

PART 1 - GENERAL

1.1 RELATED SECTIONS

- .1 Section 01 74 21 - Construction/Demolition Management and Disposal.
- .2 Section 03 30 07 - Concrete Repairs.

1.2 REFERENCES

- .1 Canadian General Standards Board (CGSB).
 - .1 CAN/CGSB-51-32, Sheathing, Membrane, Breather Type.
- .2 Canadian Standards Association (CSA).
 - .1 CSA B111, Wire Nails, Spikes and Staples.
 - .2 CAN/CSA-G064, Hot Dip Galvanizing of Irregularly Shaped Articles.
 - .3 CSA O112 Series, CSA Standards for Wood Adhesives.
 - .4 CSA O121, Douglas Fir Plywood.
 - .5 CAN/CSSA-0141, Softwood Lumber.
 - .6 CSA O151, Canadian Softwood Plywood.
 - .7 CAN/CSA-0325.0, Construction Sheathing.
- .3 National Lumber Grades Authority (NLGA)
 - .1 Standard Grading Rules for Canadian Lumber.

1.3 QUALITY ASSURANCE

- .1 Lumber identification: by grade stamp of an agency certified by Canadian Lumber Standards Accreditation Board.
- .2 Plywood, particleboard, OSB and wood based composite panels in accordance with CSA and ANSI standards.

1.4 SUBMITTALS

- .1 Submit proof of compatibility between Alkaline Copper Quaternary (ACQ) pressure treated lumber and fasteners to be utilized.

1.5 MEASUREMENT FOR PAYMENT

- .1 Staircase: No separate payment shall be made for materials, equipment, and labour required to construct the staircase as detailed on the drawings. Include all costs in the lump sum

portion of the work on the bid and acceptance form. Include in lump sum rock removal, concrete anchors, concrete footings for post supports, embedded rock and/or concrete anchors, excavation, backfilling, site work, galvanized steel pipe hand rail, field treatment of preservative, galvanized fasteners, galvanized connector's plates and all cost to provide approved temporary structures for access to the fishway during staircase construction.

- .2 No separate payment shall be made for reinstalling the timber counting trap. Include all costs for additional materials, labour and equipment in the lump sum portion of the bid and acceptance form.

PART 2 - PRODUCTS

2.1 FRAMING AND LUMBER MATERIALS

- .1 Lumber: unless specified otherwise, softwood, No. 1 or No. 2 grade, S4S, moisture content 19% (S-dry) or less in accordance with following standards:
 - .1 CAN/CSA-O-141.
 - .2 NLGA Standard Grading Rules for Canadian Lumber.
- .2 Framing and board lumber: in accordance with NBC.
- .3 Furring, blocking, nailing strips, grounds, rough bucks, fascia backing and sleepers:
 - .1 Board sizes: "Standard" or better grade.
 - .2 Dimension sizes: "Standard" light framing or better grade.
 - .3 Post and timbers sizes: "Standard" or better grade.
- .4 Pressure treated material to be Alkaline Copper Quaternary (ACQ).

2.2 PANEL MATERIALS

- .1 Plywood, OSB and wood based composite panels: to CAN/CSA-O325.0.
- .2 Douglas fir plywood (DFP): to CSA O121, standard construction.

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- .3 Canadian softwood plywood (CSP): to CSA O151, standard construction.

2.3 ACCESSORIES

- .1 General purpose adhesive: to CSA O112 Series.
- .2 Nails, spikes and staples: to CSA B111.
- .3 Bolts: to ASTM A307 Grade, galvanized c/w nuts and washers. Diameter as indicated on the drawing.
- .4 Proprietary fasteners: toggle bolts, expansion shields and lag bolts, screws and lead or inorganic fibre plugs, explosive actuated fastening devices, recommended for purpose by manufacturer.

2.4 FASTENER FINISHES

- .1 Galvanizing: to ASTM A153/A153M, use galvanized fasteners for exterior work.

2.5 WOOD PRESERVATIVE

- .1 Surface-applied wood preservative: clear or copper naphthenate or 5% pentachlorophenol solution, water repellent preservative.

2.6 PRE-ENGINEERED GALVANIZED METAL CONNECTORS

- .1 For the new staircase construction use metal connectors, hangers, caps, bases, hold-downs and plates for all wood to wood and wood to concrete connections as indicated on the drawings.
- .2 Steel:
- .1 Sheet: ASTM A36, ASTM A653, ASTM A1011 2.
Fasteners: ASTM A307, ASTM F1554, ASTM F1667, SAE C1022 (SDS Screws).
- .3 Finishes:
- .1 Hot-dipped galvanized or electro-plated galvanized: G90, G185 (ZMAX or HDG).
- .4 Install in strict accordance with the manufacturers specifications.
- .5 Standard of acceptance: Manufactured products by Simpson Strong-Tie Co., Inc. or approved equal.

PART 3 - EXECUTION

3.1 PREPARATION

- .1 Treat cut surfaces of plant treated material with wood preservative, before installation.
- .2 Apply preservative by dipping, or by brush to completely saturate and maintain wet film on surface for minimum 3 minute soak on lumber and one minute soak on plywood.
- .3 Re-treat surfaces exposed by cutting, trimming or boring with liberal brush application of preservative before installation.
- .4 All material to be treated unless specifically noted otherwise on the drawing or directed by the Departmental Representative.
- .5 Bedrock removal to facilitate construction of new staircase shall be done in accordance with Section 31 23 17 - Rock Removal.
- .6 Anchors or dowels to be drilled and grouted into rock or existing concrete shall be done in accordance with Section 03 20 50 - Rock Anchors.

3.2 INSTALLATION

- .1 Comply with requirements of NBC latest edition.
- .2 Install members true to line, levels and elevations, square and plumb.
- .3 Construct continuous members from pieces of longest practical length.
- .4 Install spanning members with "crown-edge" up.
- .5 Select exposed framing for appearance. Install lumber and panel material so that grade-marks and other defacing marks are concealed or are removed by sanding where materials are left exposed.
- .6 Install rough bucks, nailers and linings to rough openings as required to provide backing for frames and other work.
- .7 Install sleepers as indicated.

- .8 Use dust collectors and high quality respirator masks when cutting or sanding wood panels.

3.3 ERECTION

- .1 Frame, anchor, fasten, tie and brace members to provide necessary strength and rigidity.
- .2 Countersink bolts where necessary to provide clearance for other work.
- .3 Use nailing disks for soft sheathing as recommended by sheathing manufacturer.