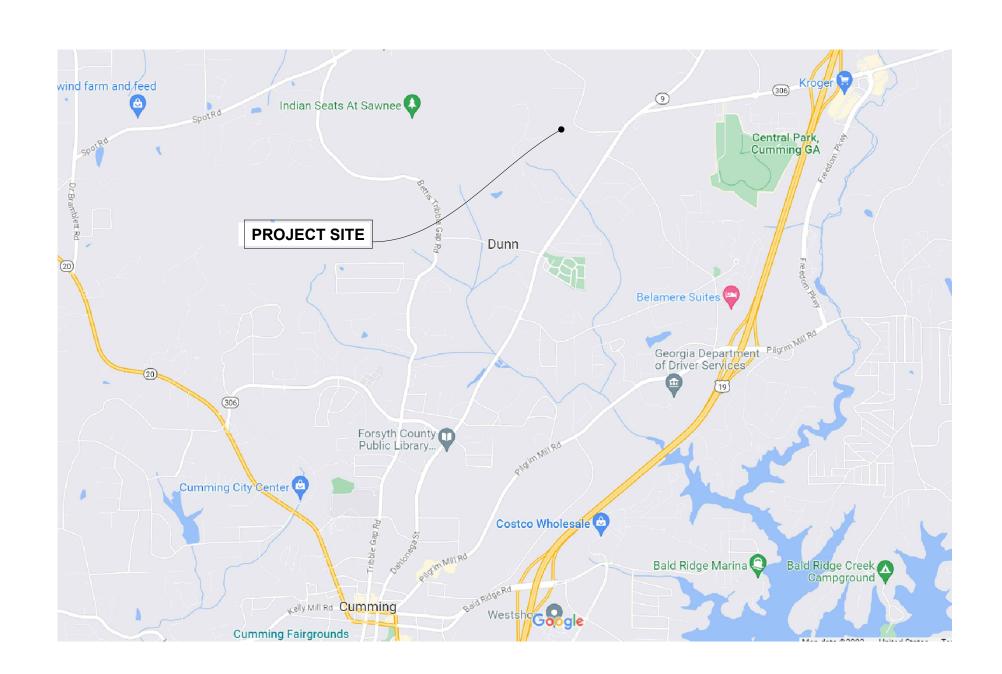
PER NRCS COMMENTS

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				20)23						2024											
CONSTRUCTION ACTIVITY	0	СТ	NOV			DEC				JΑ	N			F	ЕВ		MAR					
INSTALLATION OF EROSION																						
AND SEDIMENT CONTROL																						
MEASURES																						
INSTALLATION OF SITE																						
IMPROVEMENTS																						
MAINTAIN EROSION AND																						
SEDIMENT CONTROL																						
MEASURES FOR ENTIRE																						
PROJECT																						
FINAL GRASSING																						

alional i lood i lazard	Layer i ii iivioile	FEMA	Legend	
27"W 34°15'8"N			SEE FIS REPORT FOR DETAILED	LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT
				Without Base Flood Elevation (BFE) Zone A, V, A99 With BFE or Depth Zone AE, AO, AH, VE, AR
* **			SPECIAL FLOOD HAZARD AREAS	Regulatory Floodway
				0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
The state of the s	考试。随 《有法》。	(1) (1) (1)		Future Conditions 1% Annual Chance Flood Hazard Zone X
はない問題は、	13117C0065G eff. 6/7/2019		OTHER AREAS OF	Area with Reduced Flood Risk due to Levee. See Notes. Zone X
	是四个人的 然后 依天顺		FLOOD HAZARD	Area with Flood Risk due to Levee Zone D
	a land and a		NO SCR	REEN Area of Minimal Flood Hazard Zone X Effective LOMRs
A Service Transport	国情况 经产品的		OTHER AREAS	Area of Undetermined Flood Hazard Zone
A			GENERAL · STRUCTURES	Channel, Culvert, or Storm Sewer II Levee, Dike, or Floodwall
(1) 10 10 10 10 10 10 10 10 10 10 10 10 10	En MILLIAND			20.2 Cross Sections with 1% Annual Chance 7.5 Water Surface Elevation
	Forsyth County	/ 经经验证券	8 — —	
	130312			Limit of Study Jurisdiction Boundary
	THE RESERVE OF THE PARTY OF THE	Town To	OTHER	Coastal Transect Baseline Profile Baseline
THE RESERVE OF THE PARTY OF THE	eomorron et essonvenso		FEATURES	Hydrographic Feature
AREAOI	MINIMAL FLOOD HAZARD			Digital Data Available N
	Mark Indiana		::	No Digital Data Available
	A CONTRACTOR OF THE PARTY OF TH	了。这一位 经 国际	MAP PANELS	■ Unmapped
M. Maria	13117C0151F eff. 3/4/2013		ро	e pin displayed on the map is an approximate int selected by the user and does not represer authoritative property location.
S'ONNE S			digital flood maps if i	rith FEMA's standards for the use of it is not void as described below. complies with FEMA's basemap
			authoritative NFHL w was exported on 6/2: reflect changes or an time. The NFHL and e	ormation is derived directly from the leb services provided by FEMA. This map 8/2023 at 8:01 AM and does not mendments subsequent to this date and effective information may change or by new data over time.
ZoneA		84°6'50"W 34°14'38"I	This map image is vo elements do not app legend, scale bar, ma FIRM nanel number	oid if the one or more of the following map ear: basemap imagery, flood zone labels, ap creation date, community identifiers, and FIRM effective date. Map images for

Basemap Imagery Source: USGS National Map 2023

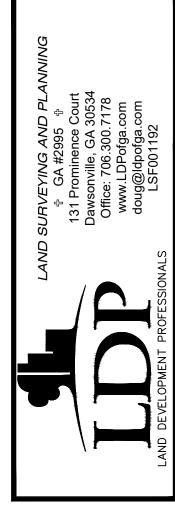
unmapped and unmodernized areas cannot be used for



	Sheet List Table
Sheet Number	
1-C-1	COVER SHEET
1-C-2	SITE AND GRADING PLAN
1-C-3	DETENTION POND DETAILS
1-C-4	EROSION CONTROL PLAN PHASE 1
1-C-5	EROSION CONTROL PLAN PHASE 2
1-C-6	EROSION CONTROL PLAN PHASE 3
1-C-7	EROSION CONTROL CHECKLIST AND NOTES
1-C-8	EROSION CONTROL NOTES
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1-C-10	VEGETATIVE MEASURES 1 VEGETATIVE MEASURES (2)
1-C-11	VEGETATIVE MEASURES (2)
1-C-12	MISC DETAILS 1

- 1. ALL IMPROVEMENTS TO CONFORM WITH FORSYTH COUNTY CONSTRUCTION STANDARDS AND SPECIFICATIONS, LATEST EDITION.
- 2. NO STRUCTURES, FENCES OR OTHER OBSTRUCTIONS MAY BE LOCATED WITHIN A DRAINAGE OR ACCESS EASEMENT WITHOUT PRIOR APPROVAL BY THE FORSYTH COUNTY DEPARTMENT OF ENGINEERING.
- 3. APPROVAL OF THESE PLANS DOES NOT CONSTITUTE APPROVAL BY FORSYTH COUNTY OF ANY LAND DISTRUBING ACTIVITIES WITHIN WETLAND AREAS. IT IS THE RESPONSIBILITY OF THE PROPERTY OWNER TO CONTACT THE APPROPRIATE REGULATORY AGENCY FOR THE APPROVAL OF ANY WETLAND AREA DISTURBANCE.
- 4. THIS PROPERTY IS NOT WITHIN A FLOOD ZONE. SEE ATTACHED FIRM PANEL.
- 5. NOTIFY FORSYTH COUNTY INSPECTOR 24 HOURS BEFORE THE BEGINNING PHASE OF CONSTRUCTION (770)781-2165.
- 6. APPROVAL OF THESE PLANS BY FORSYTH COUNTY IS SUBJECT TO, AND CONTINGENT UPON THE APPLICANT OBTAINING ANY AND ALL NECESSARY APPROVALS FROM ANY AND ALL APPLICABLE AGENCIES INCLUDING, BUT NOT LIMITED TO THE UNITED STATES ARMY CORPS OF ENGINEERS, THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, THE USDA-NRCS, GEORGIA DEPARTMENT OF NATURAL RESOURCES, GEORGIA ENVIRONMENTAL PROTECTION DIVISION, AND THE GEORGIA SOIL AND WATER CONSERVATION COMMISSION
- 7. MAXIMUM CUT SLOPES SHALL BE 2 HORIZONTAL TO 1 VERTICAL. CONTINUOUS FILL SLOPES TEN (10) FEET IN HEIGHT OR LESS MAY BE 2 HORIZONTAL TO 1 VERTICAL. ALL CONTINUOUS FILL SLOPES THAT EXCEED TEN (10) FEET IN HEIGHT MUST BE 3 HORIZONTAL TO 1 VERTICAL UNLESS: (A) A MECHANICALLY ENGINEERED STABILIZED SLOPE IS APPROVED BY THE FORSYTH COUNTY DIRECTOR OF ENGINEERING; OR (B) THE DESIGNED AND CONSTRUCTED SLOPES ARE CERTIFIED BY A REGISTERED ENGINEER EXPERIENCED IN GEOTECHNICAL ENGINEERING AND LICENSED IN THE STATE OF GEORGIA
- 8. ALL UNDISTURBED BUFFERS SHALL BE IDENTIFIED WITH ORANGE, FOUR-FOOT TREE-SAVE FENCING PRIOR TO ANY LAND DISTURBANCE (UDC SEC. 18-10.0)
- 9. .

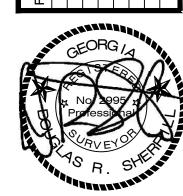






June 13, 2023
FIELD CREW: LDP
DRAWN BY: DRS
Job Number:
5151.001
DRWG FILE: 5151
FIELD DATE:
6/13/2023
Checked By: LDP





COVER SHEET

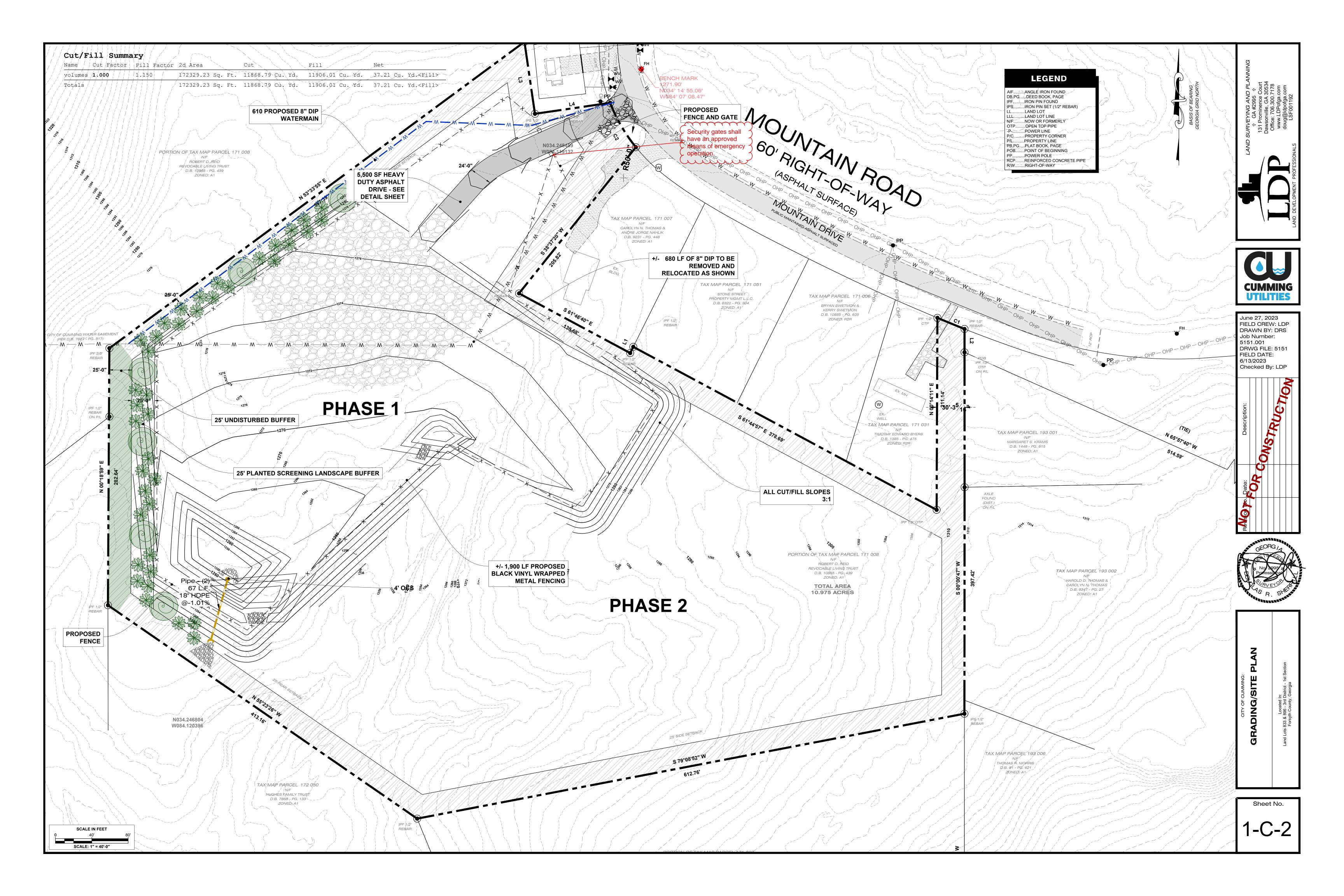
COVER SHEET

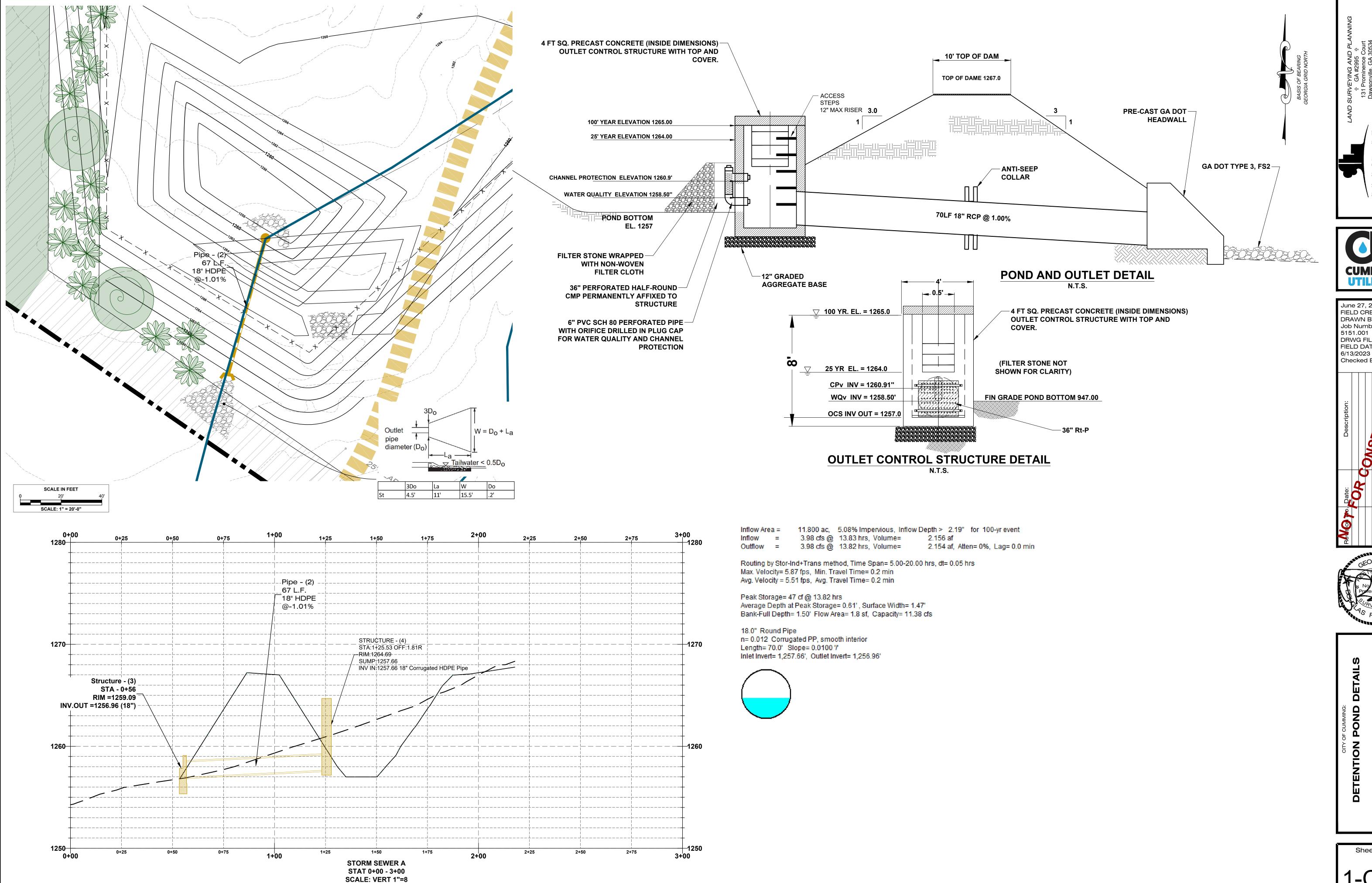
Located In:

Land Lots 833 & 896 - 3rd District - 1st Section
Forsyth County, Georgia

Sheet No.

1-C-1

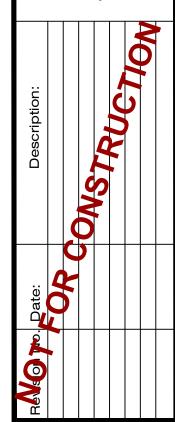


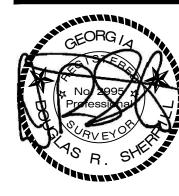


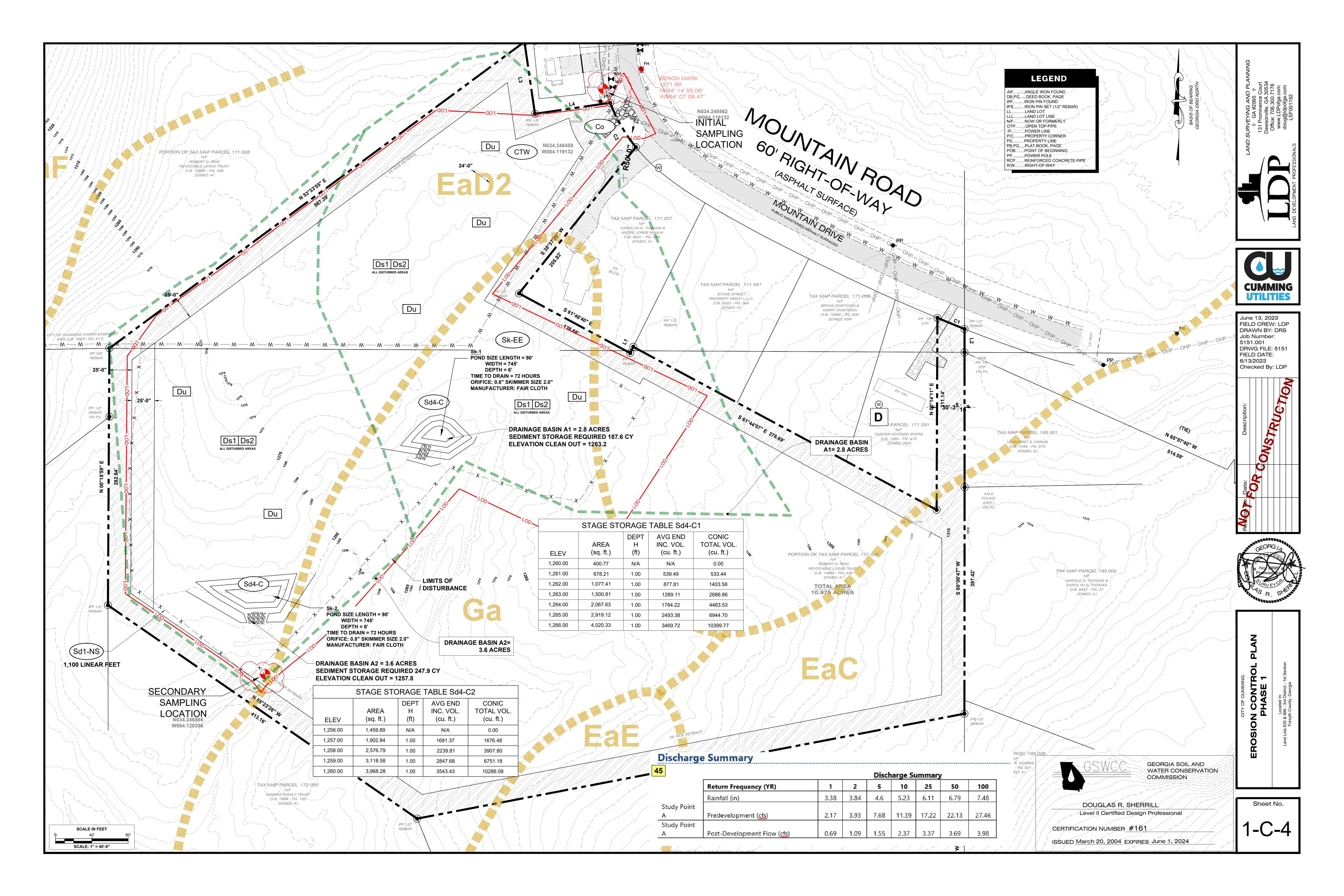
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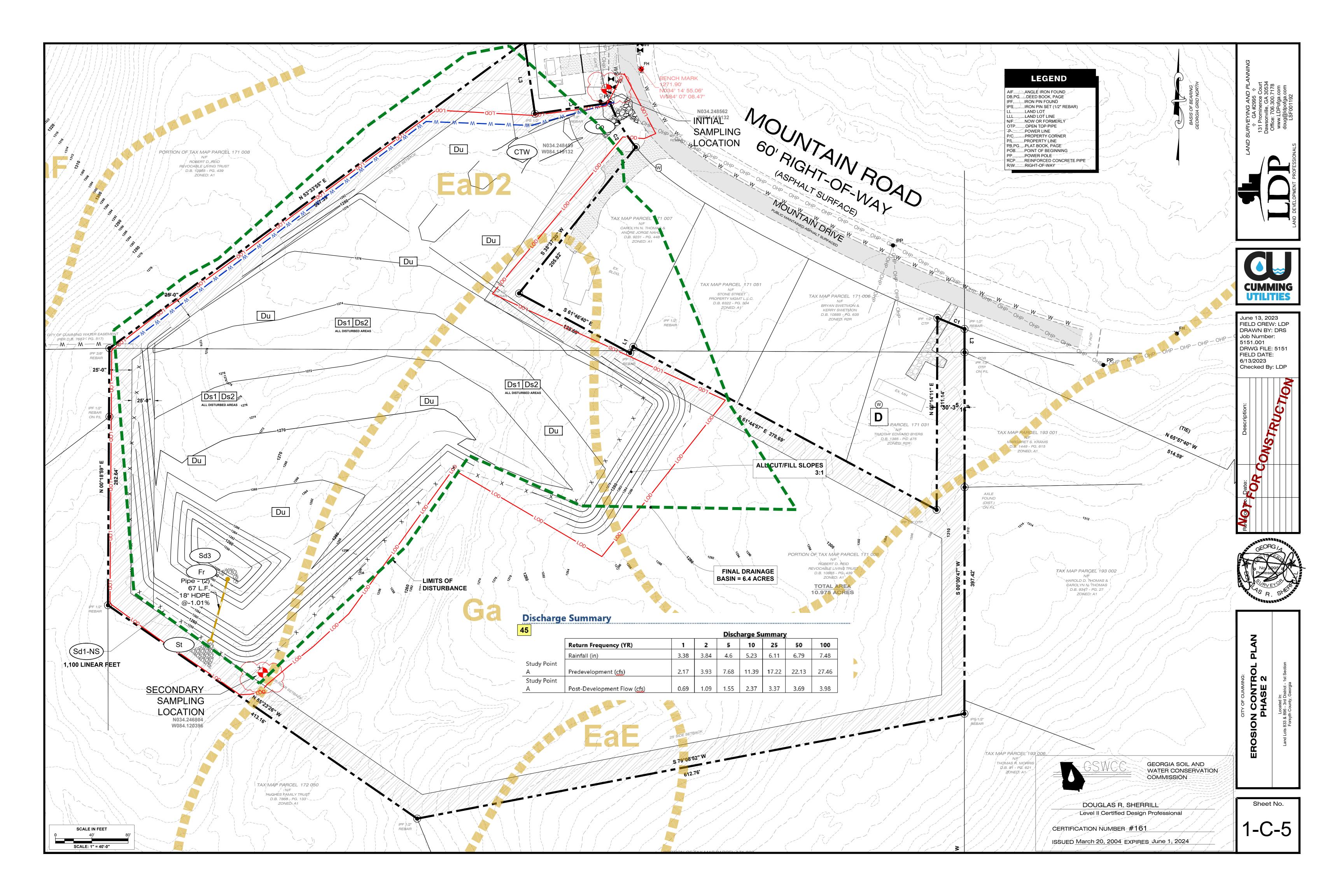


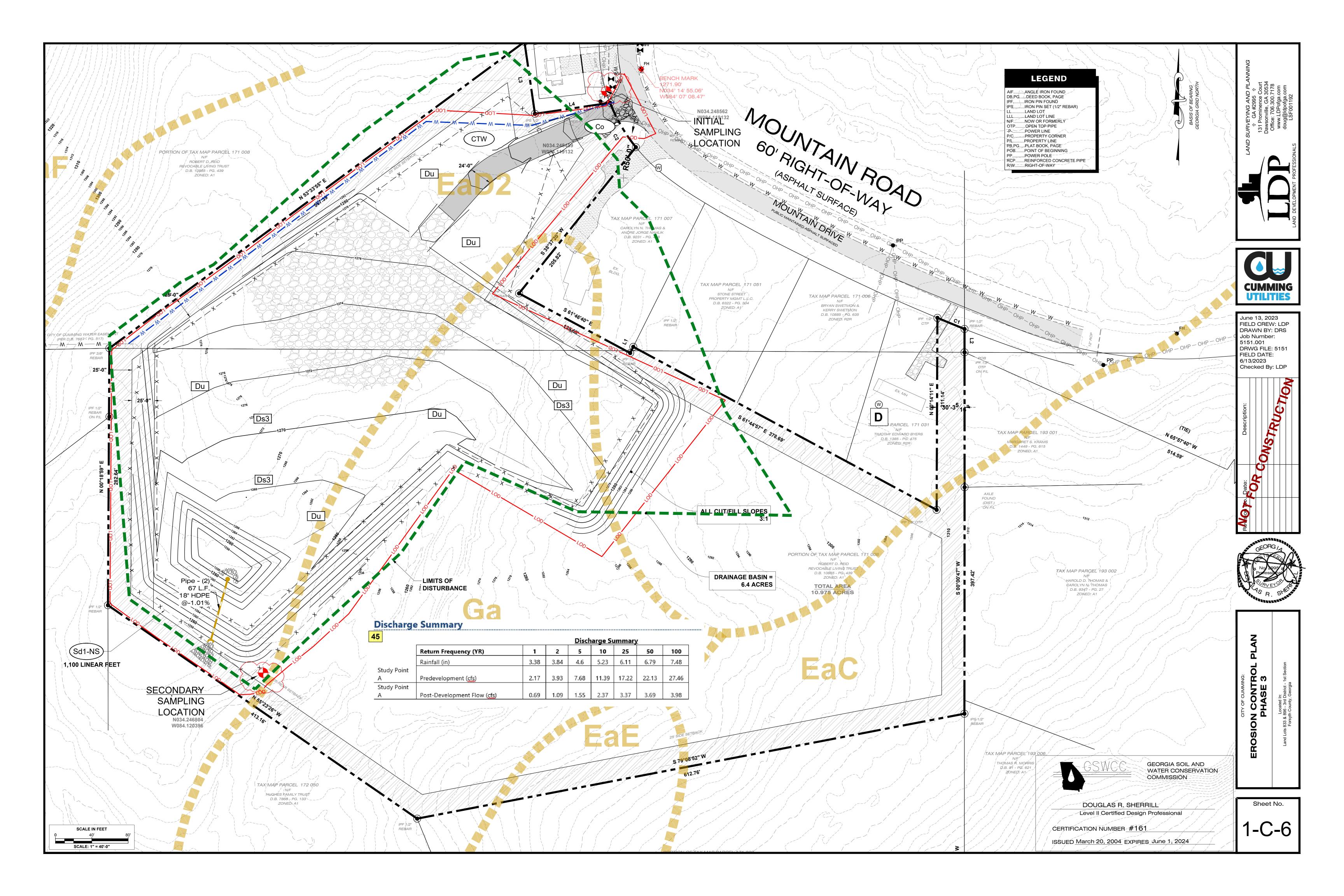
June 27, 2023 FIELD CREW: LDP DRAWN BY: DRS Job Number: 5151.001 DRWG FILE: 5151 FIELD DATE: 6/13/2023 Checked By: LDP











dates and seeding, fertilizer, lime and mulching rates. Vegetative plan shall be site specific for appropriate time

of the year that seeding will take place and for the appropriate geographic region of Georgia.

* If using this checklist for a project that is less than 1 acre and not part of a common development

but within 200 ft of a perennial stream, the * checklist items would be N/A.

RETENTION OF RECORDS.

THE PRIMARY PERMITTEE SHALL RETAIN THE FOLLOWING RECORDS AT THE CONSTRUCTION SITE OR THE RECORDS SHALL BE READILY AVAILABLE AT A DESIGNATED ALTERNATE LOCATION FROM COMMENCEMENT OF CONSTRUCTION UNTIL SUCH TIME AS A NOT IS SUBMITTED IN ACCORDANCE WITH PART VI:

- a. A COPY OF ALL NOTICES OF INTENT SUBMITTED TO EPD;
- A COPY OF THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN REQUIRED BY THIS PERMIT; THE DESIGN PROFESSIONAL'S REPORT OF THE RESULTS OF THE INSPECTION CONDUCTED IN ACCORDANCE WITH PART IV.A.5. OF THIS PERMIT;
- d. A COPY OF ALL SAMPLING INFORMATION, RESULTS, AND REPORTS REQUIRED BY THIS PERMIT;
- A COPY OF ALL INSPECTION REPORTS GENERATED IN ACCORDANCE WITH PART IV.D.4.A. OF THIS PERMIT;
- f. A COPY OF ALL VIOLATION SUMMARIES AND VIOLATION SUMMARY REPORTS GENERATED IN ACCORDANCE WITH PART III.D.2. OF THIS PERMIT; AND
- g. DAILY RAINFALL INFORMATION COLLECTED IN ACCORDANCE WITH PART IV.D.4.A.(2). OF THIS PERMIT. EACH SECONDARY PERMITTEE SHALL RETAIN THE FOLLOWING RECORDS AT THE CONSTRUCTION SITE OR THE RECORDS SHALL BE READILY AVAILABLE AT A DESIGNATED ALTERNATE LOCATION FROM COMMENCEMENT OF CONSTRUCTION UNTIL SUCH TIME AS A NOT IS SUBMITTED IN ACCORDANCE WITH PART VI:
- a. A COPY OF ALL NOTICES OF INTENT SUBMITTED TO EPD;
- b. A COPY OF THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN REQUIRED BY THIS PERMIT OR THE APPLICABLE PORTION OF THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN FOR THEIR
- ACTIVITIES AT THE CONSTRUCTION SITE REQUIRED BY THIS PERMIT; A COPY OF ALL INSPECTION REPORTS GENERATED IN ACCORDANCE WITH PART IV.D.4.B. OF THIS PERMIT;
- A COPY OF ALL VIOLATION SUMMARIES AND VIOLATION SUMMARY REPORTS GENERATED IN ACCORDANCE WITH PART III.D.2. OF THIS PERMIT.
- 3. EACH TERTIARY PERMITTEE SHALL RETAIN THE FOLLOWING RECORDS AT THE CONSTRUCTION SITE OR THE RECORDS SHALL BE READILY AVAILABLE AT A DESIGNATED ALTERNATE LOCATION FROM COMMENCEMENT OF CONSTRUCTION UNTIL SUCH TIME AS A NOT IS SUBMITTED IN ACCORDANCE WITH PART VI:
- a. A COPY OF ALL NOTICES OF INTENT SUBMITTED TO EPD;
- A COPY OF THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN REQUIRED BY THIS PERMIT; THE DESIGN PROFESSIONAL'S REPORT OF THE RESULTS OF THE INSPECTION CONDUCTED IN ACCORDANCE WITH PART IV.A.5. OF THIS PERMIT;
- d. A COPY OF ALL SAMPLING INFORMATION, RESULTS, AND REPORTS REQUIRED BY THIS PERMIT;
- e. A COPY OF ALL INSPECTION REPORTS GENERATED IN ACCORDANCE WITH PART IV.D.4.C. OF THIS PERMIT;
- A COPY OF ALL VIOLATION SUMMARIES AND VIOLATION SUMMARY REPORTS GENERATED IN ACCORDANCE WITH PART III.D.2. OF THIS PERMIT; AND.
- DAILY RAINFALL INFORMATION COLLECTED IN ACCORDANCE WITH PART IV.D.4.C.(2). OF THIS PERMIT.
- 4. COPIES OF ALL NOTICES OF INTENT, NOTICES OF TERMINATION, INSPECTION REPORTS, SAMPLING REPORTS (INCLUDING ALL CALIBRATION AND MAINTENANCE RECORDS AND ALL ORIGINAL STRIP CHART RECORDINGS FOR CONTINUOUS MONITORING INSTRUMENTATION) OR OTHER REPORTS REQUESTED BY THE EPD, EROSION, SEDIMENTATION AND POLLUTION CONTROL PLANS, RECORDS OF ALL DATA USED TO COMPLETE THE NOTICE OF INTENT TO BE COVERED BY THIS PERMIT AND ALL OTHER RECORDS REQUIRED BY THIS PERMIT SHALL BE RETAINED BY THE 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 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

36 EROSION CONTROL ALL PHASES

PHASE 1

DRAINAGE BASIN A CONSISTS OF 5.7 ACRES REQUIRING 381.9 CYRDS OF SEDIMENT STORAGE. ALL SEDIMENT STORAGE IS PROVIDED IN TWO SEDIMENT PONDS AS SHOWN ON PHASE 1 EROSION PLAN. PERIMETER SILT FENCE WILL ADD ADDITIONAL SEDIMENT STORAGE. AN APPROPRIATELY SIZED SKIMMER SHALL BE USED IN EACH SEDIMENT STORAGE PONDS.

PHASE 2

THE SEDIMENT STORAGE IS PROVIDED BY A SD3 AS SHOWN ON SHEET 1-C-7. CLEAN OUT ELEVATION SHALL BE CLEARLY MARKED ON A STAKE INSIDE THE SD3. AN APPROPRIATELY SIZED SKIMMER SHALL BE USED IN THE SEDIMENT STORAGE POND. THE OUTLET FROM THE SD3 SHALL HAVE ENERGY DISSIPATER IN THE FORM OF ST RIPRAP.

PHASE 3

THE SEDIMENT STORAGE IS PROVIDED BY SD3 AND PERMANENT STABILIZATION AS SHOWN ON PLANS.

Nephelometric Turbidity Unit (NTU) Tables **APPENDIX B**

Warm Water (Supporting Warm Water Fisheries) **Surface Water Drainage Area** (Square Miles)

(Acres)	0-4.99	5-9.99	10-24.99	25-49.99	50-99.99	100-249.99	250-499.99	
1.00-10	75	150	200	400	750	750	750	
10.01-25	50	100	100	200	300	500	750	
25.01-50	50	50	100	100	200	300	750	
50.01-100	50	50	50	100	100	150	300	
100.01+	50	50	50	50	50	100	200	

CLEAR AND GRUB TO LIMITS OF DISTURBANCE. ALL SEDIMENT STORAGE IS AS SHOWN ON PLANS.

STONE FILTER RING

PERSPECTIVE VIEW

50#\- 150#

750 NA URAL GROUND

T STRUCTURE

TONE FILTER RING

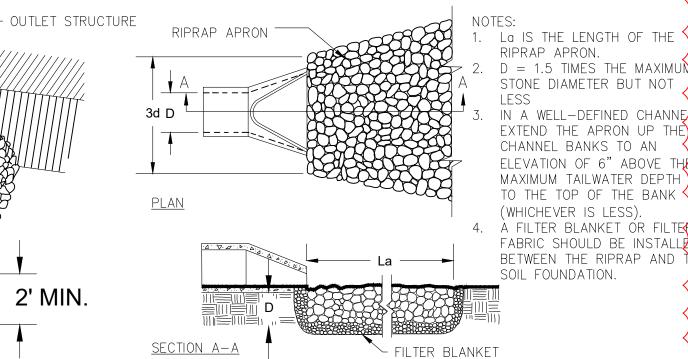
750

100

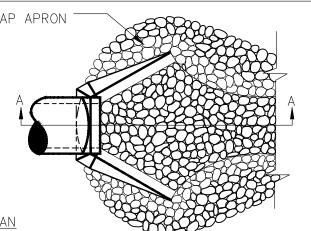
STONE RIP-RAP

RIPRAP OUTLET PROTECTION

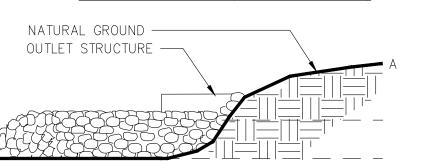
PIPE OUTLET TO FLAT AREA -- NO WELL DEFINED CHANNEL



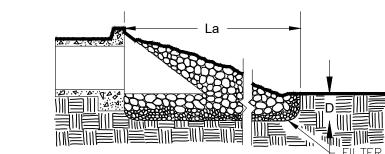
PIPE OUTLET TO WELL DEFINED CHANNEL

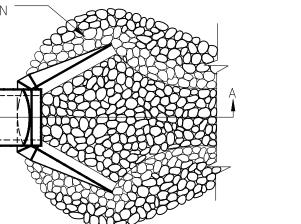


CROSS SECTION (NOT TO SCALE)



PLAN VIEW (NOT TO SCALE)



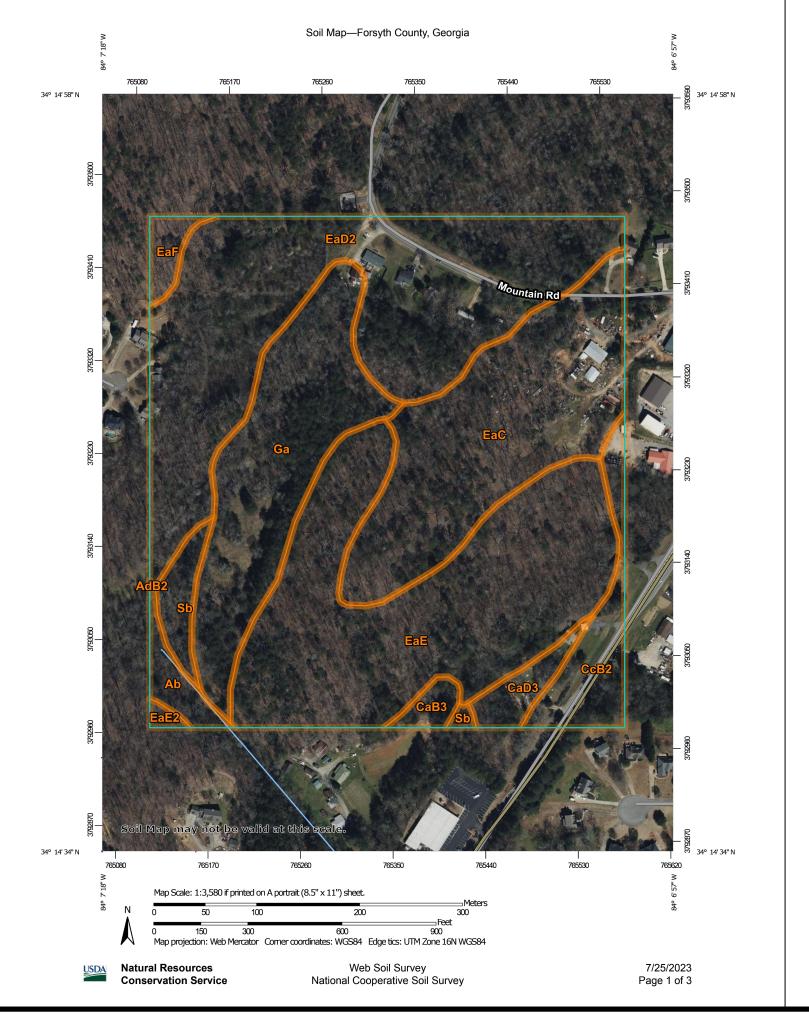


Soil Map—Forsyth County, Georgia

Map Unit Legend

Toccoa and Chewacla soils, 0 to 2 percent slopes, occasionally flooded Appling sandy clay loam, eroded very gently sloping phase	0.9	1.6%			
eroded very gently sloping	0.0	0.0%			
Cecil clay loam, severely eroded very gently sloping phase	0.5	0.9%			
Cecil clay loam, severely eroded sloping phase	1.0	1.79			
Cecil sandy loam, 2 to 6 percent slopes, moderately eroded	2.4	4.3%			
Edgemont stony sandy loam, gently sloping phase	10.4	18.4%			
Edgemont stony sandy loam, eroded sloping phase	16.1	28.4%			
Edgemont stony sandy loam, moderately steep phase	15.0	26.6%			
Edgemont stony sandy loam, eroded moderately steep phase	0.2	0.3%			
Edgemont stony sandy loam, steep phase	0.6	1.1%			
Gullied land, acid materials	8.3	14.7%			
Severely gullied land	1.1	2.0%			
	phase Cecil clay loam, severely eroded sloping phase Cecil sandy loam, 2 to 6 percent slopes, moderately eroded Edgemont stony sandy loam, gently sloping phase Edgemont stony sandy loam, eroded sloping phase Edgemont stony sandy loam, moderately steep phase Edgemont stony sandy loam, eroded moderately steep phase Edgemont stony sandy loam, eroded moderately steep phase Edgemont stony sandy loam, steep phase Gullied land, acid materials	phase Cecil clay loam, severely eroded sloping phase Cecil sandy loam, 2 to 6 percent slopes, moderately eroded Edgemont stony sandy loam, gently sloping phase Edgemont stony sandy loam, eroded sloping phase Edgemont stony sandy loam, moderately steep phase Edgemont stony sandy loam, aroded moderately steep phase Edgemont stony sandy loam, eroded moderately steep phase Edgemont stony sandy loam, aroded moderately steep phase Edgemont stony sandy loam, steep phase Edgemont stony sandy loam, steep phase Edgemont stony sandy loam, steep phase Gullied land, acid materials			

Natural Resources
Conservation Service Web Soil Survey National Cooperative Soil Survey Page 3 of 3



Dust Control on Disturbed Areas



DEFINITION

Controlling surface and air movement of dust on construction sites, roads, and demolition sites

PURPOSE

•To prevent surface and air movement of dust from exposed soil surfaces.

•To reduce the presence of airborne substances that may be harmful or injurious to human health, welfare, or safety, or to animals or plant life.

CONDITIONS

This practice is applicable to areas subject to surface and air movement of dust where on and off-site damage may occur without treatment.

METHOD AND MATERIALS

A. 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 specification Tac - Tackifiers Resins should be used according to manufacturer's recommendations.

Vegetative Cover. See specification 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 specification Tac - Tackifiers.

Tillage. This practice is designed to roughen and bring clods to the surface. It is an emergency GSWCC 2016 Edition

measure that should be used before wind erosion starts. Begin plowing on windward side of site. Chisel-type plows spaced about 12 inches apart, spring-toothed harrows, and similar plows are examples of equipment that may produce the desired effect.

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.

B. Permanent Methods

Permanent Vegetation. See specification 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 erosive soil material. See specification Tp - Topsoiling.

Stone. Cover surface with crushed stone or coarse gravel. See specification Cr-Construction Road Stabilization.

6-55

EROSIONHECKLIST

CUMMING

June 13, 2023

Job Number:

FIELD DATE:

5151.001

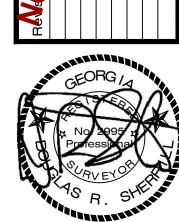
6/13/2023

FIELD CREW: LDP

DRAWN BY: DRS

DRWG FILE: 5151

Checked By: LDP



PRIMARY PERMITEE **100 MAIN STREET CUMMING, GEORGIA 30040** 770-781-2020 JON.HEARD@CITYOFCUMMING.NET

TOTAL PROJECT AREA: 10.95 ACRES - DISTURBED AREA 5.3 ACRES

GPS LOCATION BEGINNING N 34.409559 - W 84.425807

EXISTING PROPERTY CURRENTLY UNDEVELOPED WOODLAND WITH SHRUBS. PROJECT CONSISTS OF A GRADED AREA TO BE A PIPE LAYDOWN YARD WITH ACCOMPANYING STORMWATER AND ACCESS

THE PROJECT RECEIVING WATERS ARE AN UNNAMED TRIBUTARY TO BALDRIDGE CREEK

CERTIFICATION STATEMENTS:

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

"I CERTIFY THAT THE PERMITTEE'S EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN PROVIDES FOR AN APPROPRIATE AND COMPREHENSIVE SYSTEM OF BEST MANAGEMENT PRACTICES REQUIRED BY THE GEORGIA WATER QUALITY CONTROL ACT AND THE DOCUMENT MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA PUBLISHED BY THE GEORGIA SOIL AND WATER CONSERVATION COMMISSION AS OF JANUARY 1 OF THE YEAR IN WHICH THE LAND-DISTURBING ACTIVITY WAS PERMITTED, PROVIDES FOR THE SAMPLING OF THE RECEIVING WATER(S) OR THE SAMPLING OF THE STORM WATER OUTFALLS AND THAT THE DESIGNED SYSTEM OF BEST MANAGEMENT PRACTICES AND SAMPLING METHODS IS EXPECTED TO MEET THE REQUIREMENTS CONTAINED IN THE GENERAL NPDES NO. GAR 100003.

"I CERTIFY THAT THE PERMITTEE'S EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN PROVIDES FOR THE MONITORING OF :(A) ALL PERENNIAL AND INTERMITTENT STREAMS AND OTHER WATER BODIES SHOWN ON THE USGS TOPOGRAPHIC MAP AND ALL OTHER FIELD VERIFIED PERENNIAL AND INTERMITTENT STREAMS AND OTHER WATER BODIES. OR (B) WHERE ANY SUCH SPECIFIC IDENTIFIED PERENNIAL OR INTERMITTENT STREAM AND OTHER WATER BODY IS NOT PROPOSED TO BE SAMPLED, I HAVE DETERMINED IN MY PROFESSIONAL JUDGEMENT, UTILIZING THE FACTORS REQUIRED IN THE GENERAL NPDES PERMIT NO. GAR 1000003 THAT THE INCREASE IN THE TURBIDITY OF EACH SPECIFIC IDENTIFIED SAMPLED RECEIVING WATER WILL BE REPRESENTATIVE OF THE INCREASE IN THE TURBIDITY OF A SPECIFIC IDENTIFIED UN-SAMPLED RECEIVING WATER.

THE DESIGN PROFESSIONAL WHO PREPARED THE ES&PC IS TO INSPECT THE INSTALLATION OF THE INITIAL SEDIMENT STORAGE REQUIREMENTS, PERIMETER CONTROL BMPS, AND SEDIMENT BASINS WITHIN 7 DAYS AFTER INSTALLATION.

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

NO BUFFER ENCROACHMENT PROPOSED ON THIS PROJECT.

AMENDMENTS/REVISIONS TO THE ES&PC PLAN WHICH HAVE A SIGNIFICANT EFFECT ON BMPS WITH A HYDRAULIC

COMPONENT MUST BE CERTIFIED BY THE DESIGN PROFESSIONAL.

WASTE MATERIALS SHALL NOT BE DISCHARGED TO WATER OF THE STATE, EXCEPT AS AUTHORIZED BY A SECTION 404

THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURE 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.

ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR

THE PRIMARY PERMITTEE SHALL PROVIDE A COPY OF THE PLAN (AND ANY SUBSEQUENT REVISION TO THE PLAN) TO EACH SECONDARY PERMITTEE. THE PLAN MUST INCLUDE A SECTION FOR EACH SECONDARY TO SIGN INDICATING THAT THEY HAVE MADE A WRITTEN ACKNOWLEDGEMENT OF RECEIPT OF THE PLAN AND A COPY OF THE ACKNOWLEDGEMENT MUST BE KEPT IN THE PRIMARY'S RECORDS.

PROJECT SITE IS NOT LOCATED WITHIN A LINEAR MILE OF AN IMPAIRED STREAM SEGMENT.

CWA - WASHDOWN OF TOOLS, CONCRETE MIXER CHUTES, HOPPERS AND THE REAR OF VEHICLES. WASHOUT OF THE DRUM AT THE CONSTRUCTION SITE IS PROHIBITED.

SOIL AND PETROLEUM CLEANUP AND CONTROL PRACTICES

1. LOCAL, STATE AND MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP WILL BE CLEARLY POSTED AND PROCEDURES WILL BE MADE AVAILABLE TO SITE PERSONNEL.

2. MATERIAL AND EQUIPMENT NECESSARY FOR SPILL CLEAN WILL BE KEPT IN THE MATERIAL STORAGE AREAS. TYPICAL MATERIALS AND EQUIPMENT INCLUDES, BUT TO BROOMS, DUSTPANS, MAPS, RAGS, GLOVES, GOGGLES, CAT LITTER, SAND, SAWDUST, AND PROCEDURES WILL BE REVIEWED AFTER A SPILL AND ADJUSTED AS NECESSARY TO PREVENT FUTURE SPILLS.

3. SPILL PREVENTION PRACTICES AND PROCEDURES WILL BE REVIEWED AFTER A SPILL AND ADJUSTED AS NECESSARY

4. ALL SPILLS WILL BE CLEANED UP IMMEDIATELY UPON DISCOVERY. ALL SPILLS WILL BE REPORTED AS REQUIRED BY LOCAL, STATE, AND FEDERAL REGULATIONS.

5. FOR SPILLS THAT IMPACT SURFACE WATER (LEAVE A SHEEN ON SURFACE WATER). THE NATIONAL RESPONSE CENTER (NRC) WILL BE CONTACTED WITHIN 24 HOUR AT 1-(800) 424-8802.

6. FOR SPILLS OF AN UNKNOWN AMOUNT, THE NATION CENTER (NRC) WILL BE CONTACTED WITHIN 24 HOURS AT 1-(800)

7. FOR SPILLS GREATER THAN 25 GALLONS AND NO SURFACE WATER IMPACTS, THE GEORGIA EPD WILL BE CONTACTED

8. 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 PROFESSION WHO PREPARED THIS PLAN IF MORE THAN 1320 GALLONS OF PETROLEUM IS STORED ONSITE (THIS INCLUDES CAPACITIES OF EQUIPMENT) OF IF ANY ONE PIECE 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

27 ALL WEATHER SENSITIVE MATERIALS WILL BE COVERED BY TARP ON BUILDING SITE.

ALL POLLUTANTS THAT OCCUR AFTER CONSTRUCTION IS CONCLUDED WILL BE CONTROLLED BY BMPS SHOWN ON PLAN WHICH 28 CONSISTS OF A STORMWATER POND WITH WATER QUALITY STORAGE. THE STORMWATER POLLUTION POTENTIAL SOURCES EXPECTED ON THE SITE ARE DISTURBED AREAS LEFT UNCOVERED. DURING THE

CONSTRUCTION PROCESS, BMPS HAVE BEEN DESIGNED TO COVER ALL DISTURBED AREA, AND CHANNEL WATER THROUGH VEGETATED SWALE TO THE STORMWATER DETENTION POND.

29 SEE COVER SHEET

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

(2). MEASURE AND RECORD RAINFALL WITHIN DISTURBED AREAS OF THE SITE THAT HAVE NOT MET FINAL STABILIZATION ONCE EVERY 24 HOURS EXCEPT ANY NON-WORKING SATURDAY NON-WORKING SUNDAY AND NON-WORKING FEDERAL HOLIDAY. THE DATA COLLECTED FOR THE PURPOSE OF COMPLIANCE WITH THIS PERMIT SHALL BE REPRESENTATIVE OF THE MONITORED ACTIVITY. MEASUREMENT OF RAINFALL MAY BE SUSPENDED IF ALL AREAS OF THE SITE HAVE UNDERGONE FINAL STABILIZATION OR ESTABLISHED A CROP OF ANNUAL VEGETATION AND A SEEDING OF TARGET PERFUNIALS APPROPRIATE FOR THE REGION

(3). CERTIFIED PERSONNEL (PROVIDED BY THE PRIMARY PERMITTEE) SHALL INSPECT THE FOLLOWING 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 SUCH STORM ENDS AFTER 5:00 PM ON ANY FRIDAY OR ON ANY NON-WORKING SATURDAY, NON-WORKING SUNDAY OR ANY NON-WORKING FEDERAL HOLIDAY IN WHICH CASE THE INSPECTION SHALL BE COMPLETED BY THE END OF THE NEXT BUSINESS DAY AND/OR WORKING DAY, WHICHEVER OCCURS FIRST): (A) DISTURBED AREAS OF THE PRIMARY PERMITTEE'S CONSTRUCTION SITE; (B) AREAS USED BY THE PRIMARY PERMITTEE FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION; AND (C) STRUCTURAL CONTROL MEASURES. EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN APPLICABLE TO THE PRIMARY PERMITTEE'S SITE SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY. WHERE DISCHARGE LOCATIONS OR POINTS ARE ACCESSIBLE, THEY SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO RECEIVING WATER(S). FOR AREAS OF A SITE THAT HAVE UNDERGONE FINAL STABILIZATION OR ESTABLISHED A CROP OF ANNUAL VEGETATION AND A SEEDING OF TARGET PERENNIALS APPROPRIATE FOR THE REGION, THE PERMITTEE MUST COMPLY WITH PART IV.D.4.A.(4). THESE INSPECTIONS MUST BE CONDUCTED UNTIL A NOTICE OF

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

(5). BASED ON THE RESULTS OF EACH INSPECTION, THE SITE DESCRIPTION AND THE POLLUTION PREVENTION AND CONTROL MEASURES IDENTIFIED IN THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN, THE PLAN SHALL BE REVISED AS APPROPRIATE NOT LATER THAN SEVEN (7) CALENDAR DAYS FOLLOWING EACH INSPECTION. IMPLEMENTATION OF SUCH CHANGES SHALL BE MADE AS SOON AS PRACTICAL BUT IN NO CASE LATER THAN SEVEN (7) CALENDAR DAYS FOLLOWING EACH INSPECTION. THE PRIMARY PERMITTEE MUST AMEND THE PLAN IN ACCORDANCE WITH PART IV.D.4.B.(5). WHEN A SECONDARY PERMITTEE NOTIFIES THE PRIMARY PERMITTEE OF ANY PLAN DEFICIENCIES.

(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 SITE THAT HAS BEEN PHASED HAS UNDERGONE FINAL STABILIZATION AND A NOTICE OF TERMINATION IS SUBMITTED TO EPD. SUCH REPORTS SHALL BE READILY AVAILABLE BY END OF THE SECOND BUSINESS DAY AND/OR WORKING DAY AND SHALL IDENTIFY ALL INCIDENTS OF BEST MANAGEMENT PRACTICES THAT HAVE NOT BEEN PROPERLY INSTALLED AND/OR MAINTAINED AS DESCRIBED IN THE PLAN. WHERE THE REPORT DOES NOT IDENTIFY AN INCIDENT, THE INSPECTION REPORT SHALL CONTAIN A STATEMENT THAT THE BEST MANAGEMENT PRACTICES ARE IN COMPLIANCE WITH THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN. THE REPORT SHALL BE SIGNED IN ACCORDANCE WITH PART V.G.2. OF THIS

b. SECONDARY PERMITTEE.

(1). EACH DAY WHEN ANY TYPE OF CONSTRUCTION ACTIVITY HAS TAKEN PLACE AT A SECONDARY PERMITTEE'S SITE. CERTIFIED PERSONNEL PROVIDED BY THE SECONDARY PERMITTEE SHALL INSPECT: (A) ALL AREAS USED BY THE SECONDARY PERMITTEE WHERE PETROLEUM PRODUCTS ARE STORED, USED, OR HANDLED FOR SPILLS AND LEAKS FROM VEHICLES AND EQUIPMENT; AND (B) ALL LOCATIONS AT THE SECONDARY PERMITTEE SITE WHERE THAT PERMITTEE'S 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. THIS PARAGRAPH IS NOT APPLICABLE TO UTILITY COMPANIES AND UTILITY CONTRACTORS IF THEY ARE SECONDARY PERMITTEES.

(2). CERTIFIED PERSONNEL (PROVIDED BY THE UTILITY COMPANIES AND UTILITY CONTRACTORS IF THEY ARE SECONDARY PERMITTEES) SHALL INSPECT THE FOLLOWING EACH DAY ANY TYPE OF CONSTRUCTION ACTIVITY HAS TAKEN PLACE AT THE CONSTRUCTION SITE: (A) AREAS OF THE CONSTRUCTION SITE DISTURBED BY THE UTILITY COMPANIES AND UTILITY CONTRACTORS THAT HAVE NOT UNDERGONE FINAL STABILIZATION OR ESTABLISHED A CROP OF ANNUAL VEGETATION AND A SEEDING OF TARGET PERENNIALS APPROPRIATE FOR THE REGION; (B) AREAS USED BY THE UTILITY COMPANIES AND UTILITY CONTRACTORS FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION THAT HAVE NOT UNDERGONE FINAL STABILIZATION OR ESTABLISHED A CROP OF ANNUAL VEGETATION AND A SEEDING OF TARGET PERENNIALS APPROPRIATE FOR THE REGION OR ESTABLISHED A CROP OF ANNUAL VEGETATION AND A SEEDING OF TARGET PERENNIALS APPROPRIATE FOR THE REGION; AND (C) STRUCTURAL CONTROL MEASURES. EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN APPLICABLE TO THE UTILITY COMPANIES AND UTILITY CONTRACTORS' CONSTRUCTION ACTIVITIES 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). THIS PARAGRAPH IS NOT APPLICABLE TO UTILITY COMPANIES AND UTILITY CONTRACTORS WHEN THEY ARE SECONDARY PERMITTEES PERFORMING SERVICE LINE INSTALLATIONS OR WHEN CONDUCTING REPAIRS ON EXISTING LINE INSTALLATIONS.

(3), CERTIFIED PERSONNEL (PROVIDED BY THE SECONDARY PERMITTEE) SHALL INSPECT THE FOLLOWING AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM THAT IS 0.5 INCHES RAINFALL OR GREATER (UNLESS SUCH STORM ENDS AFTER 5:00 PM ON ANY FRIDAY OR ON ANY NON-WORKING SATURDAY, NON-WORKING SUNDAY OR ANY NON-WORKING FEDERAL HOLIDAY IN WHICH CASE THE INSPECTION SHALL BE COMPLETED BY THE END OF THE NEXT BUSINESS DAY AND/OR WORKING DAY, WHICHEVER OCCURS FIRST): (A) DISTURBED AREAS OF THE SECONDARY PERMITTEE'S CONSTRUCTION SITE; (B) AREAS USED BY THE SECONDARY 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 SECONDARY PERMITTEE'S SITE SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY. WHERE DISCHARGE LOCATIONS OR POINTS ARE ACCESSIBLE, THEY SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION CONTROL MEASURES ARE FEFECTIVE 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.B.(4). THESE INSPECTIONS MUST BE CONDUCTED UNTIL A NOTICE OF TERMINATION IS SUBMITTED. THIS PARAGRAPH IS NOT APPLICABLE TO UTILITY COMPANIES AND UTILITY CONTRACTORS IF THEY ARE SECONDARY PERMITTEES.

(4). CERTIFIED PERSONNEL (PROVIDED BY THE SECONDARY PERMITTEE) SHALL INSPECT AT LEAST ONCE PER MONTH DURING THE TERM OF THIS PERMIT (I.E., UNTIL A NOTICE OF TERMINATION IS SUBMITTED TO EPD) THE AREAS OF THEIR SITES THAT HAVE UNDERGONE FINAL STABILIZATION OR ESTABLISHED A CROP OF ANNUAL VEGETATION AND A SEEDING OF TARGET PERENNIALS APPROPRIATE FOR THE REGION. THESE AREAS SHALL BE INSPECTED FOR EVIDENCE OF, OR THE POTENTIAL FOR, POLLUTANTS ENTERING THE DRAINAGE SYSTEM AND THE RECEIVING WATER(S). EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY. WHERE DISCHARGE LOCATIONS OR POINTS ARE ACCESSIBLE. THEY SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO RECEIVING WATER(S). THIS PARAGRAPH IS NOT APPLICABLE TO UTILITY COMPANIES AND UTILITY CONTRACTORS IF THEY ARE SECONDARY PERMITTEES.

(5). BASED ON THE RESULTS OF EACH INSPECTION, THE SECONDARY PERMITTEE MUST NOTIFY THE PRIMARY PERMITTEE WITHIN 24-HOURS OF ANY SUSPECTED BMP DESIGN DEFICIENCIES. THE PRIMARY PERMITTEE MUST EVALUATE WHETHER THESE DEFICIENCIES EXIST WITHIN 48- HOURS OF SUCH NOTICE, AND IF THESE DEFICIENCIES ARE FOUND TO EXIST MUST AMEND THE PLAN IN ACCORDANCE WITH PART IV.C. OF THIS PERMIT TO ADDRESS THOSE DEFICIENT BMPS WITHIN SEVEN (7) DAYS OF BEING NOTIFIED BY THE SECONDARY PERMITTEE. WHEN THE PLAN IS AMENDED. THE PRIMARY PERMITTEE MUST NOTIFY AND PROVIDE A COPY OF THE AMENDMENT TO ALL AFFECTED SECONDARY PERMITTEE(S) WITHIN THIS SEVEN (7) DAY PERIOD. THE SECONDARY PERMITTEES MUST IMPLEMENT ANY NEW PLAN REQUIREMENTS AFFECTING THEIR SITE(S) WITHIN 48-HOURS OF NOTIFICATION BY THE PRIMARY PERMITTEE.

(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.B.(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 HAS UNDERGONE FINAL STABILIZATION AND A NOTICE OF TERMINATION IS SUBMITTED TO EPD. SUCH REPORTS SHALL BE READILY AVAILABLE BY THE END OF THE SECOND BUSINESS DAY AND /OR WORKING DAY AND SHALL IDENTIFY ALL INCIDENTS OF BEST MANAGEMENT PRACTICES THAT HAVE NOT BEEN PROPERLY INSTALLED AND/OR MAINTAINED AS 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. THIS PARAGRAPH IS NOT APPLICABLE TO UTILITY COMPANIES AND UTILITY CONTRACTORS IF THEY ARE SECONDARY PERMITTEES PERFORMING ONLY SERVICE LINE INSTALLATIONS OR WHEN CONDUCTING REPAIRS ON EXISTING LINE

TERTIARY PERMITTEE.

(1). EACH DAY WHEN ANY TYPE OF CONSTRUCTION ACTIVITY HAS TAKEN PLACE AT A TERTIARY PERMITTEE'S SITE, CERTIFIED PERSONNEL PROVIDED BY THE TERTIARY PERMITTEE SHALL INSPECT: (A) ALL AREAS USED BY THE TERTIARY PERMITTEE WHERE PETROLEUM PRODUCTS ARE STORED, USED, OR HANDLED FOR SPILLS AND LEAKS FROM VEHICLES AND EQUIPMENT: AND (B) ALL LOCATIONS AT THE TERTIARY PERMITTEE SITE WHERE THAT PERMITTEE'S 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. THIS PARAGRAPH IS NOT APPLICABLE TO UTILITY COMPANIES AND UTILITY CONTRACTORS PERFORMING ONLY SERVICE LINE INSTALLATIONS OR WHEN CONDUCTING REPAIRS ON EXISTING LINE INSTALLATIONS.

(2). MEASURE AND RECORD RAINFALL WITHIN DISTURBED AREAS OF THE SITE THAT HAVE NOT MET FINAL STABILIZATION ONCE EVERY 24 HOURS EXCEPT ANY NON-WORKING SATURDAY, NON-WORKING SUNDAY AND NON-WORKING FEDERAL HOLIDAY. THE DATA COLLECTED FOR THE PURPOSE OF COMPLIANCE WITH THIS PERMIT SHALL BE REPRESENTATIVE OF THE MONITORED ACTIVITY. MEASUREMENT OF RAINFALL MAY BE SUSPENDED IF ALL AREAS OF THE SITE HAVE UNDERGONE FINAL STABILIZATION OR ESTABLISHED A CROP OF ANNUAL VEGETATION AND A SEEDING

(3). CERTIFIED PERSONNEL (PROVIDED BY THE TERTIARY PERMITTEE) SHALL INSPECT AT LEAST THE FOLLOWING ONCE EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM THAT IS 0.5 INCHES RAINFALL OR GREATER (UNLESS SUCH STORM ENDS AFTER 5:00 PM ON ANY FRIDAY OR ON ANY NON-WORKING SATURDAY. NON-WORKING SUNDAY OR ANY NONWORKING 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 TERTIARY PERMITTEE'S CONSTRUCTION SITE; (B) AREAS USED BY THE TERTIARY 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 TERTIARY PERMITTEE'S SITE SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY. WHERE DISCHARGE LOCATIONS OR POINTS ARE ACCESSIBLE, THEY SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO RECEIVING WATER(S). FOR AREAS OF A SITE THAT HAVE UNDERGONE FINAL STABILIZATION OR ESTABLISHED A CROP OF ANNUAL VEGETATION AND A SEEDING OF TARGET PERENNIALS APPROPRIATE FOR THE REGION, THE PERMITTEE MUST COMPLY WITH PART IV.D.4.C.(4). THESE INSPECTIONS MUST BE CONDUCTED UNTIL A NOTICE OF TERMINATION IS SUBMITTED. THIS PARAGRAPH IS NOT APPLICABLE TO UTILITY COMPANIES AND UTILITY CONTRACTORS PERFORMING ONLY SERVICE LINE INSTALLATIONS OR WHEN CONDUCTING REPAIRS ON EXISTING LINE INSTALLATIONS.

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

SUCH CHANGES SHALL BE MADE AS SOON AS PRACTICAL BUT IN NO CASE LATER THAN SEVEN (7) CALENDAR DAYS FOLLOWING THE INSPECTION.

INSTALLATIONS OR WHEN CONDUCTING REPAIRS ON EXISTING LINE INSTALLATIONS. (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

SIGNIFICANT IMPACTS TO RECEIVING WATER(S). THIS PARAGRAPH IS NOT APPLICABLE TO UTILITY COMPANIES AND UTILITY CONTRACTORS PERFORMING ONLY SERVICE LINE

(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.C.(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 HAS UNDERGONE FINAL STABILIZATION AND A NOTICE OF TERMINATION IS SUBMITTED TO EPD. SUCH REPORTS SHALL BE READILY AVAILABLE BY THE END OF THE SECOND BUSINESS DAY AND/OR WORKING DAY AND SHALL IDENTIFY ALL INCIDENTS OF BEST MANAGEMENT PRACTICES THAT HAVE NOT BEEN PROPERLY INSTALLED AND/OR MAINTAINED AS DESCRIBED IN THE PLAN. WHERE THE REPORT DOES NOT IDENTIFY ANY INCIDENTS, THE INSPECTION REPORT 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. THIS PARAGRAPH IS NOT APPLICABLE TO UTILITY COMPANIES AND UTILITY CONTRACTORS PERFORMING ONLY SERVICE LINE INSTALLATIONS OR WHEN CONDUCTING REPAIRS ON EXISTING LINE INSTALLATIONS.

SAMPLING REQUIREMENTS

THIS PERMIT REQUIRES THE MONITORING OF NEPHELOMETRIC TURBIDITY IN RECEIVING WATER(S) OR OUTFALLS IN ACCORDANCE WITH THIS PERMIT. THIS SECTION IS APPLICABLE TO PRIMARY PERMITTEES WITH A TOTAL PLANNED DISTURBANCE EQUAL TO OR GREATER THAN ONE (1) ACRE AND TERTIARY PERMITTEES WITH A TOTAL PLANNED DISTURBANCE EQUAL TO OR GREATER THAN FIVE (5) ACRES. THIS SECTION IS NOT APPLICABLE TO SECONDARY PERMITTEES. 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 1:24000 MAP SHOWING THE LOCATION OF THE SITE OR THE COMMON DEVELOPMENT; (A) THE LOCATION OF ALL PERENNIAL AND INTERMITTENT STREAMS AND OTHER WATER BODIES AS SHOWN ON A USGS TOPOGRAPHIC MAP, AND ALL OTHER PERENNIAL AND INTERMITTENT STREAMS AND OTHER WATER BODIES LOCATED DURING MANDATORY FIELD VERIFICATION, INTO WHICH THE STORMWATER IS DISCHARGED AND (B) THE RECEIVING WATER AND/OR OUTFALL SAMPLING LOCATIONS. WHEN THE PERMITTEE HAS CHOSEN TO USE A USGS TOPOGRAPHIC MAP AND THE RECEIVING WATER(S) IS NOT SHOWN ON THE USGS TOPOGRAPHIC MAP, THE LOCATION OF THE RECEIVING WATER(S) MUST BE HAND-DRAWN ON THE USGS TOPOGRAPHIC MAP FROM WHERE THE STORMWATER(S) ENTERS THE RECEIVING WATER(S) TO THE POINT WHERE THE RECEIVING WATER(S) COMBINES WITH THE FIRST BLUE LINE STREAM SHOWN ON THE USGS TOPOGRAPHIC MAP;

(2). THE ANALYTICAL METHOD USED TO COLLECT AND ANALYZE THE SAMPLES INCLUDING QUALITY CONTROL/QUALITY ASSURANCE PROCEDURES. THIS NARRATIVE MUST INCLUDE PRECISE SAMPLING METHODOLOGY FOR

(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 PLAN. EPD WILL PROVIDE WRITTEN NOTICE TO THE PERMITTEE OF THE INFORMATION NECESSARY AND THE TIME LINE FOR

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 OTHER TEST PROCEDURES HAVE BEEN APPROVED); THE GUIDANCE DOCUMENT TITLED "NPDES STORM WATER SAMPLING GUIDANCE DOCUMENT, EPA 833-B-92-001" AND GUIDANCE DOCUMENTS THAT MAY BE PREPARED BY THE EPD.

(1). SAMPLE CONTAINERS SHOULD BE LABELED PRIOR TO COLLECTING THE SAMPLES.

(2). SAMPLES SHOULD BE WELL MIXED BEFORE TRANSFERRING TO A SECONDARY CONTAINER.

(3). LARGE MOUTH, CLEAN AND RINSED GLASS OR PLASTIC JARS SHOULD BE USED FOR COLLECTING SAMPLES. THE JARS SHOULD BE CLEANED THOROUGHLY TO AVOID CONTAMINATION.

(4). MANUAL, AUTOMATIC OR RISING STAGE SAMPLING MAY BE UTILIZED. SAMPLES REQUIRED BY THIS PERMIT SHOULD BE ANALYZED IMMEDIATELY, BUT IN NO CASE LATER THAN 48 HOURS AFTER COLLECTION HOWEVER. SAMPLES FROM AUTOMATIC SAMPLERS MUST BE COLLECTED NO LATER THAN THE NEXT BUSINESS DAY AFTER THEIR ACCUMULATION. UNLESS FLOW THROUGH AUTOMATED ANALYSIS IS UTILIZED. IF AUTOMATIC SAMPLING IS UTILIZED AND THE AUTOMATIC SAMPLER IS NOT ACTIVATED DURING THE QUALIFYING EVENT, THE PERMITTEE MUST UTILIZE MANUAL SAMPLING OR RISING STAGE SAMPLING DURING THE NEXT QUALIFYING EVENT. DILUTION OF SAMPLES IS NOT REQUIRED. SAMPLES MAY BE ANALYZED USING A DIRECT READING. PROPERLY CALIBRATED TURBIDIMETER, SAMPLES ARE NOT REQUIRED TO BE COOLED. (5), SAMPLING AND ANALYSIS OF THE RECEIVING WATER(S) OR OUTFALLS BEYOND THE MINIMUM FREQUENCY STATED IN THIS PERMIT MUST BE REPORTED TO EPD AS SPECIFIED IN PART IV.E.

(1). FOR CONSTRUCTION ACTIVITIES THE PRIMARY PERMITTEE WITH A TOTAL PLANNED DISTURBANCE EQUAL TO OR GREATER THAN ONE (1) ACRE AND TERTIARY PERMITTEE WITH A TOTAL PLANNED DISTURBANCE EQUAL TO OR GREATER THAN FIVE (5) ACRES 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 STORMWATER 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 STORMWATER DISCHARGE FROM THE PERMITTED ACTIVITY (I.E., THE DISCHARGE FARTHEST UPSTREAM AT THE SITE) BUT DOWNSTREAM OF ANY OTHER STORMWATER DISCHARGES NOT ASSOCIATED WITH THE PERMITTED ACTIVITY. WHERE APPROPRIATE, SEVERAL UPSTREAM SAMPLES FROM ACROSS THE RECEIVING WATER(S) MAY NEED TO BE TAKEN AND THE ARITHMETIC AVERAGE OF THE TURBIDITY OF THESE SAMPLES USED FOR THE UPSTREAM TURBIDITY VALUE.

(B). THE DOWNSTREAM SAMPLE FOR EACH RECEIVING WATER(S) MUST BE TAKEN DOWNSTREAM OF THE CONFLUENCE OF THE LAST STORMWATER DISCHARGE FROM THE PERMITTED ACTIVITY (I.E., THE DISCHARGE FARTHEST DOWNSTREAM AT THE SITE) BUT UPSTREAM OF ANY OTHER STORMWATER 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 STORMWATER OUTFALL CHANNEL(S).

(D). CARE SHOULD BE TAKEN TO AVOID STIRRING THE BOTTOM SEDIMENTS IN THE RECEIVING WATER(S) OR IN THE OUTFALL STORMWATER 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 TO SAMPLE SHEET FLOW THAT FLOWS ONTO UNDISTURBED NATURAL AREAS OR AREAS STABILIZED BY THE PROJECT. FOR PURPOSES OF THIS SECTION, STABILIZED SHALL MEAN, FOR UNPAVED AREAS AND AREAS NOT COVERED BY PERMANENT STRUCTURES AND AREAS LOCATED OUTSIDE THE WASTE DISPOSAL LIMITS OF A LANDFILL CELL THAT HAS BEEN CERTIFIED BY EPD FOR WASTE DISPOSAL. 100% OF THE SOIL SURFACE IS UNIFORMLY COVERED IN PERMANENT VEGETATION WITH A 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 SEEDING OF TARGET CROP PERENNIALS

(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 STORMWATER 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.

(1). THE PRIMARY PERMITTEE WITH A TOTAL PLANNED DISTURBANCE EQUAL TO OR GREATER THAN ONE (1) ACRE AND TERTIARY PERMITTEE WITH A TOTAL PLANNED DISTURBANCE EQUAL TO OR GREATER THAN FIVE (5) ACRES MUST SAMPLE IN ACCORDANCE WITH THE PLAN AT LEAST ONCE FOR EACH RAINFALL EVENT DESCRIBED BELOW. FOR A QUALIFYING EVENT, THE PERMITTEE SHALL SAMPLE AT THE BEGINNING OF ANY STORMWATER DISCHARGE TO A MONITORED RECEIVING WATER AND/OR FROM A MONITORED OUTFALL WITHIN FORTY-FIVE (45) MINUTES OR AS SOON AS POSSIBLE.

(2). HOWEVER, WHERE MANUAL AND AUTOMATIC SAMPLING ARE IMPOSSIBLE (AS DEFINED IN THIS PERMIT), OR ARE BEYOND THE PERMITTEE'S CONTROL, THE PERMITTEE SHALL TAKE SAMPLES AS SOON AS POSSIBLE, BUT IN NO CASE MORE THAN TWELVE (12) HOURS AFTER THE BEGINNING OF THE STORMWATER 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 STORMWATER DISCHARGE THAT ALLOWS FOR SAMPLING 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 STORMWATER DISCHARGE THAT OCCURS DURING NORMAL BUSINESS HOURS AS DEFINED IN THIS PERMIT EITHER 90 DAYS AFTER THE FIRST SAMPLING EVENT OR AFTER ALL MASS GRADING OPERATIONS HAVE BEEN COMPLETED, BUT PRIOR TO SUBMITTAL OF A NOT, IN THE DRAINAGE AREA OF THE LOCATION SELECTED AS THE 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 AREA OF THE SITE FOR EACH SUBSEQUENT RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH DURING NORMAL BUSINESS HOURS* UNTIL THE SELECTED TURBIDITY STANDARD IS ATTAINED, OR UNTIL POST-STORM EVENT INSPECTIONS DETERMINE THAT BMPS ARE PROPERLY DESIGNED. INSTALLED AND MAINTAINED:

(D). WHERE SAMPLING PURSUANT TO (A), (B) OR (C) ABOVE IS REQUIRED BUT NOT POSSIBLE (OR NOT REQUIRED BECAUSE THERE WAS NO DISCHARGE), THE PRIMARY PERMITTEE, IN ACCORDANCE WITH PART IV.D.4.A.(6).. OR THE TERTIARY PERMITTEE, IN ACCORDANCE WITH PART IV.D.4.C.(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 (A) AND (B) ABOVE BY COLLECTING TURBIDITY SAMPLES FROM ANY RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH AND ALLOWS FOR

NON-STORMWATER DISCHARGES. EXCEPT FOR FLOWS FROM FIRE FIGHTING ACTIVITIES, SOURCES OF NONSTORMWATER LISTED IN PART III.A.2. OF THIS PERMIT THAT ARE COMBINED WITH STORMWATER 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-STORMWATER COMPONENT(S) OF THE DISCHARGE.

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 THIS PERMIT. SAMPLING RESULTS SHALL BE IN A CLEARLY LEGIBLE FORMAT. UPON WRITTEN NOTIFICATION, EPD MAY REQUIRE THE APPLICABLE PERMITTEE TO SUBMIT THE SAMPLING RESULTS ON A MORE FREQUENT BASIS. SAMPLING AND ANALYSIS OF ANY STORMWATER DISCHARGE(S) OR THE RECEIVING WATER(S) BEYOND THE MINIMUM FREQUENCY STATED IN THIS PERMIT MUST BE REPORTED IN A SIMILAR MANNER TO THE EPD. THE SAMPLING REPORTS MUST BE SIGNED IN ACCORDANCE WITH PART V.G.2. SAMPLING REPORTS MUST BE SUBMITTED TO EPD USING THE ELECTRONIC SUBMITTAL SERVICE PROVIDED BY EPD. SAMPLING REPORTS MUST BE SUBMITTED TO EPD UNTIL SUCH TIME AS A NOT IS SUBMITTED IN ACCORDANCE WITH PART VI.

ALL SAMPLING REPORTS SHALL INCLUDE THE FOLLOWING INFORMATION:

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

THE DATE(S) ANALYSES WERE PERFORMED:

THE TIME(S) ANALYSES WERE INITIATED;

THE NAME(S) OF THE CERTIFIED PERSONNEL WHO PERFORMED THE ANALYSES;

REFERENCES AND WRITTEN PROCEDURES, WHEN AVAILABLE, FOR THE ANALYTICAL TECHNIQUES OR METHODS USED;

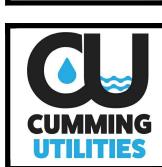
THE RESULTS OF SUCH ANALYSES, INCLUDING THE BENCH SHEETS, INSTRUMENT READOUTS, COMPUTER DISKS OR TAPES, ETC., USED TO DETERMINE THESE RESULTS;

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

CERTIFICATION STATEMENT THAT SAMPLING WAS CONDUCTED AS PER THE PLAN.

3. ALL WRITTEN CORRESPONDENCE REQUIRED BY THIS PERMIT SHALL BE SUBMITTED BY RETURN RECEIPT CERTIFIED MAIL (OR SIMILAR SERVICE) TO THE APPROPRIATE DISTRICT OFFICE OF THE EPD ACCORDING TO THE SCHEDULE IN APPENDIX A OF THIS PERMIT. THE APPLICABLE PERMITTEES SHALL RETAIN A COPY OF THE PROOF OF SUBMITTAL AT THE CONSTRUCTION SITE OR THE PROOF OF SUBMITTAL SHALL BE READILY AVAILABLE AT A DESIGNATED LOCATION FROM COMMENCEMENT OF CONSTRUCTION UNTIL SUCH TIME AS A NOT IS SUBMITTED IN ACCORDANCE WITH PART VI.





June 13, 2023 FIELD CREW: LDP DRAWN BY: DRS Job Number: 5151.001 DRWG FILE: 5151 FIELD DATE: 6/13/2023 Checked By: LDP



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GEORGIA UNIFORM CODING SYSTEM

FOR SOIL EROSION AND SEDIMENT CONTROL PRACTICES

GEORGIA SOIL AND WATER CONSERVATION COMMISSION STRUCTURAL PRACTICES STRUCTURAL PRACTICES

\bigcirc	CHECKDAM			A small temporary barrier or dam constructed across a swale, drainage ditch or area of
	OFFECTION		<i>y</i>	concentrated flow.
Ch	CHANNEL STABILIZATION			Improving, constructing or stabilizing an open channel, existing stream, or ditch.
Co	CONSTRUCTION EXIT		(LABEL)	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		Cr Cr	A travelway 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		(LABEL)	A flexible conduit of heavy—duty fabric or other material designed to safely conduct surface runoff down a slope. This is temporary and inexpensive.
Dn2	PERMANENT DOWNDRAIN STRUCTURE		Dn2 (LABEL)	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		Gr (LABEL)	Permanent structures installed to protect channels or waterways where otherwise the slope would be sufficient for the running water to form gullies.
Lv	LEVEL SPREADER			A 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		Re (LABEL)	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		Rt (LABEL)	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		(INDICATE TYPE)	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	y 2 - Z - Z - V - V - V - V - V - V - V - V		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		(LABEL)	A basin created by excavation or a dam across a waterway. The surface water runoff is temporarily stored allowing the bulk of the sediment to drop out.
Sd4)	TEMPORARY SEDIMENT TRAP			A small temporary pond that drains a disturbed area so that sediment can settle out. The principle feature distinguishing a temporary sediment trap from a temporary sediment basin is the lack of a pipe or riser.
Sk	FLOATING SURFACE SKIMMER		Sk) (LABEL)	A buoyant device that releases/drains water from the surface of sediment ponds, traps, or basins at a controlled rate of flow.
Spb	SEEP BERM		(LABEL)	Linear control device constructed as a diversion perpendicular to the direction of runoff to enhance dissipation and infiltration, while creating multiple sedimentation chambers with the employment of intermediate dikes.

CODE PRACTICE DETAIL

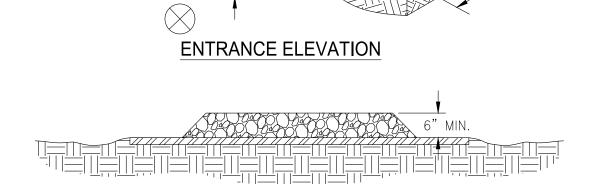
CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Sr	TEMPORARY STREAM CROSSING		(LABEL)	A temporary bridge or culvert—type structure protecting a stream or watercourse from damage by crossing construction equipment.
St	STORMDRAIN OUTLET PROTECTION		St	A paved or short section of riprap channel at the outlet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

VEGETATIVE PRACTICES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION			
Bf	BUFFER ZONE		Bf (LABEL)	Strip of undisturbed original vegetation, enhanced or restored existing vegetation or the reestablishment of vegetation surrounding an area of disturbance or bordering streams.			
Cs	COASTAL DUNE STABILIZATION (WITH VEGETATION)	少年3年3年43年3年43年3	Cs	Planting vegetation on dunes that are denuded artificially constructed, or re-nourished.			
Ds1	DISTURBED AREA STABILIZATION (WITH MULCHING ONLY)	(WITH // Ds1 disturbed areas where seedlings					
Ds2	DISTURBED AREA STABILIZATION (WITH TEMP SEEDING)		Ds2	Establishing a temporary vegetative cover with fast growing seedings on disturbed areas.			
Ds3	DISTURBED AREA STABILIZATION (WITH PERM SEEDING)	ilization (พาหา 🚽 🖟 🎏 🖟 Ds3 such as trees, shrubs, vine					
Ds4	DISTURBED AREA STABILIZATION (SODDING)		Ds4	A permanent vegetative cover using sods on highly erodable or critically eroded lands.			
Du	DUST CONTROL ON DISTURBED AREAS		Du	Controlling surface and air movement of dust on construction site, roadways and similar sites.			
FI-Co	FLOCCULANTS AND COAGULANTS		FI-Co	Substance formulated to assist in the solids/liquid separation of suspended particles in solution.			
Sb	STREAMBANK STABILIZATION (USING PERM VEGETATION)	Q. Q. Q.	Sb	The use of readily available native plant materials to maintain and enhance streambanks, or to prevent, or restore and repair small streambank erosion problems.			
Ss	SLOPE STABILIZATION		Ss	A protective covering used to prevent erosion and establish temporary or permanent vegetation on steep slopes, shore lines, or channels.			
Tac	TACKIFIERS AND BINDERS		Tac	Substance used to anchor straw or hay mulch by causing the organic material to bind together.			

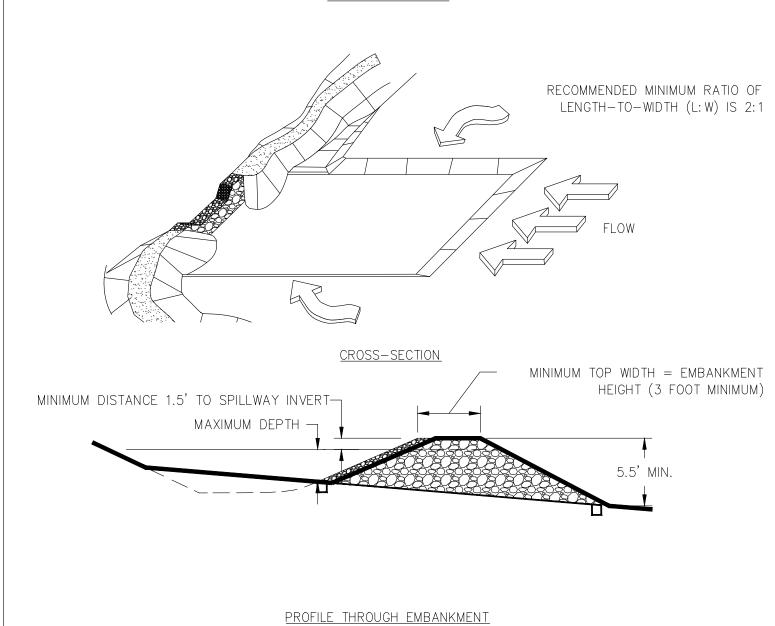
Co CRUSHED STONE CONSTRUCTION EXIT **EXIT DIAGRAM** (IF NEEDED)

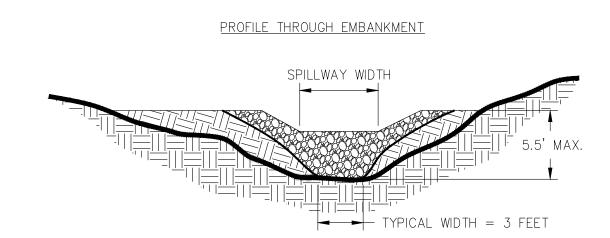
GEOTEXTILE -

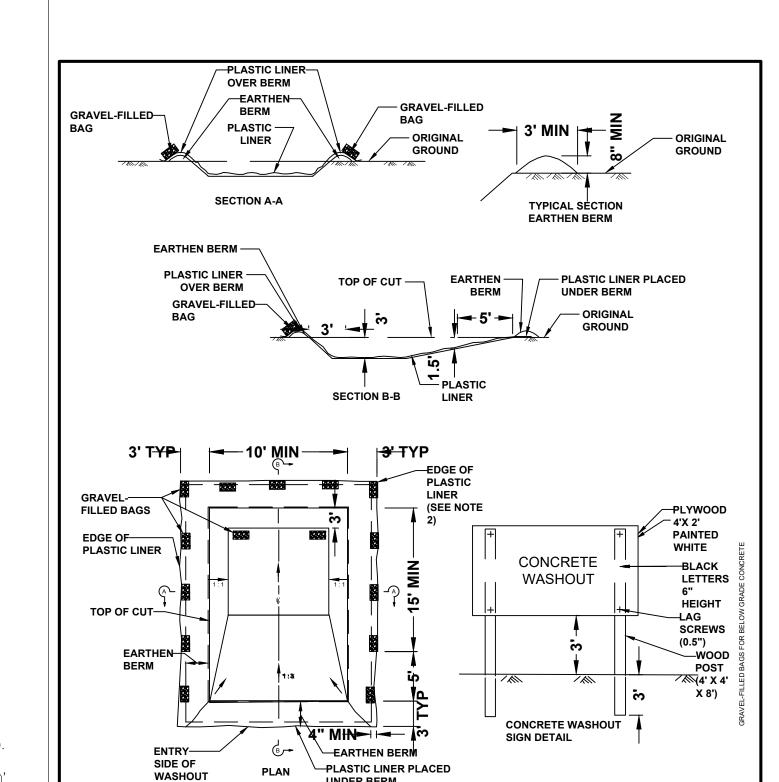


- <u>NOTES:</u> 1. AVOID LOCATING ON STEEP SLOPES OR AT CURVES ON PUBLIC ROADS. 2. REMOVE ALL VEGETATION AND OTHER UNSUITABLE MATERIAL FROM THE FOUNDATION AREA, GRADE, AND 3. AGGREGATE SIZE SHALL BE IN ACCORDANCE WITH NATIONAL STONE ASSOCIATION R-2 (1.5"-3.5" STONE).
- 4. GRAVEL PAD SHALL HAVE A MINIMUM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

TEMPORARY SEDIMENT TRAP COURTESY OF CITY OF KNOXVILLE BMP EROSION AND SEDIMENT **ROCK OUTLET**







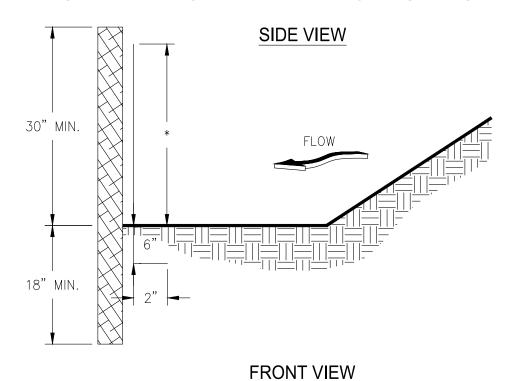
1. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30' OF THE TEMPORARY CONCRETE WASHOUT FACILITY.
2. 10 MIL PLASTIC LINER SHALL BE ANCHORED WITH WASHOUT FACILITY. **CITY OF CUMMING**

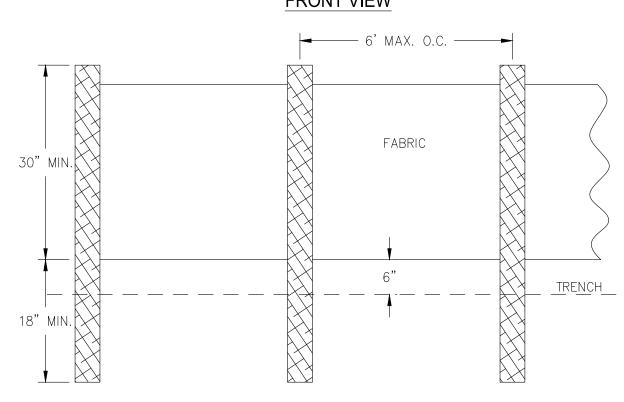
DEPARTMENT OF UTILITIES **CUMMING CONCRETE WASHOUT AREA** LATEST REVISION

SW-18

SCALE: NOT TO SCALE

SILT FENCE - TYPE NON-SENSITIVE

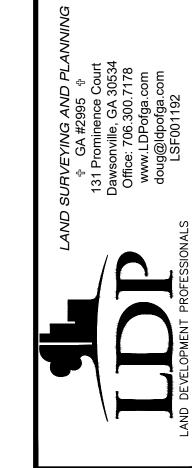




NOTES:

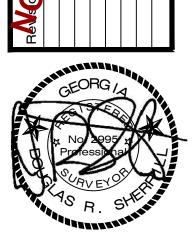
1. USE STEEL OR WOOD POSTS OR AS SPECIFIED BY THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.

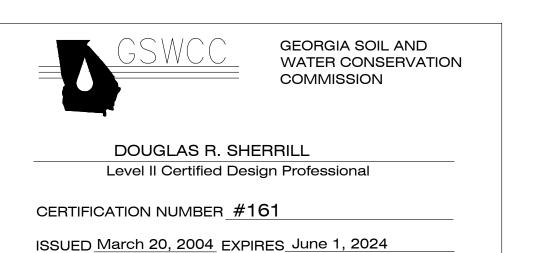
2. HEIGHT (*) IS TO BE SHOWN ON THE EROSION, SEDIMENTATION, AND POLLUTION





June 13, 2023 FIELD CREW: LDP DRAWN BY: DRS Job Number: 5151.001 DRWG FILE: 5151 FIELD DATE: 6/13/2023 Checked By: LDP





See Figure 6-4.1.

Table 6-5.2 - Permanent Cover

PLANTS, PLANTING RATES, AND PLANTING DATES FOR PERMANENT COVER

/ Reduce seeding rates by 50% when drilled. 2/ PLS is an abbreviation for Pure Live Seed. Refer to Section V.E. of these specifications. 3/ M-L represents to Mountain; Blue Ridge; and Ridges and Valleys MLRAs.

P represents the Southern Piedmont MLRA. C represents the Southern Coastal Plain; Sand Hills; Black Lands; and Atlantic Coast Flatwoods MLRAs.

Species	Broadcast Rates 2/ - PLS 3/ Per Per		Resource Area 3	(Sol	Are id li	e as nes	P s in	lan dic	ting	g [Dat otim	es nun			Remarks	
	Per Acre	1000		_ r	err	nis	sibl	le b	out	es i ma	rgi	nal	da				
BAHIA, PENSACOLA		sq. ft.	P	J	F	M	Α	M	J	J	Α	S	0	N	D	166,000 seed per pund. Low	
(Paspalum notatum)	60 lbs.	1.4 lbs.	С													growing. Sod forming. Slow toestablish. Plant with a	
alone or with temporary cover	ou ibs.	1.4 IDS.														companion crop. Will spread into bermuda pastures and lawns. Mi with Sericea lespedeza or	
with other perennials	30 lbs.	0.7 lbs.														weeping lovegrass.	
BAHIA, WILMINGTON (Paspalum notatum)			M-L P														
alone or with temporary cover	60 lbs.	1.4 lbs.														Same as above	
with other perennials	30 lbs.	0.7 lbs.															
BERMUDA, COMMON (Cynodon dactylon) Hulled seed			P C													1,787,000 seed per pound. Quick cover. Low growing and	
alone	10 lbs.	0.2 lbs.														sod forming. Full sun. Good for	
with other perennials	6 lbs.	0.1 lbs.		J	F	М	Α	М	J	J	Α	s	0	N	D	athletic fields.	
BERMUDA, COMMON (Cynodon dactylon) Unhulled seed			P C														
with temporary cover	10 lbs.	0.2 lbs.														Plant with winter annuals.	
with other perennials	6 lbs.	0.1 lbs.		J	F	М	Α	М	J	J	Α	s	0	N	D	Plant with tall fescue.	
BERMUDA SPRIGS	40 cu. ft.	0.9 cu. ft	. M-L													A cubic foot contains approximately 650 sprigs. A	
(Cynodon dactylon) Coastal, Common, Midland, or Tift 44		or ıgs 3' x 3'														bushel contains 1.25 cubic feet or approximately 800 sprigs.	
Coastal, Common,			Р						<u>.</u>							Same as above.	
or Tift 44 Tift 78.			c C													Southern Coastal Plain only.	
CENTIPEDE			Р		L											Drought tolerant. Full sun or	
(Eremochloa ophiuroides)	Block	sod only	C													partial shade. Effective adjacent to concrete and in concentrated	
																flow areas. Irrigation is needed until fully established. Do not pla near pastures. Winterhardy as fa	
CROWNVETECH				J	F	М	Α	M	J	J	Α	S	0	Ν	D	north as Athens and Atlanta.	
(Coronilla varia)																100,000 seed per pound. Dense growth. Drought tolerant and fire	
with winter annuals or cool season grasses	15 lbs.	0.3 lbs.	M-L P													resistant. Attractive rose, pink, a white blossoms spring to late fa Mix with 30 pounds of Tall fescu 15 pounds of rye. Inoculate seed with M inoculant. Use from North	
FESCUE, TALL (Festuca arundinacea)																Atlanta and Northward. 227,000 seed per pound. Use a only on better sites. Not for	
alone	50 lbs.	1.1 lbs.	M-L													droughty soils. Mix with perenni lespedezas or crownvetch. App	
with other	30 lbs.	0.7 lbs.	Р							•						topdressing in spring following f plantings. Not for heavy use are	
perennials KUDZU																or athletic fields.	
(Pueraria thumbergiana)																Rapid and vigorous growth. Excellent in gully erosion contro Will climb. Good livestock forag	
plants or crowns LESPEDEZA, SERICEA	3' - 7	' apart	ALL	J	F	Ν/Ι	Α	NΛ	.1	.1	Α	ď	0	N	D	350,000 seed per pound. Widely	
(Lespedeza cuneata)						101	^	101)			adapted. Low maintenance. Mix with weeping lovegrass, commo	
scarified	60 lbs.	1.4 lbs.	M-L P C													bermuda, bahia, or tall fescue. Takes 2 to 3 years to become fuestablished. Excellent on roadbanks. Inoculate seed with	
unscarified	75 lbs.	1.7 lbs.	M-L													inoculant. Mix with Tall fescue or winter	
a. ISSAI IIISA	, J IDS.	i./ IDS.	P C													annuals.	
seed-bearing hay	3 tons	138 lbs.	M-L P													Mix with Tall fescue or winter annuals.	
LESPEDEZA			C	J	 F	N 4	Α	N 4		J	Α	٥	_	N 1	_	300,000 seed per pound. Height	
Ambro virgata (Lespedeza virgata DC) or Appalow				J	F	ı√l	А	ı√l	J	J	A	0	J	IN	ט	growth is 18 to 24 inches. Advantageous in urban areas. Spreading-type growth has bror	
(Lespedeza cuneata [Dumont] G. Don)			M-L													coloration. Mix with Weeping lovegrass, Common bermuda,	
scarified	60 lbs.	1.4 lbs.	P C													bahia, tall fescue or winter annu Do not mix with Sericea lespeda	
unscarified	75 lbs.	1.7 lbs.	M-L P													Slow to develop solid stands. Inoculate seed with EL inoculate	
LESPEDEZA, SHRUBM (Lespedeza bicolor) (Lespedeza thumbergii)			C M-L P													Provide wildlife food and cover.	
plants	3'	x 3'	С														
LOVEGRASS, WEEPING (Eragrostis curvula)				J	F	M	Α	M	J	J	Α	S	0	N	D	1,500,000 seed per pound. Quic cover. Drought tolerant. Grows with Sericea lespedezaon	
alone	4 lbs.	0.1 lbs.	M-L P													roadbanks.	
with other perennials MAIDENCANE (Panicum hemitomon)	2 lbs.	0.05 lbs.	C													For very wet sites. May clog channels. Dig sprigs from local	
(Panicum hemitomon) sprigs	2' x 3'	spacing	all													sources. Use along river banks a shorelines.	
REED CANARY GRASS (Phalaris arundinacea)				J	F	М	Α	M	J	J	Α	S	0	N	D	Grows similar to tall fescue.	
alone with other	50 lbs.	1.1 lbs.	M-L													S. Swo Shimal to tall lescue.	
perennials	30 lbs.	0.7 lbs.	P														
			i .													I .	



Table 6-4.1 - Temporary Cover or Companion Crops 1/

PLANT, PLANTING RATES, AND PLANTING DATED FOR TEMPORARY COVER OR COMPANION CROPS 1/

Opecies .	Broadcast		Resource Area 4/					Da an					SOL	ırc	e	
	2/ - PLS 3/			(Sc												Remarks
	Per	Per		da											`	
	Acre	1000		ре							_					
		sq. ft.		J	<u> </u>	М	Α	М	J	J	Α	s	0	N	I D	
BARLEY (Horduem vulgare)			M-L P											ļ		
alone		С														14,000 seed per pound Winterhardy. Use on
in milytura	3 bu (144 lbs)	3.3 lb.														productive soils.
	1/2 bu.	0.6 lb.														
	(24 lbs.)	0.0 10.														
LESPEDEZA, ANNUAL			M-L													
(Lespedeza striata)			P													200,000 seed per pound. May volunteer
alone	40 lbs.	0.9 lb. in														for several years. Use
and the state of t																inoculant EL.
mixtures LOVEGRASS,WEEPING	10 lbs.	0.2 lb.														
(Eragrostis curvula)			M-L P													1,500,000 seed per
	40 lb a	0.4.15	C													pound. May last for
alone	40 lbs.	0.1 lb.														several years. Mix with
mixtures	2 lbs.	0.05 lb.														Sericea lespedeza.
MILLET, BROWNTOP			M-L P							ļ						137,000 seed per pour
(Panicum fasciculatum)		С														Quick dense cover. Wil
alone	40 lbs.	0.9 lb.														provide too much competition in mixtures
mixtures	10 lbs.	0.2 lb.														if seeded at high rates.
	10 150.	0.2 10.														
MILLET, PEARL (Pennesetum glaucum)			M-L P													88,000 seed per pound
alone			C													Quick dense cover. Ma reach 5 in height. Not
	50 lbs	1.1 lbs														recommended for
OATS																mixtures.
(Avena sativa)			M-L P											<u> </u>		13,000 seed per pound
alone in	4 h	0.0 lb	C											<u> </u>		Use on productive soils
	4 bu (128 lbs)	2.9 lb.														Not as winterhardy as r or barley.
	1bu	0.7 lb.														
RYE	(32 lbs)															
(Secale cereale)			M-L P								<u> —</u>					
alone	O In	0.0 !!-	C													18,000 seed per pound Quick cover. Drought
	3 bu (168 lbs)	3.9 lb.														tolerant and winterhard
	1/2 bu	0.6 lb.														
	(28 lbs)															227,000 seed per
RYEGRASS, ANNUAL (Lolium temulentum)			M-L P											1	<u> </u>	pound.Dense cover.
-1		С										<u>-</u>		-		Very competitive and is not to be used in
alone	40 lbs	0.9 lbs														mixtures.
SUDANGRASS(Sorghum			M-L													55,000 seed per pound
Sudanese)			P													Good on droughty sites Not recommended for
alone	60 lbs.	1.4 lb.	С													mixtures.
TRITICALE																
(X-riticosecale)			С												 	Use on lower part of Southern Coastal Plain
alone	3 bu	3.3 lb.														and in Atlantic Coastal
	(144 lbs)															Flatwoods only.
	1/2 bu (24 lbs)	0.6 lb.														
WHEAT	(בד וטט)		M-L	\vdash												
(Triticum Aestivum)			P												-	
alone	3 bu	4.1 lb.	С													15,000 seed per pound
	(180 lbs)	10.														15,000 seed per pound
	(100 100)	0.7 lb.						1	l .		1		1	1		

- 1. Temporary cover crops are very competitive and will crown out perennials if seeded too heavily.
- 2. Reduce seeding rates by 50% when drilled.
- 3. PLS is an abbreviation for Pure Live Seed.
- 4. M-L represents the Mountain; Blue Ridge; and Ridges and Valleys MLRAs P represents the Southern Piedmont MLRA
- C represents Southern Coastal Plain; Sand Hills; Black Lands; and Atlantic Coast Flatwoods ML (See Figure 6-4.1, p. 6-40).

Lime and Fertilizer Rates and Analysis

Agricultural lime is required at the rate (2) two tons per acre. 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.

Lime spread by conventional equipment shall be "ground limestone." Ground limestone is calcitic or dolomitic limestone ground so that 90 percent of the material will pass through a 10-mesh sieve, not less than 50 percent will pass through a 50-mesh sieve and not less than 25 percent will pass through a 100-mesh sieve.

Agricultural lime spread by hydraulic seeding equip- ment shall be "finely ground limestone." Finely ground limestone is calcitic or dolomitic limestone ground so that 98 percent of the material will pass through a 20- mesh sieve and not less than 70 percent will pass through a 100-mesh sieve.

It is desirable to use dolomitic limestone in the Sand Hills, Southern Coastal Plain and Atlantic Coast Flatwoods MLRAs. (See Figure 6-4.1)

Agricultural lime is generally not required where only trees are planted.

Initial fertilization, nitrogen, topdressing, and main-tenance fertilizer requirements for each species or com-bination of species are listed in Table 6-5.1.

Fertilize low fertility soils prior to or during planting at the rate of 500-700 lbs per acre of 10-10-10 fertilizer or equivalent to 12-16 lbs/1000sqft

Finely ground limestone will be mixed with water and applied immediately after mulching is completed or in combination with the top dressing.

When conventional planting is to be done, lime and fertilizer shall be applied uniformly in one of the follow- ing ways:

1. Apply before land preparation so that it will be mixed with the soil during seedbed prepara-tion.

2. Mix with the soil used to fill the holes, distrib- ute in furrows.

3. Broadcast after steep surfaces are scarified, pitted or trenched. 4. A fertilizer pellet shall be placed at root depth in the

closing hole beside each pine tree seedling.

Lime and Fertilizer Application

GaSWCC (Amended - 2000)

When equipment is used, the iniitial hydraulic seeding fertilizer shall be mixed with seed, innoculant (if needed), and wood cellulose or wood pulp fiber mulch and applied in a slurry. The innoculant, if needed, shall be mixed with the seed prior to being placed into the hydraulic seeder. The slurry mixture will be agitated during application to keep the ingredients thoroughly mixed. The mixture will be spread uniformly over the area within one hour after being placed in the hydroseeder.

Ds1

Disturbed Area Stabilization (With Mulching Only)

Applying plant residues or other suitable materials, produced on the site if possible, to the soil surface.

PURPOSE To reduce runoff and erosion

To conserve moisture To prevent surface compaction or crusting

To control undesirable vegetation

To modify soil temperature To increase biological activity in the soil

REQUIREMENT FOR REGULATORY COMPLIANCE

Mulch or temporary grassing shall be applied to all exposed areas within 14 days of distur- bance. 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.

FERTILIZER REQUIREMENTS

1000 lbs./ac.

400 lbs./ac.

50-100 lbs./ac. *1,*2 -

1500 lbs./ac. 50-100 lbs./ac. *2,*6

400 lbs./ac. 30 lbs./ac.

EQUIVALENT N-P-K

6-12-12

6-12-12

*2 APPLY IN SPLIT APPLICATIONS WHEN HIGH RATES ARE USED

*6 APPLY WHEN PLANTS GROW TO A HEIGHT OF 2 TO 4 INCHES

YEAR

FIRST SECOND

GRASSES MAINTENANCE 10-10-10

SEASON SECOND 6-12-12
GRASSES MAINTENANCE 10-10-10

1 APPLY IN SPRING FOLLOWING SEEDING.

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.

SPECIFICATIONS

Mulching Without Seeding This standard applies to graded or cleared areas where seedings may not have a suitable growing season to produce an erosion retardant cover, but can be stabilized with a mulch cover.

Site Preparation 1. Grade to permit the use of equipment for applying and anchoring mulch.

2. Install needed erosion control measures as required such as dikes, diversions, berms, terraces and sediment barriers.

3. Loosen compact soil to a minimum depth of 3 inches.

Mulching Materials

Select one of the following materials and apply at the depth indicated:

1. Dry straw or hay shall be applied at a depth of 2 to 4 inches providing complete soil cover- age. One advantage of this material is easy application.

2. Wood waste (chips, sawdust or bark) shall be applied at a depth of 2 to 3 inches. Organic material from the clearing stage of development should remain on site, be chipped, and applied as mulch. This method of mulching can greatly reduce erosion control costs.

3. Polyethylene film shall be secured over banks or stockpiled soil material for temporary protection. This material can be salvaged and re-used.

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.

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

Apply polyethylene film on exposed areas.

Straw or hay mulch can be pressed into the soil with a disk harrow with the disk set straight or with a special "packer disk." Disks may be smooth or serrated and should be 20 inches or more in diameter and 8 to 12 inches apart. The edges of the disk should be dull enough not to cut the mulch but to press it into the soil leaving much of it in an 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. Tackifers, binders and hydraulic mulch with tackifier specifically designed for tacking straw can be substituted for emulsified asphalt. Please refer to specification Tackifers. Plastic mesh or netting with mesh no larger than one inch by one inch shall be installed according to manufacturer's specifications.

Netting of the appropriate size shall be used to anchor wood waste. Openings of the net- ting shall not be larger than the average size of the wood waste chips.

Polyethylene film shall be anchor trenched at the top as well as incrementally as necessary.

Ds2

Disturbed Area Stabilization (With Temporary Seeding)

The establishment of temporary vegetative cover with fast growing seedings for seasonal protection on disturbed or denuded areas.

To reduce runoff and sediment damage of downstream resources

To protect the soil surface from erosion To improve wildlife habitat

To improve aesthetics

To improve tilth, infiltration and aeration as well as organic matter for permanent plantings

REQUIREMENT FOR REGULATORY COMPLIANCE

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 Temporary Seeding).

CONDITIONS

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 companion crops until the permanent vegetation is established. Note: Some species of temporary vegetation are not appropriate for companion crop plantings because of their potential to out-compete the desired species (e.g. annual ryegrass). Contact NRCS or the local SWCD for more information.

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 hand-seeding, 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.

Agricultural lime is required unless soil tests indicate otherwise. Apply agricultural lime at a rate determined by soil test for pH. Quick acting lime should be incorporated to modify pH during the germination period. Bio stimulants should also be considered when there is less than 3% organic matter in the soil. Graded areas require lime application. Soils must be tested to deter- mine required amounts of fertilizer and amendments. Fertilizer should be applied before land preparation and incorporated with a disk, ripper, or chisel. On slopes too steep for, or inaccessible to equipment, fertilizer shall be hydraulically applied, preferably in the first pass with seed and some hydraulic mulch, then topped with the remaining required application

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, culti-packer-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 seeded by hand. See Table 6-4.1

Temporary vegetation can, in most cases, be established without the use of mulch, provided there is little to no erosion potential. However, the use of mulch can often accelerate and enhance germination and vegetation establishment. Mulch without seeding should be considered for short term protection. Refer to Ds1 - Disturbed Area Stabilization (With Mulching Only).

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



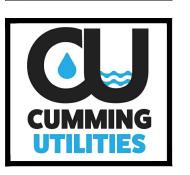
GEORGIA SOIL AND WATER CONSERVATION COMMISSION

DOUGLAS R. SHERRILL Level II Certified Design Professional

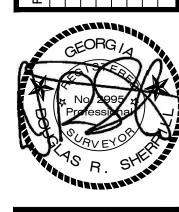
CERTIFICATION NUMBER #161

ISSUED March 20, 2004 EXPIRES June 1, 2024





June 13, 2023 FIELD CREW: LDP DRAWN BY: DRS Job Number: 5151.001 DRWG FILE: 5151 FIELD DATE: 6/13/2023 Checked By: LDP



ΔП



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.

To protect the soil surface from erosion

To reduce damage from sediment and runoff to down-stream areas

To improve wildlife habitat and visual resources

To improve aesthetics

REQUIREMENT FOR REGULATORY COMPLIANCE

This practice shall be applied immediately to rough graded areas that will be undisturbed for longer than six months. This practice or sodding shall be applied immediately to all areas at final grade. Final Stabilization means that all soil disturbing activities at the site have been com- pleted, and that 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 the GA EPD for waste disposal, 100% of the soil surface is uniformly covered in permanent vegetation with a density of 70% or greater, or landscaped ac- cording to the Plan (uniformly covered with land- scaping materials in planned landscaped areas), or equivalent permanent stabilization measures.

Permanent vegetation shall consist of, planted trees, shrubs, perennial vines; or a crop of perennial vegetation appropriate for the region, such that within the growing season a 70% coverage by perennial vegetation shall be achieved. Final stabilization applies to each phase of construction. For linear construction projects on land used for agricultural or silvicultural purposes, final stabilization may be accomplished by stabilizing the disturbed land for its agricultural or silvicultural use. Until this standard is satisfied and permanent control measures and facilities are operational, interim stabilization measures and temporary erosion and sedimentation control measures shall not be removed. CONDITIONS

Permanent perennial vegetation is used to provide a protective cover for exposed areas including cuts, fills, dams, and other denuded areas. PLANNING CONSIDERATIONS

Use conventional planting methods where

stands of rve is an excellent procedure.

possible.

When mixed plantings are done during marginal planting periods, companion crops shall be used.

No-till planting is effective when planting is done following a summer or winter annual cover crop. Sericea lespedeza planted no-till into

Block sod provides immediate cover. It is especially effective in controlling erosion adjacent to concrete flumes and other structures. Refer to Specification Ds4-Disturbed Area Stabilization (With Sodding).

Irrigation should be used when the soil is dry or when summer plantings are done.

Mowing should not be performed during the quail nesting season (May to September).

Low maintenance plants, as well as natives, should be used to ensure long-lasting erosion control.

Wildlife plantings should be included incritical area plantinWildlife Plantings

Commercially available plants beneficial to wildlife species include the following:

Mast Bearing Trees

Beech, Black Cherry, Blackgum, Chestnut, Chinkapin, Hackberry, Hickory, Honey Locust, Native Oak, Persimmon, Sawtooth Oak and

All trees that produce nuts or fruits are favored by many game species. Hickory provides nuts used mainly by squirrels and bear. Shrubs and Small Trees

Bayberry, Bicolor Lespedeza, Crabapple, Dog-wood, Huckleberry or Native Blueberry, Mountain Laurel, Native Holly, Red Cedar, Red

Mulberry, Sumac, Wax Myrtle, Wild Plum and Blackberry

Plant in patches without tall trees to develop stable shrub communities. All produce fruits used by many kinds of wildlife, except for lespedeza that produces seeds used by quail and songbirds.

Grasses, Legumes, Vines and Temporary Cover

Bahiagrass, Bermudagrass, Grass-Legume mixtures, Partridge Pea, Annual Lespedeza, Orchardgrass (for mountains), Browntop Millet (for temporary cover), and Native grapes.

Provides herbaceous cover in clearings for a game bird brood-rearing habitat. Appropriate legumes such as vetches, clovers, and

lespedezas may be mixed with grass, but they may die out after a few years.

CONSTRUCTION SPECIFICATIONS Grading and Shaping

Grading and shaping may not be required where hydraulic seeding and fertilizing equi ment 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.

Lime and Fertilizer Rates and Analysis

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.

Lime spread by conventional equipment shall be "ground limestone." Ground limestone is calcitic or dolomitic limestone ground so that 90 percent of the material will pass through a 10-mesh sieve, not less than 50 percent will pass through a 50-mesh sieve and not less than 25 percent will pass through a 100-mesh sieve.

Fast-acting lime spread by hydraulic seeding equipment should be "finely ground limestone" spanning from the 180 micron size to the 5 micron size. Finely ground limestone is calcitic or dolomitic limestone ground so that 95 percent of the material will pass through a 100-mesh

It is desirable to use dolomitic limestone in the Sand Hills, Southern Coastal Plain and Atlantic Coast Flatwoods MLRAs. (See Figure 6-4.1) Agricultural lime is generally not required where only trees are planted.

Initial fertilization, nitrogen, topdressing, and maintenance fertilizer requirements for each species or combination of species are listed in Table 6-5.1.

Lime and Fertilizer Application

When hydraulic seeding equipment is used, the initial fertilizer shall be mixed with seed, innoculant (if needed), and wood cellulose or wood pulp fiber mulch and applied in a slurry. The innoculant, if needed, shall be mixed with the seed prior to being placed into the hydraulic seeder. The slurry mixture will be agitated during application to keep the ingredients thoroughly mixed. The mixture will be spread uniformly over the area within one hour after being placed in the hydroseeder.

Finely ground limestone can be applied in the mulch slurry or in combination with the top dressing.

When conventional planting is to be done, lime and fertilizer shall be applied uniformly in one of the following ways:

Apply before land preparation so that it will be mixed with the soil during seedbed preparation. Mix with the soil used to fill the holes, distribute in furrows. Broadcast after steep surfaces are scarified, pitted or trenched.

A fertilizer pellet shall be placed at root depth in the closing hole beside each pine tree seedling.

Refer to Tables 6-4.1, 6-5.2, 6-5.3 and 6-5.4 for approved species. Species not listed shall be approved by the State Resource

Conservationist of the Natural Resources Conservation Service before they are used. Plants shall be selected on the basis of species characteristics, site and soil conditions, planned use and maintenance of the area; time of

year of planting, method of planting; and the needs and desires of the land user. Some perennial species are easily established and can be planted alone. Examples of these are Common Bermuda, Tall Fescue, and

Weeping Lovegrass. Other perennials, such as Bahia Grass and Sericea Lespedeza, are slow to become established and should be planted with another perennial spe- cies. The additional species will provide quick cover and ample soil protection until the target perennial species become

established. For example, Com- mon seeding combinations are 1) Weeping Lovegrass with Sericea Lespedeza (scarified) and 2) Tall Fescue with Sericea Lespedeza (unscarified). Plant selection may also include annual compan- ion crops. Annual companion crops should be used only when the perennial species are

not planted during their optimum planting period. A common mixture is Brown Top Millet with Common Bermuda in mid-summer. Care

should be taken in select- ing companion crop species and seeding rates because annual crops will compete with perennial species for water, nutrients, and growing space. A high seeding rate of the companion crop may prevent the establishment of perennial species. Ryegrass shall not be used in any seeding mixtures containing perennial species due to its ability to out-compete desired species chosen for permanent perennial cover.

The term "pure live seed" is used to express the quality of seed and is not shown on the label. Pure live seed, PLS, is expressed as a percent- age of the seeds that are pure and will germinate. Information on percent germination and purity can be found on seed tags. PLS is deter- mined by multiplying the percent of pure seed with the percent of germination; i.e.,

Seed Quality

(PLS = % germination x % purity) EXAMPLE:

Common Bermuda seed 70% germination, 80% purity PLS = 70% germination x 80% purity PLS = 56%

The percent of PLS helps you determine the amount of seed you need. If the seeding rate is 10 pounds PLS and the bulk seed is 56 % PLS,

the bulk seeding rate is: 10 lbs. PLS/acre = 17.9 lbs/acre

56% PLS

You would need to plant 17.9 lbs/acre to provide 10 lbs/acre of pure live seed.

Seedbed Preparation

Seedbed preparation may not be required where hydraulic seeding and fertilizing equip- ment is to be used (but is strongly recommended for any seeding process, when possible). When conventional seeding is to be used, seedbed preparation will be done as follows:

Tillage, at a minimum, shall adequatelyvloosen 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.

Tillage may be done with any suitable equipment.

Tillage should be done on the contour where feasible. 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

Where individual plants are to be set, the soil shall be prepared by excavating holes, opening furrows, or dibble

For nursery stock plants, holes shall be large enough to accommodate roots without crowding.

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.

All legume seed shall be inoculated with ap- propriate nitrogen-fixing bacteria. The innoculant shall be a pure culture prepared specifically for the seed species and used within the dates on the container.

A mixing medium recommended by the manu- facturer shall be used to bond the innoculant to the seed. For conventional seeding, use twice the amount of innoculant recommended by the manufacturer. For hydraulic seeding, four times the amount of innoculant recommended by the manufacturer shall be used.

All inoculated seed shall be protected from the sun and high temperatures and shall be planted the same day inoculated. No inoculated seed shall remain in the hydroseeder longer than one hour.

Hydraulic Seeding

Mix the seed (innoculated 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.

Seeding will be done on a freshly prepared and firmed seedbed. For broadcast planting, use a culti-packer-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 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 distrib- uted 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

Mulch is required for all permanent vegeta- tion applications. Mulch applied to seeded areas shall achieve 75% to 100% soil cover. When selecting a mulch, design professionals should consider the mulch's functional longevity, vegetation establishment enhancement, and erosion control effectiveness. Select the mulching mate- rial from the following and apply as indicated:

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.

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. 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. Sericea Lespedeza hay containing mature seed shall be applied at a rate of three tons per acre.

When using temporary erosion control blankets or block sod, mulch is not required.

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.

Bituminous treated roving may be applied on planted areas, 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 Fransportation 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

Applying 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:

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 may be used. The disks may be smooth or serrated and should be 20 inches or more in diameter and 8 to 12 inches apart. The edges of the 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.

Synthetic tackifiers, binders or hydraulic mulch specifically designed to tack straw, shall be applied in conjunction with or immediately after the mulch is spread. Syn- thetic tackifiers shall be mixed and applied according to manufacturer's specifications. All tackifiers, binders or hydraulic mulch specifically designed to tack straw should be verified nontoxic through EPA 2021.0 testing. Refer to Tackifiers-Tac

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

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.

Bedding Material

Mulch is used as a bedding material to conserve moisture and control weeds in nurseries, ornamental beds, around shrubs, and on bare areas on lawns. Material Depth

Grain straw 4" to 6" Grass Hay

Pine needles 3" to 5"

Irrigation will be applied at a rate that will not cause runoff.

Topdressing will be applied on all temporary and permanent (perennial) species planted alone or in mixtures with other species. Recommended rates of application are listed in Table 6-5.1.

Second Year and Maintenance Fertilization

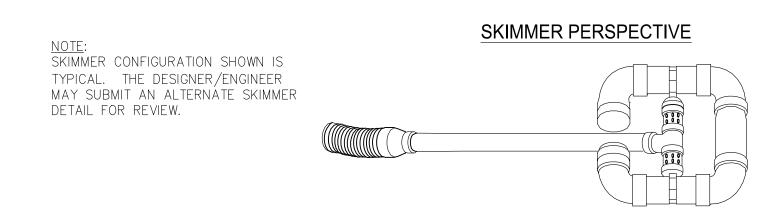
Second year fertilizer rates and maintenance fertilizer rates are listed in Table 6-5.1.

Apply one ton of agricultural lime every 4 to 6 years or as indicated by soil tests. Soil tests can be conducted to determine more accurate requirements, if desired.

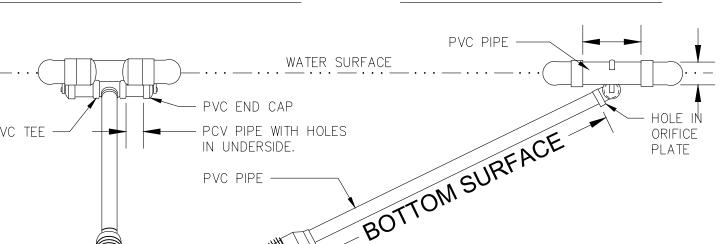
Use and Management

Mow Sericea Lespedeza only after frost to ensure that the seeds are mature. Mow between November and March.Bermudagrass, Bahiagrass and Tall Fescue may be mowed as desired. Maintain at least 6 inches of top growth under any use and management. Moderate use of top growth is beneficial after es- tablishment. Exclude traffic until the plants are well established. Because of the quail nesting season, mowing should not take place between May and September.

TEMPORARY SEDIMENT POND



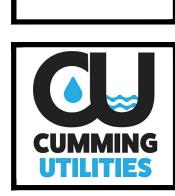
SKIMMER FRONTAL SECTION VIEW



SKIMMER SIDE SECTION VIEW



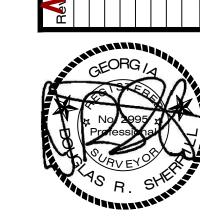




June 13, 2023 FIELD CREW: LDP

DRAWN BY: DRS

Job Number: 5151.001 DRWG FILE: 5151 FIELD DATE: 6/13/2023 Checked By: LDP



GEORGIA SOIL AND

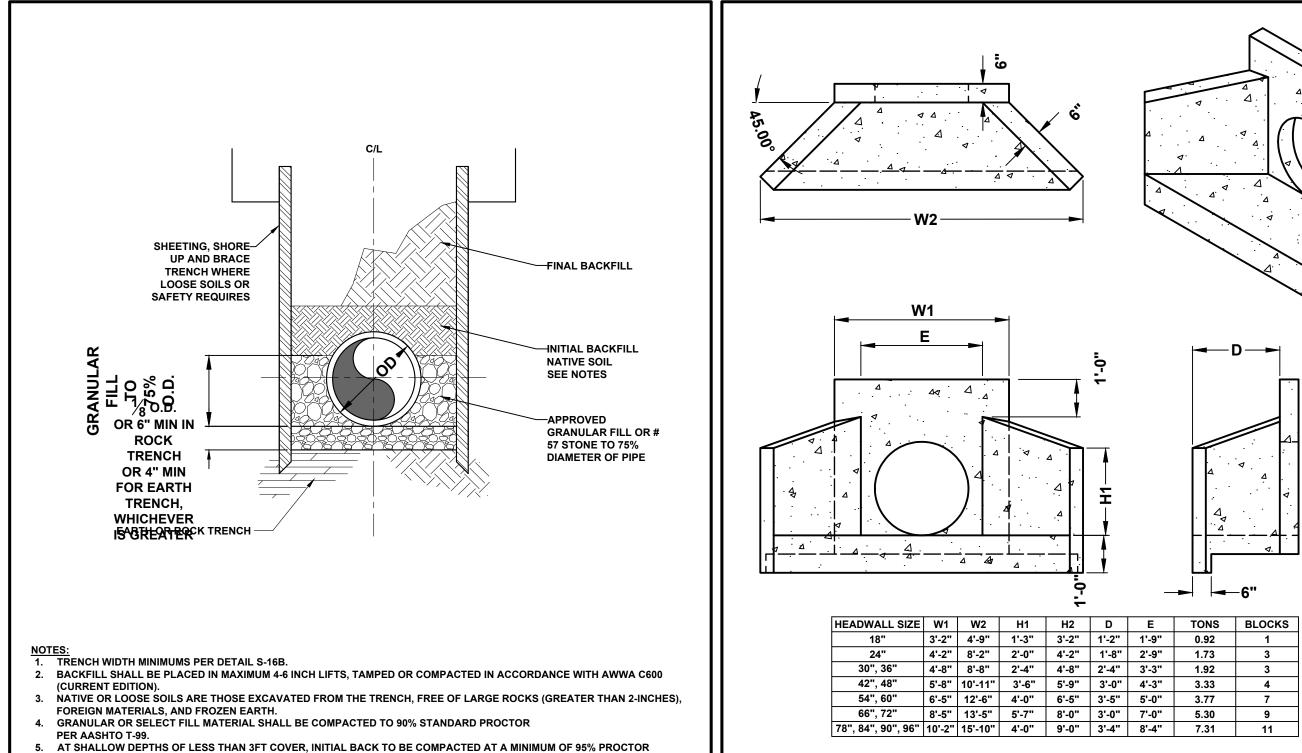
DOUGLAS R. SHERRILL

ISSUED March 20, 2004 EXPIRES June 1, 2024

CERTIFICATION NUMBER #161

Level II Certified Design Professional

WATER CONSERVATION



. 44. 4 HEADWALL SIZE W1 W2 H1 H2 D E TONS BLOCKS 3'-2" 4'-9" 1'-3" 3'-2" 1'-2" 1'-9" 0.92 4'-2" 8'-2" 2'-0" 4'-2" 1'-8" 2'-9" 1.73 4'-8" 8'-8" 2'-4" 4'-8" 2'-4" 3'-3" 1.92

MATERIALS: CONCRETE: 4,000 PSI, TYPE I/II CEMENT

CUMMING UTILITIE LATEST REVISION

DETAIL NUMBER:

SCALE: NOT TO SCALE

CITY OF CUMMING

PRECAST CONCRETE HEADWALLS

DEPARTMENT OF UTILITIES

SCALE: NOT TO SCALE

TRENCH WIDTH CHART FILL TO GRADE SEE NOTE 2 — BACKFILL MATERIAL COMPACTED IN 4" - 6" GRANULAR COVER — APPROVED GRANULAR FILL OR #57 PIPE BEDDED TO **CENTERLINE IN** COMPACTED GRANULAR MATERIAL **4" MIN UNDER PIPE** EARTH OR — ROCK TRENCH SEE DETAIL W-3B FOR TRENCH -WIDTH CHART FILL TO GRADE SEE 1' NOTE 2 GRANULAR COVER GRANULAR FILL OR #57 STONE 1/8" O.D. OR 6" MIN IN ROCK TRENCH OR 4" MIN FOR EARTH **TRENCH** WHICHEVER IS GREATER ROCK TRENCH TRENCH WIDTH MINIMUMS PER DETAIL W-2B. FOREIGN MATERIALS, AND FROZEN EARTH.

W-3B FOR

2. BACKFILL SHALL BE PLACED IN MAXIMUM 4-6 INCH LIFTS, TAMPED OR COMPACTED IN ACCORDANCE WITH AWWA C600 NATIVE OR LOOSE SOILS ARE THOSE EXCAVATED FROM THE TRENCH, FREE OF LARGE ROCKS (GREATER THAN 2-INCHES),

GRANULAR OR SELECT FILL MATERIAL SHALL BE COMPACTED TO 90% STANDARD PROCTOR PER AASHTO T-99.

5. TYPE "V" AND "IV" BEDDING REQUIRED FOR ALL WATER MAIN INSTILLATION. WHERE TRENCH IS EXPOSED ROCK, 6-9 INCHES MIN. CUSHION REQUIRED BETWEEN PIPE & ROCK. TYPE I, II, AND III LAYING CONDITIONS SHALL NOT BE ALLOWED FOR WATER MAINS.
 TYPE "V" BEDDING REQUIRED AT ROADWAY CROSSINGS AND RESTRAINED JOINT LOCATIONS

CUMMING

LATEST REVISION

CITY OF CUMMING

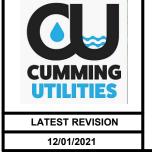
DEPARTMENT OF UTILITIES

BEDDING DETAIL WATER MAINS

DETAIL NUMBER:

SCALE: NOT TO SCALE

SIZE | SIDE CLEARANCE - INCH | DITCH WIDTH - INCH | SHORING WIDTH | **CUT REPAIR WIDTH - FEET** (NOMINAL) SOIL ROCK SOIL ROCK (ADDITIONAL - INCH) ROCK MJ SJ MJ SJ MJ SJ MJ NA 8 NA 14 AS APPROVED NA 3.00 NA 12 | 25 | 23 | 27 | 25 | AS APPROVED | 4.08 3.92 4.25 12 | 28 | 28 | 30 | 30 | AS APPROVED | 4.33 4.50 12 | 32 | 30 | 34 | 32 | AS APPROVED | 4.67 12 | 36 | 34 | 38 | 36 | AS APPROVED | 5.00 4.83 5.17 14 | 45 | 44 | 47 | 46 | AS APPROVED | 5.75 | 5.67 | 5.92 | 18 | 58 | 54 | 60 | 56 | AS APPROVED | 6.83 | 6.50 | 7.00 | 18 | 72 | 64 | 74 | 66 | AS APPROVED | 8.00 | 7.33 | 8.17 |

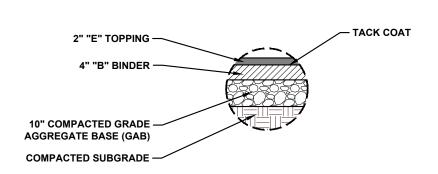


DEPARTMENT OF UTILITIES

W-3B

DETAIL NUMBER:

SCALE: NOT TO SCALE



6. WHERE TRENCH IS EXPOSED ROCK, 6-9 INCHES MIN. CUSHION REQUIRED BETWEEN PIPE & ROCK.
7. FINAL BACKFILL SHALL BE FREE OF OF LARGE ROCKS, ORGANIC MATERIAL, AND DEBRIS.

CUMMING

LATEST REVISION

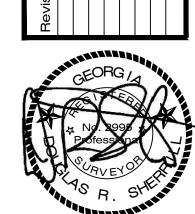
12/01/2021

CITY OF CUMMING

DEPARTMENT OF UTILITIES

STANDARD EMABANKMENT BEDDING

DETAIL FOR HDPE STORMWATER PIPE



CUMMING

June 13, 2023

Job Number:

FIELD DATE: 6/13/2023

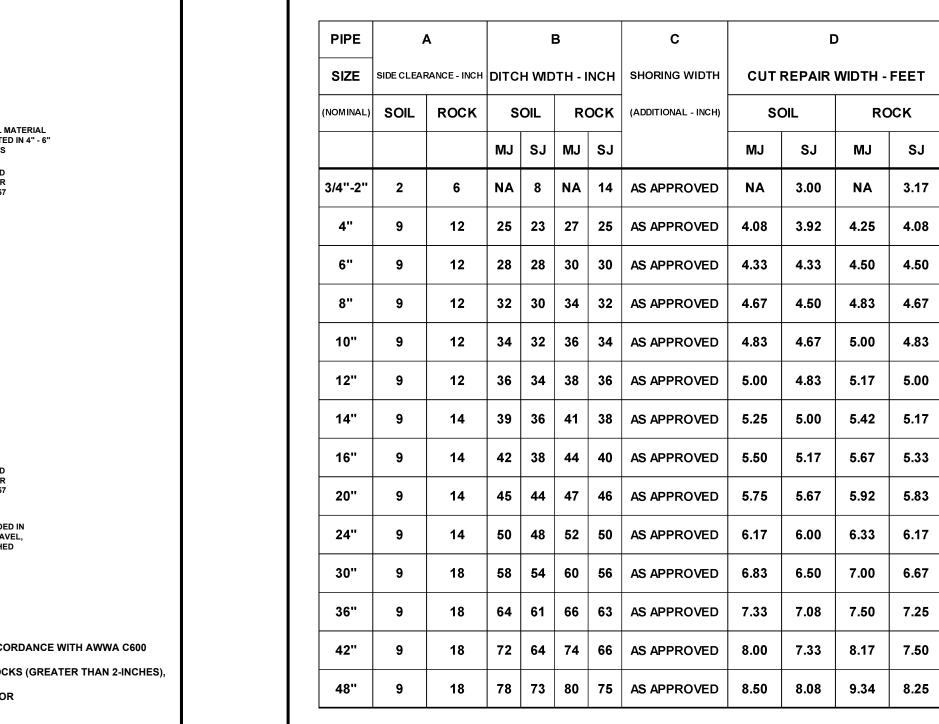
5151.001

FIELD CREW: LDP

DRAWN BY: DRS

DRWG FILE: 5151

Checked By: LDP





CITY OF CUMMING

ALLOWABLE TRENCH WIDTH CHART