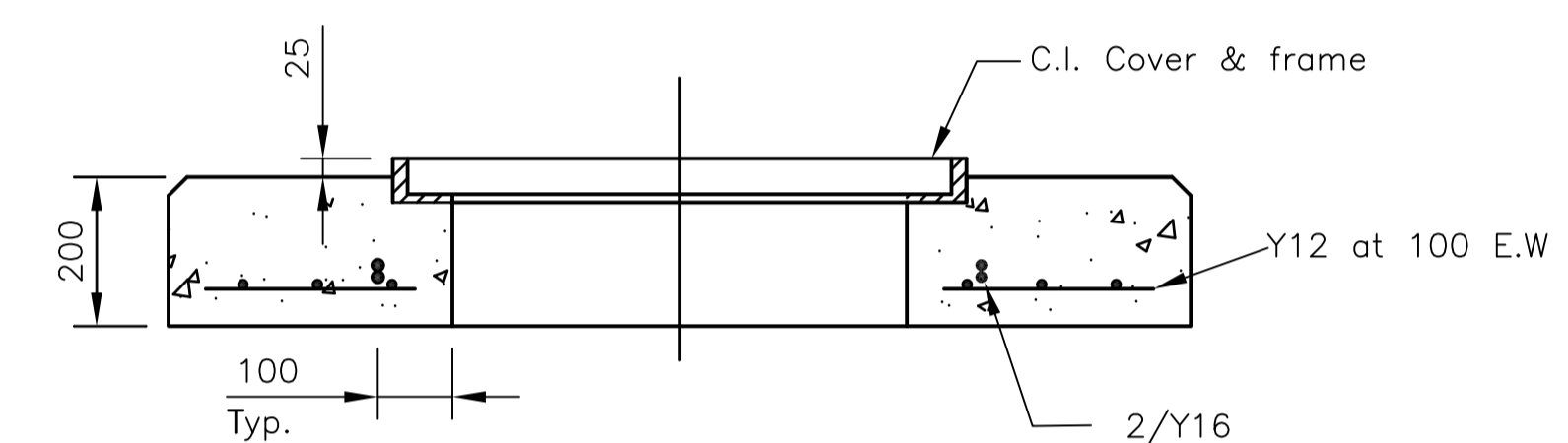
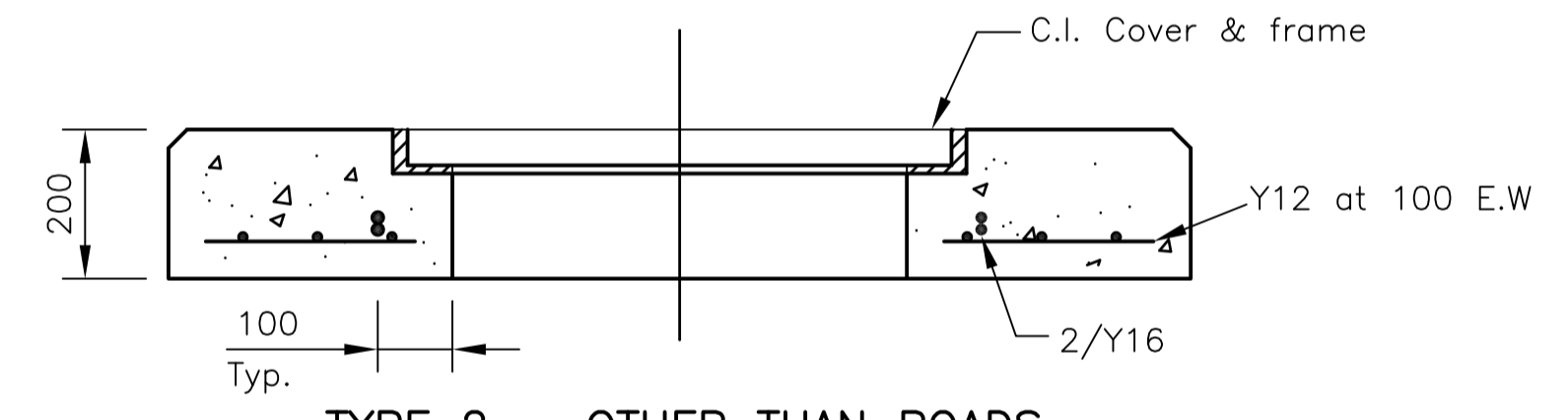


FIXING ARRANGEMENT FOR SURCHARGE CONDITIONS



TYPE 1 - ROADS

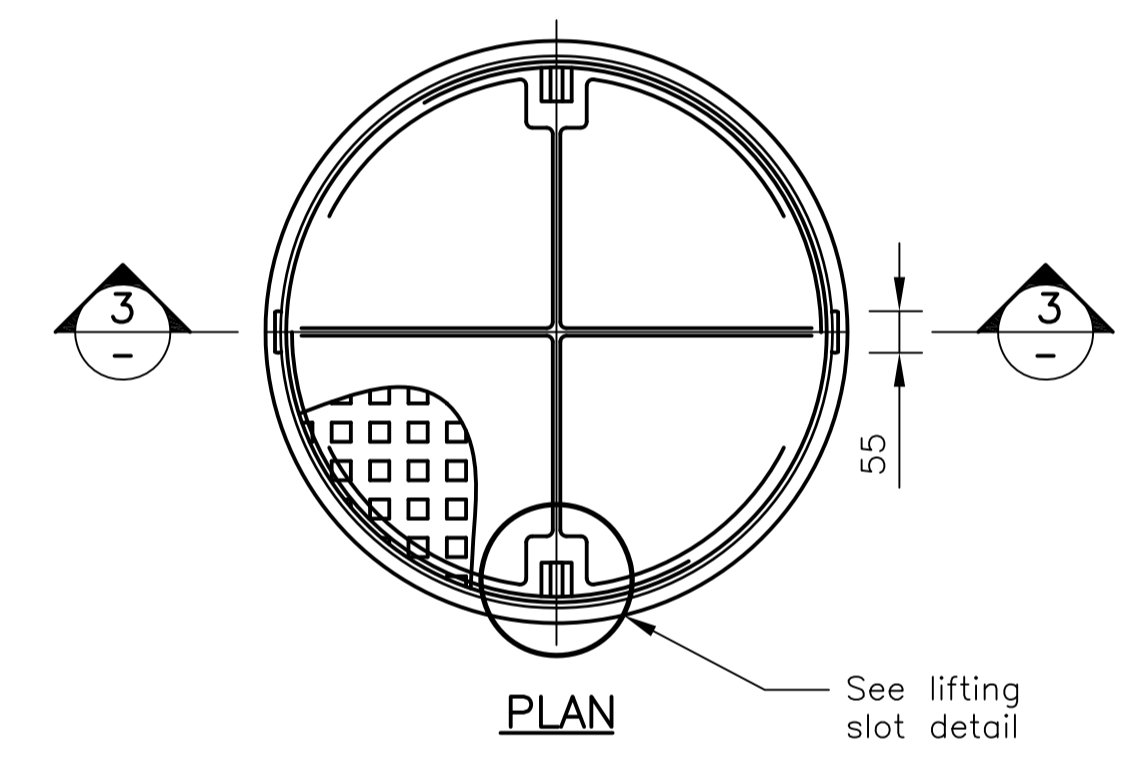
SECTION 1-1



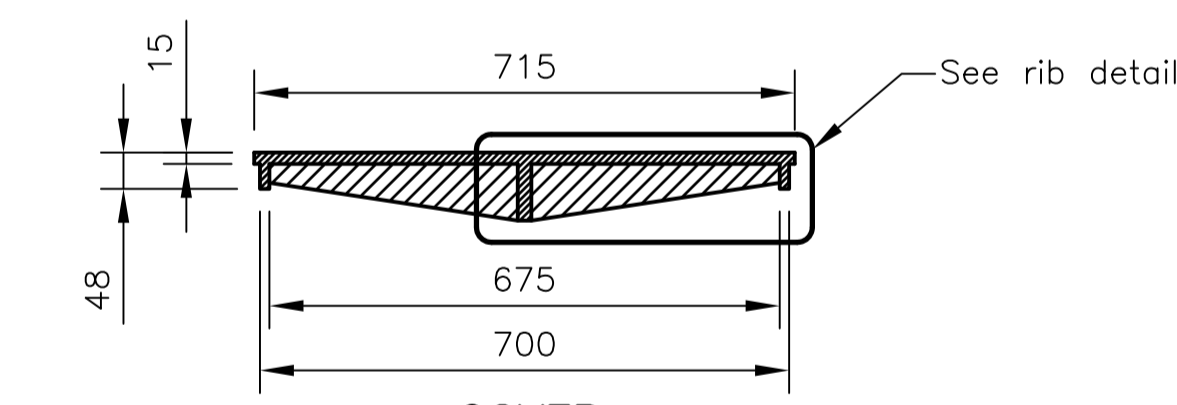
TYPE 2 - OTHER THAN ROADS

SECTION 1-1

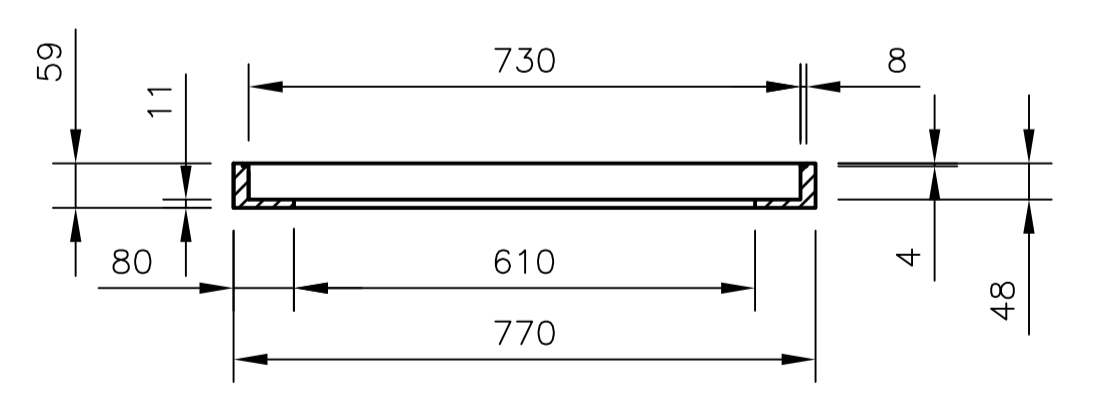
PRECAST CONCRETE MAINTENANCE HOLE TOPS



PLAN



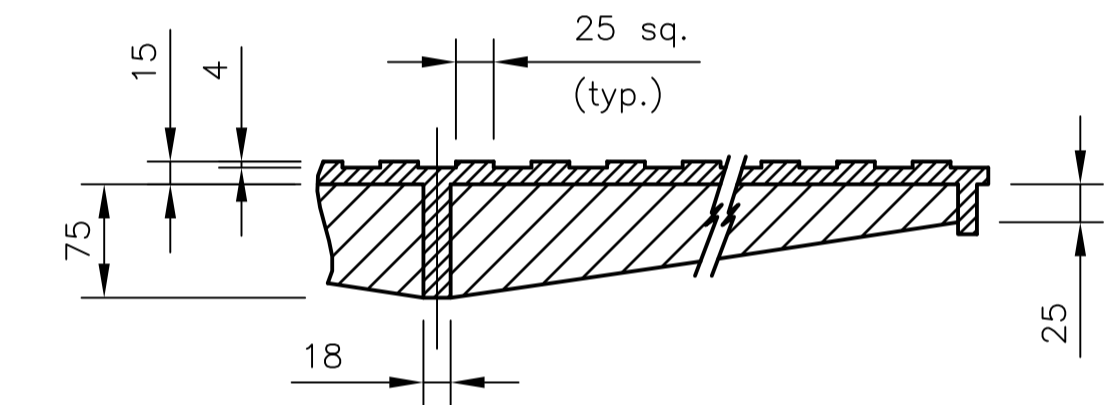
COVER



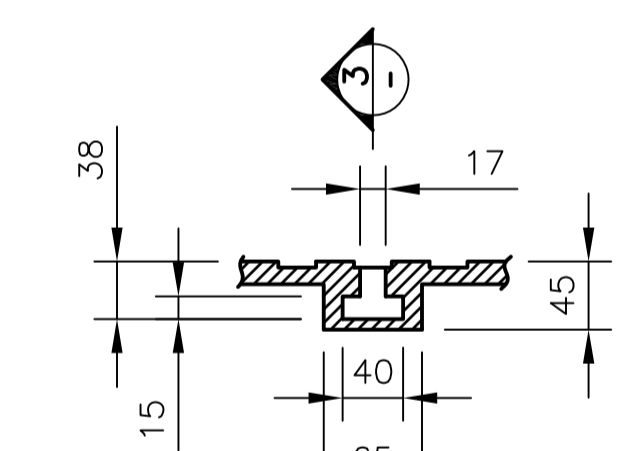
FRAME

SECTION 3-3

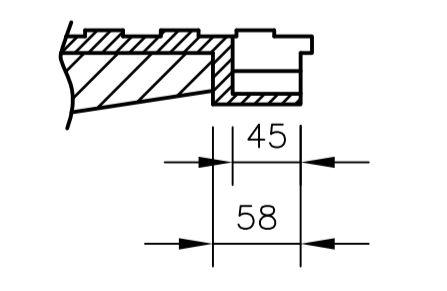
CAST IRON COVER AND FRAME



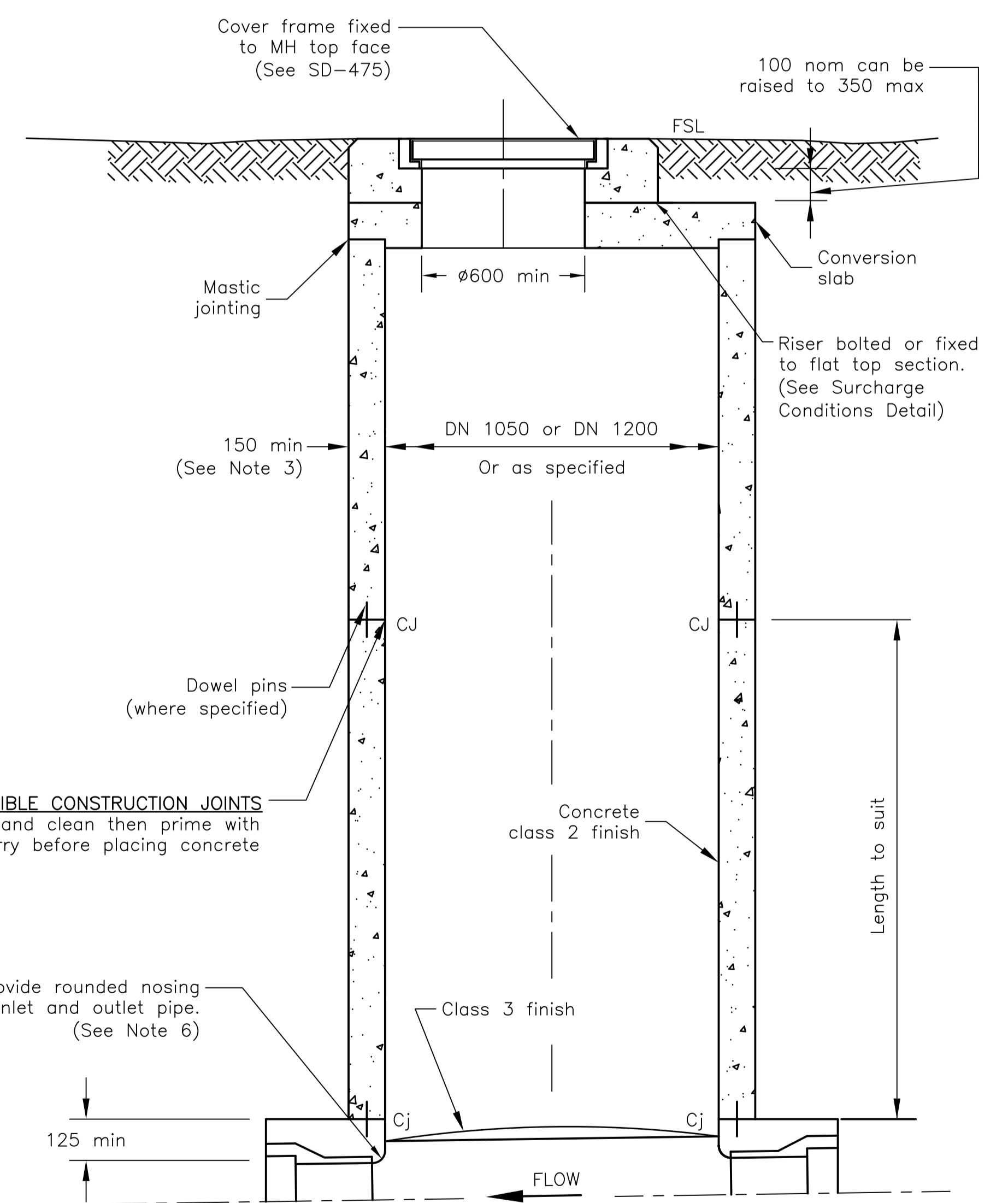
RIB DETAIL



LIFTING SLOT DETAIL



SECTION 4-4



MAINTENANCE HOLE

FOR MH >1200 TO <=6000 DEPTH

- NOTES**
- All dimensions are in millimetres unless noted otherwise.
 - All concrete to be N32 20/80.
 - Wall thickness to be 150 min or 225 min in aggressive soils, high water table and saline environments.
 - Conical top construction only allowed with Townsville Water approval.
 - For pipe connection details into MH see SD-484.
 - Form rounded nosing on inlet and outlet pipe to prevent damage to jetting equipment, CCTV guides and cables.
 - In areas subject to surcharge, use cast in-situ MH dowel or bolt cover slabs, DI cover and frame to the shaft section in such a manner that separation during surcharge is prevented.
 - Step irons or ladders are not permitted.
 - Make-up ring of 100-150 nominal height to be installed to allow adjustment without affecting the chamber structure.
 - Approved PVC liner or epoxy coating of internal surfaces of maintenance holes with epigen 1311 (or equivalent) for rising main discharge maintenance hole and maintenance holes on DN300 sewers.
 - Maintenance holes to maximum of 6m total depth. Deeper maintenance holes only allowed with written approval of Townsville Water.

NOTES : BASED ON FORMER WSAW DRAWING SEW-1301		Full Size A1	DRAWN: DESIGN OFFICE	CHECKED: D. MOSELEY	<p>City of Townsville Ph: (07) 4727 9000 www.townsville.qld.gov.au</p>	<p>MAINTENANCE HOLES SEWER ≤ DN 300 CAST IN-SITU</p>	<p>STANDARD DRAWING SEWERAGE</p>
Not to Scale		Design Engineer Approved: Original signed by P. TURL	Date: 26/07/2012				
		Manager Approved: Original signed by P. MENDIOLEA	Date: 26/07/2012				
B	NOTES AMENDED						
A	ORIGINAL ISSUE						
No.	DATE	DESCRIPTION	AP'D				
REVISIONS							
						SD-470	B