

## **EROSION AND SEDIMENT CONTROL NOTES:** A SPECIFIC INDIVIDUAL SHALL BE DESIGNATED TO BE RESPONSIBLE FOR EROSION AND SEDIMENT CONTROLS ON PROJECT SITE. THIS INDIVIDUAL MUST HAVE COMPLETED THE "FUNDAMENTALS OF EROSION PREVENTION AND SEDIMENT CONTROL" COURSE OR AN EQUIVALENT COURSE. REFER TO THE TENNESSEE EROSION AND SEDIMENT CONTROL HANDBOOK FOR DESIGN CRITERIA AND GUIDELINES FOR EROSION CONTROL MEASURES. . CLEARING AND GRUBBING MUST BE HELD TO THE MINIMUM NECESSARY FOR GRADING AND EQUIPMENT OPERATION. 5. CONSTRUCTION STAGING AND PHASING IS CRITICAL TO REDUCING SEDIMENT RUNOFF FROM SITE. CONSTRUCTION PERIOD. RAINFALL. CHECK DAILY DURING PROLONGED RAINFALL. DRAINAGEWAYS SO THAT RUNOFF CANNOT CARRY SEDIMENT DOWNSTREAM. CALENDAR DAYS PRIOR TO GRADING.

REPAIR AND RE-ESTABLISH VEGETATION TO DAMAGED AREAS.

- 4. CONSTRUCTION MUST BE SEQUENCED TO MINIMIZE THE EXPOSURE TIME OF CLEARED SURFACE
- 6. EROSION CONTROL MEASURES MUST BE IN PLACE AND FUNCTIONAL BEFORE EARTH MOVING OPERATIONS BEGIN, AND MUST BE PROPERLY CONSTRUCTED AND MAINTAINED THROUGHOUT THE
- . ALL EROSION CONTROL MEASURES SHALL BE CHECKED TWICE WEEKLY AND AFTER EACH
- B. CONSTRUCTION DEBRIS MUST BE KEPT FROM ENTERING THE STORM MANAGEMENT SYSTEM.
- 9. STOCKPILED SOIL SHALL BE PROTECTED AND LOCATED FAR ENOUGH FROM STREAMS AND
- 10. VEGETATIVE GROUND COVER SHALL NOT BE DESTROYED, REMOVED OR DISTURBED MORE THAN 10
- 11. TEMPORARY SOIL STABILIZATION WITH APPROPRIATE ANNUAL VEGETATION SHALL BE APPLIED ON AREAS THAT WILL REMAIN UNFINISHED FOR MORE THAN 14 CALENDAR DAYS.
- 12. PERMANENT SOIL STABILIZATION WITH PERENNIAL VEGETATION SHALL BE APPLIED AS SOON AS PRACTICAL AFTER FINAL GRADING. CONTRACTOR SHALL INSPECT THE SITE PERIODICALLY TO
- 13. STAKED AND ENTRENCHED SILT FENCE MUST BE INSTALLED ALONG THE BASE OF ALL FILLS AND CUTS, ON THE DOWNHILL SIDES OF STOCKPILED SOIL, AND ALONG STREAM BANKS IN CLEARED AREAS TO PREVENT EROSION INTO STREAMS. SILT FENCE MAY BE REMOVED AT THE BEGINNING OF THE WORK DAY, BUT MUST BE REPLACED AT THE END OF THE WORK DAY OR PRIOR TO
- 14. WHERE APPROPRIATE, SURFACE WATER FLOWING TOWARD CONSTRUCTION AREA SHALL BE DIVERTED AROUND THE CONSTRUCTION AREA USING DIKES, TO REDUCE EROSION POTENTIAL
- 15. PLACEMENT AND MAINTENANCE OF CHECK DAMS SHALL BE AS SPECIFIED ON PLANS AND AS REQUIRED IN THE TENNESSEE EROSION AND SEDIMENT CONTROL HANDBOOK.
- 16. ALL ROCK SHALL BE CLEAN, HARD ROCK CONTAINING NO SAND, DUST, OR ORGANIC MATERIAL.
- 17. REFER TO THE TENNESSEE EROSION CONTROL HANDBOOK FOR MAINTENANCE REQUIREMENTS OF EROSION AND SEDIMENT CONTROL MEASURES
- 18. CONTRACTOR SHALL MAINTAIN SILT FENCES AND OTHER EROSION CONTROL DEVICES FOR THE DURATION OF THE PROJECT, TO ENSURE EFFECTIVENESS, UNTIL ACCEPTED BY THE OWNER, AT NO ADDITIONAL EXPENSE TO THE OWNER. IF CONSTRUCTION ACTIVITIES CEASE DUE TO WEATHER RELATED CAUSES, THEN THE CONTRACTOR WILL ENSURE THAT THE SITE IS PROPERLY STABILIZED AND ALL EROSION CONTROL DEVICES ARE MAINTAINED AND FUNCTIONAL DURING THOSE PERIODS
- 19. CONSTRUCTION EXIT CONTRACTOR SHALL INSTALL TEMPORARY CONSTRUCTION EXIT PRIOR TO ANY EARTHWORK OPERATIONS, CONSTRUCTION EXIT SHALL BE LOCATED AS SHOWN. CONSTRUCTION EXIT SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD TO PUBLIC RIGHTS-OF-WAYS. ALL MATERIAL SPILLED, DROPPED, WASHED OR TRACKED FROM VEHICLES OR SITE ONTO ADJACENT ROADWAYS SHALL BE REMOVED IMMEDIATELY FROM THE ROADWAY.
- 20. CONTRACTOR IS RESPONSIBLE FOR CLEANING OUT AND PROPER DISPOSAL OF ALL DEBRIS WITHIN THE STORM DRAINAGE STRUCTURES, INCLUDING SILT FROM FLUMES, PIPES, ETC., PRIOR TO
- 21. ADDITIONAL PROTECTION IN ADDITION TO THE ABOVE, SHALL BE PROVIDED THAT WILL PREVENT SILT FROM LEAVING THE SITE DUE TO UNFORESEEN CONDITIONS OR ACCIDENTS.
- 22. STREAMS SHALL NOT BE USED AS TRANSPORTATION ROUTES FOR EQUIPMENT CROSSINGS MUST BE LIMITED TO ONE POINT. A STABILIZED PAD OF CLEAN AND PROPERTY SIZED SHOT ROCK MUST BE USED AT THE CROSSING POINT.
- 23. MEASURES SHOWN FOR SEDIMENT AND EROSION CONTROL REPRESENT THE MINIMUM ANTICIPATED ADDITIONAL PROTECTION SHALL BE PROVIDED AS NECESSARY THAT WILL PREVENT SEDIMENT FROM LEAVING THE SITE DUE TO UNFORESEEN CONDITIONS OR ACCIDENTS.
- 24. THE GRADING CONTRACTOR AND BUILDING CONTRACTOR WILL REFRAIN FROM DOING ANY WORK OUTSIDE OF THE DELINEATED LIMITS OF DISTURBANCE.
- 25. ROADS SHALL BE STABILIZED BY APPLYING STONE ONCE SUBGRADE ELEVATION IS ACHIEVED.
- 26. ALL SILT FENCE IS TO BE TYPE A EXCEPT WHERE SPECIFIED DIFFERENTLY.
- 27. EROSION CONTROL MATTING TO BE JUTE MESH(OR APPROVED EQUAL) AND INSTALLED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
- 28. THE EROSION PREVENTION AND SEDIMENT CONTROLS FOR THIS SITE HAVE BEEN DESIGNED FOR THE 5-YEAR 24 HOUR STORM IN ACCORDANCE WITH THE TENNESSEE GENERAL PERMIT FOR STORMWATER DISCHARGES FOR CONSTRUCTION ACTIVITIES (5.4.1.A)

6' MAX. O.C. (TYPE "A") & 4' MAX O.C. (TYPE "C")

OR AS PER T.D.E.C. STANDARDS

## FILL LOW AREAS ALONG TOP OF BANK TO FLOW LINE PREVENT BACKWATER FROM EXITING DITCH. - D (1.0' MINIMUM) WEIR FLOW DEPTH BASED UPON 2yr/24hr STORM EVENT OR 5yr/24hr STORM EVENT. SECTION B - B **CHECK DAM** EDGE OF PUBLIC ROAD-50' (MIN.) <2% SLOPE LASTM D 448, SIZE NO. 1 STONE 6" DEPTH WITH GEOTEXTILE FABRIC TEMPORARY DRAINAGE PIPE WHERE NEEDED PLAN VIEW OF TEMPORARY CONSTRUCTION ROAD EXISTING NATURAL -GROUND 50' (MIN.) PUBLIC ROAD -ASTM D 448, SIZE NO. 1 STONE 3" UNDERCUT PRIOR $\overline{\ \ }$ 6" DEPTH WITH GEOTEXTILE FABRIC TO PLACEMENT OF MACHINED RIPRAP GEOTEXTILE FABRIC SHALL BE PLACED UNDER ENTIRE WIDTH OF RIPRAP TEMPORARY DRAINAGE -PIPE WHERE NEEDED

SECTION A-A

**CONSTRUCTION EXIT DETAIL** 

1. FILTER CLOTH SHALL MEET THE REQUIREMENTS OF THE STANDARD

SPECIFICATION FOR GEOTEXTILES AASHTO DESIGNATION: M288,

2. THE FILTER MATERIAL SHALL BE STAPLED TO THE STAKES. HEAVY DUTY

SPACED WITH AT LEAST FOUR PER POST FOR SILT FENCES AND THREE

WIRE STAPLES WITH 1/2 INCH WIDTH SHALL BE USED AND EVENLY

PER POST FOR FILTER BARRIERS. FILTER MATERIAL SHALL NOT BE

AS INDICATED MINIMUM 1.33 LB./FT. STEEL POST (STD. OR U SECTION.

PLACE STRAW BALES ON DOWNSTREAM SIDE OF SILT FENCE AS REQUIRED.

7. STRAW BALES TO BE PLACED END TO END UP AGAINST THE SILT FENCE.

TYPE A SILT FENCE - THIS 36-INCH WIDE FILTER FABRIC SHOULD BE USED ON DEVELOPMENTS WHERE THE LIFE OF THE PROJECT IS SIX MONTHS

TYPE C SILT FENCE - TYPE C SILT FENCE IS 36-INCHES WIDE WITH WIRE

REINFORCEMENT. THE WIRE REINFORCEMENT IS NECESSARY BECAUSE THIS

FABRIC ALLOWS FOR ALMOST THREE TIMES THE FLOW RATE AS TYPE A SILT

4. WHEN STEEL POSTS ARE USED THEY SHALL HAVE A PROTECTION FOR

(2.25 SQ. IN.) HARDWOOD POST (OAK OR HICKORY) - LENGTH

FASTENING WIRE TO THEM. THE WIRE FASTENERS SHOULD

BE EVENLY SPACED WITH AT LEAST FIVE PER POST.

5. BINDING WIRE OR TWINE SHALL REMAIN ON STRAW BALES.

SEDIMENT CONTROL, SELF SUPPORTED.

3. MINIMUM 2"X 2" (NOMINAL) - (1.5"X 1.5" ACTUAL)

STAPLED TO EXISTING TREES.

BASE OF

TRAPEZOIDAL DITCH

PLAN VIEW

BASE OF DITCH

GEOTEXTILE FABRIC

TO EXTEND 3' BEYOND LIMITS OF RIPRAP ----

MACHINED RIPRAP (CLASS A-1) ----

TOP OF DITCH —

TOP OF CHECK DAM

AT EDGE OF DITCH —

SHALL BE PLACED UNDER

ENTIRE WIDTH OF RIPRAP.-

PROFILE VIEW

DRY SEDIMENT STORAGE-

TOP OF CHECK DAM

D (DEPTH) | S (SLOPE) |L (LENGTH)|

1'-0" 4 % 25'

1'-0" 5 % 20'

1'-0" 6 % 17'

2'-0" 2 % 100'

2'-0" | 5 % | 40'

2'-0" | 6 % | 34'

2'-0" | 7 % | 28'

2'-0" 8 % 26'

2'-0" 9 % 22'

3 % 33'

7 % 14'

8 % 13' 9 % 11'

1 % 200'

3 % | 66'

4 % 50'

AT EDGE OF DITCH

MACHINED RIPRAP

- GEOTEXTILE FABRIC SHALL

MACHINED RIPRAP SLOPE 3'.

EXTEND BEYOND TOE OF

─ 2:1 OR FLATTER

(CLASS A-1)

- CENTERLINE

L TOP OF DITCH (NATURAL GROUND)

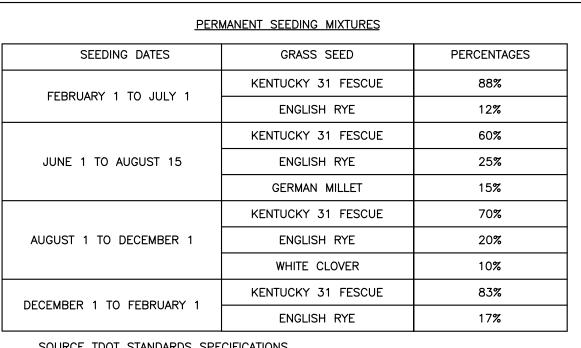
TOP OF DITCH

- ROCK CHECK DAM

REDUCTION

(NATURAL GROUND)

FLOW -



2:1 OR FLATTER -

S = DITCH SLOPE

TOE OF DITCH

L = THE DISTANCE SUCH THAT POINTS X

- BASE OF DITCH

BETWEEN CHECK DAMS

AND YARE OF EQUAL ELEVATION

FLOW LINE OF WEIR-

FLOW LINE OF

TOP OF DITCH

(NATURAL GROUND) -

PROPOSED DITCH-

SEEDING DATES	GRASS SEED	PERCENTAGES
JANUARY 1 TO MAY 1	ITALIAN RYE	50%
	SUMMER OATS	50%
MAY 1 TO JULY 15	SUDAN-SORGHURM	100%
MAY 1 TO JULY 15	STARR MILLET	100%
JULY 15 TO JANUARY 1	BALBOA RYE	67%
	ITALIAN RYE	33%

INSTALL FILTER SOCK OVERLAP JOINTS AND ALONG CONTOUR COVER W/ #57 STONE TYPICAL FILTER SOCK INSTALLATION

-DISTURBED AREA

AROUND SOCK.

WIDTH 1.5' (MIN.)

INSTALL OUTLET DRAINS AT LOCATIONS

DIRECTED BY OWNERS REPRESENTATIVE.

OUTLET BEYOND LIMITS OF NEW FILL.

**OUTLET DRAIN** 

NOT TO SCALE

- TOP OF DITCH

(NATURAL GROUND)

- EDGE OF GEOTEXTILE

AT EDGE OF DITCH

SIDESLOPES

- 2:1 MAX EMBANKMENT

SHOWN ON PLAN AND AT WET AREAS AS

-18' VERTICAL HDPE GUYED

## SEDIMENT TRAP DETAIL (TDEC)

LEDGE OF WET STORAGE

PLAN VIEW

SMALLER CLEAN STONE-

FLOW LINE

- WET SEDIMENT STORAGE

(MIN. 67cy/acre)

LENGTH OF SEDIMENT TRAP = L

LENGTH OF SEDIMENT TRAP

L = 3 X W (MINIMUM)

PER	MANENT SEEDING MIXTURES	
SEEDING DATES	GRASS SEED	PERCENTAGES
FEBRUARY 1 TO JULY 1	KENTUCKY 31 FESCUE	88%
FEDRUARI I TO JULY I	ENGLISH RYE	12%
JUNE 1 TO AUGUST 15	KENTUCKY 31 FESCUE	60%
	ENGLISH RYE	25%
	GERMAN MILLET	15%
AUGUST 1 TO DECEMBER 1	KENTUCKY 31 FESCUE	70%
	ENGLISH RYE	20%
	WHITE CLOVER	10%
DECEMBER 1 TO FEBRUARY 1	KENTUCKY 31 FESCUE	83%
DECEMBER 1 TO FEBRUART 1	ENGLISH RYE	17%
SOURCE TDOT STANDARDS SPE	CIFICATIONS	

SEEDING DATES	GRASS SEED	PERCENTAGES
ARY 1 TO MAY 1	ITALIAN RYE	50%
	SUMMER OATS	50%
1 TO JULY 15	SUDAN-SORGHURM	100%
1 TO JULY 15	STARR MILLET	100%
5 TO JANUARY 1	BALBOA RYE	67%
	ITALIAN RYE	33%

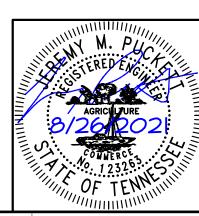
3/4" x 3/4" WOOD STAKES 4'-0" MAX. SPACING **ENTRENCHMENT DETAIL** 

**FILTER SOCK DETAIL** 

## —PERFORATED OUTLET HOLES ANCHOR TRENCH -(MIN. 6" DEEP) 3" TO 4" TYPICAL ----FINAL GROUND SURFACE **BLANKETS ARE** USUALLY INSTALLED VERTICALLY ON THE SLOPE -STAKES OR STAPLES AT RECOMMENDED SPACING AND PATTERN -#57 CRUSHED STONE MIN. 4" ABOVE AND BELOW PIPE 1. STITCHING BLANKET SEAMS IS PREFERABLE TO OVERLAPPING BLANKET SEAMS. 2. STAKING OR STAPLING LAYOUT SHALL CONFORM TO MANUFACTURER'S RECOMMENDATIONS FOR SLOPE AND GRADE 3. ALL MATERIALS SHALL CONFORM TO TDEC EROSION CONTROL SPEC. MA-3. 3'-0" (TYP.) **SLOPE MATTING DETAIL** FILTER LOG (8", 12" OR 18" TYP.) PAVEMENT OR IMPERVIOUS SURFACE SIZED AS NEEDED (10' O.C.) WORK AREA SECTION TURN ENDS UPSLOPE TO PREVENT RUNOFF

CONCRETE BLOCKS OR SAND BAGS SIZED AS NEEDED (10' O.C.) AREA TO BE PROTECTED FILTER LOG (8", 12" OR 18" TYP.) WATER FLOW WORK AREA ALL MATERIALS TO MEET MARYLAND DEPARTMENT OF ENVIRONMENT SPECIFICATIONS 2. FILTER MEDIA TO BE DISPERSED ON SITE, AS DETERMINED BY ENGINEER

FILTER LOG ON PAVEMENT DETAIL 0015



PREVENTION /

LONGITUDINAL A

FOR LONG SLOPE

SPLICE WITH GEOTEXTILE

STITCHING (PERFERABLE) OR BY OVERLAPPING.

GEOTEXTILE MAY BE NECESSARY

TO ALLEVIATE HYDROSTATIC

PRESSURES.

BY MANUFACTURER

CONCRETE BLOCKS OR SAND BAGS

AREA TO BE PROTECTED

- TERMINAL TREATMENT OR

ANCHORING AS RECOMMENDED

TRENCH MAY BE NEEDED

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- FILTER FABRIC WOOD OR STEEL POST --BACKFILL W/ COMPACTED SOIL FILTERED

FENCE. TYPE C SILT FENCE SHOULD BE USED WHERE RUNOFF FLOWS OR VELOCITIES ARE PARTICULARLY HIGH OR WHERE SLOPES EXCEED A VERTICAL

**SEEDING SCHEDULE** 

SILT FENCE BARRIER

**EXISTING** GROUNDLINE -6" MIN., BOT. OF TRENCH

STEEL POST

COMPACTED

TYPE "A" & TYPE "C" SILT FENCE HEIGHT OF 10 FEET.

NOTES: