# **GEORGIA** UNIFORM CODING SYSTEM

FOR SOIL EROSION AND SEDIMENT CONTROL PRACTICES GEORGIA SOIL AND WATER CONSERVATION COMMISSION

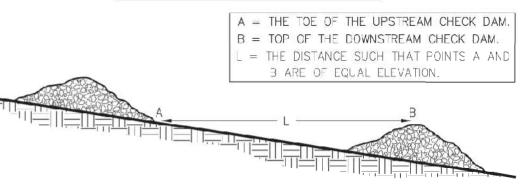
### STRUCTURAL PRACTICES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Cq	CHECKDAM	To the same of the	J.	A small temporary barrier or dam constructed across a swale, drainage ditch or area of concentrated flow.
Ch	CHANNEL STABILIZATION	90	77	Improving, constructing or stabilizing an open channel, existing stream, or ditch.
<u>©</u>	CONSTRUCTION EXIT		(C)	A crushed stone pad located at the construction site exit to provide a place for removing mud from tires thereby protecting public streets.
Sd1)	SEDIMENT BARRIER		ONONCASE TOPO	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.
Sd3	TEMPORARY SEDIMENT BASIN		\$600 8.480	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.
Sk	FLOATING SURFACE SKIMMER		(Sk)~~	A buoyant device that releases/drains water from the surface of sediment ponds, traps, or basins at a controlled rate of flow.
St	STORMDRAIN OUTLET PROTECTION		(SI)	A paved or short section of riprap channel at the outlet of a storm drain system preventing erosion from the concentrated runoff.

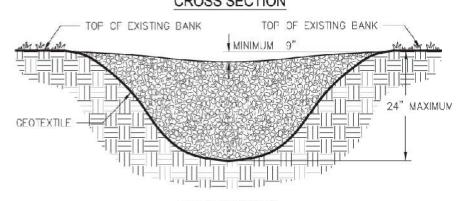
#### VECETATIVE DDACTICES

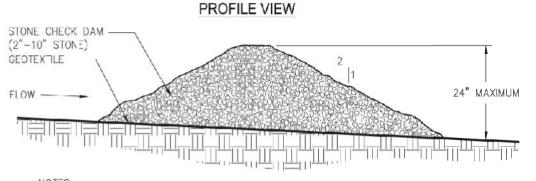
VEGETATIVE PRACTICES						
CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION		
Ds1	DISTURBED AREA STABILIZATION (WITH MULCHING ONLY)		Ds1	Establishing temporary protection for disturbed areas where seedlings may not have a suitable growing season to produce an erosion retarding cover.		
Ds2	DISTURBED AREA STABILIZATION (WITH TEMP SEEDING)		Ds2	Establishing a temporary vegetative cover with fast growing seedings on disturbed areas.		
Ds3	DISTURBED AREA STABILIZATION (WITH PERM SEEDING)		Ds3	Establishing a permanent vegetative cover such as trees, shrubs, vines, grasses, or legumes on disturbed areas.		
Ds4	DISTURBED AREA STABILIZATION (SODDING)		Ds4	A permanent vegetative cover using sods on highly erodable or critically eroded lands.		
Du	DUST CONTROL ON DISTURBED AREAS		Du	Controlling surface and air movement of dust on construction site, roadways and similar sites.		

#### STONE CHECK DAM SPACING BETWEEN CHECK DAMS



# STONE CHECK DAM





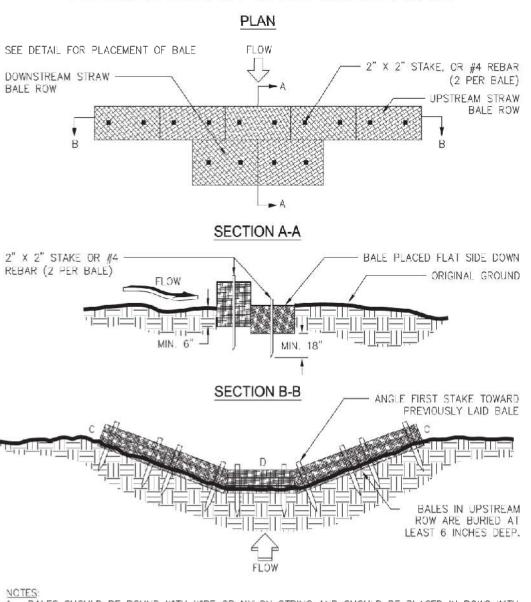
THE DRAINAGE AREA FOR STONE CHECK DAMS SHALL NOT EXCEED TWO ACRES. . THE CENTER OF THE CHECK DAM MUST BE AT LEAST 9 INCHES LOWER THAN THE 4 THE DAM HEIGHT SHOULD BE A MAXIMUM OF 2 FEET FROM CENTER TO RIM EDGE. . THE SIDE SLOPES OF THE CHECK DAM SHALL NOT EXCEED A 2:1 SLOPE,

GEOTEXTILE SHALL BE USED TO PREVENT THE MITIGATION OF SUBGRADE SOIL

1. CHECK DAMS ARE TO BE USED ONLY IN SMALL OPEN CHANNELS (THEY ARE NOT TO

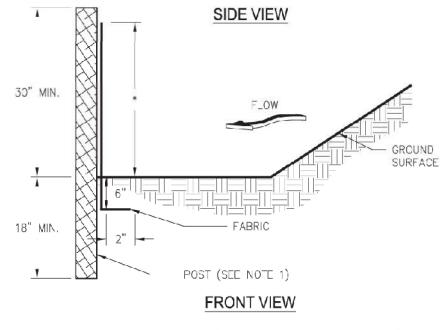
TYPICAL STRAW BALE CHECK DAM

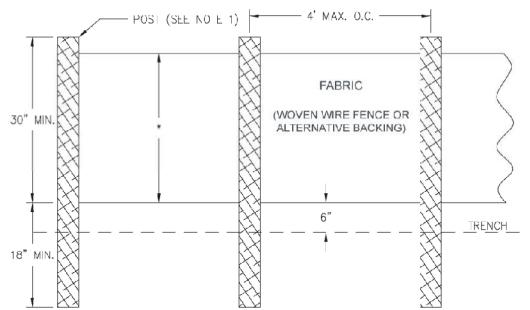
PARTICLES INTO THE STONES (REFER TO AASHTO M288-96, SECTION 7.3, TABLE 3).



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. POINT C OF SECTION B-B SHOULD ALWAYS BE HIGHER THAN POINT D. STRAW-BALE CHECK DAMS SHALL NOT BE USED WHERE THE DRAINAGE AREA EXCEEDS ONE ACRE

## Sd1-S SILT FENCE - TYPE C

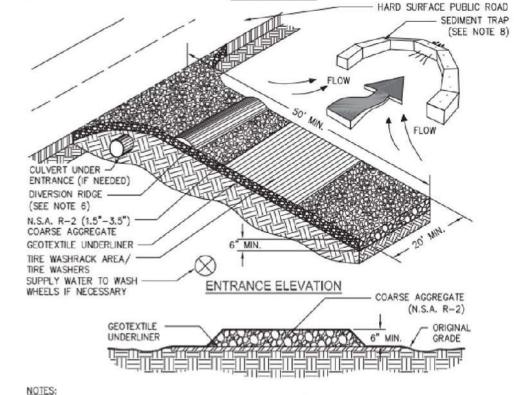




NOTES:

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

# CRUSHED STONE CONSTRUCTION EXIT

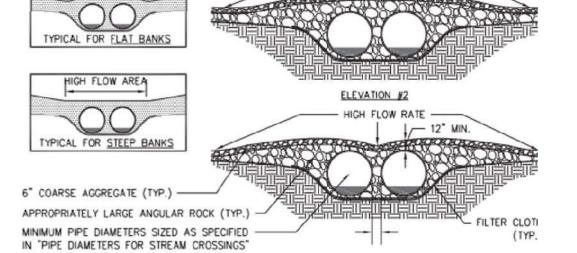


REMOVE ALL VEGETATION AND OTHER UNSUITABLE MATERIAL FROM THE FOUNDATION AREA, GRADE, AND CROWN FOR POSITIVE DRAINAGE. S. AGGREGATE SIZE SHALL BE IN ACCORDANCE WITH NATIONAL STONE ASSOCIATION R-2 (1.5"-3.5" STONE) GRAVEL PAD SHALL HAVE A MINIMUM THICKNESS OF 6". PAD WIDTH SHALL BE EQUAL FULL WIDTH AT ALL POINTS OF VEHICULAR EGRESS, BUT NO LESS THAN 20' 7. INSTALL PIPE UNDER THE ENTRANCE IF NEEDED TO MAINTAIN DRAINAGE DITCHES.

8. WHEN WASHING IS REQUIRED, IT SHOULD BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN (DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE ENTRANCE TO A SEDIMENT CONTROL DEVICE)

9. WASHRACKS AND/OR TIRE WASHERS MAY BE REQUIRED DEPENDING ON SCALE AND CIRCUMSTANCE. IF NECESSARY, WASHRACK DESIGN MAY CONSIST OF ANY MATERIAL SUITABLE FOR TRUCK TRAFFIC THAT O. 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

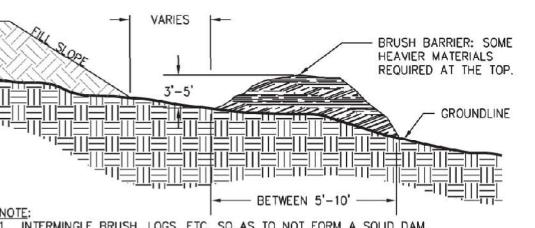
### CONFIGURATION OF TEMPORARY CULVERT CROSSINGS Sr-C - HIGH FLOW RATE -



TYPICAL CULVERT CROSSING PLAN (NOT TO SCALE) STREAM CROSSINGS")

THIS TYPE OF CROSSING CAN BE INSTALLED IN BOTH A WET OR DRY WEATHER STREAM CONDITION WHERE THE DRAINAGE AREA EXCEEDS 10 ACRES

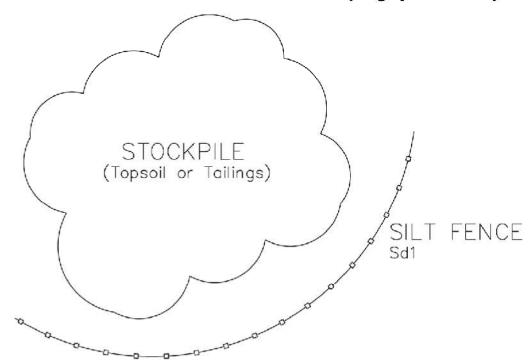
#### SEDIMENT BARRIERS **BRUSH BARRIER SECTION**



INTERMINGLE BRUSH, LOGS, ETC. SO AS TO NOT FORM A SOLID DAM. BRUSH SHOULD BE WIND-ROWED ON THE CONTOUR AS CLOSE AS POSSIBLE MINIMUM BASE WIDTH FOR BARRIER SHALL BE 5 FEET AND SHOULD BE NO WIDER THAN 10 FEET. THE HEIGHT OF THE BARRIER SHOULD BE BETWEEN

4. A COMMERCIALLY AVAILABLE FILTER FABRIC MAY BE PLACED ON THE SIDE OF THE BRUSH BARRIER RECEIVING SEDIMENT-LADEN RUNOFF FOR ADDED FILTER CAPACITY (LOWER EDGE MUST BE BURIED IN A 6 INCH DEEP TRENCH AND THE UPPER EDGE MUST BE FASTENED TO THE BRUSH BARRIER).

# STOCKPILE BMP (Typical)



NOTE: Silt fence will be placed on the downgradient side of the stockpile located outside of the PCP/WCP area if run-off is not or can not be directed toward the mining pit.

#### EROSION CONTROL NOTES

**EROSION & SEDIMENT CONTROL MEASURES** 1. BMPS WILL BE INSTALLED AS DEPICTED IN EROSION AND SEDIMENT CONTROL PLAN SHEET 6 PRIOR TO ANY

OTHER CONSTRUCTION OR MINING ACTIVITY AND WILL BE MAINTAINED UNTIL PERMANENT GROUND COVER 2. EROSION CONTROL NOTES:

CONTROL MEASURES AND PRACTICES PRIOR, OR CONCURRENT WITH LAND DISTURBING ACTIVITIES. b. 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 WILL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT c. ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS WILL BE STABILIZED
- WITH MULCH OR TEMPORARY SEEDING. d. ALL EROSION AND SEDIMENT CONTROL MEASURES WILL CONFORM WITH THE GUIDELINES OF THE
- "MANUAL FOR EROSION AND SEDIMENT CONTROL." e. DURING CONSTRUCTION AND MINING ACTIVITIES, TPM WILL MAINTAIN CAREFUL SCHEDULING AND PERFORMANCE TO ENSURE THAT LAND STRIPPED OF ITS NATURAL GROUND COVER IS EXPOSED ONLY
- IN SMALL QUANTITIES, AND PROTECTION IS ESTABLISHED. f. SEDIMENT AND EROSION CONTROL MEASURES MUST BE CHECKED AFTER EACH RAIN EVENT. EACH DEVICE IS TO BE MAINTAINED OR REPLACED IF SEDIMENT ACCUMULATION HAS REACHED HALF THE CAPACITY OF THE DEVICE. ADDITIONAL DEVICES MUST BE INSTALLED IF NEW CHANNELS HAVE
- g. DUST WILL BE CONTROLLED BY APPLYING WATER TO HAUL ROADS AND OTHER HIGH-TRAFFIC AREAS.
- h. TPM WILL INSPECT EROSION CONTROL MEASURES AT THE END OF EACH WORKING DAY TO ENSURE

#### PROPER FUNCTIONING. **AUXILIARY EROSION & SEDIMENT CONTROL MEASURES**

- 1. AUXILIARY BMPS INCLUDING DIVERSIONS, DIKES, OR BERMS WILL BE CONSTRUCTED TO RETAIN, DIRECT, AND CONTROL SURFACE WATER RUNOFF FROM AFFECTED AREAS INTO DESIGNED SEDIMENT CONTROL STRUCTURES. SURFACE WATER DISCHARGE WILL BE CONTROLLED AND RELEASED IN A NON-EROSIVE VELOCITY ONTO STABILIZED AREAS OR INTO STABILIZED CHANNELS
- CONTAINMENT BERMS WILL BE DESIGNED TO PROVIDE A MINIMUM OF 3 FEET OF FREEBOARD
- 3. THE BERM ALONG THE SOUTHERN SITE BOUNDARY WILL BE CONSTRUCTED AS DEPICTED IN TYPICAL CROSS SECTIONS (SHEET 5), CRESTS WILL BE SLOPED TO DIVERT STORMWATER TOWARD THE MINE AREA. THE TOP AND EXTERIOR SLOPE AND TOE OF ALL BERMS WILL BE GRASSED WITH QUICK-GROWING/GERMINATED GRASSES. SILT FENCING WILL BE INSTALLED ALONG THE EXTERIOR TOE OF THE OUTER BERMS, AND IN ALL AREAS WHERE DEEMED NECESSARY FOR EROSION CONTROL. SILT FENCING WILL BE ARMORED WITH STACKED HAY BALES ABUTTING THE FENCE PERPENDICULAR TO THE DIRECTION OF STORMWATER FLOW
- 4. AUXILIARY BMPS WILL BE SEEDED WITH APPROPRIATE GRASSES (BASED ON PLANTING SEASON) AS SOON AS POSSIBLE. EFFORT WILL BE MADE TO UTILIZE NATURAL EXISTING VEGETATION IN THOSE AREAS WHERE BUFFERS ARE PROPOSED OR WHERE PRACTICAL.

#### TEMPORARY VEGETATION 1. DISTURBED AREAS LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS WILL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING.

- 2. SEEDBED PREPARATION WHEN A HYDRAULIC SEEDER IS USED, SEEDBED PREPARATION IS NOT REQUIRED. MATERIAL IS LOOSE AND NOT SEALED BY RAINFALL. WHEN SOIL HAS BEEN SEALED BY RAINFALL OR CONSISTS OF SMOOTH CUT SLOPES, THE SOIL WILL BE PITTED, TRENCHED OR OTHERWISE SCARIFIED TO PROVIDE A PLACE FOR SEED TO LODGE AND GERMINATE.
- 3. LIME AND FERTILIZER AGRICULTURAL LIME IS REQUIRED UNLESS SOIL TESTS INDICATE OTHERWISE. APPLY AGRICULTURAL LIME AT A RATE OF ONE TON PER ACRE. FERTILIZER SHOULD BE APPLIED BEFORE LAND PREPARATION AND INCORPORATED WITH A DISK, RIPPER OR CHISEL
- 4. TEMPORARY VEGETATION SPECIES WILL BE PLANTED IN ACCORDANCE WITH TABLE 6-4.1 TEMPORARY COVER OR COMPANION COVER CROPS, IN THE MANUAL FOR SEDIMENT AND EROSION CONTROL IN GEORGIA.

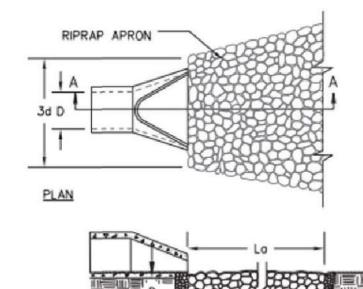
- 1. STORMWATER FALLING WITHIN THE ACTIVE MINING AREA, TO INCLUDE THE CONVEYORS AND TOPSOIL AND TAILINGS STOCKPILES WILL BE DIRECTED BACK INTO THE MINING PIT AS PRACTICAL. FOR STORMWATER DISCHARGES OFF-SITE, THE FACILITY WILL OPERATE UNDER A DNR-EPD GENERAL PERMIT NO. GARO50000 STORMWATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITIES.
- 2. STORMWATER FALLING WITHIN THE PCP/WCP AREA WILL BE DIRECTED INTO THE PROCESS PONDS AND RECIRCULATED AS PROCESS WATER. DURING HEAVY RAIN EVENTS, WATER FROM THE PROCESS PONDS MAY BE DISCHARGED THROUGH OUTFALL WW001. THIS SCENARIO WILL BE COVERED UNDER A NPDES WASTEWATER
- 3. ROUTINE DEWATERING OF THE MINE PIT IS NOT ANTICIPATED. AFTER EQUIPMENT SHUTDOWNS OR HEAVY RAIN EVENTS, IF DEWATERING IS NECESSARY, THIS WATER WILL BE DISCHARGED THROUGH THE NPDES WASTEWATER PERMIT OUTFALL WW001.



SECTION A-A

# RIPRAP OUTLET PROTECTION

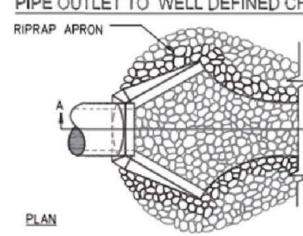
#### PIPE OUTLET TO FLAT AREA -- NO WELL DEFINED CHANNEL

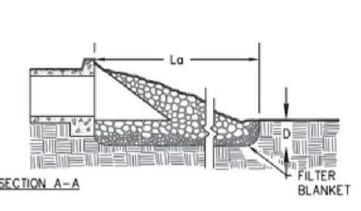


La IS THE LENGTH OF THE RIPRAP

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











SHEET 7: EROSION & SEDIMENT CONTROL NOTES & DETAILS TWIN PINES MINERALS, LLC SAUNDERS DEMONSTRATION MINE (ID NO. 2073)

ST. GEORGE, CHARLTON COUNTY, GEORGIA

DRAWN BY: DEK CHECKED BY: SGR DRAWING DATE: 11/13/2020 **REVISION DATE: 6/25/2021** TTL JOB NO.: 000180200804.00

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