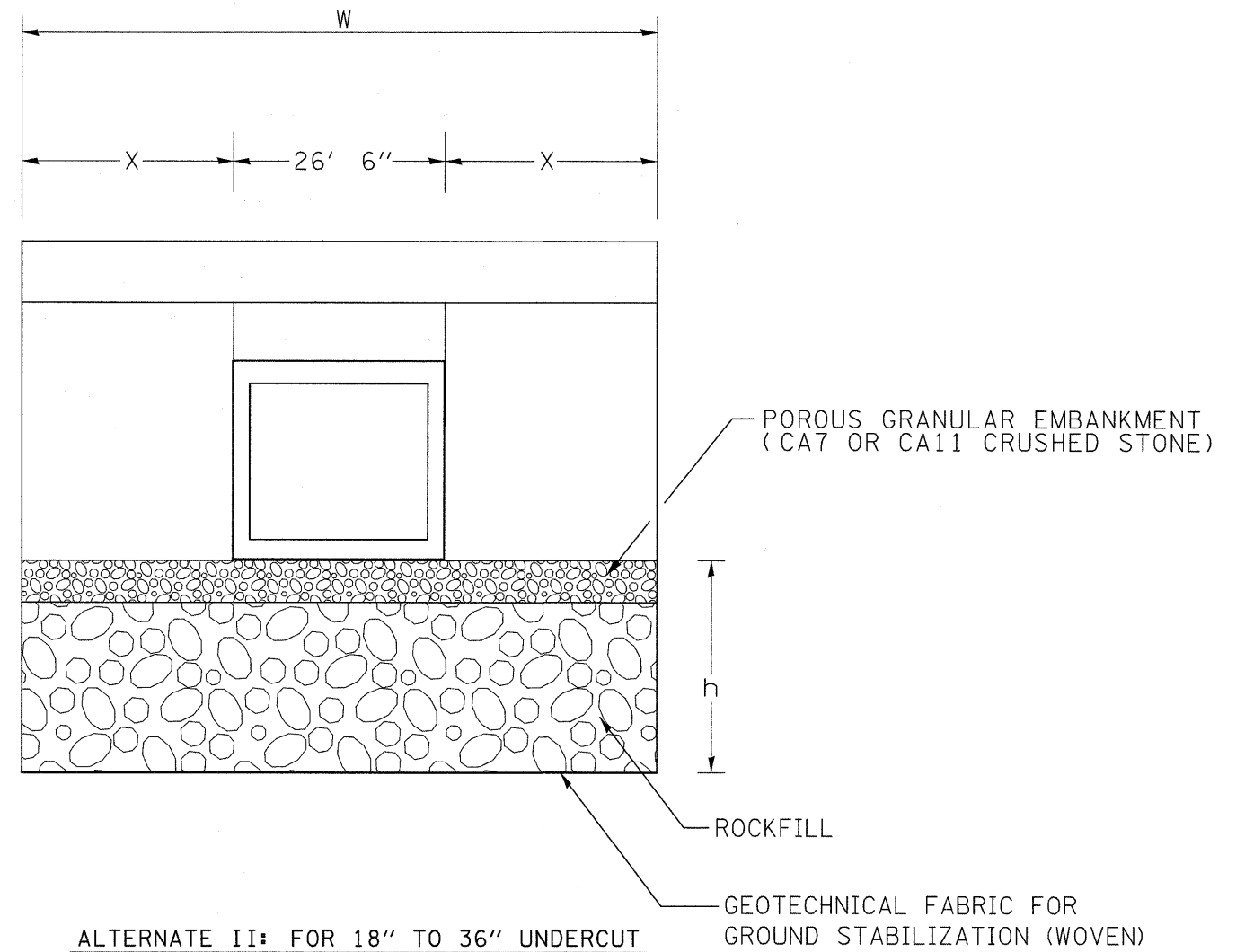


ALTERNATE I: FOR 12" TO 18" UNDERCUT



ALTERNATE II: FOR 18" TO 36" UNDERCUT

GENERAL NOTES:

1. Undercut any soil encountered below the box culvert to bedrock. At the Engineer's discretion, fill the undercut area(s) with:
  - a) Concrete per Article 502.05 of the Standard Specifications
  - b) Porous Granular Embankment and Rockfill as shown in Alternates I and II.
2. DEFINITIONS:
  - OD = Outside Diameter or outside width of box culvert
  - h = Depth of undercut (for precast box culverts, the upper 6" is included in the cost of culvert).
  - x = h or min. width specified in Sec. 542.04, which ever is greater for pipe culverts.
  - x = h or minimum 2 feet, which ever is greater for box culverts.
  - W = Width of undercut = 2x + OD
3. For undercuts greater than 36", use Alternate II with undercut treatments as directed by the District Geotechnical Engineer.

CULVERT LOCATION	UNDERCUT			
	DEPTH	WIDTH		
	h	x	OD	W
STA. 9+39	*			

\* TO BE DETERMINED DURING CONSTRUCTION. SEE NOTE 1.

All dimensions are in inches (millimeters) unless otherwise noted.