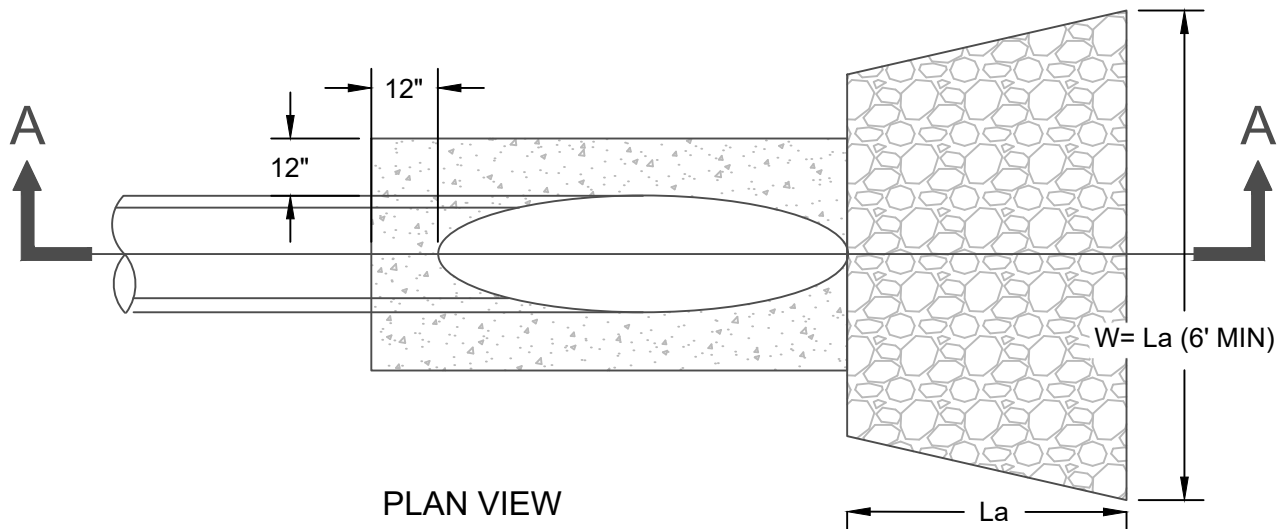


NOTES:

1. LAST 3 PIPE SEGMENTS, PIPE SLOPE = 0.5% OR LESS
2. SEE ACCOMPANYING SHEET 2 FOR ROCK RIP RAP SIZING CHART

SECTION A - A



RIP RAP APRON SIZING:

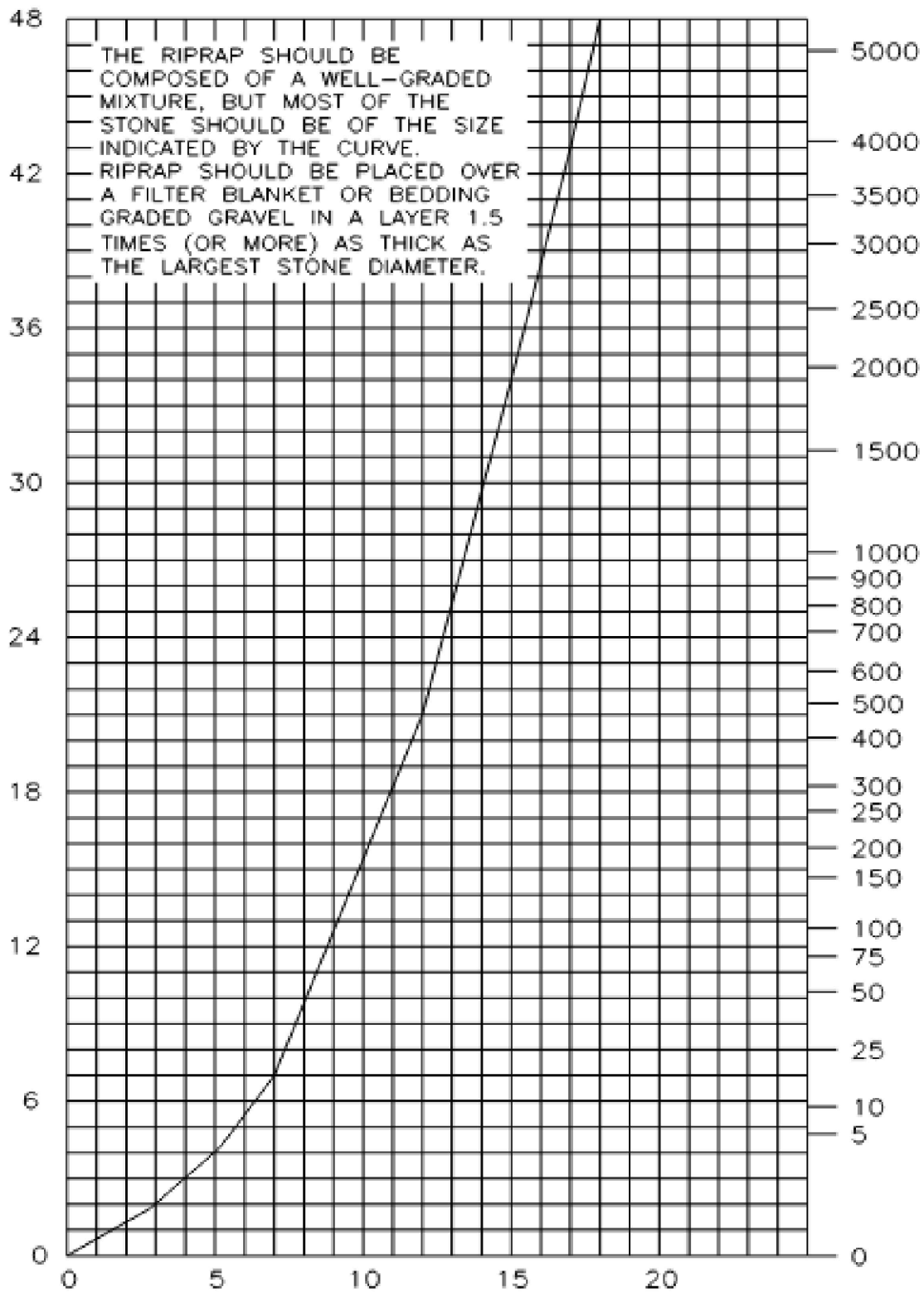
$$La = 0.5V * D$$

La = LENGTH OF RIP RAP APRON, FT
 V = CULVERT DISCHARGE VELOCITY, FT/S
 D = DIAMETER OR HEIGHT OF CULVERT, FT

* MIN. APRON LENGTH IS 6 FT

LOWER COLORADO RIVER AUTHORITY	DATE: 03-2023	SHEET: 1 OF 2
HEADWALL AND RIP RAP DETAIL		

STONE DIAMETER IN INCHES



WEIGHT OF SPHERICAL STONE IN POUNDS (•165 POUNDS PER CUBIC FOOT)

BOTTOM VELOCITY IN FEET PER SECOND

RIP RAP SIZE SELECTION

LOWER COLORADO RIVER AUTHORITY

HEADWALL AND RIP RAP DETAIL

DATE:
03-2023

SHEET:
2 OF 2