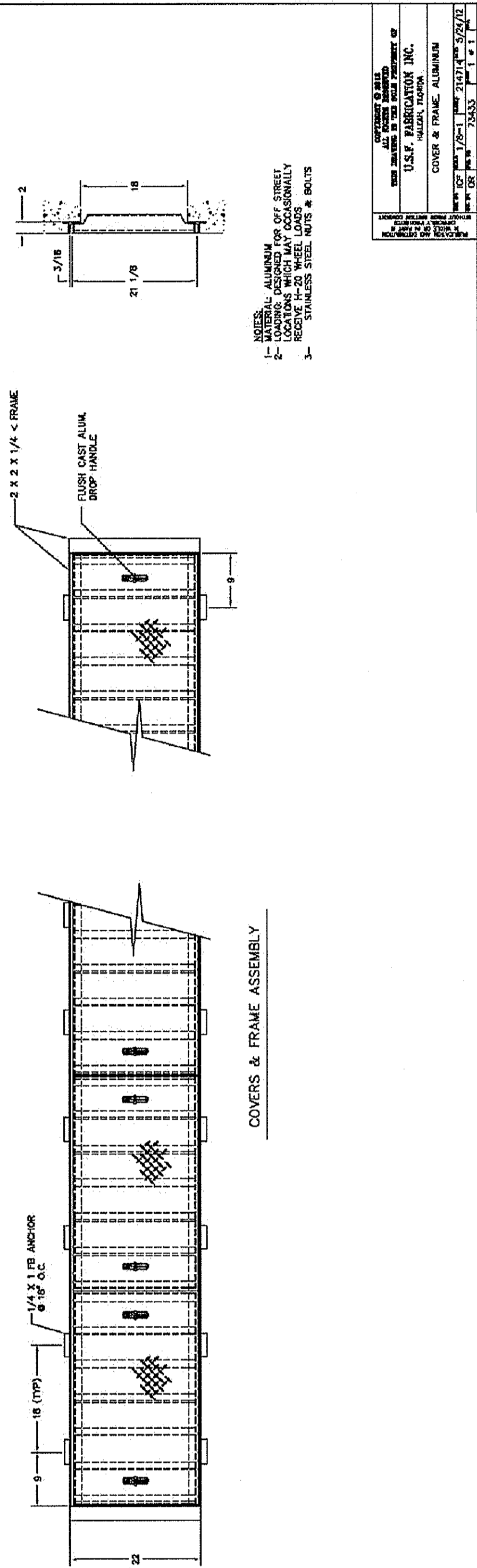
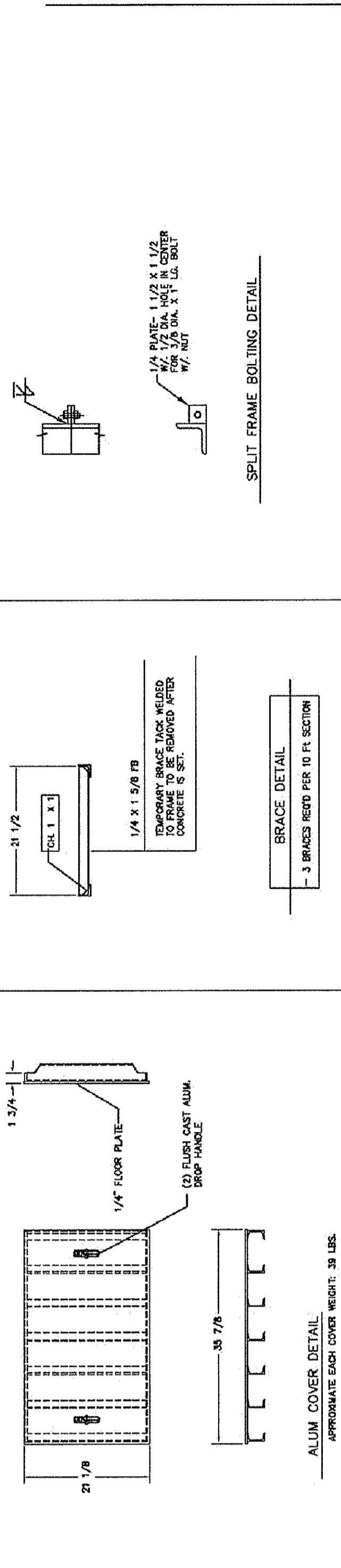
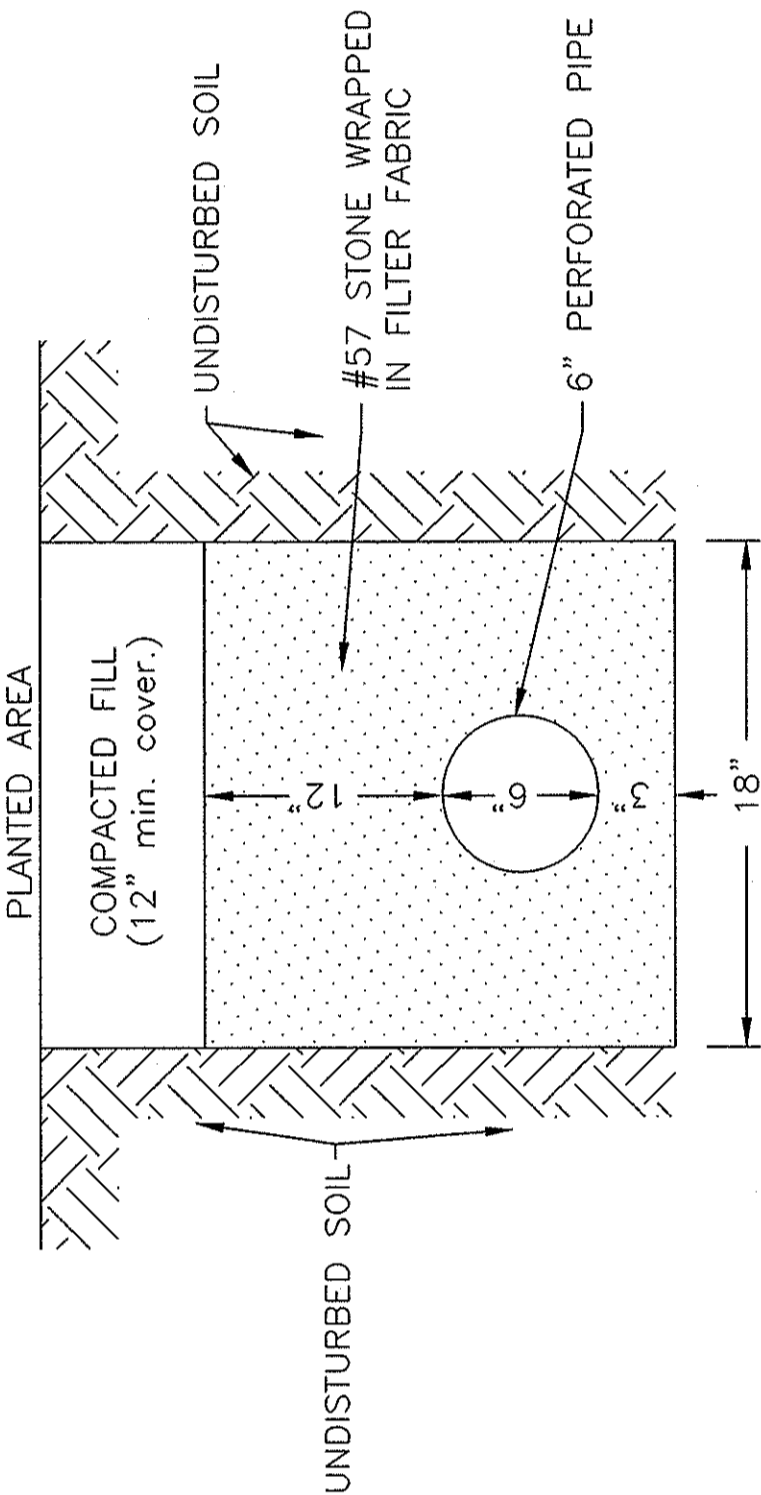


PROJECT TITLE:	WB STADIUM MISC. SITE IMPROVEMENTS
DATE:	6-14-2012
DRAWN BY:	DLH
CHECKED BY:	DKH
ORIG. BY:	
DATE:	
DESCRIPTION:	
BUILDING:	N/A
RSV:	



**COMMUNICATION TRENCH COVER DETAIL**

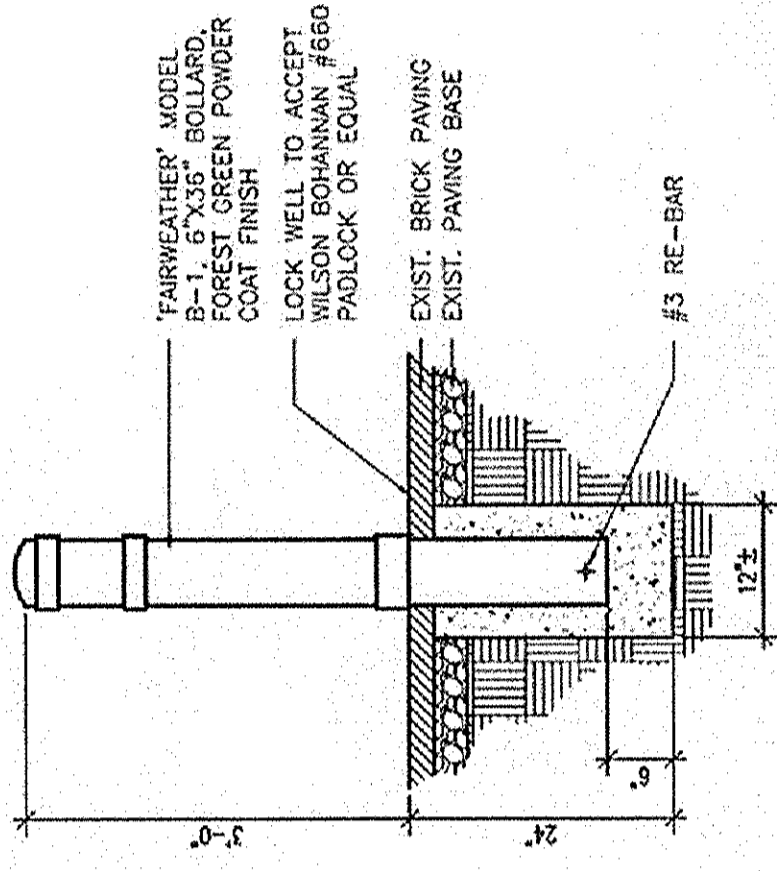


**INFILTRATION TRENCH DRAIN DETAIL**

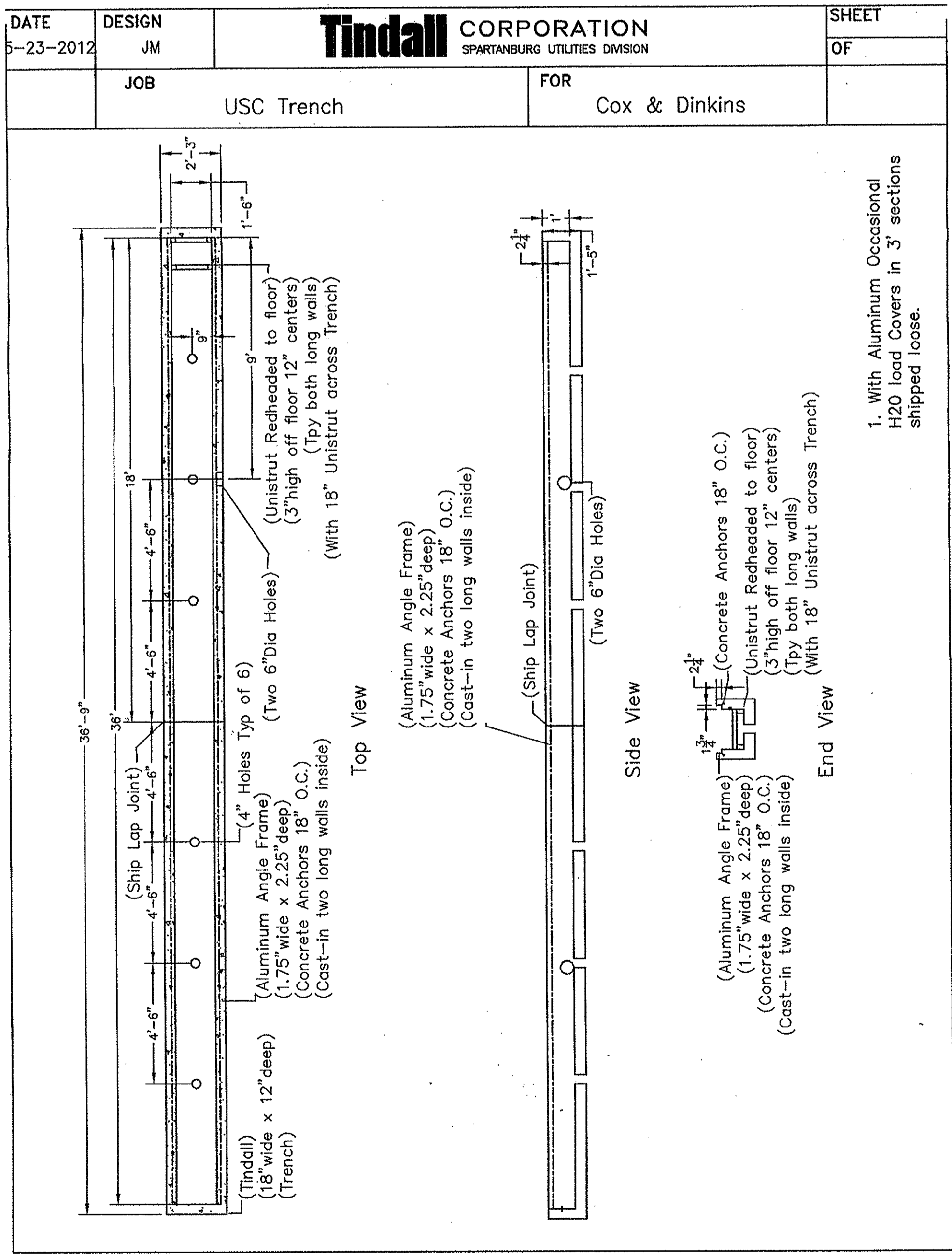
**MATERIAL**  
Bollard shall be fabricated with 3" schedule 10 steel pipe (3.578" OD), 2 each 2 inch and 1 each 3 inch schedule 80 decorative collar (6.62" OD) and a schedule 40 welded cap all fully welded and machine ground smooth. Steel shall conform to ASTM A53.  
In Ground Receivers, for removable bollard only, shall be fabricated with a 10 gauge steel sleeve welded to a 3" x 3" lockwell.

**PROTECTIVE COATINGS**  
Powder Coating: Following fabrication bollards shall be cleaned and treated with an iron phosphate process prior to the coating application. This process shall include a nonchromated alkaline cleaner and an iron phosphate treatment followed with an acidic sealer for maximum adhesion. The protective coatings shall be either polyester or polyester/TGIC powder. Following application the parts shall be baked until properly cured. The coating shall be a minimum of 4 mils thick on all surfaces.  
Hot Dip Galvanizing on Receivers: Following fabrication, the receivers shall be hot dip galvanized to standard ASTM A123, 3 to 4 mils thick.

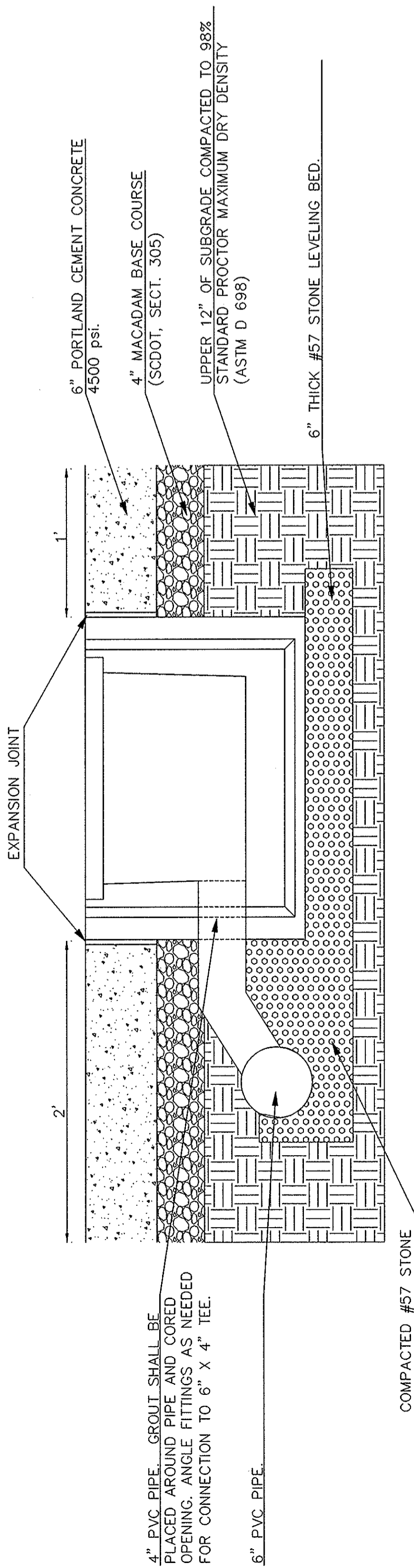
**WARRANTY**  
Manufacturer's warranty for products will be to be free from defects in material and/or workmanship for a period of three years from the date of invoice.



**BOLLARD DETAIL**

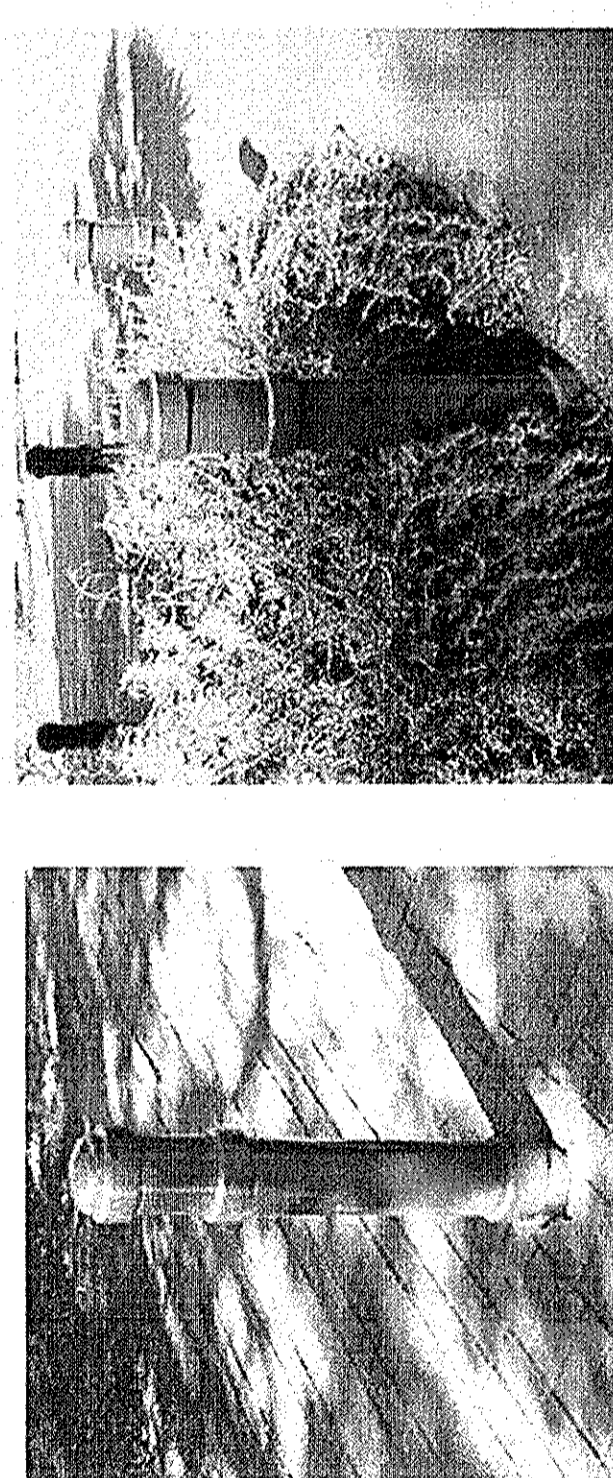


**COMMUNICATION TRENCH DETAIL**



**COMMUNICATION TRENCH CROSS SECTION DETAIL**

**BOLLARDS**



**Description**  
The campus standard bollard is a 6" diameter steel pipe with collars. Both direct burial and removable bollards are used. Color: Black or Forest Green.

**Standard**

The model and manufacturer used as the USC standards:

**B-1 Bollard**  
Fairweather Site Furnishings,  
Port Orchard, Washington, 1-800-323-1798

Bollards from other manufacturers must be of similar style and meet or exceed specified standards noted below.

Bollards may also be obtained via Work Order from USC Welding Shop.