

1 GENERAL

1.01 RELATED REQUIREMENTS

- .1 Division 1 - General Requirements
- .2 Section 09 03 61 Historic Repainting

1.02 REFERENCES

- .1 Definitions:
 - .1 Shingle: tapered slice of wood sawn from block with taper in direction of grain or axial direction.
 - .2 Shake: split shingle of 9.5 mm thickness with or without taper occurring in direction of grain or axial direction.
- .2 Reference Standards:
- .3 ASTM International
 - .1 ASTM D 5116-10, Standard Guide For Small-Scale Environmental Chamber Determinations of Organic Emissions From Indoor Materials/Products.
- .5 Canadian General Standards Board (CGSB)
 - .1 CAN/CGSB-51.32-M77, Sheathing, Membrane, Breather Type.
 - .2 CAN/CGSB-51.34-M86(R1988), Vapour Barrier, Polyethylene Sheet for Use in Building Construction.
- .6 CSA International
 - .1 CSA A123.3-05(R2010), Asphalt Saturated Organic Roofing Felt.
 - .2 CSA B111-1974(R2003), Wire Nails, Spikes and Staples.
 - .3 CSA O118.1-08, Western Red Cedar Shakes and Shingles.
 - .4 CAN/CSA-Z809-08, Sustainable Forest Management.
- .7 Cedar Shake and Shingle Bureau (CSSB)
 - .1 CSSB-97, Cedar Shake and Shingle Grading Rules.
 - .2 CSSB New Roof Construction Manual for Roof Application Details 2011.
 - .3 CSSB Exterior and Interior Wall Manual for Sidewall Application Details 2002].
- .8 Forest Stewardship Council (FSC)
 - .1 FSC-STD-01-001-2004, FSC Principle and Criteria for Forest Stewardship.
- .9 Sustainable Forestry Initiative (SFI)
 - .1 SFI-2010-2014 Standard.

1.03 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Submit in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Product Data:
 - .1 Submit manufacturer's instructions, printed product literature and data sheets for wood shingles and include product characteristics, performance criteria, physical size, finish and limitations.

- .2 Include information on preservation and restoration of shingles.
- .4 Samples:
 - .1 Submit duplicate full size shingles, of finish and profile specified.

1.04 QUALITY ASSURANCE

- .1 Qualifications:
 - .1 Use only contractors competent to meet all performance criteria specified.
- .2 Mock-ups:
 - .1 Construct mock-ups in accordance with Section 01 45 00 - Quality Control.
 - .1 Construct 1200 mm x 1200 mm mock-up where directed by Departmental Representative.
 - .2 For testing to determine compliance with performance requirements.
 - .1 Perform tests as follows:
 - .3 Allow 72 hours for inspection of mock-up before proceeding with work.
 - .4 When accepted, mock-up will demonstrate minimum standard of quality required for this work.
 - .1 Approved mock-up may remain as part of finished work.
- .3 Test Reports: submit certified test reports showing compliance with specified performance characteristics and physical properties.
- .4 Certificates: submit product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.

1.05 DELIVERY, STORAGE AND HANDLING

- .1 Deliver, store and handle materials in accordance with Section 01 61 00 - Common Product Requirements.
- .2 Delivery and Acceptance Requirements: deliver materials to site in original factory packaging, labelled with manufacturer's name and address.
- .3 Storage and Handling Requirements:
 - .1 Exercise care to avoid damage during unloading and storing.
 - .2 Store materials off ground in dry location and in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.
 - .3 Store and protect shingles from nicks, scratches, and blemishes.
 - .4 Replace defective or damaged materials with new.
 - .5 Remove only in quantities required for same day use.

1.06 UNUSED MATERIALS

- .1 Unused shingles shakes remain property of Departmental Representative.
- .2 Return unused shingles to Departmental Representative. Retain packaging or rewrap shingles to form complete bundles.
- .3 Label packages to identify product, quantity and manufacturer/supplier.

- .4 Deliver and store in location designated by Departmental Representative.

2 PRODUCTS

2.01 MATERIALS

- .1 Western Red Cedar shingles: to CSA 0118.08, 460 mm length, square pattern to match existing.
 - .1 CAN/CSA-Z809 or FSC or SFI certified.
- .2 Wood Strapping Fasteners: 8mm stainless steel impact expansion anchors. At 1000mm O.C. vertically.
- .3 Shaped Wood Strapping: Douglas Fir 50mm x 150mm to 300mm treated timber strapping
- .4 Wood Sheathing: 19mm Douglas Fir treated plywood.
- .5 Wood Sheathing Fasteners: 44mm stainless Steel wood screws at 300mm O.C.
- .6 Shingle Nails: 30mm Stainless Steel.
- .7 Bronze insect screen: 90% copper and 10% zinc.
- .8 Waterproof membrane: self-adhesive, rubberized asphalt, cross laminated high density polyethylene film and primer.
- .9 Galvanized aluminum flashing: 0.4mm.

3 EXECUTION

3.01 EXAMINATION

- .1 Verification of Conditions: verify that conditions of substrate previously installed under other Sections or Contracts are acceptable in accordance with manufacturer's written instructions.
 - .1 Visually inspect substrate in presence of Departmental Representative.
 - .2 Inform Departmental Representative of unacceptable conditions immediately upon discovery.
 - .3 Proceed with installation only after unacceptable conditions have been remedied and after receipt of written approval to proceed from Departmental Representative.

3.02 MANUFACTURER'S INSTRUCTIONS

- .1 Compliance: comply with manufacturer's written data, including product technical bulletins, product catalogue installation instructions, product carton installation instructions, and data sheets.

3.03 REMOVAL OF EXISTING WALL SHINGLES

- .1 Remove existing wall shingles and sheathing to expose masonry below.

- .1 Extent of removal as shown on drawings, is limited to the lower portion of the tower exterior where new belled condition to be implemented.
- .2 Withdraw existing shingle and flashing nails, set those which break off. Leave surfaces free from dirt and loose material.
- .3 Departmental Representative to inspect condition of wall masonry beind.
- .4 Replace cut out portions of sheathing boards of equal sectional dimensions, and specified grade. Seat each end of board on batten, with 25 mm bearing, and secure.

3.04 APPLICATION - WALL SIDING SHINGLES AND SHAKES

- .1 Do wood shingle work in accordance with NBC and CSA 0118.1, Appendix C, CSA 0118.2, Appendix B.
- .3 Install shingles over strapping and plywood sheathing.
- .4 Space shingles from 6 to 10 mm.
- .5 Stagger joints minimum of 40 mm in succeeding courses. Ensure that in any 3 courses no two joints are in alignment.
- .6 Use two nails per shingle. Space nails 20 mm from edge and 40 mm above butt line of following course.
- .7 Drive nails flush but do not crush shingles.
- .8 Install shingles using single course method to ensure triple thickness at any given point.
- .9 Starter course
 - .1 Double shingles at eaves.
 - .2 Block up started course sufficient to bring high points of all shingles courses into alignment.
 - .3 Project butts 25mm from first sheathing board or face of crown moulding.
- .10 Change in orientation
 - .1 Shingles at external corners soaked with galvanized metal flashing.
 - .2 At external corners alternate overlap.

3.05 CLEANING

- .1 Progress Cleaning: clean in accordance with Section 01 74 11 - Cleaning.
 - .1 Leave Work area clean at end of each day.
- .2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01 74 11 - Cleaning.

- .3 Waste Management: separate waste materials for reuse and recycling in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.
 - .1 Remove recycling containers and bins from site and dispose of materials at appropriate facility.

3.06 PROTECTION

- .1 Protect installed products and components from damage during construction.
- .2 Repair damage to adjacent materials caused by wood shingles and shakes installation.

END OF SECTION