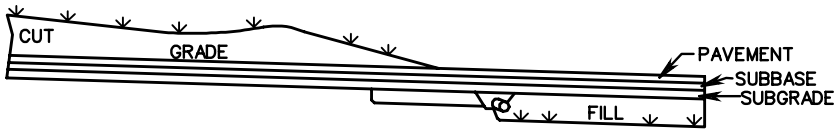
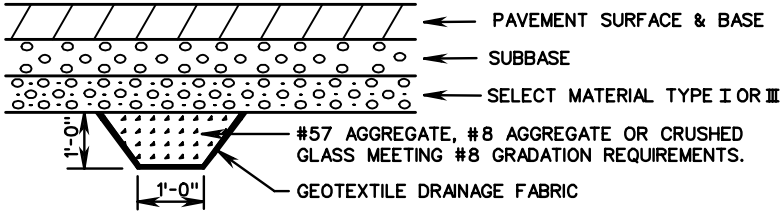
CD-1

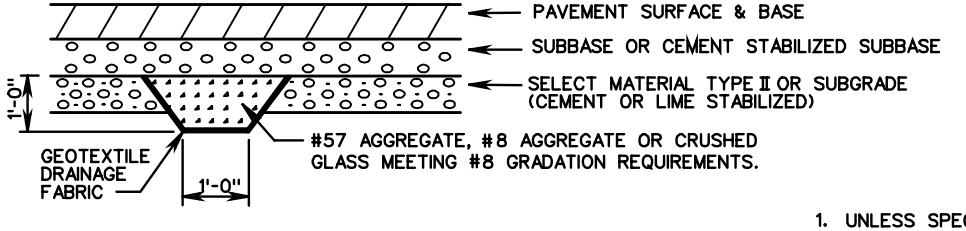


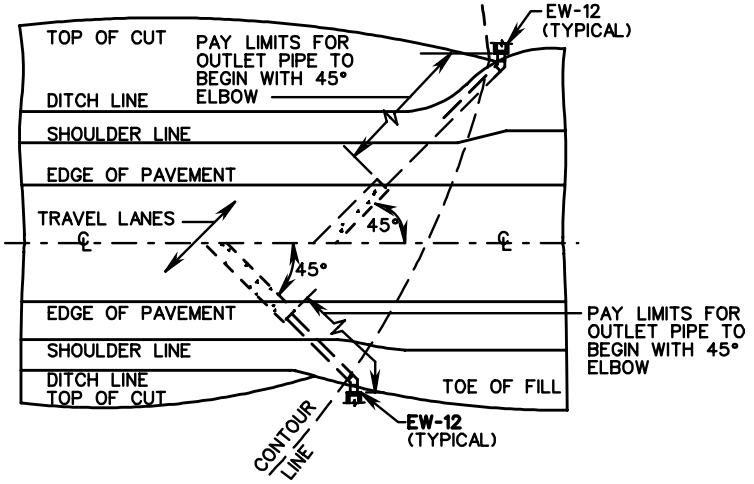
COMBINATION UNDERDRAIN CD-1 AT LOWER END OF CUTS
CENTER LINE SECTION
(WITH TYPE 1 SELECT MATERIAL)

TRENCH PLACEMENT



OR





PLAN VIEW
(PLACEMENT OF CD-1 COMBINATION UNDERDRAIN)

NON-PERFORATED OUTLET PIPE

TYPE OF PIPE	CRUSHING STRENGTH			
	✳W.T.	4" NOM. DIAMETER	✳W.T.	6" NOM. DIAMETER
SMOOTH WALL PVC	.103		0.153	
SMOOTH WALL PE		70 PSI ✳✳✳		70 PSI ✳✳✳

✳ WALL THICKNESS (MIN) - INCHES

✳✳✳ TESTED ACCORDING TO ASTM D-2412 AT 5% DEFLECTION.

GENERAL NOTES

1. UNLESS SPECIFICALLY INDICATED, COMBINATION UNDERDRAIN WILL NOT BE LOCATED AT THIS POINT WHEN BOTH SUBBASE AND SUBGRADE ARE STABILIZED.
2. TRENCH SHALL BE FILLED WITH AGGREGATE AND THROUGHLY HAND TAMPED TO INSURE COMPACTNESS.
3. OUTLET PIPE SHALL BEGIN AT THE EDGE OF THE TRAVEL LANE PAVEMENT AND SHALL BE PLACED ON A GRADE PARALLEL TO THE SHOULDER SLOPE 2% MIN. (3% DESIRABLE) GRADE.
4. ON CURB AND GUTTER SECTIONS, WHERE IT IS IMPOSSIBLE TO OTHERWISE PROVIDE OUTLETS FOR UNDERDRAINS, THEY ARE TO BE LOCATED SO AS TO DRAIN INTO DROP INLETS OR MANHOLES.
5. ON SUPERELEVATED SECTIONS, TRENCH IS TO BE UNDER ENTIRE PAVEMENT AREA WITH OUTLET PIPE ON LOW SIDE ONLY.
6. INVERT ELEVATION AT OUTLET END OF OUTLET PIPE TO BE A MINIMUM OF 1'-0" ABOVE INVERT ELEVATION OF RECEIVING DRAINAGE DITCH OR STRUCTURE.
7. ALL CONNECTIONS (ELBOWS, WYES, ETC.) WITHIN PAY LIMITS FOR OUTLET PIPE ARE TO BE OF THE SAME CRUSHING STRENGTH AS THE OUTLET PIPE.
8. OUTLET PIPE TO BE SECURELY CONNECTED TO EW-12 OR OTHER DRAINAGE STRUCTURE.

VDOT
ROAD AND BRIDGE STANDARDS

STANDARD COMBINATION UNDERDRAIN
(AT LOWER END OF CUTS)
VIRGINIA DEPARTMENT OF TRANSPORTATION

SHEET 1 OF 1	REVISION DATE
108.04	

SPECIFICATION REFERENCE
232
501
701