

GENERAL

- ### REFERENCED DRAWINGS

- FIELD REVIEWS BY McELHANNEY LTD.

- DESIGN STANDARDS:

- 1 H5 VEHICLE LOAD
S101 SCALE: N.T.S.

1. PREPARATION, PLACING AND FINISHING OF CONCRETE IS TO CONFORM TO CSA A23.1.

2. TESTING OF CONCRETE IS TO CONFORM TO CSA A23.2. THE MINIMUM NUMBER OF TESTS IS NOT TO BE LESS THAN ONE (1) COMPRESSIVE STRENGTH, SLUMP AND AIR TEST FOR EACH CONCRETE ELEMENT (FOOTINGS, FOUNDATIONS AND SLABS). IN ADDITION:
 - COMPRESSIVE STRENGTH TESTING FREQUENCY IS TO BE FOR ONE (1) TEST PER DAY FOR CONCRETE OF A SINGLE MIX DESIGN AND FOR EVERY 100 CUBIC METERS PLACED.
 - AIR CONTENT TEST FREQUENCY FOR CONCRETE CLASSES F1, C-XL AND C1 IS TO BE ONE (1) TEST FOR EVERY LOAD OR BATCH
3. IT IS THE CONTRACTORS RESPONSIBILITY TO COORDINATE THE TESTING SCHEDULE AND TIMING WITH THE TESTING AGENCY.
4. IF A CONCRETE HARDENER IS SELECTED BY THE OWNER/ARCHITECT THEN THE AIR CONTENT OF THE CONCRETE IS TO BE COORDINATED WITH THE MANUFACTURER FOR COMPATIBILITY.
5. CONCRETE PROPERTIES:

ITEM	28 DAY STRENGTH	EXPOSURE GLASS	W/C	AIR (%)	CEMENT TYPE	AGG. SIZE (")
FOOTINGS	25 MPa	F-2	.55	4 - 7	GU	3/4
FOUNDATIONS	25 MPa	F-2	.55	4 - 7	GU	3/4
INTERIOR SLAB	25 MPa	F-2	.55	4 - 7	GU	3/4
EXTERIOR SLAB	32 MPa	C1	.45	5 - 8	GU	3/4

REINFORCING

1. REINFORCING STEEL IS TO CONFORM TO CSA G30.12M - GRADE 400 MPa.
2. REINFORCING STEEL IS TO BE PLACED AS DETAILED TO 3/8" TOLERANCE AND IS TO BE SUPPORTED BY METAL OR PLASTIC SUPPORTS AND/OR HANGERS IN ACCORDANCE WITH CSA A23.1.
3. LAP ALL REINFORCING BAR SPLICES 32 BAR DIAMETERS MINIMUM UNLESS INDICATED OTHERWISE ON THE DRAWINGS.
4. REINFORCING STEEL IS TO BE CLEAN, FREE OF CORROSION AND UNDAMAGED.
5. DO NOT WELD BARS OR USE HEAT TO BEND REINFORCING STEEL.
6. WELDED WIRE MESH IS TO CONFORM TO CSA G30.15.
7. CONCRETE COVER OVER REINFORCEMENT IS TO BE:
 - a. SURFACE PLACED IN CONTACT WITH GROUND = 5"
 - b. FORMED SURFACE EXPOSED TO GROUND OR WEATHER = 2"
 - c. SLABS = 1-1/2"

1. STRUCTURAL STEEL IS TO CONFORM TO CSA G40.21 WITH THE FOLLOWING GRADES:

- CHANNELS AND ANGLES 300W
- HSS SECTIONS, CLASS C 350W
- BARS AND PLATES 300W
- HANDRAIL ASTM A53 GRADE B PIPE AND MIN YIELD OF 240MPa
2. SUPPLY MISCELLANEOUS ITEMS INCLUDING ALL ANCHOR BOLTS, EXPANSION BOLTS, AND OTHER MEANS OF ANCHORAGE NOT SPECIFICALLY CALLED FOR ELSEWHERE. SUPPLY ALL BOLTS, BRACKETS, CLEATS, PLATES, BEAMS, CHANNELS, NUTS, BOLTS AND OTHER ANCILLARY FASTENING NOT SPECIFIED ELSEWHERE.
3. DETAILING, FABRICATION, AND ERECTION OF STRUCTURAL STEEL TO CONFORM TO THE CSA S16-14.
4. WELDING TO CONFORM TO CSA W-59 BY FABRICATORS CERTIFIED BY CANADIAN WELDING BUREAU (CWB) TO THE REQUIREMENTS OF CSA W47.1 DIVISION 1 OR 2.1.
5. FIELD CONNECTIONS ARE TO BE HIGH STRENGTH, STEEL BOLTED CONNECTIONS EXCEPT WHERE DETAILED OTHERWISE ON DRAWINGS.
6. PREPARE STEEL SURFACES FOR PAINTING TO SSPC-SP3 FOR ALL STEEL AND APPLY MINIMUM (1) COAT OF SHOP PRIMER (COLOR TO BE AS SPECIFIED BY OWNER).
7. BOLT GRADE: ASTM F3125 GRADE A325. MINIMUM $\frac{1}{4}$ " DIAMETER AND GALVANIZED IF EXPOSED TO WEATHER.
8. ANCHOR RODS TO BE HILTI EPOXY ANCHORS AS SPECIFIED.
9. GRATING TO BE TRU-WELD TYP19-4 STEEL GRATING WITH $1\frac{1}{2}$ " x $\frac{3}{16}$ " BEARING BARS BY NUCOR GRATING OR APPROVAL EQUAL.
10. THE STEEL FABRICATOR IS TO SUBMIT SHOP DRAWINGS AND STEEL LAYOUT PLANS IN ACCORDANCE WITH THE BUILDING CONTRACT SPECIFICATIONS TO THE ENGINEER FOR REVIEW, MINIMUM 2 WEEKS PRIOR TO FABRICATION. THE SHOP DRAWINGS ARE TO BE IN THE SAME UNITS OF MEASURE (IMPERIAL OR METRIC) AS THE STRUCTURAL DRAWINGS.
11. THE SHOP DRAWINGS ARE TO INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING:
PROJECT NAME, PROJECT ADDRESS, DESIGN LOADS, DESIGN METHODS, LIFE LOAD AND TOTAL LOAD DEFLECTIONS, MEMBER LAYOUT, MEMBER SIZES, MATERIAL GRADE, BRACING SYSTEMS, BEARING REQUIREMENTS, BEARING ATTACHMENT, MEMBER CONNECTION DETAILS AND INSTALLATION PROCEDURE.
12. BOLT HOLES DIAMETER, EXCEPT FOR HILTI ANCHORS) TO BE $\frac{1}{16}$ " LARGER THAN BOLT Ø.
13. ALL WELDS TO BE $\frac{1}{4}$ "  UNO ON DETAILS.
14. USE HILTI GRATING CLIPS OR FIELD WELD GRATING. DOWN TO FRAME @24" MAX HOLD DOWN (CLIPS OR WELD) SPACING.
15. INSTALL ALL STRUCTURAL STEEL BOLTS USING TURN-OF-NUT INSTALL PROCEDURE AS PER CL.23.7.2 OF CSA STANDARD S16.
16. BASE PLATE ANCHOR BOLTS ARE TO CONFORM TO MINIMUM ASTM A-36 TO DIAMETERS AND LENGTHS INDICATED ON DRAWINGS.

1. ALL FRAMING IS TO BE S-P-F #2 OR BETTER, S4S, SEASONED DRY UNLESS INDICATED OTHERWISE ON DRAWINGS.

- ## LOG AND HEAVY TIMBER CONSTRUCTION

1. ALL HEAVY TIMBER CONSTRUCTION IS TO COMPLY WITH BC BUILDING CODE. (3.1.4.6.)
2. THE HEAVY TIMBER AND LOG MANUFACTURERS / FABRICATORS ARE TO SUBMIT SHOP DRAWINGS AND LAYOUT PLANS INCLUDING: MEMBER LAYOUT, SIZE, SPACING, SPECIES, FINISH AND CONNECTION DETAILS.
3. THE SHOP DRAWINGS ARE TO BE SEALED BY A PROFESSIONAL ENGINEER OF THE PROVINCE OF B.C. CERTIFYING MEMBERS ARE CORRECT FOR THE SPECIFIED DESIGN LOADS AND THAT MEMBERS CONFORM TO BC BUILDING CODE AND CSA STANDARDS.

12. BOLT HOLES DIAMETER; EXCEPT FOR HLTI ANCHORS) TO BE $\frac{1}{16}$ " LARGER THAN BOLT Ø.
13. ALL WELDS TO BE $\frac{1}{4}$ " UNO ON DETAILS.
14. USE HLTI GRATING CLIPS OR FIELD WELD GRATING. DOWN TO FRAME @24" MAX HOLD DOWN (CLIPS OR WELD) SPACING.
15. INSTALL ALL STRUCTURAL STEEL BOLTS USING TURN-OF-NUT INSTALL PROCEDURE AS PER CL.23.7.2 OF CSA STANDARD S16.
16. BASE PLATE ANCHOR BOLTS ARE TO CONFORM TO MINIMUM ASTM A-36 TO DIAMETERS AND LENGTHS INDICATED ON DRAWINGS.

A	Dec. 16, 2021	ISSUED FOR REVIEW	SW	SW	LC	
Rev	Date	Description	Drawn	Design	App'd	

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ORIGINAL DWG SIZE: ARCH D (24" x 36") - DO NOT SCALE THIS DRAWING

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Approved Sealed

CITY OF FERNIE

FERNIE VALLEY PATHWAY PEDESTRIAN BRIDGE

GENERAL STRUCTURAL NOTES

Drawing No.

S101

Sheet 1 of 5

Project Number

Rev



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