

- CONSTRUCTION SPECIFICATIONS**
1. THE INLET PIPE SHALL HAVE A SLOPE OF 3% OR STEEPER.
 2. THE TOP OF THE EARTH DIKE OVER THE INLET PIPE AND THOSE DIKES CARRYING WATER TO THE PIPE SHALL BE AT LEAST 1' HIGHER AT ALL POINTS THAN THE TOP OF THE INLET PIPE.
 3. THE INLET PIPE SHALL BE CORRUGATED METAL PIPE WITH WATERTIGHT CONNECTING BANDS.
 4. THE FLEXIBLE TUBING SHALL BE THE SAME DIAMETER AS THE INLET PIPE AND SHALL BE CONSTRUCTED OF A DURABLE MATERIAL WITH HOLD-DOWN GROMMETS SPACED AT 10' ON CENTER.
 5. THE FLEXIBLE TUBING SHALL BE SECURELY FASTENED TO THE CORRUGATED METAL PIPE WITH METAL STRAPPING OR WATERTIGHT CONNECTING COLLARS.
 6. THE FLEXIBLE TUBING SHALL BE SECURELY ANCHORED TO THE SLOPE BY STAKING AT THE GROMMETS PROVIDED.
 7. A RIPRAP APRON SHALL BE PROVIDED AT THE OUTLET. THIS SHALL CONSIST OF 6" DIAMETER STONE PLACED AS SHOWN.
 8. THE SOIL AROUND AND UNDER INLET PIPE AND ENTRANCE SECTION SHALL BE HAND TAMPED IN 4" LIFTS TO THE TOP OF EARTH DIKE.
 9. FOLLOW-UP INSPECTION AND ANY NEEDED MAINTENANCE SHALL BE PERFORMED AFTER EACH STORM AND AS REQUIRED BY PERMIT.
 10. DRAINAGE AREA MUST NOT EXCEED 5 ACRES.
 11. PIPE SLOPE DRAINS SHALL BE SIZED BASED ON DRAINAGE AREA PER THE TABLE ON THIS SHEET.

PIPE SLOPE DRAIN SIZING CRITERIA

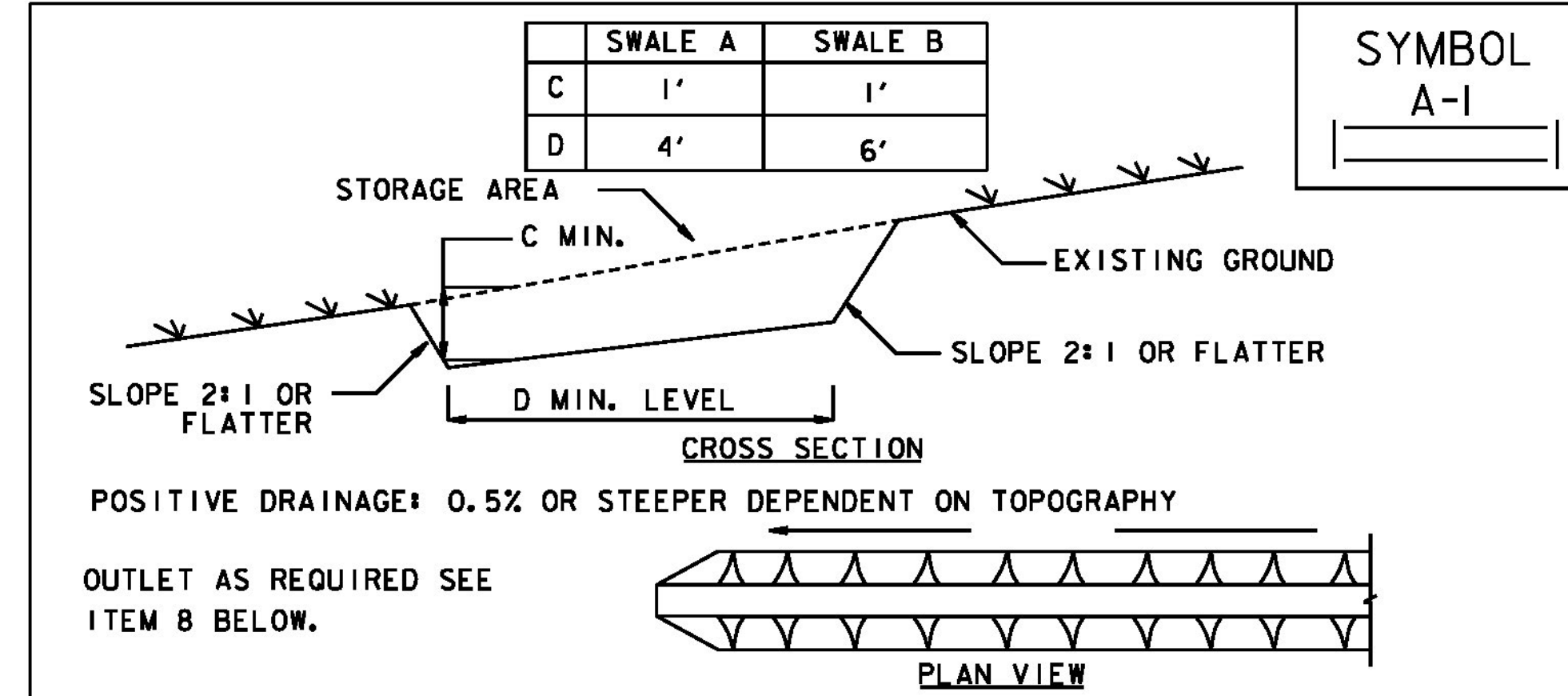
DRAINAGE AREA (ACRES)	DIAMETER (IN.)
0.5	12
1.5	18
2.5	21
3.5	24

ADAPTED FROM DETAILS PROVIDED BY:
NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

PIPE SLOPE DRAIN FLEXIBLE

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- " FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

THIS ITEM SHALL BE PAID FOR UNDER
900.620 - SPECIAL PROVISION (PIPE SLOPE DRAIN)



1. ALL TEMPORARY SWALES SHALL HAVE UNINTERRUPTED POSITIVE GRADE TO AN OUTLET.
2. DIVERTED RUNOFF FROM A DISTURBED AREA SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE.
3. DIVERTED RUNOFF FROM AN UNDISTURBED AREA SHALL OUTLET DIRECTLY INTO AN UNDISTURBED STABILIZED AREA AT NON-EROSIVE VELOCITY.
4. ALL TREES, BRUSH, STUMPS, OBSTRUCTIONS, AND OTHER OBJECTIONABLE MATERIAL SHALL BE REMOVED AND DISPOSED OF SO AS NOT TO INTERFERE WITH THE PROPER FUNCTIONING OF THE SWALE.
5. THE SWALE SHALL BE EXCAVATED OR SHAPED TO LINE, GRADE, AND CROSS SECTION AS REQUIRED TO MEET THE CRITERIA SPECIFIED HEREIN AND BE FREE OF BANK PROJECTIONS OR OTHER IRREGULARITIES WHICH WILL IMPEDE NORMAL FLOW.
6. FILLS SHALL BE COMPACTED BY EARTH MOVING EQUIPMENT.
7. ALL EARTH REMOVED AND NOT NEEDED FOR CONSTRUCTION SHALL BE PLACED SO THAT IT WILL NOT INTERFERE WITH THE FUNCTIONING OF THE SWALE.
8. STABILIZATION SHALL BE AS PER THE FLOW CHANNEL STABILIZATION CHART BELOW:

TYPE OF TREATMENT	CHANNEL GRADE	A (5 AC. OR LESS)		B (5 AC. - 10 AC.)	
		SEED AND STRAW MULCH	SEED AND COVER USING RECP	SEED AND STRAW MULCH	LINED WITH 4-8" RIP-RAP OR GEOTEXTILE
1	0.5%-3.0%	SEED AND STRAW MULCH	SEED AND COVER USING RECP	SEED AND STRAW MULCH	SEED AND COVER USING RECP
2	3.1%-5.0%	SEED AND STRAW MULCH	SEED AND COVER USING RECP	LINED WITH 4-8" RIP-RAP OR GEOTEXTILE	LINED WITH 4-8" RIP-RAP OR GEOTEXTILE
3	5.1%-8.0%	SEED AND COVER WITH RECP	LINED WITH 4-8" RIP-RAP	LINED WITH 4-8" RIP-RAP	LINED WITH 4-8" RIP-RAP
4	8.1%-20%	LINED WITH 4-8" RIP-RAP	ENGINEERED DESIGN	ENGINEERED DESIGN	ENGINEERED DESIGN

9. PERIODIC INSPECTION AND REQUIRED MAINTENANCE MUST BE PROVIDED AFTER EACH RAIN EVENT.

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TEMPORARY SWALE

- NOTES:
1. REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- " FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.
 2. TEMPORARY SWALES SHALL ONLY BE USED TO SAFELY CONVEY RUNOFF TO STABILIZED AREA AND AS DIRECTED BY THE RESIDENT ENGINEER. TEMPORARY SWALE PAY ITEM SHALL NOT BE USED IN LOCATIONS OF PERMANENT SWALES.
 3. THIS ITEM SHALL BE PAID FOR UNDER ITEM 900.640 SPECIAL PROVISION (TEMPORARY SWALE)

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