

PART 1- GENERAL

1.1 RELATED REQUIREMENTS

- .1 Section 06 10 53 – Miscellaneous Rough Carpentry
- .2 Section 07 62 00 – Sheet Metal Flashing and Trim
- .3 Section 07 71 23 – Gutters and Down Spouts

1.2 REFERENCE STANDARDS

- .1 Canadian General Standards Board (CGSB)
 - .1 CAN/CGSB-37.4-M89, Fibrated, Cutback Asphalt, Lap Cement for Asphalt Roofing.
 - .2 CAN/CGSB-37.5-M89, Cutback Asphalt Plastic Cement.
- .2 Canadian Roofing Contractors' Association (CRCA)
 - .1 CRCA Roofing Specification Manual - 1997.
- .3 CSA International
 - .1 CSA A123.1/A123.5-05(R2015), Asphalt Shingles Made From Organic Felt and Surfaced With Mineral Granules/Asphalt Shingles Made From Glass Felt and Surfaced With Mineral Granules.
 - .2 CAN/CSA-A123.2-03(R2013), Asphalt-Coated Roofing Sheets.
 - .3 CSA A123.3-05(2015), Asphalt Saturated Organic Roofing Felt.
 - .4 CAN3-A123.51-14, Asphalt Shingle Application on Roof Slopes 1:3 and Steeper.
 - .5 CSA B111-1974(R2003), Wire Nails, Spikes and Staples.
- .4 Health Canada/Workplace Hazardous Materials Information System (WHMIS)
 - .1 Material Safety Data Sheets (MSDS).
- .5 National Research Council Canada (NRC) - Canadian Construction Materials Centre (CCMC)
 - .1 CCMC Registry of Product Evaluations.

1.3 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 asphalt shingles and include product characteristics, performance criteria, physical size, finish and limitations.
 - .2 Manufacturer's Instructions: provide to indicate special handling criteria, installation sequence, and cleaning procedures.
 - .3 Submit 2 copies of WHMIS MSDS in accordance with Section 01 35 29 - Health and Safety Requirements.

- .3 Samples:
 - .1 Submit duplicate samples of full size specified shingles.

1.4 DELIVERY, STORAGE AND HANDLING

- .1 Deliver, store and handle materials in accordance with Section 01 61 00 - Common Product Requirements and with manufacturer's written instructions.
- .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 Store materials off ground and in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.
 - .2 Remove only in quantities required for same day use.
 - .3 Store and protect asphalt shingles from nicks, scratches, and blemishes.
 - .4 Replace defective or damaged materials with new.

1.5 EXTRA STOCK MATERIALS

- .1 Submit maintenance materials in accordance with Section 01 78 00 - Closeout Submittals.
- .2 All unused shingles remain property of Departmental Representative.

1.6 WARRANTY

- .1 Provide a written guarantee, signed and issued in the name of the owner, stating the fiberglass-reinforced asphalt shingles shall remain free from defects in materials and workmanship for a period of forty (40) years from the date of Substantial Completion.
 - .1 Provide upgraded 15 year Wind Warranty from 177 km/h to 209 km/h mph (by complying with all manufacturers' conditions and instructions).
 - .2 10 year Algae Resistant Warranty.

PART 2 - PRODUCTS

2.1 SUSTAINABLE REQUIREMENTS

- .1 Materials and products in accordance with Section 01 47 15 – Sustainable Requirements

2.2 MATERIALS

- .1 Fiberglass-reinforced asphalt shingles: to CSA A123.1/A123.5.
 - .1 Type: Self-seal, standard, pattern rectangular
 - .2 Size: 1038mm x 349mm.
 - .3 Exposure: 149mm.

- .4 Texture: appearance of natural wood shakes.
- .5 32mm reinforced nailing area to resist nail pull through.
- .6 Resistant to blue-green algae growth.
- .7 Colours: as selected by Departmental Representative from manufacturer's full colour range.
- .2 Roofing underlayment: self-adhesive, non-woven glass fibre matt coated with SBS modified bitumen, minimum thickness 1.8 mm, bottom surface release film, top surface sanded.
- .3 Ice & water protector: Self-adhering, self-sealing, bituminous sheet surfaced with a sand-fines surface. Each roll is backed by a silicone treated release film for easier installation.
- .4 Continuous Ridge Vent: minimum 285 mm wide durable, copolymer plastic ridge vent, providing minimum 357 cm²/m net free vent area, capable of accepting fiberglass-reinforced asphalt shingle cap over for shingle finish.
- .5 Cement: Plastic cement: to CAN/CGSB-37.5.
- .6 Nails: to CSA B111, of galvanized steel, sufficient length to penetrate 19 mm into deck.
- .7 PVC drip edge: extruded profile of unplasticized polyvinyl chloride of minimum thickness of 0.8 mm.
- .8 Metal flashing: see Section 07 62 00 – Sheet Metal Flash and Trim

PART 3 - EXECUTION

3.1 EXAMINATION

- .1 Verification of Conditions: verify that conditions of substrate previously installed under other Sections or Contracts are acceptable for asphalt shingles installation 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.

3.2 REMOVAL OF EXISTING ROOFING

- .1 Remove existing roofing, flashings and underlay, and expose sheathing or shingle lath of roof.
- .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 roof sheathing.
- .4 Remove portion of sheathing affected by fungal or insect attack as directed by Departmental Representative.
- .5 Replace cut out portions of sheathing or lath with sheathing of equal sectional dimensions, and specified grade. Seat each end on rafter, with 25 mm bearing, and secure to rafter.

3.3 APPLICATION

- .1 Do asphalt shingle work to CAN3-A123.51 and manufacturer's written instructions except where specified otherwise.
- .2 Install drip edge along eaves, overhanging 12 mm, with minimum 50 mm flange extending onto roof decking.
 - .1 Nail to deck at 400 mm on centre.
- .3 Install ice dam protection underlayment directly on plywood at all eaves and roof edges as well as at all penetrations, abutments, and to vertical walls.
- .4 Apply 1-ply of underlayment over the entire deck surface, except where ice and water protector membrane has been installed.
- .5 Install bottom step flashing (soaker base flashing) interleaved between shingles at vertical junctions.
- .6 Install asphalt shingles on roof slopes 1:3 and steeper in accordance with CAN3-A123.51.
- .7 To ensure coverage under the High Wind Application Limited Wind Resistance Warranty; the shingles shall be installed with additional nails, the shingles shall have an opportunity to seal or be manually sealed and starter strip shingles shall be used at all eaves and rakes.

3.4 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.

3.5 PROTECTION

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

END OF SECTION