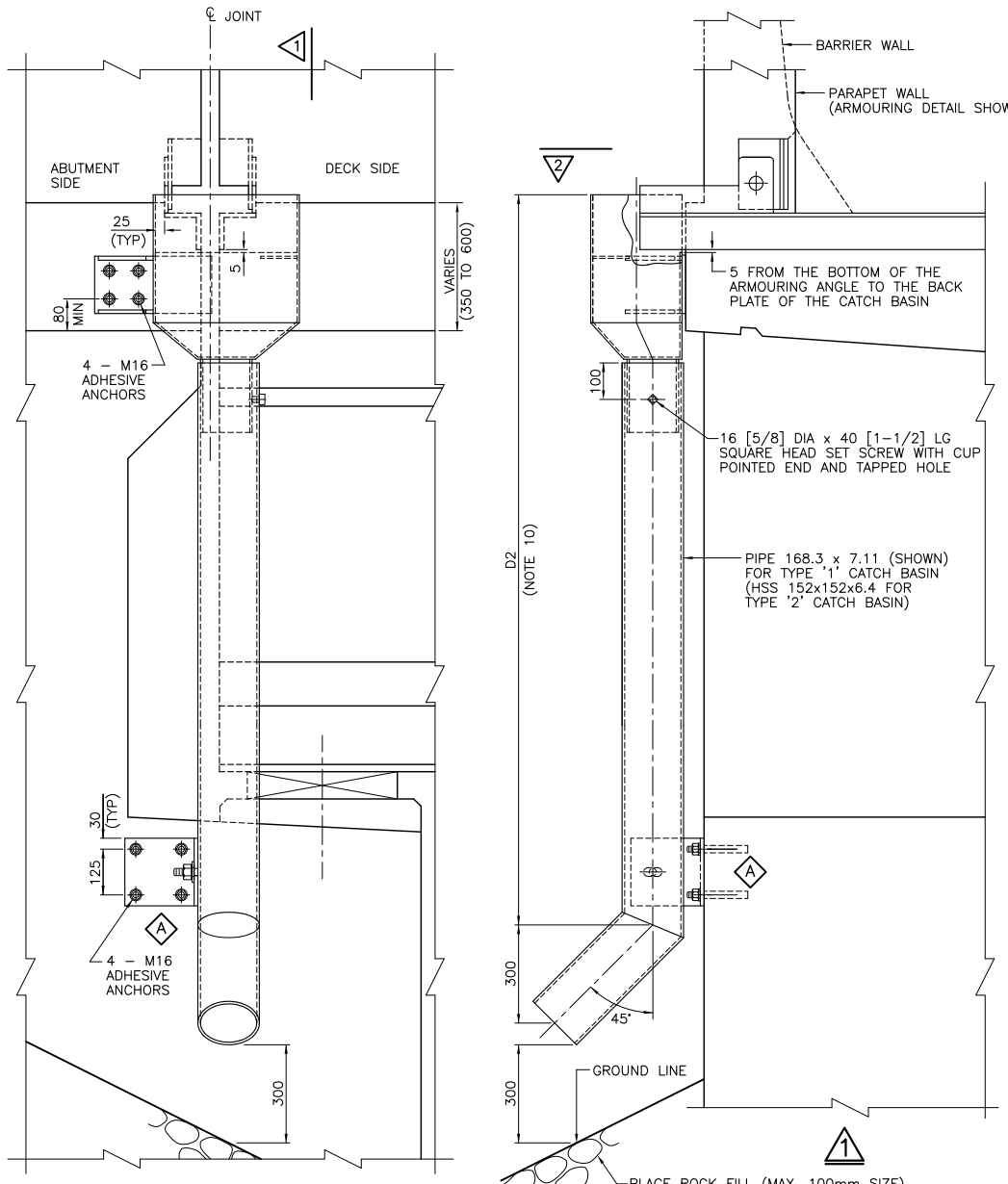
MINISTRY OF TRANSPORTATION, ONTARIO PR-D-707 88-05
DRAWING NAME: s113-14 July 2014.dwg MODIFIED: 2014/07/16 16:28:05
CREATED: 1998/03/13

METRIC
DIMENSIONS ARE IN METRES AND/OR MILLIMETRES UNLESS OTHERWISE SHOWN

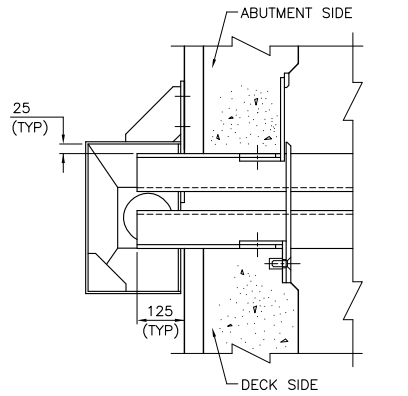
CONT No
WP No

SHEET

EXPANSION JOINT DRAINAGE SYSTEM
CATCH BASIN AND DOWNPIPE – DETAILS

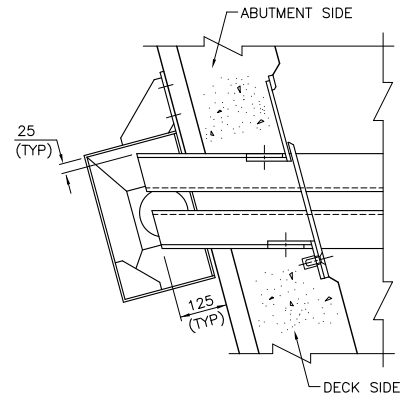


ELEVATION



SKEW ANGLE = 0°

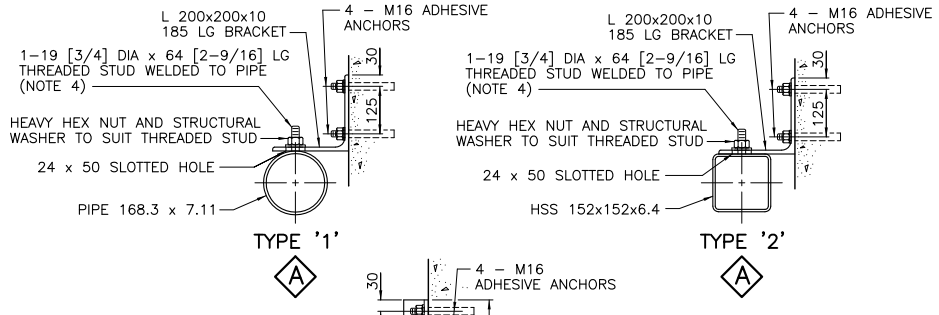
2

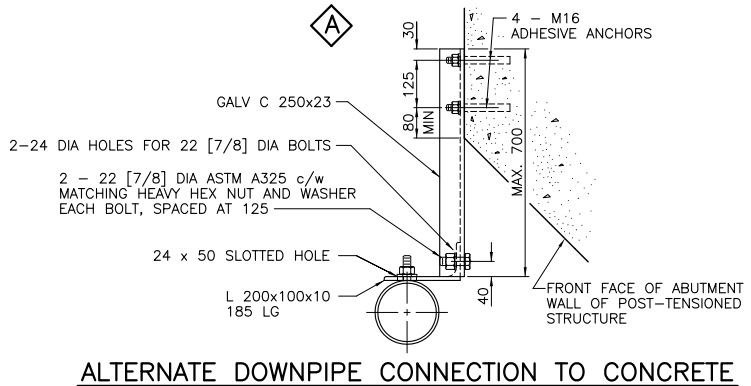


SKEW ANGLE > 0°

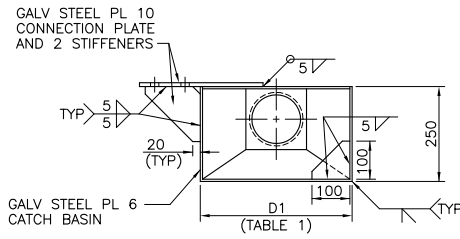
2

(PLOUGH GUARD AND CLAMPING BAR FOR TYPE "A" NOT SHOWN)

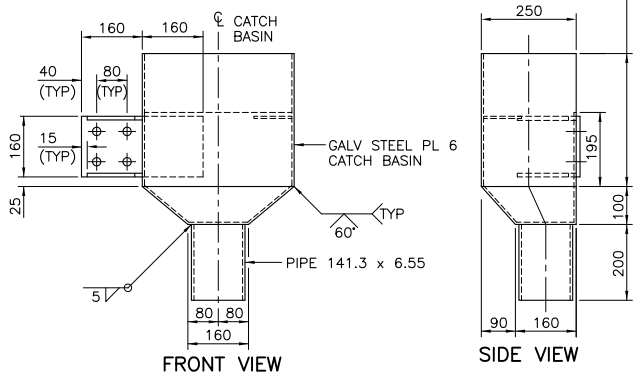




ALTERNATE DOWNPIPE CONNECTION TO CONCRETE



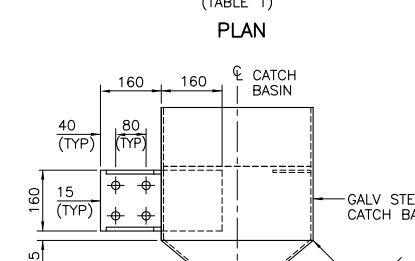
PLAN



FRONT VIEW

SIDE VIEW

CATCH BASIN (TYPE '1') AS SHOWN
CATCH BASIN (TYPE '1') OPPOSITE HAND



PLAN

FRONT VIEW

SIDE VIEW

CATCH BASIN (TYPE '2') AS SHOWN
CATCH BASIN (TYPE '2') OPPOSITE HAND

NOTES:

1. PIPE SHALL BE IN ACCORDANCE WITH ASTM A53 GRADE B.
2. HSS SHALL BE GRADE 350W. STEEL PLATE GRADE 350W MAY BE USED AS AN ALTERNATIVE TO HSS, PROVIDED THAT SECTIONS ARE FABRICATED USING FULL PENETRATION WELDS.
3. STEEL SHALL BE GRADE 300W UNLESS NOTED OTHERWISE.
4. THREADED STUDS SHALL BE IN ACCORDANCE WITH ASTM SPECIFICATION A10B AND CSA W59–13, USING FUSION WELD OR SHIELDED METAL ARC WELDING PROCESS.
5. ALL COMPONENTS, INCLUDING ALL CONNECTORS, SHALL BE HOT DIP GALVANIZED AFTER FABRICATION.
6. CATCH BASIN AND DOWNPIPE SHALL BE CONNECTED TO CONCRETE USING ADHESIVE ANCHORS. THEY SHALL BE EQUIVALENT TO ASTM A325M, SIZE M16, WITH A MINIMUM EMBEDMENTLENGTH OF 100mm.
7. ADHESIVE ANCHOR INSTALLATION TO BE DONE ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
8. DETAILS OF CATCH BASIN ARE APPROPRIATE AND THE SIZE ADEQUATE FOR BRIDGES WITH ANY SKEW.
9. THIS DRAWING TO BE READ IN CONJUCTION WITH DRAWING SS113–11 (FOR BARRIER WALLS) OR SS113–16 (FOR PARAPET WALLS), OR SS113–31 (FOR BARRIER WALLS) OR SS113–34 (FOR PARAPET WALLS).
10. FOR REHABILITATION CONTRACTS, DIMENSION D2 TO BE VERIFIED IN THE FIELD BY THE CONTRACTOR AND SHOWN ON THE SHOP DRAWINGS.
11. LEGEND: [ ] DENOTES FASTENER SIZE IN INCHES.

NOTES TO DESIGNER:

1. THIS DRAINAGE SYSTEM IS OPTIONAL AND SUBJECT TO THE APPROVAL OF THE REGIONAL STRUCTURAL SECTIONS.
2. THIS DRAWING, IN CONJUNCTION WITH DRAWINGS SS113–11 OR SS113–16 OR SS113–31 OR SS113–34, SHOULD ONLY BE USED WHEN THE FREEZING AND/OR PONDING OF WATER ON THE BRIDGE DECK IS A CONCERN. IT IS NOT TO BE USED IN AESTHETICALLY SENSITIVE LOCATIONS AND UNDERPASSES.
3. THE LENGTH OF CATCH BASIN REQUIRED, BASED ON THE SKEW OF THE BRIDGE AND THE TYPE OF EXPANSION JOINT, IS GIVEN IN TABLE 1.
4. THE DESIGNER SHALL COMPLETE TABLE 2 BASED ON TABLE 1 AND THE CONTOUR OF THE ABUTMENT BACKFILL.
5. FOR POST–TENSIONED STRUCTURES (WHICH DO NOT HAVE DECK DRAINS) CATCH BASIN(S) SHALL BE PROVIDED AT THE END(S) OF APPROACH SLABS TO RECEIVE WATER WHICH THE EXPANSION JOINT DRAINAGE SYSTEM CANNOT CONVEY.
6. THE 'NOTES TO DESIGNER' SHALL BE DELETED FROM THIS DRAWING PRIOR TO ISSUING OF CONTRACT.

TABLE 1

SKEW ANGLE	LENGTH OF CATCH BASIN, D1 (mm)	
	FOR STRIP SEAL	FOR SLIDING PLATE
0° TO 15°	400	450
15° TO 30°	500	550
30° TO 45°	600	650
>45°	700	750

TABLE 2

CATCH BASIN AND DOWNPIPE		
LOCATION	D1 (mm)	D2 (mm)

REFER TO 1.1.8 IN THE STRUCTURAL MANUAL FOR PROFESSIONAL ENGINEER STAMPING REQUIREMENTS.

DRAWING NOT TO BE SCALED
100mm ON ORIGINAL DRAWING

STANDARD DRAWING
JULY 2014

SS113–14

EXPANSION JOINT DRAINAGE SYSTEM
CATCH BASIN AND DOWNPIPE – DETAILS

REVISIONS

		DESCRIPTION			
DESIGN	CHK	CODE CHBDC–00	LOAD		DATE
DRAWN	CHK	SITE			DWG