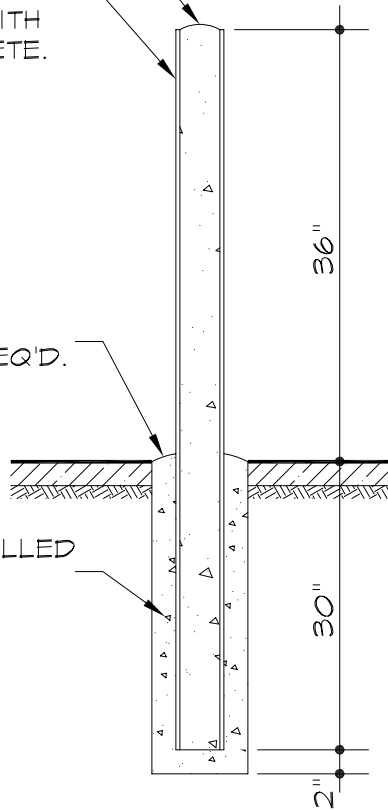


CONCRETE CAP  
 4" I.D. x 0.188" WALL  
 STEEL PIPE, 5'-6"  
 LONG FILLED WITH  
 20MPa CONCRETE.

CUT HOLE IN  
 CONCRETE OR  
 ASPHALT AS REQ'D.

8" DIA. HOLE FILLED  
 WITH 20MPa  
 CONCRETE.



CONCRETE FILLED  
STEEL BOLLARD  
 (SET-IN)

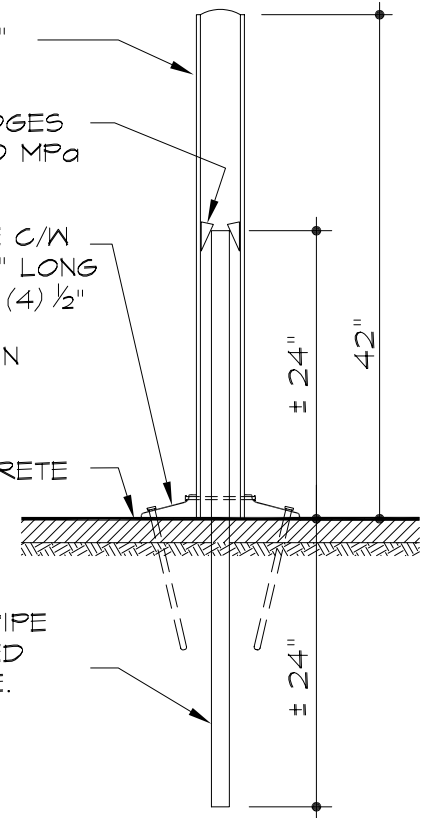
4" DIA. x 42"  
 STEEL POST

2 WOODEN WEDGES  
 FILLED WITH 20 MPa  
 CONCRETE.

8"x8"x<sup>3</sup>/<sub>8</sub>" BASE C/W  
 (4) 1/2" DIA. x 12" LONG  
 DRIFT PINS OR (4) 1/2"  
 DIA. x 3" LONG  
 ANCHORS SET IN  
 CONCRETE.

ASPHALT OR CONCRETE

1-1/2" DIA STD. PIPE  
 x 4' LONG PUSHED  
 INTO SUB-GRADE.



STEEL BOLLARD  
 (SURFACE)



CITY OF WINNIPEG  
 PLANNING, PROPERTY &  
 DEVELOPMENT DEPARTMENT  
 CIVIC ACCOMMODATIONS DIVISION  
 300-65 GARRY STREET R3C 4K4

PROJECT  
 CONCRETE REPAIRS

SHEET TITLE  
 DETAILS  
 BOLLARDS

DRAWN BY  
 RH/DTA

CHECKED BY  
 RC/DTA

APPROVED BY

DATE  
 1994.02/2005.05  
 eFILE  
 bollards.dwg

SCALE  
 N.T.S.  
 PROJECT  
 NO. N/A

SHEET NO.  
 D-1