PART 1 - GENERAL

1.1 WORK INCLUDED

.1 This Section specifies requirements for supplying, transporting and installing all items of rough carpentry.

1.2 RELATED WORK

.1 Sealants: Section 07 92 00

.2 Painting: Section 09 91 23

1.3 REFERENCES

.1 CSA O80 Series-08(R2012), Wood Preservation.

.2 CSA O86-2014, Engineering Design in Wood.

.3 CSA O112 Series-M1977(R2006), CSA Standards for Wood Adhesives.

.4 CSA O121-08(R2013), Douglas Fir Plywood.

.5 CSA O141-05(R2014), Softwood Lumber.

.6 CSA O151-09(R2014), Canadian Softwood Plywood.

.7 CSA O325.0-92(R2003), Construction Sheathing.

.8 National Lumber Grades Owner (NLGA) Standard Grading Rules for Canadian Lumber 2014.

1.4 QUALITY ASSURANCE

.1 Lumber identification: by grade stamp of an agency certified by Canadian Lumber Standards Accreditation Board.

.2 Plywood identification: by grade mark in accordance with applicable CSA standards.

PART 2 - PRODUCTS

2.1 FRAMING AND STRUCTURAL MATERIALS

.1 Lumber: unless specified otherwise, softwood, S4S, moisture content 19% (S-dry) or less in accordance with following standards:
.1 CAN/CSA-O141.
.2 NLGA Standard Grading Rules for Canadian Lumber.

.2 Glued end-jointed (finger-jointed) lumber is not acceptable.

.3 Machine stress-rated lumber is acceptable for all purposes.

.4 Framing and Board members: in accordance with NBC 2010.

.5 Furring, blocking, nailing strips, grounds, rough bucks, cants, curbs, fascia backing and sleepers:
.1 S2S or S4S is acceptable.
.2 Board sizes: "Standard" or better grade.
.3 Dimension sizes: "Standard" light framing or better grade.
.4 Post and timbers sizes: "Standard" or better grade.

.6 Lumber: unless specified otherwise, softwood kiln dried, spruce-pine-fir and cedar (where indicated) species, S4S, moisture content 15% or less in accordance with the following standards:
.1 CAN/CSA O141.
.2 NLGA Standard Grading Rules for Canadian Lumber 2014.

.7 Pressure treat all lumber in contact with ground or concrete.

2.2 PANEL MATERIALS

.1 Douglas fir plywood (DFP): to CSA O121, standard construction, thickness indicated.

.2 Canadian softwood plywood (CSP): to CSA O151, standard construction, thickness indicated. Exterior grade.

.3 Panel standards: type, grade and thickness as indicated and in accordance with the following standards:
.1 Canadian Softwood Plywood (CSP): to CAN/CSA O151, standard construction.

2.2 PANEL MATERIALS (Cont'd)

.4 Construction sheathing: to CSA O325.
.1 Wall sheathing to be 16 mm exterior grade Douglas Fir plywood sheathing.
.2 Roof sheathing to be 19 mm exterior grade tongue and groove plywood sheathing.

2.3 ACCESSORIES

.1 Sealants: as specified in Section 07 92 00.

.2 Nails, spikes and staples: galvanized for exterior work, plain finish for interior work.

.3 Bolts: 12 mm diameter unless indicated otherwise, complete with nuts and washers.

.4 Proprietary fasteners: toggle bolts, expansion shields and lag bolts, screws and lead or inorganic fibre plugs, recommended for purpose by manufacturer.

.5 General purpose adhesive to CSA-O112.

.6 Sill gasket: purpose made compressible sill gasket by "TrueFoam", or approved equivalent.

2.4 FINISHES

.1 Galvanizing: use galvanized fasteners for exterior work, interior highly humid areas and pressure-preservative treated lumber as indicated.

2.5 WOOD PRESERVATIVE

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

.2 Use pressure preservative treated wood to CAN/CSA O80, water borne for stained finish, where indicated and as follows:
.1 Treat plywood to CSA O80.9 using CCA or ACA preservative to obtain minimum net retention of 4.0 kg/m^3 of wood.
.2 Treat lumber to CSA O80.2 using CCA or ACA preservative to obtain minimum net retention of 4.0 kg/m^3 of wood.
.3 Following water-borne preservative treatment, kiln dry material.

PART 3 - EXECUTION

3.1 PREPARATION

.1 Treat cut surfaces of pressure preservative treated material with surface applied wood preservative, before installation, and as follows:
.1 Apply preservative by dipping, or by brush to completely saturate and maintain wet film on surface for minimum three (3) minute soak on lumber and one (1) minute soak on plywood.
.2 Re-treat surfaces exposed by cutting, trimming or boring with liberal brush application of preservative before installation.
.3 Treat all material as indicated and as follows:
.1 Wood cants, backing, curbs, nailers on roof deck, and wall blocking.

3.2 INSTALLATION

.1 Comply with requirements of NBC 2010, Division B, Part 9 supplemented by following paragraphs.

.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 Install furring and blocking as required to space-out and support casework, cabinets, electrical equipment mounting boards, and other work as required.

.6 Install furring to support siding applied vertically where there is no blocking.
.1 Align and plumb faces of furring and blocking to tolerance of 1:600.

.7 Install rough bucks, nailers and linings to rough openings as required to provide backing for frames and other work.

.8 Install wood cants, nailers, curbs and other wood supports as required and secure using galvanized or stainless steel fasteners.

.9 Sheathing to be installed as and where indicated on the Drawings.

3.2 INSTALLATION (Cont'd)

.10 Install sheathing with a gap (3 mm) between sheets on all sides to accommodate sheathing expansion, under any masonry adhered veneer.

.10 Cutting of holes by trades or splices in members not indicated are not be permitted.

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.

3.4 SCHEDULES

.1 Sheathing:
.1 Plywood, DFP or CSP, exterior grade, pressure treated, square edge, thickness indicated.
.2 Interior and exterior applications as indicated on the Drawings.

.2 Electrical equipment backboards: Canadian softwood plywood to CSA O151, standard construction, CSP/S1S, 19 mm thick. Overall dimensions to suit equipment layout and arrangement. Install wood support framing as required. Painting of panel in Section 09 91 23.

END

PART 1 - GENERAL

1.1 Work Included

.1 This section specifies wood shingle roof and wood shingle siding plus accessories including flashing, fascia, soffit and wood preservative.

1.2 Related Work

.1 Rough Carpentry: Section 06 10 00

.2 Prefabricated Wood Trusses: Section 06 17 53

.3 Wood Siding: Section 07 46 23.

.4 Sealants: Section 07 92 00

.5 Painting: Section 09 91 23

1.3 References

.1 ASTM A123/A123M-13, Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.

.2 CAN/CGSB 51.32-77, Sheating, Membrane, Breather Type.

.3 CAN/CSA-O141-05(R2014), Softwood Lumber.

.4 CSA B111-1974(R2003), Wire Nails, spikes and Staples.

.5 CSA O80 Series-2008, Wood Preservative.

.6 CSA O118.2-08, Eastern White Cedar Shingles.

.7 CSA O121-M1978(R2008), Douglas Fir Plywood.

.8 CSA O151-2009, Canadian Softwood Plywood.

.9 National Lumber Grades Authority (NLGA) Standard Grading Rules for Canadian Lumber 1996.

1.4 Quality Assurance

.1 Lumber identification: by grade stamp of an agency certified by Canadian Lumber Standards Accreditation Board.

.2 Plywood identification: by grade mark in accordance with applicable CSA standards.

PART 2 - PRODUCTS

2.1 Lumber Material

.1 Lumber: unless specified otherwise, softwood, S4S, moisture content 19% or less in accordance with following standards:
.1 CAN/CSA-O141-05(R2014).
.2 NLGA Standard Grading Rules for Canadian Lumber.

2.2 Shingles

.1 No. 1 Clear Eastern Cedar shingles: to CSA O118.2.

.2 Shingle exposure to be maximum 125mm to the weather.

2.3 Accessories

.1 Nails, spikes and staples: to CSA B111.

.2 Bolts: 12mm diameter unless indicated otherwise, complete with nuts and washers.

.3 Proprietary fasteners: toggle bolts, expansion shields and lag bolts, screws, powder driven fasteners, and lead or inorganic fibre plugs, recommended for purpose by manufacturer.

.4 Nailing discs: flat caps, minimum 25mm diameter, minimum 27 gauge (0.4 mm) thick, sheet metal, formed to prevent dishing. Bell or cup shapes not acceptable.

.5 Air barrier: to CAN/CGSB-51.32, spunbonded olefin type.
.1 Acceptable product: Tyvek by Dupont, or approved equivalent.

.6 Fascia eave vents: polypropylene strip vent.
.1 Acceptable product: S-400 as manufactured by Cor-A-Vent, or approved equivalent.

.7 Prefinished perforated aluminum soffit panels: 26 ga perforated aluminum, white in colour.

.8 Prefinished metal spandral panels: Vic West "Channel Wall" 26ga., white in colour or as selected by Departmental Representative.

.9 Prefinished aluminum cladding: 26ga aluminum sheet, colour as selected by Departmental Representative.

2.4 Finishes

.1 Galvanizing: to ASTM A123/A123M-13, use galvanized fasteners for exterior work, interior highly humid areas, pressure-preservative treated lumber.

2.5 Wood Preservative

.1 Pressure-applied wood preservative: to CAN/CSA-O80 Series and as follows:

.1 Treat lumber to CAN/CSA-O80 using CCA or ACA preservative to obtain minimum net retention of 4.0 kg/m^3 of wood.

.2 Following water-borne preservative treatment, kiln dry material.

.3 Surface applied wood preservative: coloured, copper napthenate or 5% pentachlorophenol solution, water repellent preservative to meet specific requirements of CSA O80.

PART 3 - EXECUTION

3.1 Preparation

.1 Treat cut surfaces of pressure preservative treated material with same 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.

3.2 Installation

.1 Comply with requirements of NBC 2005 Part 9 supplemented by following paragraphs.

.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 Install wall sheathing in accordance with manufacturer's printed instructions.

.6 Install roof sheathing in accordance with requirements of NBC.

.7 Install wood fascia backing, nailers, and other wood supports as required and secure using galvanized steel fasteners.

3.2 Installation (Cont'd)

.8 Apply shingles 125mm exposure to weather and to NBC 2005, Bechem 9.27.7.

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.

.4 Power driven fasteners to be used to fasten wood to steel members.

END

PART 1 - GENERAL

1.1 Work Included

.1 This Section specifies requirements for design, supply, transporting and erecting pre-fabricated wood roof trusses where shown on the Drawings and as specified herein.

1.2 Related Work

.1 General Instructions Section 01 10 10

.2 Rough carpentry: Section 06 10 00

1.3 References

.1 CSA-O86-2014, Engineering Design in Wood.

.2 CAN/CSA-O141-05(R2014), Softwood Lumber.

.3 CSA W47.1-09(R2014), Certification of Companies for Fusion Welding of Steel Structures.

.4 NLGA, Standard Grading Rules for Canadian Lumber, 2014.

1.4 Design Criteria

.1 Design trusses, bracing and bridging in accordance with CSA-O86.

.2 Dead load and snow loads are indicated on the design drawings. Design trusses for point loads from suspended mechanical/electrical equipment as noted on plans.

.3 Limit combined live load and dead load deflections to 1/240th of span unless otherwise specified or indicated. Limit live load deflection to 1/360th of span unless otherwise specified or indicated.

.4 Design all truss uplift anchors (truss tie downs), including girder truss tie downs, in accordance with CSA-O86, to withstand the wind uplift loads shown on Drawings.

.5 At truss bearing points, where allowable compression perpendicular to the grain is exceeded, the truss manufacturer must provide bearing plates.

1.5 Source Quality Control

.1 Identify lumber by grade stamp of an agency certified by Canadian Lumber Standards Administration Board.

1.6 Qualification of manufacturers

.1 Fabricator for welded steel connections to be certified in accordance with CSA W47.1.

1.7 Shop Drawings

.1 Submit shop drawings and erection drawings in accordance with Section 01 10 10.

.2 Each shop drawing submission showing connection details must bear signature and stamp of professional engineer registered or licensed in the Province of Prince Edward Island.

.3 Indicate species, sizes, and stress grades of all lumber used as structural members. Show pitch, span, camber, configuration and spacing of members. Indicate connector types, thicknesses, sizes, locations and design value. Show bearing details. Indicate design load for each member.

.4 Submit stress diagram or print-out of computer design indicating design load for each member. Indicate allowable load and stress increase.

.5 Indicate arrangement of webs or other members to accommodate ducts and other specialties.

.6 Show lifting points for storage, handling and erection.

.7 Show location of lateral bracing for compression members.

1.8 Delivery and Storage

.1 Store members on job site in accordance with manufacturer's instructions. Provide bearing supports and bracings. Prevent bending, warping and overturning of members.

PART 2 - PRODUCTS

2.1 Materials

.1 Lumber: SPF species, No. 1 grade, softwood, S4S, with maximum moisture content of 19% at time of fabrication and to following standards:
.1 CAN/CSA-O141.
.2 NLGA (National Lumber Grading Association), Standard Grading Rules for Canadian Lumber.

.2 Fastenings: to CSA-O86.

.3 Tie-down anchors: prefabricated wood truss to top plate uplift anchors, galvanized, to resist uplift force calculated as per National Building Code of Canada, current edition.

2.2 Fabrication

.1 Fabricate wood trusses in accordance with reviewed shop drawings.

.2 Provide for design camber and roof slopes when positioning truss members.

.3 Connect members using metal connector plates.

PART 3 - EXECUTION

3.1 Erection

.1 Erect wood trusses in accordance with reviewed erection drawings.

.2 Indicated lifting points to be used to hoist trusses into position.

.3 Make adequate provisions for handling and erection stresses.

.4 Exercise care to prevent out-of-plane bending of trusses.

.5 Install temporary horizontal and cross bracing to hold trusses plumb and in safe condition until permanent bracing and decking are installed.

.6 Install permanent bracing in accordance with reviewed shop drawings, prior to application of loads to trusses.

3.1 Erection (Cont'd)

.7 Do not cut or remove any truss material without approval of the Departmental Representative.

.8 Provide galvanized uplift anchor(s), at each truss bearing point, to resist uplift force, calculated as per National Building Code of Canada, current edition.

.9 Have all truss tie downs (uplift anchors), including girder truss tie downs, designed, supplied and installed by truss supplier.

END