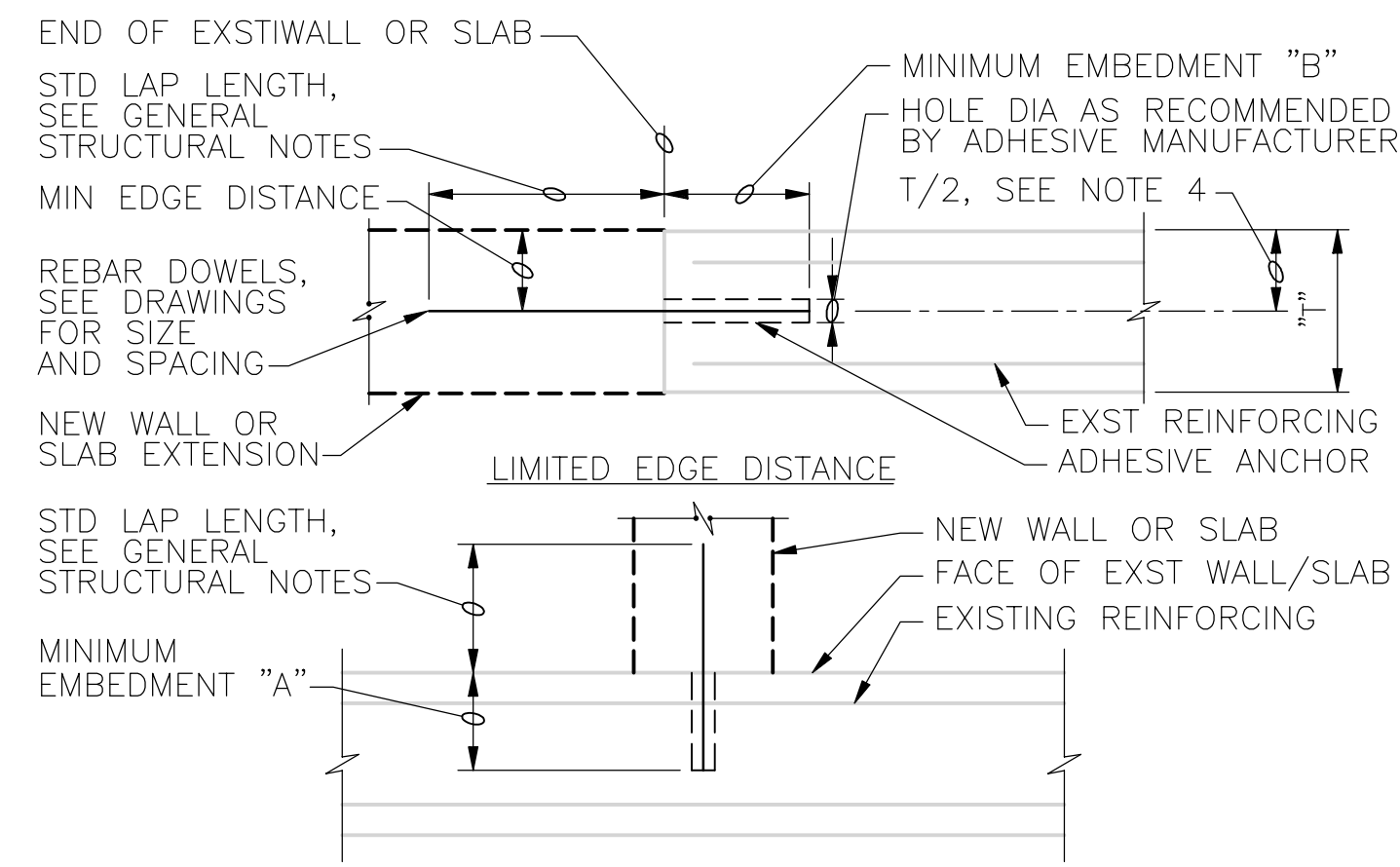


ONLY FOR : 30 MPa CONCRETE, NORMAL WEIGHT  
400 MPa REINFORCING BAR

BAR SIZE	TOP BARS (mm)		OTHER BARS (mm)	
	CLASS A	CLASS B	CLASS A	CLASS B
10M	390	500	300	390
15M	550	710	420	550
20M	670	870	520	670
25M	1080	1400	830	1080
30M	1280	1660	990	1280
35M	1530	1990	1180	1530

- 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.

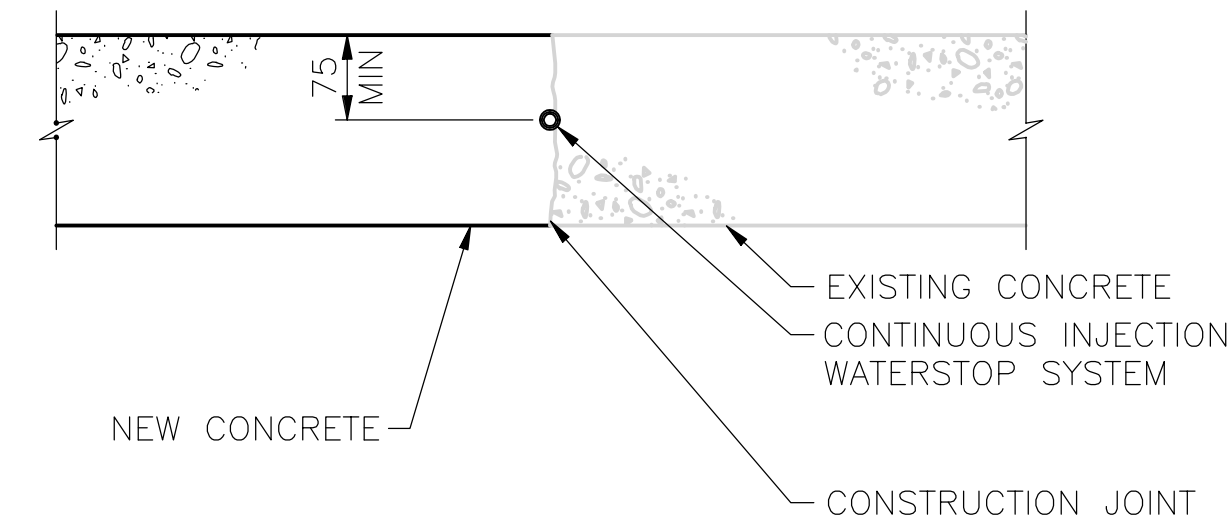
1 REINFORCING BAR TENSION LAP SPLICE TABLE  
NTS



DOWEL SIZE	MINIMUM EDGE DIST	MINIMUM EMBEDMENT A	MINIMUM EMBEDMENT B
10M	65mm	125mm	200mm
15M	100mm	200mm	330mm
20M	125mm	265mm	400mm
25M	175mm	355mm	560mm
30M	190mm	380mm	600mm

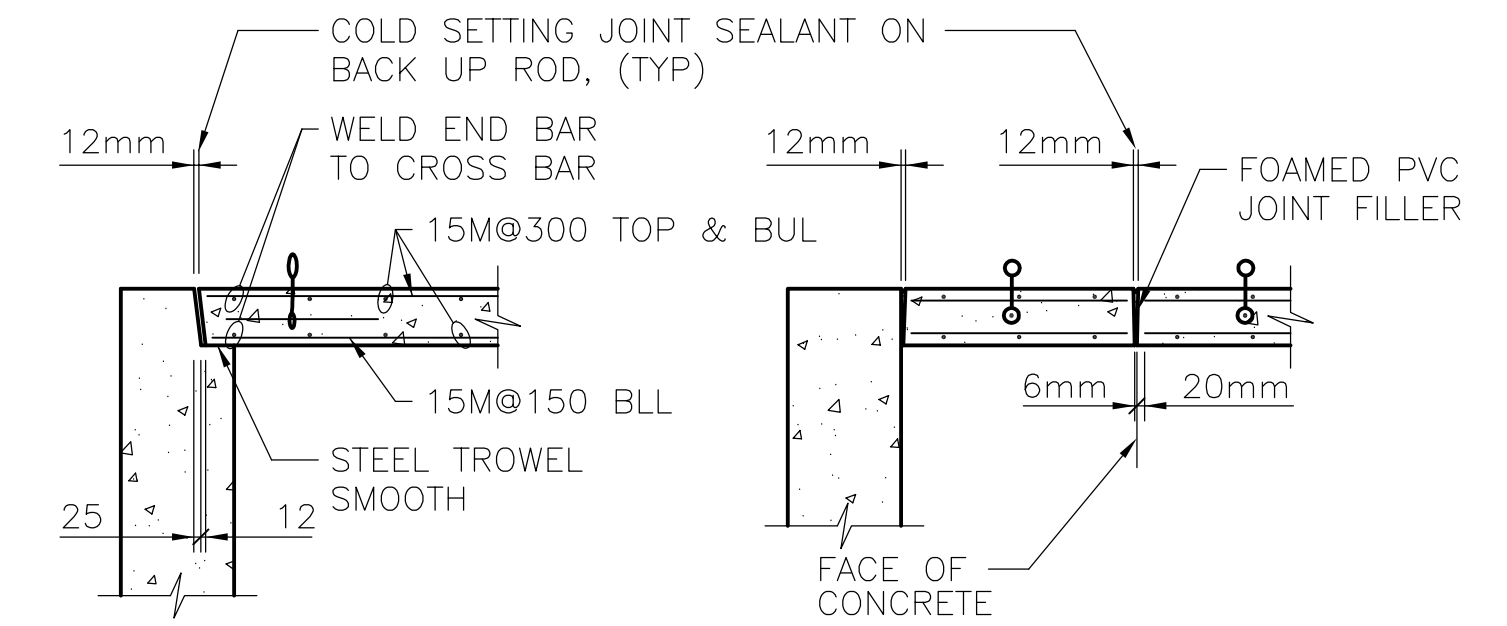
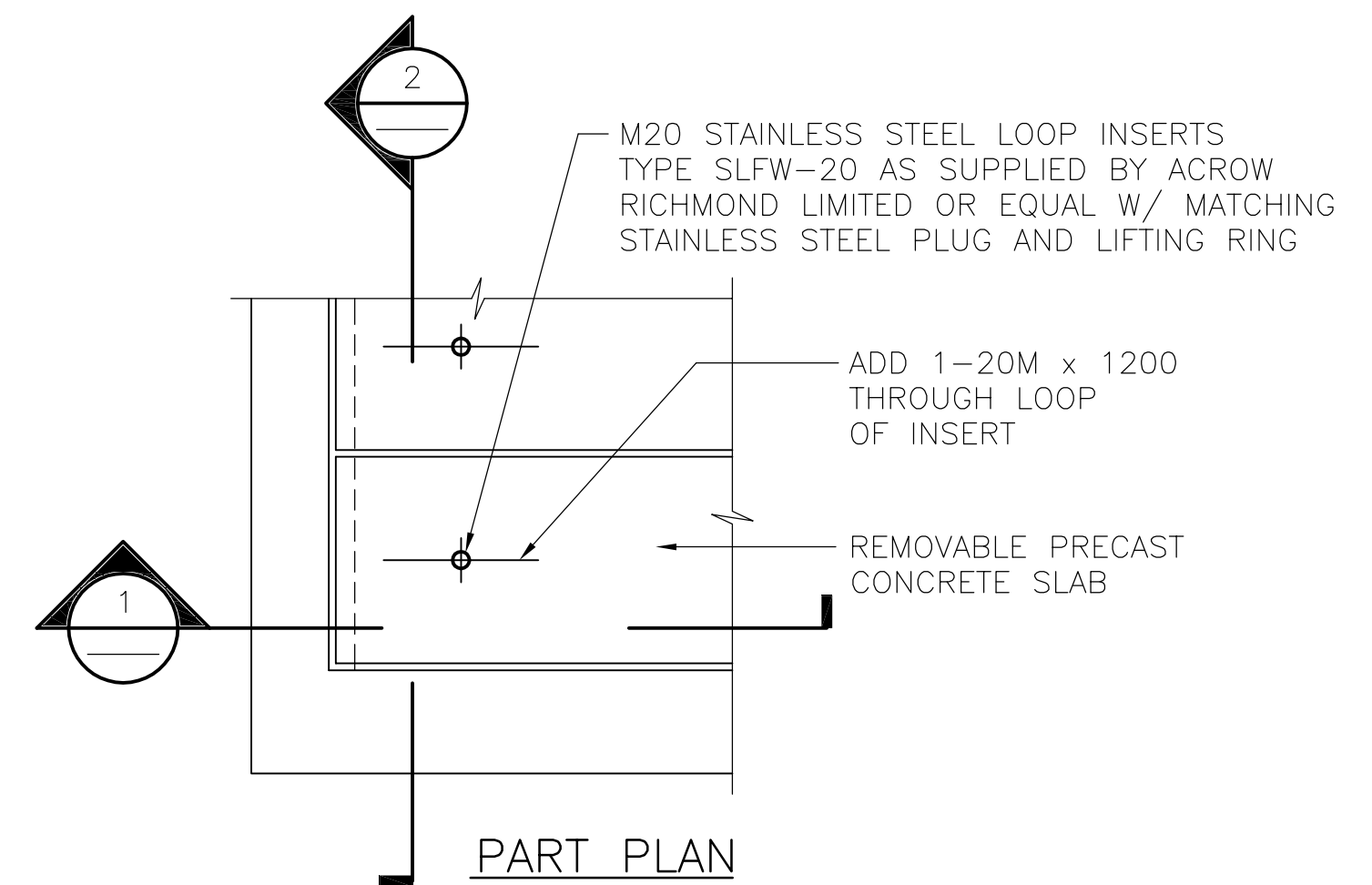
- NOTES:
- CONFORM TO THE REQUIREMENTS OF SPECIFICATION SECTION 03215, DOWELING FOR CONCRETE.
  - FOLLOW ADHESIVE MANUFACTURER'S INSTRUCTIONS FOR INSTALLATION.
  - USE MINIMUM EMBEDMENTS SHOWN, EXCEPT USE MANUFACTURER'S MINIMUM RECOMMENDED EMBEDMENT IF GREATER.
  - LOCATE DOWELS CENTERED IN WALL OR SLAB UNLESS OTHERWISE NOTED ON DRAWINGS. WHERE 2 ROWS OF DOWELS INDICATED, STAGGER SPACING & LOCATE ALTERNATING DOWELS AT MINIMUM EDGE DISTANCE FROM OPPOSITE FACES.

2 ADHESIVE DOWEL  
NTS

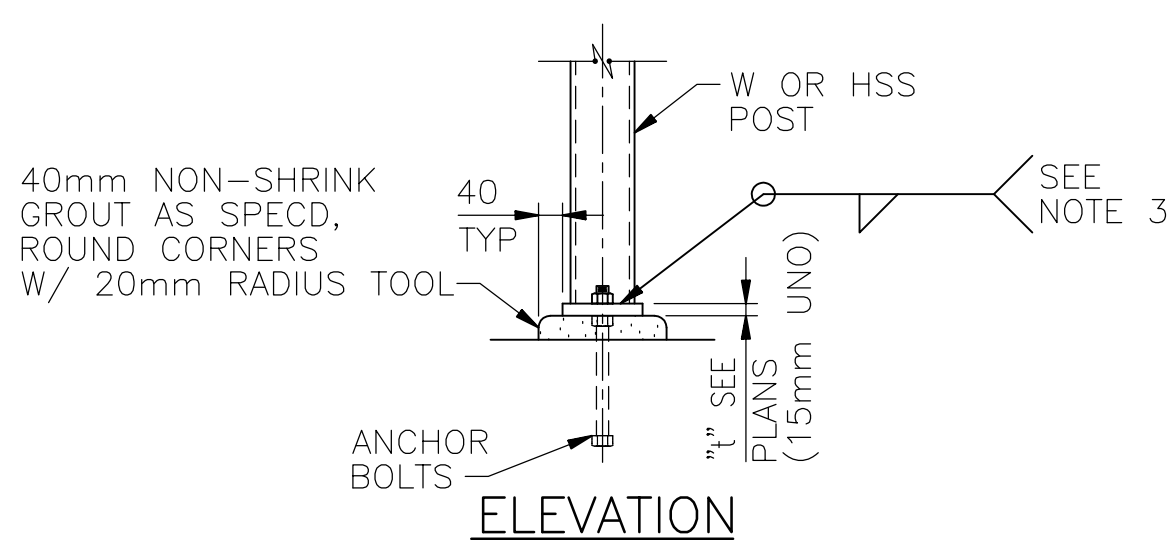
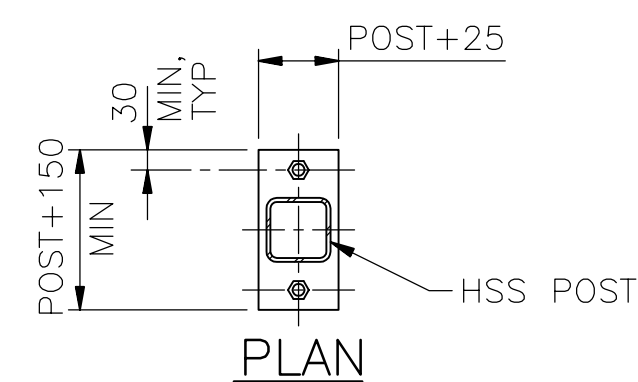


- NOTE:
- FOR USE IN NON-MOVING CONSTRUCTION JOINTS AND ONLY WHERE INDICATED ON PLANS.

3 INJECTION HOSE WATERSTOP SYSTEM  
NTS

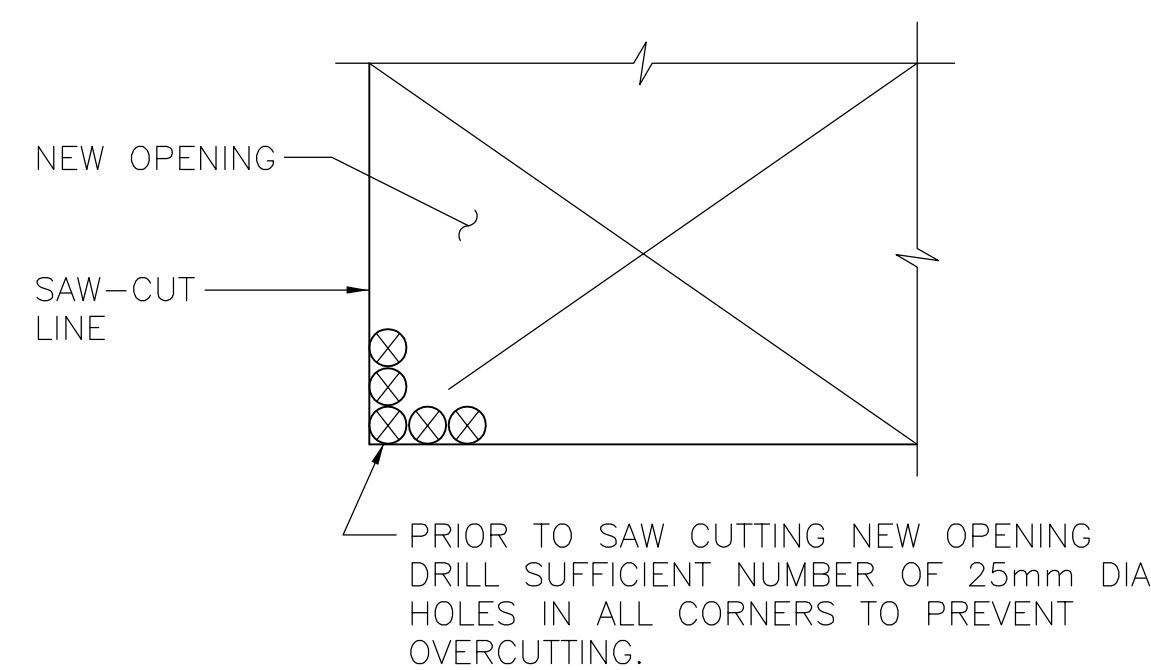


4 REMOVABLE SLAB DETAILS  
NTS



- NOTES:
- UNLESS OTHERWISE NOTED, ANCHOR BOLTS SHALL BE 20mm DIA x REQUIRED WITH LEVELING NUTS AND 300mm MINIMUM EMBEDMENT AND BASEPLATES SHALL BE CENTERED ON POSTS.
  - USE OF 2-BOLT STEEL POST BASEPLATE ANCHORAGE DETAIL SHOWN SHALL BE LIMITED TO STEEL SUPPORT MEMBERS WEIGHING LESS THAN 135kg IN ACCORDANCE WITH OSHA STANDARDS.
  - WELD SIZE SHALL BE DETERMINED BY THE THICKEST MEMBER JOINED; MIN WELD SIZE SHALL BE 5mm FILLET FOR MATERIAL THICKNESSES UP TO AND INCLUDING 15mm, 6mm FILLET FOR THICKNESSES OVER 15mm TO 20mm, AND 8mm FILLET FOR MATERIAL THICKNESSES OVER 20mm. ALL WELDS SHALL BE SINGLE-PASS WELDS.

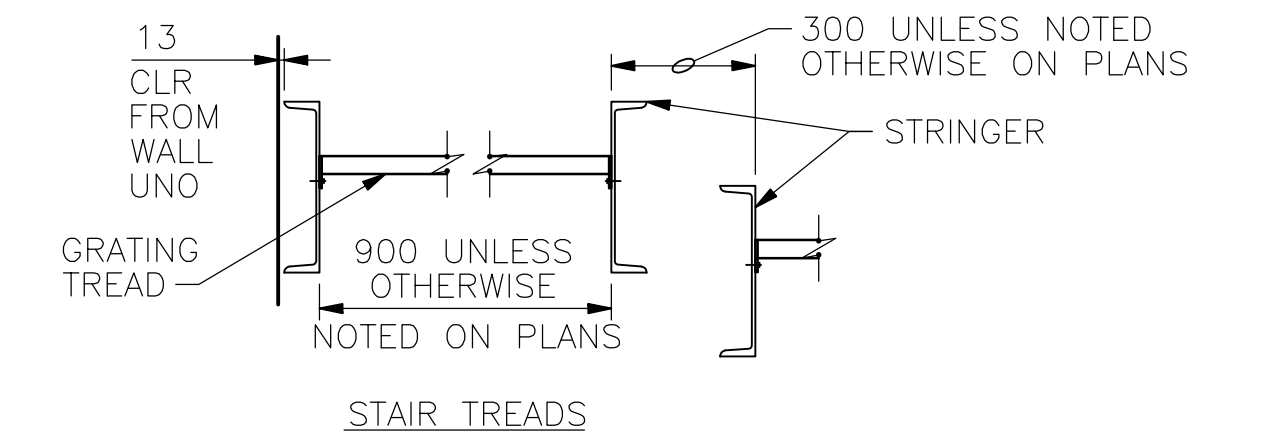
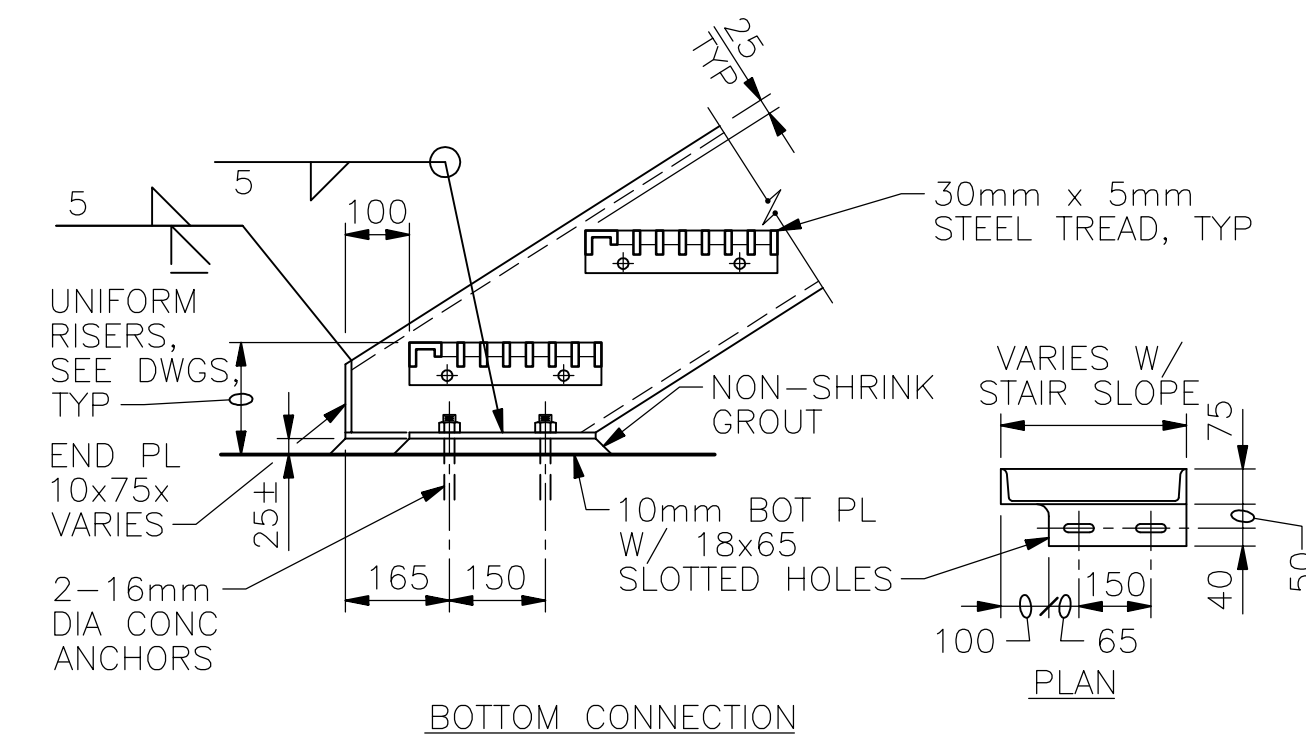
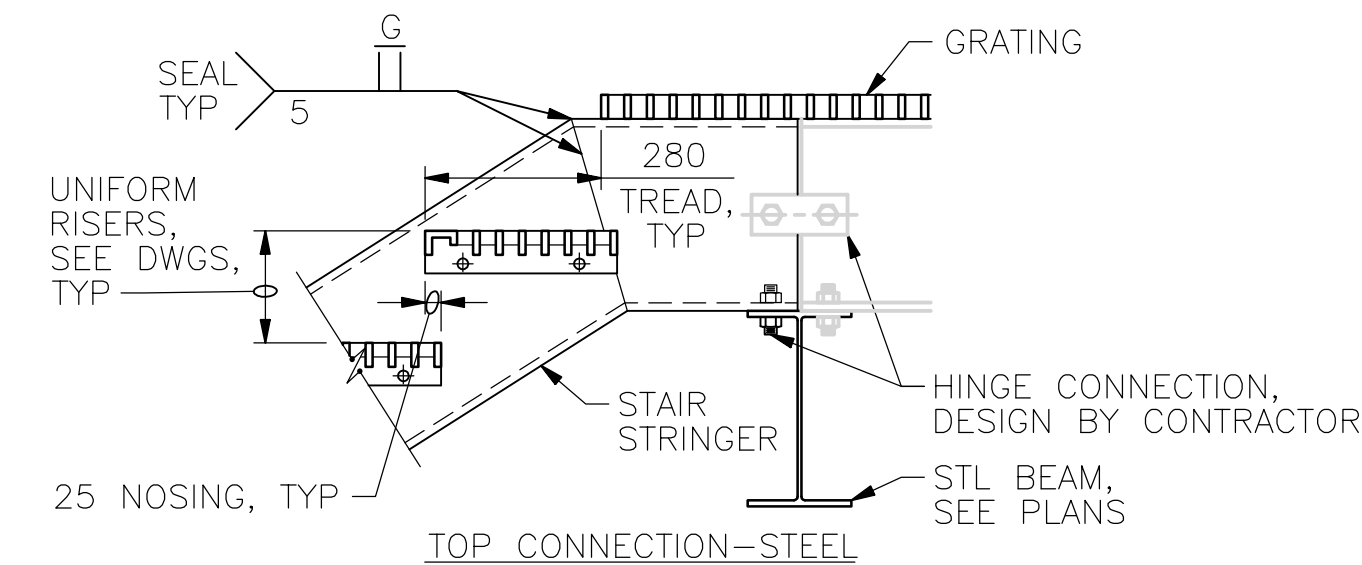
5 STEEL POST BASE  
NTS



EXISTING WALL ELEVATION / SLAB PLAN

- 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.

6 NEW OPENING THROUGH EXISTING WALL OR SLAB  
NTS



- NOTES:
- PROVIDE PROTECTION FOR DISSIMILAR METALS AND CONCRETE AS SPECIFIED.
  - C310x31 STRINGERS TYPICAL EXCEPT WHERE OTHERWISE NOTED ON PLANS.
  - GALVANIZED STEEL GRATING TREADS UNLESS OTHERWISE NOTED ON PLANS.
  - STAIR HANDRAIL NOT SHOWN.
  - STAIR MANUFACTURER TO COORDINATE BOLTED TREADS AND HANDRAIL CONNECTIONS.
  - HOT DIP GALVANIZE ALL MEMBERS AND FASTENERS AFTER FABRICATION.
  - FIELD VERIFY DIMENSIONS & ELEVATIONS PRIOR TO FABRICATION.

7 STAIR DETAILS-STEEL  
NTS

**APCGM**  
Certificate of Authorization  
CH2M HILL Canada Ltd.  
No. 1441 Expiry: April 30, 2008

B.M. ELEV.	FIELD BOOK #:	<b>CH2MHILL</b>		ENGINEER'S SEAL
POSTED TO LBIS		DESIGNED BY R.ZENG	CHECKED BY R.PARIKH	ORIGINAL SIGNED BY R.P. PARIKH
		DRAWN BY A.JANSSENS	APPROVED BY E.SHARP	2007/11/28
		HOR. SCALE NTS	RELEASED FOR CONSTRUCTION K. ZUREK	PROJECT No.: 358676
0 ISSUED FOR TENDER 07/11/28 AJ		VERTICAL	DATE 2007/11/29	PLOT DATE: 2007/11/28
NO. REVISIONS	DATE BY	DATE 2007 06 20	DATE 2007/11/29	

**THE CITY OF WINNIPEG**  
WATER AND WASTE DEPARTMENT

**Winnipeg**

NORTH END WATER POLLUTION CONTROL CENTRE  
WET WELL REHABILITATION  
STRUCTURAL STANDARD DETAILS (1)

SHEET 9 OF 24  
CONSULTANT DRAWING NUMBER S0006  
CITY DRAWING NUMBER 1-0101M-A-S0005-001-00D