

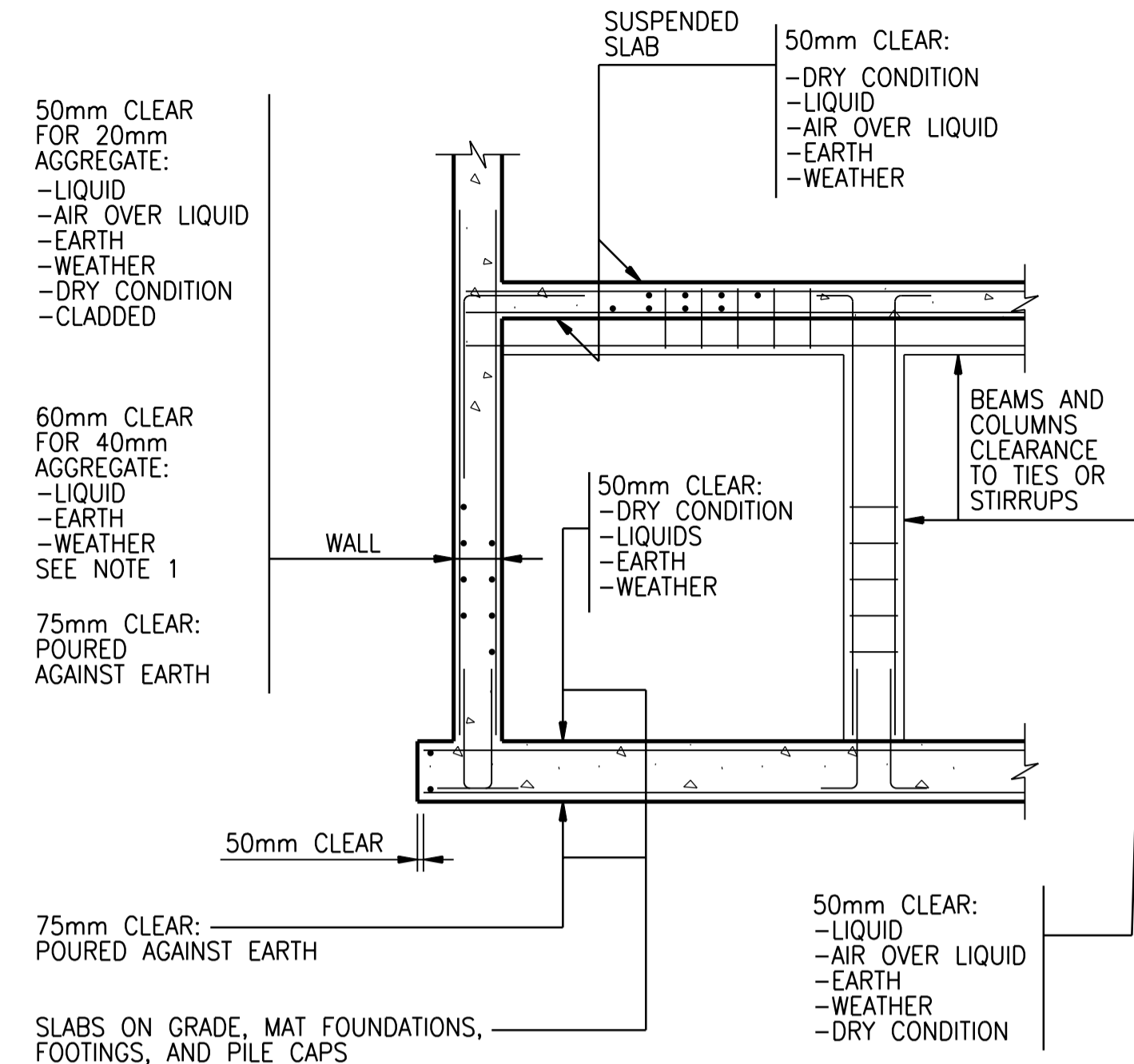
REINFORCING BAR YIELD STRENGTH = 400MPa

SPECIFIED CONCRETE STRENGTH	BAR LOCATION	LAP TYPE	BAR SIZE						
			10M	15M	20M	25M	30M	35M	
F <sub>c</sub> =20MPa	TOP	CLASS A	450	650	850	1350	1600	2000	
	OTHER	CLASS B	550	850	1100	1750	2050	2600	
F <sub>c</sub> =25MPa	TOP	CLASS A	350	500	650	1050	1250	1550	
	OTHER	CLASS B	450	650	850	1350	1600	2000	
F <sub>c</sub> =30MPa 32MPa	TOP	CLASS A	400	600	750	1200	1450	1800	
	OTHER	CLASS B	500	750	1000	1550	1850	2300	
F <sub>c</sub> =35MPa	TOP	CLASS A	300	450	600	900	1100	1400	
	OTHER	CLASS B	400	600	750	1200	1450	1800	
F <sub>c</sub> =40MPa	TOP	CLASS A	350	550	700	1100	1300	1650	
	OTHER	CLASS B	450	700	900	1400	1700	2100	
F <sub>c</sub> =30MPa 32MPa	TOP	CLASS A	300	400	550	850	1000	1250	
	OTHER	CLASS B	350	550	700	1100	1300	1650	
F <sub>c</sub> =35MPa	TOP	CLASS A	350	500	650	1000	1200	1500	
	OTHER	CLASS B	450	650	850	1300	1550	1950	
F <sub>c</sub> =40MPa	TOP	CLASS A	300	400	500	800	950	1150	
	OTHER	CLASS B	350	500	650	1000	1200	1500	
F <sub>c</sub> =40MPa	TOP	CLASS A	300	450	600	950	1150	1400	
	OTHER	CLASS B	400	600	800	1250	1450	1850	
F <sub>c</sub> =40MPa	TOP	CLASS A	300	350	500	750	900	1100	
	OTHER	CLASS B	300	450	600	950	1150	1400	

- NOTES:**
- TOP BARS ARE:
    - ALL BARS IN CONCRETE WITH MORE THAN 300mm CONCRETE BELOW.
    - ALL HORIZONTAL BARS IN WALLS.
  - PROVIDE CLASS B LAP UNLESS NOTED OTHERWISE.
  - LAP SPLICE LENGTHS SHOWN IN THE TABLE ARE BASED ON HEAVIER CONFINED BARS.
  - TABLE APPLIES UNLESS SHOWN OTHERWISE.
  - DEVELOPMENT LENGTHS ARE EQUAL TO CLASS A LAP SPLICES.

**REINFORCING BAR TENSION LAP SPLICE TABLE**

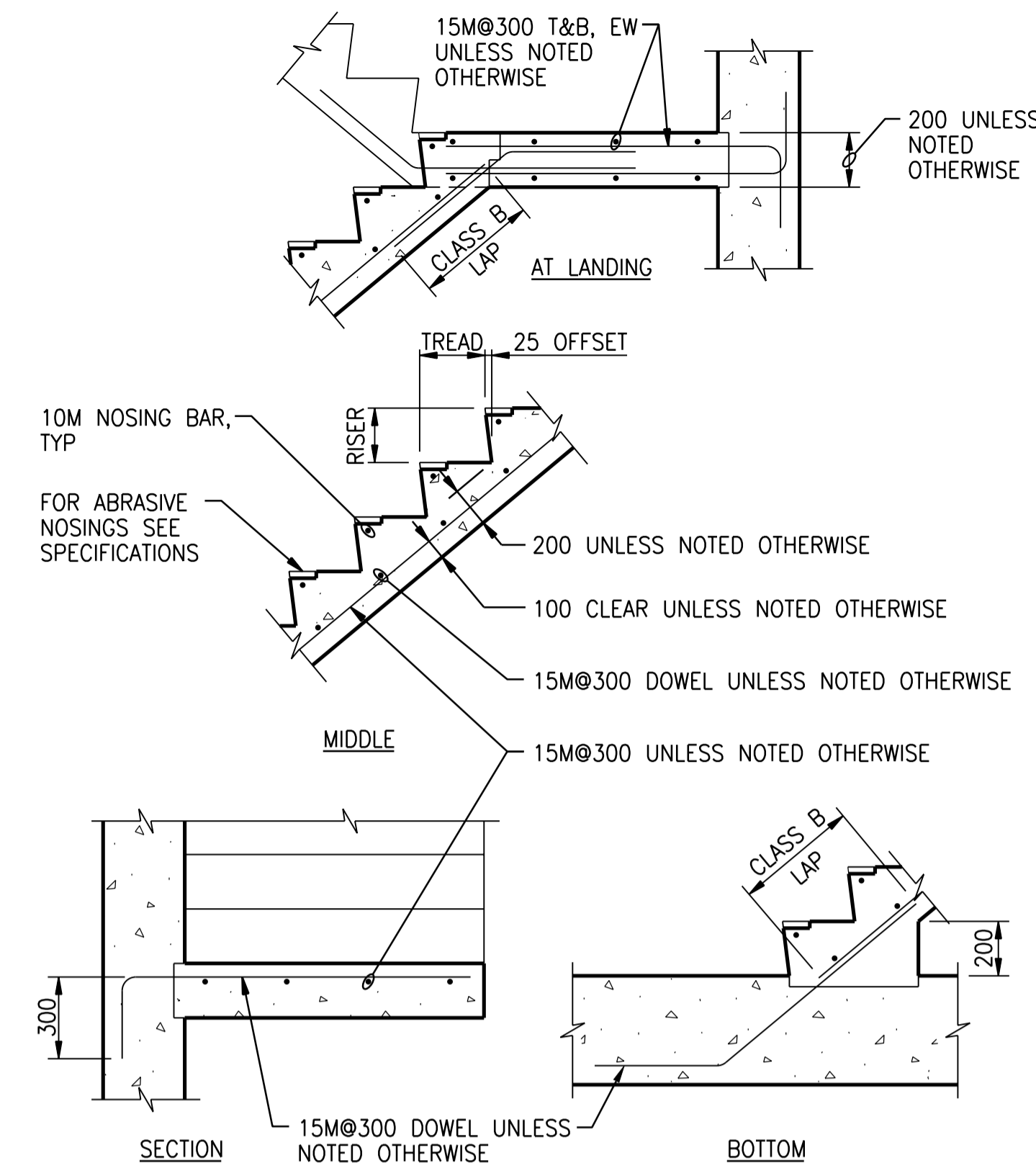
NTS 0330-801



- NOTES:**
- PROVIDE 50mm CLEARANCE ON FACE EXPOSED TO DRY CONDITION.
  - SPECIFIED COVER WILL PROVIDE MINIMUM 3 HOUR FIRE RATING. WHERE 4 HOUR FIRE RATING IS REQUIRED, AS NOTED ON DRAWINGS, INCREASE CLEAR COVER FOR WALLS AND COLUMNS TO 62.5mm.

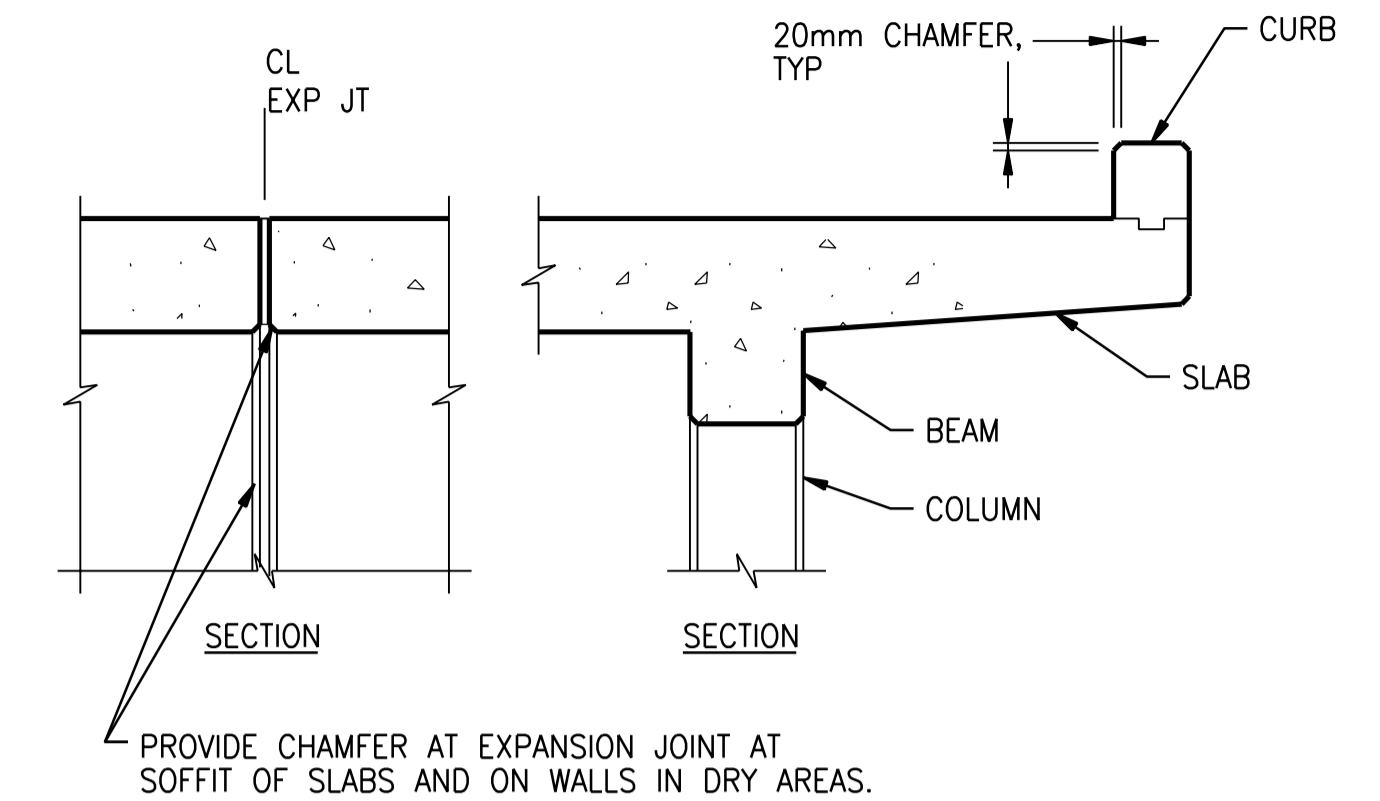
**CONCRETE COVER TO REINFORCING**

NTS 0330-803



**TYPICAL CONCRETE STAIR REINFORCING**

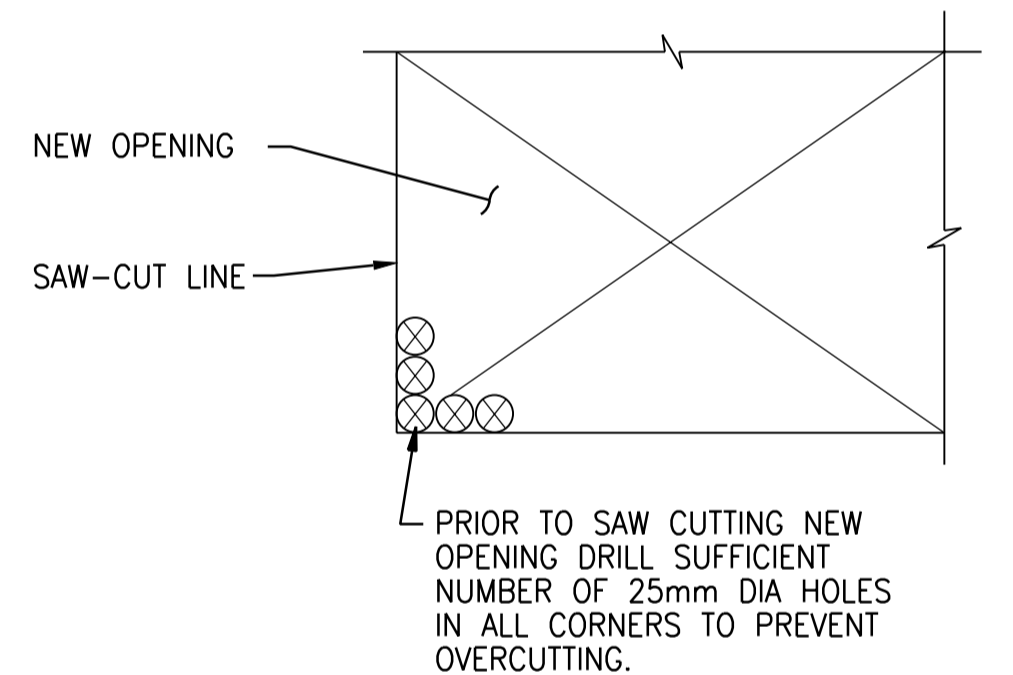
NTS 0330-805



- NOTE:**
- PROVIDE CHAMFER ALONG EXPOSED EDGES ON CONCRETE SLABS, BEAMS, CURBS, COLUMNS, WALL OPENINGS AND SIMILAR ITEMS UNLESS OTHERWISE NOTED OR DIRECTED.

**CHAMFERS**

NTS 0330-806

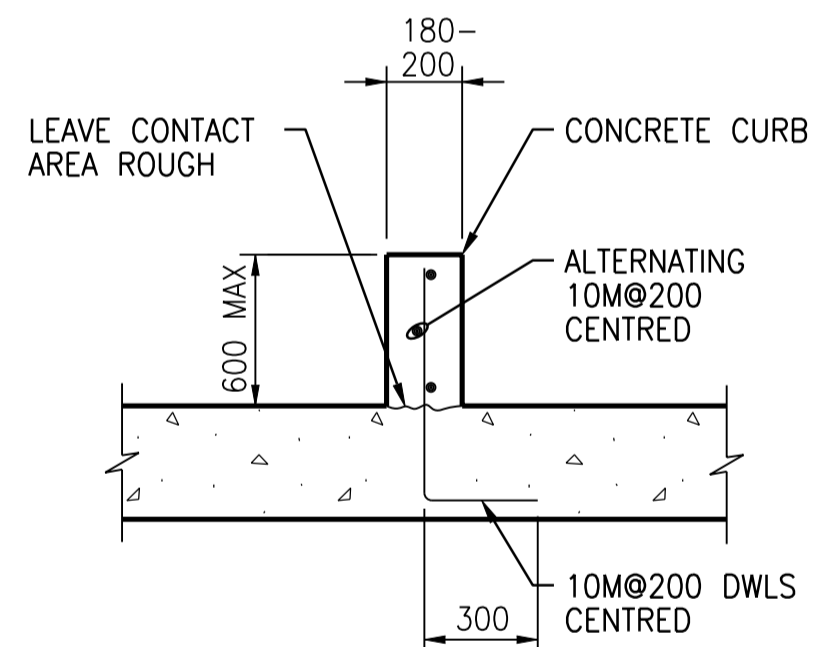


EXISTING WALL ELEVATION OR SLAB PLAN DETAIL

- NOTES:**
- LOCATE ANY EXISTING UTILITIES THAT COULD BE AFFECTED WITH DEMOLITION. REPORT TO THE ENGINEER IF ANY UTILITIES ARE FOUND.
  - STAY WITHIN LIMITS OF OPENING, DO NOT OVERCUT.
  - BURN BACK EXPOSED REINFORCING 25mm AND DRY PACK WITH NON SHRINK GROUT.
  - REFER TO DETAIL 0330-143.

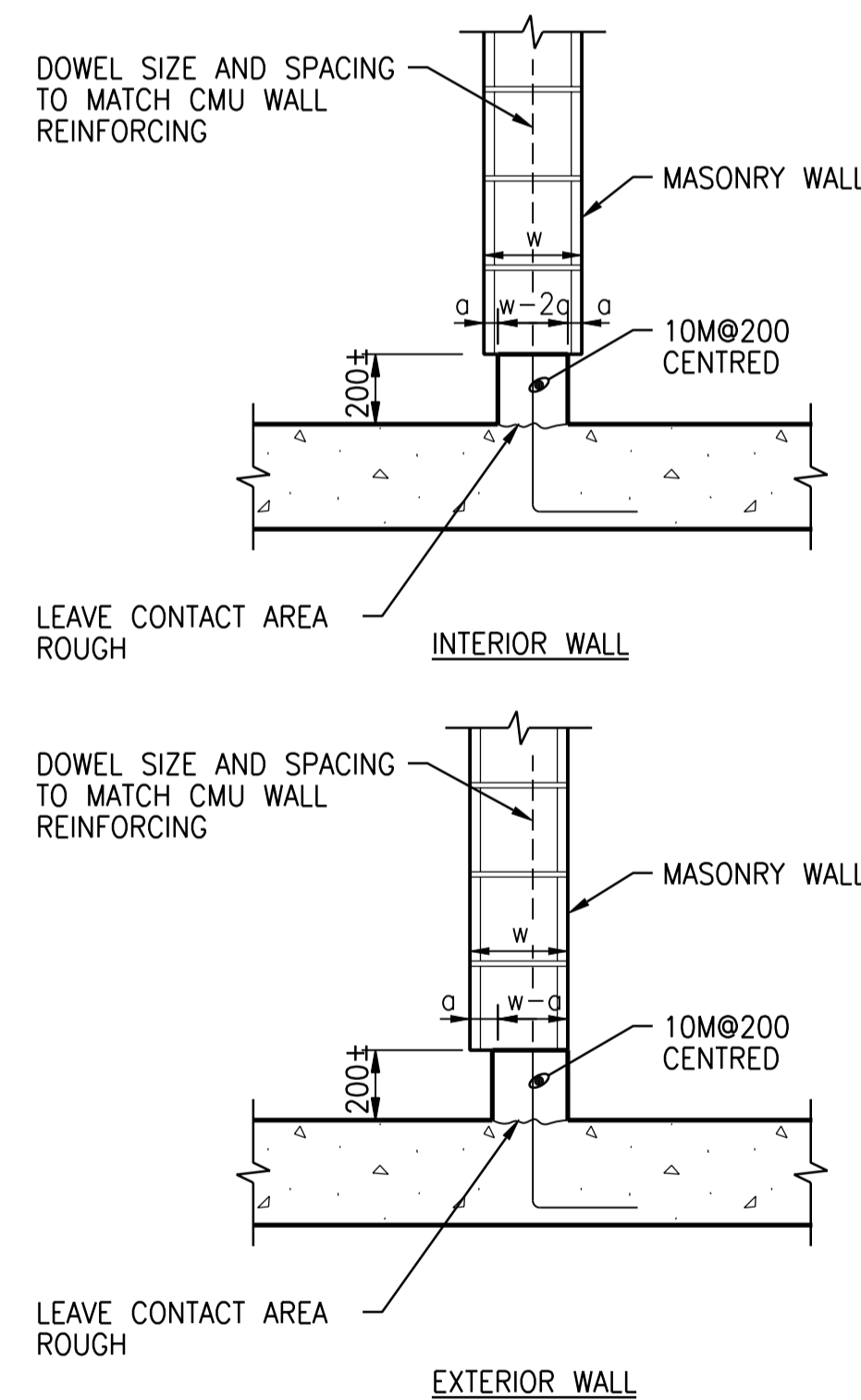
**NEW OPENING THROUGH EXISTING OR SLAB**

NTS 0330-808



**CONCRETE CONTAINMENT CURB**

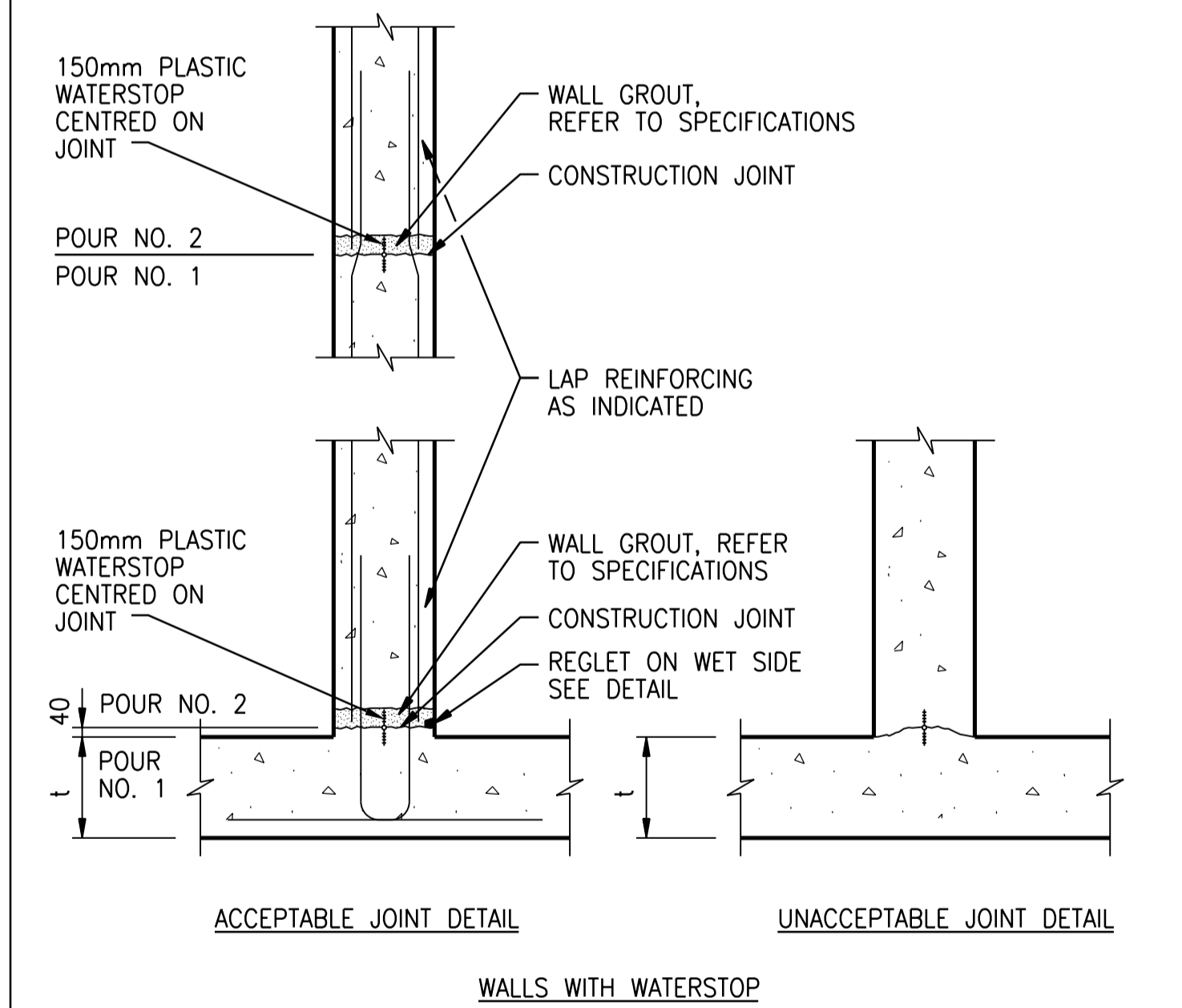
NTS 0330-810



- NOTE:**
- o = OVERHANG  
w = WIDTH OF MASONRY WALL

**CONCRETE CURB UNDER MASONRY**

NTS 0330-811



**WALL CONSTRUCTION JOINTS**

NTS 0330-812



NO.	REVISIONS	DATE	DESIGN	CHECK
01	ISSUED FOR CONSTRUCTION	10/2015	G.O. J.C.	
00	ISSUED FOR TENDER	08/2015	G.O. J.C.	

**CH2MHILL.**

SNC-LAVALIN

DESIGNED BY: E. LUI

CHECKED BY: R. PARIKH

DRAWN BY: G. OMORI

APPROVED BY: E. LUI

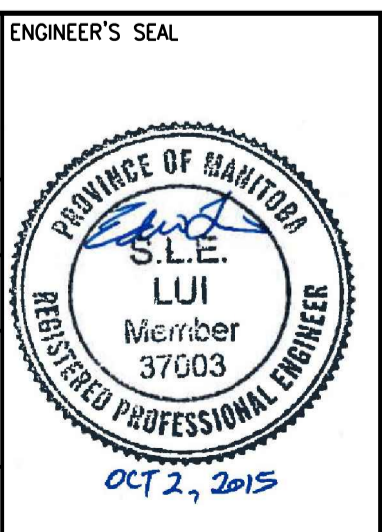
SCALE: NTS

ISSUED FOR CONSTRUCTION BY: T. TURZAK

DATE: 2015/08/13

DATE: 2015/10/02

CONSULTANT NO.: 474248



THE CITY OF WINNIPEG  
Winnipeg WATER AND WASTE DEPARTMENT

SOUTH END WATER POLLUTION CONTROL CENTRE  
SEWPPCC UPGRADING/EXPANSION PROJECT  
STRUCTURAL  
STANDARD DETAILS (6)

CITY DRAWING NUMBER: 1-0102-SDTL-A007

SHEET: 01

REV: A1

SIZE: A1