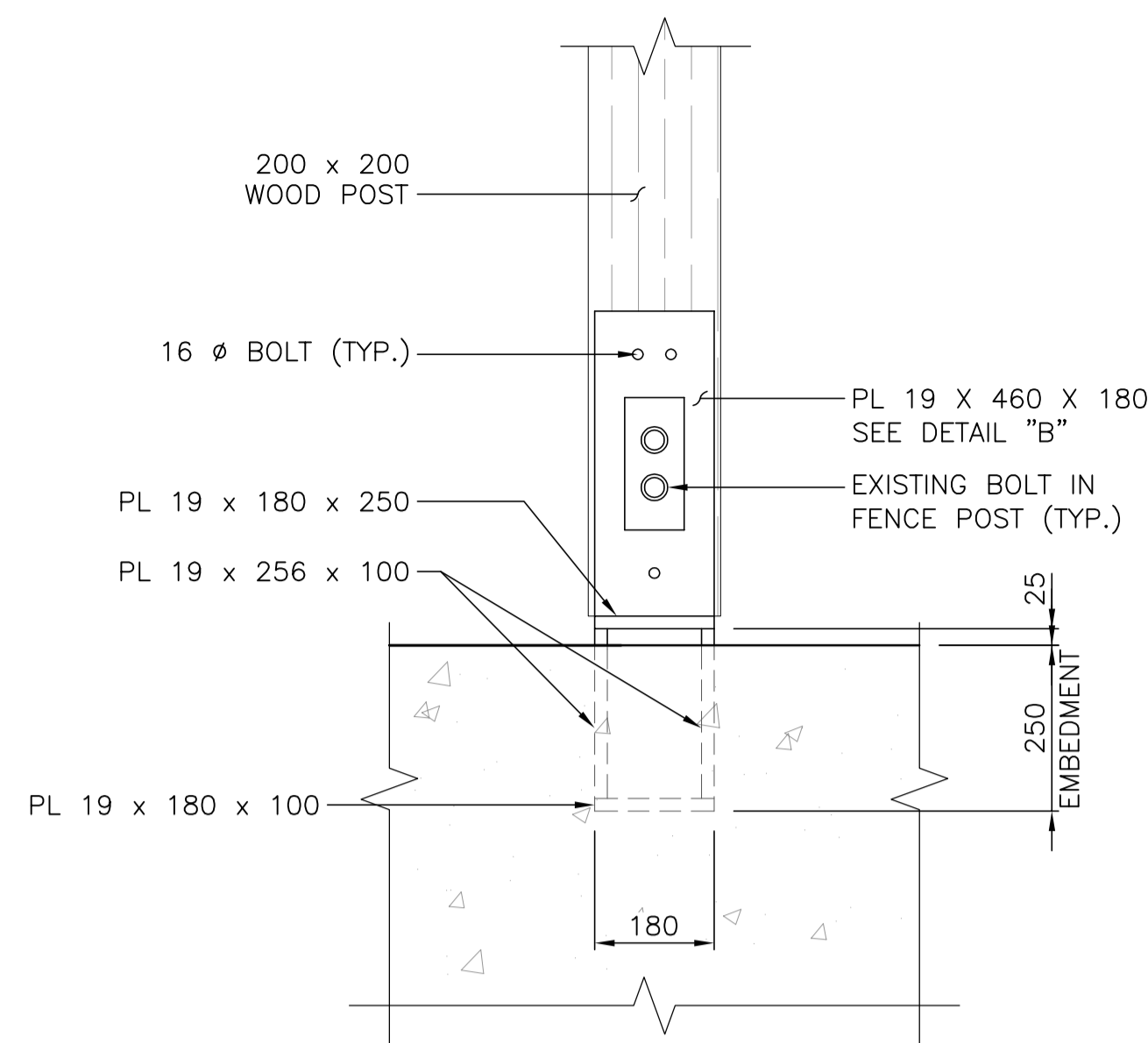
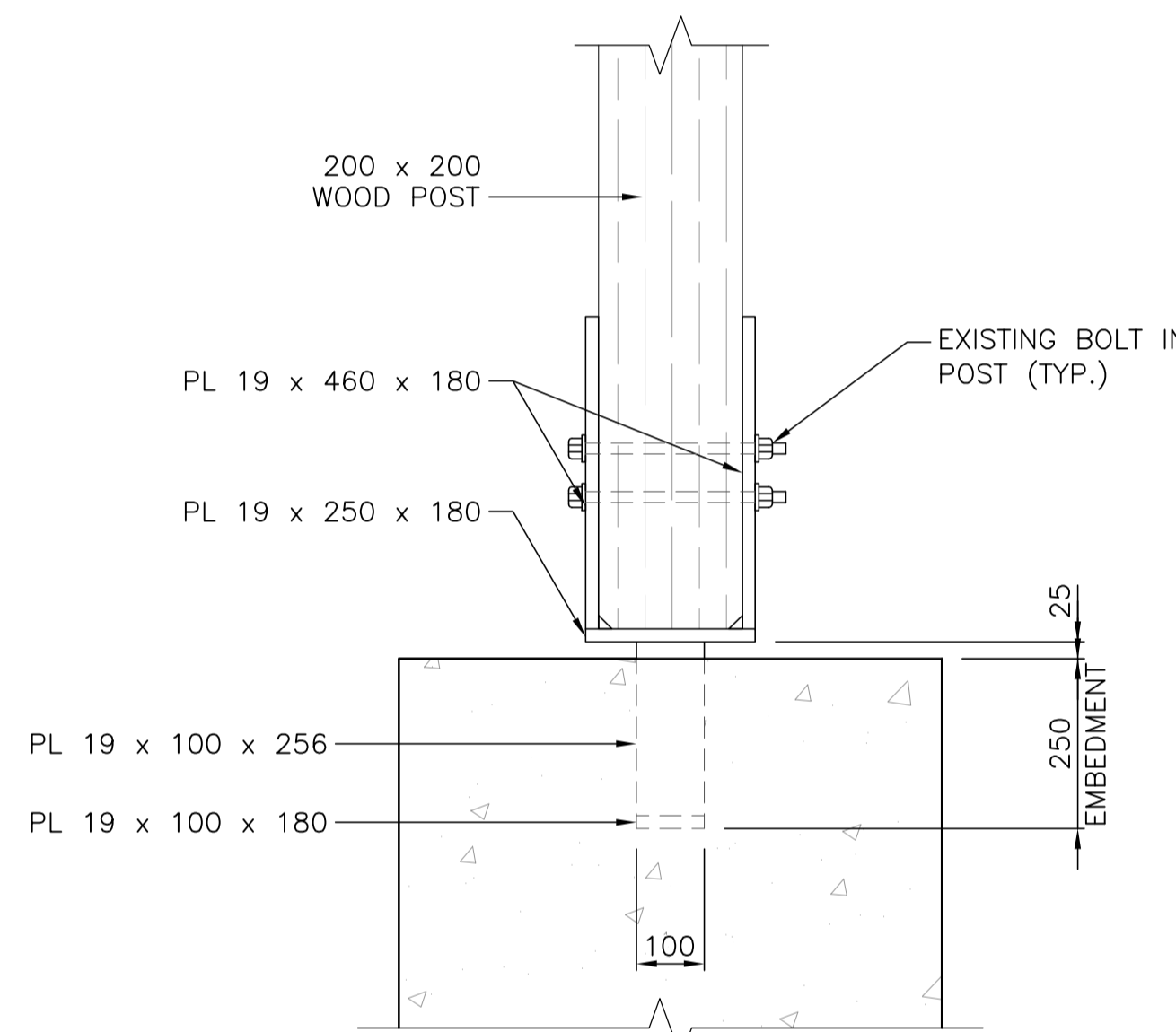


FENCE ELEVATION
SCALE 1:15

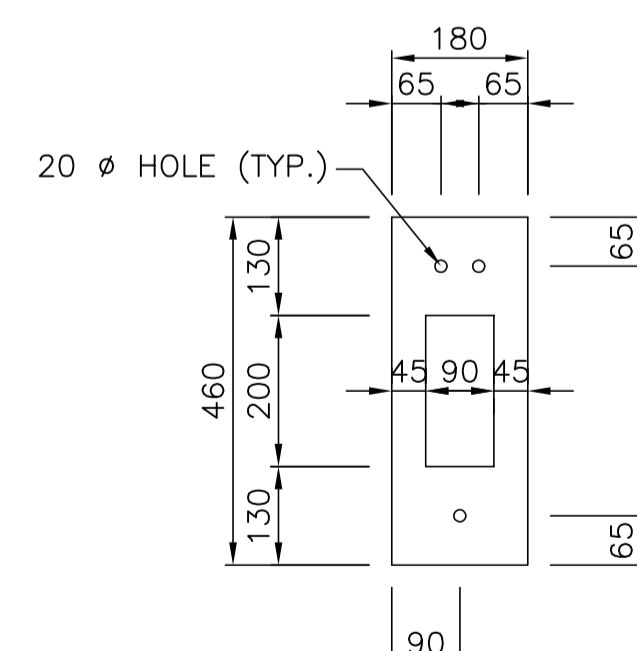


FRONT VIEW



SIDE VIEW

DETAIL "A"
SCALE 1:10



DETAIL "B"
SCALE 1:10

GENERAL NOTES:

- DESIGN IS IN ACCORDANCE WITH THE NATIONAL BUILDING CODE OF CANADA, 2010 EDITION PLUS MANITOBA AMENDMENTS.
- CONTRACTOR TO VERIFY UNDERGROUND UTILITIES AND STRUCTURES PRIOR TO CONSTRUCTION.
- CONTRACTOR TO VERIFY EXISTING FENCE POST LOCATIONS TO DETERMINE LOCATION OF NEW STEEL BRACKETS FOR PROPOSED FENCE.
- PROPOSED WOOD POST LENGTH AFTER CUTTING IS 1400± (WILL HAVE TO CUT APPROX. 75 BELOW EXISTING GROUND LEVEL).
- THE FENCE IS TO BE PLUMB.

CAST IN PLACE CONCRETE:

- TO BE READ IN CONJUNCTION WITH CW 2160 AND AS AMENDED IN ACCORDANCE WITH THESE NOTES.
- CONCRETE MIX:
 - CLASS OF EXPOSURE: S-1
 - MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS: 32MPa
 - MAXIMUM SLUMP: 80mm ± 20mm
 - AIR CONTENT: 4 - 7%
 - MAXIMUM WATER/CEMENT RATIO: 0.45
 - CEMENT TYPE HS
- CONCRETE COVER = 50mm UNLESS OTHERWISE STATED.
- ALL EXTERIOR CORNERS CHAMFERED 20mm.

REINFORCING STEEL:

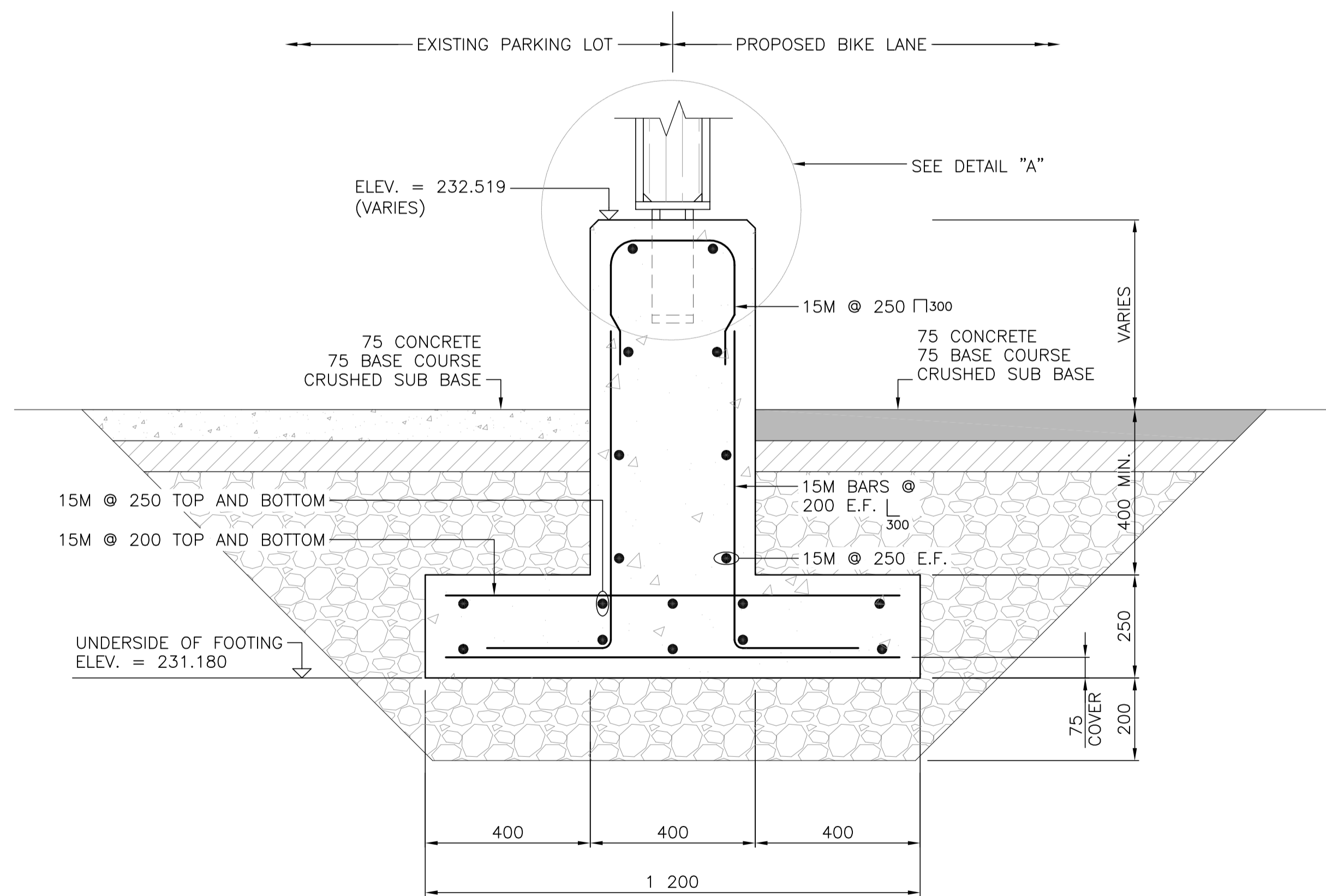
- TO BE READ IN CONJUNCTION WITH CW 2160 AND AS AMENDED IN ACCORDANCE WITH THESE NOTES.
- ALL REINFORCING STEEL SHALL CONFORM TO CSA G30.18M, GRADE 400W.
- ALL CONCRETE REINFORCING WORK SHALL BE PERFORMED IN ACCORDANCE WITH CSA A23.1.
- LAPS IN BARS SHALL BE AT LEAST 40 BAR DIAMETERS. REINFORCING SPLICES NOT INDICATED IN THE DRAWINGS SHALL BE LOCATED AT POINTS OF MINIMUM STRESS AND SHALL BE ALTERNATING.
- BEFORE PLACING CONCRETE, REINFORCING TO BE CLEAN, FREE OF LOOSE SCALE, DIRT OR OTHER FOREIGN MATTER THAT WOULD REDUCE OR PREVENT BOND TO THE CONCRETE.

STRUCTURAL STEEL & MISCELLANEOUS NOTES:

- ALL STRUCTURAL STEEL SHAPES AND PLATES SHALL BE IN ACCORDANCE WITH CSA G40.21-M, GRADE 300W, EXCEPT W, HP AND HSS SECTIONS WHICH SHALL BE GRADE 350W CLASS C.
- ALL GALVANIZING SHALL COMPLY WITH THE LATEST EDITION OF CSA G164, WITH MINIMUM ZINC COATING OF 600g/m². TOUCH UPS MADE WITH GALVALLOY OR GAL-VIZ.
- ALL BOLTS SHALL BE ASTM A316 STAINLESS STEEL, UNLESS OTHERWISE INDICATED.
- ANCHOR RODS SHALL COMPLY WITH ASTM-F1554, GRADE 55.
- ANGLES, STEEL PLATE, GRATING & HARDWARE INCLUDING SADDLE CLIPS, AND BOLTS SHALL BE GALVANIZED AFTER FABRICATION.
- ALL WELDS SHALL BE SEALED PRIOR TO GALVANIZING.
- WELDING SHALL BE IN ACCORDANCE WITH RECOMMENDATIONS OF CSA W59-13
- APPLY GALALLOY OR GAL-VIZ TO ALL FIELD WELDS AND DAMAGED AREAS OF GALVANIZING.
- THREADED ROD, WASHER, AND NUT SHALL BE GALVANIZED OR STAINLESS STEEL.
- ROUND ALL SHARP CORNERS.

STRUCTURAL WOOD NOTES:

- ALL LUMBER SHALL CONFORM TO 2014 N.L.G.A. GRADING RULES FOR CANADIAN LUMBER.
- THE CARPENTRY CONTRACTOR IN CONJUNCTION WITH THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR SUPPLYING AND INSTALLING ALL TEMPORARY AND PERMANENT BRACING REQUIRED TO PROVIDE THE STABILITY OF THE STRUCTURE.
- ALL NEW WOOD FENCING SHALL MATCH EXISTING FENCE.
- NEW WOOD FENCE MATERIAL SHALL BE PRESSURE-TREATED.



SECTION A-A
SCALE 1:10

LOCATIONS APPROVED UNDERGROUND STRUCTURES			
SIGNED BY:	DATE		
SUPV U/G STRUCTURES			
LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING			
NO.	REVISIONS	DATE	BY

G.B.M. -			
ELEV. -			
DESIGNED BY	MLW		
CHECKED BY	MLW		
DRAWN BY	KB		
APPROVED BY			
HOR. SCALE	As Shown		
VERTICAL			
ISSUED FOR U/G STRUCTURES FOR REVIEW	28.03.16 MW		
NO.	REVISIONS	DATE	BY
		19.04.2016	

MMM GROUP

MMM Group Limited,
Suite 111 - 93 Lombard Ave.
Winnipeg, MB R3B 3B1
t. 204.943.3178
f. 204.943.4948
www.mmm.ca

ENGINEER'S SEAL
PROVINCE OF MANITOBA
April 19, 2016
M. L. WADELIUS
Member
23909
REGISTERED PROFESSIONAL ENGINEER

CONSULTANT ACAD DWG. NO.
5515081 - S-01

THE CITY OF WINNIPEG
PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES DIVISION

Winnipeg

CITY OF WINNIPEG
WINNIPEG BIKE PROJECTS

CITY DRAWING NUMBER
SHEET 1 OF 1

BID NO.
312-2016

MAIN STREET AND ASSINIBOINE AVENUE CROSSING
FENCE AND RETAINING WALL DETAILS

METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

APGM
Certificate of Authorization
MMM Group Limited
No. 4531 Date: -

Apr 19, 2016 - 1:15:11 PM
P:\5515081-5515081-5515081-5515081 - Winnipeg Bike Projects\MMM Drawings\Project 1 and 2 For Gerry\Preliminary Design\5515081 - Retaining Wall Detail.dwg - Lab\Rail Post

NOTE:
These design documents are prepared solely for the use by the party with whom the design professional has entered into a contract and there are no representations of any kind made by the design professional to any party with whom the design professional has not entered into a contract.