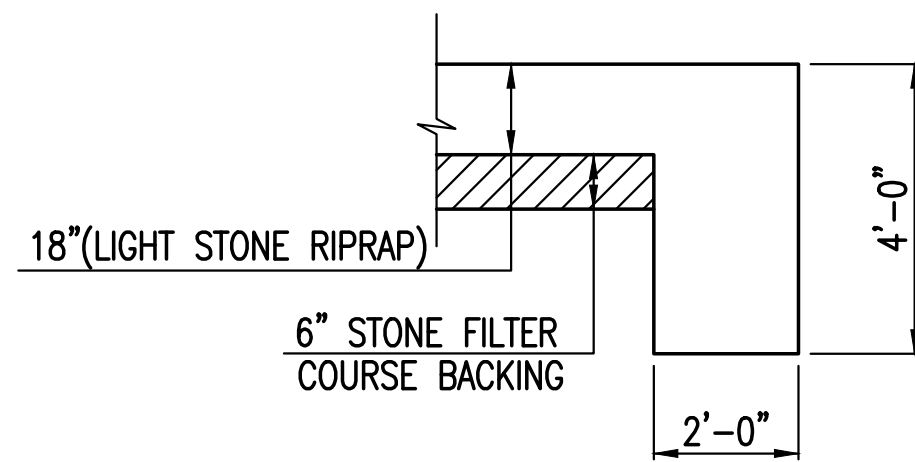


**HEAVY DUTY (H.D.) COUPLER**

NO SCALE

NOTES

1. BOLTS TO BE A-36 1 1/2" DIAMETER.
2. BOLTS, NUTS, WASHERS AND SLEEVES TO BE ZINC PLATED.
3. WASHERS TO BE 3 1/2" O.D. X 7 GAUGE.
4. SHIP WITH NUTS AND WASHERS PLACED ON BOLTS.

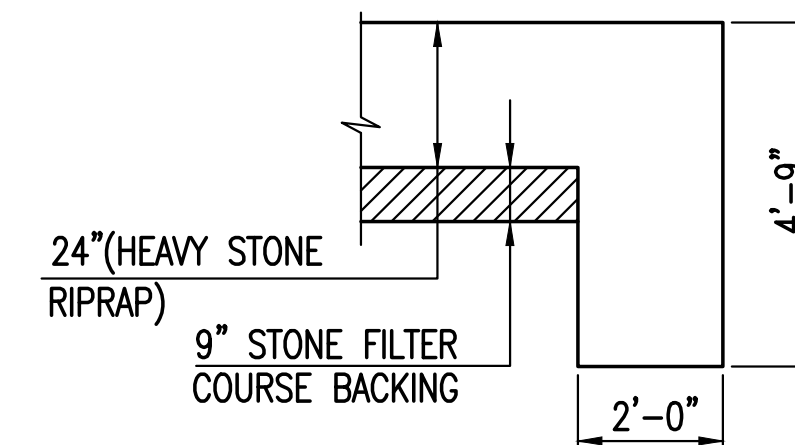


TYPICAL SECTION THRU TOEWALL  
NO SCALE

NOTES

1. ALL RIPRAP FOR THIS PROJECT SHALL BE NATURAL STONE. NEITHER BROKEN CONCRETE, FABRIC ENVELOPE, NOR PREMIXED DRY PACKAGED CONCRETE BAG ALTERNATES WILL BE ALLOWED, UNLESS INDICATED OTHERWISE.
2. TOEWALLS SHALL BE INSTALLED ALONG ALL UNPROTECTED EDGES OF STONE RIPRAP.
3. GROUTING OF THE SURFACE OF THE RIPRAP SHALL NOT BE PERFORMED, UNLESS INDICATED OTHERWISE. GROUTING OF THE TOEWALLS SHALL BE PERFORMED PER CITY SPECIFICATIONS.

**LIGHT STONE RIPRAP DETAILS**



TYPICAL SECTION THRU TOEWALL  
NO SCALE

NOTES

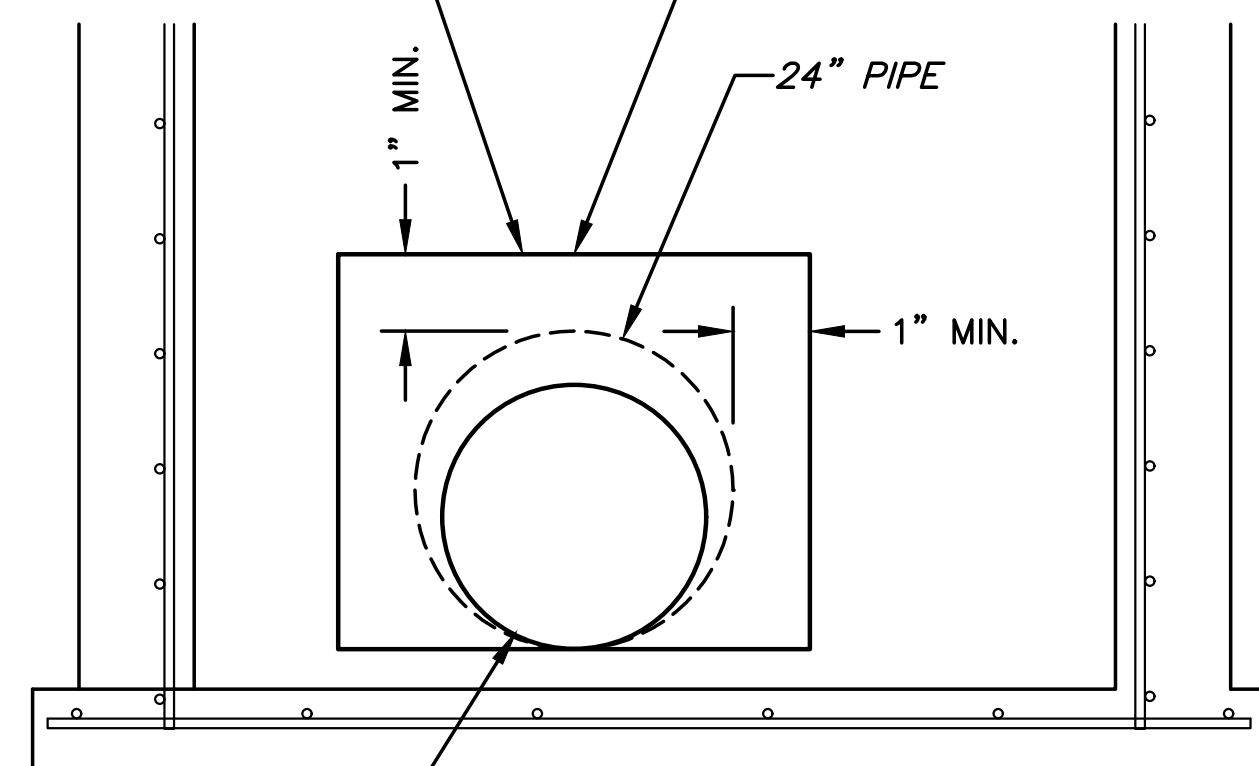
1. ALL RIPRAP FOR THIS PROJECT SHALL BE NATURAL STONE. NEITHER BROKEN CONCRETE, FABRIC ENVELOPE, NOR PREMIXED DRY PACKAGED CONCRETE BAG ALTERNATES WILL BE ALLOWED, UNLESS INDICATED OTHERWISE.
2. TOEWALLS SHALL BE INSTALLED ALONG ALL UNPROTECTED EDGES OF STONE RIPRAP.
3. GROUTING OF THE SURFACE OF THE RIPRAP SHALL NOT BE PERFORMED, UNLESS INDICATED OTHERWISE. GROUTING OF THE TOEWALLS SHALL BE PERFORMED PER CITY SPECIFICATIONS.

**HEAVY STONE RIPRAP DETAILS**

ORIFICE PLATE  
PLATE MUST OVERLAP OUTSIDE EDGE  
12" PIPE BY A MINIMUM OF 1"

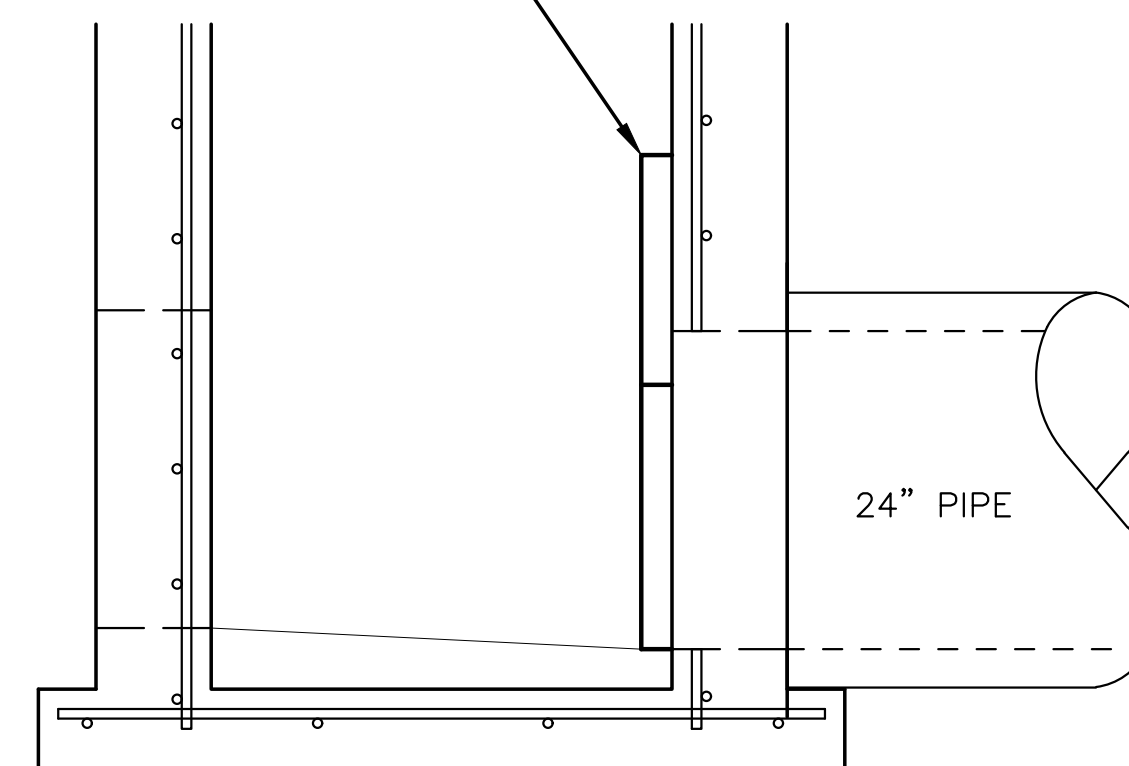
ORIFICE PLATE  
SUBSIDIARY TO SWS

ORIFICE PLATE TO BE  
1/4" A606 CORTEN STEEL  
BOLTED TO HEADWALL



20" ORIFICE

FRONT



24" PIPE

SECTION

**ORIFICE PLATE DETAILS**



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**MISC SWS  
DETAILS**

PROJECT NO.	170567	
DATE	01-10-18	
SCALE	#"=#'	
DESIGNED	DRAWN	CHECKED
ABC	ABC	ABC

NO.	REVISION	DATE