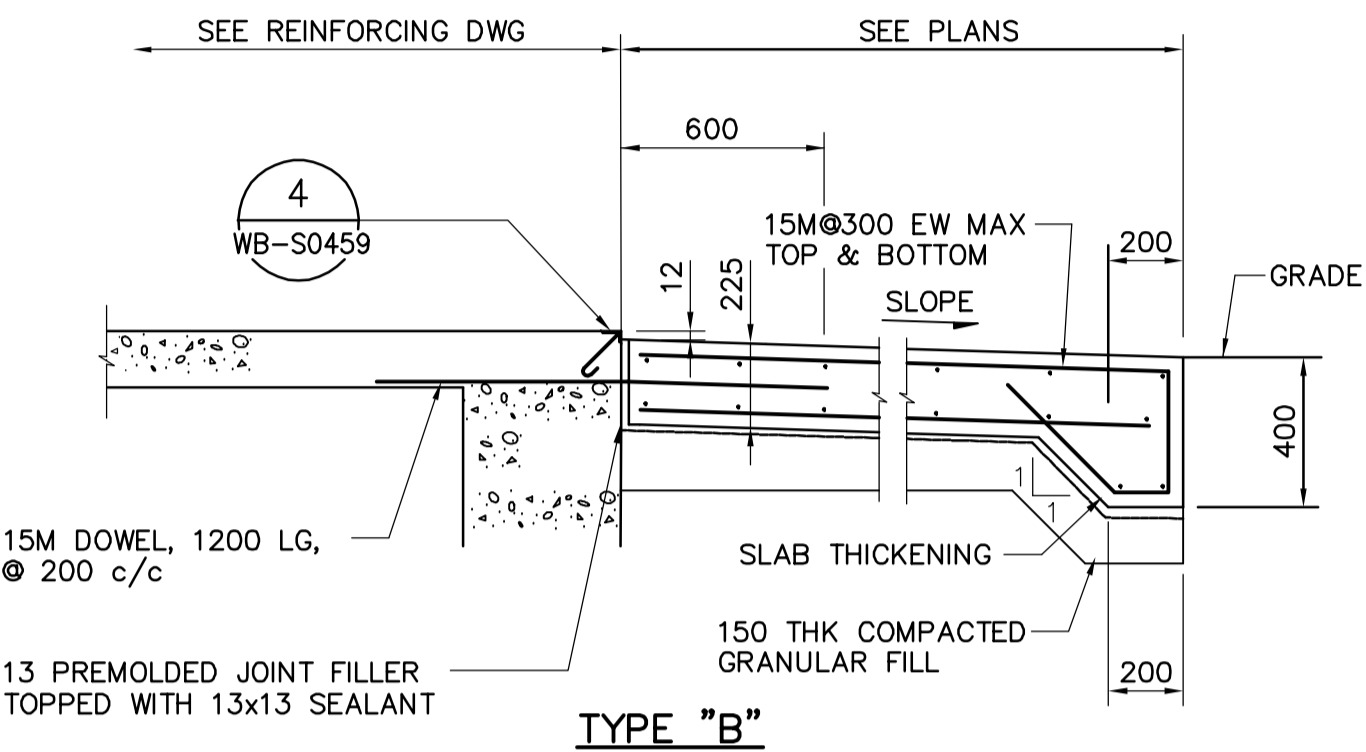
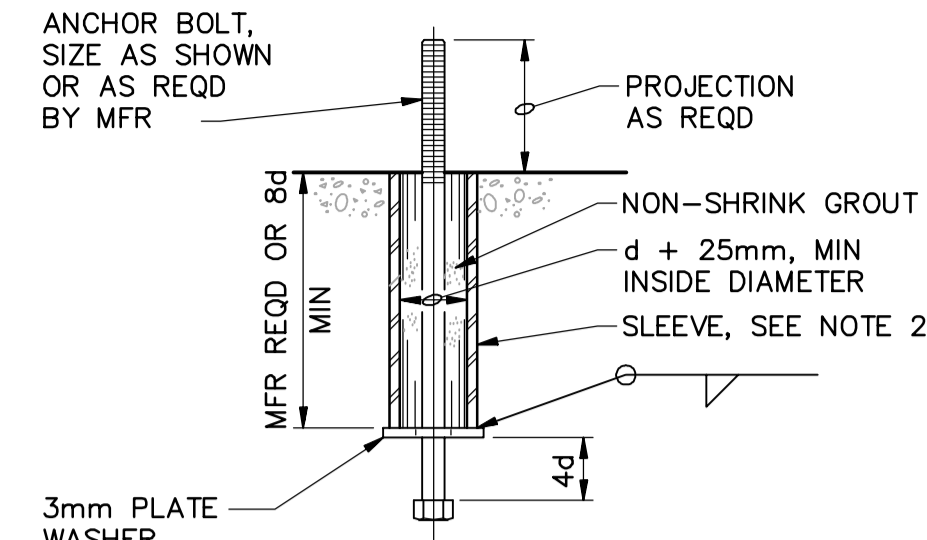


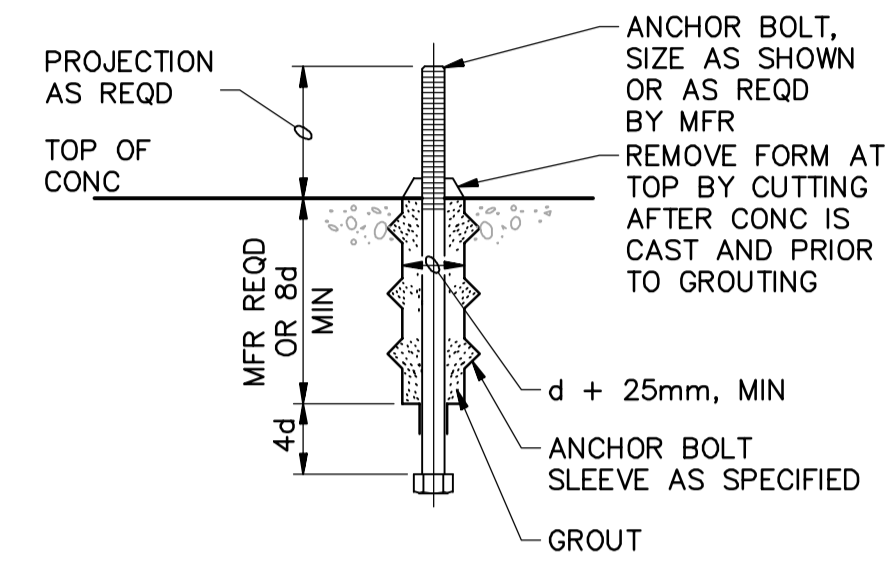
1 CONCRETE APRON DETAIL
N.T.S.



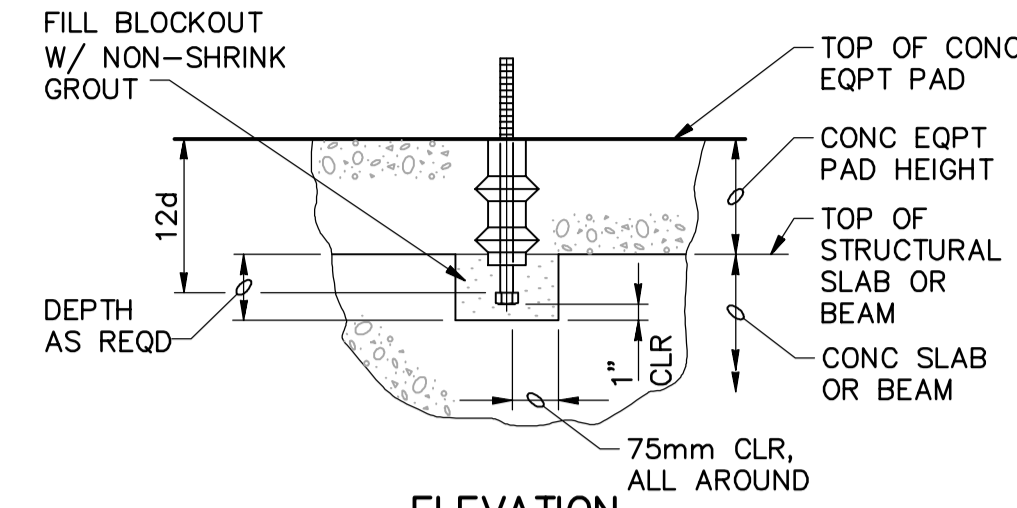
NOTE:
EXTERIOR BOLLARDS ON CONCRETE APRONS AT OVERHEAD DOORS NOT IN CONTRACT, COORDINATE ANCHORAGE REQUIREMENTS WITH CONTRACT ADMINISTRATOR



MACHINERY ANCHOR BOLT

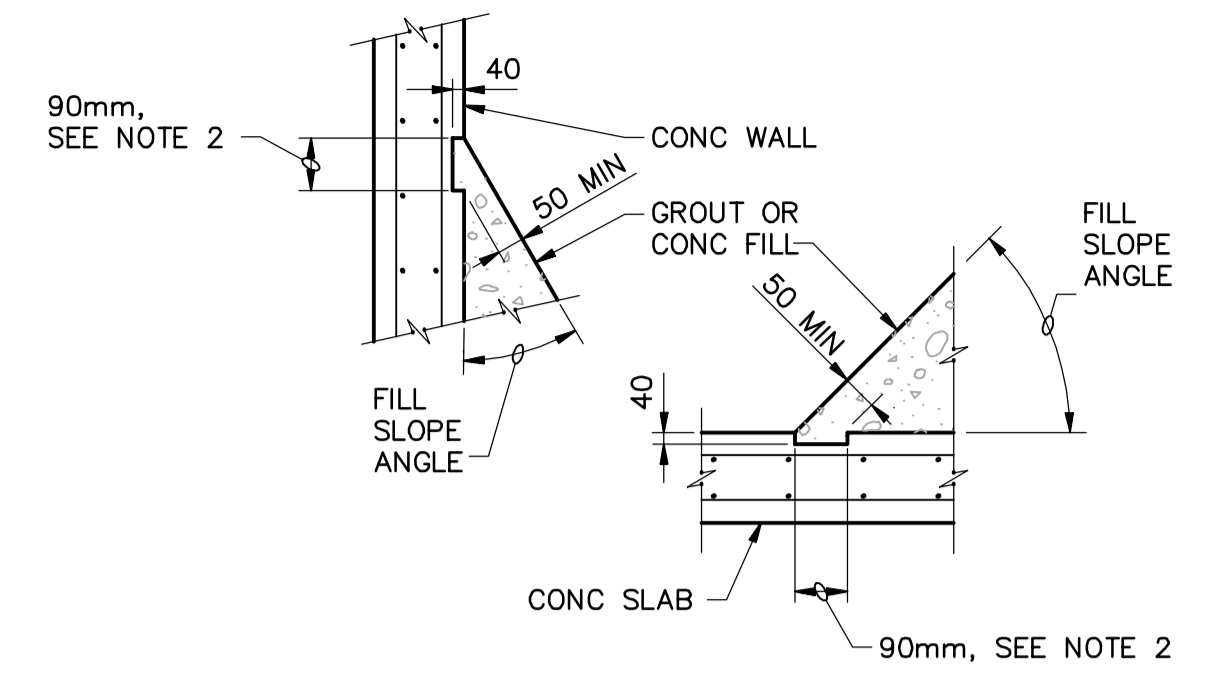


2 ANCHOR BOLT DETAILS
N.T.S.



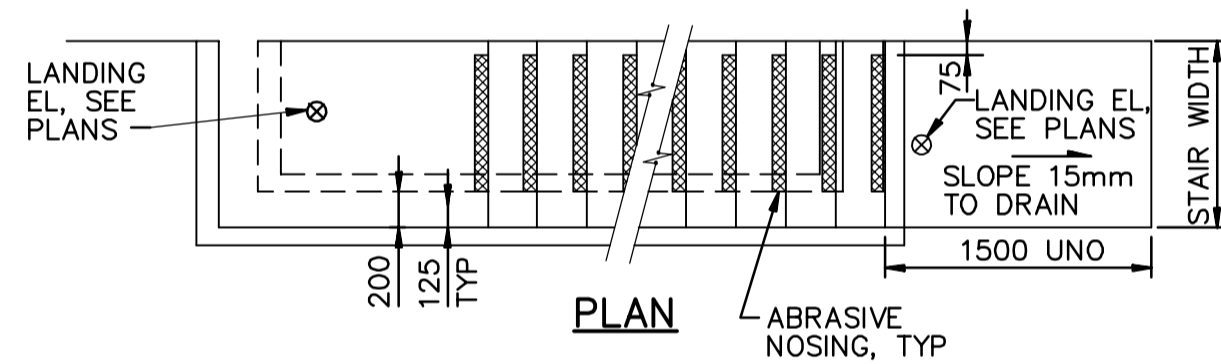
ELEVATION
ANCHOR BOLT BLOCKOUT

NOTES:
1. FOR CONCRETE EQUIPMENT PAD DETAILS AND NOTES NOT SHOWN SEE 2 AND 2
WB-S0459 WB-S0460
2. MATERIAL TO MATCH BOLT.

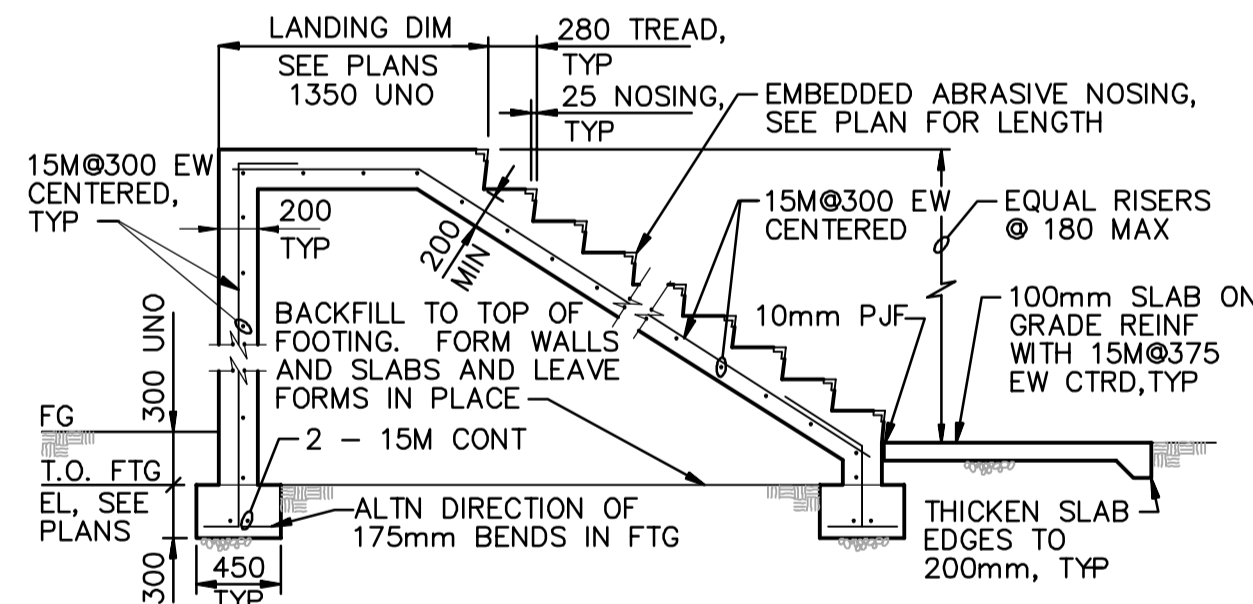


NOTES:
1. PROVIDE KEY FOR ALL FILL WHERE FILL SLOPE ANGLE TO WALL OR SLAB IS LESS THAN 45 DEGREES.
2. LENGTHEN 90mm BLOCKOUT AS REQUIRED TO MAINTAIN 50mm MINIMUM THICKNESS OF GROUT OR CONCRETE FILL.

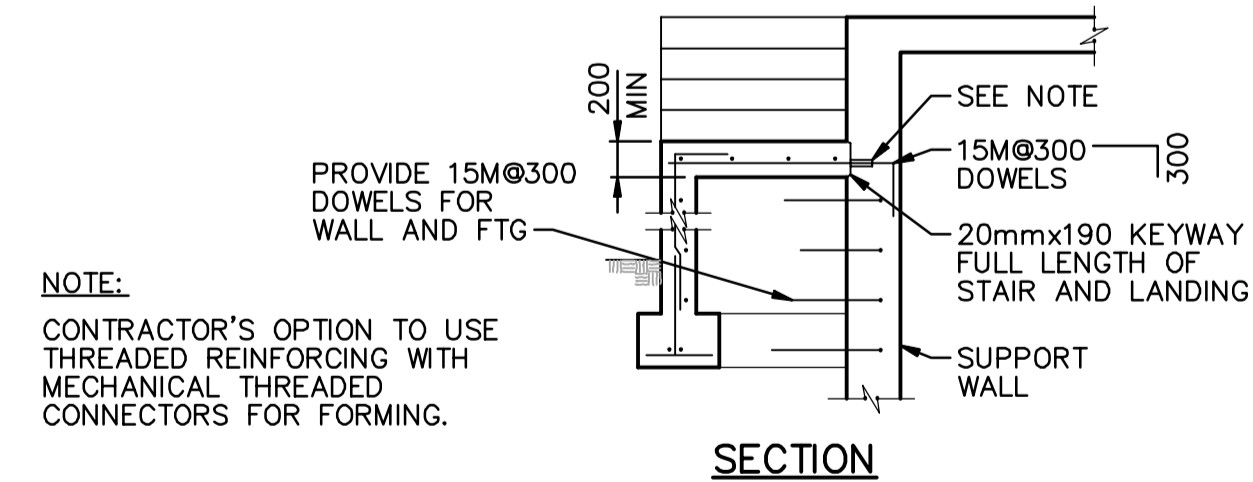
3 CONCRETE OR GROUT FILL KEY
N.T.S.



PLAN

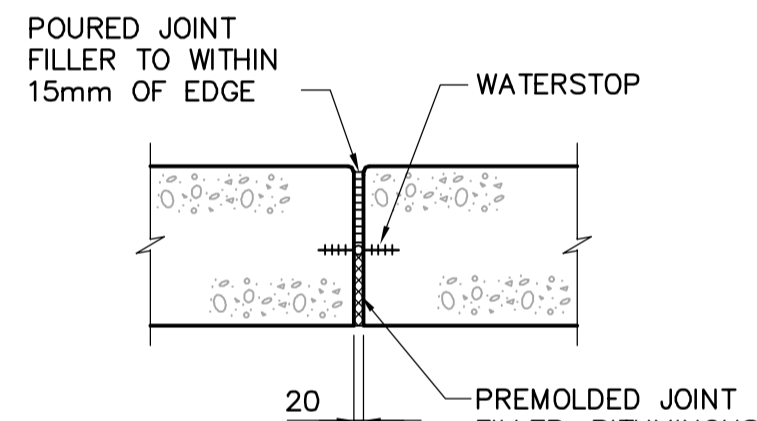


SECTION

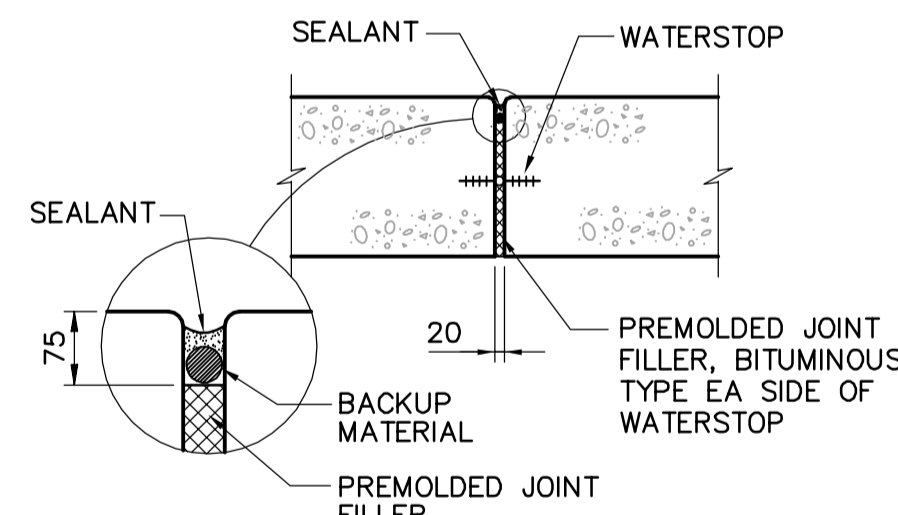


SECTION

4 CONCRETE STAIR - WITH CLOSURE WALL
N.T.S.



AT LIQUID SURFACE

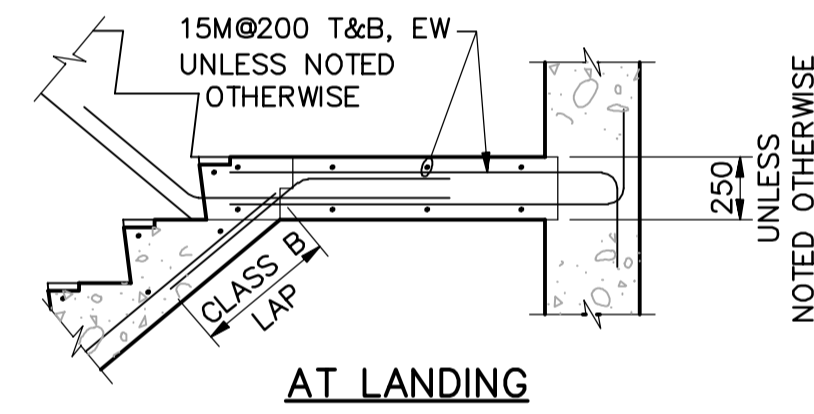


AT NON-LIQUID SURFACE

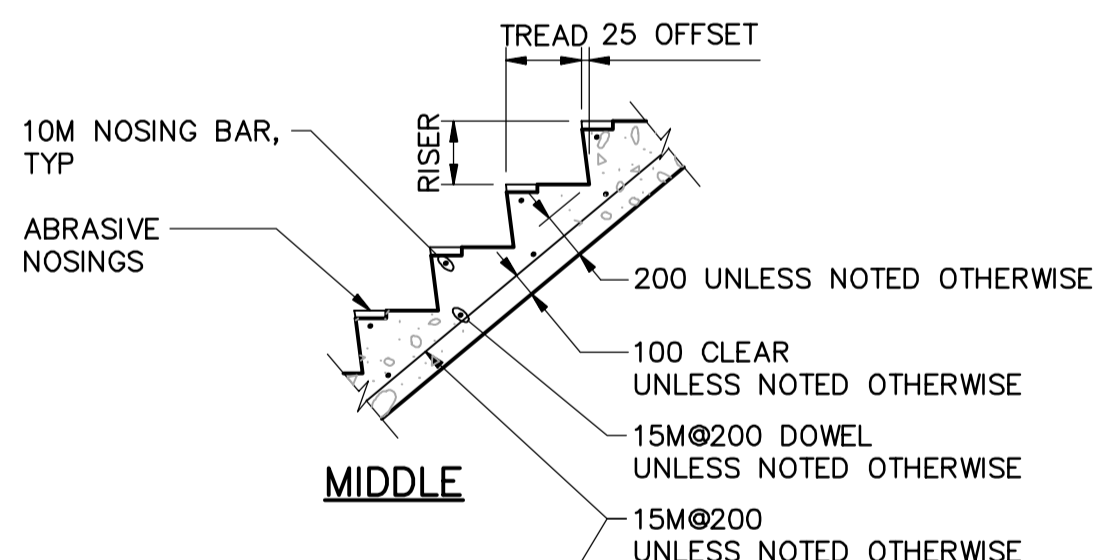
NOTE:
ATTACH PREMOLDED JOINT FILLER WITH 65mm GALVANIZED NAILS @ 300mm SPACING EMBEDDED IN FIRST POUR.

EXPANSION JOINT TREATMENT

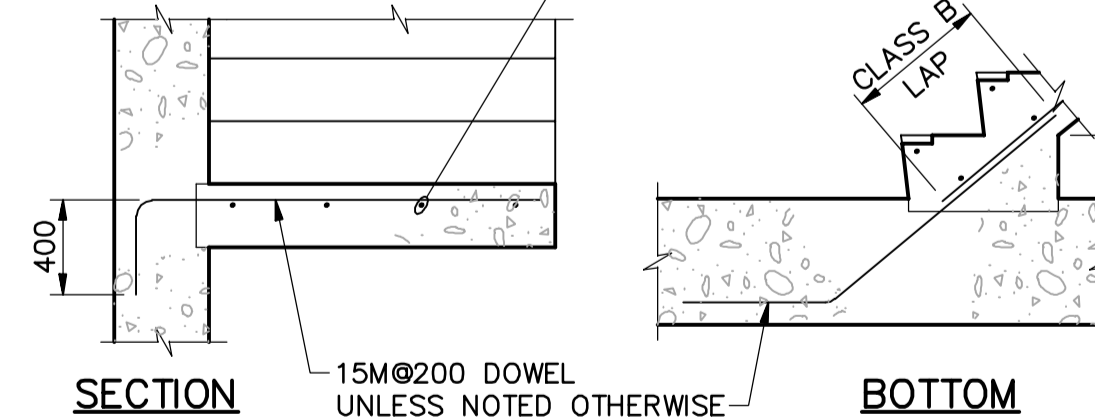
5 DETAIL
N.T.S.



AT LANDING



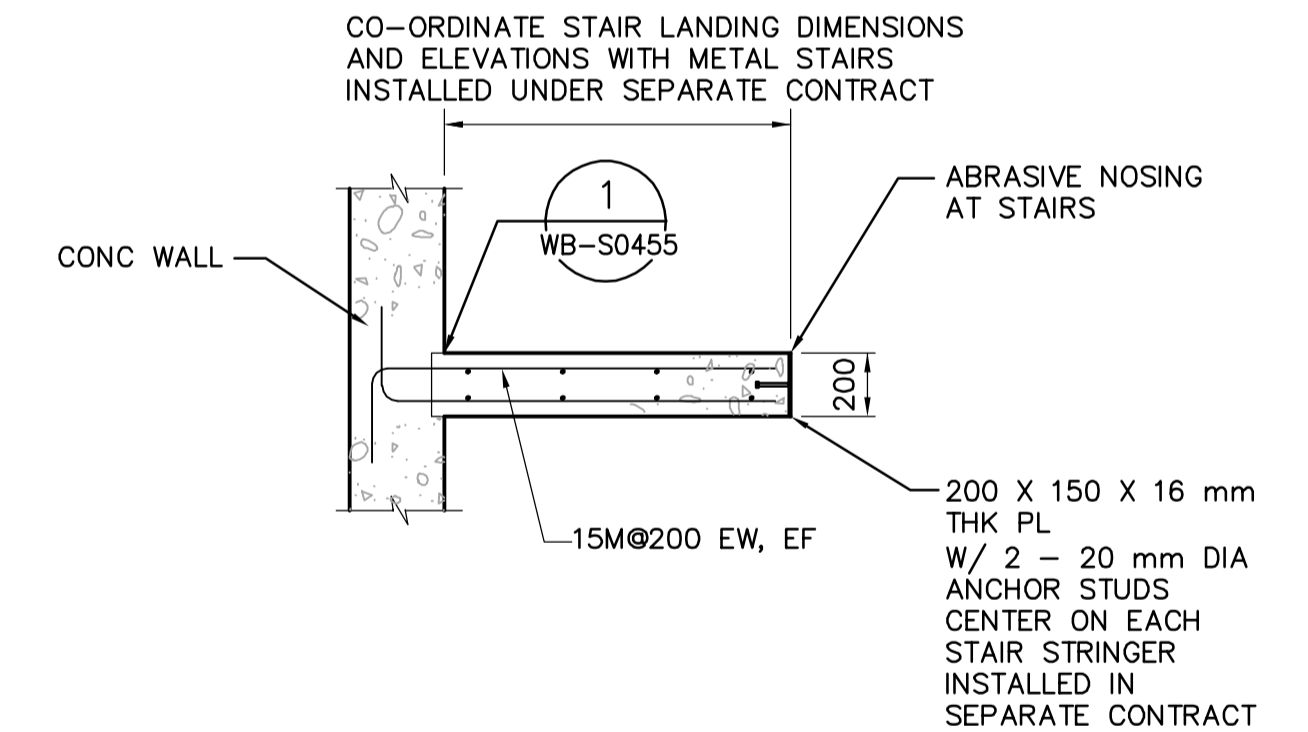
MIDDLE



SECTION

BOTTOM

6 TYPICAL CONCRETE STAIR REINFORCING
N.T.S.



7 TYPICAL CONCRETE STAIR LANDING
N.T.S.

APECA
Certificate of Authorization
CH2M HILL Canada Ltd.
No. 1441 Expiry: April 30, 2006

B.M. ELEV.					
DESIGNED BY	DK	CHECKED BY	AP		
DRAWN BY	PT	APPROVED BY	DJT		
SCALE:	NTS	RELEASED FOR CONSTRUCTION BY:	R. SOROKOWSKI		
ISSUED FOR TENDER	2006/02/03	DATE	2005/08/31	DATE	2006/02/08
NO. REVISIONS		DATE		DATE	

ENGINEER'S SEAL
ORIGINAL SIGNED BY
D. KRUGER
2006/02/06
CONSULTANT DRAWING NO.
WB-S0457

THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT
ENGINEERING DIVISION

WATER TREATMENT PLANT
FOUNDATIONS AND CONCRETE STRUCTURES
STRUCTURAL
STANDARD DETAILS

CITY FILE NUMBER
SHEET OF
CITY DRAWING NUMBER
1-060B-A-S0457-001-000