NOTES:
1) REINFORCING STEEL - ASTM A-615, 5-420 MPa (MIN). EQUIVALENT INTERNATIONAL REINFORCING BARS ARE SHOWN IN PARENTHESES. THE SUBSTITUTION OF NON-ASTM BAR SIZES MUST BE APPROVED BY BIDDER PER THE REQUIREMENTS OF AECG CHAPTER 5.1, SECTION 6.3.3.4.
2) STEEL PIPE - ASTM A-53 GR. B-0, 87.6-205 MPa (MIN).
   OPTION 1: SCHEDULE 40 (28.4 mm WALL, THICK).
   OPTION 2: SCHEDULE 80 (15.08 mm WALL, THICK).
   USE PL 20.1 IN 2110 WITH OPTION 2.
3) STEEL PLATE - ASTM A-36, 25-205 MPa (MIN).
4) CONCRETE - f_c = 25 MPa @ 28 DAY (MIN) IN ACCORDANCE WITH ASTM C39, C39-C93 AND C447.
5) SOILS - ALL BACKFILL SHALL BE IN COMPLIANCE WITH THE REQUIREMENTS OF MS-30-2001, SECTION 5.1.2. IF THE MAXIMUM CAPACITY OF THE EXISTING SOIL IS NOT IN COMPLIANCE WITH THE REQUIREMENTS OF MS-30-2001, SECTION 5.1.2, THEN THE EXISTING SOIL SHALL BE REPLACED WITH SOIL MEETING THOSE REQUIREMENTS.
6) SUGGESTED CAGE TENSION SPACERS SHALL BE ALLOWED FOR SPACING OF HORIZONTAL BARS.
7) CROSSTEES: 0.75 (16) CROSSTEES 66 X 66 X 300 X 2000 X 2000 PER SIDE OF THE BOLLARD (SEE ELEVATION 1).
8) ALL DIMENSIONS WITH A DECIMAL ARE IN METERS, ALL DIMENSIONS WITHOUT A DECIMAL ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.

CROSSTEE DETAIL
N.T.S. (28 CROSSTEES PER BOLLARD)

#237 mm x 2123 mm
STILL PIPE (SEE NOTE 2)
PL 20.1 IN 2110 W/4 C & FILL, TOP AND BOTTOM SEE DETAIL PLAN B (SEE NOTE 2, USE WITH SCHEDULE 80 PIPE ONLY)
4-#10 (322) TOP 2 LAYERS
10-#8 (205) (TYP)
#8 (16) CROSSTEES W/ 90° HOOK AT ATTACK SIDE (SEE DETAIL D)
SOILS, FILL (SEE NOTE 1)
CONCRETE, FILL (SEE NOTE 4)
CONCRETE (SEE NOTE 4)
7-PARY #16 (16X) CROSSTIES @ 300 MM O.C., CLOSED F/V HOOK 75 CLEARANCE
75 CLEARANCE
FOOTING - TAMPERED, UNDISTURBED SIZE OR CEMENTED OR LEAN CONCRETE.
25 CLEARANCE
1200 (MIN)
1000
100
800
FOOTING - TAMPERED, UNDISTURBED SIZE OR CEMENTED OR LEAN CONCRETE.

SECTION - A
N.T.S.