

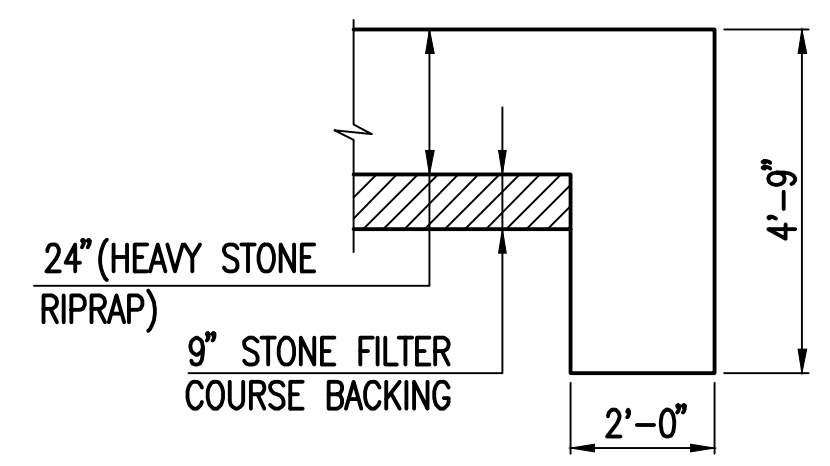
HEAVY DUTY (H.D.) COUPLER

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.

SIZE REQUIREMENTS FOR ROCK RIPRAP							
PERCENT HEAVIER THAN:							
	1/4 TON	250 LBS.	200 LBS.	180 LBS.	60 LBS.	10 LBS.	5 LBS.
HEAVY	0%		50%				90%
LIGHT		0%		5-15%	50-70%	85-100%	



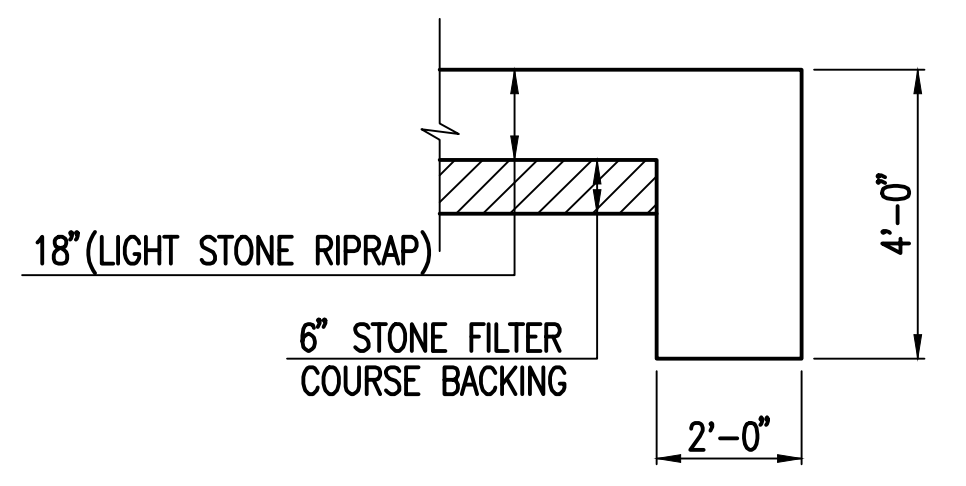
TYPICAL SECTION THRU TOEWALL

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



TYPICAL SECTION THRU TOEWALL


NO SCALE

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LIGHT STONE RIPRAP DETAILS

Sheet 01-28-2014 1:56:38 PM by BLS
 Proj. Name: 11-01-28-2014 1:26:47 PM
 City: 2013\13438\002\13438-002-24C-MISCELLANEOUS DETAILS-STORM SEWER

 <p>CITY OF WICHITA PUBLIC WORKS & UTILITIES ENGINEERING DIVISION</p>	MISCELLANEOUS DETAILS (STORM SEWER)		
	CITY ENGINEER GARY JANZEN, P.E.		
	PROJECT NUMBER	OCA NUMBER	DATE
	468-84634	751522	11/2010
CITY ENGINEER'S OFFICE CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202-1620 (316) 268-4501			DESIGN DRAWN SHEET 24 of 28