DIVISION 7 THERMAL & MOISTURE PROTECTION

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DIVISION 7 - THERMAL & MOISTURE PROTECTION

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1. GENERAL

1.1 General Requirements

.1 All requirements of the Contract apply to and govern all work of this Section

1.2 Related Work

- Division 06 Woods & Plastics.
- Section 07465 Preformed Metal Cladding/Siding.
- .3 Sheet Metal Roofing.

1.3 Standards Referred To

- .1 CAN/CGSB-51.33-M80 Vapour Barrier
- .2 CAN/CGSSB-51.34-M86, Vapour Barrier, Polyethylene Sheet, for Use in Building Construction.
- .3 CGSB 37-GP-9Ma, asphalt primer.
- .4 CSA B111; galvanized steel nails, minimum 12 mm long, large head.
- .5 CRCA "Manual on Good Roofing Practice" latest edition.

1.4 Quality Assurance and Extended Guarantees

.1 No specific requirements.

1.5 Special Handling and Transportation Requirements

.1 No specific requirements.

1.6 Submittals

- Shop drawings: Not required.
- .2 Samples: Not required

1.7 Maintenance Data and Materials

None required.

1.8 Special Environmental Requirements

.1 Maintain rolls at a temperature of not less than 5°C until application.

.2 Do not apply membrane during conditions of rain, snow or other precipitation.

1.9 Special Protection Requirements

No specific requirements.

2. PRODUCTS

2.1 Vapour Barrier Walls

.1 Self adhesive membrane composed of SBS modified bitumen and a polyethylene woven complex on the top surface. Acceptable product: Sopraseal Stick 1100 T manufactured by Soprema.

2.2 Vapour Barrier Roof

.1 Self adhesive membrane composed of a non-woven polyester reinforcement and elastomere bitumen. Acceptable product: Sopravap'r by Soprema.

2.3 Weather Barrier

.1 Acceptable material: TYVEK commercial wrap by Dupont.

2.4 Accessories

.1 Prime surfaces to receive vapour barrier with Elastocol Stick primer by Soprema.

3. EXECUTION

3.1 Installation

- Coordinate installation with Division 06.
- .2 Install 100 mm wide strips of flexible membrane on all corner joints of interior metal liner at exterior wall, exterior wall and roof penetrations and as indicated to form a continuous barrier. Clean primer, to substrate as required according to manufacturer's instructions.
- .3 All penetrations through interior metal liner, unless clearly indicated on Drawings and so installed must be approved by Consultant.
- 4 Inspect joint strips for continuity. Repair punctures and tears before work is concealed.

3.2 Electrical and Mechanical Penetrations

- .1 Where electrical or mechanical elements penetrate the interior metal liner, seal flexible membrane to liner panel and lap to electrical or mechanical element.
- .2 Provide effective seals within conduit between the inside and outside at the penetration.

3.3 Inspection

.1 Inspect entire installation and repair or replace damaged materials upon completion. Do not cover up any area or job mock-up until Consultant has inspected and accepted installation of air/vapour barriers. Provide Consultant with five days notice to arrange inspections of the air/vapour barrier installations.

3.4 Air/Vapour Barrier

- .1 Ensure all roof penetrations are in place before air/vapour barrier is applied.
- .2 Touch up pre-primed sheathing in accordance with manufacturer's directions to solid black colour.
- .3 Over primed plywood deck install torch on air/vapour barrier membrane.
- .4 Installed vapour barrier shall be torched on to form a complete and continuous membrane over the roof and wall connection, sealed at all joints and penetrations. Seal all roof penetrations with double layer of membrane.
- .5 Sequence wall and roof air/vapour barrier installation as indicated to ensure positive air seal at junctions.
- .6 Apply air/vapour barrier material parallel to roof slope. Make laps so that flow of water is over them and never against them. Reinforce peaks and valleys in roof to membrane manufacturer's recommendation. At wall/roof junction lap and seal polyethylene sheet vapour barrier with torch on roof vapour barrier to ensuring continuous seal.

3.5 Roof Insulation

- .1 Install insulation in two layers.
- .2 Install first level of insulation shiplapped edged, running with roof slope and adhere with insulation base layer fasteners and/or SBS modified mastic sufficient to secure until subsequent layers of insulation and Z-girts are installed. Fill all voids with spray foam insulation.
- .3 Install Z-girts screw fastened at 600 mm o.c. through to wood deck, perpendicular to roof slope.
- .4 Remove any fasteners which penetrate exposed wood deck.
- .5 Install second layer of butt edged insulation butting boards tight to Z-girts and to each other so that no gaps or voids exist. Fill all voids with spray foam insulation.

3.6 Weather Barrier

- .1 Over roof insulation, install weather barrier. Use tape as recommended by Weather Barrier manufacturer to seal joints.
- .2 Over Weather Barrier install sheet metal roofing
- .3 Use only tradesmen who are experienced in this work.

BOARD INSULATION

1. GENERAL

1.1 References

- .1 American Society for Testing and Materials (ASTM)
 - .1 ASTM E 96, Test Methods for Water Vapour Transmission of Materials.
 - .2 ASTM C 591, Standard Specification for Unfaced Preformed Rigid Cellular Polyisocyanurate Thermal Insulation.
 - .3 ASTM C 1126, Standard Specification for Faced or Unfaced Rigid Cellular Phenolic Thermal Insulation.
 - .4 ASTM C 1289, Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board.
- .2 Canadian General Standards Board (CGSB)
 - .1 CGSB 71-GP-24M, Adhesive, Flexible, for Bonding Cellular Polystyrene Insulation.
- .3 Underwriters Laboratories of Canada (ULC)
 - .1 CAN/ULC-S702, Thermal Insulation, Mineral Fibre, for Buildings.

2. PRODUCTS

2.1 Insulation

- .1 Batt insulation: Fibreglass batt insulation friction fit, R15.
- .2 Foundation Wall application: Extruded polystyrene insulation, type 4, thermal resistance valve 0.87 per 25 mm (R5 per inch) thickness as noted. Square edges.
 - .1 Acceptable material: Styrofoam SM by Dow Chemical Canada.
- .3 Roof application: Extruded polystyrene insulation: thermal resistance valve 0.87 per 25 mm (R5 per inch) thickness as noted. Square edges.
 - .1 Acceptable material: Styrofoam SM by Dow Chemical Canada.
- .4 Under slab application: 2 layers extruded polystyrene closed cell insulation. Total thickness 100 mm (4") for R value of 20.
 - .1 Acceptable material: Styrofoam Highload 40 by Dow Chemical Canada.

BOARD INSULATION

2.2 Accessories

- .1 Fasteners: of same material as sheet steel metal and according to manufacturers standard system, suitable for sheet metal roofing application.
- .2 Touch-up paint: as recommended by sheet metal roofing manufacture.

2.3 Fabrication

.1 Insulation clips: impale type, perforated 50 x 50 mm cold rolled carbon steel 1.3 mm thick, adhesive back, spindle of 2.5 mm diameter annealed steel, length to suit insulation, 25 mm diameter washers of self locking type.

3. EXECUTION

3.1 Workmanship

- .1 Install insulation after building substrate materials are dry.
- .2 Install insulation to maintain continuity of thermal protection to building elements and spaces.
- .3 Fit insulation tight around electrical boxes, plumbing and heating pipes and ducts, around exterior doors and windows and other protrusions.
- .4 Keep insulation minimum 75 mm from heat emitting devices such as recessed light fixtures, and minimum 50 mm from sidewalls if CAN4-S604 type A chimneys.
- .5 Cut and trim insulation neatly to fit spaces. Butt joints tightly, offset vertical joints. Use only insulation boards free from chipped or broken edges. Use largest possible dimension ns to reduce number of joints.
- .6 Offset both vertical and horizontal joints in multiple layer applications.
- .7 Do not enclose insulation until it has been inspected and approved by Engineer.

3.2 Examination

- .1 Examine substrates and immediately inform Engineer in writing of defects.
- .2 Prior to commencement of work ensure:
 - .1 Substrates are firm, straight, smooth, dry, free of snow, ice or frost, and clean of dust and debris.

BOARD INSULATION

3.3 Perimeter Foundation Insulation

- .1 Interior application: extend boards vertically below bottom of finish floor slab as indicated.
- .2 Under slab application: As indicated. Lay boards on level compacted fill.

PREFORMED METAL CLADDING/SIDING

1. GENERAL

1.1 Related Work

- .1 Section 07900 Joint Sealers.
- .2 Division 09 Finishes.

1.2 References

- .1 American National Standards Institute (ANSI)
 - .1 ANSI B18.6.4-1981(R1991), Screws, Tapping and Metallic Drive, Inch Series, Thread Forming and Cutting.
- .2 Canadian General Standards Board (CGSB)
 - 1 CAN/CGSB-93.4-92, Galvanized Steel and Aluminum-Zinc Alloy Coated Steel Siding Soffits and Fascia, Prefinished, Residential.
 - .2 CAN/CGSB-93.5-92, Installation of Metal Residential Siding, Soffits and Fascia.
- .3 Canadian Standards Association (CSA)
 - .1 CSA B111-1974 (R1998), Wire Nails, Spikes and Staples.

1.3 Shop Drawings

- Submit shop drawings in accordance with Section 01300 Submittals.
- .2 Indicate dimensions, profiles, attachment methods, schedule of wall elevations, trim and closure pieces, fascia, metal furring, and related work.

2. PRODUCTS

2.1 Steel Cladding and Components

- .1 Exterior vertical metal siding to CAN/CGSB-93.4-92: Type 1
 - .1 Finish coating: Class FIS.
 - .2 Colour: from manufacturer's standard color range as shown on drawings.
 - .3 Gloss: medium.
 - .4 Thickness: siding material: minimum 0.61 mm (24 gauge)
 - .5 Profile: Vertical ribbed

PREFORMED METAL CLADDING/SIDING

- .6 Acceptable product: based on VicWest Model # CL725.
- .2 Fascia facings and exposed trim: to CAN/CGSB-93.4-92, Class plain:
 - .1 Finish coating: Series 10000.
 - .2 Colour: as shown on drawings, colour selected by Engineer from manufacturer's standard range.
 - .3 Gloss: medium.
 - .4 Thickness: 0.61 mm (24 gauge) base metal thickness.
 - .5 Profile: indicated.
- .3 Interior metal linder: 0.5mm (26 gauge) based on Robertson Durarib liner panel.

2.2 Accessories

.1 Exposed trim: inside corners, outside corners, cap strip, drip cap, undersill trim, starter strip and window/door trim of same material, colour and gloss as cladding, with fastener holes pre-punched.

2.3 Fasteners

.1 Nails: to CSA B111-1974 (R1998). Screws to ANSI B18.6.4-1981(R1991). Purpose made aluminum alloy.

2.4 Caulking

.1 Sealants: See Section 07900.

3. EXECUTION

3.1 Installation

- .1 Install cladding in accordance with CAN/CGSB-93.5-92, and manufacturer's written instructions.
- .2 Install continuous starter strips, inside and outside corners, edgings, soffit, drip, cap, sill and window/door opening flashings as indicated.
- .3 Install outside corners, fillers and closure strips with carefully formed and profiled work
- .4 Install soffit and fascia cladding as indicated.
- .5 Maintain joints in exterior cladding, true to line, tight fitting, hairline joints.

PREFORMED METAL CLADDING/SIDING

- .6 Attach components in manner not restricting thermal movement.
- .7 Caulk junctions with adjoining work with sealant. Do work in accordance with Section 07900 Joint Sealers.

SHEET METAL ROOFING

1. GENERAL

1.1 Related Work

- .1 Division 06 Wood & Plastics.
- 2 Section 07465 Preformed Metal Wall Cladding/Siding.

1.2 Shop Drawings

- .1 Submit shop drawings in accordance with Section 01300 Submittals.
- .2 Indicate arrangements of sheets and joints, types and locations of fasteners and special shapes and relationship of panels to structural frame.

2. PRODUCTS

2.1 Sheet Metal Materials

.1 Galvanized steel sheet: 0.61 mm thickness, commercial quality, to ASTM A 525M-91b, or ASTM A 446/A 446M-93 446M-93 Grade A.

2.2 Prefinished Steel Sheet

- .1 Prefinished steel with factory applied silicone modified polyester.
 - 1 Finish: Series 10000.
 - .2 Colour: as shown on drawings selected by Engineer from manufacturer's standard range.
 - .3 Gloss: medium.
 - .4 Thickness: 0.61 mm.
 - .5 Profile: Vicwest.
- .2 Panel Widths: as recommended by manufacturer.

2.3 Accessories

- .1 Fasteners: of same material as sheet steel metal and according to manufacturers standard system, suitable for sheet metal roofing application.
- .2 Touch-up paint: as recommended by sheet metal roofing manufacture.

SHEET METAL ROOFING

2.4 Fabrication

- .1 Form individual pieces in continuous lengths from eave to ridge. Make allowances for expansion at joints.
- .2 Form sections square, true and accurate to size, free from distortion and other defects detrimental to appearance or performance.

3. EXECUTION

3.1 Installation

- .1 Use screw type fastenings except where approved by Engineer before installation.
- .2 Install sheet metal roof panels using screw fasteners spaced at 150 mm oc.
- .3 Flash roof penetrations with material matching roof panels, and make watertight.
- .4 Form seams in direction of water-flow and make watertight.
- .5 Apply sheet metal roofing beginning at ridge and continuous in one piece to eave all according to manufacturers written instructions.

SHEET METAL FLASHING AND TRIM

1. GENERAL

1.1 Related Work

- .1 Division 03 Concrete.
- .2 Division 06 Woods & Plastics.
- .3 Section 07610 Sheet Metal Roofing.
- .4 Section 09 Finishes

1.2 References

- Aluminum Association.
 - .1 Aluminum Sheet Metal Work in Building Construction 1980.
 - .2 Designation System for Aluminum Finishes 1980.
- .2 American Society for Testing and Materials (ASTM).
 - .1 ASTM A 167-99, Specification for Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet, and Strip.
 - .2 ASTM A 591/A 591M-98 591 M-89(1994), Specification for Steel Sheet, Electrolytic Zinc-Coated, for Light Coating Mass Applications.
 - .3 ASTM A 606-01, Specification for Steel, Sheet and Strip, High-Strength, Low-Alloy, Hot-Rolled and Cold-Rolled, with Improved Atmospheric Corrosion Resistance.
 - .4 ASTM A 792/A 792M-02 792M-95, Specification for Steel Sheet, 55% Aluminum-Zinc Alloy-Coated by the Hot-Dip Process.
- .3 Canadian Roofing Contractors Association (CRCA).
 - .1 Roofing Specifications Manual.
- .4 Canadian Standards Association (CSA)
 - .1 CSA B111-1974 (R1998), Wire Nails, Spikes and Staples.
- .5 Canadian General Standards Board (CGSB)
 - .1 CAN/CGSB-37.5-M89, Cutback Asphalt Plastic Cement.
 - .2 CAN/CGSB-51.32-M77, Sheathing, Membrane, Breather Type.

FIRE STOPPING

1. GENERAL

1.1 Related Work

Fire stopping and smoke seals within mechanical assemblies (i.e., inside ducts, dampers) and electrical assemblies (i.e., inside cable trays) are specified in Divisions 15 and 16 respectively.

1.2 References

- .1 Underwriter's Laboratories of Canada (ULC)
 - .1 ULC-S115-[1995], Fire Tests of Firestop Systems.

1.3 Samples

.1 Submit samples in accordance with Division 01.

1.4 Shop Drawings

- .1 Submit shop drawings in accordance with Division 01.
- .2 Submit shop drawings to show proposed material, reinforcement, anchorage, fastenings and method of installation. Construction details should accurately reflect actual job conditions.

1.5 Product Data

- .1 Submit product data in accordance with Division 01.
- .2 Submit manufacturer's product data for materials and prefabricated devices, providing descriptions are sufficient for identification at job site. Include manufacturer's printed instructions for installation.

2. PRODUCTS

2.1 Materials

- .1 Fire stopping and smoke seal systems: in accordance with ULC-S115.
 - .1 Asbestos-free materials and systems capable of maintaining an effective barrier against flame, smoke and gases in compliance with requirements of ULC-S115 and not to exceed opening sizes for which they are intended.
 - .2 Service penetration assemblies: certified by ULC in accordance with ULC-S115 and listed in ULC Guide No.40 U19.

FIRE STOPPING

- .3 Service penetration firestop components: certified by ULC in accordance with ULC-S115 and listed in ULC Guide No.40 U19.13 and ULC Guide No.40 U19.15 under the Label Service of ULC.
- .4 Fire-resistance rating of installed fire stopping assembly in accordance with NBC.
- .5 Fire stopping and smoke seals at openings intended for ease of re-entry such as cables: elastomeric seal.
- .6 Fire stopping and smoke seals at openings around penetrations for pipes, ductwork and other mechanical items requiring sound and vibration control: elastomeric seal.
- .7 Primers: to manufacturer's recommendation for specific material, substrate, and end use.
- .8 Water (if applicable): potable, clean and free from injurious amounts of deleterious substances.
- .9 Damming and backup materials, supports and anchoring devices: to manufacturer's recommendations, and in accordance with tested assembly being installed as acceptable to authorities having jurisdiction.
- .10 Sealants for vertical joints: non-sagging.

3. EXECUTION

3.1 Preparation

- .1 Examine sizes and conditions of voids to be filled to establish correct thicknesses and installation of materials. Ensure that substrates and surfaces are clean, dry and frost free.
- .2 Prepare surfaces in contact with fire stopping materials and smoke sears to manufacturer's instructions.
- .3 Maintain insulation around pipes and ducts penetrating fire separation without interruption to vapour barrier.
- .4 Mask where necessary to avoid spillage and over coating onto adjoining surfaces; remove stains on adjacent surfaces.

3.2 Installation

- .1 Install fire stopping and smoke seal material and components in accordance with ULC certification and manufacturer's instructions.
- .2 Seal holes or voids made by through penetrations, poke-through termination devices, and unpenetrated openings or joints to ensure continuity and integrity of fire separation are maintained.

FIRE STOPPING

- .3 Provide temporary forming as required and remove forming only after materials have gained sufficient strength and after initial curing.
- .4 Tool or trowel exposed surfaces to a neat finish.
- .5 Remove excess compound promptly as work progresses and upon completion.

3.3 Inspection

.1 Notify Engineer when ready for inspection and prior to concealing or enclosing firestopping materials and service penetration assemblies.

3.4 Schedule

- .1 Firestop and smoke seal at:
 - 1 Penetrations through fire-resistance rated gypsum board partitions and walls.
 - .2 Openings and sleeves installed for future use through fire separations.
 - .3 Around mechanical and electrical assemblies penetrating fire separations.
 - .4 Rigid ducts: greater than 129 cm²: fire stopping to consist of bead of fire stopping material between retaining angle and fire separation and between retaining angle and duct, on each side of fire separation.

3.5 Clean Up

- .1 Remove excess materials and debris and clean adjacent surfaces immediately after application.
- .2 Remove temporary dams after initial set of fire stopping and smoke seal material.

1. GENERAL

1.1 Related Work

- .1 Section 07465 Preformed Metal Wall Cladding/Siding.
- .2 Section 08111 Steel Doors and Frames.

1.2 References

- .1 CAN/CGSB-19.1-M87, Putty, Linseed Oil Type.
- .2 CAN/CGSB-19.2-M87, Glazing Compound, Nonhardening, Modified Oil Type.
- .3 CGSB 19-GP-5M, Sealing Compound, One Component, Acrylic Base, Solvent Curing.
- .4 CAN/CGSB-19.6-M87, Caulking Compound, Oil Base.
- .5 CAN/CGSB-19.13-M87, Sealing Compound, One-component, Elastomeric, Chemical Curing.
- .6 CGSB 19-GP-14M, Sealing Compound, One Component, Butyl-polyisobutylene Polymer Base, Solvent Curing.
- .7 CAN/CGSB-19.17-M90, One-Component Acrylic Emulsion Base Sealing Compound.
- .8 CAN/CGSB-19.18-M87, Sealing Compound, One Component, Silicone Base, Solvent Curing.
- .9 CAN/CGSB-19.20-M87, Cold-applied Sealing Compound, Aviation Fuel-resistant.
- .10 CAN/CGSB-19.21-M87, Sealing and Bedding Compound Acoustical.
- .11 CAN/CGSB-19.22-M89, Mildew Resistant, Sealing Compound for Tubs and Tiles.
- .12 CAN/CGSB-19.24-M90, Multi-component, Chemical Curing Sealing Compound.

1.3 Delivery, Storage and Handling

.1 Deliver and store materials in original wrappings and containers with manufacturer's seals and labels, intact. Protect from freezing, moisture, water and contact with ground or floor.

1.4 Environmental and Safety Requirements

.1 Comply with requirements of Workplace Hazardous Materials Information System (WHMIS) regarding use, handling, storage, and disposal of hazardous materials; and regarding labelling and provision of material safety data sheets acceptable to Labour Canada.

.2 Conform to manufacturer's recommended temperatures, relative humidity, and substrate moisture content for application and curing of sealants including special conditions governing use.

2. PRODUCTS

2.1 Sealant Materials

Sealants acceptable for use on this project must be listed on CGSB Qualified Products List issued by CGSB Qualification Board for Joint Sealants. Where sealants are qualified with primers use only these primers.

2.2 Elastomeric Sealant Material Designations

- .1 One part modified Polyurethane sealant to CAN/CGSB-19.24-M90, Type 2, Class 2.
 - .1 Acceptable material: Tremco Dymonic.
- .2 Two modified Polyurethane to CAN/CGSB-19.24-M90, Type 2, Class B.
 - .1 Acceptable material: Tremco Dymmeric 240.

2.3 Non-Elastomeric Sealant Material Designations

- .1 Latex sealant to CAN/CGSB-19.17-M90, non-sag, mildew resistant, paintable material.
 - .1 Acceptable Material: Tremco Sliconized Acrylic Latex.
- .2 Acoustical Sealant:
 - .1 To CAN/CGSB-19.21-M87.
 - .2 Acceptable material: Tremco.
- .3 Preformed Compressible and Non-Compressible back-up materials:
 - .1 Polyethylene, Urethane, Neoprene or Vinyl Foam:
 - Extruded closed cell foam backer rod.
 - .2 Size: oversize 30 to 50%.
 - .2 Neoprene or Butyl Rubber:
 - .1 Round solid rod, Shore A hardness 70.

.3 High Density Foam:

Extruded closed cell polyvinyl chloride (PVC), extruded polyethylene, closed cell, Shore A hardness 20, tensile strength 140 to 200 kPa, extruded polyolefin foam, 32 kg/mn density, or neoprene foam backer, size as recommended by manufacturer.

.4 Bond Breaker Tape:

.1 Polyethylene bond breaker tape which will not bond to sealant.

2.4 Sealant Selection

- .1 Non-Elastomeric sealant:
 - .1 Between pressed steel interior door frames and adjacent finishes.
 - Perimeters of exterior frames.
- .2 Elastomeric sealant:
 - .1 Joints at tops of non-load bearing walls at underside of poured slabs.
- .3 Acoustic sealant: at joints in polyethylene vapour barriers.

2.5 Joint Cleaner

- .1 Non-corrosive and non-staining type, compatible with joint forming materials and sealant recommended by sealant manufacturer.
- .2 Primer: as recommended by manufacturer.

3. EXECUTION

3.1 Protection

Protect installed work of other trades from staining or contamination.

3.2 Preparation of Joint Surfaces

- .1 Examine joint sizes and conditions to establish correct depth to width relationship for installation of backup materials and sealants.
- .2 Clean bonding joint surfaces of harmful matter substances including dust, rust, oil grease, and other matter which may impair work.

- .3 Do not apply sealants to joint surfaces treated with sealer, curing compound, water repellent, or other coatings unless tests have been performed to ensure compatibility of materials. Remove coatings as required.
- .4 Ensure joint surfaces are dry and frost free.
- .5 Prepare surfaces in accordance with manufacturer's directions

3.3 Priming

- .1 Where necessary to prevent staining, mask adjacent surfaces prior to priming and caulking.
- .2 Prime sides of joints in accordance with sealant manufacturer's instructions immediately prior to caulking.

3.4 Back-up Material

- .1 Apply bond breaker tape where required to manufacturer's instructions.
- .2 Install joint filler to achieve correct joint depth and shape, with approximately 30% compression.

3.5 Mixing

.1 Mix materials in strict accordance with sealant manufacturer's instructions.

3.6 Application

- .1 Sealant:
 - .1 Apply sealant in accordance with manufacturer's written instructions.
 - .2 Mask edges of joint where irregular surface or sensitive joint border exists to provide neat joint.
 - .3 Apply sealant in continuous beads.
 - .4 Apply sealant using gun with proper size nozzle.
 - .5 Use sufficient pressure to fill voids and joints solid
 - .6 Form surface of sealant with full bead, smooth, free from ridges, wrinkles, sags, air pockets, embedded impurities.
 - .7 Tool exposed surfaces before skinning begins to give slightly concave shape.
 - .8 Remove excess compound promptly as work progresses and upon completion.

- .2 Curing:
 - .1 Cure sealants in accordance with sealant manufacturer's instructions.
 - .2 Do not cover up sealants until proper curing has taken place.
- .3 Clean-up:
 - .1 Do not cover up sealants until proper curing has taken place.
 - .2 Remove excess and droppings, using recommended cleaners as work progresses.
 - .3 Remove masking tape after initial set of sealant.