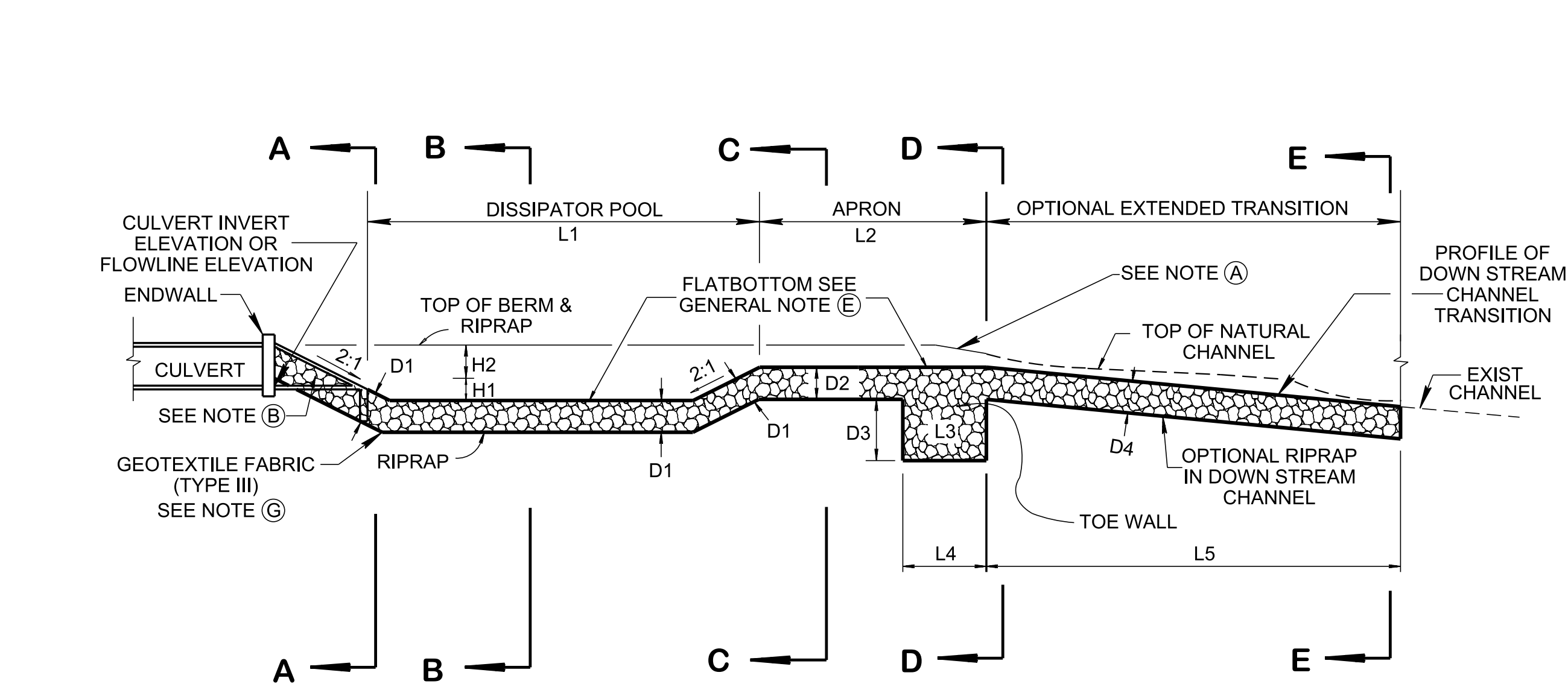
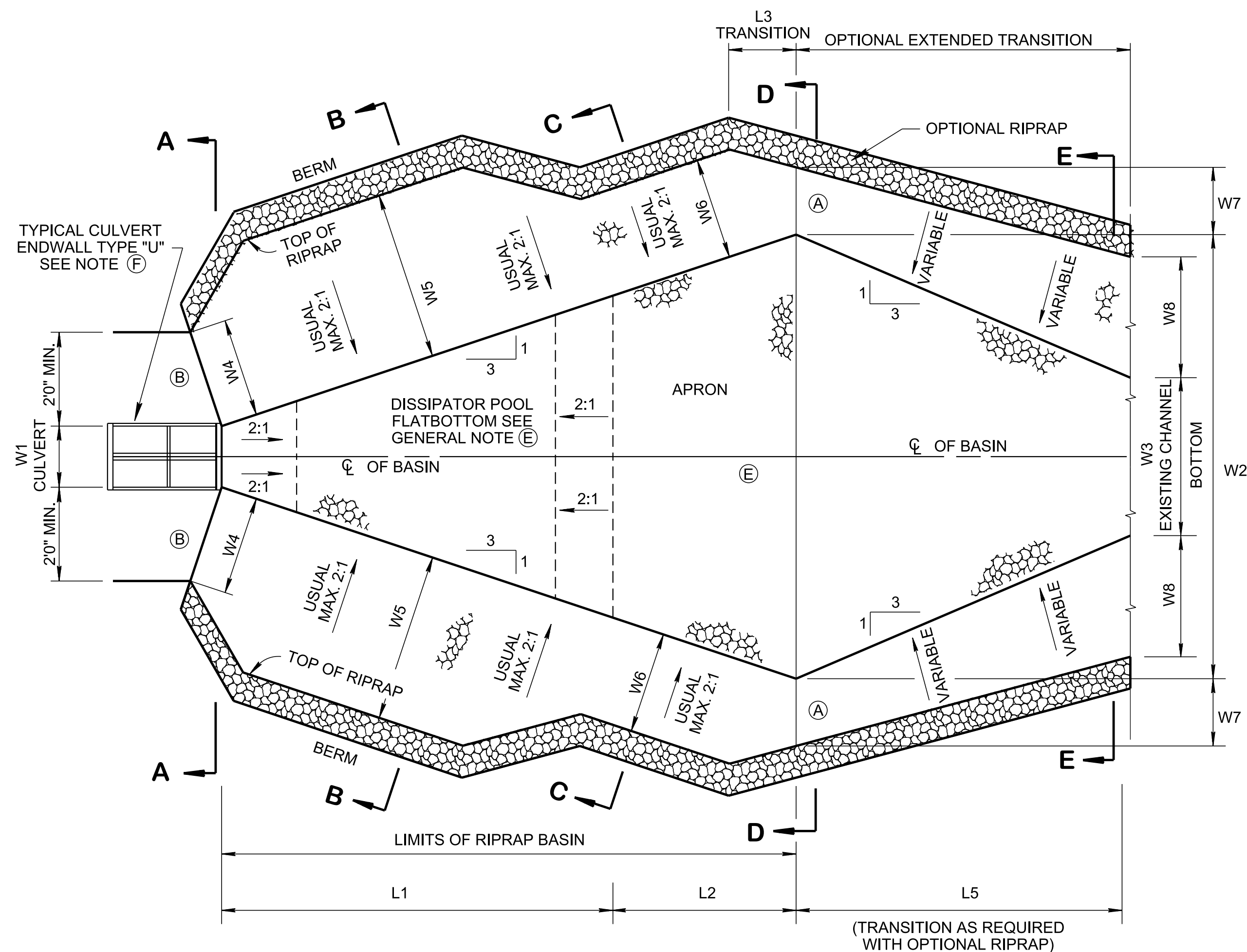


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ELEVATION VIEW



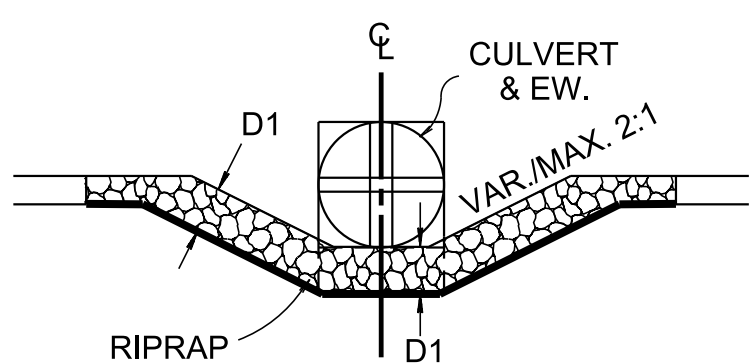
PLAN VIEW

NOTE TO DESIGNER
RIPRAP BASIN SHALL NOT BE PLACED IN PERENNIAL OR INTERMITTENT STREAMS UNLESS PERMITTED

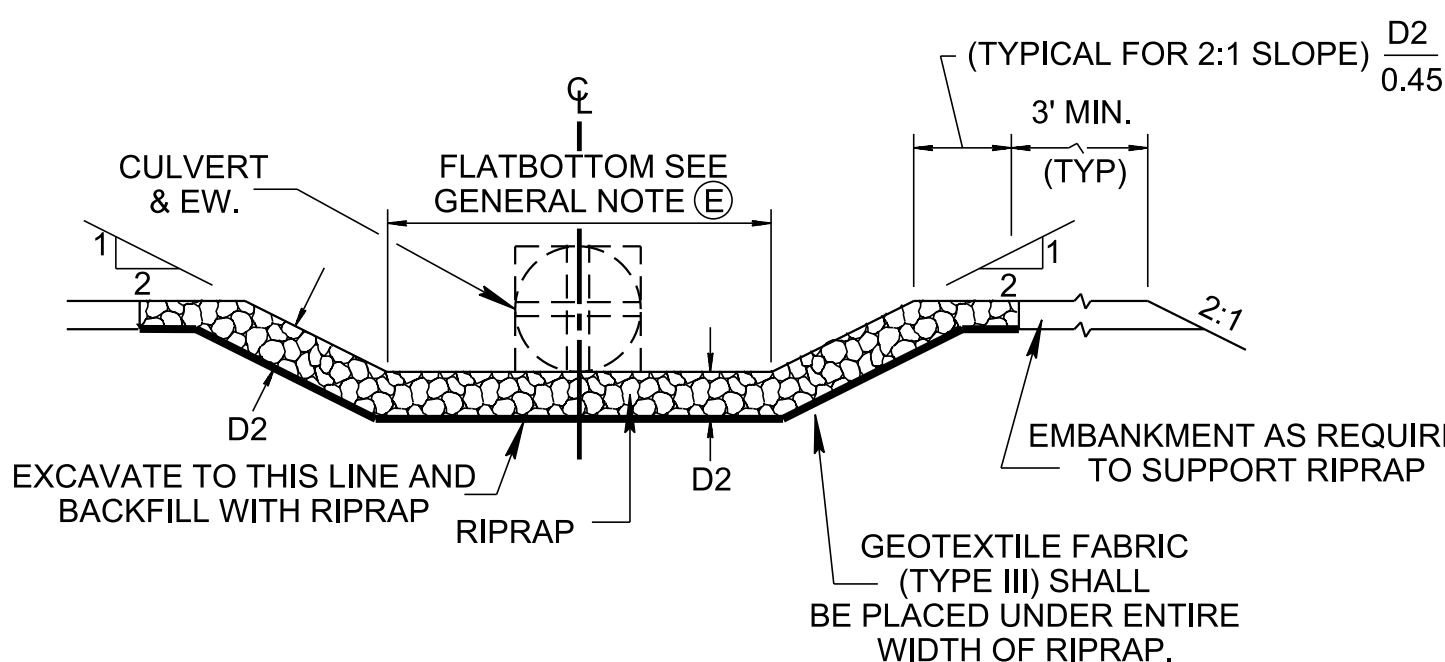
EROSION CONTROL PLAN LEGEND:



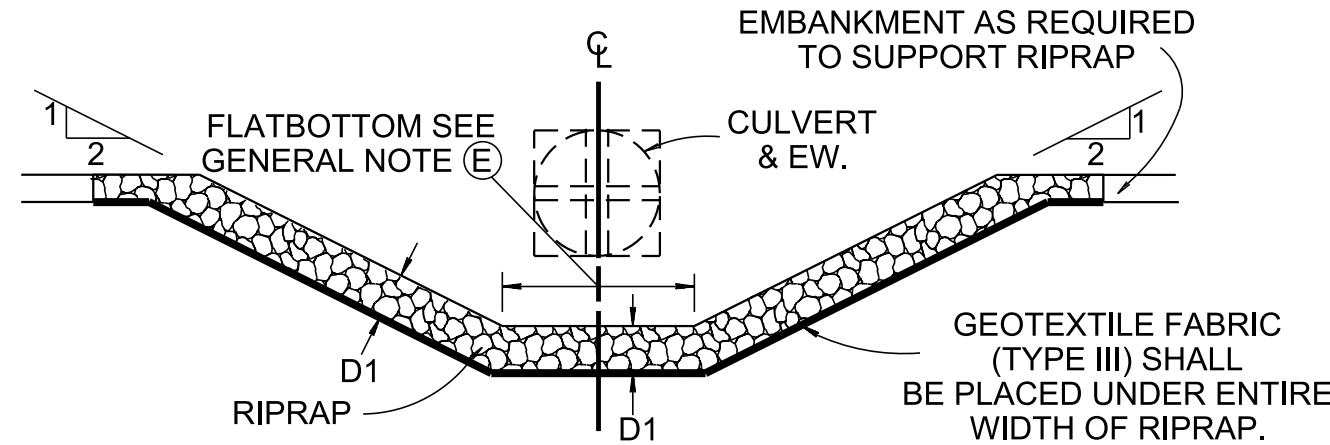
PERMANENT RIPRAP ENERGY DISSIPATOR



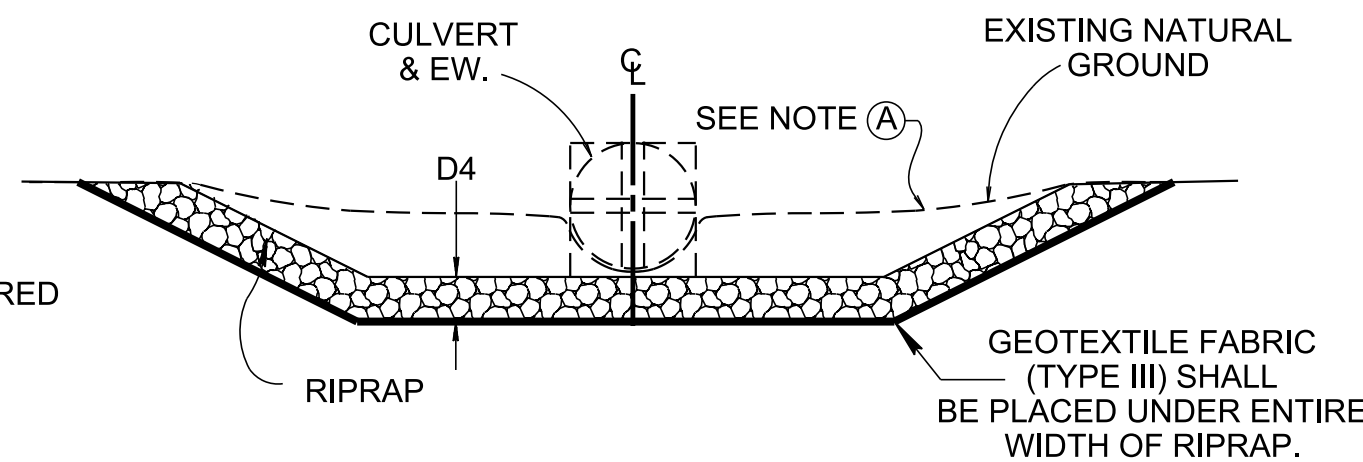
SECTION A - A



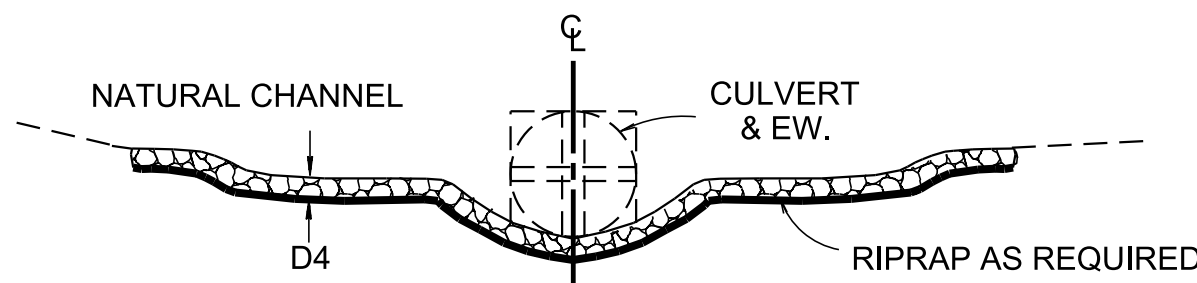
SECTION C - C



SECTION B - B



SECTION D - D



SECTION E - E

RIPRAP BASIN LOCATIONS, DIMENSIONS AND QUANTITIES																											
STATION	LOCATION		CULVERT OUTLET			BASIN DIMENSIONS (FT.)															RIPRAP DEPTHS (FT.)				GEOTEXTILE FABRIC (S.Y.)	RIP-RAP CLASS A-1 (TON)	RIP-RAP CLASS A-2 (TON)
	DISTANCE (FT.)	OFFSET	NO. OF BBLs.	SIZE	LENGTH (FT.)	W1	W2	W3	W4	W5	W6	W7	W8	H1	H2	L1	L2	L3	L4	L5	D1	D2	D3	D4			
		LT																									
TOTALS																											

NOTE: THE RIPRAP BASIN LOCATIONS, DIMENSIONS AND QUANTITIES TABLE SHOWN ABOVE SHALL BE REQUIRED FOR ALL ROADWAY PROJECTS THAT HAVE A RIPRAP BASIN ENERGY DISSIPATOR. THIS TABLE SHALL BE FILLED IN ACCORDINGLY AND PLACED ON A SECOND SHEET IN THE ROADWAY PLANS. THIS TABLE IS A PART OF THE "Estimated Roadway Quantities.xlsm" FILE, THAT IS REQUIRED FOR ALL TDOT DESIGN PROJECTS.

TABULATION TABLE

GENERAL NOTES

- (A) WARP BASIN TO CONFORM TO THE NATURAL CHANNEL. TOP OF RIPRAP IN FLOOR OF BASIN DISSIPATOR POOL OR APRON SHALL BE AT THE SAME OR LOWER ELEVATION THAN THE NATURAL CHANNEL BOTTOM SECTION D-D. MODIFY FLATBOTTOM WIDTH IF THE OPTIONAL EXTENDED TRANSITION IS REQUIRED.
- (B) MODIFY THE BASIN DIMENSIONS AS REQUIRED TO MATCH THE CONFIGURATION OF CULVERT END TREATMENTS.
- (C) REFER TO TDOT DESIGN DIVISION DRAINAGE MANUAL (CHAPTER 9) FOR HYDRAULIC DESIGN PROCEDURES OF ENERGY DISSIPATORS FOR CULVERT AND CHANNELS.
- (D) MODIFY DIMENSION W1 AS REQUIRED TO MATCH CULVERT WITH ENDWALL TYPE "A" (WITH OR WITHOUT CONCRETE PAVED APRONS OR OUTLETS).
- (E) DESIRABLE SLOPE IS 0.0 % IN DISSIPATOR POOL FLATBOTTOM AND IN APRON FLATBOTTOM.
- (F) THE ENDWALL SHOWN IN THIS DRAWING IS FOR ILLUSTRATIVE PURPOSES ONLY. PERMANENT RIPRAP BASIN ENERGY DISSIPATOR MAY BE USED WITH ANY TYPE OF CULVERT ENDWALL.
- (G) GEOTEXTILE FABRIC (TYPE III) SHALL MEET REQUIREMENTS OF THE STANDARD SPECIFICATION FOR GEOTEXTILES AASHTO DESIGNATION M-288, EROSION CONTROL.
- (H) PERMANENT RIPRAP BASIN ENERGY DISSIPATORS SHALL BE PAID FOR UNDER THE FOLLOWING ITEM NUMBERS:
- | | | |
|------------|--|-------|
| 203-01, | ROAD & DRAINAGE EXCAVATION (UNCLASSIFIED), | C.Y., |
| 709-05.06, | MACHINED RIP-RAP (CLASS A-1), | TON, |
| 709-05.08, | MACHINED RIP-RAP (CLASS B), | TON, |
| 709-05.09, | MACHINED RIP-RAP (CLASS C), | TON, |
| 740-10.03, | GEOTEXTILE (TYPE III) (EROSION CONTROL), | S.Y. |
- PAYMENT SHALL INCLUDE ALL MATERIALS AND LABOR NECESSARY FOR CONSTRUCTION AND MAINTENANCE OF PERMANENT RIPRAP BASIN ENERGY DISSIPATORS.

REV. 12-18-95: CHANGED DRAWING NO. FROM ESC-STR-21 TO EC-STR-21.

REV. 5-27-01: CHANGED DESCRIPTION OF ITEM NOS. 709-05.06 AND 709-05.07. CHANGED DRAWING NAME.

REV. 4-1-08: MISC. EDITS TO DRAWING, TABLE, AND NOTES.

REV. 8-1-12: MINOR EDITS TO DRAWING AND GENERAL NOTES.

REV. 05-04-22: NOTE TO DESIGNER NOTE WAS ADDED. THE RIPRAP BASIN LOCATIONS DIMENSIONS AND QUANTITIES TABLE WERE UPDATED AND NOTE ADDED. REDREW SHEET.

APPROVED BY FHWA
(ALL OTHERS APPROVED BY TDOT)

STATE OF TENNESSEE
STANDARD
DRAWING
DEPARTMENT OF TRANSPORTATION

PERMANENT
RIPRAP
BASIN
ENERGY
DISSIPATORS

10-26-1992

EC-STR-21