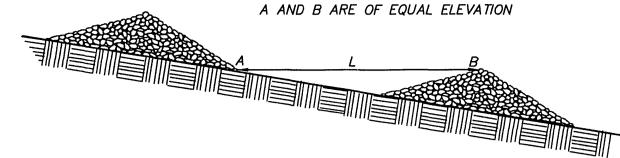


SPACING BETWEEN CHECK DAMS

L = THE DISTANCE SUCH THAT POINTS



GENERAL SPECIFICATIONS

- 1. MAXIMUM HEIGHT OF DAM SHALL BE 3.0 FEET . THE CENTER OF THE DAM SHALL BE AT LEAST 6 INCHES LOWER THAN THE OUTER EDGES.
- 3. FOR ADDED STABILITY, THE BASE OF THE DAM CAN BE KEYED INTO THE SOIL APPROXIMATELY 6 INCHES. 4. THE MAXIMUM SPACING BETWEEN THE DAMS SHOULD BE SUCH THAT THE TOE OF THE UPSTREAM
- DAM IS AT LEAST THE SAME ELEVATION AS THE TOP OF THE DOWNSTREAM DAM
- 5. STONE SHOULD BE PLACED ACCORDING TO THE DETAIL ON THIS SHEET, HAND OR MECHANICAL PLACEMENT WILL BE NECESSARY TO ACHIEVE COMPLETE COVERAGE OF THE DITCH
- OR SWALE AND TO INSURE THAT THE CENTER OF THE DAM IS LOWER THAN THE EDGES. 6. FILTER CLOTH MAY BE USED UNDER THE STONE TO PROVIDE A STABLE FOUNDATION AND TO FACILITATE THE REMOVAL OF THE STONE. SEE STANDARD AND SPEC. 3.19, RIPRAP, FOR REQUIRED PHYSICAL PROPERTIES OF THE FILTER CLOTH.

MAINTENANCE

- 1. CHECK DAMS SHALL BE CHECKED FOR SEDIMENT ACCUMULATION AFTER EACH RUNOFF PRODUCING STORM EVENT. SEDIMENT SHOULD BE REMOVED WHEN IT REACHES ONE HALF OF THE ORIGINAL HEIGHT OF THE
- MEASURE. R. REGULAR INSPECTIONS SHALL BE MADE TO INSURE THAT THE CENTER OF THE DAM IS LOWER THAN THE EDGES. EROSION CAUSED BY HIGH FLOWS AROUND THE EDGES OF THE DAM SHALL BE CORRECTED IMMEDIATELY.

REMOVAL OF PRACTICE

1. UNLESS THEY WILL BE INCORPORATED INTO A PERMANENT STORMWATER MANAGEMENT CONTROL, CHECK DAMS MUST BE REMOVED WHEN THEIR USEFUL LIFE HAS BEEN COMPLETED. IN TEMPORARY DITCHES AND SWALES. CHECK DAMS SHOULD BE REMOVED AND THE DITCH FILLED IN WHEN THEY ARE NO LONGER NEEDED. IN PERMANENT STRUCTURES, CHECK DAMS SHOULD BE REMOVED WHEN A PERMANENT LINING CAN BE INSTALLED. IN CASE OF GRASS—LINED DITCHES, CHECK DAMS SHOULD BE REMOVED WHEN THE GRASS HAS MATURED SUFFICIENTLY TO PROTECT THE DITCH OR SWALE. THE AREA BENEATH THE CHECK DAMS SHOULD BE SEEDED AND MULCHED IMMEDIATELY AFTER THEY ARE REMOVED. THE USE OF FILTER CLOTH UNDERNEATH THE STONE WILL MAKE THE REMOVAL OF THE STONE EASIER.

NOT EXCEED 34"

FLOW, CREATE A "HORSESHOE" SHAPE AS SHOWN IN DETAIL.

THE UPSLOPE AREA HAS BEEN PERMANENTLY STABILIZED.

PONDING PROBLEMS WHICH INTERFERE WITH ON—SITE CONSTRUCTION.

THE MEASURE.

BE UTILIZED.

MAINTENANCE

MULCHES	RATES:		NOTES.
	PER ACRE	PER 1000 SQ.FT.	NOTES:
STRAW OR HAY	1 1/2 - 2 TONS (MINIMUM 2 TONS FOR WINTER COVER)	70 — 90 LBS	FREE FROM WEEDS AND COARSE MATTER. MUST BE ANCHORED. SPREAD WITH MULCH BLOWER OR BY HAND.
FIBER MULCH	MINIMUM 1500 LBS.	35 LBS	DO NOT USE AS MULCH FOR WINTER COVER OR DURING HOT, DRY PERIODS.* APPLY AS SLURRY.
CORN STALKS	4 — 6 TONS	185 – 275 LBS.	CUT OR SHREDDED IN 4-6" LENGTHS. AIR-DRIED. DO NOT USE IN FINE TURF AREAS. APPLY WITH MULCH BLOWER OR BY HAND.
WOOD CHIPS	4 — 6 TONS	185 – 275 LBS.	FREE OF COARSE MATTER. AIR— DRIED. TREAT WITH 12 LBS. NITROGEN PER TON. DO NOT USE IN FINE TURF AREAS. APPLY WITH MULCH BLOWER, CHIP HANDLER, OR BY HAND.
BARK CHIPS OR SHREDDED BARK	50 — 70 CU.YDS.	1 —2 CU. YDS.	FREE OF COARSE MATTER. AIR—DRIED. DO NOT USE IN FINE TURF AREAS. APPLY WITH MULCH BLOWER, CHIP HANDLER, OR BY HAND.

SHOULD BE USED, APPLY AT A MINIMUM RATE OF 2000 LBS/AC. OR 45 LBS./1000 SQ.FT.

SPECIFICATIONS

- 1. PRIOR TO MULCHING COMPLETE REQUIRED GRADING AND INSTALL NEEDED SEDIMENT CON ...OL PRACTICES, 2. LIME AND FERTILIZER SHOULD BE INCORPORATED AND SURFACE ROUGHENING ACCOMPLISHED AS NEEDED, SEED SHOULD BE APPLIED PRIOR TO MULCHING EXCEPT IN THE FOLLOWING CASES:
- A. WHERE SEED IS TO BE APPLIED AS PART OF A HYDROSEEDER SLURRY CONTAINING FIBER
- B. WHERE SEED IS TO BE APPLIED FOLLOWING A STRAW MULCH SPREAD DURING WINTER
- 3. APPLICATION: MULCH MATERIAL SHALL BE SPREAD UNIFORMLY, BY HAND OR MACHINE. WHEN SPREADING STRAW BY HAND, DIVIDE THE AREA TO BE MULCHED INTO APPROXIMATELY 1,000 SQ.FT. SECTIONS AND PLACE 70-90 LBS. (1 1/2 TO 2 BALES) OF STRAW IN EACH SECTION TO FACILITATE UNIFORM DISTRIBUTION.
- 4. MULCH ANCHORING: STRAW MULCH MUST BE ANCHORED IMMEDIATELY AFTER SPREADING TO PREVENT DISPLACEMENT. OTHER ORGANIC MULCHES LISTED IN TABLE DO NOT REQUIRE ANCHORING. THE FOLLOWING METHODS OF ANCHORING STRAW MAY BE USED:
- 1. MULCH ANCHORING TOOL (OFTEN REFERRED TO AS A KRIMPER OR KRIMPER TOOL): THIS IS A TRACTOR-DRAWN IMPLEMENT DESIGNED TO PUNCH MULCH INTO THE SOIL SURFACE. THIS METHOD PROVIDES GOOD EROSION CONTROL WITH STRAW. IT IS LIMITED TO USE ON SLOPES NO STEEPER THAN 3:1 WHERE EQUIPMENT CAN OPERATE SAFELY. MACHINERY SHALL BE OPERATED ON THE
- 2. FIBER MULCH: APPLY FIBER MULCH BY MEANS OF A HYDROSEEDER AT A RATE OF 500-750 LBS./ ACRE OVER TOP OF STRAW MULCH OR HAY. IT HAS AN ADDED BENEFIT OF PROVIDING ADDITIONAL MULCH TO THE NEWLY SEEDED AREA.
- 3. LIQUID MULCH BINDERS: APPLICATION OF LIQUID MULCH BINDERS AND TACKIFIERS SHOULD BE HEAVIEST AT THE EDGES OF AREAS AND AT CRESTS OF RIDGES AND BANKS, TO PREVENT DISPLACEMENT . THE REMAINDER OF THE AREA SHOULD HAVE BINDER APPLIED UNIFORMLY. BINDER MAY BE APPLIED AFTER MULCH IS SPREAD OR MAY BE SPRAYED INTO MULCH AS IT IS BEING BLOWN ONTO THE SOIL.
- THE FOLLOWING TYPES OF BINDERS MAY BE USED: A. SYNTHETIC BINDERS — FORMULATED BINDERS OR ORGANICALLY FORMULATED PRODUCTS MAY BE USED
- AS RECOMMENDED BY THE MANUFACTURER TO ANCHOR MULCH. *B. ASPHALT - ANY TYPE OF ASPHALT THIN ENOUGH TO BE BLOWN FROM SPRAY EQUIPMENT IS SATISFACTORY. RECOMMENDED FOR USE ARE RAPID CURING (RC-70, RC-250, RC-800), MEDIUM CURING (MC-250, MC-800) AND EMULSIFIED ASPHALT (SS-1, CSS-1, CMS-2, MS-2, RS-1, RS-2, CRS-1 AND CRS-2).
- *NOTE: WHEN THIS METHOD IS USED, ENVIRONMENTAL CONCERNS SHOULD BE ADDRESSED TO ENSURE THAT PETROLEUM— BASED PRODUCTS DO NOT ENTER VALUABLE WATER SUPPLIES. AVOID APPLICATIONS INTO WATERWAYS OF CHANNELS 4. MULCH NETTINGS: LIGHTWEIGHT PLASTIC, COTTON, OR PAPER NETS MAY BE STAPLED OVER THE MULCHED
- ACCORDING TO MANUFACTURER'S RECOMMENDATIONS. 5. PEG AND TWINE: BECAUSE IT IS LABOR—INTENSIVE, THIS METHOD IS FEASIBLE ONLY IN SMALL AREAS WHERE
- OTHER METHODS CANNOT BE USED. DRIVE 8 TO 10 INCH WOODED PEGS TO WITHIN 3 INCHES OF THE SOIL SURFACE, EVERY 4 FEET IN ALL DIRECTIONS. STAKES MAY BE DRIVEN BEFORE OR AFTER STRAW IS SPREAD. SECURE MULCH BY STRETCHING TWINE BETWEEN PEGS IN A CRISS-CROSS-WITHIN-A SQUARE. TURN TWINE 2 OR MORE TIMES AROUND EACH PEG. CHEMICAL MULCHES

CHEMICAL MULCHES* MAY BE USED ALONE ONLY IN THE FOLLOWING SITUATIONS:

- A. WHERE NO OTHER MULCHING MATERIAL IS AVAILABLE
- B. IN CONJUNCTION WITH TEMPORARY SEEDING DURING THE TIMES WHEN MULCH IS NOT REQUIRED FOR THAT PRACTICE. C. FROM MARCH 15 TO MAY 1 AND AUGUST 15 TO SEPTEMBER 30, PROVIDED THAT THEY ARE USED ON AREAS WITH SLOPES NO STEEPER THAN 4:1, WHICH HAVE BEEN ROUGHENED IN ACCORDANCE WITH SURFACE ROUGHENING, STANDARD AND SPECIFICATION 3.29 OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK. IF RILL EROSION OCCURS, ANOTHER MULCH MATERIAL SHALL BE APPLIED IMMEDIATELY.
- *NOTE: CHEMICAL MULCHES MAY BE USED TO BIND OTHER MULCHES OR WITH FIBER MULCH IN A HYDROSEEDED SLURRY AT ANY TIME. MANUFACTURER'S RECOMMENDATIONS FOR APPLICATION OF CHEMICAL MULCHES SHALL BE FOLLOWED.

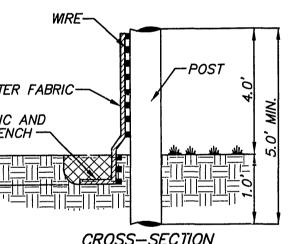
ALL MULCHES AND SOIL COVERINGS SHOULD BE INSPECTED PERIODICALLY (PARTICULARLY AFTER RAINSTORMS) TO CHECK FOR EROSION. WHERE EROSION IS OBSERVED IN MULCHED AREAS, ADDITIONAL MULCH SHOULD BE APPLIED. NETS AND MATS SHOULD BE INSPECTED AFTER RAINSTORMS FOR DISLOCATION OR FAILURE. IF WASHOUTS OR BREAKAGE OCCUR, RE-INSTALL NETTING OR MATTING AS NECESSARY AFTER REPAIRING DAMAGE TO THE SLOPE OR DITCH. INSPECTIONS SHOULD TAKE PLACE UP UNTIL GRASSES ARE FIRMLY ESTABLISHED. WHERE MULCH IS USED IN CONJUNCTION WITH ORNAMENTAL PLANTINGS, INSPECT PERIODICALLY THROUGHOUT THE YEAR TO DETERMINE IF MULCH IS MAINTAINING COVERAGE OF THE SOIL SURFACE; REPAIRER AS NEEDED.

EACH LIFT OF THE FILL IS COMPACTED, BUT THE OUTER FACE

OF THE SLOPE IS ALLOWED TO REMAIN LOOSE SO THAT THE ROCKS, CLODS, ETC. REACH THE NATURAL ANGLE OF REPOSE

CAN CANADA COMO CONTRA CONTRA

FILL SLOPE TREATMENT



CROSS-SECTION USED.

PHYSICAL PROPERTIES OF FILTER FABRIC IN SILT FENCE

TABLE 3.02-B

PHYSICAL PROPERTY	<u>TEST</u>	<u>REQUIREMENTS</u>
FILTERING EFFICIENCY	ASTM 5141	75% (MIN.)
TENSILE STRENGTH AT 20% (MAX.) ELONGATION (*)	VTM-52	EXTRA STRENGTH — 50 LBS./LINEAR INCH (MIN.)
FLOW RATE	ASTM 5141	0.2 GAL./SQ.FT./ MINUTE (MIN.)

ULTRAVIOLET RADIATION ASTM-G-26 90% (MIN.) STABILITY %

(*) REQUIREMENTS REDUCED BY 50% AFTER SIX MONTHS OF INSTALLATION.

CULVERT-----SILT FENCE VDOT #3, #357, OR #5 COARSE-AGGRËGATE TO REPLACE SILT FENCE IN HORSESHOE WHEN HIGH VELOCITY FLOW IS EXPECTED OPTIONAL STONE COMBINATION FLOW CULVERT INLET PROTECTION

1. THE HEIGHT OF THE SILT FENCE (IN FRONT OF THE CULVERT OPENING) SHALL BE A MINIMUM OF 16" AND SHALL

3. THE PLACEMENT OF SILT FENCE SHOULD BE APPROXIMATELY 6' FROM THE CULVERT IN THE DIRECTION OF INCOMING

PROTECTION IS EXCESSIVE AND MAY BREACH THE STRUCTURE, THE STONE COMBINATION NOTED IN DETAIL SHOULD

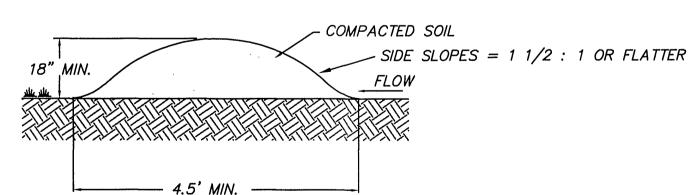
3. TEMPORARY STRUCTURES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFUL PURPOSE, BUT NOT BEFORE

4. IF THE SILT FENCE CANNOT BE INSTALLED PROPERLY OR THE FLOW AND/OR VELOCITY OF FLOW TO THE CULVERT

2. AGGREGATE SHALL BE REPLACED OR CLEANED WHEN INSPECTION REVEALS THAT CLOGGED VOIDS ARE CAUSING

2. EXTRA STRENGTH FILTER FABRIC WITH A MINIMUM SPACING OF STAKES OF 3' SHALL BE USED TO CONSTRUCT

1. THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRS MADE AS NEEDED.



GRADE: THE CHANNEL BEHIND THE DIKE SHALL HAVE A POSITIVE GRADE TO A STABILIZED OUTLET. IF THE CHANNEL SLOPE IS LESS THAN OR EQUAL TO 2%, NO STABILIZATION IS REQUIRED. IF THE SLOPE IS GREATER THAN 2%, THE CHANNEL SHALL BE STABILIZED IN ACCORDANCE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK STD. & SPEC. 3.17, STORMWATER CONVEYANCE CHANNEL.

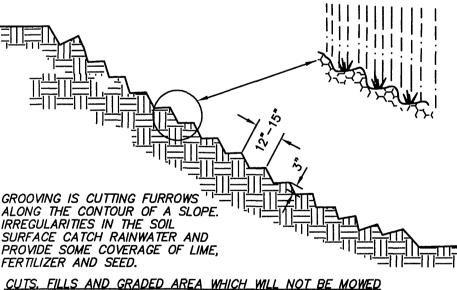
SPECIFICATIONS: 1. TEMPORARY DIVERSION DIKES MUST BE INSTALLED AS A FIRST STEP IN THE LAND-DISTURBING ACTIVITY AND MUST BE FUNCTIONAL PRIOR TO UPSLOPE

- LAND DISTURBANCE. 2. THE DIKE SHOULD BE ADEQUATELY COMPACTED TO PREVENT FAILURE.
- 3. TEMPORARY OR PERMANENT SEEDING AND MULCH SHALL BE APPLIED TO THE IMMEDIATELY FOLLOWING ITS CONSTRUCTION 4. THE DIKE SHOULD BE LOCATED TO MINIMIZE DAMAGES BY CONSTRUCTION
- OPERATION AND TRAFFIC.

MAINTENANCE: THE MEASURE SHALL BE INSPECTED AFTER EVERY STORM AND REPAIRS MADE TO THE DIKE, FLOW CHANNEL, OUTLET OR SEDIMENT TRAPPING FACILITY, AS NECESSARY. ONCE EVERY TWO WEEKS, WHETHER A STORM EVENT HAS OCCURRED OR NOT, THE MEASURE SHALL BE INSPECTED AND REPAIRS MADE IF NEEDED. DAMAGES CAUSED BY CONSTRUCTION TRAFFIC OR OTHER ACTIVITY MUST BE REPAIRED BEFORE THE END OF EACH WORKING DAY.

DIVERSION DIKE

DEBRIS FROM SLOPE ABOVE IS CAUGHT WATER, SOIL AND FERTILIZER ARE HELD BY STEPS - PLANTS -CLASS I RIP-RAP CAN BECOME ESTABLISHED ON



GROOVING SLOPES

THE STEPS.

STAIR STEPPING CUT SLOPES

1. CUT OR FILL SLOPES WITH A GRADE STEEPER THAN 3:1 SHALL BE STAIR—STEP GRADED OR GROOVED 2. A. STAIR-STEP GRADING MAY BE CARRIED OUT ON ANY MATERIAL SOFT ENOUGH TO BE RIPPED WITH A BULLDOZER. SLOPES CONSISTING OF SOFT ROCK WITH SOME SUBSOIL ARE PARTICULARLY SUITED

GROOVES PERPENDICULAR TO THE SLOPE.

TO STAIR-STEP GRADING. B. THE RATIO OF VERTICAL CUT DISTANCE TO THE HORIZONTAL DISTANCE SHALL BE LESS THAN 1:1
AND THE HORIZONTAL PORTION OF THE "STEP" SHALL SLOPE TOWARD THE VERTICAL WALL. C. INDIVIDUAL VERTICAL CUTS SHALL NOT BE MORE THAN 30 INCHES ON SOFT MATERIALS AND

NOT MORE THAN 40 INCHES IN ROCKY MATERIALS. 3. A. GROOVING CONSISTS OF USING MACHINERY TO CREATE A SERIES OF RIDGES AND DEPRESSIONS WHICH RUN PERPENDICULAR TO SLOPE (ON CONTOUR) B. GROOVES MAY BE MADE WITH ANY APPROPRIATE IMPLEMENT WHICH CAN BE SAFELY OPERATED

ON THE SLOPE AND WHICH WILL NOT CAUSE UNDUE COMPACTION. SUGGESTED IMPLEMENTS

INCLUDE DISCS, TILLERS, SPRING HARROWS AND THE TEETH ON A FRONT-END LOADER BUCKET. SUCH GROOVES SHALL NOT BE LESS THAN 3 INCHES DEEP NOR FURTHER THAN 15 INCHES APART. . AS LIFTS OF FILL ARE CONSTRUCTED, SOIL AND ROCK MATERIALS MAY BE ALLOWED TO FALL NATURALLY

ONTO THE SLOPE SURFACE. 5. COLLUVIAL MATERIALS (SOIL DEPOSITS AT THE BASE OF SLOPES OR FROM OLD STREAM BEDS) SHALL NOT BE USED IN FILLS AS THEY FLOW WHEN SATURATED.

6. AT NO TIME SHALL SLOPES BE BLADED OR SCRAPED TO PRODUCE A SMOOTH, HARD SURFACE.

ROUGHENING WITH TRACKED MACHINERY . ROUGHENING WITH TRACKED MACHINERY ON CLAYEY SOILS IS NOT RECOMMENDED UNLESS NO ALTERNATIVES ARE AVAILABLE. UNDUE COMPACTION OF SURFACE SOIL RESULTS FROM THIS PRACTICE. SANDY SOILS DO NOT COMPACT SEVERELY, AND MAY BE TRACKED. IN NO CASE IS TRACKING AS EFFECTIVE AS OTHER ROUGHENING

. WHEN TRACKING IS THE CHOSEN SURFACE ROUGHENING TECHNIQUE, IT SHALL BE DONE BY OPERATING TRACKED MACHINERY UP AND DOWN THE SLOPE TO LEAVE HORIZONTAL DEPRESSIONS IN THE SOIL. AS FEW PASSES OF THE MACHINERY SHOULD BE MADE AS POSSIBLE TO MINIMIZE COMPACTION.

1. ROUGHENED AREAS SHALL BE SEEDED AND MULCHED AS SOON AS POSSIBLE TO OBTAIN OPTIMUM SEED GERMINATION



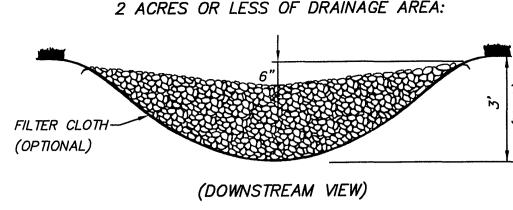
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DRAWN BY: DESIGNED BY: M.L.L. CHECKED BY: **DATE:** JAN. 26, 2006 AS SHOWN REVISIONS

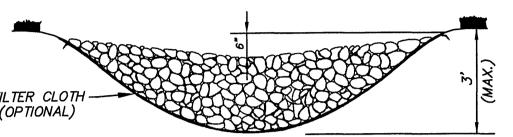
SHEET No.

EROSION CONTROL DETAILS

JOB No. 050/6



2-10 ACRES OF DRAINAGE AREA:



(DOWNSTREAM VIEW)

SILT FENCE BARRIER DETAIL

FILTER FABRIC-EXTEND FABRIC AND WIRE INTO TRENCH ---6' IF WIRE IS NOT USED.

* 10' IF WIRE IS

CONSTRUCTION SPECIFICATIONS

<u>MATERIALS</u>

1. SYNTHETIC FILTER FABRIC SHALL BE A PERVIOUS SHEET OF PROPYLENE, NYLON, POLYESTER OR ETHYLENE YARN AND SHALL BE CERTIFIED BY THE MANUFACTURER OR SUPPLIER AS CONFORMING TO THE REQUIREMENTS NOTED IN TABLE 3.05-B

2. SYNTHETIC FILTER FABRIC SHALL OF I'N ULTRAVIOLET RAY INHIBITORS AND STABILIZERS TO PROVIDE A MINIMUM OF TOTALE CONSTRUCTION LIFE AT A TEMPERATURE RANGE OF 0" T

ONSTRUCTION. THEY MUST HAVE A DIAMETER "I PINE IS USED. WOODEN STAKES MUST

JTILIZED FOR SILT FENCE CONSTRUCTION, THEY INEAR FOOT AND SHALL HAVE A

ANDARD-STRENGTH FILTER CLOTH SHALL BE MESH SPACING OF 6 INCHES.

16 INCHES ABOVE THE ORIGINAL GROUND ROUND ELEVATION. NUOUS ROLL CUT TO THE LENGTH OF THE ARE UNAVOIDABLE, FILTER CLOTH SHALL BE A MINIMUM 6-INCH OVERLAP. AND SECURELY

INCHES WIDE AND 4-INCHES DEEP ON THE MEASURE.

I FILTER CLOTH MAY BE USED. POSTS FOR THIS 1 OF 10 FEET APART (SEE DETAIL) Y TO THE UPSLOPE SIDE OF THE POST USING VG, TIE WIRES OR HOG RINGS. THE WIRE SHALL S AND SHALL NOT EXTEND MORE THAN 34 STANDARD-STRENGTH FABRIC SHALL BE HES OF THE FABRIC SHALL BE EXTENDED INTO

I FILTER CLOTH MAY BE USED. POST FOR THIS JM OF 10-FEET APART (SEE PLATE 3.05-1).

O EXISTING TREES.