

CE TEMPORARY GRAVEL CONSTRUCTION ENTRANCE

PS PERMANENT SEEDING MIXTURE

**TYPE A**

15 OCTOBER TO 1 FEBRUARY  
K-31 FESCUE @ 5 LB / 1000 SF  
BIRDY WINTER RYE @ 1/2 LB / 1000 SF

1 FEBRUARY TO 1 JUNE  
K-31 FESCUE @ 5 LB / 1000 SF  
ANNUAL RYE @ 1/2 LB / 1000 SF

1 JUNE TO 1 SEPTEMBER  
K-31 FESCUE @ 5 LB / 1000 SF  
GERMAN MILLET @ 1/2 LB / 1000 SF

1 SEPTEMBER TO 15 OCTOBER  
K-31 FESCUE @ 5 LB / 1000 SF  
ANNUAL RYE @ 1/2 LB / 1000 SF

**TYPE B (SLOPES 3:1 OR STEEPER)**

15 MARCH TO 1 MAY  
CROWN VETCH @ 1/2 LB / 1000 SF  
PERENNIAL RYEGRASS @ 1/2 LB / 1000 SF

15 AUGUST TO 1 OCTOBER  
CROWN VETCH @ 1/2 LB / 1000 SF  
PERENNIAL RYEGRASS @ 1/2 LB / 1000 SF

**LIME:** 140 LB / 1000 SF PULVERIZED AGRICULTURAL LIMESTONE

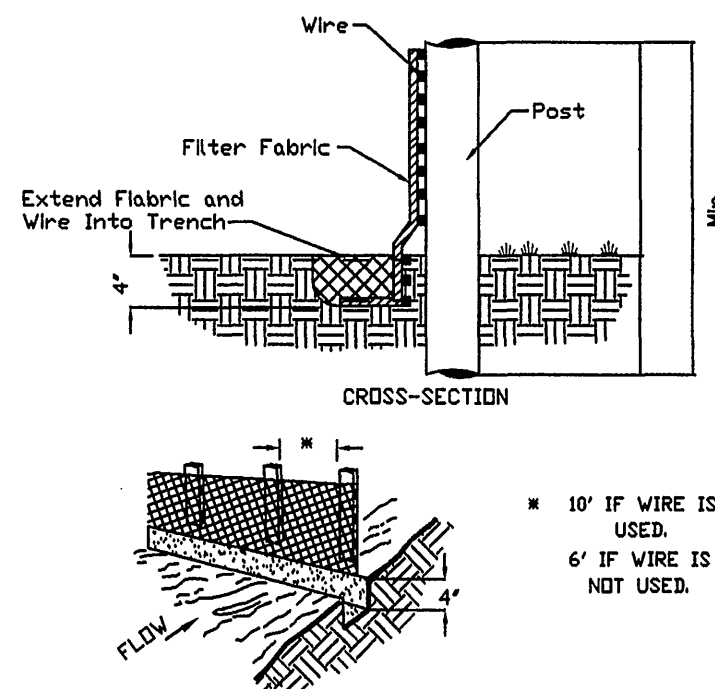
**FERTILIZER:** 5-20-0 @ 25 LB / 1000 SF

**MULCH:** IF REQUIRED, SHALL BE USED OVER ALL SEEDED AREAS AND SHALL BE APPLIED IN ACCORDANCE WITH SECTION 175 OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION.

**SOIL CONDITIONING:** INCORPORATION OF LIME AND FERTILIZER, SELECTION OF CERTIFIED SEED, MIXING, MAINTENANCE OF NEW SEEDINGS, AND RESEEDING SHALL BE IN ACCORDANCE WITH SPECIFICATIONS CONTAINED WITHIN THE VIRGINIA SOIL EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION. ADDITIONAL SEEDING TO BE PERFORMED AS REQUIRED BY THE INSPECTOR.

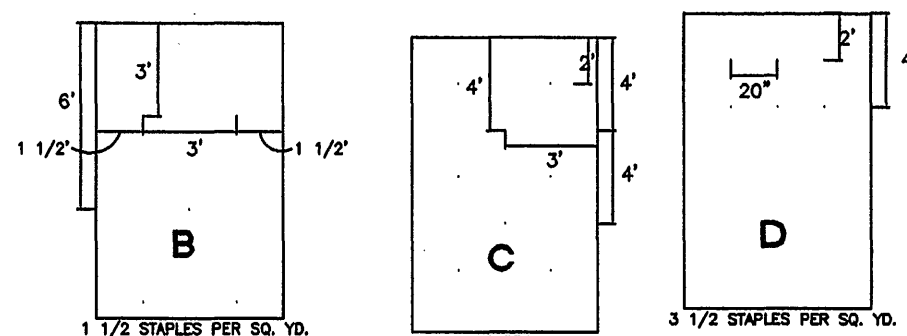
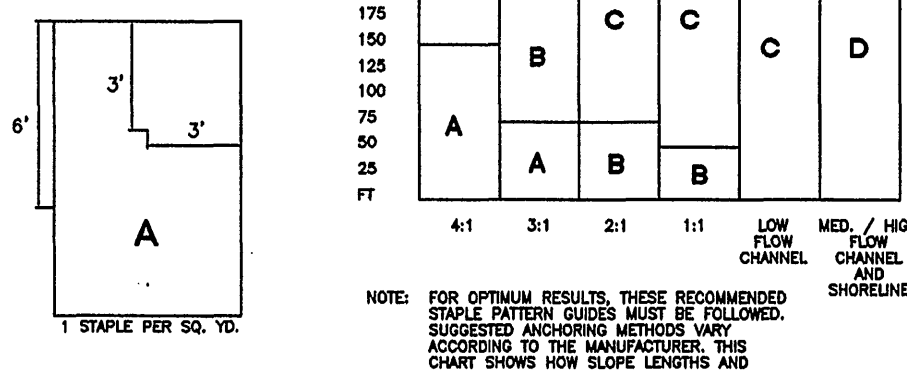
**SEED APPLICATION:** APPLY SEED UNIFORMLY WITH A CYCLOPS SEEDER, DRILL, CULTIPACKER SEEDER, OR HYDROSEEDER ON A FIRM, FRIABLE, SEEDBED. MAXIMUM SEEDING DEPTH SHALL BE 1/4 INCH.

TOTAL DISTURBED AREA = 0.53 AC. = 22,696 SQ. FT.

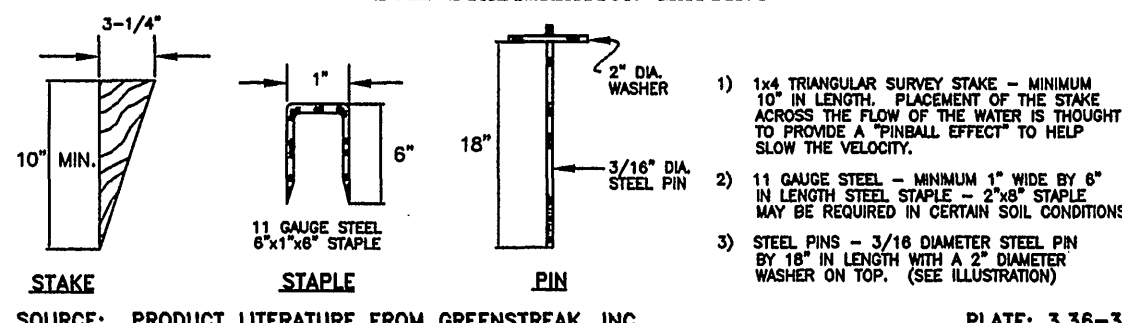


SF CONSTRUCTION OF A SILT FENCE

GENERAL STAPLE PATTERN GUIDE FOR TREATMENT - 1 (SOIL STABILIZATION MATTING)



STAPLES, STAPLES & PINS TREATMENT - 1 SOIL STABILIZATION MATTING



THE CONTRACTOR SHALL UTILIZE SOME MEASURE OF BLANKET MATTING OR SOIL STABILIZATION MATERIAL TO STABILIZE DISTURBED SLOPES AT 3:1 SLOPE OR STEEPER.

SOIL STABILIZATION BLANKETS & MATTING: VESCH STD & SPEC 3.36

TREATMENT-1: DEGRADABLE SOIL STABILIZATION BLANKET

EXAMPLES: JUTE MESH, LANDSCAPE SUPPLY (NORTH AMERICAN GREEN) P300, C350, C125 EQUIVALENT SUPPLIES

USE TO HELP ESTABLISH VEGETATIVE GROWTH, TEMPORARY MEASURES.

TREATMENT-2: NON-DEGRADABLE SOIL STABILIZATION BLANKET

EXAMPLES: LANDSCAPE SUPPLY (NORTH AMERICAN GREEN) P550 PYRAMAT

B/M SOIL STABILIZATION BLANKETS/MATTING VA ESCH STD & SPEC 3.36

FOR THE PURPOSE OF THIS PROJECT, THE CONTRACTOR SHALL ANTICIPATE UTILIZATION OF EC-2, TREATMENT 1 (NORTH AMERICAN GREEN C125 OR APPROVED EQUAL)

EROSION AND SEDIMENT CONTROL NARRATIVE

PROJECT DESCRIPTION: THE PURPOSE OF THIS PROJECT IS TO CONSTRUCT A SANITARY SEWER SYSTEM FOR AN AREA THAT HAS MARGINAL AND FAILED SEPTIC SYSTEMS. THIS IS AN EMERGENCY REPAIR TO ASSIST A RESIDENT WITH A FAILED SEPTIC SYSTEM. THE MAIN CONSTRUCTION WILL DISTURB A 20' WIDE STRIP OR LESS FOR A DISTANCE OF 1,100' AND APPROXIMATELY 500' OF LATERALS WILL BE INSTALLED. THE AREA OF LAND DISTURBANCE IS ESTIMATED AT FOLLOWS: 1,100 x 20' FOR MAIN LINE CONSTRUCTION PLUS 500' X 10' FOR LATERALS, FOR A TOTAL AREA OF 27,000SF OR 0.6 ACRES.

EXISTING SITE CONDITIONS: THE PROPERTY DRAINS TO THE SOUTHEAST, TOWARD AN EXISTING INTERMITTENT DITCH, DRAINING UNDER I-81 AND TOWARD LITTLE BEAR ROCK BRANCH. THE PROJECTS STARTS AT 4732 CHEROKEE HILLS DRIVE AND CONTINUES WESTWARD TO 4928 CHEROKEE HILLS DRIVE. THE MAJORITY OF THE WORK IS LOCATED ON PRIVATE PROPERTY IN EASEMENTS.

ADJACENT PROPERTY: THE PROJECT IS SURROUNDED BY RESIDENTIAL PROPERTIES.

OFF-SITE AREAS: THE DEVELOPMENT WILL BE A "BALANCED" SITE AND NO EXCESS MATERIAL WILL BE EXPORTED NOR WILL ANY MATERIAL BE IMPORTED FROM OTHER PROPERTIES.

SOILS: AS IDENTIFIED BY THE US DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE, GENERAL SOIL MAP, THE BASIC SOIL IS TUMBLING-WEIKERT-BERKS.

CRITICAL EROSION AREAS: STEEP SLOPES SHALL BE STABILIZED IMMEDIATELY.

EROSION AND SEDIMENT CONTROL MEASURES: UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS OF THE "VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, THIRD EDITION" (VESCH). THE MINIMUM STANDARDS OF THE VESCH SHALL BE ADHERED TO UNLESS OTHERWISE DIRECTED BY THE LOCAL PROGRAM ADMINISTRATOR.

STRUCTURAL - CONSTRUCTION ENTRANCE-STD. 3.02.....A STONE PAD LOCATED AT THE POINT OF INGRESS/EGRESS TO REDUCE SOIL TRANSPORTED ON PUBLIC ROADS. SILT FENCE-STD. 3.05.....A TEMPORARY SEDIMENT BARRIER CONSTRUCTED OF POSTS, FILTER FABRIC AND IN SOME CASES WIRE SUPPORT FENCE TO INTERCEPT AND DETAIN SEDIMENT.

VEGETATIVE -

PERMANENT SEEDING-STD. 3.32.....ESTABLISHMENT OF PERMANENT VEGETATIVE COVER BY PLACING SEED ON ROUGH GRADED AREAS THAT WILL NOT BE BROUGHT TO FINAL GRADE FOR A YEAR OR MORE. SOIL STABILIZATION BLANKETS & MATTING-3.36.....THE INSTALLATION OF A PROTECTIVE BLANKET OR A SOIL STABILIZATION MAT ON A STEEP SLOPE, CHANNEL, OR SHORELINE.

MANAGEMENT STRATEGIES:

A) CONSTRUCTION WILL BE SEQUENCED SO THAT GRADING OPERATIONS CAN BEGIN AND END AS QUICKLY AS POSSIBLE.

B) SEDIMENT TRAPPING MEASURES WILL BE INSTALLED AS A FIRST STEP IN GRADING.

C) THE LOCAL PROGRAM ADMINISTRATOR RESERVES THE RIGHT TO ADD TO, DELETE OR OTHERWISE CHANGE THE EROSION CONTROL MEASURES AS DEEMED NECESSARY DUE TO ACTUAL FIELD CONDITIONS BY WRITTEN NOTIFICATION TO THE CONTRACTOR.

D) ALL CUT AND FILL SLOPES SHALL BE SEEDDED WITHIN SEVEN (7) DAYS OF ACHIEVING FINAL GRADE.

E) ONLY AFTER INSPECTION AND APPROVAL FROM THE LOCAL PROGRAM ADMINISTRATOR MAY ITEMS BE REMOVED FOLLOWING THE STABILIZATION OF THE CONTRIBUTING AREAS.

INSPECTIONS:

THE GENERAL CONTRACTOR SHALL INSPECT DISTURBED AREAS OF THE SITE THAT HAVE NOT BEEN FINALLY STABILIZED, AND AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION, STRUCTURAL CONTROL MEASURES, AND THE AREA OF CONSTRUCTION VEHICLE ACCESS AT LEAST EVERY FOURTEEN (14) CALENDAR DAYS, AND WITHIN 48 HOURS OF THE END OF A STORM EVENT PRODUCING 1/2" OR GREATER OF PRECIPITATION. WHERE AREAS HAVE BEEN FINALLY OR TEMPORARILY STABILIZED OR RUNOFF IS UNLIKELY DUE TO WINTER CONDITIONS (SITE IS COVERED WITH SNOW, ICE, OR FROZEN GROUND EXISTS) SUCH INSPECTIONS SHALL BE CONDUCTED AT LEAST ONCE EVERY MONTH.

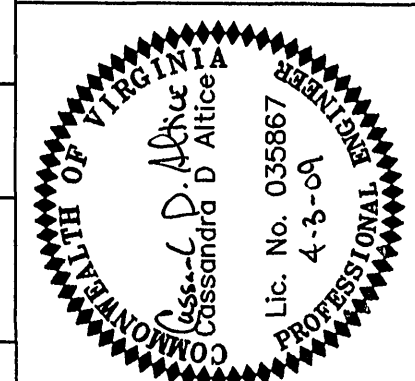
A) INSPECT DISTURBED AREAS AND AREAS OF MATERIALS STORAGE THAT ARE EXPOSED TO PRECIPITATION FOR EVIDENCE OF, OR THE POTENTIAL FOR SEDIMENT ENTERING THE STORM DRAIN SYSTEM. INSPECT E&S CONTROLS IN ACCORDANCE WITH REQUIREMENTS STATED HEREIN, AND INSPECT POINTS OF STORM DRAIN DISCHARGE FOR EXCESSIVE SEDIMENTATION. CORRECT SITE CONTROLS AS REQUIRED TO REDUCE SEDIMENTATION OF STORM DRAINS, CULVERTS, AND RECEIVING CHANNELS.

B) IF CONTROLS OR SEDIMENT PREVENTION AREAS ARE FOUND TO BE IN NEED OF REPAIR OR MODIFICATION, THE GENERAL CONTRACTOR SHALL PROVIDE ADDITIONAL MEASURES OR MODIFICATIONS TO EXISTING MEASURES AS REQUIRED. ANY ADDITIONAL MEASURES OR MODIFICATIONS TO EXISTING MEASURES SHALL BE RECORDED AS FIELD REVISIONS TO THESE PLANS. IN THE EVENT THAT ADDITIONAL CONTROLS ARE FOUND TO BE REQUIRED, THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING THESE CONTROLS BEFORE THE NEXT ANTICIPATED STORM EVENT. IF IMPLEMENTATION BEFORE THE NEXT STORM EVENT IS IMPRACTICAL, THEY SHALL BE IMPLEMENTED AS SOON AS PRACTICAL.

MINIMUM STANDARDS

THE FOLLOWING STANDARDS ARE TO BE PROVIDED OR ADDRESSED ON EVERY DEVELOPMENT PROJECT EXCEEDING 5000 S.F. IN AREA OF DISTURBANCE. THESE STANDARDS ARE CONSIDERED A MINIMUM AND MAY REQUIRE ADDITIONAL MEASURES AS DEEMED NECESSARY BY THE LOCAL APPROVING AUTHORITY OR THE CONSULTING ENGINEER.

No.	CRITERIA, TECHNIQUE OR METHOD	PRACTICES PROVIDED
1	PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN SEVEN (7) DAYS AFTER FINAL GRADE HAS BEEN REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN (7) DAYS TO DENUDED AREAS THAT MAY BE AT FINAL GRADE BUT WILL REMAIN DORMANT (UNDISTURBED) FOR LONGER THAN THIRTY (30) DAYS. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN ONE (1) YEAR.	PS B/M FOR ALL DENUDED AREAS
2	DURING CONSTRUCTION OF THE PROJECT, SOIL STOCKPILES SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES. THE CONTRACTOR IS RESPONSIBLE FOR THE TEMPORARY PROTECTION AND PERMANENT STABILIZATION OF ALL SOIL STOCKPILES ON SITE AS WELL AS SOIL INTENTIONALLY TRANSPORTED FROM THE PROJECT SITE.	PS SF IF STOCKPILE APPLICABLE
3	A PERMANENT VEGETATIVE COVER SHALL BE ESTABLISHED ON DENUDED AREAS NOT OTHERWISE PERMANENTLY STABILIZED. PERMANENT VEGETATION SHALL NOT BE CONSIDERED ESTABLISHED UNTIL A GROUND COVER IS ACHIEVED THAT, IN THE OPINION OF THE LOCAL PROGRAM ADMINISTRATOR OR DESIGNATED AGENT, IS UNIFORM, MATURE ENOUGH TO SURVIVE AND WILL INHIBIT EROSION.	PS FOR ALL DENUDED AREAS
4	SEDIMENT BASINS AND TRAPS, PERIMETER DIKES, SEDIMENT BARRIERS AND OTHER MEASURES INTENDED TO TRAP SEDIMENT SHALL BE CONSTRUCTED AS A FIRST STEP IN ANY LAND-DISTURBING ACTIVITY AND SHALL BE MADE FUNCTIONAL BEFORE UPSLOPE LAND DISTURBANCE TAKES PLACE.	SF
5	STABILIZATION METHODS SHALL BE APPLIED TO EARTHEN STRUCTURES SUCH AS DAMS, DIKES AND DIVERSIONS IMMEDIATELY AFTER INSTALLATION.	NA
6	SEDIMENT TRAPS AND BASINS SHALL BE DESIGNED AND CONSTRUCTED BASED UPON THE TOTAL DRAINAGE AREA TO BE SERVED BY THE TRAP OR BASIN.	NA
7	CUT AND FILL SLOPES SHALL BE CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION. SLOPES THAT ARE FOUND TO BE ERODING EXCESSIVELY WITHIN ONE (1) YEAR OF PERMANENT STABILIZATION SHALL BE PROVIDED WITH ADDITIONAL SLOPE STABILIZATION MEASURES UNTIL THE PROBLEM IS CORRECTED.	PS FOR ALL ERODING SLOPES
8	CONCENTRATED RUNOFF SHALL NOT FLOW DOWN CUT OR FILL SLOPES UNLESS CONTAINED WITHIN AN ADEQUATE TEMPORARY OR PERMANENT CHANNEL, FLUME OR SLOPE DRAIN STRUCTURE.	NA
9	WHENEVER WATER SEEPS FROM A SLOPE FACE, ADEQUATE DRAINAGE OR OTHER PROTECTION SHALL BE PROVIDED.	NA
10	ALL STORM SEWER INLETS THAT ARE MADE OPERABLE DURING CONSTRUCTION SHALL BE PROTECTED SO THAT SEDIMENT-LADEN WATER CANNOT ENTER THE CONVEYANCE SYSTEM WITHOUT FIRST BEING FILTERED OR OTHERWISE TREATED TO REMOVE SEDIMENT.	NA
11	BEFORE NEWLY CONSTRUCTED STORMWATER CONVEYANCE CHANNELS ARE MADE OPERATIONAL, ADEQUATE OUTLET PROTECTION AND ANY REQUIRED TEMPORARY OR PERMANENT CHANNEL LINING SHALL BE INSTALLED IN BOTH THE CONVEYANCE CHANNEL AND RECEIVING CHANNEL.	NA
12	WHEN WORK IN A LIVE WATERCOURSE IS PERFORMED, PRECAUTIONS SHALL BE TAKEN TO MINIMIZE ENCROACHMENT, CONTROL SEDIMENT TRANSPORT AND STABILIZE THE WORK AREA TO THE GREATEST EXTENT POSSIBLE DURING CONSTRUCTION. NONERODIBLE MATERIAL SHALL BE USED FOR THE CONSTRUCTION OF CAUSEWAYS AND COFFERDAMS. EARTHEN FILL MAY BE USED FOR THESE STRUCTURES IF ARMORED BY NONERODIBLE COVER MATERIALS.	NA
13	WHEN A LIVE WATERCOURSE MUST BE CROSSED BY CONSTRUCTION VEHICLES MORE THAN TWICE IN ANY SIX (6) MONTH PERIOD, A TEMPORARY STREAM CROSSING CONSTRUCTED OF NONERODIBLE MATERIAL.	NA
14	ALL APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS PERTAINING TO WORKING IN OR CROSSING LIVE WATERCOURSES SHALL BE MET. THE BEDS AND BANKS OF ANY WATERCOURSE SHALL BE STABILIZED IMMEDIATELY AFTER WORK IN THE WATERCOURSE IS COMPLETED.	NA
15	THE BEDS AND BANKS OF A WATERCOURSE SHALL BE STABILIZED IMMEDIATELY AFTER WORK IN THE WATERCOURSE IS COMPLETED.	NA
16	UNDERGROUND UTILITY LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING STANDARDS IN ADDITION TO OTHER APPLICABLE CRITERIA: 1)NO MORE THAN 500 LINEAR FEET OF ANY TRENCH MAY BE OPENED AT ONE TIME. 2)EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES. 3)EFFLUENT FROM DEWATERING OPERATIONS SHALL BE FILTERED OR PASSED THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE, OR BOTH, AND DISCHARGED IN A MANNER THAT DOES NOT ADVERSELY AFFECT FLOWING STREAMS OR OFF-SITE PROPERTY. 4)MATERIAL USED FOR BACKFILLING TRENCHES SHALL BE PROPERLY COMPACTED IN ORDER TO MINIMIZE EROSION AND PROMOTE STABILIZATION. 5)RESTALLMENT SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THESE REGULATIONS. 6)APPLICABLE SAFETY REGULATIONS SHALL BE COMPLIED WITH.	CONTRACTOR'S WORK SHALL BE IN ACCORDANCE
17	WHERE CONSTRUCTION VEHICLE ACCESS ROUTES INTERSECT PAVED OR PUBLIC ROADS, PROVISIONS SHALL BE MADE TO MINIMIZE THE TRANSPORT OF SEDIMENT BY VEHICULAR TRACKING ONTO THE PAVED SURFACE. WHERE SEDIMENT IS TRANSPORTED ONTO A PAVED OR PUBLIC ROAD SURFACE, THE ROAD SURFACE SHALL BE CLEANED THOROUGHLY AT THE END OF EACH DAY. SEDIMENT SHALL BE REMOVED FROM THE ROADS BY SHOVELING OR SWEEPING AND TRANSPORTED TO A SEDIMENT CONTROL DISPOSAL AREA. STREET WASHING SHALL BE ALLOWED ONLY AFTER SEDIMENT IS REMOVED IN THIS MANNER.	CE FOR ALL POINTS OF INGRESS/EGRESS
18	ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN THIRTY (30) DAYS AFTER FINAL SITE STABILIZATION OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED, UNLESS OTHERWISE AUTHORIZED BY THE LOCAL PROGRAM ADMINISTRATOR. TRAPPED SEDIMENT AND THE DISTURBED SOIL AREAS RESULTING FROM THE DISPOSITION OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED TO PREVENT FURTHER EROSION AND SEDIMENTATION.	PS SELF-EXPLANATORY
19	PROPERTIES AND WATERWAYS DOWNSTREAM FROM DEVELOPMENT SITES SHALL BE PROTECTED FROM SEDIMENT DEPOSITION, EROSION AND DAMAGE DUE TO INCREASES IN VOLUME, VELOCITY AND PEAK FLOW RATE OF STORMWATER RUNOFF FOR THE STATED FREQUENCY STORM OF 24-HOUR DURATION IN ACCORDANCE WITH THE APPLICABLE CRITERIA.	NA



Cherokee Hills ( 4900 Bk)  
Sewer Extension  
E & S Narrative

Rev	Description	Date	By
1	Added Lat Sta 4+50 and Revised Profile	3 APR 08	CDA

Designed: CDA  
Drawn: CDA  
Checked: CDA  
Approved: JGR  
Date: 19 MAR 2009  
Project: