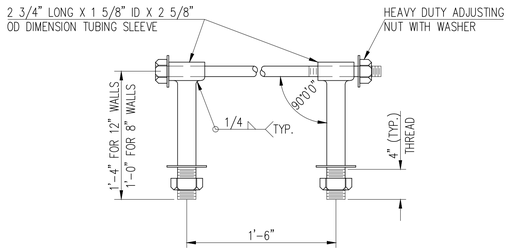
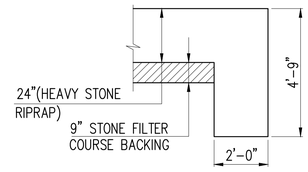


HEAVY DUTY (H.D.) COUPLER

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.



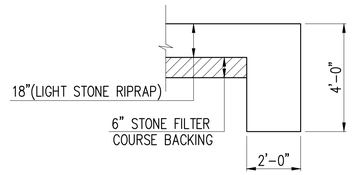
TYPICAL SECTION THRU TOEWALL

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.

HEAVY STONE RIPRAP DETAILS



TYPICAL SECTION THRU TOEWALL

NO SCALE

NOTES

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LIGHT STONE RIPRAP DETAILS

CITY OF WICHITA
PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

MISCELLANEOUS DETAILS (STORM SEWER)

CITY ENGINEER
GARY JANZEN, P.E.

PROJECT NUMBER	OCA NUMBER	DATE
		11/2010

CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202-1620
(316) 268-4501

SHEET

No.	Date	By	Approved	Revision

NORTHBOROUGH ADDITION
STREET AND DRAINAGE IMPROVEMENTS
Miscellneous Details
CITY OF WICHITA, KANSAS
GARY JANZEN, P.E. - CITY ENGINEER

POE & ASSOCIATES, INC.
CONSULTING ENGINEERS
5940 E. Central, Suite 200 ■ Wichita, KS 67208-4242
Phone 316/685-4114 ■ FAX 316/685-4444

TIMOTHY R. AUSTIN LICENSED 11496 KANSAS PROFESSIONAL ENGINEER 6/19/13

FINAL

Engineer: S. SERVIS
Designer: J. UNRUH
Dwg P:\843C\843C-ROAD-sheets
Date:6/19/2013