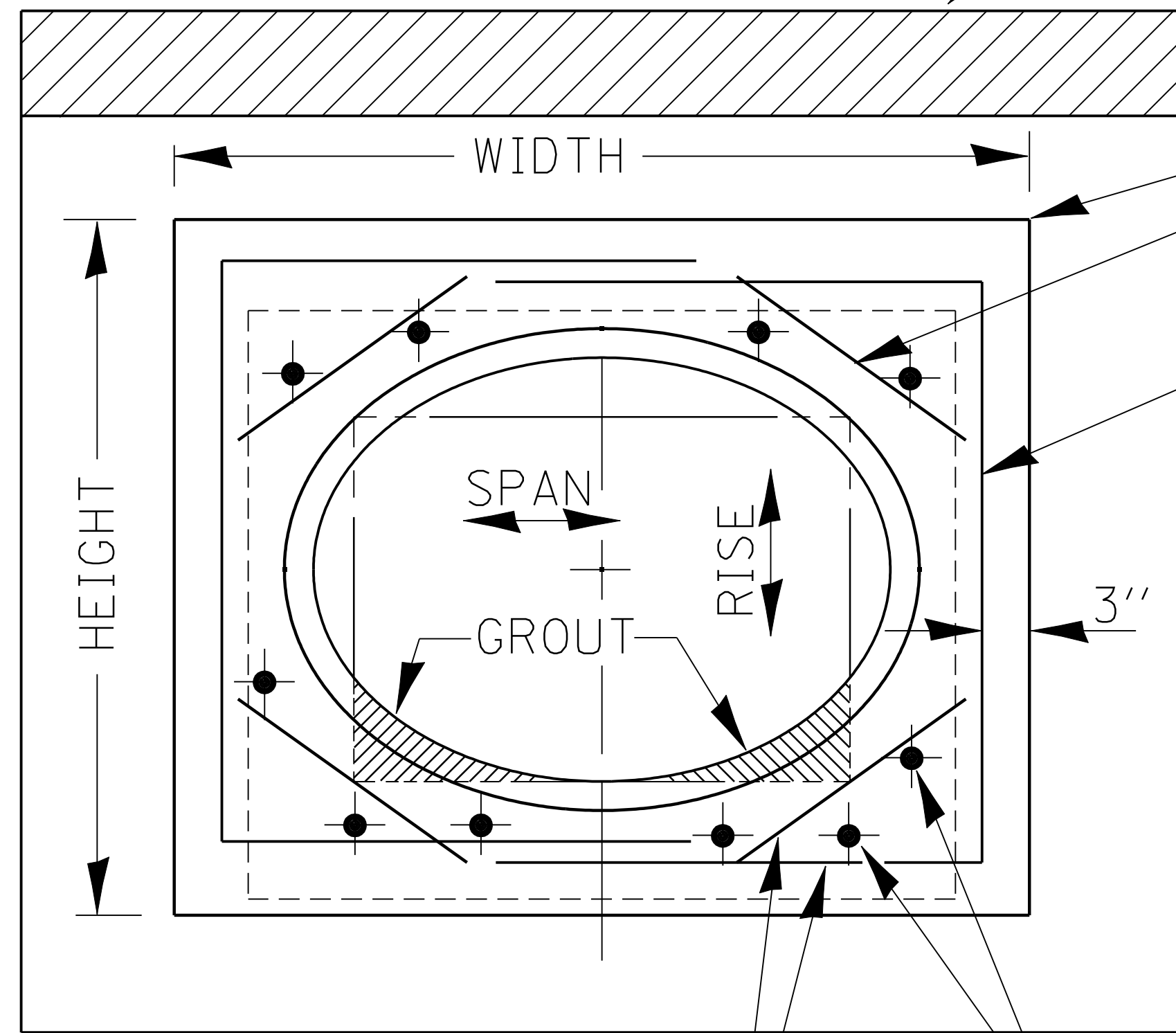


REMOVE EXISTING HEADWALL TO A DEPTH ±4"
BELOW EXISTING SHOULDER LINE IF REQUIRED.



EXTENSION COLLAR
CLASS SI CONCRETE

#4 A-BAR

#4 U-BAR

3/4" EXPANSION BOLTS
EQUALLY SPACED

2-#4 BARS
EACH LOCATION

Ø PIPE
PROP. PIPE
CULVERT

6"

6"

6"

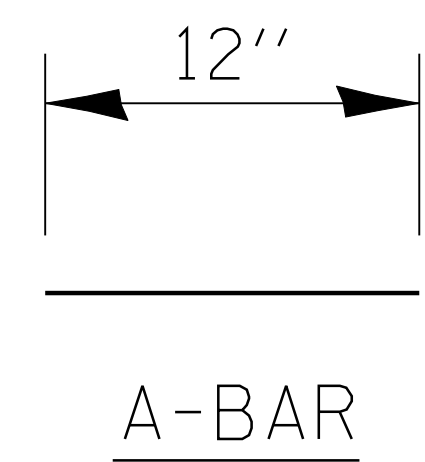
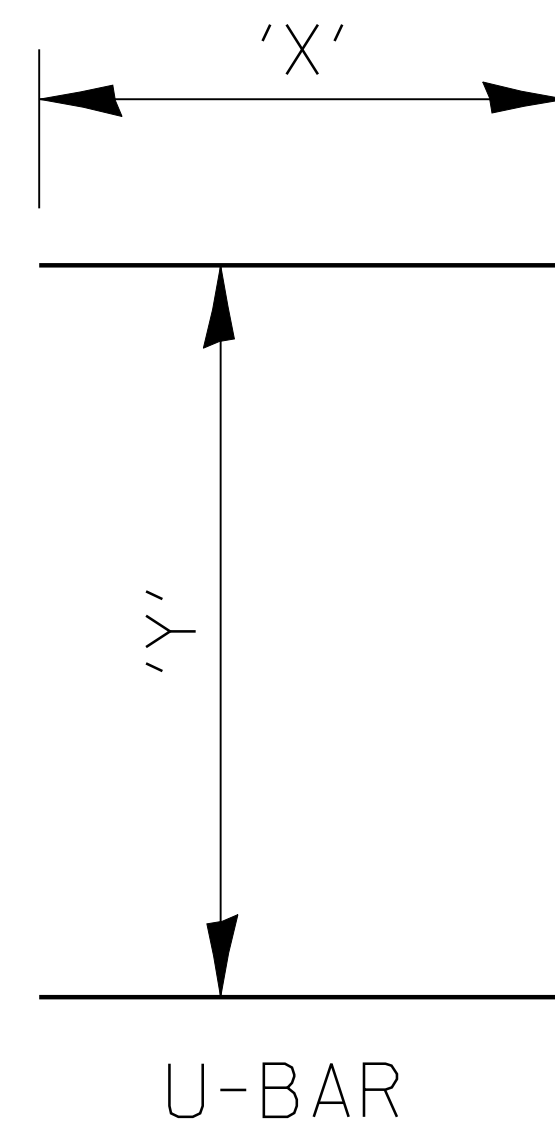
6"

12"

EXIST. HEADWALL

EXIST. BOX CULVERT

EXPANSION BOLTS SHALL CONSIST OF SELF DRILLING EXPANSION SHIELDS AND 3/4" DIA. HOOKED BOLTS. HOOKED BOLTS SHALL EXTEND A MINIMUM OF 9" INTO NEW CONCRETE. BOLTS SHALL BE DRILLED IN THE CENTER OF THE EXISTING BOX CULVERT BARREL WALLS. MINIMUM CERTIFIED PROOF LOAD = 4,080 LBS.



LOCATION	EXISTING CULVERT SIZE FT. x FT.	PIPE DIMENSION (ELLIPTICAL) IN.	EXTENSION COLLAR		A-BAR 305 IN.	U-BAR		CONC. COLLAR CU. YD.	REINFORCEMENT BARS POUND	3/4" EXPAN BOLTS EACH
			WIDTH IN.	HEIGHT IN.		'X' IN.	'Y' IN.			

COLLAR DETAIL (ELLIP. CMP EXTENSION OF BOX CULVERT)