

COUNTY	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
FAYETTE	GA	R-5F	R-5F	



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KNOWN UTILITY COMPANIES
 Coweta-Fayette EMC
 Georgia Power
 Fayette County Water System
 Atlanta Gas Light
 Comcast Cable Television

FAYETTE COUNTY

PUBLIC WORKS DEPARTMENT

EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN

S.R. 92 AT WESTBRIDGE RD./VETERANS PKWY.

SPLOST PROJECT NO. R-5F

TRAFFIC DATA
 ADT (2014) = 14,660 VPD
 ADT (2034) = 0 VPD

POSTED SPEED = 55 M.P.H. - S.R. 92
 POSTED SPEED = 45 M.P.H. - VETERANS PKWY.
 POSTED SPEED = 45 M.P.H. - WESTBRIDGE ROAD

THE GEORGIA D.O.T. STANDARDS AND CONSTRUCTION DETAILS REQUIRED FOR THIS PROJECT ARE LISTED IN THE INDEX WITH THE LATEST KNOWN REVISION DATE BUT ARE NOT INCLUDED AS PART OF THE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND MAINTAINING ON THE PROJECT SITE THE GEORGIA D.O.T. STANDARD DRAWINGS AND THE CONSTRUCTION DETAIL DRAWINGS LISTED ON THE INDEX SHEET. FULL SIZE SHEETS MAY BE PURCHASED BY THE CONTRACTOR AT HIS EXPENSE FROM THE GEORGIA D.O.T.

PROJECT LOCATED IN
 FAYETTE COUNTY
 CONGRESSIONAL DISTRICT 3
 COUNTY CODE
 LAND LOT 256
 13TH DISTRICT

FUNCTIONAL CLASSIFICATION:

S.R. 92 - RURAL MINOR ARTERIAL
 VETERANS PKWY. - MINOR ARTERIAL
 WESTBRIDGE ROAD - COLLECTOR

LENGTH OF PROJECT

DESCRIPTION	FEET	MILES
NET LENGTH OF ROADWAY	2973	0.56
NET LENGTH OF BRIDGES	N/A	N/A
NET LENGTH OF PROJECT	2973	0.56
NET LENGTH OF EXCEPTIONS	N/A	N/A
GROSS LENGTH OF PROJECT	2973	0.56

E&SC 24-Hr. Contact:
 Mr. Phil Mallon
 770-320-6010

PRIMARY PERMITTEE:
 Fayette County Public Works
 115 McDonough Rd.
 Fayetteville, GA 30215
 770-461-3142

Non-exempt activities shall not be conducted within the 25 or 50-foot undisturbed stream buffers as measured from the point of wrested vegetation without first acquiring the necessary variances and permits.

Waste materials shall not be discharged to waters of the State, except as authorized by a Section 404 permit.

Construction Activity Stage:
 This stage includes the construction of a 100' wide right-of-way/24' wide roadway to continue construction for a traffic bypass of the City of Fayetteville. This stage also includes the construction of a stop sign intersection at S.R. 92. Prior to the start of land disturbing activities in this project the contractor shall install perimeter sediment control BMP's shown in the plans. Stripping of vegetation and other development activities shall be conducted in such a manner so as to minimize erosion as well as installing orange barrier fence around areas need to be protected. Construction exits shall be provided prior to the start of clearing and grubbing. During construction sediment in run-off water must be trapped by the use of check dams, and sediment inlet traps until the disturbed area is stabilized. Permanent vegetation must be installed as soon as practical for final stabilization.

I certify that this Erosion, Sedimentation and Pollution Control Plan has been prepared in accordance with Part IV, of the General NPDES Permit No. GAR100002. 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 Act and the document "Manual for Erosion and Sediment Control in Georgia" (Manual) published by the State Soil and Water Conservation Commission as of January 1 of this 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 outfall(s) and that the designed system of best management practices and sampling methods is expected to meet requirements contained in the General NPDES Permit No. GAR 100002.

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 judgment, utilizing the factors required in the General NPDES Permit No. GAR 100002, that the increase in the turbidity of each specific receiving water will be representative of the increase in the turbidity of a specific identifies un-sampled receiving water.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that certified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

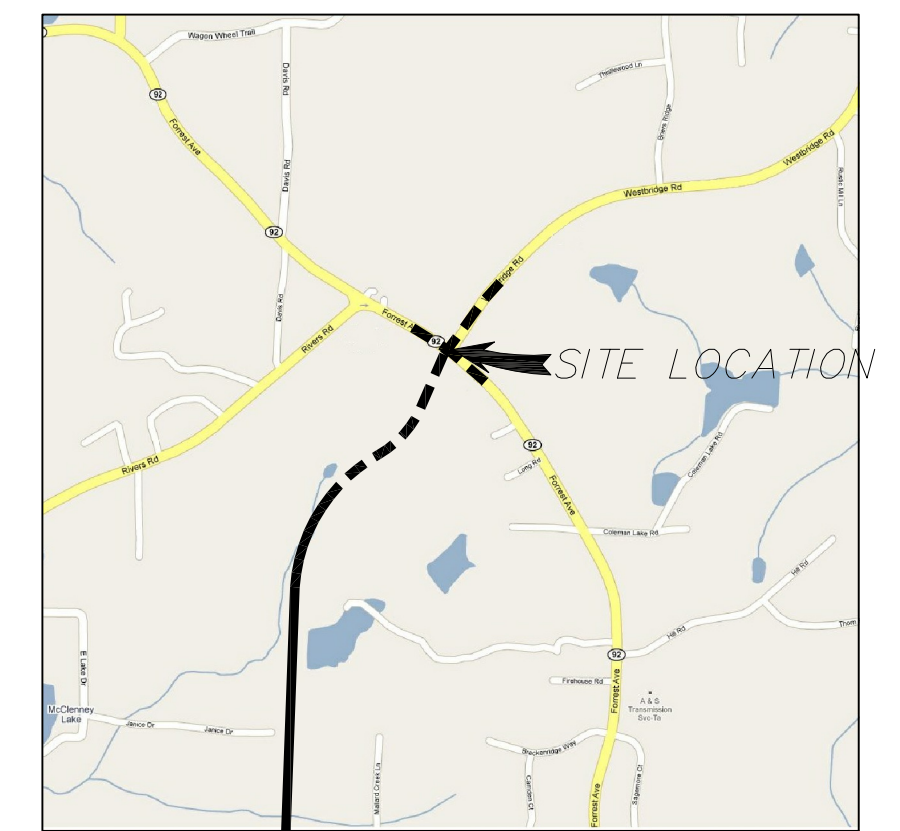
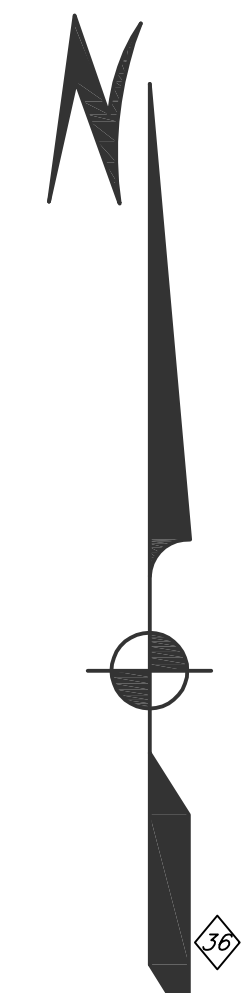
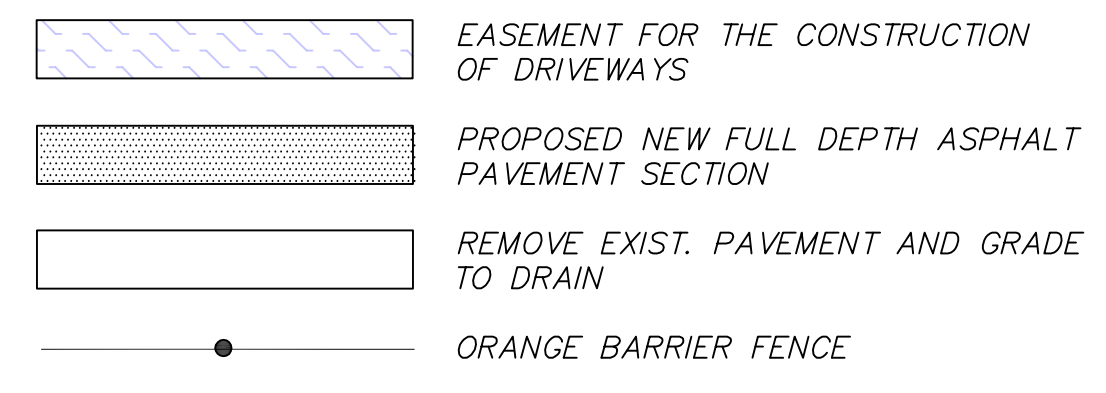
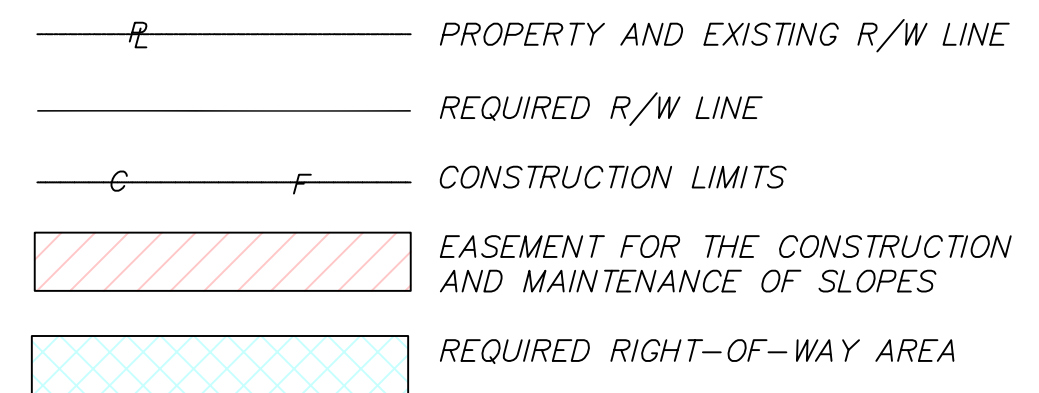
I certify under penalty of law that this plan was prepared after a site visit to the location described herein by myself or my authorized agent, under my supervision.

THE PROPOSED EROSION AND RUNOFF CONTROL MEASURES ARE IN COMPLIANCE WITH THE FAYETTE COUNTY SEDIMENT CONTROL AND FLOOD PROTECTION REGULATIONS AND WILL NOT INCREASE THE RUNOFF RATE FROM THE SITE FOR RAINSTORMS WITH A RETURN PERIOD OF 2, 5, 10, 25, 50 AND/OR 100 YEARS.

David W. Jaeger, P.E.
 Level II Certified Design Professional 0000024056

INITIAL DATE: MARCH 16, 2016

STATE WATERS ARE NOT LOCATED WITHIN 200' OF THIS PROJECT



VICINITY MAP
 N.T.S.



ENGINEERING DEPT.

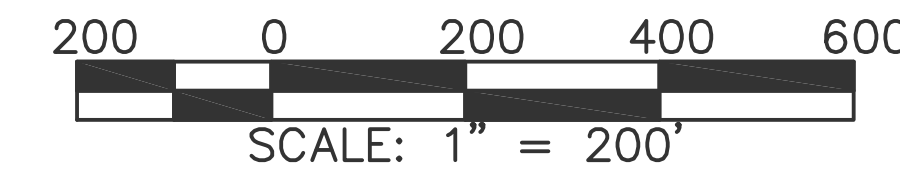
115 McDonough Road, Fayetteville, Georgia 30215
 Phone: (770)320-6010 Fax: (770)719-0871
 www.fayettecountyga.gov



Level II Certified Design
 Professional 0000024056

EROSION CONTROL AND TREE PROTECTION MEASURES SHALL BE INSTALLED PRIOR TO ANY OTHER CONSTRUCTION ACTIVITY AND MAINTAINED UNTIL PERMANENT GROUND COVER IS ESTABLISHED.
 "THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH LAND DISTURBING ACTIVITIES."
 "EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED 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 7 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING."

Fayette County Georgia logo
ENGINEERING DEPT.
 115 McDonough Road, Fayetteville, Georgia 30215
 Phone: (770)320-6010 Fax: (770)719-0871
 www.fayettecountyga.gov



REVISION DATES	
2-7-17	

FAYETTE COUNTY
 PUBLIC WORKS DEPARTMENT
 MARCH 16, 2016
ES&PC PLAN
 S.R. 92 AT WESTBRIDGE RD. / VETERANS
 PKWY.
 DRAWING NO.
CVR

ESPCP GENERAL NOTES:

The Erosion Sedimentation and Pollution Control Plan (ESPCP) is provided by the Public Works Department. If the Contractor elects to alter/revise the ES&PC Plan which significantly effects BMP's, especially BMP's with Hydraulic Components from that shown in the plans, and the Engineer approves the request, it will be the responsibility of the contractor to revise the ESPCP to reflect all changes in ES&PC Plan. This will also include any revisions to erosion and sedimentation control item quantities. Major modification or deletion of specified structural BMP's that are specified in the ESPCP will require a formal revision of the ESPCP and the signature of a GSWCC level II design professional. Additional BMP's may be added as directed by the Engineer.

The escape of sediment from the site shall be prevented by the installation of erosion and sediment control measures and practices prior to, or concurrent with, land disturbing activities.

Erosion control measures will be maintained at all times. If full implementation on 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.

Erosion control and tree protection measures shall be installed prior to any other construction activity and maintained until permanent ground cover is established. Any disturbed area left exposed for a period greater than 7 days shall be stabilized with mulch or temporary seeding.

Records per Part IV.F will be retained by permittee (Fayette County Public works) at county office, 115 McDonough Rd, Fayetteville, GA 30215.

All erosion control measures are to conform to the standards set forth in The Manual for Erosion and Sediment Control in Georgia, most recent edition.

Silt fence is to be placed along back of all curb as directed by the local Inspector.

Dust Control methods are to be used at all time for the duration of construction.

This project does not discharge storm water into an impaired stream segment, or within one mile of and within the same watershed as, any portion of a biota impaired stream segment.

SILT FENCE INSTALLATIONS WITH J-HOOKS AND SPURS

Silt fence should never run continuous without J-Hooks or spurs. The silt fence should turn back into the fill or slope to create small pockets that trap silt and force stormwater to flow through the silt fence. This technique or configuration is commonly referred to as J-Hooks or spurs. The J-Hooks or Spurs shall be installed on all silt fences that are located around the perimeter of the project and along the toe of embankments or slopes. The J-hooks and Spurs shall be spaced in accordance with the Typical Location Details for Silt Fences / Baled Straw. Spacing for J-Hooks or Spurs shall not be less than 50 feet except as noted. Silt fences that are near the outlet of culverts, cross drains, and storm drains shall have a minimum of 3 J-Hooks or Spurs on both sides of the structure at spacing not to exceed 30 feet. J-Hooks or spurs shall be paid for as silt fence items per foot. All costs and other incidental items are included in cost of installing and maintaining the silt fence.

MAINTENANCE AND STABILIZATION MEASURES

All structural BMP's shall be maintained in accordance with the contract documents. All sediment control devices (except sediment basins) installed on a project shall as a minimum, be cleaned of sediment when one-half the capacity, by height, depth, or volume has been reached. Sediment basins shall be cleaned of sediment when one-third the capacity by volume has been reached.

As a minimum the Contractor shall complete the permanent grassing, or temporary grassing, or mulching, as appropriate and in accordance with contract documents, on all cut and fill slopes on a weekly basis during grading operations, except projects with a total of 3 acres or less of grassing may be treated every two weeks. When conditions warrant, the Engineer may require more frequent intervals for this work. It is extremely important to get a stabilizing cover in place, whether it is mulch, temporary grass or permanent grass. Adequate mulch is a must.

When grading operations or other soil disturbing activities have been suspended, for whatever reason, the Contractor shall promptly perform needed grassing work and/or erosion control work as shown in the plans, submitted by the Contractor or as directed by the Engineer.

Temporary grass shall be used when required by the contract documents or as directed by the Engineer to control erosion in areas where permanent grassing cannot be planted. Temporary grass shall be used where an area must be protected for longer than mulch is expected to last which is 60 calendar days. After 60 calendar days, areas with only mulch shall be planted with temporary grass and mulched again.

Temporary grass shall be a quick growing species suitable to the area and season. Seeds shall conform to the requirements of contract documents. Seeding shall be done in accordance with the requirements of the contract documents, except that ground preparation shall be the minimum required to provide a seed bed where further grading will be required. Areas that require no further grading shall be prepared in accordance with the contract documents. Lime shall be omitted unless the area will later be planted in permanent grass without further grading; in which case, lime will be applied according to the contract documents, mixed grade fertilizer shall be applied at the rate of 400 pounds per acre. Nitrogen shall be omitted. All temporary grass shall be mulched in

accordance with contract documents. All areas where temporary grass has been planted shall be prepared in accordance with contract documents prior to planting permanent grass. Where staged construction (or other conditions not controlled by the Contractor) prohibits the completion of a roadway section in a continuous manner, the Contractor shall apply mulch to control erosion for a period of 60 calendar days or less. After 60 calendar days, areas stabilized with only mulch shall be planted with temporary grass and mulched again. Mulch shall be applied and uniformly spread in accordance with contract documents. When grassing operations begin, mulch shall be left in place and plowed into the soil during the process of seedbed preparation, thereby becoming beneficial plant food for the newly planted grass. Mulch required for protection of newly planted grass shall be in addition to the mulch specified herein.

WASTE DISPOSAL

Solid materials, including building materials, shall not be discharged to waters of the state, except as authorized by a Section 404 Permit.

INSPECTIONS

All inspections shall be documented on form DOT-EC-1, or equivalent.

Daily:

Daily inspections shall be conducted by the Worksite Erosion Control Supervisor (WECS) or qualified personnel on the following areas:

- a. Petroleum product storage, usage and handling areas
- b. All locations where vehicles enter/exit the site
- c. Measure rainfall once each twenty four hour period at the site

Weekly and after Rainfall Events:

The following areas shall be inspected by the WECS or qualified personnel every fourteen (14) calendar days and within twenty-four (24) hours of the end of a rainfall event that is 0.5 inches or greater (unless such storm ends after 5:00PM 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):

- a. Disturbed areas not permanently stabilized
- b. Material storage areas
- c. Structural control measures (BMP's)

Within 7 calendar days after the initial installation of the erosion control devices required by the erosion control plan, the Engineer shall inspect the installation and condition of each device. This inspection shall be performed for each stage of construction when new devices are installed. All deficiencies shall be reported in writing to the Contractor and corrections shall be made within two business days.

Monthly:

Once per month, the WECS or qualified personnel shall inspect all areas where final stabilization has been completed. These areas shall be inspected for evidence of sediments or pollutants entering the drainage system and or receiving waters. Any erosion control devices that remain in place shall be inspected to verify the maintenance status and that the devices are functioning properly.

These inspections shall continue until the Notice of Termination is submitted.

Failure to perform inspections as required by the contract documents and the NPDES permit shall result in the cessation of all construction activities with the exception of Traffic Control and Erosion Control. Continued failure to perform inspections shall result in non-refundable deductions as specified in the contract documents.

NON-STORM WATER DISCHARGES

Non-storm water discharges as defined in Part III.A.2 of the NPDES Permit will be identified after construction has commenced and shall be subject to the same requirements as storm water discharges as required by the Georgia Erosion and Sedimentation Control Act, the NPDES Permit, the Clean Water Act, the Manual For Erosion and Sediment Control in Georgia, Department Standards, and contract documents.

PETROLEUM SPILLS & LEAKS

Any leaks or spills of petroleum products will be the responsibility of the contractor to contain, control, and remediate in accordance with all local, state and federal guidelines, ordinances, and laws.

Control of Pollutants: Pollutants or potentially hazardous materials, such as fuels, lubricants, lead paint, chemicals or batteries, shall be transported, stored and utilized in a manner to prevent leakage or spillage into the environment. The Contractor shall also be responsible for proper and legal disposal of all such materials. Equipment, especially concrete or asphalt trucks, shall not be washed or cleaned out on the Project except in areas where unused product contaminants can be prevented from entering waterways.

OTHER CONTROLS

The contractor shall follow this ESPCP and ensure and demonstrate compliance with applicable State and/or local waste disposal, sanitary sewer or septic system regulations.

Contractor shall, where necessary, provide area(s) for the washdown of tools, concrete mixer chutes, hoppers and the rear of vehicles. Washout of the drum is prohibited on site. Use silt fence and rock filter berm as necessary to prevent run off of from leaving washdown area.

SEDIMENT BASINS

Sediment Basins will not be used on this project.

The disturbed area within the drainage area is 6.1 acres. The disturbance activities consist of clearing, grading, and highway construction. Due to the linear nature of the project BMP's as shown on the erosion control plans will be adequate to control sediment runoff at this location. BMP's will include aggressive use of mulch berms, mulching, and mulch blankets to minimize exposure of disturbed areas and slopes and reduce erosion and sediment potential at the source.

PHASE ACTIVITY DESCRIPTION:

Initial and Intermediate erosion control phase: This phase includes the start of land disturbing activities in this project the construction exit shall be installed prior to the start of clearing and grubbing. Contractor shall install perimeter sediment control BMP's shown in the plans. Stripping of vegetation and other development activities shall be conducted in such a manner so as to minimize erosion as well as installing orange barrier fence around areas need to be protected. The temporary stream crossing shall constructed for access to the rear of the project as shown on plan. During construction sediment in run-off water must be trapped by the use of check dams and silt fence until the disturbed area is stabilized. Once stabilized mass grading of residential streets, detention ponds, sanitary and storm sewers can as shown on the plans. The temporary stream crossing is to be removed and the proposed culvert installed as shown of plans. During construction sediment in run-off water must be trapped by the use of check dams and sediment inlet traps until the disturbed area is stabilized. Vegetative BMP's must be used for stabilization of graded areas, mulch berms may also be installed as need to prevent the escape of sediment from disturbed areas.

Final erosion control phase: This phase includes the final construction of residential street and infrastructure as shown on the plans. Construction exits shall be removed to install paving. Mucking of detention ponds and removal of retrofits may be done to insure proper hydraulic function of these features. Sediment in run-off water must be trapped by the use of check dams and sediment inlet traps until the disturbed area is stabilized. Permanent vegetation must be installed as soon as practical for final stabilization.

POST-CONSTRUCTION BMP's

All permanent, post-construction BMP's are shown in the construction plans and in the NPDES plan. The post-construction BMP's for this project may consist of vegetation, rip-rap at pipe outlets for velocity dissipation and outlet stabilization, rip-rap and concrete ditch lining where necessary. The post-construction BMP's will provide permanent stabilization of the site and prevent accelerated transportation of sediment and pollutants into receiving waters.



REVISION DATES			FAYETTE COUNTY PUBLIC WORKS DEPARTMENT	
			MARCH 16, 2016	
			ES&PC PLAN NOTES	
			S.R. 92 AT WESTBRIDGE RD. / VETERANS PKWY.	
			DRAWING NO.	51-01

- | | | | | | | |
|-------------------|--------------------------------------|---|-------------------|--------------------------------------|-------------------|------------------------------|
| Plan Page # | Included Y/N | | | | | |
| 51-2 | <input checked="" type="checkbox"/> | 1. The applicable Erosion, Sedimentation and Pollution Control Plan Checklist established by the Commission as of January 1 of the year in which the land-disturbing activity was permitted.
(The completed Checklist must be submitted with the ES&PC Plan or the Plan will not be reviewed.) | | | | |
| CVR | <input checked="" type="checkbox"/> | 2. Level II certification number issued by the Commission, signature and seal of the certified Design Professional.
(Signature, seal and Level II number must be on each sheet pertaining to ES&PC plan or the Plan will not be reviewed.) | | | | |
| CVR | <input checked="" type="checkbox"/> | 3. The name and phone number of the 24-hour local contact responsible for erosion, sedimentation and pollution controls. | | | | |
| CVR | <input checked="" type="checkbox"/> | 4. Provide the name, address and phone number of primary permittee. | | | | |
| 51-1 | <input checked="" type="checkbox"/> | 5. Note total and disturbed acreage of the project or phase under construction. | | | | |
| CVR | <input checked="" type="checkbox"/> | 6. Provide the GPS locations of the beginning and end of the infrastructure project. Give the Latitude and Longitude in decimal degrees. | | | | |
| CVR | <input checked="" type="checkbox"/> | 7. Initial date of the Plan and the dates of any revisions made to the Plan including the entity who requested the revisions. | | | | |
| CVR | <input checked="" type="checkbox"/> | 8. Description of the nature of construction activity. | | | | |
| CVR | <input checked="" type="checkbox"/> | 9. Provide vicinity map showing site's relation to surrounding areas. Include designation of specific phase, if necessary. | | | | |
| 53-1 | <input checked="" type="checkbox"/> | 10. Identify the project receiving waters and describe all adjacent areas including streams, lakes, residential areas, wetlands, etc. which may be affected. | | | | |
| CVR | <input checked="" type="checkbox"/> | 11. Design professional's certification statement and signature that the site was visited prior to development of the ES&PC Plan as stated on page 15 of the permit. | | | | |
| CVR | <input checked="" type="checkbox"/> | 12. Design professional's certification statement and signature that the permittee's ES&PC Plan provides for an appropriate and comprehensive system of BMPs and sampling to meet permit requirements as stated on page 15 of the permit. | | | | |
| CVR | <input checked="" type="checkbox"/> | 13. Design professional certification statement and signature that the permittee's ES&PC Plan provides for representative sampling as stated on page 26 permit as applicable. | | | | |
| 51-1 | <input checked="" type="checkbox"/> | 14. Clearly note statement that "The design professional who prepared the ES&PC Plan is to inspect the installation of the sediment storage requirements, perimeter control BMPs and sediment basins in accordance with part IV-A.5. within 7 days after installation." | | | | |
| CVR | <input checked="" type="checkbox"/> | 15. Clearly note the statement that "Non-exempt activities shall not be conducted within the 25 or 50-foot undisturbed stream buffers as measured from the point of wasted vegetation or within 25-feet of the coastal marshland buffer as measured from the Jurisdictional Determined Line without first acquiring the necessary variances and permits." | | | | |
| 51-2 | <input checked="" type="checkbox"/> | 16. Provide a description of any buffer encroachments and indicate whether a buffer variance is required. | | | | |
| 51-1 | <input checked="" type="checkbox"/> | 17. Clearly note the statement that "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." | | | | |
| CVR | <input checked="" type="checkbox"/> | 18. Clearly note the statement that "Waste materials shall not be discharged to waters of the State, except as authorized by a section 404 permit." | | | | |
| ALL | <input checked="" type="checkbox"/> | 19. Clearly note the statement that "The escape of sediment from the site shall be prevented by the installation of erosion and sediment control measures and practices prior to, or concurrent with, land disturbing activities." | | | | |
| ALL | <input checked="" type="checkbox"/> | 20. Clearly note statement that "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." | | | | |
| ALL | <input checked="" type="checkbox"/> | 21. Clearly note the statement "Any disturbed area left exposed for a period greater than 14 days shall be stabilized with mulch shall be stabilized with mulch or temporary seeding." | | | | |
| 51-1 | <input checked="" type="checkbox"/> | 22. Any construction activity which discharges storm water into an Impaired Stream Segment, or within 1 linear mile upstream of and within the same watershed as, any portion of an Biota Impaired Stream Segment must comply with Part III. C. of the Permit. Include the completed Appendix 1 listing all the BMPs that will be used for those areas of the site which discharge to the Impaired Stream Segment. | | | | |
| N/A | <input checked="" type="checkbox"/> | 23. If a TMDL Implementation Plan for sediment has been finalized for the Impaired Stream Segment (identified in item 22 above) at least six months prior to submittal of NOI, the ES&PC Plan must address any site-specific conditions or requirements included in the TMDL Implementation Plan. | | | | |
| 51-1 | <input checked="" type="checkbox"/> | 24. BMPs for concrete washdown of tools, concrete mixer chutes, hoppers and the rear of the vehicles. Washout of the drum at the construction site is prohibited. | | | | |
| 51-1 | <input checked="" type="checkbox"/> | 25. Provide BMPs for the remediation of all petroleum spills and leaks. | | | | |
| 51-1 | <input checked="" type="checkbox"/> | 26. Description of the measures that will be installed during the construction process to control pollutants in storm water that will occur after construction operations have been completed. | | | | |
| 51-1 | <input checked="" type="checkbox"/> | 27. Description of the practices that will be used to reduce the pollutants in storm water discharges. | | | | |
| 52-1 | <input checked="" type="checkbox"/> | 28. Description and chart or timeline of the intended sequence of major activities which disturb soils for the major portions of the site (i.e., initial perimeter and sediment storage BMPs, clearing and grubbing activities, excavation activities, utility activities, temporary and final stabilization). | | | | |
| | <input type="checkbox"/> | 29. Provide complete requirements of inspections and record keeping by the primary permittee. | | | | |
| | <input type="checkbox"/> | 30. Provide complete requirements of sampling frequency and reporting of sampling results. | | | | |
| | <input type="checkbox"/> | 31. Provide complete details for retention of records as per Part IV.F. of the permit. | | | | |
| | <input type="checkbox"/> | 32. Description of analytical methods to be used to collect and analyze the samples from each location. | | | | |
| | <input type="checkbox"/> | 33. Appendix B rationale for NTU values at all outfall sampling points where applicable. | | | | |
| | <input type="checkbox"/> | 34. Delineate all sampling locations, perennial and intermittent streams and other water bodies into which storm water discharged. | | | | |
| 51-1 | <input checked="" type="checkbox"/> | 35. A description of appropriate controls and measures that will be implemented at the construction site including: (1) initial sediment storage requirements and perimeter control BMPs, (2) intermediate grading and drainage BMPs, and (3) final BMPs. For construction sites where there will be no mass grading and the initial perimeter control BMPs, intermediate grading and drainage BMPs, and final BMPs are the same, the plan may combine all of the BMPs into a single phase. | | | | |
| CVR | <input checked="" type="checkbox"/> | 36. Graphic scale and North arrow. | | | | |
| ALL | <input checked="" type="checkbox"/> | 37. Existing and proposed contour lines with contour lines drawn at an interval in accordance with the following:
<table border="1" style="margin-left: 20px;"> <tr> <td>Existing Contours</td> <td>USGS 1" : 2000' Topographical Sheets</td> </tr> <tr> <td>Proposed Contours</td> <td>1" : 400' Centerline Profile</td> </tr> </table> | Existing Contours | USGS 1" : 2000' Topographical Sheets | Proposed Contours | 1" : 400' Centerline Profile |
| Existing Contours | USGS 1" : 2000' Topographical Sheets | | | | | |
| Proposed Contours | 1" : 400' Centerline Profile | | | | | |
| | <input type="checkbox"/> | 38. Use of alternative BMPs whose performance has been documented to be equivalent to or superior to conventional BMPs as certified by a Design Professional (unless disapproved by EPD or the Georgia Soil and Water Conservation Commission). Please refer to the Alternative BMP Guidance Document found at www.dasrec.org . | | | | |
| | <input type="checkbox"/> | 39. Use of alternative BMP for application to the Equivalent BMP List. Please refer to Appendix A-2 of the Manual for Erosion & Sediment Control in Georgia 2016 Edition. | | | | |
| ALL | <input checked="" type="checkbox"/> | 40. Delineation of the applicable 25-foot or 50-foot undisturbed buffers adjacent to state waters and any additional buffers required by the Local Issuing Authority. Clearly note and delineate all areas of impact. | | | | |
| ALL | <input checked="" type="checkbox"/> | 41. Delineation of on-site wetlands and all state waters located on and within 200 feet of the project site. | | | | |
| 53-1 | <input checked="" type="checkbox"/> | 42. Delineation and acreage of contributing drainage basins on the project site. | | | | |
| 53-1 | <input checked="" type="checkbox"/> | 43. Delineation on-site drainage and off-site watersheds using USGS 1":2000' topographical sheets. | | | | |
| 53-1 | <input checked="" type="checkbox"/> | 44. An estimate of the runoff coefficient or peak discharge flow of the site prior to and after construction activities are completed. | | | | |
| ALL | <input checked="" type="checkbox"/> | 45. Storm-drain pipe and weir velocities with appropriate outlet protection to accommodate discharges without erosion. Identify/Delineate all storm water discharge points. | | | | |
| ALL | <input checked="" type="checkbox"/> | 46. Soil series for the project site and their delineation. | | | | |
| ALL | <input checked="" type="checkbox"/> | 47. The limits of disturbance for each phase of construction. | | | | |
| 51-2 | <input checked="" type="checkbox"/> | 48. Provide a minimum of 67 cubic yards of sediment storage per acre drained using a temporary sediment basin, retrofitted detention pond, and/or excavated inlet sediment traps for each common drainage location. Sediment storage volume must be in place prior to and during all land disturbance activities until final stabilization of the site has been achieved. A written rationale explaining the decision to use equivalent controls when a sediment basin is not attainable must be included in the Plan for each common drainage location in which a sediment basin is not provided. Worksheets from the Manual must be included for structural BMPs and all calculations used by the design professional to obtain the required sediment storage when using equivalent controls. | | | | |
| ALL | <input checked="" type="checkbox"/> | 49. Location of Best Management Practices that are consistent with and no less stringent than the Manual for Erosion and Sediment Control in Georgia. Use uniform coding symbols from the Manual, Chapter 6, with legend. | | | | |
| 52 | <input checked="" type="checkbox"/> | 50. Provide detailed drawings for all structural practices. Specifications must, at a minimum, meet the guidelines set forth in the Manual for Erosion and Sediment Control in Georgia. | | | | |
| 52-2 | <input checked="" type="checkbox"/> | 51. Provide vegetative plan, noting all temporary and permanent vegetative practices. Include species, planting dates and seeding, fertilizer, lime and mulching rates. Vegetative plan shall be site specific for appropriate time of year that seeding will take place and for the appropriate geographic region of Georgia. Effective January 1, 2017 | | | | |

SEDIMENT STORAGE

The following table summarizes the required and available sediment storage of every outfall on this project. The contractor shall provide and maintain the storage volumes for the BMP's specified in this table.

OUTFALL ID	DRAINAGE AREA (ACRES)	DISTURBED AREA (ACRES)	REQUIRED SEDIMENT STORAGE VOLUME (CY)	TOTAL STORAGE VOLUME PROVIDED (CY)	BUFFER ENCROACHMENT	VARIANCE REQUIRED	SEDIMENT BASINS (CY)		CHECK DAMS (CY)		FILTER RINGS (CY)		SILT FENCE TYPE C (LF) (CY)	
							POND#	TOTAL VOLUME	# OF DEVICES	TOTAL VOLUME	# OF DEVICES	TOTAL VOLUME	LENGTH	TOTAL VOLUME
* EX. DITCH 230+00 LT	31.6	4.68	313	467	N	N	0	0	8	24	0	0	2648	443**
* EX. DITCH 230+00 RT	3.5	1.53	103	297	N	N	0	0	10	30	0	0	1604	267**

* EXISTING DITCHES PREVIOUSLY CONSTRUCTED DURING VETERANS PARKWAY PHASE 2, SECTION 2 CONSTRUCTIONS
 ** SILT FENCE SEDIMENT STORAGE USED IS 0.167 CY/LF



REVISION DATES		FAYETTE COUNTY PUBLIC WORKS DEPARTMENT	
		MARCH 16, 2016	
		ES&PC PLAN NOTES	
		S.R. 92 AT WESTBRIDGE RD. / VETERANS PKWY.	
		DRAWING NO.	51-02

GEORGIA UNIFORM CODING SYSTEM

FOR SOIL EROSION AND SEDIMENT CONTROL PRACTICES

GEORGIA SOIL AND WATER CONSERVATION COMMISSION

STRUCTURAL PRACTICES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Cd	CHECKDAM			A small temporary barrier or dam constructed across a swale, drainage ditch or area of concentrated flow.
Ch	CHANNEL STABILIZATION			Improving, constructing or stabilizing an open channel, existing stream, or ditch.
Co	CONSTRUCTION EXIT			A crushed stone pad located at the construction site exit to provide a place for removing mud from tires thereby protecting public streets.
Cr	CONSTRUCTION ROAD STABILIZATION			A 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			A flexible conduit of heavy-duty fabric or other material designed to safely conduct surface runoff down a slope. This is temporary and inexpensive.
Dn2	PERMANENT DOWNDRAIN STRUCTURE			A paved chute, pipe, sectional conduit or similar material designed to safely conduct surface runoff down a slope.
Fr	FILTER RING			A temporary stone barrier constructed at storm drain inlets and pond outlets.
Ga	GABION			Rock filter baskets which are hand-placed into position forming soil stabilizing structures.
Gr	GRADE STABILIZATION STRUCTURE			Permanent structures installed to protect channels or 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 drainage ways.
Re	RETAINING WALL			A wall installed to stabilize cut and fill slopes where maximum permissible slopes are not obtainable. Each situation will require special design.
Rt	RETRO FITTING			A device or structure placed in front of a permanent stormwater detention pond outlet structure to serve as a temporary sediment filter.
Sd1	SEDIMENT BARRIER			A barrier to prevent sediment from leaving the construction site. It may be sandbags, bales of straw or hay, brush, logs and poles, gravel, or a silt fence.
Sd2	INLET SEDIMENT TRAP			An impounding area created by excavating around a storm drain drop inlet. The excavated area will be filled and stabilized on completion of construction activities.
Sd3	TEMPORARY SEDIMENT BASIN			A basin created by excavation or a 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			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			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.

STRUCTURAL PRACTICES

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

VEGETATIVE PRACTICES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Bf	BUFFER ZONE			Strip of undisturbed original vegetation, enhanced or restored existing vegetation or the reestablishment of vegetation surrounding an area of disturbance or bordering streams.
Cs	COASTAL DUNE STABILIZATION (WITH VEGETATION)			Planting vegetation on dunes that are denuded, artificially constructed, or re-nourished.
Ds1	DISTURBED AREA STABILIZATION (WITH MULCHING ONLY)			Establishing temporary protection for disturbed areas where seedlings may not have a suitable growing season to produce an erosion retarding cover.
Ds2	DISTURBED AREA STABILIZATION (WITH TEMP SEEDING)			Establishing a temporary vegetative cover with fast growing seedlings on disturbed areas.
Ds3	DISTURBED AREA STABILIZATION (WITH PERM SEEDING)			Establishing a permanent vegetative cover such as trees, shrubs, vines, grasses, or legumes on disturbed areas.
Ds4	DISTURBED AREA STABILIZATION (SOODING)			A permanent vegetative cover using sods on highly erodible or critically eroded lands.
Du	DUST CONTROL ON DISTURBED AREAS			Controlling surface and air movement of dust on construction site, roadways and similar sites.
Fl-Co	FLOCCULANTS AND COAGULANTS			Substance formulated to assist in the solids/liquid separation of suspended particles in solution.
Sb	STREAMBANK STABILIZATION (USING PERM. VEGETATION)			The use of readily available native plant materials to maintain and enhance streambanks, or to prevent, or restore and repair small streambank erosion problems.
Ss	SLOPE STABILIZATION			A protective covering used to prevent erosion and establish temporary or permanent vegetation on steep slopes, shore lines, or channels.
Tac	TACKIFIERS AND BINDERS			Substance used to anchor straw or hay mulch by causing the organic material to bind together.

ACTIVITY	WEEKS FROM START OF CONSTRUCTION											
	1ST	2ND	3RD	4TH	5TH	6TH	7TH	8TH	9TH	10TH	11TH	12TH
INITIAL SEDIMENT CONTROL	■	■	■	■	■	■	■	■	■	■	■	■
CLEARING	■	■	■	■	■	■	■	■	■	■	■	■
MASS GRADING	■	■	■	■	■	■	■	■	■	■	■	■
STORM DRAIN	■	■	■	■	■	■	■	■	■	■	■	■
INTERMEDIATE SEDIMENT CONTROL	■	■	■	■	■	■	■	■	■	■	■	■
GRADED AGGREGATE BASE	■	■	■	■	■	■	■	■	■	■	■	■
GRASSING	■	■	■	■	■	■	■	■	■	■	■	■
MAINTAIN EROSION CONTROL	■	■	■	■	■	■	■	■	■	■	■	■

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

Construction Exit

DEFINITION
A stone stabilized pad located at any point where traffic will be leaving a construction site to a public right-of-way, street, alley, sidewalk or parking area or any other area where there is a transition from bare soil to a paved area.

PURPOSE
To reduce or eliminate the transport of mud from the construction area onto public rights-of-way by motor vehicles or by runoff.

CONDITIONS
This practice is applied at appropriate points of construction egress. Geotextile underlayment are required to stabilize and support the pad aggregates.

DESIGN CRITERIA
Formal design is not required. The following standards shall be used:
Aggregate Size: Stone will be in accordance with National Stone Association R-2 (1.5 to 3.5 inch stone).

Pad Thickness
The gravel pad shall have a minimum thickness of 6 inches.

Pad Width
At a minimum, the width should equal full width of all points of vehicular egress, but not less than 20 feet wide.

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Washing

If the action of the vehicle traveling over the gravel pad does not sufficiently remove the mud, the tires should be washed prior to entrance onto public rights-of-way. When washing is required, it shall be done on an area stabilized with crushed stone and provisions that intercept this sediment-laden runoff and direct it into an approved sediment trap or sediment basin.

Location
The exit shall be located or protected to prevent sediment from leaving the site.

CONSTRUCTION SPECIFICATIONS
It is recommended that the entrance area be excavated to a depth of 3 inches and be cleared of all vegetation and roots.

Diversion Ridge
On sites where the grade toward the paved area is greater than 2%, a diversion ridge 6 to 8 inches high with 3:1 side slopes shall be constructed across the foundation approximately 15 feet above the road.

Geotextile
The geotextile underlayment must be placed the full length and width of the entrance. Geotextile selection shall be based on AASHTO M288-96 specification.

MAINTENANCE
The exit shall be maintained in a condition which will prevent tracking or flow of mud onto public rights-of-way. This may require periodic dressing with 1.5 to 3.5 inch stone, as conditions demand, and repair and/or cleanup of any structures to trap sediment. All materials applied, dropped, washed, or tracked from vehicles or site onto roadways or into storm drains must be removed immediately.

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CRUSHED STONE CONSTRUCTION EXIT

EXIT DIAGRAM

ENTRANCE ELEVATION

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

Slope Stabilization

DEFINITION
A protective covering used to prevent erosion and establish temporary or permanent vegetation on steep slopes, shore lines, or channels.

PURPOSE
To provide a cover layer that stabilizes the soil and acts as a rain drop impact dissipater while providing a microclimate which protects young vegetation and promotes its establishment. If using slope stabilization to reinforce channels, please refer to specification, Ch. Channel Stabilization.

CONDITIONS
Slope stabilization can be applied to fill areas or slopes where the erosion hazard is high and slope protection is needed during the establishment of vegetation.

PERFORMANCE EVALUATION
For a product or practice to be approved as slope stabilization, that product or practice must have a documented C-factor of 0.080, as specified by GSWCC. For complete test procedures and approved products list please visit www.gswcc.org/2018/02/

PLANNING CONSIDERATIONS
Care must be taken to choose the type of slope stabilization product which is most appropriate for the specific needs of a project. Two general types of slope stabilization products are discussed within this specification.

Roller Erosion Control Products (RECP)
A natural fiber blanket with single or double photodegradable or biodegradable nets.

Hydraulic Erosion Control Products (HECP)
HECP shall utilize straw, cotton, wood or other natural based fibers held together by a soil binding agent which works to stabilize soil particles. Paper mulch should not be used for erosion control.

CRITERIA
Roller Erosion Control Products (RECPs) and Hydraulic Erosion Control Products (HECPs)
- Installation and staging of RECPs and application rates for the HECPs shall conform to manufacturer's guidelines for application
- Products shall have a maximum C-factor (ASTM D6459) for the following slope grade:
Slope (H:V) C-Factor (max.)
3:1 or greater 0.080

Materials - HECP
Hydraulic erosion control products shall be prepackaged from the manufacturer. Field mixing of performance enhancing additives will not be allowed. Fibrous components should be all natural or biodegradable.
Products shall be determined to be non-toxic in accordance with EPA-821-R-02-012.

Materials - RECP
Blankets shall be non-toxic to vegetation, seed, or wildlife. Products shall be determined to be non-toxic in accordance with EPA-821-R-02-012. At minimum, the plastic or biodegradable netting shall be attached to the fibrous matrix to maximize strength and provide for ease of handling.

RECPs are categorized as follows:
a. Short-Term (functional longevity 12 mo.)
i. Photodegradable
Straw blankets with a top and bottom side biodegradable jute net. The top side net shall consist of machine direction strands that are twisted together and then interwoven with cross direction strands (levo weave). The bottom net may be levo weave or otherwise to meet requirements. The approximate size of the mesh shall be openings of 0.5" X 1.0". The blanket should be sewn together on 1.5' centers with degradable thread. Minimum thickness should be 0.25" and minimum density should be 0.5 lbs per square yard.
ii. Biodegradable
Blankets that consist of 70% straw and 30% coconut with a top and bottom side biodegradable jute net. The top side net shall consist of machine direction strands that are twisted together and then interwoven with cross direction strands (levo weave). The bottom net may be levo weave or otherwise to meet requirements. The approximate size of the mesh shall be openings of 0.5" X 1.0". The blanket should be sewn together on 1.5' centers with degradable thread. Minimum thickness should be 0.25" and minimum density should be 0.5 lbs per square yard.
iii. Biodegradable
Blankets that consist of 100% coconut with a top and bottom side biodegradable jute net. The top side net shall consist of machine direction strands that are twisted together and then interwoven with cross direction strands (levo weave). The bottom net may be levo weave or otherwise to meet requirements. The approximate size of the mesh shall be openings of 0.5" X 1.0". The blanket should be sewn together on 1.5' centers with degradable thread. Minimum thickness should be 0.25" and minimum density should be 0.5 lbs per square yard.

b. Extended-Term (functional longevity 24 mo.)
i. Photodegradable
Blankets that consist of 70% straw and 30% coconut with a top and bottom side biodegradable jute net. The top side net shall consist of machine direction strands that are twisted together and then interwoven with cross direction strands (levo weave). The bottom net may be levo weave or otherwise to meet requirements. The approximate size of the mesh shall be openings of 0.5" X 1.0". The blanket should be sewn together on 1.5' centers with degradable thread. Minimum thickness should be 0.25" and minimum density should be 0.5 lbs per square yard.
ii. Biodegradable
Blankets that consist of 70% straw and 30% coconut with a top and bottom side biodegradable jute net. The top side net shall consist of machine direction strands that are twisted together and then interwoven with cross direction strands (levo weave). The bottom net may be levo weave or otherwise to meet requirements. The approximate size of the mesh shall be openings of 0.5" X 1.0". The blanket should be sewn together on 1.5' centers with degradable thread. Minimum thickness should be 0.25" and minimum density should be 0.5 lbs per square yard.

c. Long-Term (functional longevity 36 mo.)
i. Photodegradable
Blankets that consist of 100% coconut with a top and bottom side biodegradable jute net. Each net should have ultraviolet additives to delay breakdown. The maximum size of the mesh should be openings of 0.5" X 0.5". The blanket should be sewn together on 1.5' centers with degradable thread. Minimum thickness should be 0.25" and minimum density should be 0.5 lbs per square yard.
ii. Biodegradable
Blankets that consist of 100% coconut with a top and bottom side biodegradable jute net. The top side net shall consist of machine direction strands that are twisted together and then interwoven with cross direction strands (levo weave). The bottom net may be levo weave or otherwise to meet requirements. The approximate size of the mesh should be openings of 0.5" X 1.0". The blanket should be sewn together on 1.5' centers with degradable thread. Minimum thickness should be 0.25" and minimum density should be 0.5 lbs per square yard.

Site Preparation
After the site has been shaped and graded to the approved design, prepare a friable seedbed relatively free from clods and rocks more than one inch in diameter, and any foreign material that will prevent contact of the soil stabilizer with the soil surface. Surface must be smooth to ensure proper contact of blankets or matting to the soil surface. If necessary, redirect any runoff from the ditch or slope during installation.

MAINTENANCE
All erosion control blankets and matting should be inspected periodically following installation, particularly after rainstorms to check for erosion and undermining. Any dislocation or failure should be repaired immediately. If washouts or breakage occurs, reinstall the material after repairing damage to the slope or ditch. Continue to monitor these areas until they become permanently stabilized.

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TYPICAL INSTALLATION GUIDELINES FOR ROLLED EROSION CONTROL PRODUCTS (RECP)

BLANKET AND MATTING CROSS-SECTIONS

UPSTREAM TERMINAL
STEP 1. CUT TERMINAL SLOT.
STEP 2. ROLL MAT INTO SLOT.
STEP 3. ROLL MAT TO ADJOINING TERMINAL.

TRANSVERSE CHECK SLOT
STEP 1. CUT CHECK SLOT.
STEP 2. WORK UPSTREAM ACROSS CHECK SLOT AND LAP BACK AND STAKE.
STEP 3. ROLL MAT LAP INTO SLOT AND STAKE.
STEP 4. BACKFILL AND PROGRESS UPSTREAM. ROLL OUT TEMPORARY STRIPES TO MAINTAIN ALIGNMENT. NO LONGER NEEDED FOR TRACKING.

DOWNSLOPE TERMINAL
STEP 1. CUT TERMINAL SLOT.
STEP 2. STAKE MAT TO ADJOINING TERMINAL.
STEP 3. ROLL MAT INTO SLOT.
STEP 4. BACKFILL AND PROGRESS UPSTREAM. ROLL OUT TEMPORARY STRIPES TO MAINTAIN ALIGNMENT. NO LONGER NEEDED FOR TRACKING.

PICTORIAL VIEW OF TRANSVERSE SLOT

NOTES
1. START AT DOWNSLOPE TERMINAL AND PROGRESS UPSTREAM.
2. FIRST ROLL IS CENTERED OVER CHANNEL IN 10'-CHANNEL AND PAVED WITH TEMPORARY STRIPES TO MAINTAIN ALIGNMENT.
3. SUBSEQUENT ROLLS FOLLOW IN STAGGERED SEQUENCE BEHIND USED ROLLS. USE THE CENTER ROLL FOR ALIGNMENT TO THE CHANNEL CENTER.
4. USE 3" OVERLAPS AND STAKE AT 5' INTERVALS ALONG THE EDGE.
5. USE 3" OVERLAPS AND STAKE DOWNSTREAM TO CONNECT THE LINK AT THE ROLL ENDS.
6. USE 3" OVERLAPS AND STAKE DOWNSTREAM TO CONNECT THE LINK AT THE ROLL ENDS.

Figure 6-10.1 - Typical Installation Guidelines for Matting and Blankets
GSWCC (Amended - 2018) 6-123



REVISION	DATE	DESCRIPTION

FAYETTE COUNTY
PUBLIC WORKS DEPARTMENT
MARCH 16, 2016

ES&PC PLAN DETAILS
S.R. 92 AT WESTBRIDGE RD. / VETERANS PKWY.

DRAWING NO.
52-01

Disturbed Area Stabilization (With Mulching Only) Ds1



DEFINITION
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 disturbance. Mulch can be used as a singular erosion control device for up to six months, but it shall be applied at the appropriate depth, depending on the material used, anchored, and have a continuous 80% cover or greater of the soil surface. Maintenance shall be required to maintain appropriate depth and 80% cover. Temporary vegetation may be employed instead of mulch if the area will remain undisturbed for less than six months. If an area will remain undisturbed for greater than six months, permanent vegetative techniques shall be employed. Refer to Ds2 - Disturbed Area Stabilization (With Temporary Seeding), Ds3 - Disturbed Area Stabilization (With Permanent Seeding), and Ds4 - Disturbed Area Stabilization (With Sodding).

Site Preparation
1. Grade to permit the use of equipment for applying and anchoring mulch.
2. Install needed erosion control measures as required such as dikes, diversions, berms, terraces and sediment barriers.
3. Loosen compact soil to a minimum depth of 3 inches.

Mulching Materials
Select one of the following materials and apply at the depth indicated:
1. *Dry straw or hay* shall be applied at a depth of 2 to 4 inches providing complete soil coverage. One advantage of this material is easy application.
2. *Wood waste* (chips, sawdust or bark) shall be applied at a depth of 2 to 3 inches. Organic material from the clearing stage of development should remain on site, be chipped, and applied as mulch. This method of mulching can greatly reduce erosion control costs.
3. *Cutback asphalt* (slow curing) shall be applied at 1200 gallons per acre (or 114 gallon per sq. yd.).
4. *Polyethylene film* shall be secured over berms or steep slopes with special blower-type equipment. The asphalt emulsion shall be sprayed onto the mulch as it is ejected from the machine. Use 100 gallons of emulsified asphalt and 100 gallons of water per ton of mulch. Tackifiers and binders can be substituted for emulsified asphalt. Please refer to specification Td - Tackifiers and Binders. Plastic mesh or netting with mesh no larger than one inch by one inch shall be installed according to manufacturer's specifications.

Anchoring Mulch
1. *Straw or hay mulch* can be pressed into the soil with a disk harrow with the disk set straight or with a special "packer disk." Disks may be smooth or serrated and should be 20 inches or more in diameter and 8 to 12 inches apart. The edges of the disk should be dull enough not to cut the mulch but to press it into the soil leaving much of it in an erect position. **Straw or hay mulch shall be anchored immediately after application.**
2. Netting of the appropriate size shall be used to anchor wood waste. Openings of the netting shall not be larger than the average size of the wood waste chips.
3. *Polyethylene film* shall be anchored at the top as well as incrementally as necessary.

Applying Mulch
When mulch is used without seeding, mulch shall be applied to provide full coverage of the exposed area.
1. *Dry straw or hay mulch* and *wood chips* shall be applied uniformly by hand or by mechanical equipment.

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SPECIFICATIONS

MULCHING WITHOUT SEEDING

This standard applies to grades or cleared areas where seedings may not have a suitable growing season to produce an erosion retardant cover, but can be stabilized with a mulch cover.

Site Preparation
1. Grade to permit the use of equipment for applying and anchoring mulch.
2. Install needed erosion control measures as required such as dikes, diversions, berms, terraces and sediment barriers.
3. Loosen compact soil to a minimum depth of 3 inches.

Mulching Materials
Select one of the following materials and apply at the depth indicated:
1. *Dry straw or hay* shall be applied at a depth of 2 to 4 inches providing complete soil coverage. One advantage of this material is easy application.
2. *Wood waste* (chips, sawdust or bark) shall be applied at a depth of 2 to 3 inches. Organic material from the clearing stage of development should remain on site, be chipped, and applied as mulch. This method of mulching can greatly reduce erosion control costs.
3. *Cutback asphalt* (slow curing) shall be applied at 1200 gallons per acre (or 114 gallon per sq. yd.).
4. *Polyethylene film* shall be secured over berms or steep slopes with special blower-type equipment. The asphalt emulsion shall be sprayed onto the mulch as it is ejected from the machine. Use 100 gallons of emulsified asphalt and 100 gallons of water per ton of mulch. Tackifiers and binders can be substituted for emulsified asphalt. Please refer to specification Td - Tackifiers and Binders. Plastic mesh or netting with mesh no larger than one inch by one inch shall be installed according to manufacturer's specifications.

Anchoring Mulch
1. *Straw or hay mulch* can be pressed into the soil with a disk harrow with the disk set straight or with a special "packer disk." Disks may be smooth or serrated and should be 20 inches or more in diameter and 8 to 12 inches apart. The edges of the disk should be dull enough not to cut the mulch but to press it into the soil leaving much of it in an erect position. **Straw or hay mulch shall be anchored immediately after application.**
2. Netting of the appropriate size shall be used to anchor wood waste. Openings of the netting shall not be larger than the average size of the wood waste chips.
3. *Polyethylene film* shall be anchored at the top as well as incrementally as necessary.

Applying Mulch
When mulch is used without seeding, mulch shall be applied to provide full coverage of the exposed area.
1. *Dry straw or hay mulch* and *wood chips* shall be applied uniformly by hand or by mechanical equipment.

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Disturbed Area Stabilization (With Temporary Seeding) Ds2



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

- PURPOSE**
- To reduce runoff and sediment damage of down stream resources
- To protect the soil surface from erosion
- To improve wildlife habitat
- To improve aesthetics
- To improve till, 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 80% cover or greater of the soil surface. Refer to specification Ds1 - Disturbed Area Stabilization (With Temporary Seeding).

Site Preparation
1. Grade to permit the use of equipment for applying and anchoring mulch.
2. Install needed erosion control measures as required such as dikes, diversions, berms, terraces and sediment barriers.
3. Loosen compact soil to a minimum depth of 3 inches.

Mulching Materials
Select one of the following materials and apply at the depth indicated:
1. *Dry straw or hay* shall be applied at a depth of 2 to 4 inches providing complete soil coverage. One advantage of this material is easy application.
2. *Wood waste* (chips, sawdust or bark) shall be applied at a depth of 2 to 3 inches. Organic material from the clearing stage of development should remain on site, be chipped, and applied as mulch. This method of mulching can greatly reduce erosion control costs.
3. *Cutback asphalt* (slow curing) shall be applied at 1200 gallons per acre (or 114 gallon per sq. yd.).
4. *Polyethylene film* shall be secured over berms or steep slopes with special blower-type equipment. The asphalt emulsion shall be sprayed onto the mulch as it is ejected from the machine. Use 100 gallons of emulsified asphalt and 100 gallons of water per ton of mulch. Tackifiers and binders can be substituted for emulsified asphalt. Please refer to specification Td - Tackifiers and Binders. Plastic mesh or netting with mesh no larger than one inch by one inch shall be installed according to manufacturer's specifications.

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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 in a annual/seasonal contact. Contact NRCS or the local SWCD for more information.

SPECIFICATIONS
Grading and Shaping
Excessive water runoff 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.

Seeded Preparation
When a hydraulic seeder is used, seeded preparation is not required. When using conventional hand-seeding, seeded 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 or steep slopes, the soil shall be ailed, bermed or otherwise scarified to provide a place for seeds to lodge and germinate.

Lime and Fertilizer
Agricultural lime is required unless soil tests indicate otherwise. Apply agricultural lime at a rate of one ton per acre. Graded areas require lime application. Soils can be tested to determine if fertilizer is needed. On reasonably fertile soils or soil material, fertilizer is not required. For soils with very low fertility, 500 to 700 pounds of 10-10-10 fertilizer or the equivalent or acre (12-18 lbs./1000 sq. ft.) shall be applied. Fertilizer should be applied before land preparation and incorporated with a disk, tiller or chisel.

Seeding
Select a grass or grass-legume mixture suitable to the area and season of the year. Seed shall be applied uniformly by hand, cyclone seeder, drill, cultipacker-

seeder, or hydraulic seeder (slurry including seed and fertilizer). Drill or cultipacker seeders should normally place seed one-quarter to one-half inch deep. Appropriate depth of planting is ten times the seed diameter. Soil should be "raked" lightly to cover seed with soil if seeded by hand.

Mulching
Temporary vegetation can, in most cases, be established without the use of mulch. Mulch without seeding should be considered for short term protection. Refer to Ds1 - Disturbed Area Stabilization (With Mulching Only).
Irrigation
During times of drought, water shall be applied at a rate not causing runoff and erosion. The soil shall be thoroughly wetted to a depth that will insure germination of the seed. Subsequent applications should be made when needed.

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Major Land Resource Areas (MLRA) of Georgia

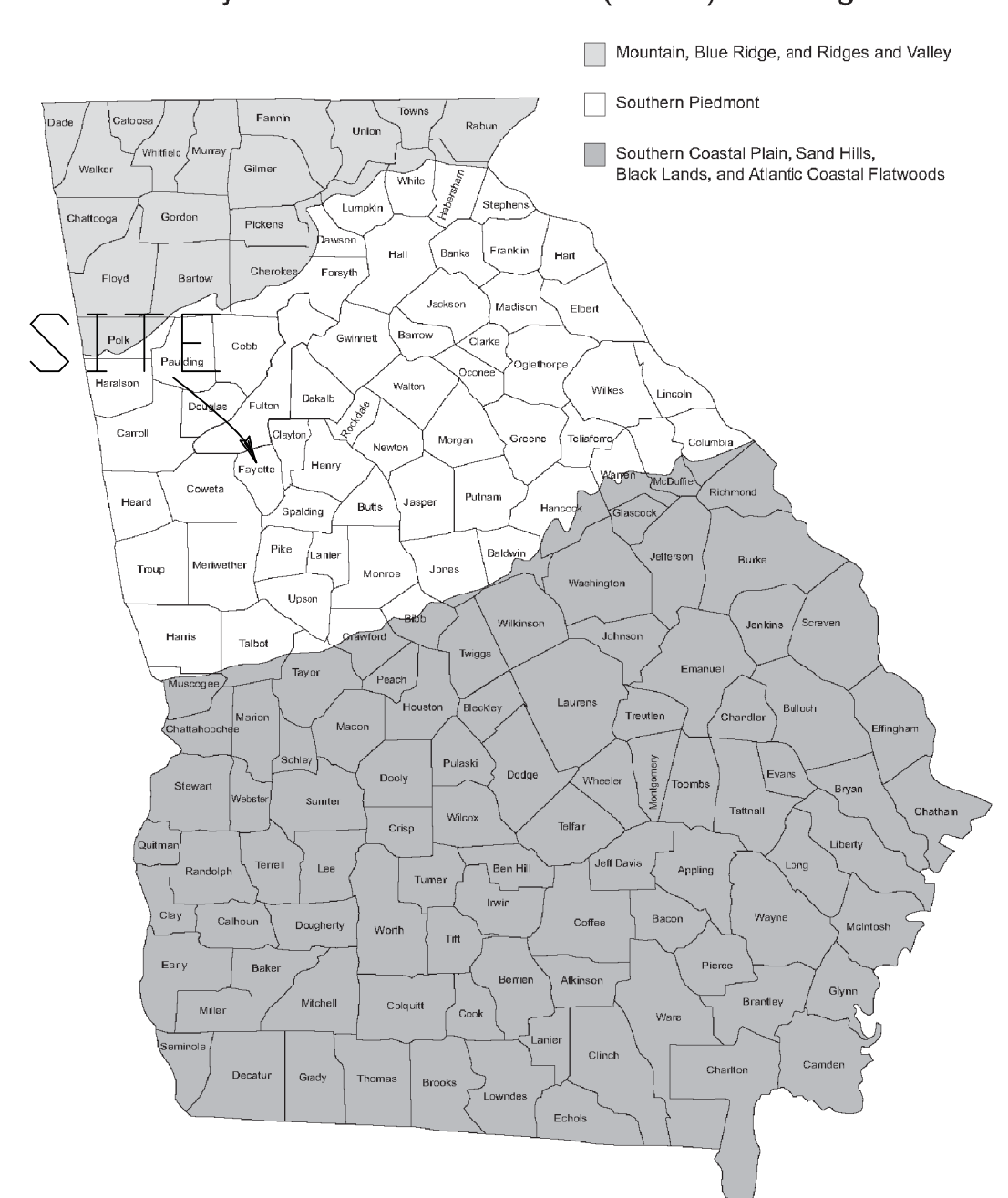


Figure 6-4.1
6-40

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

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

Species	Broadcast Rates 2/ PL S 3/ Per 1000 sq. ft.	Resource Area 4/	Planting Dates by Resource Areas												Remarks
			J	F	M	A	M	J	J	A	S	O	N	D	
BARLEY (Hordeum vulgare)	C 3 bu. (144 lbs.) 0.6 lb.	M-L P													14,000 seed per pound. Windy. Use on productive soils.
LESPEDEZA ANNUAL (Lespedeza striata)	M-L P 40 lbs. 0.9 lb.	C													200,000 seed per pound. May volunteer for several years. Use inoculant EL.
LOVEGRASS, SWEEPING (Eragrostis curvula)	M-L P 4 lbs. 0.1 lb.	C													1,500,000 seed per pound. May last for several years. Mix with Sericea lespedeza.
MILLET BROWNTOP (Panicum brownianum)	M-L P 40 lbs. 0.9 lb.	C													137,000 seed per pound. Quick dense cover. Will provide too much competition in mixtures if seeded at high rates.

Shrubs and Small Trees
Bayberry, Broomrape, Crabapple, Dogwood, Huckleberry or native Blackberry, Mountain Laurel, Native Holly, Red Cedar, Red Mulberry, Sumac, Wax Myrtle, Wild Plum and Blackberry.
Plant in patches without tall trees to develop stable communities. All produce fruits used by many kinds of wildlife, except for lespedeza which produces seeds used by quail and songbirds.

Grasses, Legumes, Vines and Temporary Cover
Bahagrass, Bermudagrass, Grass, Legume mixtures, Partridge Pea, Annual Lespedeza, Oenothera (for mountains), Browntop Millet (for temporary cover), and native grasses.
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.
It is desirable to use dolomitic limestone in the Sand Hills, Southeast 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, inoculant (if needed), and wood cellulose or wood pulp fiber mulch and applied in a slurry. The inoculant, 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.
Fine-grained limestone will be mixed with water and applied immediately after mulching is completed or in conjunction with the top dressing.
When conventional planting is to be done, lime and fertilizer shall be applied uniformly in one of the following ways:
1. Apply before land preparation so that it will be mixed with the soil during seeded preparation.
2. Mix with the soil used to fill the holes, distribute 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.
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.

Construction Specifications
Grading and Shaping
Grading and shaping may not be required where hydraulic seeding and fertilizing equipment is to be used. Vertical banks shall be sloped to erode 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 seeded 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
Agriculture lime is required at the rate of one to two tons per acre unless soil tests indicate otherwise. Graded areas require lime application. Fertilizer 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 equipment shall be "fine-grained limestone." Fine-grained 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, Southeast 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, inoculant (if needed), and wood cellulose or wood pulp fiber mulch and applied in a slurry. The inoculant, 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.
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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.
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.

Plant Selection
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 species. The additional species will provide quick cover and ample soil protection until the target perennial species become established. For example, Common seeding combinations are: 1) Weeping Lovegrass with Sericea lespedeza (scarified) and 2) Tall Fescue with Sericea lespedeza (unscarified).
Plant selection may also include annual companion 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 muckwater. Care should be taken in selecting 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 used for permanent perennial cover.
Seed Quality
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 percentage of the seeds that are pure and will germinate. Information on percent germination and purity can be found on seed tags. PLS is determined by multiplying the percent of pure seed with the percent of germination, i.e.,
(PLS % germination x % purity)
EXAMPLE:
Common Bermuda seed
70% germination, 80% purity
PLS = 70% germination x 80% purity
PLS = 56%

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(PLS % germination x % purity)
EXAMPLE:
Common Bermuda seed
70% germination, 80% purity
PLS = 70% germination x 80% purity
PLS = 56%

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

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

Species	Broadcast Rates 2/ PL S 3/ Per 1000 sq. ft.	Resource Area 4/	Planting Dates by Resource Areas												Remarks
			J	F	M	A	M	J	J	A	S	O	N	D	
MILLET, PEARL (Pennisetum glaucum)	50 lbs. 1.1 lb.	M-L P													88,000 seed per pound. Quick dense cover. May reach 5 feet in height. Not recommended for mixtures.
CATS (Avena sativa)	4 bu. (28 lbs.) 1 bu. (28 lbs.) 0.7 lb.	M-L P													13,000 seed per pound. Use on productive soils. Not as winterhardy as rye or barley.
RYE (Secale cereale)	M-L P 3 bu. (168 lbs.) 12 bu. (28 lbs.) 0.6 lb.	C													18,000 seed per pound. Quick cover. Drought tolerant and winterhardy.
RYEGRASS, ANNUAL (Lolium temulentum)	M-L P 40 lbs. 0.9 lb.	C													227,000 seed per pound. Dense cover. Very competitive and is not to be used in mixtures.
SUDANGRASS (Sorghum sudanense)	M-L P 60 lbs. 1.4 lb.	C													55,000 seed per pound. Good on droughty sites. Not recommended for mixtures.

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 would be:
10 lbs. PLS/acre x 17.9 lbs/acre = 56% PLS
You would need to plant 17.9 lbs/acre to provide 10 lbs/acre of pure live seed.

Seeded Preparation
Seeded preparation may not be required where hydraulic seeding and fertilizing equipment is to be used. When conventional seeding is to be used, seeded preparation will be done as follows:
Broadcast plantings
1. Tillage at a minimum, shall adequately loosen the soil to a depth of 4 to 6 inches, alleviate compaction, incorporate lime and fertilizer, and wood cellulose or wood pulp fiber mulch with water and apply in a slurry uniformly over the area to be seeded. Apply within one hour after the mixture is made.
Hydraulic Seeding
Mix the seed (inoculated if needed), fertilizer, and wood cellulose or wood pulp fiber mulch with water and apply in a slurry uniformly over the area to be seeded. Apply within one hour after the mixture is made.
Conventional Seeding
Seeding will be done on a freshly prepared and firmed seedbed. For broadcast planting, use a cultipacker-seeder, drill, rotary seeder, other mechanical seeder, or hand seeding. Seed shall be applied uniformly over the area to be treated. Cover the seed lightly with 1/8 to 1/4 inch of soil. 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 distributed and planted at the proper depth.
Individual Plants
1. Where individual plants are to be set, the soil shall be prepared by excavating holes, opening furrows, or dibble planting.
2. For nursery stock plants, holes shall be large enough to accommodate roots without crowding.
3. Where pine seedlings are to be planted, sub-soil under the row 30 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.
The tops 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 will be added and the plant shall be set in the hole.
Mulching
Mulch is required for all permanent vegetation applications. Mulch applied to seeded areas shall achieve 75% soil cover. Select the mulching material from the following and apply as indicated:
1. *Dry straw or dry hay* of good quality and free of weed seeds can be used. Dry straw shall be applied at the rate of 2 tons per acre. Dry hay shall be applied at a rate of 2 1/2 tons per acre.
2. *Wood cellulose mulch or wood pulp fiber* shall be used with hydraulic seeding. It shall be applied at the rate of 500 pounds per acre. Dry hay shall be applied at a rate of 2 1/2 tons per acre (the rate indicated above) after hydraulic seeding.
3. One thousand pounds of wood cellulose or wood pulp fiber, which includes a tackifier, shall be used with hydraulic seeding on slopes 3:4:1 or steeper.
4. *Sericea lespedeza* hay containing mature seed shall be applied at a rate of three tons per acre.
5. *Pine straw or pine bark* shall be applied at a thickness of 3 inches for bedding purposes. Other suitable materials in sufficient quantity may be used where ornamentals or other ground covers are planted. This is not appropriate for seeded areas.
6. When using temporary erosion control blankets or brush sod, mulch is not required.
7. *Bananas treated roving* may be applied on planted areas on slopes, in ditches or dry waterways to prevent erosion. Bananas treated roving shall be applied within 24 hours after an area has been planted. Application rates and materials must meet Georgia Department of Transportation specifications.
Wood cellulose and wood pulp fibers shall not contain germination or growth inhibiting factors. They shall be evenly dispersed when applied in water. The fibers shall contain a dye to allow visual mixing and aid in uniform application during seeding.
Care shall be taken at all times to protect state waters. The public, adjacent property, pavements, curbs, sidewalks, and all other structures from asphalt discoloration.
2. Hay and straw mulch shall be pressed into the soil immediately after the mulch is spread. A special "packer disk" or disk harrow with the disks set straight 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, leaving much of it in an erect position. Mulch shall not be piled into the soil.
3. Synthetic tackifiers or binders approved by SDOT shall be applied in conjunction with or immediately after the mulch is spread. Synthetic tackifiers shall be mixed and applied according to manufacturer's specifications. Refer to Td - Tackifiers and Binders.
4. Rye or wheat can be included with Fall and Winter plantings to stabilize the mulch. They shall be applied at a rate of one-quarter to one-half bushel per acre.
When hydraulic seeding is used, seeded preparation is not required. When using conventional hand-seeding, seeded 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 or steep slopes, the soil shall be ailed, bermed or otherwise scarified to provide a place for seeds to lodge and germinate.
Agricultural lime is required unless soil tests indicate otherwise. Apply agricultural lime at a rate of one ton per acre. Graded areas require lime application. Soils can be tested to determine if fertilizer is needed. On reasonably fertile soils or soil material, fertilizer is not required. For soils with very low fertility, 500 to 700 pounds of 10-10-10 fertilizer or the equivalent or acre (12-18 lbs./1000 sq. ft.) shall be applied. Fertilizer should be applied before land preparation and incorporated with a disk, tiller or chisel.
Select a grass or grass-legume mixture suitable to the area and season of the year. Seed shall be applied uniformly by hand, cyclone seeder, drill, cultipacker-

Seeded Preparation
Seeded preparation may not be required where hydraulic seeding and fertilizing equipment is to be used. When conventional seeding is to be used, seeded preparation will be done as follows:
Broadcast plantings
1. Tillage at a minimum, shall adequately loosen the soil to a depth of 4 to 6 inches, alleviate compaction, incorporate lime and fertilizer, and wood cellulose or wood pulp fiber mulch with water and apply in a slurry uniformly over the area to be seeded. Apply within one hour after the mixture is made.
Hydraulic Seeding
Mix the seed (inoculated if needed), fertilizer, and wood cellulose or wood pulp fiber mulch with water and apply in a slurry uniformly over the area to be seeded. Apply within one hour after the mixture is made.
Conventional Seeding
Seeding will be done on a freshly prepared and firmed seedbed. For broadcast planting, use a cultipacker-seeder, drill, rotary seeder, other mechanical seeder, or hand seeding. Seed shall be applied uniformly over the area to be treated. Cover the seed lightly with 1/8 to 1/4 inch of soil. 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 distributed and planted at the proper depth.
Individual Plants
1. Where individual plants are to be set, the soil shall be prepared by excavating holes, opening furrows, or dibble planting.
2. For nursery stock plants, holes shall be large enough to accommodate roots without crowding.
3. Where pine seedlings are to be planted, sub-soil under the row 30 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.
The tops 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 will be added and the plant shall be set in the hole.
Mulching
Mulch is required for all permanent vegetation applications. Mulch applied to seeded areas shall achieve 75% soil cover. Select the mulching material from the following and apply as indicated:
1. *Dry straw or dry hay* of good quality and free of weed seeds can be used. Dry straw shall be applied at the rate of 2 tons per acre. Dry hay shall be applied at a rate of 2 1/2 tons per acre.
2. *Wood cellulose mulch or wood pulp fiber* shall be used with hydraulic seeding. It shall be applied at the rate of 500 pounds per acre. Dry hay shall be applied at a rate of 2 1/2 tons per acre (the rate indicated above) after hydraulic seeding.
3. One thousand pounds of wood cellulose or wood pulp fiber, which includes a tackifier, shall be used with hydraulic seeding on slopes 3:4:1 or steeper.
4. *Sericea lespedeza* hay containing mature seed shall be applied at a rate of three tons per acre.
5. *Pine straw or pine bark* shall be applied at a thickness of 3 inches for bedding purposes. Other suitable materials in sufficient quantity may be used where ornamentals or other ground covers are planted. This is not appropriate for seeded areas.
6. When using temporary erosion control blankets or brush sod, mulch is not required.
7. *Bananas treated roving* may be applied on planted areas on slopes, in ditches or dry waterways to prevent erosion. Bananas treated roving shall be applied within 24 hours after an area has been planted. Application rates and materials must meet Georgia Department of Transportation specifications.
Wood cellulose and wood pulp fibers shall not contain germination or growth inhibiting factors. They shall be evenly dispersed when applied in water. The fibers shall contain a dye to allow visual mixing and aid in uniform application during seeding.
Care shall be taken at all times to protect state waters. The public, adjacent property, pavements, curbs, sidewalks, and all other structures from asphalt discoloration.
2. Hay and straw mulch shall be pressed into the soil immediately after the mulch is spread. A special "packer disk" or disk harrow with the disks set straight 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, leaving much of it in an erect position. Mulch shall not be piled into the soil.
3. Synthetic tackifiers or binders approved by SDOT shall be applied in conjunction with or immediately after the mulch is spread. Synthetic tackifiers shall be mixed and applied according to manufacturer's specifications. Refer to Td - Tackifiers and Binders.
4. Rye or wheat can be included with Fall and Winter plantings to stabilize the mulch. They shall be applied at a rate of one-quarter to one-half bushel per acre.
When hydraulic seeding is used, seeded preparation is not required. When using conventional hand-seeding, seeded 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 or steep slopes, the soil shall be ailed, bermed or otherwise scarified to provide a place for seeds to lodge and germinate.
Agricultural lime is required unless soil tests indicate otherwise. Apply agricultural lime at a rate of one ton per acre. Graded areas require lime application. Soils can be tested to determine if fertilizer is needed. On reasonably fertile soils or soil material, fertilizer is not required. For soils with very low fertility, 500 to 700 pounds of 10-10-10 fertilizer or the equivalent or acre (12-18 lbs./1000 sq. ft.) shall be applied. Fertilizer should be applied before land preparation and incorporated with a disk, tiller or chisel.
Select a grass or grass-legume mixture suitable to the area and season of the year. Seed shall be applied uniformly by hand, cyclone seeder, drill, cultipacker-

Seeded Preparation
Seeded preparation may not be required where hydraulic seeding and fertilizing equipment is to be used. When conventional seeding is to be used, seeded preparation will be done as follows:
Broadcast plantings
1. Tillage at a minimum, shall adequately loosen the soil to a depth of 4 to 6 inches, alleviate compaction, incorporate lime and fertilizer, and wood cellulose or wood pulp fiber mulch with water and apply in a slurry uniformly over the area to be seeded. Apply within one hour after the mixture is made.
Hydraulic Seeding
Mix the seed (inoculated if needed), fertilizer, and wood cellulose or wood pulp fiber mulch with water and apply in a slurry uniformly over the area to be seeded. Apply within one hour after the mixture is made.
Conventional Seeding
Seeding will be done on a freshly prepared and firmed seedbed. For broadcast planting, use a cultipacker-seeder, drill, rotary seeder, other mechanical seeder, or hand seeding. Seed shall be applied uniformly over the area to be treated. Cover the seed lightly with 1/8 to 1/4 inch of soil. Small seed and 1/2 to 1 inch for large seed when using a cultipacker or other suitable equipment.
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Individual Plants
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2. For nursery stock plants, holes shall be large enough to accommodate roots without crowding.
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1. *Dry straw or dry hay* of good quality and free of weed seeds can be used. Dry straw shall be applied at the rate of 2 tons per acre. Dry hay shall be applied at a rate of 2 1/2 tons per acre.
2. *Wood cellulose mulch or wood pulp fiber* shall be used with hydraulic seeding. It shall be applied at the rate of 500 pounds per acre. Dry hay shall be applied at a rate of 2 1/2 tons per acre (the rate indicated above) after hydraulic seeding.
3. One thousand pounds of

Table 6-5.1. Fertilizer Requirements

TYPE OF SPECIES	YEAR	ANALYSIS OR EQUIVALENT N-P-K	RATE	N TOP DRESSING RATE
1. Cool season grasses	First Second Maintenance	6-12-12 10-10-10	1500 lbs./ac. 1000 lbs./ac. 400 lbs./ac.	50-100 lbs./ac. 1/2/ 30
2. Cool season grasses and legumes	First Second Maintenance	6-12-12 10-10-10	1500 lbs./ac. 1000 lbs./ac. 400 lbs./ac.	0-50 lbs./ac. 1/ ---
3. Ground covers	First Second Maintenance	10-10-10 10-10-10 10-10-10	1300 lbs./ac. 3/ 1300 lbs./ac. 3/ 1100 lbs./ac.	---
4. Pine seedlings	First	20-10-5	one 2-1/2 gram pellet per seedling placed in the closing hole	---
5. Shrub Lespedeza	First Maintenance	0-10-10 10-10-10	700 lbs./ac. 700 lbs./ac. 4/	---
6. Temporary cover crops seeded alone	First	10-10-10	500 lbs./ac.	30 lbs./ac. 5/
7. Warm season grasses	First Second Maintenance	6-12-12 6-12-12 10-10-10	1500 lbs./ac. 800 lbs./ac. 400 lbs./ac.	50-100 lbs./ac. 2/6/ 50-100 lbs./ac. 2/ 30 lbs./ac.
8. Warm season grasses and legumes	First Second Maintenance	6-12-12 10-10-10 10-10-10	1500 lbs./ac. 1000 lbs./ac. 400 lbs./ac.	50 lbs./ac. 1/5/

- 1/ Apply in spring following seeding.
- 2/ Apply in split applications when high rates are used.
- 3/ Apply in 3 split applications.
- 4/ Apply when plants are pruned.
- 5/ Apply to grass species only.
- 6/ Apply when plants grow to a height of 2 to 4 inches.

Table 6-5.2 - Permanent Cover
PLANTS, PLANTING RATES, AND PLANTING DATES FOR PERMANENT COVER

Species	Broadcast Rates 1/ - PLS 2/		Resource Area 3/	Planting Dates by Resource Areas												Remarks
	Per Acre	Per 1000 sq. ft.		Planting Dates												
				J	F	M	A	M	J	J	A	S	O	N	D	
BAHIA, PENSACOLA (Paspalum notatum)	80 lbs.	1.4 lb.	P C													165,000 seed per pound. Low growing. Sod forming. Slow to establish. Plant with a companion crop. Will spread into bermuda pastures and lawns. Mix with Sericea lespedeza or weeping lovegrass.
BAHIA, WILMINGTON (Paspalum notatum)	80 lbs.	1.4 lb.	M-L P													Same as above.
BERMUDA, COMMON (Cynodon dactylon)	30 lbs.	0.7 lb.	P C													1,787,000 seed per pound. Quick cover. Low growing and sod forming. Full sun. Good for athletic fields.
alone	10 lbs.	0.2 lb.														
with other perennials	6 lbs.	0.1 lb.														

Table 6-5.2 - Permanent Cover - continued
PLANTS, PLANTING RATES, AND PLANTING DATES FOR PERMANENT COVER

Species	Broadcast Rates 1/ - PLS 2/		Resource Area 3/	Planting Dates by Resource Areas												Remarks
	Per Acre	Per 1000 sq. ft.		Planting Dates												
				J	F	M	A	M	J	J	A	S	O	N	D	
BERMUDA, COMMON (Cynodon dactylon)	10 lbs.	0.2 lb.	P C													Plant with winter annuals.
with temporary cover	6 lbs.	0.1 lb.														Plant with tall fescue.
with other perennials	6 lbs.	0.1 lb.														
BERMUDA SPRINGS (Cynodon dactylon)	40 cu. ft.	0.9 cu. ft.	M-L													A cubic foot contains approximately 650 sprigs. A bushel contains 1.25 cubic feet or approximately 800 sprigs.
Coastal, Common, Midland, or TR-44																Same as above.
Coastal, Common, or TR-44			P C													
Tift 78			C													Southern Coastal Plain only.
CENTPEDE (Eriochloa ophiuroides)	Block sod only		P C													Drought tolerant. Full sun or partial shade. Erosive adjacent to concrete and in concentrated flow areas. Irrigation is needed until fully established. Do not plant near pastures. Winter-hardy as far north as Athens and Atlanta.

Table 6-5.2 - Permanent Cover - continued
PLANTS, PLANTING RATES, AND PLANTING DATES FOR PERMANENT COVER

Species	Broadcast Rates 1/ - PLS 2/		Resource Area 3/	Planting Dates by Resource Areas												Remarks
	Per Acre	Per 1000 sq. ft.		Planting Dates												
				J	F	M	A	M	J	J	A	S	O	N	D	
CROWNVEITCH (Coronilla varia)	15 lbs.	0.3 lb.	M-L P													100,000 seed per pound. Dense growth. Drought tolerant and fire resistant. Attractive rose, pink, and white blossoms spring to late fall. Mix with 30 pounds of tall fescue or 15 pounds of ryegrass seed with 11 inoculant. Use from North Atlanta and Northward.
with winter annuals or cool season grasses																
FESCUE, TALL (Festuca arundinacea)	50 lbs.	1.1 lbs.	M-L P													227,000 seed per pound. Use alone only on better sites. Not for droughty soils. Mix with perennial lespedeza or crownveitch. Apply topdressing in spring following fall startings. Not for heavy use areas or athletic fields.
alone	30 lbs.	0.7 lb.														
with other perennials																
plants or covers	3 - 7 apart		ALL													Rapid and vigorous growth. Excellent in gully erosion control. Will drink. Good livestock forage.

Table 6-5.3. Durable Shrubs and Ground Covers for Permanent Cover

Common Name	Scientific Name	Mature Height	Plant Spacing	Comments
Cherokee Rose	Rosa laevigata	2 ft.	5 ft.	Rampant grower. Not for restricted spaces. State flower.
Memoria Rose	Rosa weichuriana	2 ft.	5 ft.	Rampant grower.
St. Johnswort	Hypericum calycernum	8-12 in.	3 ft.	Semi-shade.
Anthony Waterer Spirea	Spirea bumalda	3-4 ft.	5 ft.	Sun.
Thunberg Spirea	Spirea thunbergii	3-4 ft.	5 ft.	Sun.

Table 6-5.4. Trees for Erosion Control

SITE	SOIL MATERIAL	COMMON SOILS	PLANTING TREE SPECIES 1/	SPACING	PLANTING DATES 3/
Borrow areas, graded areas, and spoil material	Sandy	Lakeland, Troup	Loblolly pine (Pinus taeda)	2/	M-L, P C 12/1-3/15 12/1-3/1
	Loamy	Orangeburg, Tifton	Longleaf pine (Pinus palustris)		
	Clay	Cecil, Faceville	Loblolly pine Slash pine Virginia pine (Pinus virginiana)	2/	M-L, P C 12/1-3/15 12/1-3/1
Streambanks			Willows 4/ (Salix species)	2 ft. x 2 ft.	ALL 11/15-3/15

- 1/ Other trees and shrubs listed on Table 6-5.3 may be interplanted with the pines for improved wildlife benefits.
- 2/ Type of Planting Tree Spacing No. of Trees Per Acre
- Trees alone 4 ft. x 4 ft. 2722
- Trees in combination with grasses and/or other plants 6 ft. x 6 ft. 1210
- 3/ M-L represents the Mountains, 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 (See Figure 6-4.1).
- 4/ Fertilization of companion crop is ample for this species.

Table 6-5.3. Durable Shrubs and Ground Covers for Permanent Cover

Common Name	Scientific Name	Mature Height	Plant Spacing	Comments
Repanders Holly	Ilex crenata 'Repanders'	2-3 ft.	5 ft.	Sun, semi-shade.
Andorra Juniper	Juniperus horizontalis 'Flumosa'	2-3 ft.	5 ft.	Excellent for slopes. Sun.
Andorra Compacta Juniper	Juniperus horizontalis 'Flumosa compacta'	1-2 ft.	5 ft.	More compact than andorra.
Blue Chip Juniper	Juniperus horizontalis 'Blue Chip'	8-10 in.	4 ft.	
Blue Rug Juniper	Juniperus horizontalis 'Wiltonii'	4-6 in.	3 ft.	Very low. Sun.
Parsons Juniper	Juniperus davurica 'Expansa' (Squamata Parsons)	18-24 in.	5 ft.	One of the best, good winter cover.
Pfitzer Juniper	Juniperus chinensis 'Pfitzerana'	6-8 ft.	6 ft.	Needs room.
Prince of Wales Juniper	Juniperus horizontalis 'Prince of Wales'	8-10 in.	4 ft.	Feathery appearance.
Sargent Juniper	Juniperus chinensis 'Sargentii'	1-2 ft.	5 ft.	Full sun. Needs good drainage. Good winter color.
Shore Juniper	Juniperus conferta	2-3 ft.	5 ft.	Emerald Sea or Blue Pacific cultivars are good.
English Ivy	Hedera helix	low	3 ft.	Shade only. Climbs.
Compacta Holly	Ilex crenata 'Compacta'	3-4 ft.	5 ft.	Sun, semi-shade.
Chinese Holly	Ilex cornuta 'Rotunda'	3-4 ft.	5 ft.	Very durable. Sun, semi-shade.
Dwarf Burford Holly	Ilex burfordii 'Nana'	5-8 ft.	8 ft.	
Dwarf Yaupon Holly	Ilex vomitoria 'Nana'	3-4 ft.	5 ft.	Very durable, sun, semi-shade.

Table 6-5.3. Durable Shrubs and Ground Covers for Permanent Cover

Common Name	Scientific Name	Mature Height	Plant Spacing	Comments
Abelia	Abelia grandiflora	3-4 ft.	5 ft.	Also a prostrate form 2 feet high. Sun, semi-shade. Semi-evergreen.
Carolina Yellow Jessamine	Gelsemium sempervirens	low	3 ft.	Vine. Yellow, trumpet-like flowers. Hardy, one of best vines. Evergreen.
Carpet Blue	Ajuga reptans	2-4 in.	3 ft.	Native to Georgia. Needs good drainage, partial shade. Blue or white flowers. Evergreen.
Bearberry Cotoneaster	Cotoneaster dammeri	2-4 ft.	5 ft.	White flowers, red fruit. Sun. Evergreen.
Ground Cover Cotoneaster	Cotoneaster salicifolius 'Pepens'	1-2 ft.	5 ft.	White flowers, red fruit. Sun. Evergreen.
Rock Cotoneaster	Cotoneaster horizontalis	1-2 ft.	5 ft.	Semi-evergreen. Sun.
Virginia Creeper	Parthenocissus quinquefolia	low	3 ft.	Red in fall. Vine. Deciduous. Native to Georgia.
Daylily	Hemerocallis spp.	2-3 ft.	2 ft.	Many flower colors. Full sun. Very hardy.
English Ivy	Hedera helix	low	3 ft.	Shade only. Climbs.
Compacta Holly	Ilex crenata 'Compacta'	3-4 ft.	5 ft.	Sun, semi-shade.
Chinese Holly	Ilex cornuta 'Rotunda'	3-4 ft.	5 ft.	Very durable. Sun, semi-shade.
Dwarf Burford Holly	Ilex burfordii 'Nana'	5-8 ft.	8 ft.	
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Andorra Compacta Juniper	Juniperus horizontalis 'Flumosa compacta'	1-2 ft.	5 ft.	More compact than andorra.
Blue Chip Juniper	Juniperus horizontalis 'Blue Chip'	8-10 in.	4 ft.	
Blue Rug Juniper	Juniperus horizontalis 'Wiltonii'	4-6 in.	3 ft.	Very low. Sun.
Parsons Juniper	Juniperus davurica 'Expansa' (Squamata Parsons)	18-24 in.	5 ft.	One of the best, good winter cover.
Pfitzer Juniper	Juniperus chinensis 'Pfitzerana'	6-8 ft.	6 ft.	Needs room.
Prince of Wales Juniper	Juniperus horizontalis 'Prince of Wales'	8-10 in.	4 ft.	Feathery appearance.
Sargent Juniper	Juniperus chinensis 'Sargentii'	1-2 ft.	5 ft.	Full sun. Needs good drainage. Good winter color.
Shore Juniper	Juniperus conferta	2-3 ft.	5 ft.	Emerald Sea or Blue Pacific cultivars are good.
English Ivy	Hedera helix	low	3 ft.	Shade only. Climbs.
Compacta Holly	Ilex crenata 'Compacta'	3-4 ft.	5 ft.	Sun, semi-shade.
Chinese Holly	Ilex cornuta 'Rotunda'	3-4 ft.	5 ft.	Very durable. Sun, semi-shade.
Dwarf Burford Holly	Ilex burfordii 'Nana'	5-8 ft.	8 ft.	
Dwarf Yaupon Holly	Ilex vomitoria 'Nana'	3-4 ft.	5 ft.	Very durable, sun, semi-shade.

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Sargent Juniper	Juniperus chinensis 'Sargentii'	1-2 ft.	5 ft.	Full sun. Needs good drainage. Good winter color.
Shore Juniper	Juniperus conferta	2-3 ft.	5 ft.	Emerald Sea or Blue Pacific cultivars are good.
English Ivy	Hedera helix	low	3 ft.	Shade only. Climbs.
Compacta Holly	Ilex crenata 'Compacta'	3-4 ft.	5 ft.	Sun, semi-shade.
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Table 6-5.2 - Permanent Cover - continued
PLANTS, PLANTING RATES, AND PLANTING DATES FOR PERMANENT COVER

Species	Broadcast Rates 1/ - PLS 2/		Resource Area 3/	Planting Dates by Resource Areas												Remarks
	Per Acre	Per 1000 sq. ft.		Planting Dates												
				J	F	M	A	M	J	J	A	S	O	N	D	
LESPEDEZA SERICEA (Lespedeza cuneata)	60 lbs.	1.4 lbs.	M-L P C													350,000 seed per pound. Widely adapted. Low maintenance. Mix with weeping lovegrass, common bermuda, bahia, or tall fescue. Takes 2 to 3 years to become fully established. Excellent on roadbanks. Inoculate seed with EL inoculant.
scarified																
unscarified	75 lbs.	1.7 lb.	M-L P C													Mix with tall fescue or winter annuals.
seed-bearing hay	3 tons	138b.	M-L P C													Cut when seed is mature, but before it shatters. Acid tall fescue or winter annuals.

Table 6-5.2 - Permanent Cover - continued
PLANTS, PLANTING RATES, AND PLANTING DATES FOR PERMANENT COVER

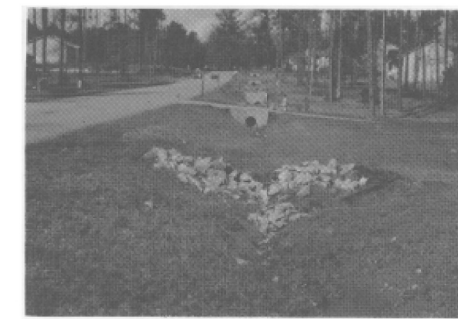
Species	Broadcast Rates 1/ - PLS 2/		Resource Area 3/	Planting Dates by Resource Areas												Remarks
	Per Acre	Per 1000 sq. ft.		Planting Dates												
				J	F	M	A	M	J	J	A	S	O	N	D	
LESPEDEZA (Lespedeza cuneata)	60 lbs.	1.4 lb.	M-L P C													300,000 seed per pound. Height of growth is 18 to 24 inches. Advantageous in urban areas. Spreading type growth has bronze coloration. Mix with weeping lovegrass. Common bermuda, bahia, tall fescue or winter annuals. Do not mix with Sericea lespedeza. Slow to develop solid stands. Inoculate seed with EL inoculant.
unscarified	75 lbs.	1.7 lb.	M-L P C													
LESPEDEZA SHRUB (Lespedeza thumbergia)	3' x 3'		M-L P C													Provide wildlife food and cover.
plants																
LOVEGRASS WEEPING (Eriogonum curvata)	4 lbs.	0.1 lb.	M-L P C													1,500,000 seed per pound. Quick cover. Drought tolerant. Grows well with Sericea lespedeza on roadbanks.
alone	2 lbs.	0.05 lb.														
with other perennials																

Table 6-5.2 - Permanent Cover - continued
PLANTS, PLANTING RATES, AND PLANTING DATES FOR PERMANENT COVER

Species	Broadcast Rates 1/ - PLS 2/		Resource Area 3/	Planting Dates by Resource Areas												Remarks
	Per Acre	Per 1000 sq. ft.		Planting Dates												
				J	F	M	A	M	J	J	A	S	O	N	D	
MAIDENCANE (Panicum hemetomon)	2' x 3' spacing		ALL													For very wet sites. May clog channels. Dig sprigs from local sources. Use along river banks and shorelines.
PRINGGRASS, ATLANTIC COASTAL (Panicum armarum var. amarum)	20 lbs.	0.5 lb.	P C													Grows well on coastal sand dunes, borrow areas, and gravel pits. Provides winter cover for wildlife. Mix with Sericea lespedeza except on sand dunes.
REED CANARY GRASS (Phalaris arundinacea)	50 lbs.	1.1 lb.	M-L P													Grows similar to tall fescue.
alone	30 lbs.	0.7 lb.														
with other perennials																
SUNFLOWER 'AZTEC' (Helianthus maximiliani)	10 lbs.	0.2 lb.	M-L P C													227,000 seed per pound. Mix with weeping lovegrass or other low-growing grasses or legumes.

- 1

Check Dam



DEFINITION

Small temporary barrier, grade control structure, or dam constructed across a swale, drainage ditch, or area of concentrated flow.

PURPOSE

To minimize the erosion rate by reducing the velocity of storm water in areas of concentrated flow.

CONDITIONS

This practice is applicable for use in small open channels and is not to be used in a live stream. Specific applications include:

1. Temporary or permanent swales or ditches in need of protection during establishment of grass linings.
2. Temporary or permanent swales or ditches which, due to their short length of service or other reasons, cannot receive a permanent non-erodible lining for an extended period of time.
3. Other locations where small local bed erosion and resulting sedimentation problems exist.

DESIGN CRITERIA

Formal design is not required. The following standards shall be used:

Drainage Area

For stone check dams, the drainage area shall not exceed two acres. For haybale, the drainage area shall not exceed one acre.

Height

The center of the check dam must be at least 9 inches lower than outer edges. Dam height should be 2 feet maximum measured to center of check dam. (See Figure 6-10.2)

Side Slopes

Side slopes shall be 2:1 or flatter.

Spacing

Two or more check dams in series shall be used for drainage areas greater than one acre. Maximum spacing between dams should be such that the toe of the upstream dam is at the same elevation as the top of the downstream dam. (See Figure 6-10.1)

Geotextiles

A geotextile should be used as a separator between the graded stone and the soil base and abutments. The geotextile will prevent the migration of soil particles from the subgrade into the graded stone. The geotextile shall be selected/specified in accordance with AASHTO M288-96 Section 7.3, Separation Requirements, Table 3. Geotextiles shall be "set" into the subgrade soils. The geotextile shall be placed immediately adjacent to the subgrade without any voids and extend five feet beyond the downstream toe of the dam to prevent scour.

CONSTRUCTION SPECIFICATIONS

The following types of check dams are used for this standard:

Stone Check Dams (C4-S)

Stone check dams should be constructed of graded size 2-10 inch stone. (See Figure 6-10.2) Mechanical or hand placement shall be required to insure complete coverage of entire width of ditch or swale and that center of dam is lower than edges.

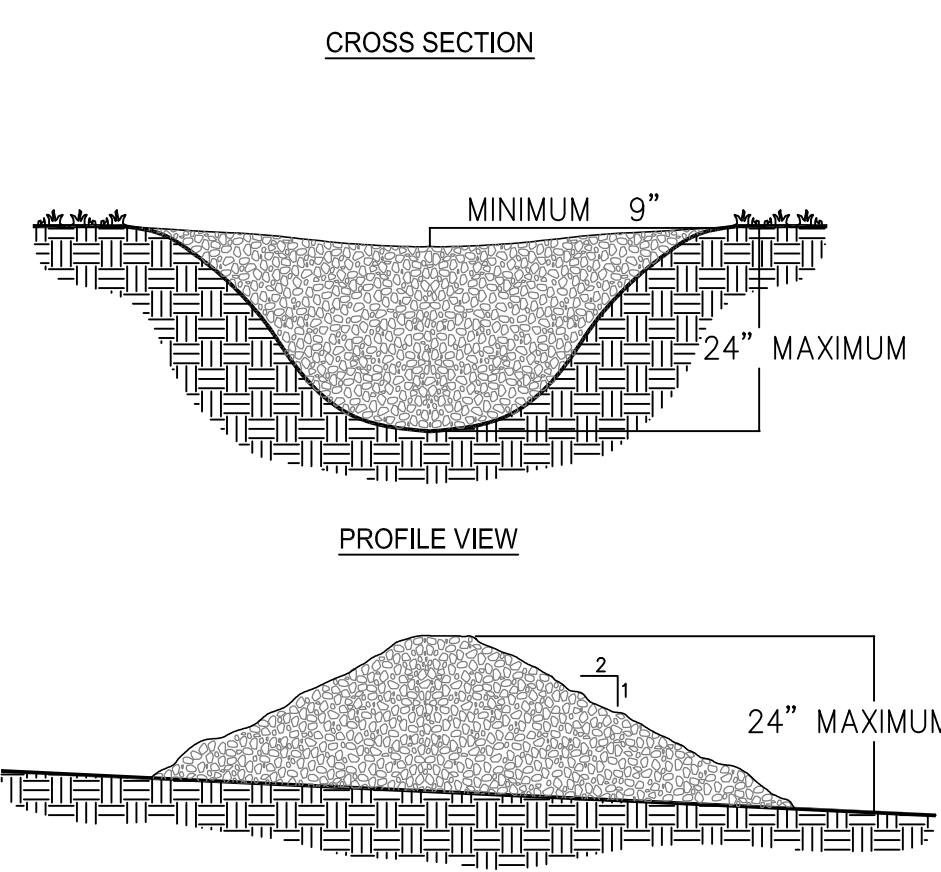
Haybale Check Dams (C4-Hb)

Stacked and embedded hay-bales may be used as temporary check dams in concentrated flow areas while vegetation is becoming established. They should not be used where the drainage area exceeds one acre. Haybales should be embedded a minimum of 4 inches. (See Figure 6-10.3)

MAINTENANCE

Periodic inspection and required maintenance must be provided. Sediment shall be removed when it reaches a depth of one-half the original dam height or before if the area is to be mowed. Check dams shall be removed once final stabilization has occurred. Otherwise, check dams may remain in place permanently. After removal, the area beneath the dam shall be seeded and mulched immediately.

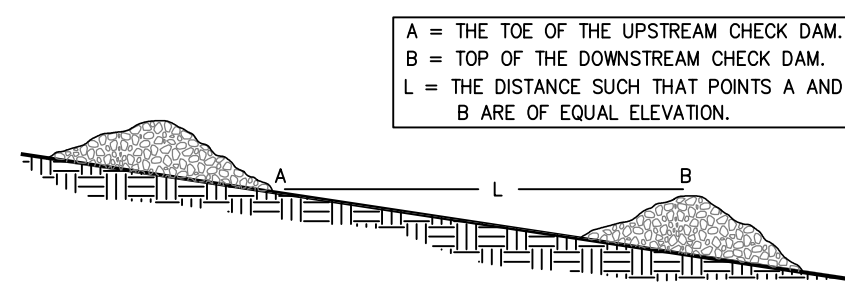
STONE CHECK DAM



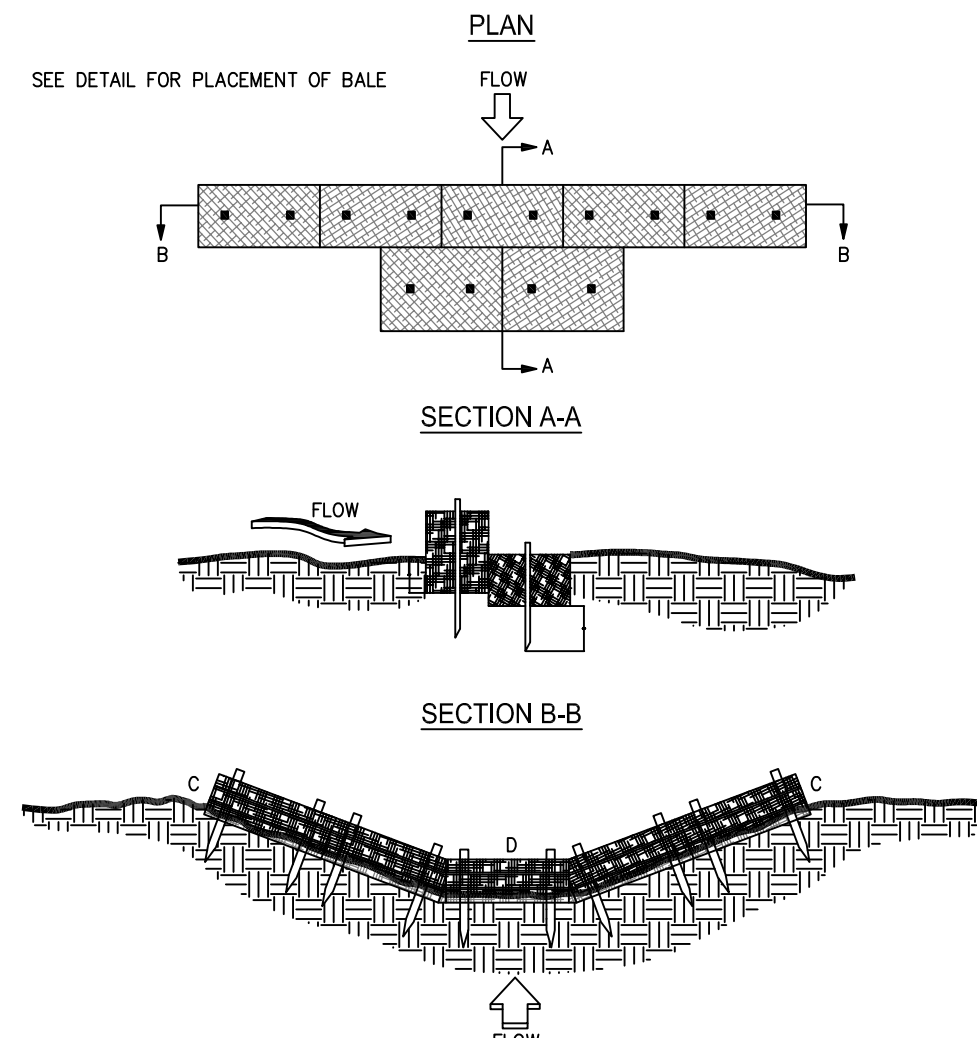
- NOTES:**
1. CHECK DAMS ARE TO BE USED ONLY IN SMALL OPEN CHANNELS (THEY ARE NOT TO BE USED IN LIVE STREAMS).
 2. THE DRAINAGE AREA FOR STONE CHECK DAMS SHALL NOT EXCEED TWO ACRES.
 3. THE CENTER OF THE CHECK DAM MUST BE AT LEAST 9 INCHES LOWER THAN THE OUTER EDGES.
 4. THE DAM HEIGHT SHOULD BE A MAXIMUM OF 2 FEET FROM CENTER TO RIM EDGE.
 5. THE SIDE SLOPES OF THE CHECK DAM SHALL NOT EXCEED A 2:1 SLOPE.
 6. GEOTEXTILE SHALL BE USED TO PREVENT THE MITIGATION OF SUBGRADE SOIL PARTICLES INTO THE STONES (REFER TO AASHTO M288-96, SECTION 7.3, TABLE 3).

STONE CHECK DAM

SPACING BETWEEN CHECK DAMS



TYPICAL STRAW BALE CHECK DAM



- NOTES:**
1. BALES SHOULD BE BOUND WITH WIRE OR NYLON STRING AND SHOULD BE PLACED IN ROWS WITH BALE ENDS TIGHTLY ABUTTING THE ADJACENT BALES.
 2. REMOVE #4 REBAR AFTER STRAW BALES ARE NO LONGER IN PLACE.
 3. POINT C OF SECTION B-B SHOULD ALWAYS BE HIGHER THAN POINT D.

Storm Drain Outlet Protection



DEFINITION

Paved and/or riprapped channel sections, placed below storm drain outlets.

PURPOSE

To reduce velocity of flow before entering receiving channels below storm drain outlets.

CONDITIONS

This standard applies to all storm drain outlets, road culverts, paved channel outlets, etc., discharging into natural or constructed channels. Analysis and treatment will extend from the end of the conduit, channel or structure to the point of entry into an existing stream or publicly maintained drainage system.

DESIGN CRITERIA

Structurally lined aprons at the outlets of pipes and paved channel sections shall be designed according to the following criteria:

Capacity

Peak stormflow from the 25-year, 24-hour frequency storm on the storm specified in Title 12-7-1 of the Official Code of Georgia Annotated or the design discharge of the water conveyance structure, whichever is greater.

Tailwater Depth

The depth of tailwater immediately below the pipe outlet must be determined for the design capacity of the pipe. Manning's Equation may be used to determine tailwater depth. If the tailwater depth is less than half the diameter of the outlet pipe, it shall be classified as a

Minimum Tailwater Condition

If the tailwater depth is greater than half the pipe diameter, it shall be classified as a Maximum Tailwater Condition. Pipes which outlet onto flat areas with no defined channel may be assumed to have a Minimum Tailwater Condition.

Apron Length and Thickness

The apron length and d_{50} stone median size, shall be determined from the curves according to tailwater conditions:

Minimum Tailwater- Use Figure 6-24.1

Maximum Tailwater- Use Figure 6-24.2

Maximum Stone Size = $1.5 \times d_{50}$

Apron Thickness = $1.5 \times d_{max}$

Apron Width

If the pipe discharges directly into a well-defined channel, the apron shall extend across the channel bottom and up the channel banks to an elevation one foot above the maximum tailwater depth or to the top of the bank (whichever is less). If the pipe discharges onto a flat area with no defined channel, the width of the apron shall be determined as follows:

- a. The upstream end of the apron, adjacent to the pipe, shall have a width three times the diameter of the outlet pipe.
- b. For a Minimum Tailwater Condition, the downstream end of the apron shall have a width equal to the pipe diameter plus the length of the apron. Refer to Figure 6-24.1.
- c. For a Maximum Tailwater Condition, the downstream end shall have a width equal to the pipe diameter plus 0.4 times the length of the pipe. Refer to Figure 6-24.2.

Bottom Grade

The apron shall be constructed with no slope along its length (0% grade). The invert elevation of the downstream end of the apron shall be equal to the elevation of the invert of the receiving channel. There shall be no overfall at the end of the apron.

Side Slope

If the pipe discharges into a well-defined channel, the side slopes of the channel shall not be steeper than 2:1.

Alignment

The apron shall be located so that there are no bends in the horizontal alignment.

Geotextiles

Geotextiles should be used as a separator between the graded stone, the soil base, and the abutments. The geotextile will prevent the migration of soil particles from the subgrade into the graded stone. The geotextile shall be specified in accordance with AASHTO M288-96 Section 7.5, Permanent Erosion Control Recommendations. The geotextile should be placed immediately adjacent to the subgrade without any voids.

Materials

The apron may be lined with riprap, grouted riprap, or concrete. The median sized stone for riprap, d_{50} , shall be determined from the curves, Figures 6-24.1 and 6-24.2, according to the tailwater condition. The gradation, quality and placement of riprap shall conform to Appendix C.

Refer to Figure 6-24.4 for alternative structures to achieving energy dissipation at an outlet. For information regarding the selection and design of these alternative energy dissipators, refer to:

FHWA Standard (REF: Hydraulic Design of Energy Dissipators for Culverts and Channels; HEC No. 14, FHWA, Available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

CONSTRUCTION SPECIFICATIONS

1. Ensure that the subgrade for the filter and riprap follows the required lines and grades shown in the plan. Compact any fill required in the subgrade to the density of the surrounding undisturbed material. Low areas in the subgrade or undisturbed soil may also be filled by increasing the riprap thickness.
2. The riprap and gravel filter must conform to the specified grading limits shown on the plans.

TO BE SHOWN ON THE EROSION AND SEDIMENT CONTROL PLAN

1. The flow characteristics of the pipe at full flow including pipe diameter, flow rate (cfs), velocity (fps), and tailwater condition.
2. The dimensions of the apron including length (La), width at the headwall (W), downstream width (Wd), average stone diameter (d50), and stone depth (D) designed in accordance with Figures 6-24.1 and 6-24.2.

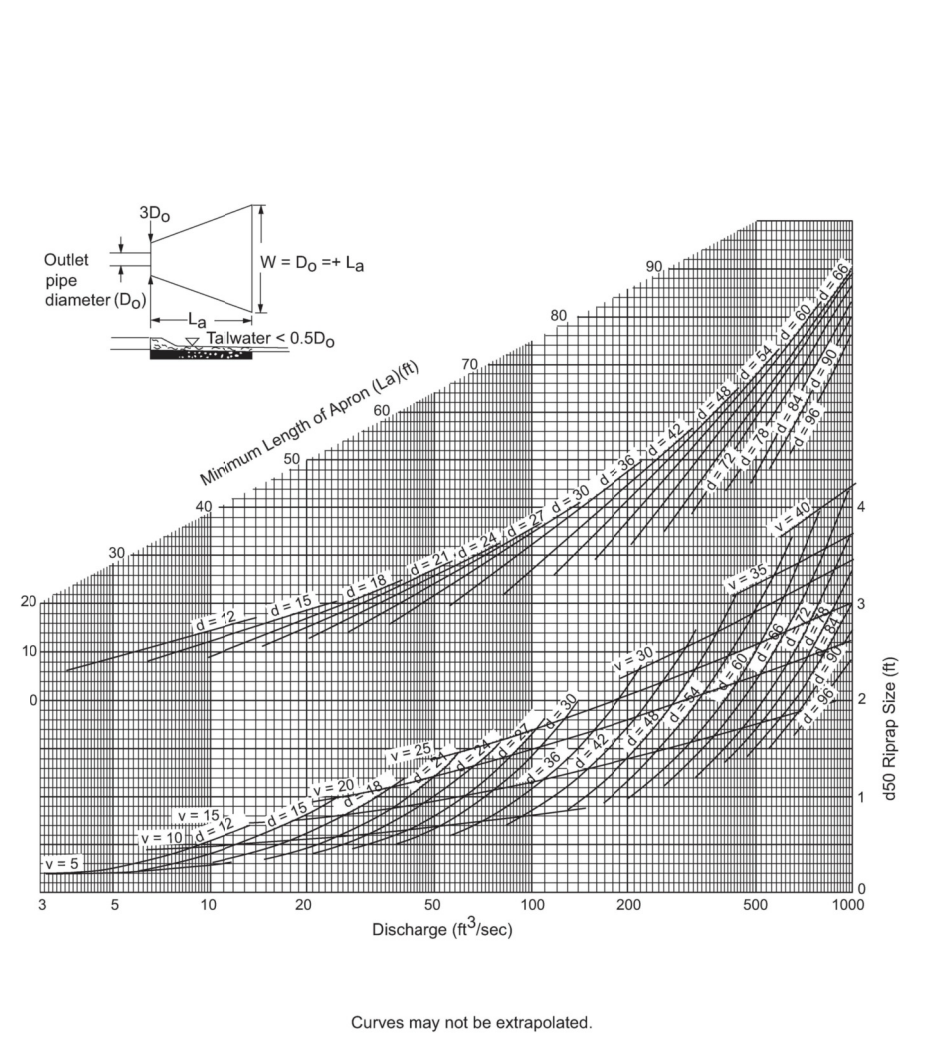


Figure 6-24.1 - Design of Outlet Protection From a Round Pipe Flowing Full, Minimum Tailwater Condition (Tw < 0.5 Diameter)

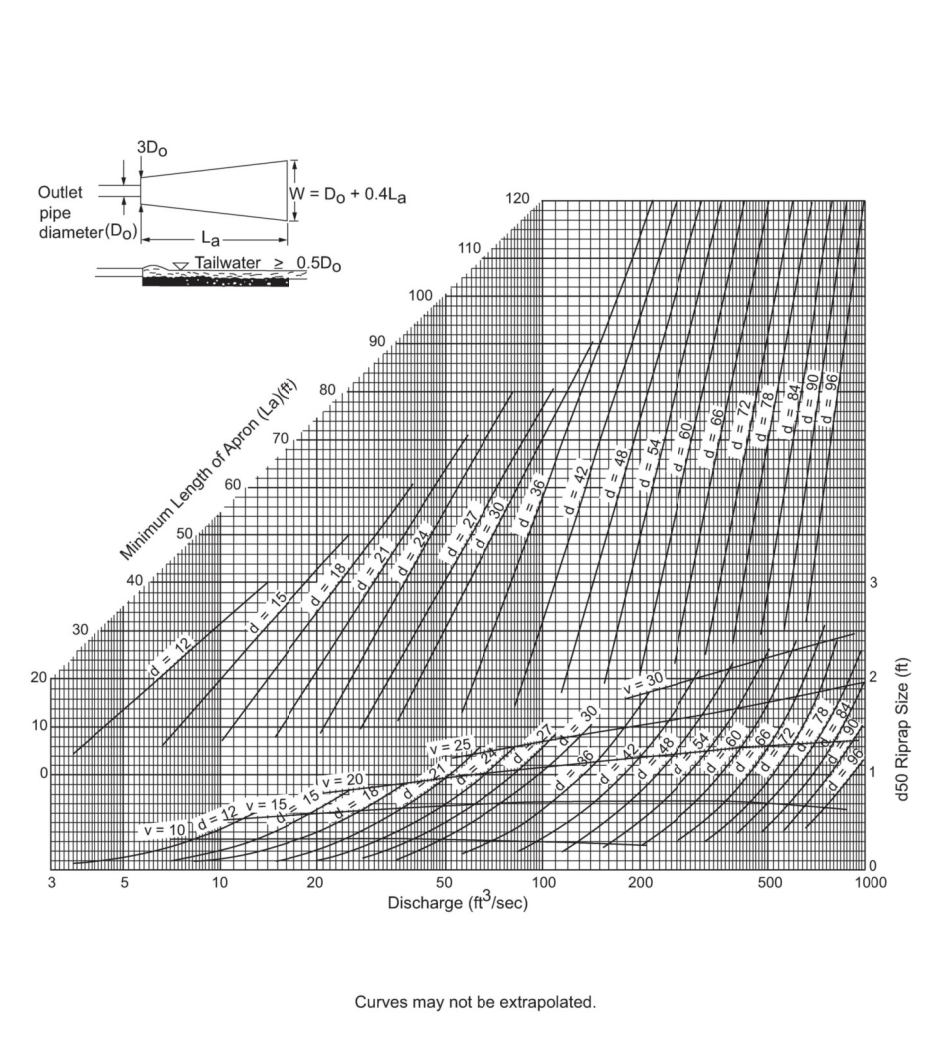


Figure 6-24.2 - Design of Outlet Protection From a Round Pipe Flowing Full, Maximum Tailwater Condition (Tw > 0.5 Diameter)

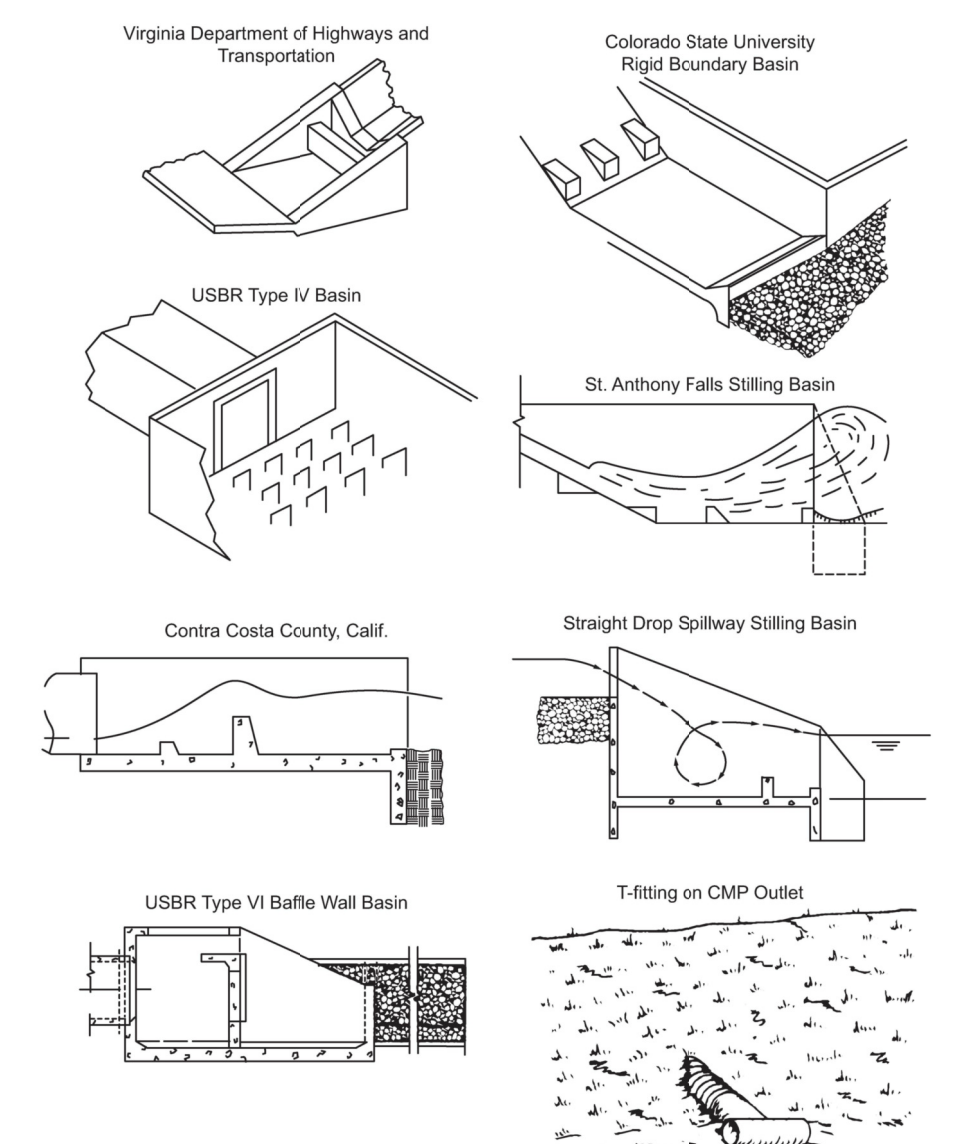


Figure 6-24.4 - Alternative Structures for Energy Dissipation at an Outlet (Modified From Goldman, Jackson, and Bursztynsky)

STORM OUTLET PROTECTION CALCULATIONS

STRUCTURE	Do	Q25	La	W	d50
A-1	24	12.2	8.5	10.5	0.5

6-179

6-180

6-181

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6-184

6-185

Riprap Outlet Protection

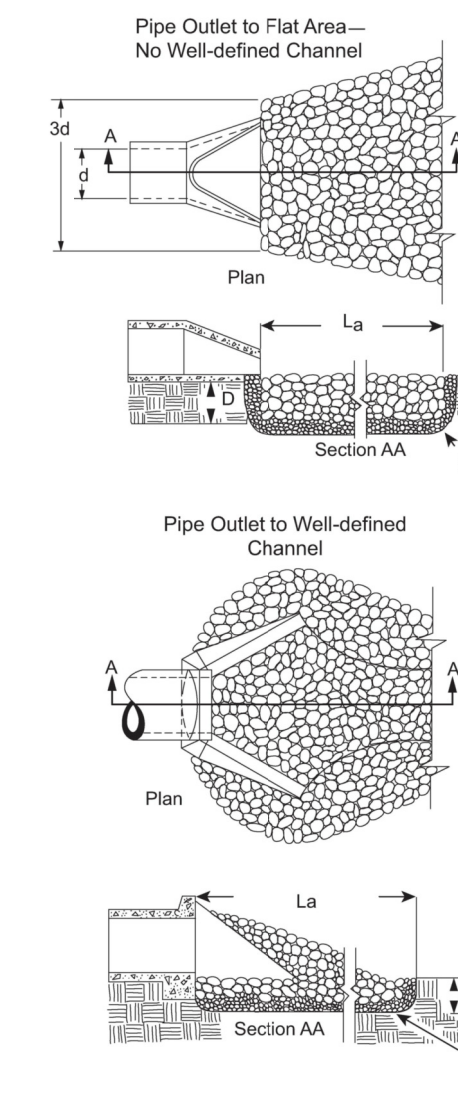
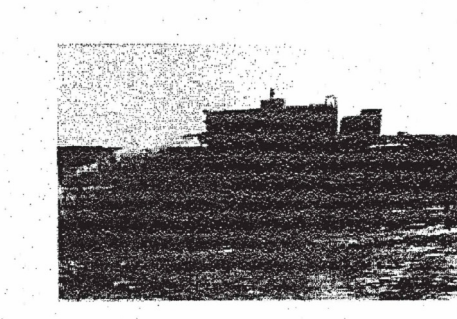


Figure 6-24.3 - Riprap Outlet Protection (Modified From Va SWCC)

6-183

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 which 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 D-1 - Disturbed Area Stabilization (With Mulching Only). Synthetic mulches may be used instead of straw to stabilize erodible areas. Refer to standard T-1 - Topsoil and Binders. Resins such as Curacel or Terrasol should be used according to manufacturer's recommendations.

Vegetative Cover. See standard D-2 - Disturbed Area Stabilization (With Temporary Seeding).

Spray-on Adhesives. These are used on mineral soils (not effective on moist soils). Keep traffic off these areas. Refer to standard T-1 - Topsoil and Binders.

Tillage

This practice is designed to roughen and bring clods to the surface. It is an emergency measure which should be used before wind erosion starts. 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 which 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, straw 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 feet and their height are effective in controlling wind erosion.

Calcium Chloride. Apply at rate that will keep surface moist. May need retreatment.

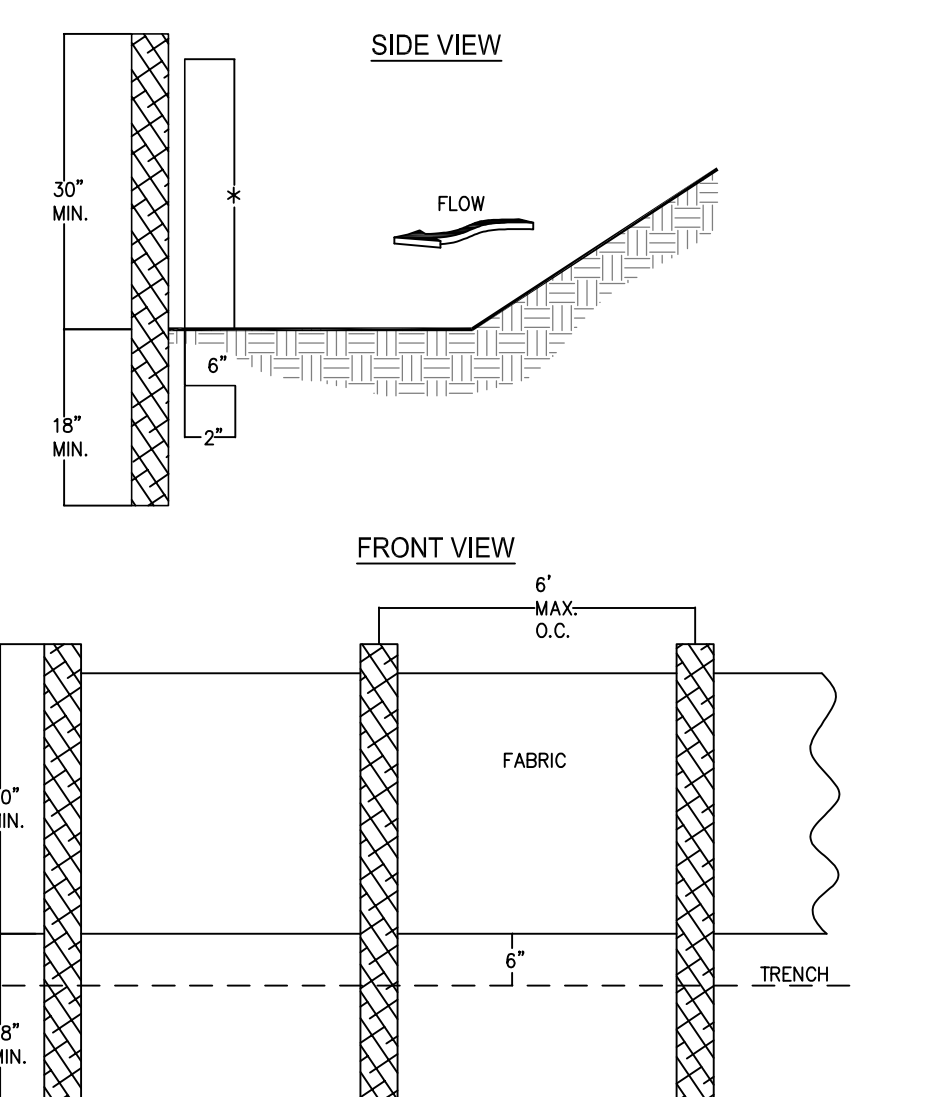
B. PERMANENT METHODS

Permanent Vegetation. See standard D-3 - 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 standard T-1 - Topsoiling.

Stone. Cover surface with crushed stone or coarse gravel. See standard C-1 - Construction Road Stabilization.

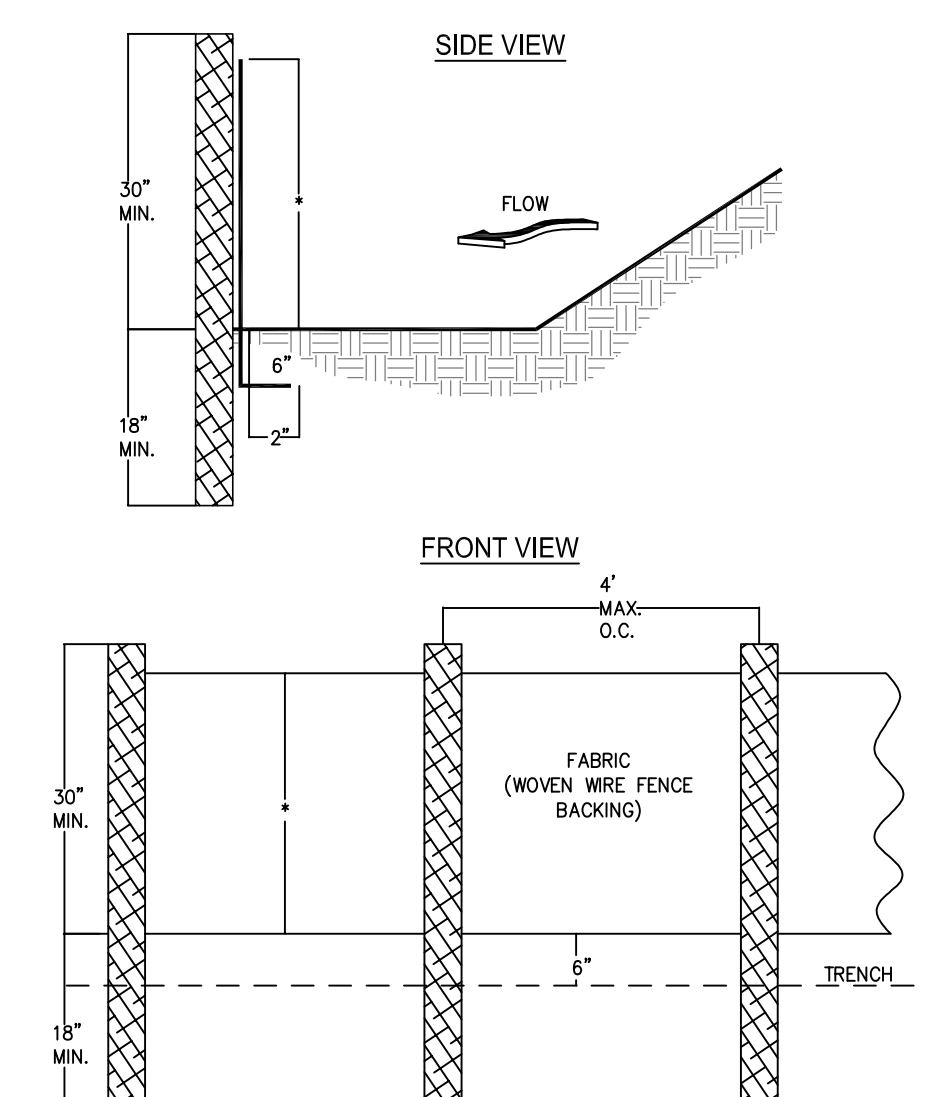
SILT FENCE - TYPE NON-SENSITIVE



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

6-181

SILT FENCE - TYPE SENSITIVE



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

6-182



Level II, Certified Design Professional 000024056

FAYETTE COUNTY PUBLIC WORKS DEPARTMENT

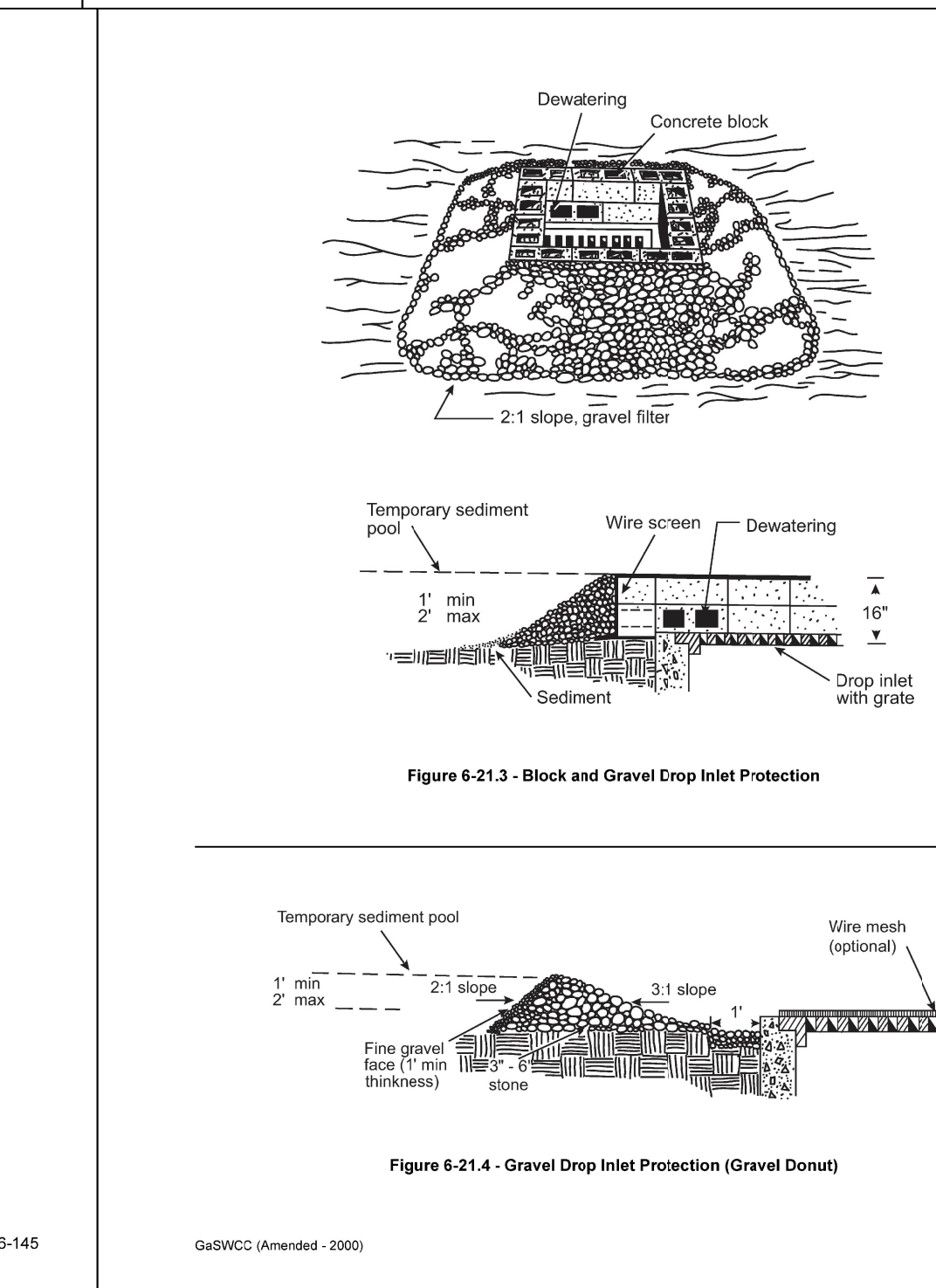
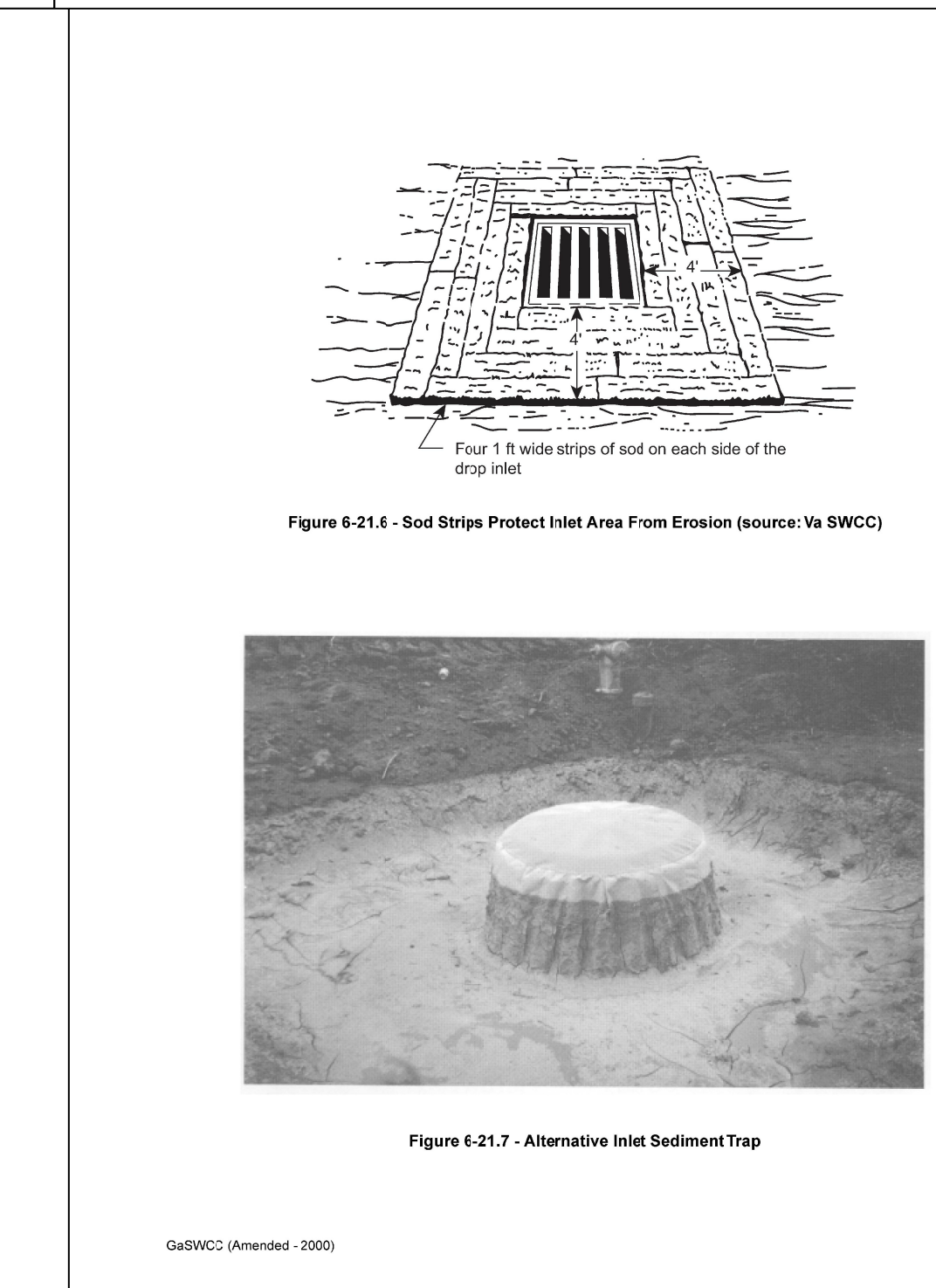
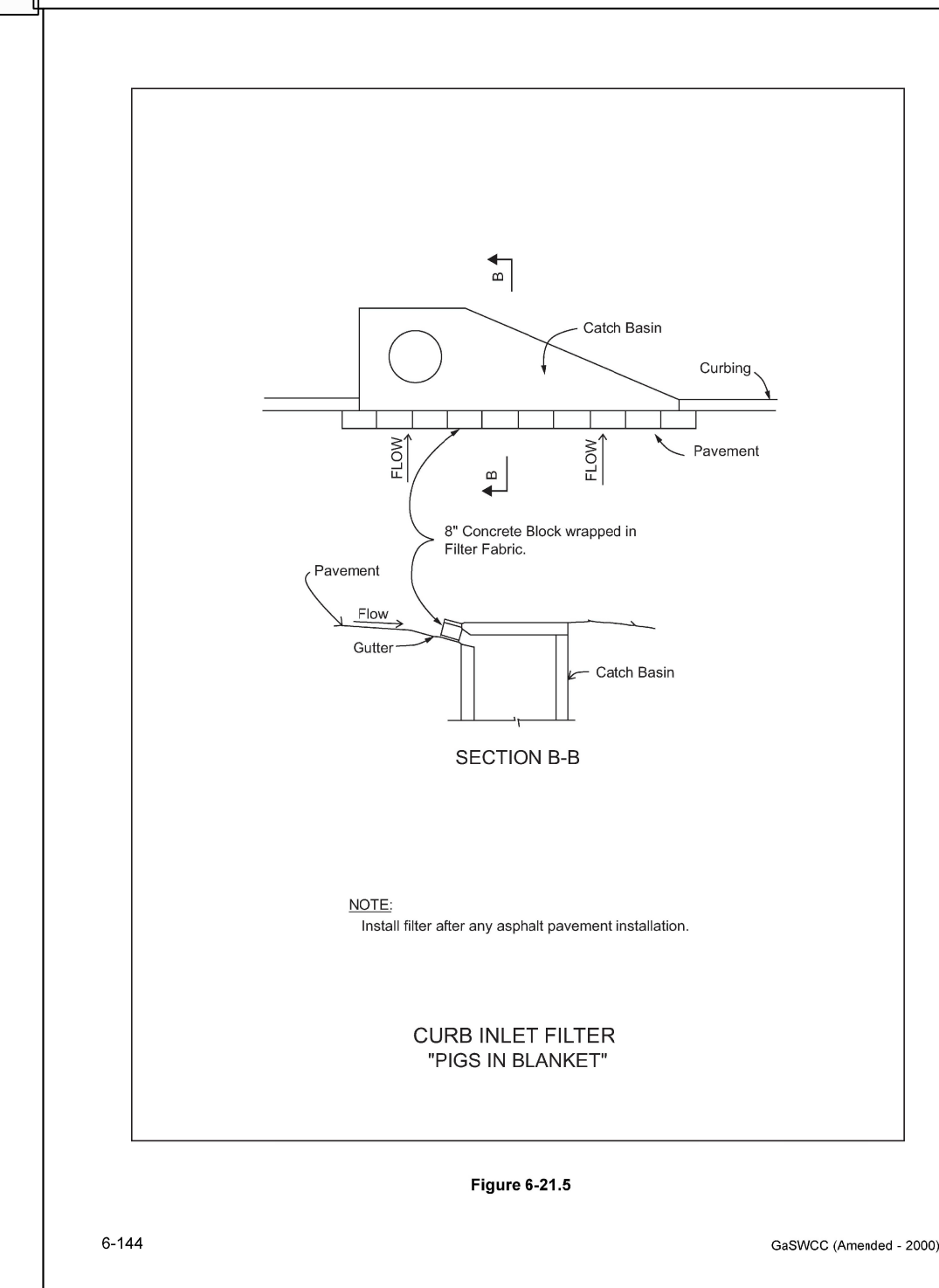
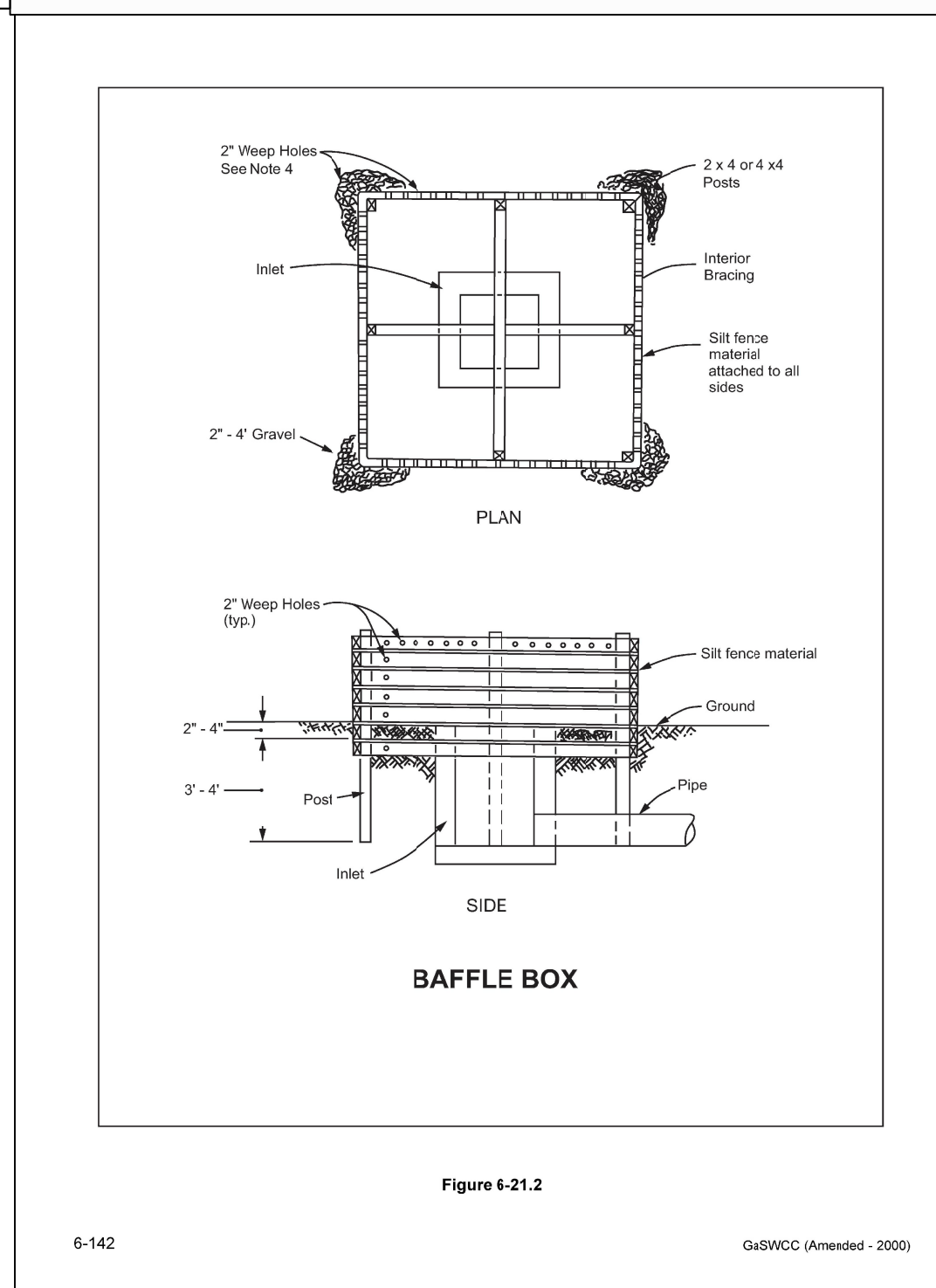
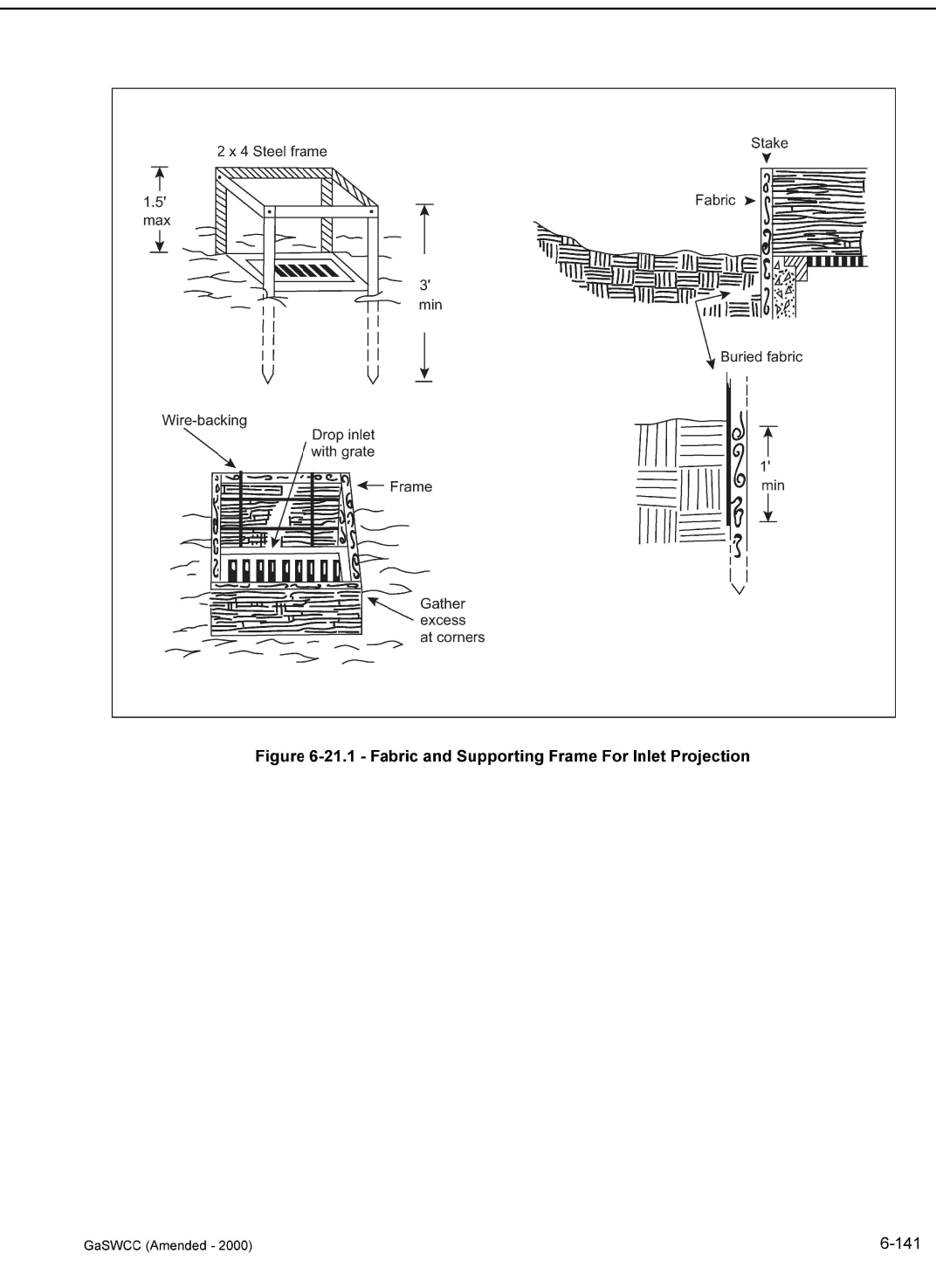
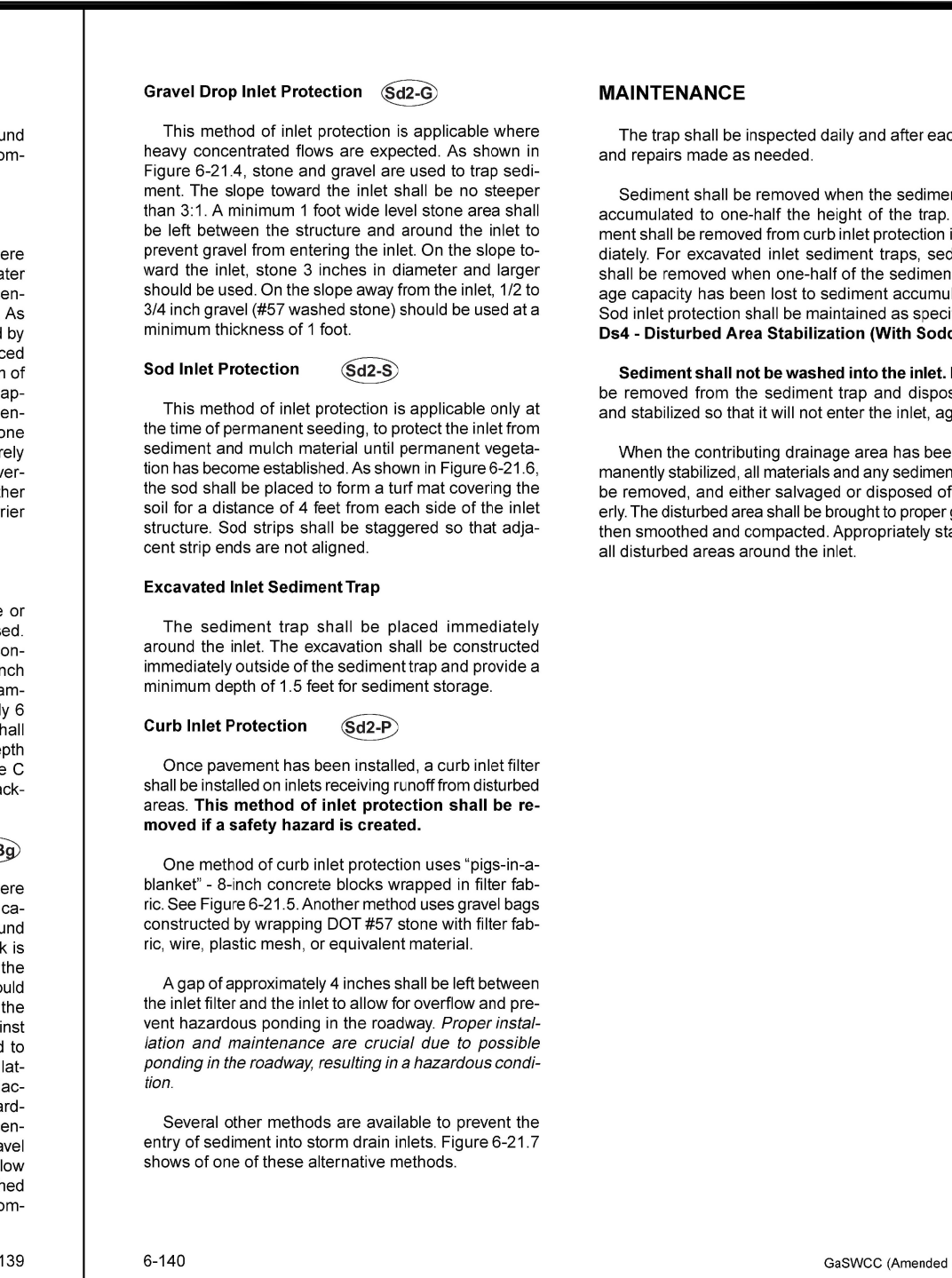
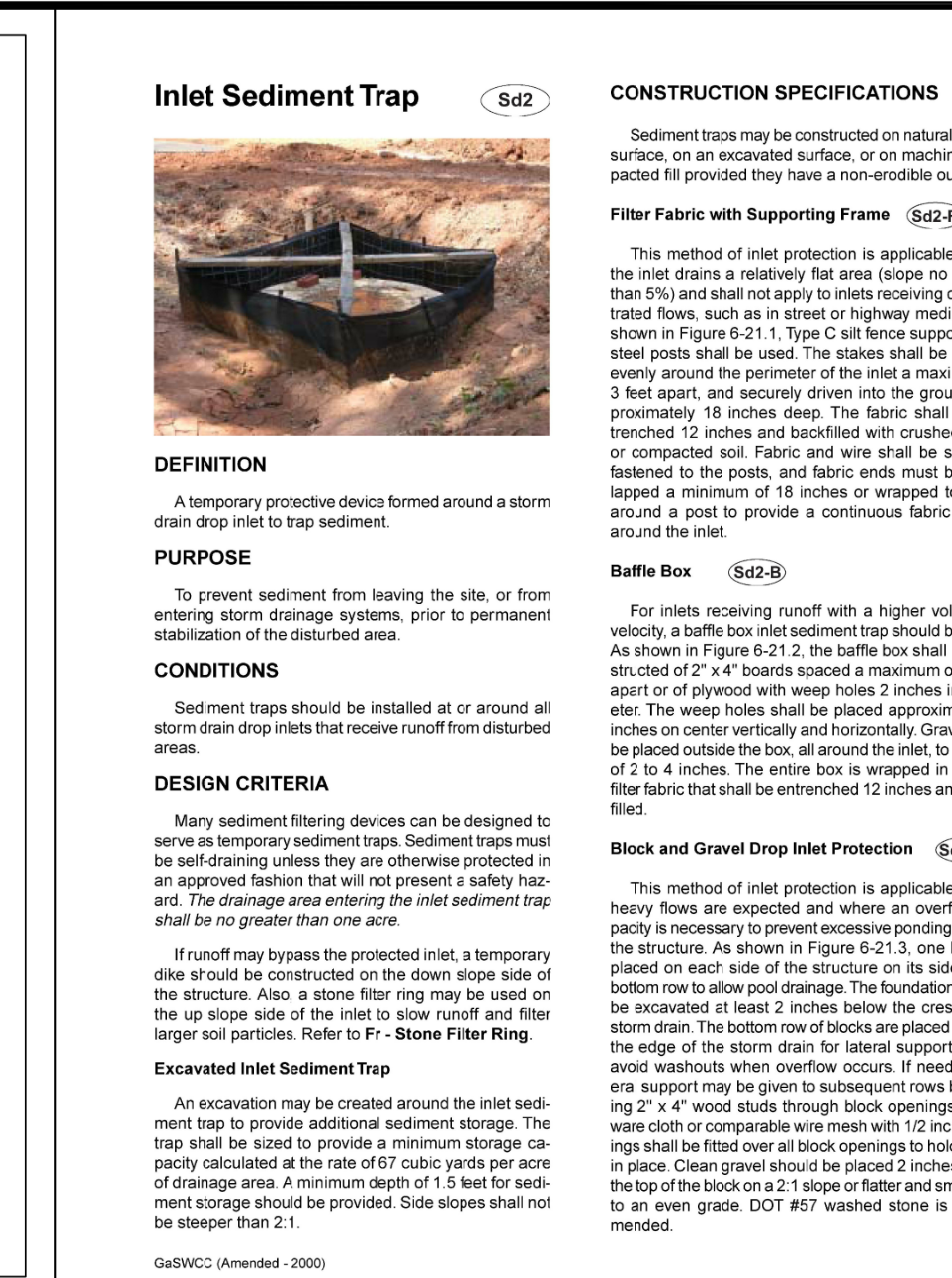
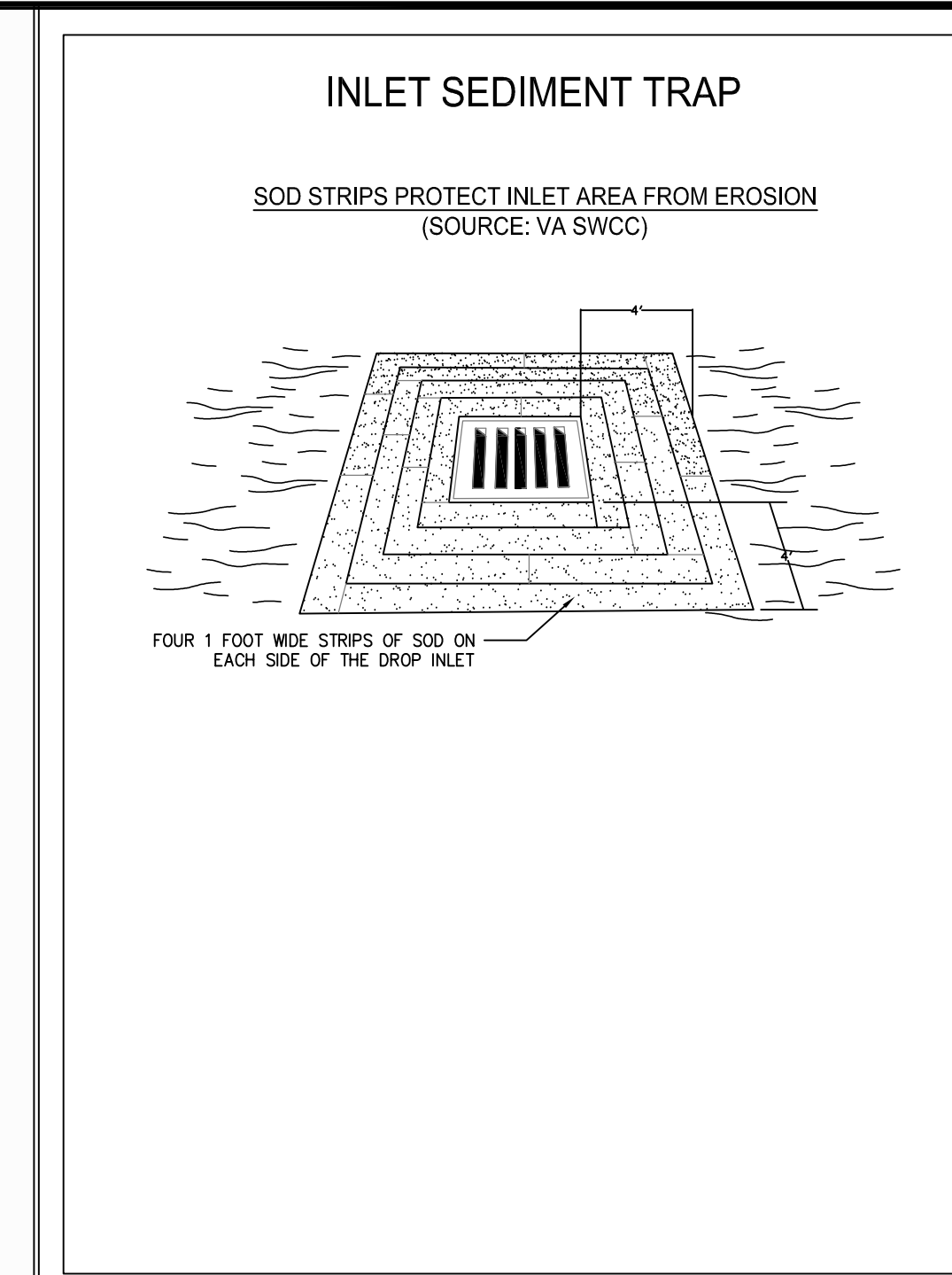
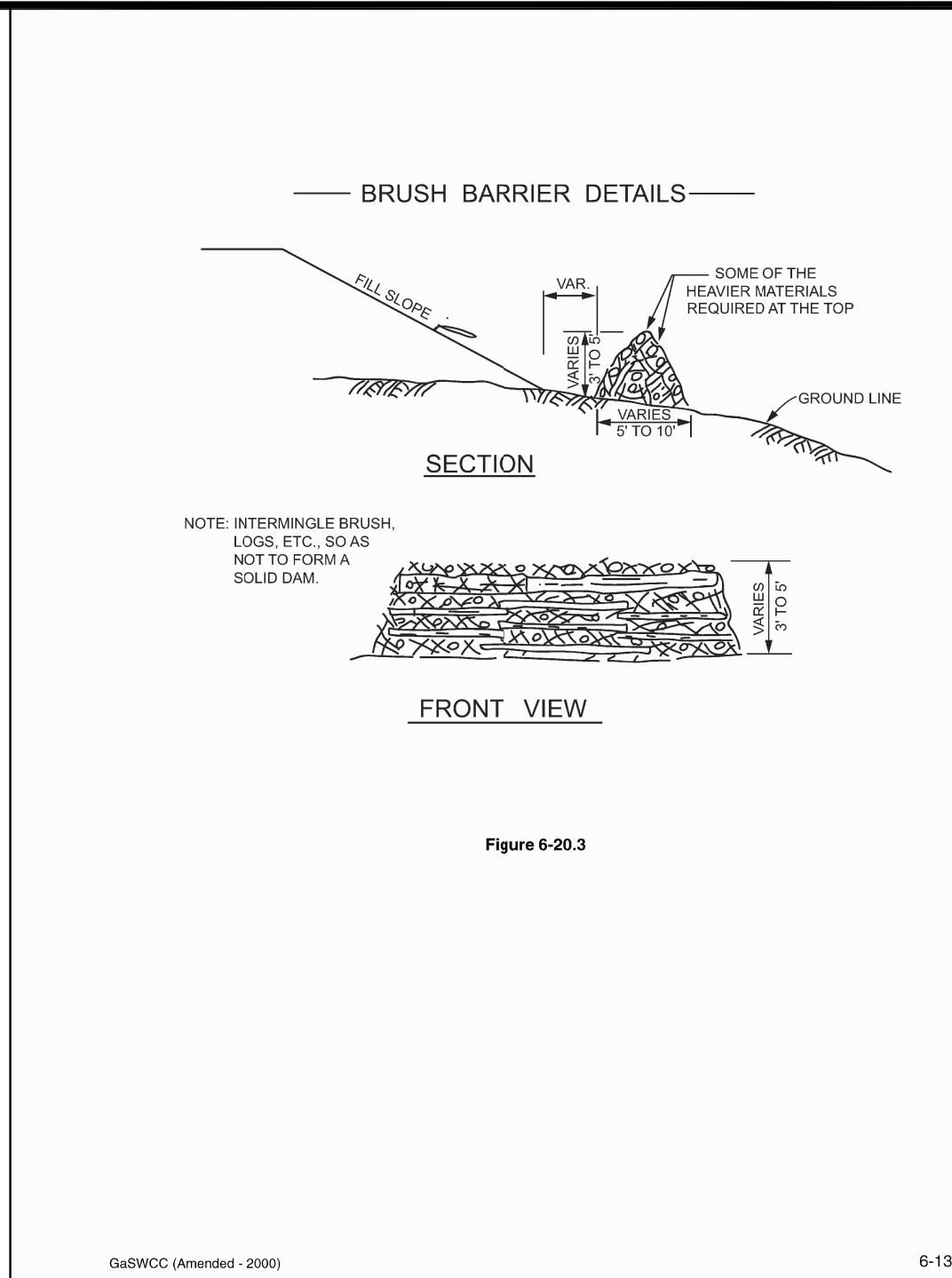
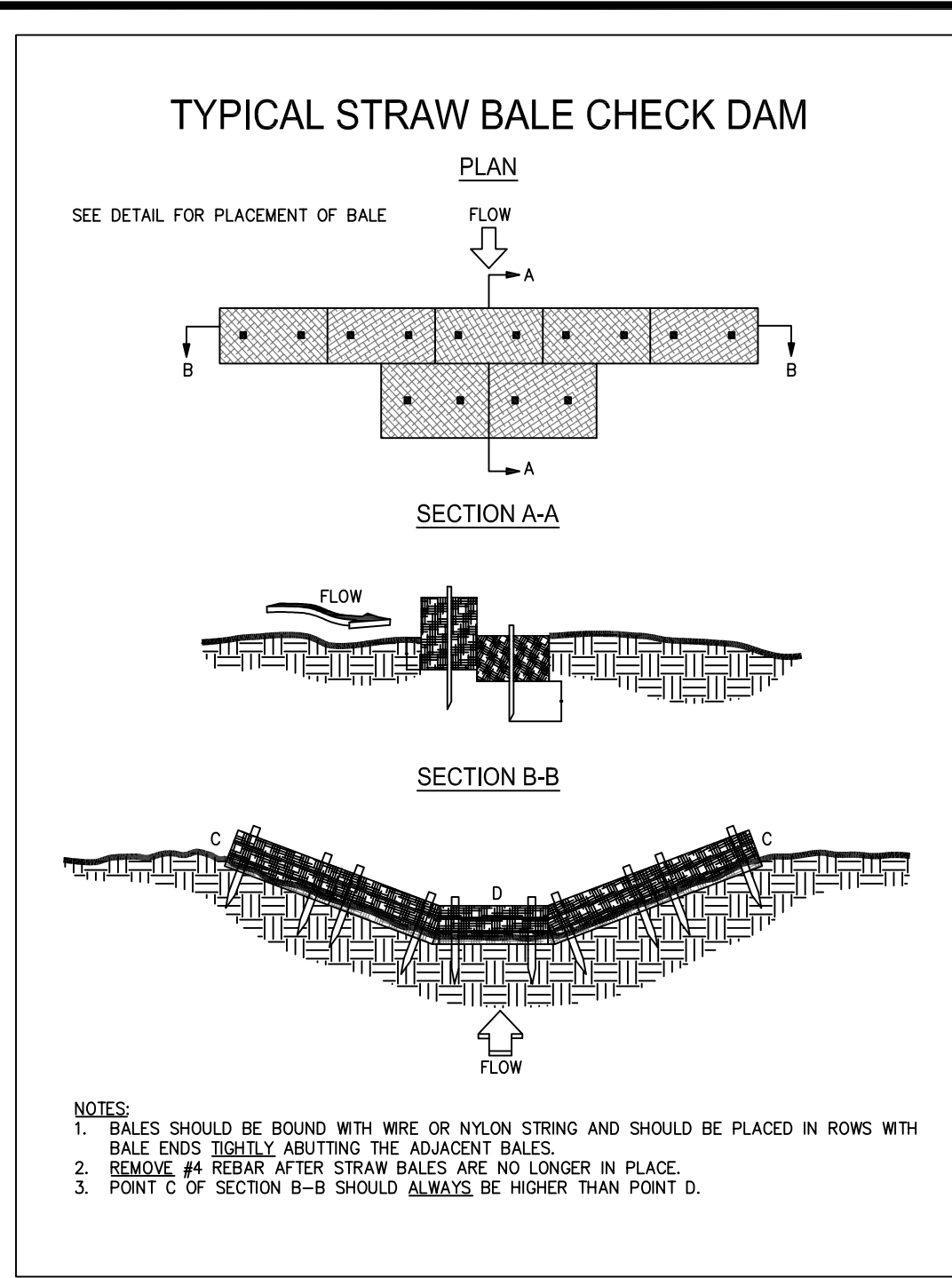
MARCH 16, 2016

ES&PC PLAN DETAILS
S.R. 92 AT WESTBRIDGE RD. / VETERANS PKWY.

DRAWING NO.

52-04

REVISION DATES	

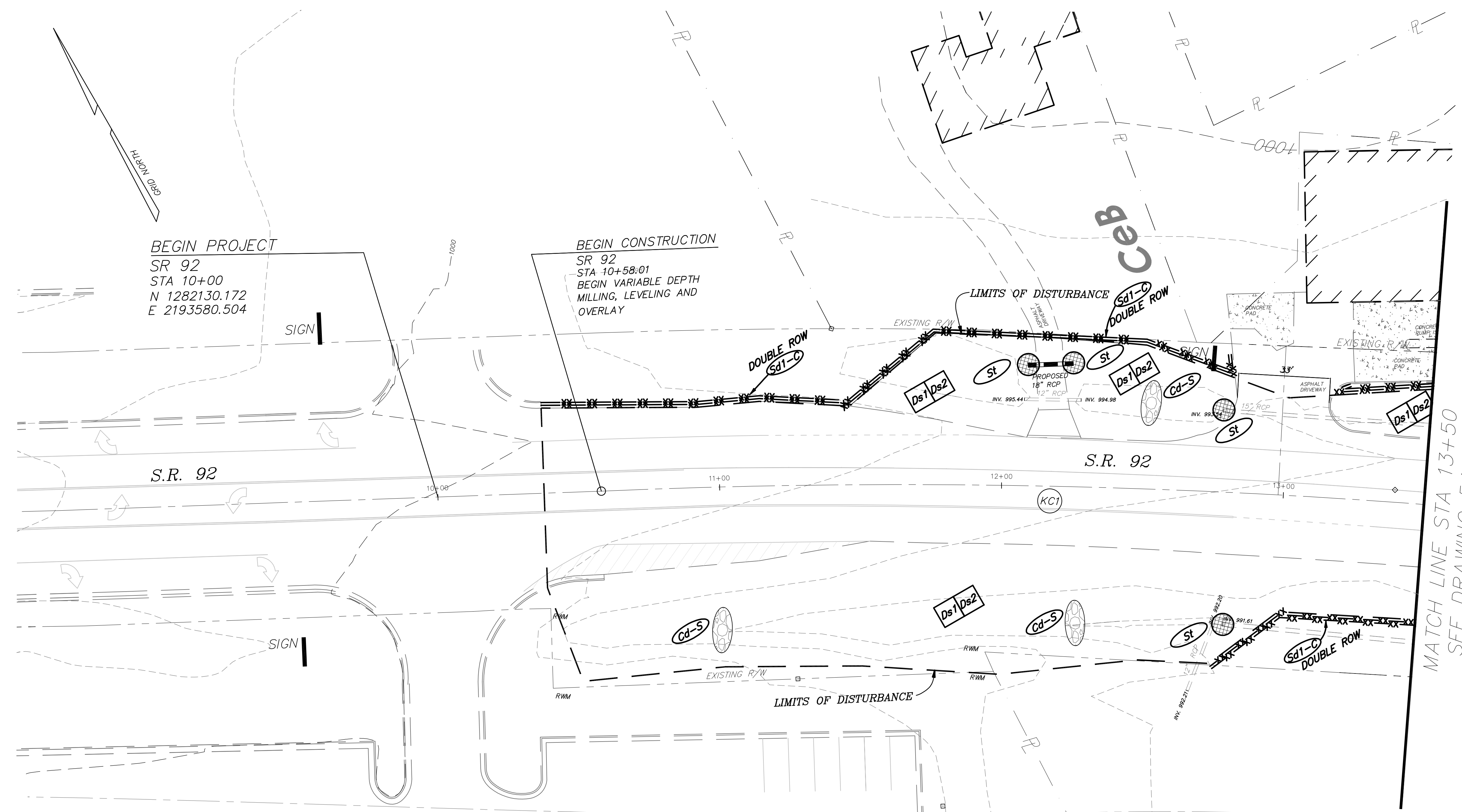


REVISION DATES	

FAYETTE COUNTY
PUBLIC WORKS DEPARTMENT
MARCH 16, 2016

ES&PC PLAN DETAILS
S.R. 92 AT WESTBRIDGE RD. / VETERANS PKWY.

DRAWING NO.
52-05



CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Cd	CHECKDAM			A small temporary barrier or dam constructed across a swale, drainage ditch or area of concentrated flow.
Ch	CHANNEL STABILIZATION			Improving, constructing or stabilizing an open channel, existing stream, or ditch.
Co	CONSTRUCTION EXIT			A crushed stone pad located at the construction exit to provide a place for removing mud from tires thereby protecting public streets.
Di	DIVERSION			An earthen channel or dike located above, below or across a slope to divert runoff. This may be a temporary or permanent structure.
Dn1	DOWNDRAIN STRUCTURE, FLEXIBLE			A flexible conduit of heavy-duty fabric or other material designed to safely conduct surface runoff down a slope.
Dn2	DOWNDRAIN STRUCTURE			A paved chute, sectional conduit, pipe or similar material, temporary or permanent, designed to safely conduct surface runoff down a slope.
Ga	GABION			Rock filled baskets which are fast-sloped into position forming soil stabilizing structures.
Gr	GRADE STABILIZATION STRUCTURE			Permanent structures installed to protect natural or artificial channels or wetlands where otherwise the slope would be sufficient for the routing water to form gullies.
Lv	LEVEL SPREADER			A structure to convert concentrated flow of waters 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 ditches.
Re	RETAINING WALL			A wall installed to stabilize cut or slopes where maximum permissible slopes are not obtainable. Each situation will require special design.
Rt	RETROFITTING			A device or structure placed in front of a permanent stormwater detention pond outlet structure to serve as a temporary sediment filter.
Sd1	SEDIMENT BARRIER			A barrier to prevent sediment from leaving the construction site. It may be sandbags, bales of straw or hay, geotextile or sediment fence. The barrier should be temporary and indicate type.
Sd2	SEDIMENT TRAP, TEMPORARY			An impounding area created by excavating around a storm drain inlet. The excavated area will be filled and stabilized on completion of construction activities.
Sd3	SEDIMENT BASIN, TEMPORARY			A basin created by excavation or a dam across a waterway. The basin allows the bulk of the sediment to drop out. The basin should be designed as a permanent pond or stormwater retention device.
St	STORMDRAIN INLET/OUTLET PROTECTION			A paved or short section of fibro channel at the outlet of a storm drain system preventing erosion from the concentrated runoff.
Wt	VEGETATED WATERWAY FOR STORMWATER CONVEYANCE CHANNEL			Paved or vegetative water outlets for diversions, terraces, berms, dikes, or similar structures.

VEGETATIVE MEASURES				
CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Bf	BUFFER ZONE			An undisturbed natural "green belt" separating the undisturbed site from surrounding property and bordering streams. It serves to reduce water velocity and remove some sediment. It is also of trees a noise or vision pollution barrier.
Ds1	DISTURBED AREA STABILIZATION (w/MULCHING ONLY)			Establishing temporary protection for disturbed areas where seedlings may not have a suitable growing season to produce an erosion-retarding cover.
Ds2	DISTURBED AREA STABILIZATION (w/TEMPORARY SEEDING)			Establishing a temporary vegetative cover with fast growing seedlings on disturbed areas.
Ds3	DISTURBED AREA STABILIZATION (w/PERMANENT SEEDING)			Establishing permanent vegetative cover such as trees, shrubs, vines, sods, grasses or legumes on disturbed areas.
Ss	DISTURBED AREA STABILIZATION (w/GEOTEXTILE MATTING)			Establishing temporary protection for disturbed areas with geotextile matting.

MATCH LINE STA 13+50 SEE DRAWING 54-02

BEGIN PROJECT
 SR 92
 STA 10+00
 N 1282130.172
 E 2193580.504

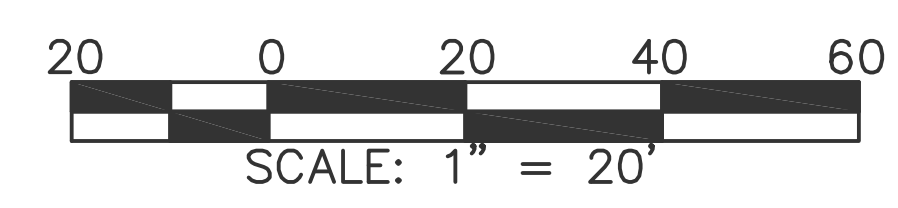
BEGIN CONSTRUCTION
 SR 92
 STA 10+58.01
 BEGIN VARIABLE DEPTH
 MILLING, LEVELING AND
 OVERLAY

EROSION CONTROL AND TREE PROTECTION MEASURES SHALL BE INSTALLED PRIOR TO ANY OTHER CONSTRUCTION ACTIVITY AND MAINTAINED UNTIL PERMANENT GROUND COVER IS ESTABLISHED.
 "THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH LAND DISTURBING ACTIVITIES."
 "EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED 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 7 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING."

	PROPERTY AND EXISTING R/W LINE
	REQUIRED R/W LINE
	CONSTRUCTION LIMITS
	EASEMENT FOR THE CONSTRUCTION AND MAINTENANCE OF SLOPES
	REQUIRED RIGHT-OF-WAY AREA

	EASEMENT FOR THE CONSTRUCTION OF DRIVEWAYS
	PROPOSED NEW FULL DEPTH ASPHALT PAVEMENT SECTION
	REMOVE EXIST. PAVEMENT AND GRADE TO DRAIN
	ORANGE BARRIER FENCE

ENGINEERING DEPT.
 115 McDonough Road, Fayetteville, Georgia 30215
 Phone: (770)320-6010 Fax: (770)719-0871
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REVISION DATES	
1-2-17	

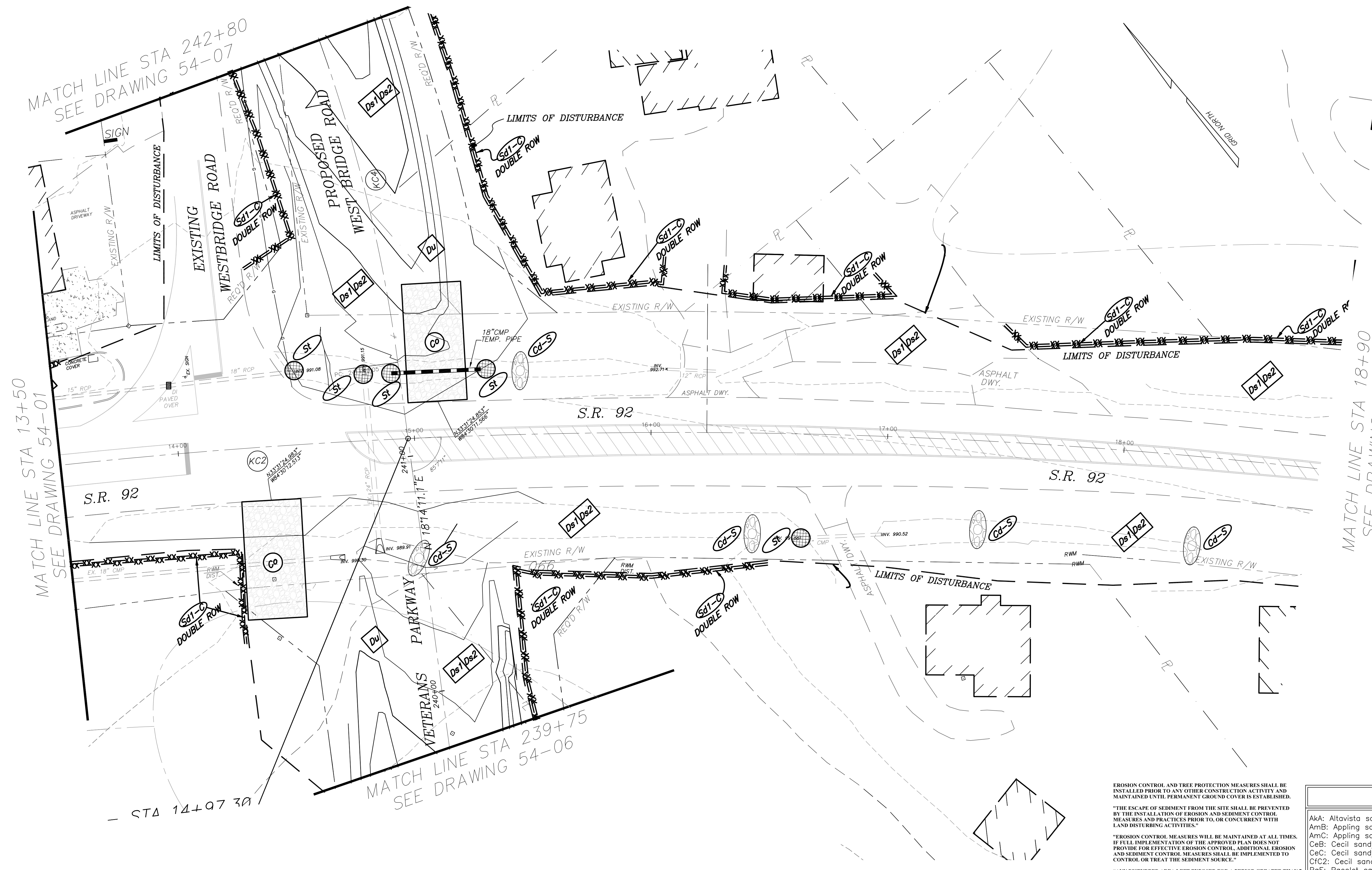
Soils Legend

AkA: Altavista sandy loam, 0 to 3 percent slopes.
 AmB: Appling sandy loam, 2 to 6 percent slopes.
 AmC: Appling sandy loam, 6 to 10 percent slopes.
 CeB: Cecil sandy loam, 2 to 6 percent slopes.
 CeC: Cecil sandy loam, 6 to 10 percent slopes.
 CfC2: Cecil sandy loam, 6 to 10 percent slopes.
 PaE: Pacolet sandy loam, 10 to 25 percent slopes.
 WH: Wehadkee soils.

FAYETTE COUNTY
 PUBLIC WORKS DEPARTMENT
 MARCH 16, 2016

BMP LOCATION DETAILS PHASE 1 & 2
S.R. 92 AT WESTBRIDGE RD. / VETERANS
PKWY.

DRAWING NO.
54-01



CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Cd	CHECKDAM			A small temporary barrier or dam constructed across a swale, drainage ditch or area of concentrated flow.
Ch	CHANNEL STABILIZATION			Improving, constructing or stabilizing an open channel, existing stream, or ditch.
Co	CONSTRUCTION EXIT			A crushed stone pad located at the construction exit to provide a place for removing mud from tires thereby protecting public streets.
Di	DIVERSION			An earthen channel or dike located above, below or across a slope to divert runoff. This may be a temporary or permanent structure.
Dn1	DOWNDRAIN STRUCTURE, FLEXIBLE			A flexible conduit of heavy-duty fabric or other material designed to safely conduct surface runoff down a slope.
Dn2	DOWNDRAIN STRUCTURE			A power chute, sectional conduit, pipe or similar material, temporary or permanent, designed to safely conduct surface runoff down a slope.
Ga	GABION			Rock filled baskets which are hand-placed into position forming soil stabilizing structures.
Gr	GRADE STABILIZATION STRUCTURE			Permanent structures installed to protect natural or artificial 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 a less erosive sheet flow. This should be constructed only on undisturbed soils.
Rd	ROCK FILTER DAM			A permanent or temporary stone filter dam installed across small streams or drainageways.
Re	RETAINING WALL			A wall installed to stabilize cut and fill slopes where maximum permissible slopes are not obtainable. Each situation will require special design.
Rt	RETROFITTING			A device or structure placed in outlet of a permanent stormwater detention pond as a temporary sediment filter.
Sd1	SEDIMENT BARRIER			A barrier to prevent sediment from leaving the construction site and to stabilize the sediment fence. The barrier will require special design.
Sd2	SEDIMENT TRAP, TEMPORARY			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. The basin is usually temporary but may be designed as a permanent pond or stormwater retention device.
Sd3	SEDIMENT BASIN, TEMPORARY			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. The basin is usually temporary but may be designed as a permanent pond or stormwater retention device.
St	STORMDRAIN INLET/OUTLET PROTECTION			A panel or short section of riprap placed at the outlet of a storm drain system preventing erosion from the concentrated runoff.
Wt	VEGETATED WATERWAY OR STORMWATER CONVEYANCE CHANNEL			Paved or vegetative water outlets for diversions, terraces, berms, dikes, or similar structures.

VEGETATIVE MEASURES				
CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Bf	BUFFER ZONE			An undisturbed natural "green belt" separating the land-disturbing site from surrounding property and bordering streams. It serves to reduce water velocity and remove some sediment. It is also at times a noise or vision pollution barrier.
Ds1	DISTURBED AREA STABILIZATION (w/MULCHING ONLY)			Establishing temporary protection for disturbed areas where seedings may not have a suitable growing season to produce an erosion retarding cover.
Ds2	DISTURBED AREA STABILIZATION (w/TEMPORARY SEEDING)			Establishing a temporary vegetative cover with fast growing seedlings on disturbed areas.
Ds3	DISTURBED AREA STABILIZATION (w/PERMANENT SEEDING)			Establishing permanent vegetative cover such as trees, shrubs, vines, sod, grasses or legumes on disturbed areas.
Ss	DISTURBED AREA STABILIZATION (w/GEOTEXTILE MATTING)			Establishing temporary protection for disturbed areas with geotextile matting.

Soils Legend	
AkA:	Altavista sandy loam, 0 to 3 percent slopes.
AmB:	Appling sandy loam, 2 to 6 percent slopes.
AmC:	Appling sandy loam, 6 to 10 percent slopes.
CeB:	Cecil sandy loam, 2 to 6 percent slopes.
CeC:	Cecil sandy loam, 6 to 10 percent slopes.
CfC2:	Cecil sandy clay loam, 6 to 10 percent slopes.
PaE:	Pacolet sandy loam, 10 to 25 percent slopes.
Wh:	Wehadkee soils.

EROSION CONTROL AND TREE PROTECTION MEASURES SHALL BE INSTALLED PRIOR TO ANY OTHER CONSTRUCTION ACTIVITY AND MAINTAINED UNTIL PERMANENT GROUND COVER IS ESTABLISHED.

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

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

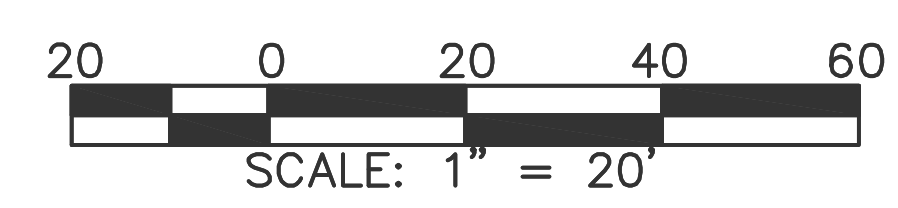
"ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 7 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING."

	PROPERTY AND EXISTING R/W LINE		EASEMENT FOR THE CONSTRUCTION OF DRIVEWAYS
	REQUIRED R/W LINE		PROPOSED NEW FULL DEPTH ASPHALT PAVEMENT SECTION
	CONSTRUCTION LIMITS		REMOVE EXIST. PAVEMENT AND GRADE TO DRAIN
	EASEMENT FOR THE CONSTRUCTION AND MAINTENANCE OF SLOPES		ORANGE BARRIER FENCE
	REQUIRED RIGHT-OF-WAY AREA		

Fayette County Georgia

ENGINEERING DEPT.

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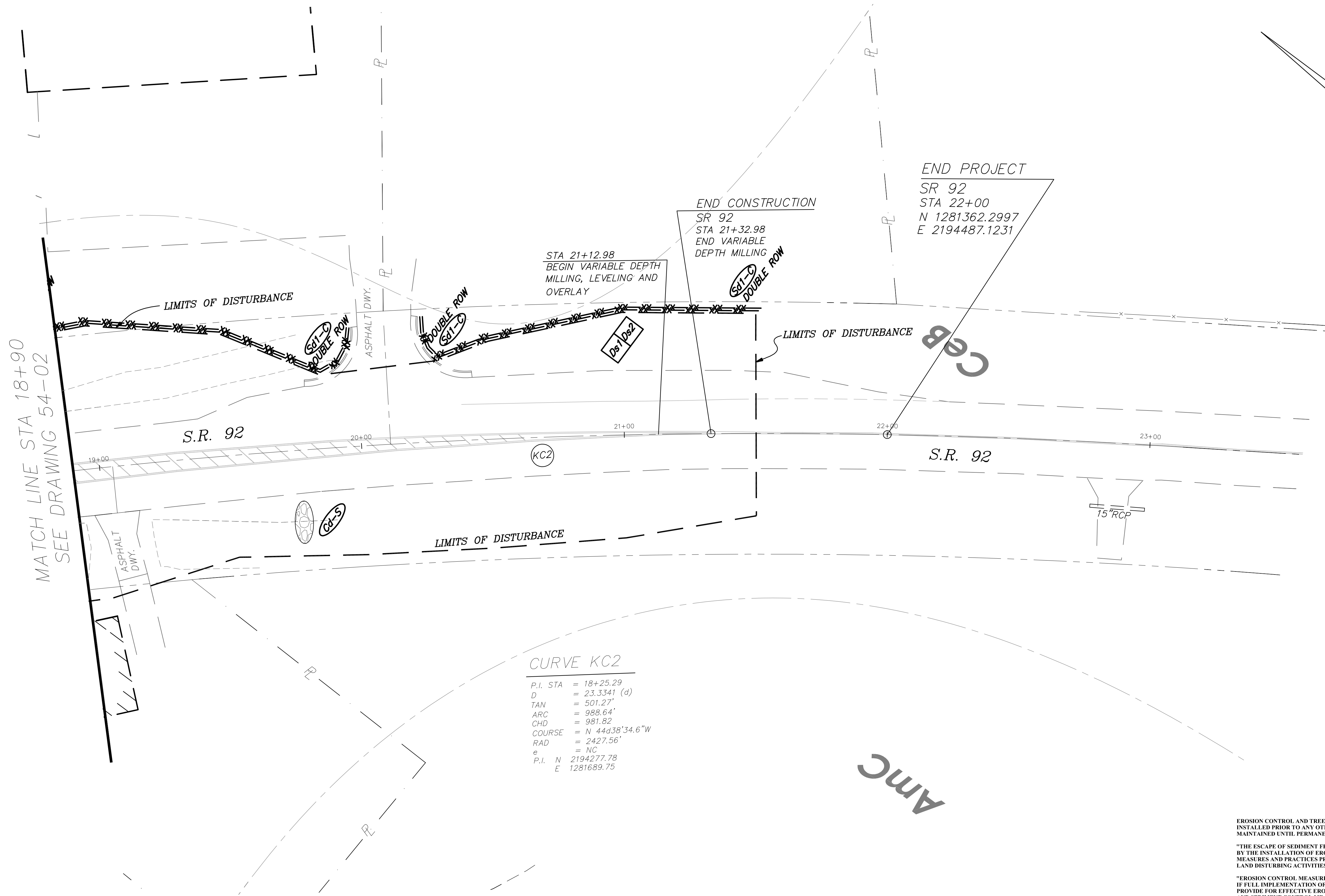
REVISION DATES	
1-2-17	

FAYETTE COUNTY
PUBLIC WORKS DEPARTMENT

MARCH 16, 2016

BMP LOCATION DETAILS PHASE 1 & 2
S.R. 92 AT WESTBRIDGE RD. / VETERANS PKWY.

DRAWING NO.
54-02



CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Cd	CHECKDAM			A small temporary barrier or dam constructed across a swale, drainage ditch or area of concentrated flow.
Ch	CHANNEL STABILIZATION			Improving, constructing or stabilizing an open channel, existing stream, or ditch.
Co	CONSTRUCTION EXIT			A crushed stone pad located at the construction exit to provide a place for removing mud from tires thereby protecting public streets.
Di	DIVERSION			An earthen channel or dike located above, below or across a slope to divert runoff. This may be a temporary or permanent structure.
Dn1	DOWNDRAIN STRUCTURE, FLEXIBLE			A flexible conduit of heavy-duty fabric or other material designed to safely conduct surface runoff down a slope.
Dn2	DOWNDRAIN STRUCTURE			A power chute, sectional conduit, pipe or similar permanent, designed to safely conduct surface runoff down a slope.
Ga	GABION			Rock filled baskets which are hand-placed into position forming soil stabilizing structures.
Gr	GRADE STABILIZATION STRUCTURE			Permanent structures installed to protect natural or artificial 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			A wall installed to stabilize cut and fill slopes where maximum permissible slopes are not obtainable. Each situation will require special design.
Rt	RETROFITTING			A device or structure placed in front of a permanent stormwater detention pond as a temporary sediment filter.
Sd1	SEDIMENT BARRIER			A barrier to prevent sediment from leaving the construction site and to stabilize bare sediment. The barrier is usually temporary or semi-permanent.
Sd2	SEDIMENT TRAP, TEMPORARY			An impounding area created by enclosing around a storm drain inlet a structure to trap sediment. The structure will be filled and stabilized on completion of construction activities.
Sd3	SEDIMENT BASIN, TEMPORARY			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. The basin is usually temporary but may be designed as a permanent pond or stormwater retention device.
St	STORMDRAIN INLET/OUTLET PROTECTION			A paved or short section of riprap placed at the inlet of a storm drain system preventing erosion from the concentrated runoff.
Wt	VEGETATED WATERWAY OR STORMWATER CONVEYANCE CHANNEL			Paved or vegetative water outlets for diversions, terraces, berms, dikes, or similar structures.

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Bf	BUFFER ZONE			An undisturbed natural "green belt" separating the land-disturbing site from surrounding property and bordering streams. It serves to reduce water velocity and remove some sediment. It is also at times a noise or vision pollution barrier.
Ds1	DISTURBED AREA STABILIZATION (w/MULCHING ONLY)			Establishing temporary protection for disturbed areas where seedlings may not have a suitable growing season to produce an erosion retarding cover.
Ds2	DISTURBED AREA STABILIZATION (w/TEMPORARY SEEDING)			Establishing a temporary vegetative cover with fast growing seedlings on disturbed areas.
Ds3	DISTURBED AREA STABILIZATION (w/PERMANENT SEEDING)			Establishing permanent vegetative cover such as trees, shrubs, vines, sod, grasses or legumes on disturbed areas.
Ss	DISTURBED AREA STABILIZATION (w/GEOTEXTILE MATTING)			Establishing temporary protection for disturbed areas with geotextile matting.

Soils Legend	
AkA:	Altavista sandy loam, 0 to 3 percent slopes.
AmB:	Appling sandy loam, 2 to 6 percent slopes.
AmC:	Appling sandy loam, 6 to 10 percent slopes.
CeB:	Cecil sandy loam, 2 to 6 percent slopes.
CeC:	Cecil sandy loam, 6 to 10 percent slopes.
CfC2:	Cecil sandy clay loam, 6 to 10 percent slopes.
PaE:	Pacolet sandy loam, 10 to 25 percent slopes.
Wh:	Wehadkee soils.

EROSION CONTROL AND TREE PROTECTION MEASURES SHALL BE INSTALLED PRIOR TO ANY OTHER CONSTRUCTION ACTIVITY AND MAINTAINED UNTIL PERMANENT GROUND COVER IS ESTABLISHED.

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

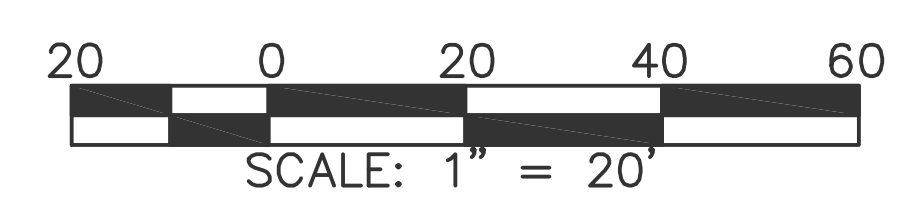
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"ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 7 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING."

	PROPERTY AND EXISTING R/W LINE		EASEMENT FOR THE CONSTRUCTION OF DRIVEWAYS
	REQUIRED R/W LINE		PROPOSED NEW FULL DEPTH ASPHALT PAVEMENT SECTION
	CONSTRUCTION LIMITS		REMOVE EXIST. PAVEMENT AND GRADE TO DRAIN
	EASEMENT FOR THE CONSTRUCTION AND MAINTENANCE OF SLOPES		ORANGE BARRIER FENCE
	REQUIRED RIGHT-OF-WAY AREA		

Fayette County
GEORGIA

ENGINEERING DEPT.
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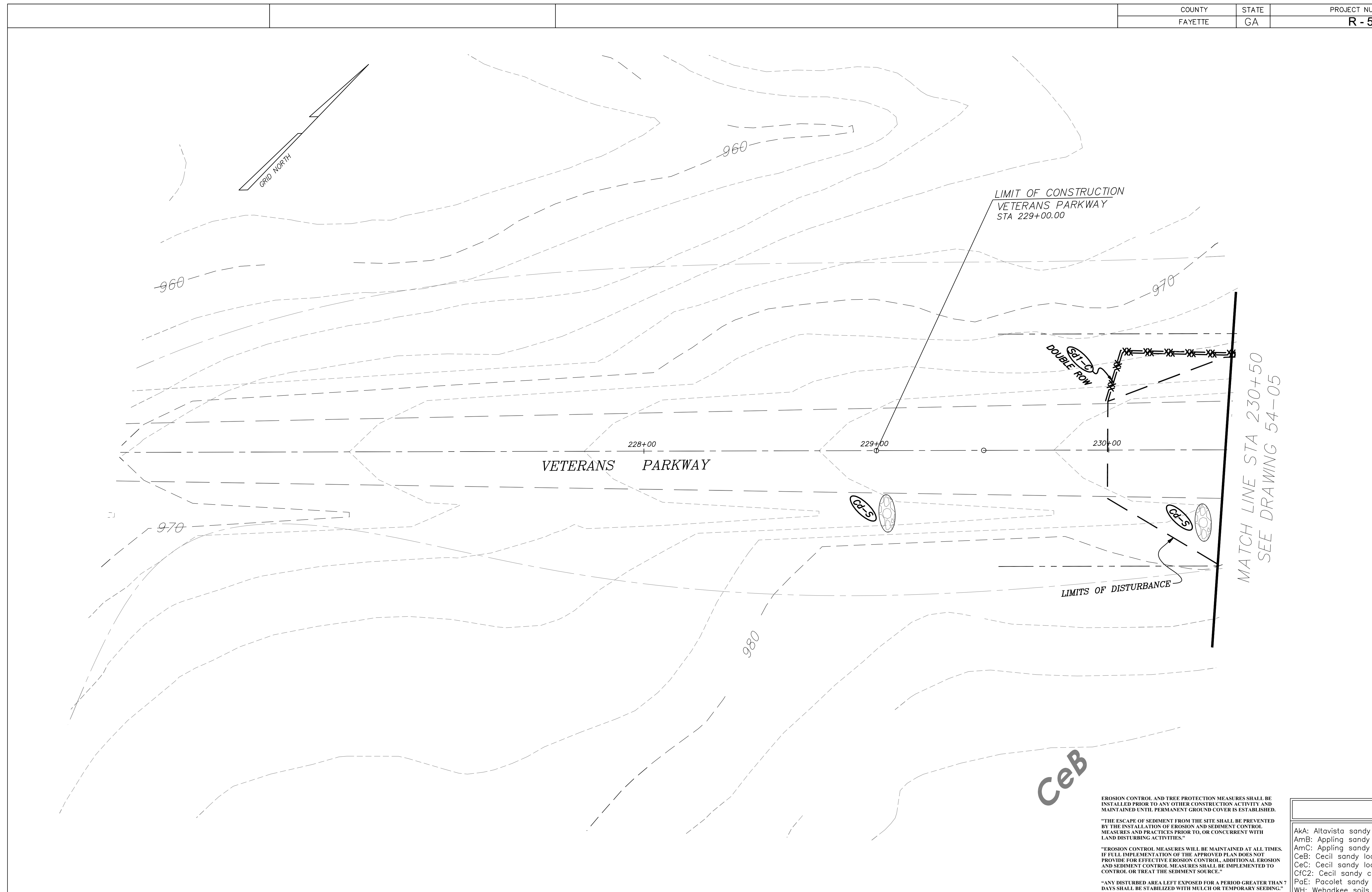
REVISION DATES	
1-2-17	

FAYETTE COUNTY
PUBLIC WORKS DEPARTMENT

MARCH 16, 2016

BMP LOCATION DETAILS PHASE 1 & 2
S.R. 92 AT WESTBRIDGE RD. / VETERANS
PKWY.

DRAWING NO.
54-03



EROSION CONTROL STRUCTURAL PRACTICES				
CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Cd	CHECKDAM			A small temporary barrier or dam constructed across a swale, drainage ditch or area of concentrated flow.
Ch	CHANNEL STABILIZATION			Improving, constructing or stabilizing an open channel, existing stream, or ditch.
Co	CONSTRUCTION EXIT			A crushed stone pad located at the construction exit to provide a place for removing mud from tires thereby protecting public streets.
Di	DIVERSION			An earthen channel or dike located above, below or across a slope to divert runoff. This may be a temporary or permanent structure.
Dn1	DOWNDRAIN STRUCTURE-FLEXIBLE			A flexible conduit of heavy-duty fabric or other material designed to safely conduct surface runoff down a slope.
Dn2	DOWNDRAIN STRUCTURE			A paved chute, sectional concrete pipe or similar material, temporary or permanent, designed to safely conduct surface runoff down a slope.
Ga	GABION			Rock filled baskets which are hand-placed into stabilizing structures.
Gr	GRADE STABILIZATION STRUCTURE			Permanent structures installed to protect natural or artificial channels or wetlands where otherwise the slope would be sufficient for the runoff water to form gullies.
Lv	LEVEL SPREADER			A structure to convert concentrated flow of waters 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 drainages.
Re	RETAINING WALL			A wall installed to stabilize cut and fill slopes where maximum permissible slopes are not obtainable. Each situation will require special design.
Rt	RETROFITTING			A device or structure placed in front of a permanent stormwater detention pond outlet structure to serve as a temporary sediment filter.
Sd1	SEDIMENT BARRIER			A barrier to prevent sediment from moving the construction site or to stabilize areas of erosion. Sediment barriers are usually temporary and in-situ.
Sd2	SEDIMENT TRAP, TEMPORARY			An impounding area created by excavation or a dam across a roadway. The surface water runoff is temporarily stored allowing the bulk of the sediment to drop out. The basin is usually temporary but may be designed as a permanent pond or stormwater retention device.
Sd3	SEDIMENT BASIN, TEMPORARY			A basin created by excavation or a dam across a roadway. The surface water runoff is temporarily stored allowing the bulk of the sediment to drop out. The basin is usually temporary but may be designed as a permanent pond or stormwater retention device.
St	STORMDRAIN INLET/OUTLET PROTECTION			A paved or short section of parapet channel at the outlet of a storm drain system preventing erosion from the concentrated runoff.
Wt	VEGETATED WATERWAY OR STORMWATER CONVEYANCE CHANNEL			Paved or vegetative water outlets for diversions, terraces, berms, dikes, or similar structures.

VEGETATIVE MEASURES				
CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Bf	BUFFER ZONE			An undisturbed natural "green belt" separating the land-disturbing site from surrounding property and bordering streams. It serves to reduce water velocity and remove some sediment. It is also of times a noise or vision pollution barrier.
Ds1	DISTURBED AREA STABILIZATION (w/MULCHING ONLY)			Establishing temporary protection for disturbed areas where seedlings may not have a suitable growing season to produce an erosion-retarding cover.
Ds2	DISTURBED AREA STABILIZATION (w/TEMPORARY SEEDING)			Establishing a temporary vegetative cover with fast growing seedlings on disturbed areas.
Ds3	DISTURBED AREA STABILIZATION (w/PERMANENT SEEDING)			Establishing permanent vegetative cover such as trees, shrubs, vines, sod, grasses or legumes on disturbed areas.
Ss	DISTURBED AREA STABILIZATION (w/SCOTCHPILE MATTING)			Establishing temporary protection for disturbed areas with geotextile matting.

Soils Legend	
AkA:	Altavista sandy loam, 0 to 3 percent slopes.
AmB:	Appling sandy loam, 2 to 6 percent slopes.
AmC:	Appling sandy loam, 6 to 10 percent slopes.
CeB:	Cecil sandy loam, 2 to 6 percent slopes.
CeC:	Cecil sandy loam, 6 to 10 percent slopes.
CfC2:	Cecil sandy clay loam, 6 to 10 percent slopes.
PaE:	Pacolet sandy loam, 10 to 25 percent slopes.
WH:	Wehadkee soils.

	PROPERTY AND EXISTING R/W LINE
	REQUIRED R/W LINE
	CONSTRUCTION LIMITS
	EASEMENT FOR THE CONSTRUCTION AND MAINTENANCE OF SLOPES
	REQUIRED RIGHT-OF-WAY AREA

	EASEMENT FOR THE CONSTRUCTION OF DRIVEWAYS
	PROPOSED NEW FULL DEPTH ASPHALT PAVEMENT SECTION
	REMOVE EXIST. PAVEMENT AND GRADE TO DRAIN
	ORANGE BARRIER FENCE

ENGINEERING DEPT.
 115 McDonough Road, Fayetteville, Georgia 30215
 Phone: (770)320-6010 Fax: (770)719-0871
 www.fayettecountyga.gov

SCALE: 1" = 20'

REVISION DATES	
1-2-17	

FAYETTE COUNTY
 PUBLIC WORKS DEPARTMENT
 MARCH 16, 2016
BMP LOCATION DETAILS PHASE 1 & 2
S.R. 92 AT WESTBRIDGE RD. / VETERANS
PKWY.
 DRAWING NO.
54-04

EROSION CONTROL AND TREE PROTECTION MEASURES SHALL BE INSTALLED PRIOR TO ANY OTHER CONSTRUCTION ACTIVITY AND MAINTAINED UNTIL PERMANENT GROUND COVER IS ESTABLISHED.

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

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

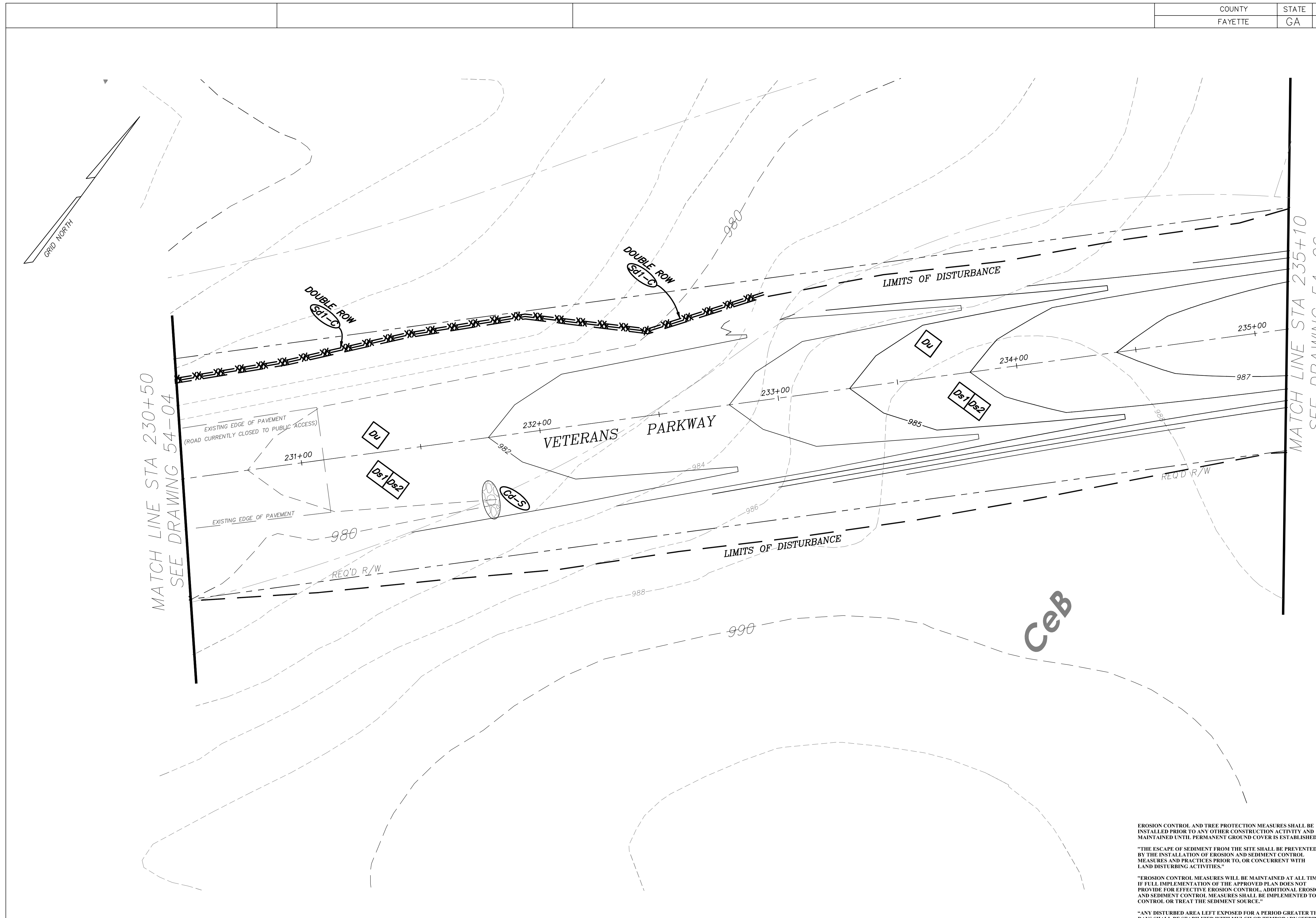
"ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 7 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING."

EROSION CONTROL STRUCTURAL PRACTICES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Cd	CHECKDAM			A small temporary barrier or dam constructed across a swale, drainage ditch or area of concentrated flow.
Ch	CHANNEL STABILIZATION			Improving, constructing or stabilizing an open channel, existing stream, or ditch.
Co	CONSTRUCTION EXIT			A crushed stone pad located at the construction exit to provide a place for removing mud from tires thereby protecting public streets.
Di	DIVERSION			An earthen channel or dike located above, below or across a slope to divert runoff. This may be a temporary or permanent structure.
Dn1	DOWNDRAIN STRUCTURE, FLEXIBLE			A flexible conduit of heavy duty fabric or other material designed to safely conduct surface runoff down a slope.
Dn2	DOWNDRAIN STRUCTURE			A paved chute, sectional conduit, pipe or similar material, temporary or permanent, designed to safely conduct surface runoff down a slope.
Ga	GABION			Rock filled baskets which are hand-placed into position forming soil stabilizing structures.
Gr	GRADE STABILIZATION STRUCTURE			Permanent structures installed to protect natural or artificial 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			A wall installed to stabilize cut and fill slopes where maximum permissible slopes are not obtainable. Each situation will require special design.
Rt	RETROFITTING			A device or structure placed in front of a permanent stormwater detention pond outlet structure to serve as a temporary sediment filter.
Sd1	SEDIMENT BARRIER			A barrier to prevent sediment from passing into a stormwater detention pond. It may be sandbags, bales of straw or hay, gravel, or sediment fence. The barrier should be temporary and installed prior to construction.
Sd2	SEDIMENT TRAP, TEMPORARY			An excavated area created by excavating around a storm drain inlet. The excavated area will be filled and stabilized on completion of construction activities.
Sd3	SEDIMENT BASIN, TEMPORARY			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. The basin is usually temporary but may be designed as a permanent pond or stormwater retention device.
St	STORMDRAIN INLET/OUTLET PROTECTION			A paved or short section of ramp channel at the outlet of a storm drain system preventing erosion from the concentrated runoff.
Wt	VEGETATED WATERWAY OR CONVEYANCE CHANNEL			Paved or vegetative water outlets for diversions, terraces, berms, dikes, or similar structures.

VEGETATIVE MEASURES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Bf	BUFFER ZONE			An undisturbed natural "green belt" separating the land-disturbing site from surrounding property and buffering streams. It serves to reduce water velocity and remove some sediment. It is also a noise or "vision pollution" barrier.
Ds1	DISTURBED AREA STABILIZATION (w/MULCHING ONLY)			Establishing temporary protection for disturbed areas where seedings may not have a suitable growing season to produce an erosion-retarding cover.
Ds2	DISTURBED AREA STABILIZATION (w/TEMPORARY SEEDING)			Establishing a temporary vegetative cover with fast growing seedlings on disturbed areas.
Ds3	DISTURBED AREA STABILIZATION (w/PERMANENT SEEDING)			Establishing permanent vegetative cover such as trees, shrubs, vines, sod, grasses or legumes on disturbed areas.
Ss	DISTURBED AREA STABILIZATION (w/GEOTEXTILE MATTING)			Establishing temporary protection for disturbed areas with geotextile matting.



EROSION CONTROL AND TREE PROTECTION MEASURES SHALL BE INSTALLED PRIOR TO ANY OTHER CONSTRUCTION ACTIVITY AND MAINTAINED UNTIL PERMANENT GROUND COVER IS ESTABLISHED.

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

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"ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 7 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING."

Soils Legend	
AkA:	Altavista sandy loam, 0 to 3 percent slopes.
AmB:	Appling sandy loam, 2 to 6 percent slopes.
AmC:	Appling sandy loam, 6 to 10 percent slopes.
CeB:	Cecil sandy loam, 2 to 6 percent slopes.
CeC:	Cecil sandy loam, 6 to 10 percent slopes.
CtC2:	Cecil sandy clay loam, 6 to 10 percent slopes.
PaE:	Pacolet sandy loam, 10 to 25 percent slopes.
WH:	Wehadkee soils.

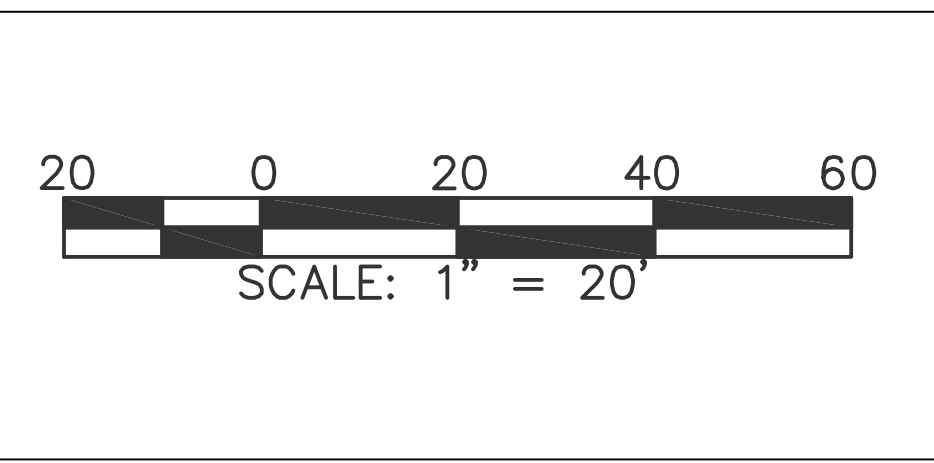
	PROPERTY AND EXISTING R/W LINE
	REQUIRED R/W LINE
	CONSTRUCTION LIMITS
	EASEMENT FOR THE CONSTRUCTION AND MAINTENANCE OF SLOPES
	REQUIRED RIGHT-OF-WAY AREA

	EASEMENT FOR THE CONSTRUCTION OF DRIVEWAYS
	PROPOSED NEW FULL DEPTH ASPHALT PAVEMENT SECTION
	REMOVE EXIST. PAVEMENT AND GRADE TO DRAIN
	ORANGE BARRIER FENCE

Fayette County GEORGIA

ENGINEERING DEPT.

115 McDonough Road, Fayetteville, Georgia 30215
Phone: (770)320-6010 Fax: (770)719-0871
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REVISION DATES	
1-2-17	

FAYETTE COUNTY PUBLIC WORKS DEPARTMENT

MARCH 16, 2016

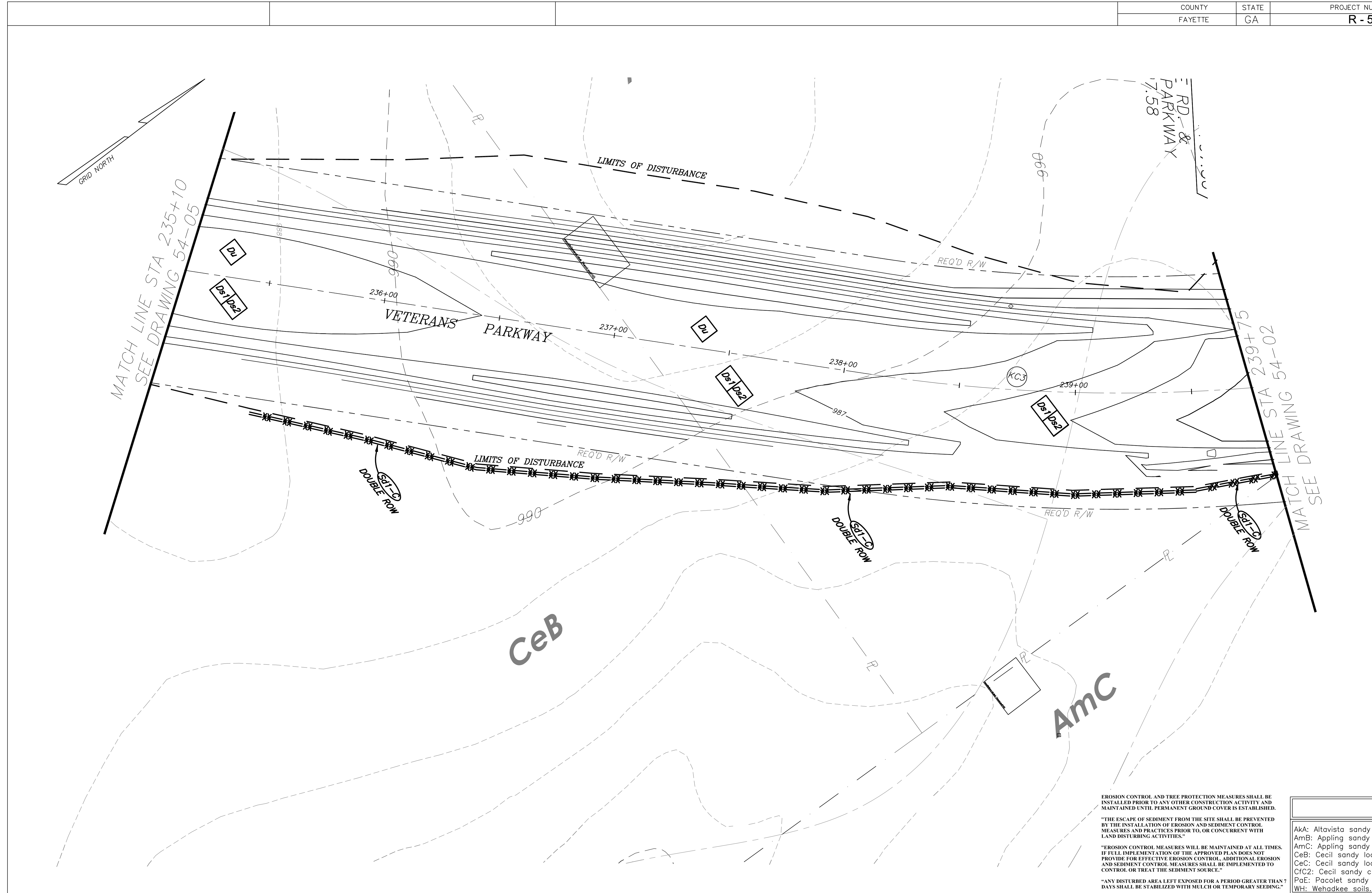
BMP LOCATION DETAILS PHASE 1 & 2
S.R. 92 AT WESTBRIDGE RD. / VETERANS PKWY.

DRAWING NO. **54-05**

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Cd	CHECKDAM			A small temporary barrier or dam constructed across a swale, drainage ditch or area of concentrated flow.
Ch	CHANNEL STABILIZATION			Improving, constructing or stabilizing an open channel, existing stream, or ditch.
Co	CONSTRUCTION EXIT			A crushed stone pad located at the construction exit to provide a place for removing mud from tires thereby protecting public streets.
Di	DIVERSION			An earthen channel or dike located above, below or across a slope to divert runoff. This may be a temporary or permanent structure.
Dn1	DOWNDRAIN STRUCTURE, FLEXIBLE			A flexible conduit of heavy-duty fabric or other material designed to safely conduct surface runoff down a slope.
Dn2	DOWNDRAIN STRUCTURE			A paved chute, sectional material, temporary or permanent, designed to safely conduct surface runoff down a slope.
Ga	GABION			Rock filled baskets which are hand-placed into position forming soil stabilizing structures.
Gr	GRADE STABILIZATION STRUCTURE			Permanent structures installed to protect natural or artificial 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 waters 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 gulliesways.
Re	RETAINING WALL			A wall installed to stabilize cut and fill slopes where maximum permissible slopes are not obtainable. Each situation will require special design.
Rt	RETROFITTING			A device or structure placed in front of a permanent stormwater detention pond outlet structure to serve as a temporary sediment filter.
Sd1	SEDIMENT BARRIER			A barrier to prevent sediment from leaving the construction site. It may be sandbags, bales of straw, hay, geotextile or a similar material. Sediment barriers are usually temporary and indicate type.
Sd2	SEDIMENT TRAP, TEMPORARY			An impounding area created by excavating around a storm drain inlet. The excavated area will be filled and stabilized on completion of construction activities.
Sd3	SEDIMENT BASIN, TEMPORARY			A basin created by excavation or a dam across a swaying. The surface water runoff is temporarily stored allowing the bulk of the sediment to drop out. The basin is usually temporary, but may be designed as a permanent pond or stormwater retention device.
St	STORMDRAIN INLET/OUTLET PROTECTION			A paved or short section of ferro channel at the outlet of a storm drain system preventing erosion from the concentrated runoff.
Wt	VEGETATED WATERWAY OR STORMWATER CONVEYANCE CHANNEL			Paved or vegetative water outlets for diversions, terraces, berms, dikes, or similar structures.

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Bf	BUFFER ZONE			An undisturbed natural "green belt" separating the end-ditching site from surrounding property and bordering streams. It serves to reduce water velocity and remove some sediment. It is also of trees a noise or vision pollution barrier.
Ds1	DISTURBED AREA STABILIZATION (w/MULCHING ONLY)			Establishing temporary protection for disturbed areas where seedlings may not have a suitable growing season to produce an erosion-retarding cover.
Ds2	DISTURBED AREA STABILIZATION (w/TEMPORARY SEEDING)			Establishing a temporary vegetative cover with fast growing seedlings on disturbed areas.
Ds3	DISTURBED AREA STABILIZATION (w/PERMANENT SEEDING)			Establishing permanent vegetative cover such as trees, shrubs, vines, sod, grasses or legumes on disturbed areas.
Ss	DISTURBED AREA STABILIZATION (w/GEOTEXTILE MATTING)			Establishing temporary protection for disturbed areas with geotextile matting.

Soils Legend	
	Aka: Altavista sandy loam, 0 to 3 percent slopes.
	AmB: Appling sandy loam, 2 to 6 percent slopes.
	AmC: Appling sandy loam, 6 to 10 percent slopes.
	CeB: Cecil sandy loam, 2 to 6 percent slopes.
	CeC: Cecil sandy loam, 6 to 10 percent slopes.
	CfC2: Cecil sandy clay loam, 6 to 10 percent slopes.
	PaE: Pacolet sandy loam, 10 to 25 percent slopes.
	WH: Wehadkee soils.



EROSION CONTROL AND TREE PROTECTION MEASURES SHALL BE INSTALLED PRIOR TO ANY OTHER CONSTRUCTION ACTIVITY AND MAINTAINED UNTIL PERMANENT GROUND COVER IS ESTABLISHED.

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

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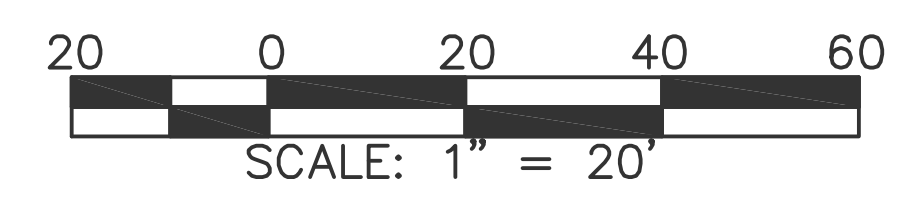
"ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 7 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING."

	PROPERTY AND EXISTING R/W LINE		EASEMENT FOR THE CONSTRUCTION OF DRIVEWAYS
	REQUIRED R/W LINE		PROPOSED NEW FULL DEPTH ASPHALT PAVEMENT SECTION
	CONSTRUCTION LIMITS		REMOVE EXIST. PAVEMENT AND GRADE TO DRAIN
	EASEMENT FOR THE CONSTRUCTION AND MAINTENANCE OF SLOPES		ORANGE BARRIER FENCE
	REQUIRED RIGHT-OF-WAY AREA		

Fayette County GEORGIA

ENGINEERING DEPT.

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REVISION DATES	
1-2-17	

FAYETTE COUNTY PUBLIC WORKS DEPARTMENT

MARCH 16, 2016

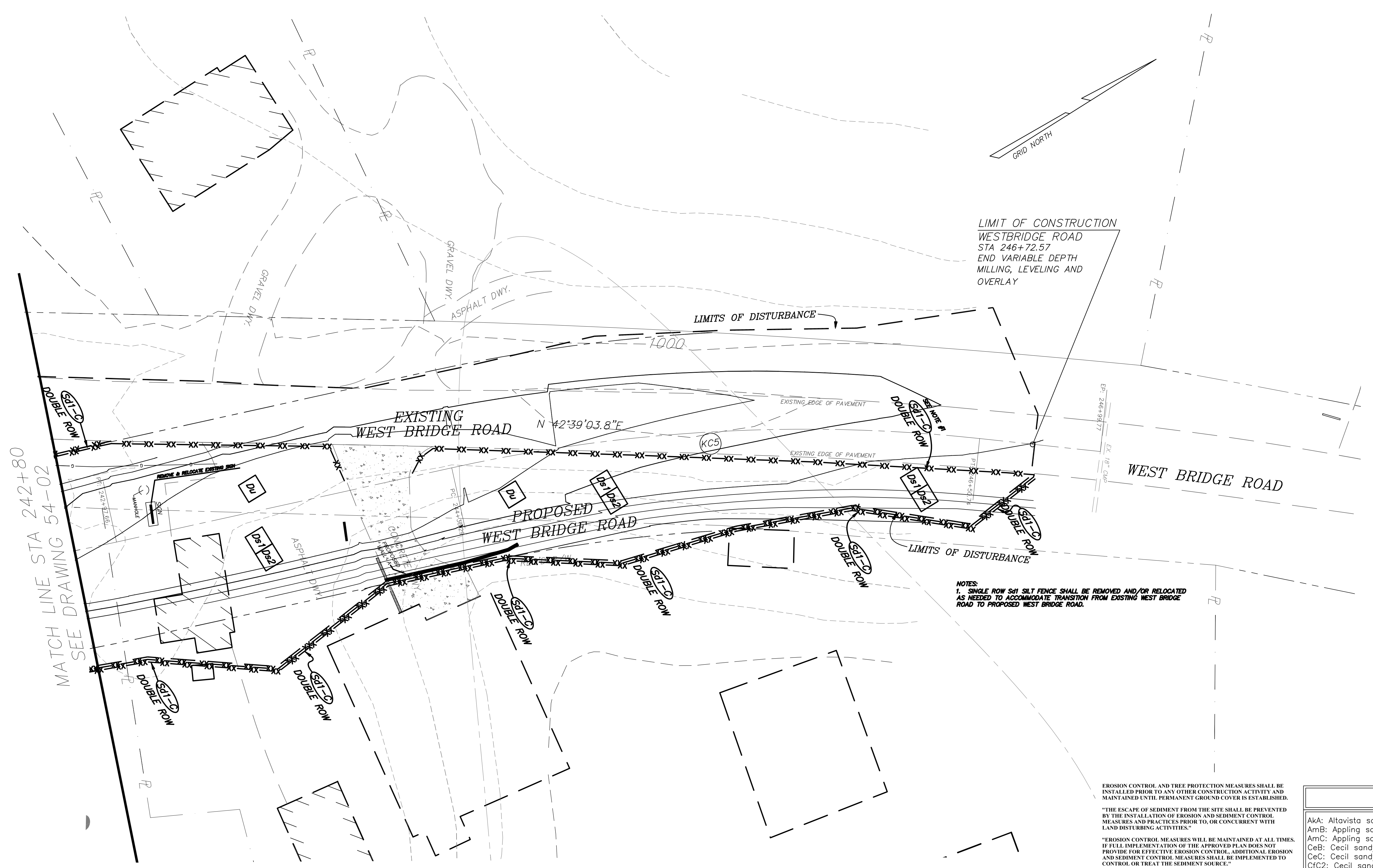
BMP LOCATION DETAILS PHASE 1 & 2
 S.R. 92 AT WESTBRIDGE RD. / VETERANS PKWY.

DRAWING NO. **54-06**

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Cd	CHECKDAM			A small temporary barrier or dam constructed across a wide, drainage ditch or area of concentrated flow.
Ch	CHANNEL STABILIZATION			Improving, constructing or stabilizing an open channel, existing stream, or ditch.
Co	CONSTRUCTION EXIT			A crushed stone pad located at the construction exit to provide a place for removing mud from tires thereby protecting public streets.
Di	DIVERSION			An earthen channel or dike located above, below or across a slope that may be a temporary or permanent structure.
Dn1	DOWNDRAIN STRUCTURE, FLEXIBLE			A flexible conduit of heavy-duty fabric or other material designed to safely conduct surface runoff down a slope.
Dn2	DOWNDRAIN STRUCTURE			A paved chute, sectional conduit, pipe or similar material, temporary or permanent, designed to safely conduct surface runoff down a slope.
Ga	GABION			Rock filled baskets which are hand-placed into position forming soil stabilizing structures.
Gr	GRADE STABILIZATION STRUCTURE			Permanent structures installed to protect natural or artificial 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			A wall installed to stabilize cut and fill slopes where maximum permissible slopes are not obtainable. Each installation will require special design.
Rt	RETROFITTING			A device or structure placed in front of a permanent stormwater detention pond outlet structure to serve as a temporary sediment filter.
Sd1	SEDIMENT BARRIER			A barrier to prevent sediment from leaving the construction site. It may be sandbags, bales of straw or hay, geotextile or sediment fence. The barrier is usually temporary and inexpensive.
Sd2	SEDIMENT TRAP, TEMPORARY			A temporary area created by excavating around a storm drain inlet. The excavated area will be filled and stabilized on completion of construction activities.
Sd3	SEDIMENT BASIN, TEMPORARY			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. The basin is usually temporary having a permanent pond or stormwater retention device.
St	STORMDRAIN INLET/OUTLET PROTECTION			A paved or short section of drop concrete at the outlet of a storm drain system preventing erosion from the concentrated runoff.
Wt	VEGETATED WATERWAY OR STORMWATER CONVEYANCE CHANNEL			Paved or vegetative water outlets, ditches, terraces, berms, dikes, or similar structures.

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Bf	BUFFER ZONE			An undisturbed natural "green belt" separating the land-disturbing site from surrounding property and bordering streams. It serves to reduce water velocity and remove some sediment. It also acts as a noise or vision pollution barrier.
Ds1	DISTURBED AREA STABILIZATION (w/MULCHING ONLY)			Establishing temporary protection for disturbed areas where seedlings may not have a suitable growing season to produce an erosion-retarding cover.
Ds2	DISTURBED AREA STABILIZATION (w/TEMPORARY SEEDING)			Establishing a temporary vegetative cover with fast growing seedlings on disturbed areas.
Ds3	DISTURBED AREA STABILIZATION (w/PERMANENT SEEDING)			Establishing permanent vegetative cover such as trees, shrubs, vines, sods, grasses or legumes on disturbed areas.
Ss	DISTURBED AREA STABILIZATION (w/GEOTEXTILE MATTING)			Establishing temporary protection for disturbed areas with geotextile matting.

Soils Legend	
AkA:	Altavista sandy loam, 0 to 3 percent slopes.
AmB:	Appling sandy loam, 2 to 6 percent slopes.
AmC:	Appling sandy loam, 6 to 10 percent slopes.
CeB:	Cecil sandy loam, 2 to 6 percent slopes.
CeC:	Cecil sandy loam, 6 to 10 percent slopes.
CfC2:	Cecil sandy clay loam, 6 to 10 percent slopes.
PaE:	Pacolet sandy loam, 10 to 25 percent slopes.
WH:	Wehadkee soils.



EROSION CONTROL AND TREE PROTECTION MEASURES SHALL BE INSTALLED PRIOR TO ANY OTHER CONSTRUCTION ACTIVITY AND MAINTAINED UNTIL PERMANENT GROUND COVER IS ESTABLISHED.

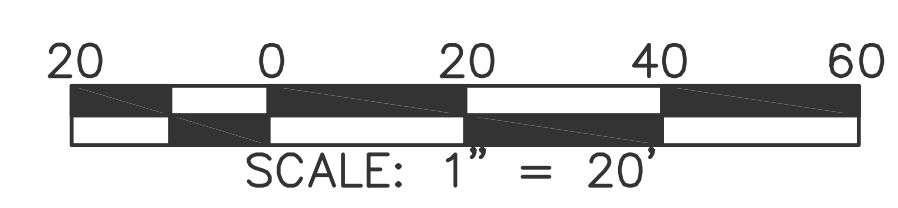
"THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH LAND DISTURBING ACTIVITIES."

"EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED 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 7 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING."

	PROPERTY AND EXISTING R/W LINE		EASEMENT FOR THE CONSTRUCTION OF DRIVEWAYS
	REQUIRED R/W LINE		PROPOSED NEW FULL DEPTH ASPHALT PAVEMENT SECTION
	CONSTRUCTION LIMITS		REMOVE EXIST. PAVEMENT AND GRADE TO DRAIN
	EASEMENT FOR THE CONSTRUCTION AND MAINTENANCE OF SLOPES		ORANGE BARRIER FENCE
	REQUIRED RIGHT-OF-WAY AREA		

Fayette County Georgia
ENGINEERING DEPT.
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REVISION DATES	
1-2-17	

FAYETTE COUNTY
 PUBLIC WORKS DEPARTMENT
 MARCH 16, 2016
BMP LOCATION DETAILS PHASE 1 & 2
 S.R. 92 AT WESTBRIDGE RD. / VETERANS
 PKWY.
 DRAWING NO.
54-07

EROSION CONTROL STRUCTURAL PRACTICES

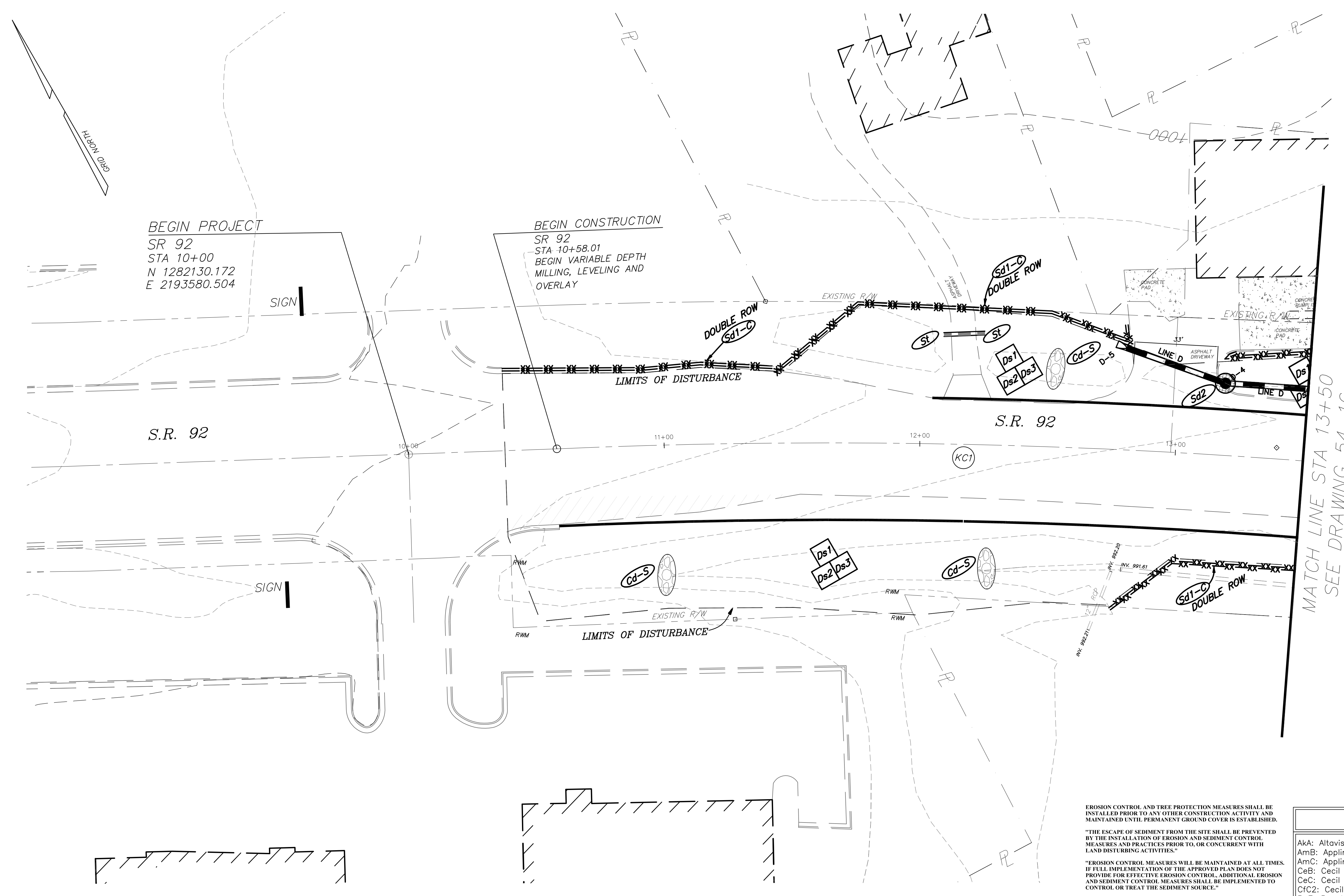
CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Cd	CHECKDAM			A small temporary barrier or dam constructed across a swale, drainage ditch or area of concentrated flow.
Ch	CHANNEL STABILIZATION			Improving, constructing or stabilizing an open channel, existing stream, or ditch.
Co	CONSTRUCTION EXIT			A crushed stone pad located at the construction exit to provide a place for removing mud from tires thereby protecting public streets.
Di	DIVERSION			An earthen channel or dike located above, below or across a slope to divert runoff. This may be a temporary or permanent structure.
Dn1	DOWNDRAIN STRUCTURE, FLEXIBLE			A flexible conduit of heavy-duty fabric or other material designed to safely conduct surface runoff down a slope.
Dn2	DOWNDRAIN STRUCTURE			A paved chute, sectional conduit, pipe or similar permanent, designed to safely conduct surface runoff down a slope.
Ga	GABION			Rock filled baskets which are hand-placed into position forming soil stabilizing structures.
Gr	GRADE STABILIZATION STRUCTURE			Permanent structures installed to protect natural or artificial 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 waters into less erosive sheet flow. This should be constructed only on undisturbed soils.
Rd	ROCK FILTER DAM			A permanent or temporary stone filter dam installed across small streams or drainageways.
Re	RETAINING WALL			A wall installed to stabilize cut and fill slopes where maximum permissible slopes are not obtainable. Each situation will require special design.
Rt	RETROFITTING			A device or structure placed in front of a permanent stormwater detention pond outlet structure to serve as a temporary sediment filter.
Sd1	SEDIMENT BARRIER			A barrier to prevent sediment from leaving the construction site. It may be a sandbag, pile of straw or hay, growth of a sediment, or temporary and inexpensive.
Sd2	SEDIMENT TRAP TEMPORARY			An impounding area created by excavating around a storm drain inlet. The excavated area will be filled and stabilized on completion of construction activities.
Sd3	SEDIMENT BASIN TEMPORARY			A basin created by excavation in a deep access roadway, temporary stored allowing the bulk of the sediment to drop out. The basin is usually temporary but may be designed as a permanent pond or stormwater retention device.
St	STORMDRAIN INLET/OUTLET PROTECTION			A paved or short section of riprap channel at the outlet of a storm drain system preventing erosion from the concentrated runoff.
Wt	VEGETATED WATERWAY OR STORMWATER CONVEYANCE CHANNEL			Paved or vegetative water outlets for diversions, terraces, berms, dikes, or similar structures.

VEGETATIVE MEASURES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Bf	BUFFER ZONE			An undisturbed natural "green belt" separating the land-disturbing site from surrounding property and bordering streams. It serves to reduce noise, velocity and remove some sediment. It is also at times a noise or visual pollution barrier.
Ds1	DISTURBED AREA STABILIZATION (w/MULCHING ONLY)			Establishing temporary protection for disturbed areas where seedings may not have a suitable growing season to produce an erosion reducing cover.
Ds2	DISTURBED AREA STABILIZATION (w/TEMPORARY SEEDING)			Establishing a temporary vegetative cover with fast growing seedlings on disturbed areas.
Ds3	DISTURBED AREA STABILIZATION (w/PERMANENT SEEDING)			Establishing permanent vegetative cover such as trees, shrubs, vines, sod, grasses or legumes on disturbed areas.
Ss	DISTURBED AREA STABILIZATION (w/GEOTEXTILE MATTING)			Establishing temporary protection for disturbed areas with geotextile matting.

Soils Legend

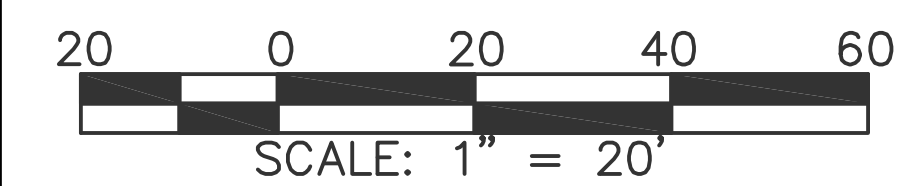
AkA: Altavista sandy loam, 0 to 3 percent slopes.
 AmB: Appling sandy loam, 2 to 6 percent slopes.
 AmC: Appling sandy loam, 6 to 10 percent slopes.
 CeB: Cecil sandy loam, 2 to 6 percent slopes.
 CeC: Cecil sandy loam, 6 to 10 percent slopes.
 CfC2: Cecil sandy clay loam, 6 to 10 percent slopes.
 PaE: Pacolet sandy loam, 10 to 25 percent slopes.
 WH: Wehadkee soils.



	PROPERTY AND EXISTING R/W LINE
	REQUIRED R/W LINE
	CONSTRUCTION LIMITS
	EASEMENT FOR THE CONSTRUCTION AND MAINTENANCE OF SLOPES
	REQUIRED RIGHT-OF-WAY AREA

	EASEMENT FOR THE CONSTRUCTION OF DRIVEWAYS
	PROPOSED NEW FULL DEPTH ASPHALT PAVEMENT SECTION
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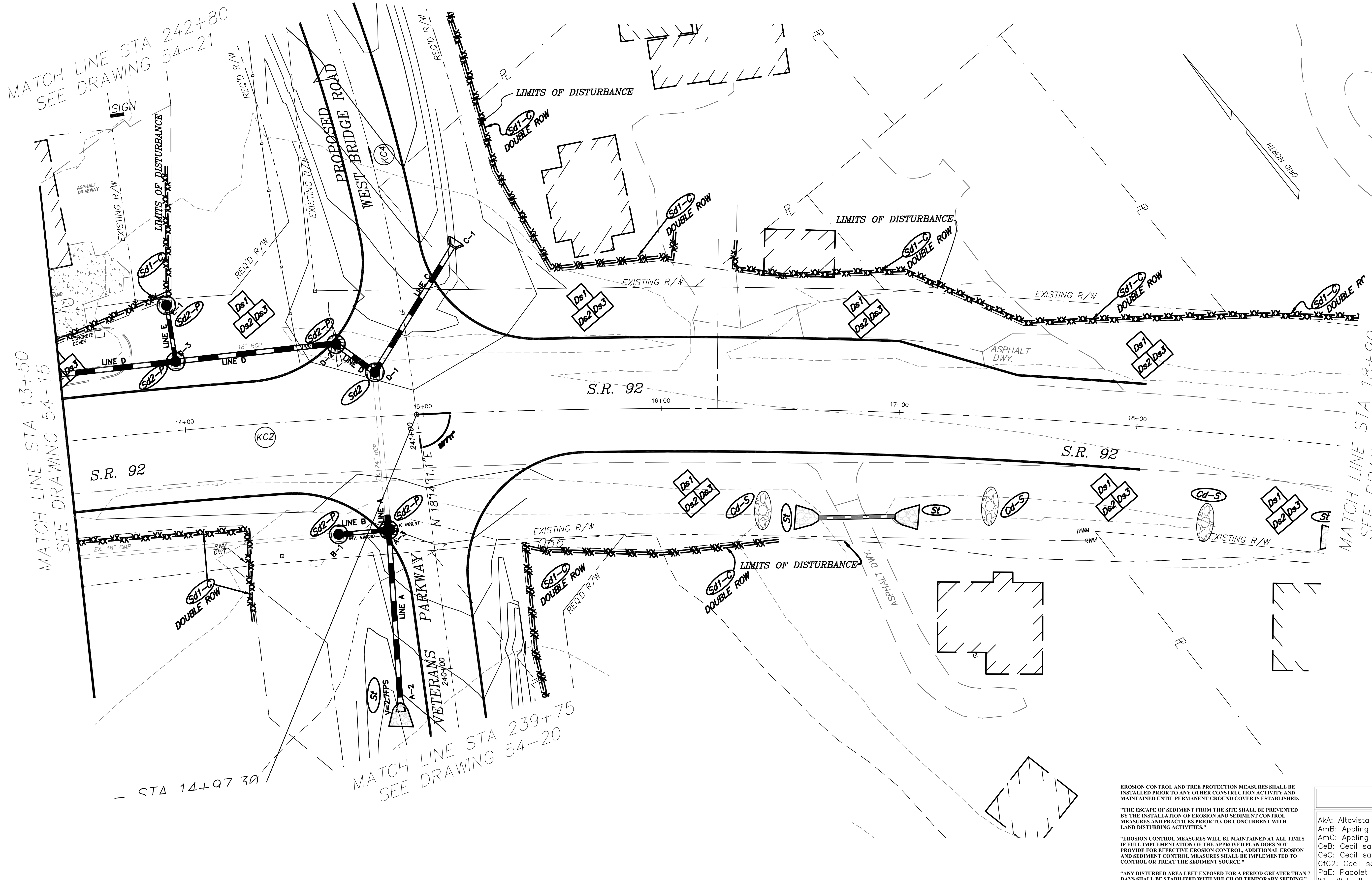


REVISION DATES	
1/02/17	

FAYETTE COUNTY
 PUBLIC WORKS DEPARTMENT
 MARCH 16, 2016
BMP LOCATION DETAILS PHASE 3
92 AT WESTBRIDGE RD. / VETERANS
PKWY.
 DRAWING NO.
54-15

EROSION CONTROL AND TREE PROTECTION MEASURES SHALL BE INSTALLED PRIOR TO ANY OTHER CONSTRUCTION ACTIVITY AND MAINTAINED UNTIL PERMANENT GROUND COVER IS ESTABLISHED.
 "THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH, LAND DISTURBING ACTIVITIES."
 "EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED 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 7 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING."

MATCH LINE STA 13+50
 SEE DRAWING 54-16



EROSION CONTROL STRUCTURAL PRACTICES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Cd	CHECKDAM	[Symbol]	[Symbol]	A small temporary barrier or dam constructed across a swale, drainage ditch or area of concentrated flow.
Ch	CHANNEL STABILIZATION	[Symbol]	[Symbol]	Improving, constructing or stabilizing an open channel, existing stream, or ditch.
Co	CONSTRUCTION EXIT	[Symbol]	[Symbol]	A crushed stone pad located at the construction exit to provide a place for removing mud from tires thereby protecting public streets.
Di	DIVERSION	[Symbol]	[Symbol]	An earthen channel or dike located above, below or across a slope to divert runoff. This may be a temporary or permanent structure.
Dn1	DOWNDRAIN STRUCTURE, FLEXIBLE	[Symbol]	[Symbol]	A flexible conduit of heavy-duty fabric or other material designed to safely conduct surface runoff over a slope.
Dn2	DOWNDRAIN STRUCTURE	[Symbol]	[Symbol]	A paved chute, sectional material, temporary or permanent, designed to safely conduct surface runoff down a slope.
Ga	GABION	[Symbol]	[Symbol]	Rock filled baskets which are hand-placed into position forming soil stabilizing structures.
Gr	GRADE STABILIZATION STRUCTURE	[Symbol]	[Symbol]	Permanent structures installed to protect natural or artificial channels or waterways where observed, the slope would be sufficient for the passing water to form gullies.
Lv	LEVEL SPREADER	[Symbol]	[Symbol]	A structure to convert concentrated flow of waters into less erosive sheet flow. This should be constructed only on undisturbed soils.
Rd	ROCK FILTER DAM	[Symbol]	[Symbol]	A permanent or temporary stone filter dam installed across small streams or gullies.
Re	RETAINING WALL	[Symbol]	[Symbol]	A wall installed to stabilize cut or fill slopes where maximum permissible slopes are not obtainable. Each situation will require special design.
Rt	RETROFITTING	[Symbol]	[Symbol]	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	[Symbol]	[Symbol]	A barrier to prevent sediment from leaving the construction site. It may be sandbags, bales of straw, rock, geotextile or a site usually temporary and indicate type.
Sd2	SEDIMENT TRAP, TEMPORARY	[Symbol]	[Symbol]	An impounding area created by excavating or grading a storm drain. The excavated area should be backfilled on completion of construction.
Sd3	SEDIMENT BASIN, TEMPORARY	[Symbol]	[Symbol]	A basin created by excavation or grading a storm drain. The basin is usually temporary but may be designed as a permanent pond or stormwater retention device.
St	STORMDRAIN INLET/OUTLET PROTECTION	[Symbol]	[Symbol]	A paved or short section of ramp channel at the outlet of a storm drain system preventing erosion from the concentrated runoff.
Wt	VEGETATED WATERWAY OR STORMWATER CONCENTRATION CHANNEL	[Symbol]	[Symbol]	Paved or vegetative water outlets for diversions, terraces, terraces, dikes, or similar structures.

VEGETATIVE MEASURES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Bf	BUFFER ZONE	[Symbol]	[Symbol]	An undisturbed natural "green belt" separating the site from the surrounding property and bordering streams. It serves to reduce water velocity and remove some sediment. It is also of trees a noise or vision pollution barrier.
Ds1	DISTURBED AREA STABILIZATION (w/MULCHING ONLY)	[Symbol]	[Symbol]	Establishing temporary protection for disturbed areas where seedlings may not have a suitable growing season to produce an erosion-retarding cover.
Ds2	DISTURBED AREA STABILIZATION (w/TEMPORARY SEEDING)	[Symbol]	[Symbol]	Establishing a temporary vegetative cover with fast growing seedlings on disturbed areas.
Ds3	DISTURBED AREA STABILIZATION (w/PERMANENT SEEDING)	[Symbol]	[Symbol]	Establishing permanent vegetative cover such as trees, shrubs, vines, sod, grasses or legumes on disturbed areas.
Ss	DISTURBED AREA STABILIZATION (w/GEOTEXTILE MATTING)	[Symbol]	[Symbol]	Establishing temporary protection for disturbed areas with geotextile matting.

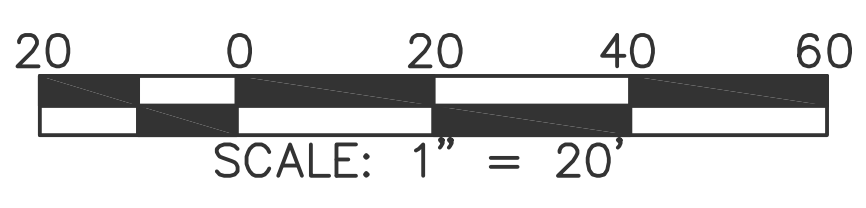
Soils Legend

AkA: Altavista sandy loam, 0 to 3 percent slopes.
 AmB: Appling sandy loam, 2 to 6 percent slopes.
 AmC: Appling sandy loam, 6 to 10 percent slopes.
 CeB: Cecil sandy loam, 2 to 6 percent slopes.
 CeC: Cecil sandy loam, 6 to 10 percent slopes.
 CFC2: Cecil sandy clay, loam, 6 to 10 percent slopes.
 PaE: Pacolet sandy loam, 10 to 25 percent slopes.
 WH: Wehadkee soils.

EROSION CONTROL AND TREE PROTECTION MEASURES SHALL BE INSTALLED PRIOR TO ANY OTHER CONSTRUCTION ACTIVITY AND MAINTAINED UNTIL PERMANENT GROUND COVER IS ESTABLISHED.
 "THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH LAND DISTURBING ACTIVITIES."
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 "ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 7 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING."

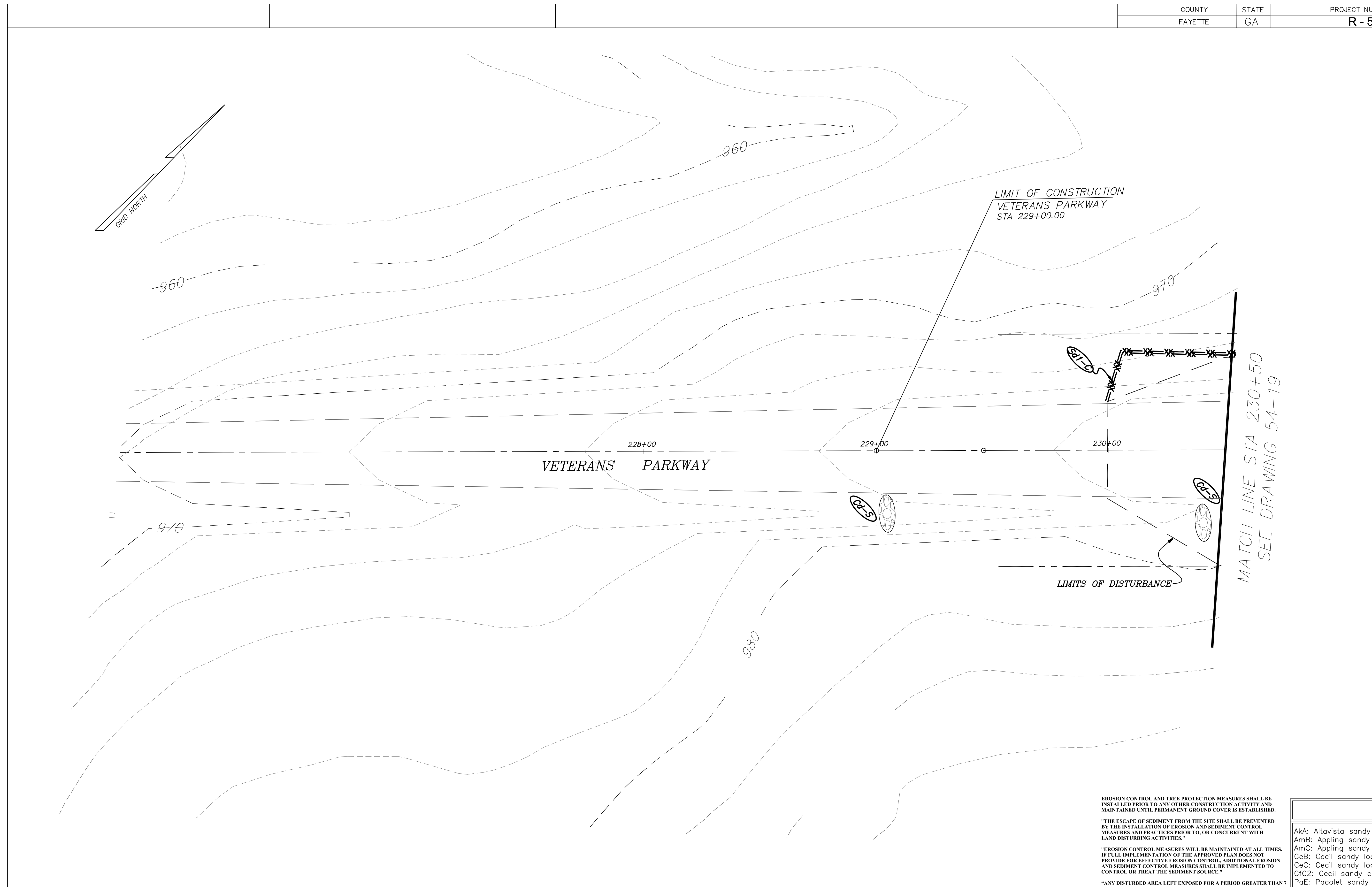
	PROPERTY AND EXISTING R/W LINE		EASEMENT FOR THE CONSTRUCTION OF DRIVEWAYS
	REQUIRED R/W LINE		PROPOSED NEW FULL DEPTH ASPHALT PAVEMENT SECTION
	CONSTRUCTION LIMITS		REMOVE EXIST. PAVEMENT AND GRADE TO DRAIN
	EASEMENT FOR THE CONSTRUCTION AND MAINTENANCE OF SLOPES		ORANGE BARRIER FENCE
	REQUIRED RIGHT-OF-WAY AREA		

Fayette County Georgia
ENGINEERING DEPT.
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REVISION DATES	
1/02/17	

FAYETTE COUNTY
 PUBLIC WORKS DEPARTMENT
 MARCH 16, 2016
BMP LOCATION DETAILS PHASE 3
92 AT WESTBRIDGE RD. / VETERANS
PKWY.
 DRAWING NO. **54-16**



CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Cd	CHECKDAM			A small temporary barrier or dam constructed across a wide, drainage ditch or area of concentrated flow.
Ch	CHANNEL STABILIZATION			Improving, constructing or stabilizing an open channel, existing stream, or ditch.
Co	CONSTRUCTION EXIT			A crushed stone pad located at the construction exit to provide a place for removing mud from tires thereby protecting public streets.
Di	DIVERSION			An earthen channel or dike located above, below or across a slope to divert runoff. This may be a temporary or permanent structure.
Dn1	DOWNDRAIN STRUCTURE, FLEXIBLE			A flexible conduit of heavy-duty fabric or other material designed to safely conduct surface runoff down a slope.
Dn2	DOWNDRAIN STRUCTURE			A paved chute, sectional conduit, pipe or similar structure, designed to safely conduct surface runoff down a slope.
Ga	GABION			Rock filled baskets which are hand-placed into position forming soil stabilizing structures.
Gr	GRADE STABILIZATION STRUCTURE			Permanent structures installed to protect natural or artificial 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			A wall installed to stabilize cut and fill slopes where maximum permissible slopes are not obtainable. Each situation will require special design.
Rt	RETROFITTING			A device or structure placed in front of a permanent stormwater detention pond outlet structure to serve as a temporary sediment filter.
Sd1	SEDIMENT BARRIER			A barrier to prevent sediment from leaving the construction site. It may be sandbags, boxes of straw, logs, geotextile sediment fence, the barrier is usually temporary and is expendable.
Sd2	SEDIMENT TRAP, TEMPORARY			An impounding area created by excavating around a storm drain inlet. The excavated area will be filled and stabilized on completion of construction activities.
Sd3	SEDIMENT BASIN, TEMPORARY			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. The basin is usually temporary but may be designed as a permanent pond or stormwater retention device.
St	STORMDRAIN INLET/OUTLET PROTECTION			A paved or short section of frp placed at the outlet of a storm drain system preventing erosion from the concentrated runoff.
Wt	VEGETATED WATERWAY OR STORMWATER CONVEYANCE CHANNEL			Paved or vegetative water outlets for diversions, terraces, berms, dikes, or similar structures.

VEGETATIVE MEASURES				
CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Bf	BUFFER ZONE			An undisturbed natural "green belt" separating the land-disturbing site from surrounding property and bordering streams. It serves to reduce water velocity and remove some sediment. Use of trees a noise or vision pollution barrier.
Ds1	DISTURBED AREA STABILIZATION (w/ MULCHING ONLY)			Establishing temporary protection for disturbed areas where seedlings may not have a suitable growing season to produce an erosion retarding cover.
Ds2	DISTURBED AREA STABILIZATION (w/ TEMPORARY SEEDING)			Establishing a temporary vegetative cover with fast growing seedlings on disturbed areas.
Ds3	DISTURBED AREA STABILIZATION (w/ PERMANENT SEEDING)			Establishing permanent vegetative cover such as trees, shrubs, vines, sod, grasses or legumes on disturbed areas.
Ss	DISTURBED AREA STABILIZATION (w/ GEOTEXTILE MATING)			Establishing temporary protection for disturbed areas with geotextile matting.

Soils Legend	
AkA:	Altavista sandy loam, 0 to 3 percent slopes.
AmB:	Appling sandy loam, 2 to 6 percent slopes.
AmC:	Appling sandy loam, 6 to 10 percent slopes.
CeB:	Cecil sandy loam, 2 to 6 percent slopes.
CeC:	Cecil sandy loam, 6 to 10 percent slopes.
CfC2:	Cecil sandy clay loam, 6 to 10 percent slopes.
PaE:	Pacolet sandy loam, 6 to 10 percent slopes.
WH:	Wehadkee soils.

EROSION CONTROL AND TREE PROTECTION MEASURES SHALL BE INSTALLED PRIOR TO ANY OTHER CONSTRUCTION ACTIVITY AND MAINTAINED UNTIL PERMANENT GROUND COVER IS ESTABLISHED.

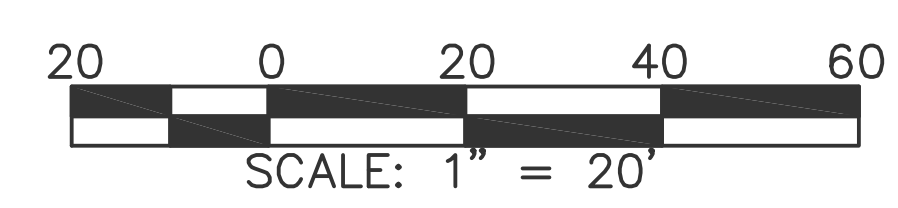
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"ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 7 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING."

	PROPERTY AND EXISTING R/W LINE		EASEMENT FOR THE CONSTRUCTION OF DRIVEWAYS
	REQUIRED R/W LINE		PROPOSED NEW FULL DEPTH ASPHALT PAVEMENT SECTION
	CONSTRUCTION LIMITS		REMOVE EXIST. PAVEMENT AND GRADE TO DRAIN
	EASEMENT FOR THE CONSTRUCTION AND MAINTENANCE OF SLOPES		ORANGE BARRIER FENCE
	REQUIRED RIGHT-OF-WAY AREA		

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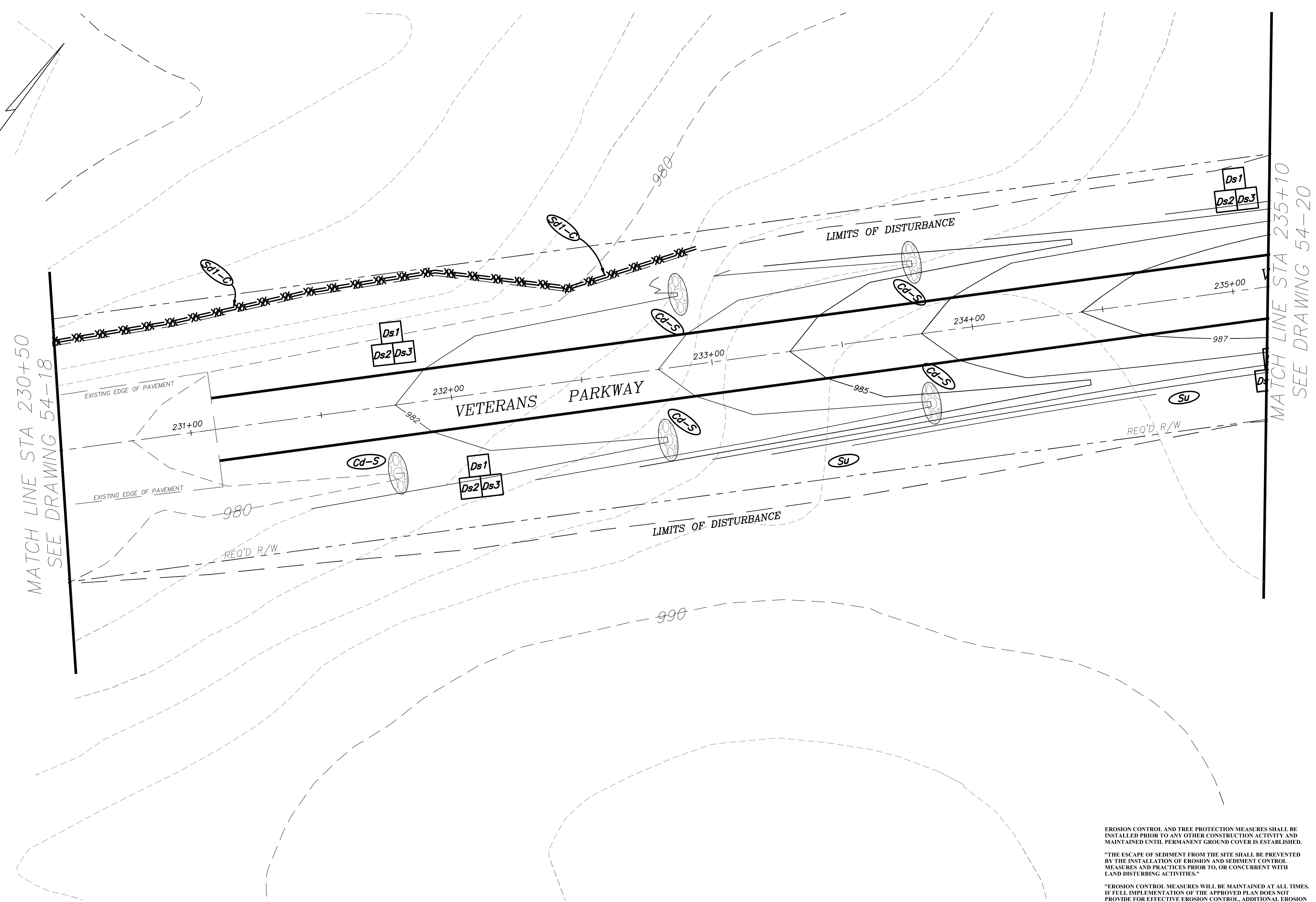
REVISION DATES	
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FAYETTE COUNTY
PUBLIC WORKS DEPARTMENT
 MARCH 16, 2016
BMP LOCATION DETAILS PHASE 3
92 AT WESTBRIDGE RD. / VETERANS
PKWY.
 DRAWING NO.
54-18

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Cd	CHECKDAM			A small temporary barrier or dam constructed across a swale, drainage ditch or area of concentrated flow.
Ch	CHANNEL STABILIZATION			Improving, constructing or stabilizing an open channel, existing stream, or ditch.
Co	CONSTRUCTION EXIT			A crushed stone pad located at the construction exit to provide a place for removing mud from tires thereby protecting public streets.
Di	DIVERSION			An earthen channel or dike located above, below or across a slope to divert runoff. This may be a temporary or permanent structure.
Dn1	DOWNDRAIN STRUCTURE, FLEXIBLE			A flexible conduit of heavy-duty fabric or other material designed to safely conduct surface runoff down a slope.
Dn2	DOWNDRAIN STRUCTURE			A power shank, sectional conduit, pipe or similar material, temporary or permanent, designed to safely conduct surface runoff down a slope.
Ga	GABION			Rock filled baskets which are hand-placed into position forming soil stabilizing structures.
Gr	GRADE STABILIZATION STRUCTURE			Permanent structures installed to protect natural or artificial 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			A wall installed to stabilize cut and fill slopes where maximum permissible slopes are not obtainable. Each situation will require special design.
Rt	RETROFITTING			A device or structure placed in front of a permanent stormwater detention pond outlet structure to serve as a temporary sediment filter.
Sd1	SEDIMENT BARRIER			A barrier to prevent sediment from leaving the construction site. It may be sandbags, brush, sediment fence, the barriers are usually temporary and inexpensive.
Sd2	SEDIMENT TRAP, TEMPORARY			An impounding area created by excavating around a storm drain or by installing a temporary structure to trap sediment from construction activities.
Sd3	SEDIMENT BASIN, TEMPORARY			A basin created by excavation or a dike across a waterway to store sediment temporarily stored allowing the bulk of the sediment to drop out. The basin is usually temporary but may be designed as a permanent pond or stormwater retention device.
St	STORMDRAIN INLET/OUTLET PROTECTION			A paved or short section of riprap channel at the inlet of a storm drain system preventing erosion from the concentrated runoff.
Wt	VEGETATED WATERWAY OR STORMWATER CONVEYANCE CHANNEL			Paved or vegetative water outlets for diversions, terraces, berms, dikes, or similar structures.

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Bf	BUFFER ZONE			An undisturbed natural "green belt" separating the land-disturbing site from surrounding property and bordering streams. It serves to reduce water velocity and remove some sediment. It is also at times a noise or vapor pollution barrier.
Ds1	DISTURBED AREA STABILIZATION (w/MULCHING ONLY)			Establishing temporary protection for disturbed areas where seedings may not have a suitable growing season to produce an erosion retarding cover.
Ds2	DISTURBED AREA STABILIZATION (w/TEMPORARY SEEDING)			Establishing a temporary vegetative cover with fast growing seedlings on disturbed areas.
Ds3	DISTURBED AREA STABILIZATION (w/PERMANENT SEEDING)			Establishing permanent vegetative cover such as trees, shrubs, vines, sod, grasses or legumes on disturbed areas.
Ss	DISTURBED AREA STABILIZATION (w/GEOTEXTILE MATTING)			Establishing temporary protection for disturbed areas with geotextile matting.

Soils Legend	
AkA:	Altavista sandy loam, 0 to 3 percent slopes.
AmB:	Appling sandy loam, 2 to 6 percent slopes.
AmC:	Appling sandy loam, 6 to 10 percent slopes.
CeB:	Cecil sandy loam, 2 to 6 percent slopes.
CeC:	Cecil sandy loam, 6 to 10 percent slopes.
CfC2:	Cecil sandy clay loam, 6 to 10 percent slopes.
PaE:	Pacolet sandy loam, 10 to 25 percent slopes.
WH:	Wehadkee soils.



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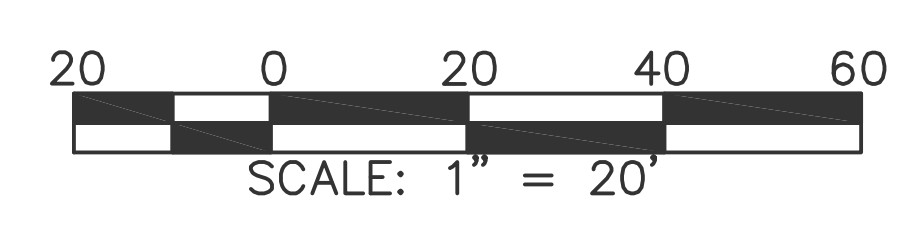
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"ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 7 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING."

	PROPERTY AND EXISTING R/W LINE
	REQUIRED R/W LINE
	CONSTRUCTION LIMITS
	EASEMENT FOR THE CONSTRUCTION AND MAINTENANCE OF SLOPES
	REQUIRED RIGHT-OF-WAY AREA

	EASEMENT FOR THE CONSTRUCTION OF DRIVEWAYS
	PROPOSED NEW FULL DEPTH ASPHALT PAVEMENT SECTION
	REMOVE EXIST. PAVEMENT AND GRADE TO DRAIN
	ORANGE BARRIER FENCE

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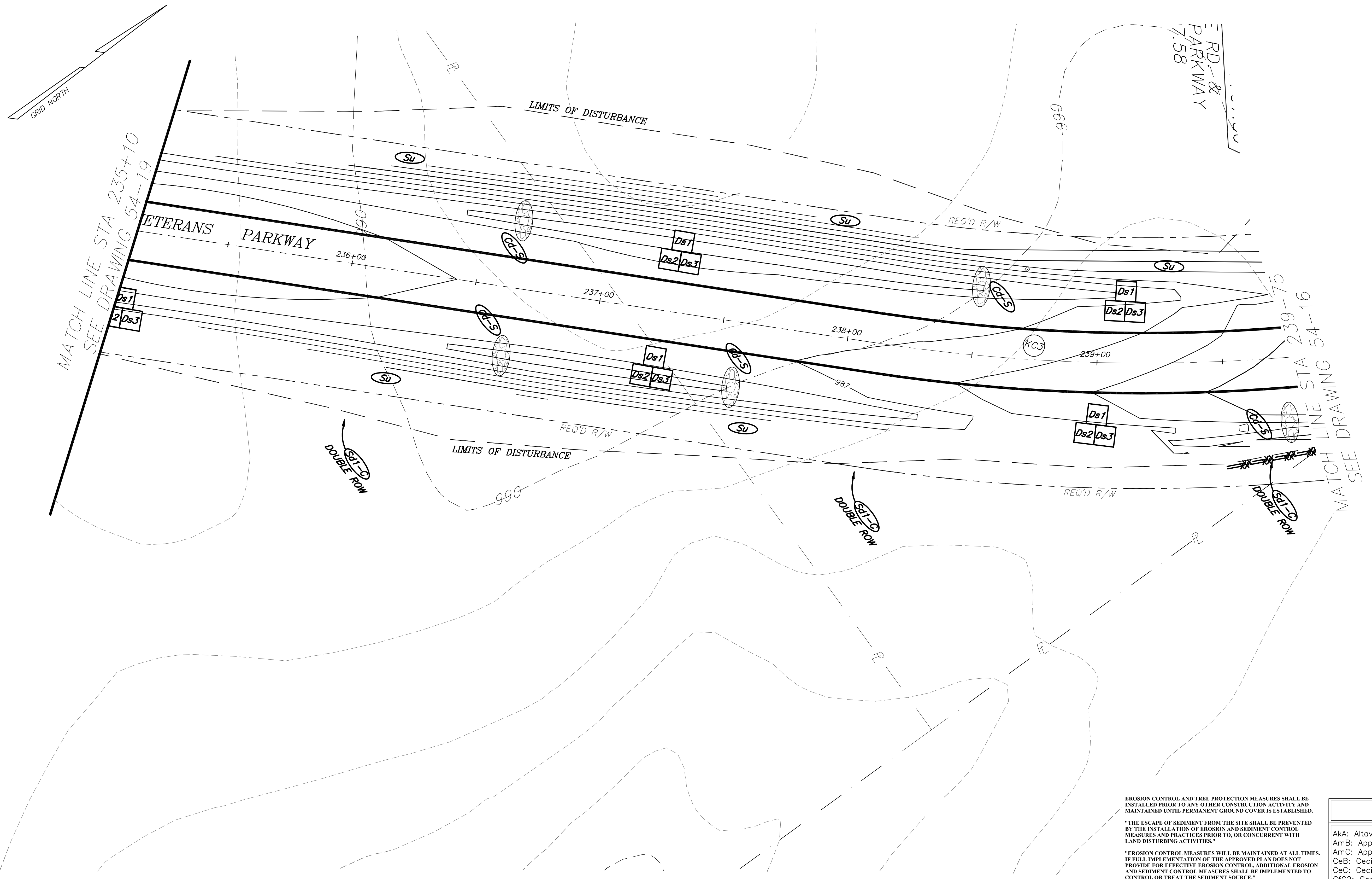
REVISION DATES	
1/02/17	

FAYETTE COUNTY
PUBLIC WORKS DEPARTMENT
 MARCH 16, 2016
BMP LOCATION DETAILS PHASE 3
92 AT WESTBRIDGE RD. / VETERANS
PKWY.
 DRAWING NO.
54-19

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Cd	CHECKDAM			A small temporary barrier or dam constructed across a swale, drainage ditch or area of concentrated flow.
Ch	CHANNEL STABILIZATION			Improving, constructing or stabilizing an open channel, existing stream, or ditch.
Co	CONSTRUCTION EXIT			A crushed stone pad located at the construction exit to provide a place for removing mud from tires thereby protecting public streets.
Di	DIVERSION			An earthen channel or dike located above, below or across a slope to divert runoff. This may be a temporary or permanent structure.
Dn1	DOWNDRAIN STRUCTURE - FLEXIBLE			A flexible conduit of heavy-duty fabric or other material designed to safely conduct surface runoff down a slope.
Dn2	DOWNDRAIN STRUCTURE			A paved chute, sectional concrete pipe or similar material, temporary or permanent, designed to safely conduct surface runoff down a slope.
Ga	GABION			Rock filled baskets which are hand-placed into position forming a permanent stabilizing structure.
Gr	GRADE STABILIZATION STRUCTURE			Permanent structures installed to protect natural or artificial channels or wetlands where otherwise the slope would be sufficient for the runoff water to form gullies.
Lv	LEVEL SPREADER			A structure to convert concentrated flow of waters 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 gullies.
Re	RETAINING WALL			A wall installed to stabilize cut and fill slopes where maximum permissible slopes are not obtainable. Each situation will require special design.
Rt	RETROFITTING			A device or structure placed in front of a permanent stormwater detention pond outlet structure to serve as a temporary sediment filter.
Sd1	SEDIMENT BARRIER			A barrier to prevent sediment from leaving the construction site. Sediment barriers may be sandbags, bags of straw, hay, geotextiles or other materials. Sediment barriers are usually temporary and in-place.
Sd2	SEDIMENT TRAP, TEMPORARY			An impounding area created by excavating around a storm drain inlet. The excavated area will be filled with mulch or other material upon completion of construction activities.
Sd3	SEDIMENT BASIN, TEMPORARY			A basin created by excavation or a dam across a swaley. The surface water runoff is temporarily stored allowing the bulk of the sediment to drop out. The basin is usually temporary, but may be designed as a permanent pond or stormwater retention device.
St	STORMDRAIN INLET PROTECTION			A paved or short section of fibro channel at the outlet of a storm drain system preventing erosion from the concentrated runoff.
Wt	VEGETATED WATERWAY OR STORMWATER CONVEYANCE CHANNEL			Paved or vegetative water outlets for diversions, terraces, berms, dikes, or similar structures.

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Bf	BUFFER ZONE			An undisturbed natural "green belt" separating the land-disturbing site from surrounding property and bordering streams. It serves to reduce water velocity and remove some sediment. It is also of trees a noise or "vision pollution" barrier.
Ds1	DISTURBED AREA STABILIZATION (w/MULCHING ONLY)			Establishing temporary protection for disturbed areas where seedlings may not have a suitable growing season to produce an erosion-retarding cover.
Ds2	DISTURBED AREA STABILIZATION (w/TEMPORARY SEEDING)			Establishing a temporary vegetative cover with fast growing seedlings on disturbed areas.
Ds3	DISTURBED AREA STABILIZATION (w/PERMANENT SEEDING)			Establishing permanent vegetative cover such as trees, shrubs, vines, sod, grasses or legumes on disturbed areas.
Ss	DISTURBED AREA STABILIZATION (w/GEOTEXTILE MATTING)			Establishing temporary protection for disturbed areas with geotextile matting.

CODE	DESCRIPTION
AmA	Altavista sandy loam, 0 to 3 percent slopes.
AmB	Appling sandy loam, 2 to 6 percent slopes.
AmC	Appling sandy loam, 6 to 10 percent slopes.
CeB	Cecil sandy loam, 2 to 6 percent slopes.
CeC	Cecil sandy loam, 6 to 10 percent slopes.
CFC2	Cecil sandy clay loam, 6 to 10 percent slopes.
PaE	Pacolet sandy loam, 10 to 25 percent slopes.
WH	Wahadkee soils.



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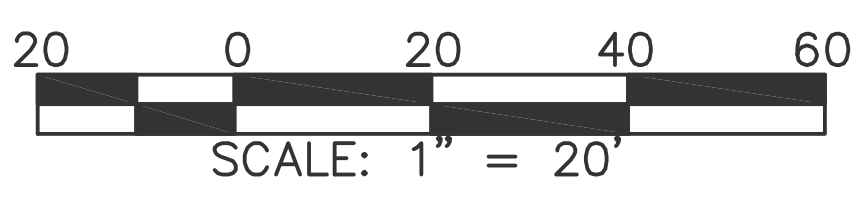
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	PROPERTY AND EXISTING R/W LINE		EASEMENT FOR THE CONSTRUCTION OF DRIVEWAYS
	REQUIRED R/W LINE		PROPOSED NEW FULL DEPTH ASPHALT PAVEMENT SECTION
	CONSTRUCTION LIMITS		REMOVE EXIST. PAVEMENT AND GRADE TO DRAIN
	EASEMENT FOR THE CONSTRUCTION AND MAINTENANCE OF SLOPES		ORANGE BARRIER FENCE
	REQUIRED RIGHT-OF-WAY AREA		

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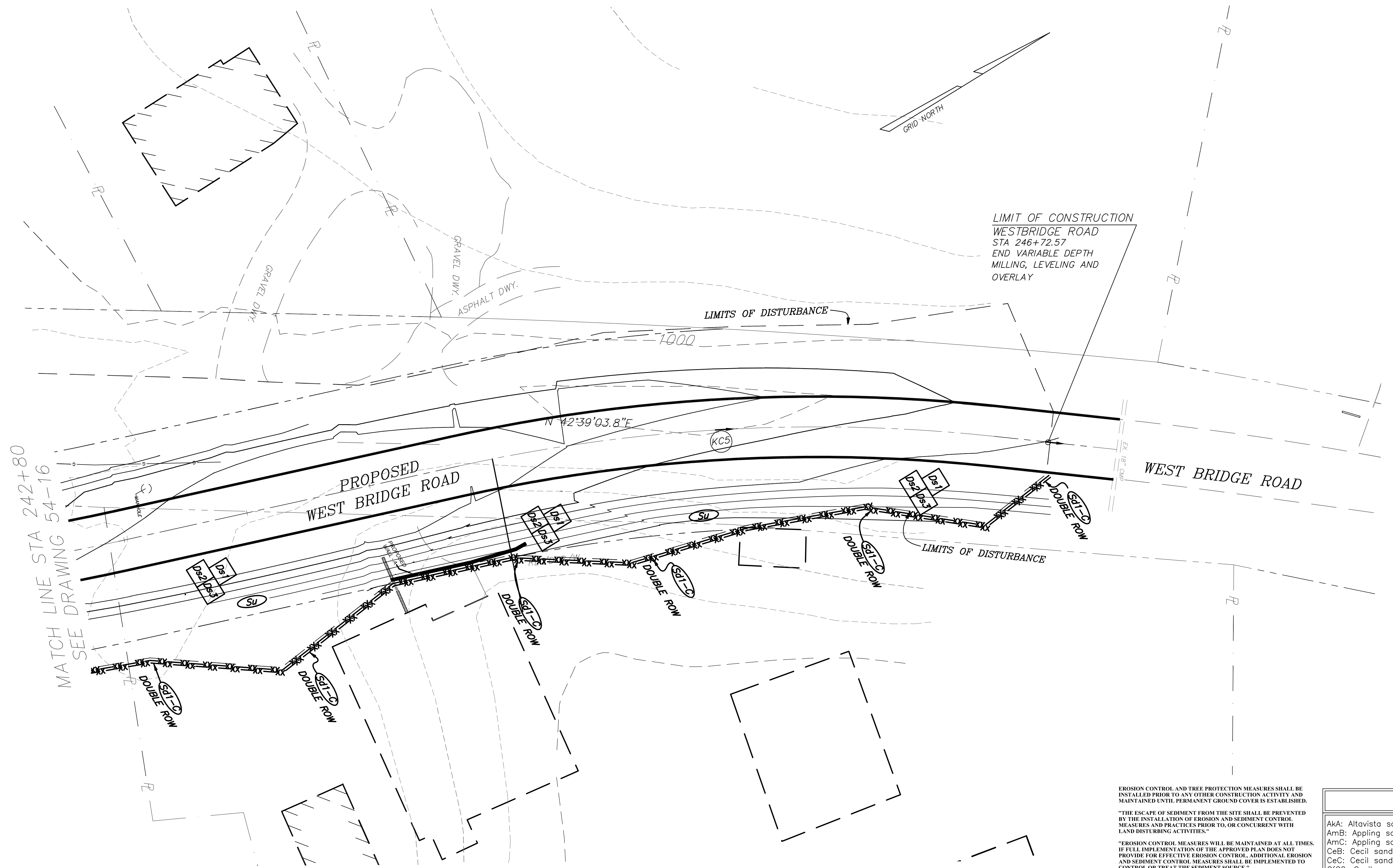
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FAYETTE COUNTY
PUBLIC WORKS DEPARTMENT
 MARCH 16, 2016
BMP LOCATION DETAILS PHASE 3
92 AT WESTBRIDGE RD. / VETERANS
PKWY.
 DRAWING NO.
54-20

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Cd	CHECKDAM			A small temporary barrier or dam constructed across a gully, drainage ditch or area of concentrated flow.
Ch	CHANNEL STABILIZATION			Improving, constructing or stabilizing an open channel, existing stream, or ditch.
Co	CONSTRUCTION EXIT			A crushed stone pad located at the construction exit to provide a place for removing mud from tires thereby protecting public streets.
Di	DIVERSION			An earthen channel or dike located above, below or across a slope to divert runoff. This may be a temporary or permanent structure.
Dn1	DOWNDRAIN STRUCTURE, FLEXIBLE			A flexible conduit of heavy-duty fabric or other material designed to safely conduct surface runoff down a slope.
Dn2	DOWNDRAIN STRUCTURE			A paved chute, sectional conduit, pipe or similar material, temporary or permanent, designed to safely conduct surface runoff down a slope.
Ga	GABION			Rock filled baskets which are hand-placed into position forming soil stabilizing structures.
Gr	GRADE STABILIZATION STRUCTURE			Permanent structures installed to protect natural or artificial 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 waters into less erosive sheet flow. This should be constructed only on undisturbed soils.
Rd	ROCK FILTER DAM			A permanent or temporary stone filter dam installed across small streams or drainageways.
Re	RETAINING WALL			A wall installed to stabilize cut and fill slopes where maximum permissible slopes are not obtainable. Each situation will require special design.
Rt	RETROFITTING			A device or structure placed in front of a permanent stormwater detention pond outlet structure to serve as a temporary sediment filter.
Sd1	SEDIMENT BARRIER			A barrier to prevent sediment from leaving the construction site. It may be sandbags, bales of straw or hay, geotextile fabric, or a sediment fence. The barriers are usually temporary and in-place.
Sd2	SEDIMENT TRAP, TEMPORARY			An impounding area created by excavating around a storm drain inlet. The excavated area will be filled and stabilized on completion of construction activities.
Sd3	SEDIMENT BASIN, TEMPORARY			A basin created by excavation or a dam across a roadway. The surface water runoff is temporarily stored during the bulk of the sediment to drop out. The basin is designed as a permanent pond or stormwater retention device.
St	STORMDRAIN INLET/OUTLET PROTECTION			A paved or short section of riprap channel at the outlet of a storm drain system preventing erosion from the concentrated runoff.
Wt	VEGETATED WATERWAY OR STORMWATER CONVEYANCE CHANNEL			Paved or vegetative water outlets for diversions, terraces, berms, dikes, or similar structures.

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Bf	BUFFER ZONE			An undisturbed natural "green belt" separating the land-disturbing site from surrounding property and bordering streams. It serves to reduce wind velocity and remove some sediment. It is also at times a noise or noise pollution barrier.
Ds1	DISTURBED AREA STABILIZATION (w/MULCHING ONLY)			Establishing temporary protection for disturbed areas where seedlings may not have a suitable growing season to produce an erosion retarding cover.
Ds2	DISTURBED AREA STABILIZATION (w/TEMPORARY SEEDING)			Establishing a temporary vegetative cover with fast growing seedlings on disturbed areas.
Ds3	DISTURBED AREA STABILIZATION (w/PERMANENT SEEDING)			Establishing permanent vegetative cover such as trees, shrubs, vines, sod, grasses or legumes on disturbed areas.
Ss	DISTURBED AREA STABILIZATION (w/GEOTEXTILE MATTING)			Establishing temporary protection for disturbed areas with geotextile matting.

Soils Legend	
AkA:	Altavista sandy loam, 0 to 3 percent slopes.
AmB:	Appling sandy loam, 2 to 6 percent slopes.
AmC:	Appling sandy loam, 6 to 10 percent slopes.
CeB:	Cecil sandy loam, 2 to 6 percent slopes.
CeC:	Cecil sandy loam, 6 to 10 percent slopes.
CfC2:	Cecil sandy clay loam, 6 to 10 percent slopes.
PaE:	Pacolet sandy loam, 6 to 10 percent slopes.
WH:	Wehadkee soils.



EROSION CONTROL AND TREE PROTECTION MEASURES SHALL BE INSTALLED PRIOR TO ANY OTHER CONSTRUCTION ACTIVITY AND MAINTAINED UNTIL PERMANENT GROUND COVER IS ESTABLISHED.

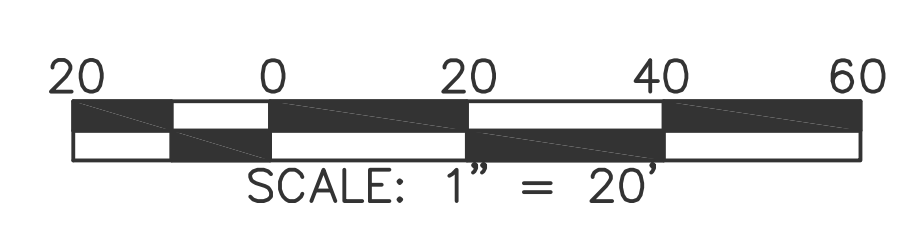
"THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH LAND DISTURBING ACTIVITIES."

"EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED 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 7 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING."

	PROPERTY AND EXISTING R/W LINE		EASEMENT FOR THE CONSTRUCTION OF DRIVEWAYS
	REQUIRED R/W LINE		PROPOSED NEW FULL DEPTH ASPHALT PAVEMENT SECTION
	CONSTRUCTION LIMITS		REMOVE EXIST. PAVEMENT AND GRADE TO DRAIN
	EASEMENT FOR THE CONSTRUCTION AND MAINTENANCE OF SLOPES		ORANGE BARRIER FENCE
	REQUIRED RIGHT-OF-WAY AREA		

ENGINEERING DEPT.
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 Phone: (770)320-6010 Fax: (770)719-0871
 www.fayettecountyga.gov



REVISION DATES	
1/02/17	

FAYETTE COUNTY
 PUBLIC WORKS DEPARTMENT
 MARCH 16, 2016
BMP LOCATION DETAILS PHASE 3
92 AT WESTBRIDGE RD. / VETERANS
PKWY.
 DRAWING NO.
54-21