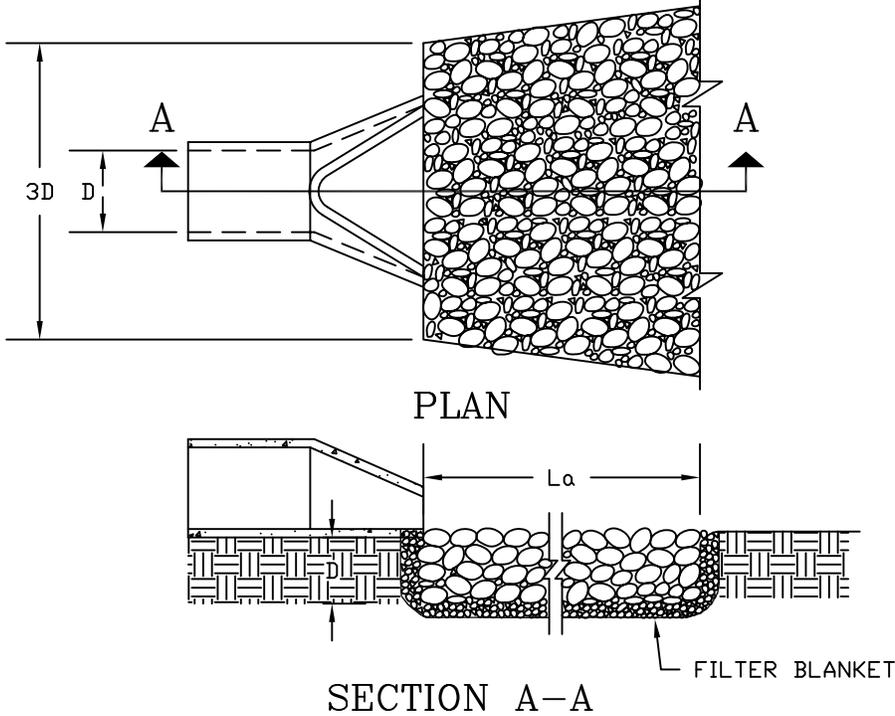
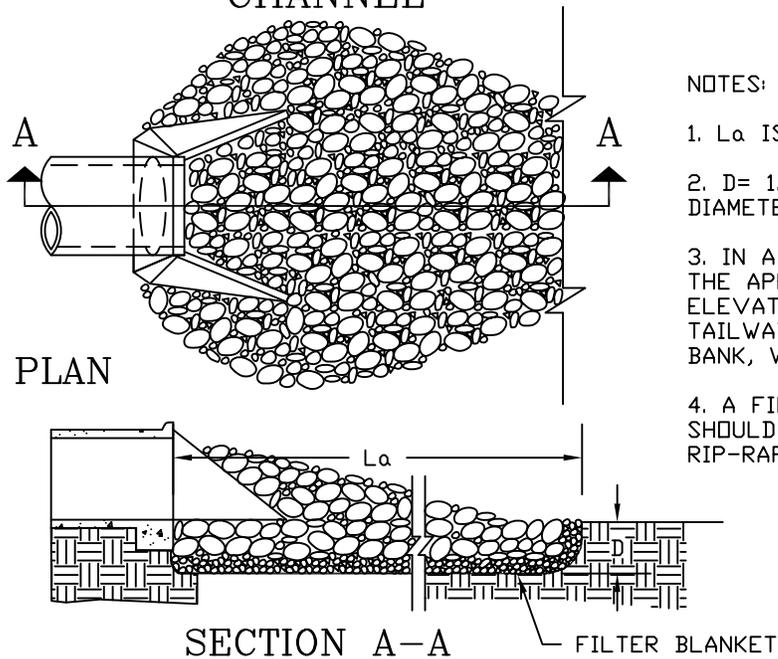


PIPE OUTLET TO FLAT AREA—  
NO WELL-DEFINED CHANNEL



PIPE OUTLET TO WELL-DEFINED  
CHANNEL



NOTES:

1.  $L_a$  IS THE LENGTH THE RIP-RAP APRON.
2.  $D = 1.5$  TIMES THE MAXIMUM STONE DIAMETER BUT NOT LESS THAN 6".
3. IN A WELL-DEFINED CHANNEL EXTEND THE APRON UP THE CHANNEL BANKS TO AN ELEVATION OF 6" ABOVE THE MAXIMUM TAILWATER DEPTH OR TO THE TOP OF THE BANK, WHICHEVER IS LESS.
4. A FILTER BLANKET OR FILTER FABRIC SHOULD BE INSTALLED BETWEEN THE RIP-RAP AND SOIL FOUNDATION.

STANDARD CONSTRUCTION  
DETAILS



RIP-RAP OUTLET PROTECTION

PLATE NUMBER:

E8

APPROVED:

*Henry D. ...*  
CITY ENGINEER

SCALE: N.T.S.

DATED: DECEMBER 1998