SECTION 04200

UNIT MASONRY

PART 1 – GENERAL

1.01 SECTION INCLUDES

A. Furnish and install all masonry work.

B. Cutting and patching.

1.02 REFERENCES

A. Building Code Requirements for Masonry Structures (ACI 530-88/ASCE 5-88 and Specifications for Masonry Structures (ACI 530.1-88/ASCE 6-88).

1.03 SUBMITTALS

A. Submit two samples of each type of masonry unit for approval.

1.04 DELIVERY, STORAGE AND HANDLING

A. Handle masonry units in such a manner as to prevent chipping and breakage.

B. Deliver cementitious materials to site in manufacturer's standard packages. No cementitious or other material that has become caked or hardened shall be permitted in the work.

1.05 ENVIRONMENTAL REQUIREMENTS

A. Fully protect masonry units.

PART 2 – PRODUCTS

2.01 MASONRY

A. Concrete Block: Load-bearing sand and gravel concrete units meeting requirements of ASTM C90 and C145, latest edition, normal weight, Type 1, Grade N with the exception that exposed block shall be free from cracks, splits, spalls, chips and other defects. Nominal face size shall be 16 inches by 8 inches. Special blocks shall be used for corners, jambs, closures, etc. Outside corners shall be square.
1. Provide scored face block veneer with integral coloring to match colors scheduled.
2. Water Repellent Admixture: Provide block veneer units produced with liquid polymeric, integral water-repellent admixture that does not reduce flexural bond strength. Units made with integral water repellent, when tested as a wall assembly made with mortar containing integral water-repellent manufacturer's mortar additive according to ASTM E 514, with test period extended to 24 hours, show no visible water or leaks on the back of the test specimen.

2.02 MORTAR MATERIALS

A. Sand: Sand used throughout the work shall be well-screened, clean, hard, sharp, siliceous, free from loam, silt or other impurities and graded so that 100% will pass through No. 8 mesh sieve, and from 15% to 35% through No. 50 sieve, conforming to the requirements of ASTM C-144, latest edition.

B. Water shall be potable.

C. Cement: Portland cement of domestic manufacture, conforming to the requirements of ASTM C-150, Type I or Type II. Only one brand of cement shall be used throughout the project. Blue Circle Portland cement and lime is acceptable. Standard masonry cements are not acceptable.

D. Lime: Type S hydrated lime, ASTM C207.

2.03 REINFORCEMENT AND ANCHORAGE

A. Exterior Block Wall: Continuous ladder type with 3/16" side rods and No. 9 gauge truss rod, galvanized ASTM A153, Class B-2, 1.50 ounce zinc coating.

2.04 MISCELLANEOUS ACCESSORIES

A. Asphalt Mastic: Trowel type fabricated mastic, meeting requirements of ASTM D-1227, Type 1, "Dehydratine" 95 by A. C. Horn, Sonneborn's "Hydrocide 700," or approved equal. Material shall be asbestos-free.

B. Compressible Material: Expanded polystyrene, one pound per cubic foot density.

C. Weep Holes: Dur-O-Wall cell vent weep hole ventilator.

D. Flashings for Masonry:
1. Metal Flashing: 16 oz. lead-coated copper. Prefabricate to detail using metal break; keep exposed edges uniform and straight. Roofing counter-flashing and receiver counter-flashing specified in Section 07600.
2. Fabric Flashing: 7 oz. fiberglass backed copper.
3. Wall Flashing (Elastomeric): W. R. Grace Perm-A-Barrier system.
   a. Flashing: 32 mil thick rubberized asphalt compound laminated to 8 mil thick cross laminated polyethylene film.
   b. Surface Conditioner: Latex based, water dispersed liquid surface prep.
   c. Termination Mastic: Bituthene mastic.

2.05 MORTAR MIX

A. Mortar Type S for concrete block and brick.

B. Admixtures will not be allowed.

PART 3 – EXECUTION

3.01 PREPARATION

A. Measure mortar materials in boxes, or other approved units. Use machine batch mixer, except that where small quantities are required, mixing may be done by hand. Mixer shall be subject to approval of the Architect. Time of mixing shall be not less than 5 minutes after all materials are in the mixer. Mix only enough mortar at one time to supply immediate requirements.

B. Use mortar within two hours of mixing.

C. If necessary, re-temper mortar within two hours of mixing to replace water lost by evaporation.

3.02 INSTALLATION

A. Laying and Setting Masonry Work:
1. Build walls uniformly.
2. Cut masonry units with masonry saw.
3. Lay masonry in full beds of mortar. Head joints shall be full.
4. Head joints shall be centered on masonry unit below.
5. Masonry Veneer:
   a. Anchor with reinforcing ties spaced 16" o.c. horizontally and 16" o.c. vertically. Secure ties with screws through sheathing to studs.
6. Lay concrete block in running bond. Form concave mortar joints for block. Form concave mortar joints for scored block, grouting scores concave to match. Wipe block that will be exposed with burlap. No chipped block shall be laid exposed.
7. Reinforce concrete block walls every second course with reinforcement of appropriate size.
8. All CMU cross webs for the first 3 courses above the flashings shall be fully bedded with mortar.
9. Wall Flashing: Install wall flashing (elastomeric), at the base of walls and over window and door heads and other openings in masonry, stepped up over lintels. Ends of flashing shall extend 6" beyond openings and shall be turned up to form pan draining to exterior of building. Flashing to provide 7" vertical lap. Lap joints at least 3 inches and seal contacting surfaces. Prime surfaces as required by wall flashing manufacturer. Seal laps, top edges, seams, cuts and penetrations with bituthane mastic. Do not expose Perma-barrier material.
   a. Set receiver in masonry for roof flashing. Install back-up plates covered with mastic behind joints. Counterflash receiver with fabric flashing.
10. Provide 2" vertical end joint weep holes at the bottom of masonry. Provide at least two weep holes between each grouted masonry pier.
11. Cutting and Patching: Consult other trades in advance to make provisions for installations of their work to avoid cutting and patching. Cutting or patching required to accommodate work of others shall be done by mechanics per- forming the work under this heading.

3.03 CONSTRUCTION TOLERANCES

A. Variation from Plumb: For vertical lines and surfaces of columns, walls and arises do not exceed 1/4" in 10' or, 3/8" in a story height not to exceed 20', nor 1/2" in 40' or more. For external corners, expansion joints, control joints and other conspicuous lines, do not exceed 1/4" in any story of 20' maxi- mum, nor 1/2" in 40' or more. For vertical alignment of head joints do not exceed plus or minus /4" in 10', 1/2" maximum.

B. Variation from Level: For bed joints and lines of exposed lintels, sills, parapets, horizontal grooves and other conspicuous lines, do not exceed 1/4" in any bay or 20' maximum, nor 1/2" in 40' or more.

C. Variation in Cross-Sectional Dimensions: For columns and thickness of walls, from dimensions shown, do not exceed minus 1/4" nor plus 1/2".

D. Variation in Mortar Joint Thickness: Do not exceed bed joint thickness indicated by more than plus or minus 1/8", with a maximum thickness limited to 1/2". Do not exceed head joint thickness indicated by more than plus or minus 1/8".

E. Variation in Adjacent Masonry Units: Do not exceed 1/32 inch variation from masonry unit to adjacent masonry unit.

END OF SECTION

SECTION 06100

ROUGH CARPENTRY

PART 1 – GENERAL

1.01 SECTION INCLUDES

A. Provide rough carpentry for all framing and where required for framing or support for Contractor's or Owner's equipment.

B. Rough carpentry work includes:
1. Wood framing.
2. Sheathing.
3. Plywood backing for signage under storefront EIFS.

1.02 SUBMITTALS

A. Submit product literature and certificate of compliance for fire treated materials.

PART 2 – PRODUCTS

2.01 MATERIALS

A. Rough lumber shall be dressed four sides, kiln-dried, sound and free from splits, checks, shakes and wane and shall conform to the following grades:
1. Studs, plates, and other structural lumber shall be S-P-F #2 grade and better, kiln dried, meeting the minimum stresses indicated on structural drawings unless otherwise noted.
2. Construction Grade Eastern Hemlock or Eastern Spruce shall be used for blocking, nailers, strapping and other minor framing members where not otherwise designated.

B. Treated Lumber: Lumber for roof nailers, curbing, cants and any wood used in conjunction with roofing shall be Wolmanized (CCA) pressure treated Southern Pine, by Koppers Company, or approved equal.
1. Fire-retardant treated wood and plywood at canopies. Treatment shall be Koppers Dricon FR-S, or Hoover Treated Wood Products, Inc. Pyro-Guard. Lumber shall be identified with U. L. stamp indicating product has code recognized classification for surface burning characteristics. Kiln dry materials after treatment. Treated material shall comply with ASTM E84, Class A.

C. Plywood: Plywood shall comply with PS-1-74 and shall bear American Plywood Association stamp.
1. Plywood for Rough Framing: "CDX" APA rated sheathing, Exposure 1. Provide Structural 1 panels for shear walls. Fire-retardant treated at canopy along store front and all interior locations.

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SECTION 06100

ROUGH CARPENTRY - CONTINUED

D. Rough Hardware:
1. Nails, Spikes, and Staples: Galvanized for exterior locations, high humidity locations, and treated wood; plain finish for other interior locations; size and type to suit application.
2. Bolts, Nuts, Washers, Lags, Pins, and Screws: Medium carbon steel, unless otherwise indicated; sized to suit application; galvanized for exterior locations, high humidity locations, and treated wood.
3. Fasteners: Toggle bolt type for anchorage to hollow masonry, expansion shield and lag bolt type for anchorage to solid masonry or concrete, bolts or power activated type for anchorage to steel.
4. Sheathing to Metal Framing: Hilti Kwik-Flex or Elco Dril-Flex; no substitution allowed, 10-24 x 1-1/4" wafer head #3.

E. Building Paper: Asphalt impregnated felt paper; 30 lb. behind brick.

PART 3 – EXECUTION

3.01 INSTALLATION

A. Consult the Specifications under other Sections of these Specifications and any rough carpentry work or materials, which are not specified under these headings and which are necessary or required for the receiving and thorough completion of the work, including the work of any Contractor employed directly by the Owner, shall be done under this Section.

B. Workmanship shall be first-class throughout. None but competent carpenters shall be employed. All framing shall be true and exact, and all work on completion shall present a clean, neat appearance with tight, square joints.

C. Framing shall be in accordance with the Drawings and shall be closely fitted and accurately set to the required lines. All framing shall be rigidly spiked, bolted, anchored, nailed and fastened in place in the most secure and permanent manner. Correct any twisted members.

D. Furnish and set all blocking.

E. All wood nailers and bucks in connection with masonry and concrete shall be treated lumber.

F. Rough Hardware: Furnish all hardware not requiring special finish, including nails, screws, anchors, anchor bolts, joist hangers, clip angles, etc., as required to erect and fasten the work.

G. Attach plywood to framing members as indicated on the drawings and in accordance with recommendations published by the American Plywood Association.
1. Screw attach plywood to metal framing with self-tapping flat head screws, spaced in accordance with APA nail pattern.

H. Perimeter Roof Nailers: Shall be installed at the perimeter of each roof level's curb flashing, expansion joints and similar penetrations.
1. Anchor wood roof nailers to resist a force of 75 pounds per linear foot in any direction. The thickness of the nailer shall be such that the top of the nailer is flush with the surface to which the membrane is to be applied as shown on the roofing manufacturer's approved details.

I. Install building paper starting from low to high overlapping edges 2-1/2" minimum and ends 6". Attach paper with tin disk and non-corrosive fasteners. Building paper shall not be left exposed more than 30 days. At brick veneer, seal end laps with asphalt mastic. Coordinate installation with masonry flashing installation.

END OF SECTION

SECTION 07240

EXTERIOR INSULATION AND FINISH SYSTEM

PART 1 – GENERAL

1.01 SECTION INCLUDES

A. All labor, materials and equipment necessary to install the field-applied, exterior insulated finish system Type PB and related items.

1.02 SUBMITTALS

A. Samples: Submit one 2' x 4' sample of each Finish, texture and color.

B. Shop Drawings: Submit Drawings showing wall layout, all details, and expansion joints.

C. Provide control joint pattern layout.

D. Manufacturer's catalog cuts with installation recommendations.

1.03 DELIVERY, STORAGE AND HANDLING

A. All materials supplied shall be delivered to the location where they will be applied in the original, unopened packages with labels intact. Upon arrival, materials shall be inspected for damage, particularly for freezing. Unsatisfactory materials shall not be used.

B. All materials shall be stored in a cool, dry location, out of sunlight, protected from weather and other damage, and at temperatures not less than 40°F (4°C).

1.04 JOB CONDITIONS

A. Environmental Conditions:
1. The ambient air temperature shall be 40°F (4°C) or greater and rising at the time of installation of materials and shall remain so for at least 24 hours thereafter.
2. Materials shall not be applied to frozen substrates.

1.05 WARRANTY

A. The Installer shall provide the manufacturer's standard warranty that all materials are guaranteed to be as specified and free from defects for a period of five years from the date of completion. The Installer shall also provide warranty that all workmanship is guaranteed to be as specified and free from defects for a period of two years from the date of completion.

PART 2 – PRODUCTS

2.01 MATERIALS

A. General: Insulated finish system shall be Dryvit System, Inc., ConProco, STO or Thorowall. All components shall be of one system manufacturer. The following minimum requirements are based on the DryVit System.

B. Adhesive:
1. Shall be a 100% acrylic-based product.
2. The bond strength to the Substrate shall meet or exceed the following value when tested per A.S.T.M. D897.
   a. Concrete Block: 160 p.s.i.
   b. Gypsum Sheathing: 39 psi
   c. Plywood: 50 psi.

C. Insulation Board:
1. Shall meet Federal Specification HH-I-524C Type I.
2. Nominal density shall be 1.0 p.c.f. (16 Kg/m3).
3. Shall be aged as follows:
   a. Six weeks at 68°F (20°C) minimum.
   b. Five days at 140°F (60°C).
4. Shall not exceed the following dimensional limits:
   a. Length: + 1/16".
   b. Width: + 1/16".
   c. Thickness: + 1/16".
   d. Squareness: + 1/32" per foot.
   e. Flatness: + 1/32" (in 4' 1.2m) per ASTM C550.
5. Maximum Flamespread and Smoke Development, when tested in accordance with ASTM E84 shall not exceed 25 and 450 respectively.
6. Thermal conductivity, "k", at one inch shall be .23 BTU/°F-SF-hr (.033 W/mK) at 40°F (4°C), .25 BTU/F-SF-hr (.036 W/mK) at 75°F (24°C).
7. Maximum board size shall be 2' x 4'.
8. Board thickness shall be 3/4" unless otherwise indicated.

D. Hi-Standard II Reinforcing Mesh: Shall be a treated, balanced, open weave, glass fiber type, 5 oz./sq. yd. minimum.

E. Finish:
1. Shall be factory-mixed, acrylic-based, and contain integral color and texture.
2. Texture shall be integral, and final texture shall be sandblast regular.

F. Lamina: The flamespread and smoke development when tested in accordance with ASTM E84 shall not exceed 5 and 0.

G. Portland Cement: Shall be Type I, I-II, or II, meeting ASTM C150, white or gray in color, fresh and free of lumps.

H. Water: Shall be clear, potable and free of all foreign matter.

2.02 MIXING AND PREPARATION

A. Adhesive:
1. A clean container free of foreign substances shall be used for mixing and preparation. Containers which have come in contact with petroleum products shall not be used.
2. The adhesive shall be stirred to obtain a homogeneous consistency using a Goldblatt Jiffier Mixer #15311H7 or equivalent, powered by a 1/2" drill at 400-500 rpm.
3. A given weight of adhesive shall be measured into a container, and an equal weight of Portland Cement measured into another container.
4. While stirring the adhesive, small amounts of Portland Cement shall be added in increments to obtain a final ratio of one-to-one by weight. Stirring shall continue until the mixture is homogeneous.
5. Small amounts of water may be added to the adhesive mixture to adjust workability. The mixture shall not be "watered down".
6. A period of five minutes shall lapse after the initial mixing, then the mixture shall be tempered by stirring again.
7. Mixture shall be used immediately after tempering. Keep container closed when not in use.
8. No additives, or materials of any kind, such as rapid binders, antifreeze, accelerators, fillers, pigments, etc. shall be added under any circumstances.

B. Finish:
1. The finish coating shall be thoroughly stirred with a clean high-speed mixer such as a Goldblatt Jiffier Mixer #15311H7 or equivalent, powered by a 1/2" (13 mm) 400-500 rpm drill, until a uniform workable consistency is obtained.
2. A small amount of water may be added to adjust workability. The finish coating shall not be "watered down." The water must be clear and potable.
3. No additives or materials of any kind, such as rapid binders, antifreeze, accelerators, fillers, pigments, etc. shall be added under any circumstances.
4. The finish coating shall be used immediately after mixing. The container shall be kept closed when not in use. Pot life depends on ambient temperature and humidity conditions.
5. The mixing tool shall be cleaned immediately after use.

C. Reinforcing Mesh:
1. The reinforcing mesh shall be "reverse-rolled" to remove the tendency of the mesh to curl.

PART 3 – EXECUTION

3.01 INSPECTION

A. Examination of Substrate:
1. Prior to installation of the insulated finish system the Substrate shall be examined by the installer as follows:
   a. The substrate surface shall be free of foreign materials such as oil, dust, dirt, form-release agents, paint, wax, glazing, water, moisture, frost, etc.
   b. The substrate shall be examined for soundness, such as tightness of connections, crumbling or looseness of surface, voids and projections, etc.
   c. The substrate shall be examined for dimensional correctness per this specification.
2. Work shall not proceed until unsatisfactory conditions are corrected.

3

SECTION 07240

EXTERIOR INSULATION AND FINISH SYSTEM CONTINUED

3.02 INSTALLATION

A. Insulated Finish System:
1. Insulation Board:
   a. General:
      1. Insulation board shall be applied to the substrate surface starting from the bottom and shall be supported by permanent or temporary means.
      2. The insulation board shall be applied with the long edge oriented horizontally, with its joints offset with respect to the substrate joints, and using a running bond pattern.
      3. Insulation board pieces shall be precut to fit openings, corners and projections prior to application of the adhesive mixture.
      4. Insulation board joints shall be staggered and interlocked at corners.
      5. Insulation board pieces smaller than 2' x 4" may be used, such as at corners, etc. In all cases, the perimeter of the insulation board shall have the 2" ribbon per the Ribbon and Dab Method and the 32% minimum contact area shall be maintained.
   b. Adhesive Mixture:
      1. Ribbon and Dab Method: Ribbons of adhesive mixture shall be applied with a trowel to one surface of the insulation board. The ribbons shall be 2" wide x 3/8" thick around the entire perimeter of the insulation board. The adhesive mixture shall not be applied to the ends of the insulation board. Dabs of adhesive mixture 4" in diameter x 3/8" thick shall be applied to the area within the perimeter ribbon. A minimum of 50% of the insulation board surface shall be in contact with the adhesive mixture.
   c. The prepared insulation board shall be immediately taken to the substrate and applied as follows:
      1. The insulation board shall be lightly affixed to the substrate with the lower horizontal edge and adjacent vertical edge 1/2" from the adjacent insulation boards.
      2. The insulation board shall be pressed down and slid diagonally until it tightly abuts the edges of the adjacent insulation boards.
      3. The entire outside surface of the insulation board shall be tamped with even pressure to insure complete contact of the adhesive mixture to the substrate and planeness of the adjacent insulation boards. A straight edge at least 6' long shall be used for this purpose.
   d. If gaps in the insulation board occur, slivers of insulation boards shall be cut and shaped to fit the gaps and inserted, without using the adhesive mixture.
   e. A period of 24 hours shall lapse to allow the adhesive mixture to form a positive bond. The insulation board shall not be moved nor the substrate flexed while the adhesive mixture is curing.
   f. The edges of the insulation board which are out of plane shall be sanded until flush. Low areas shall not be filled with adhesive mixture to produce a level surface.
   g. Grooves and other features shall be routed into the outside surface of the insulation board, if required, using a high-speed wood router and proper bit. The minimum thickness of the insulation board at any point in the routed groove or feature shall not be less than 3/4".
   h. Foam shapes of insulation board, if used, shall be applied directly to the substrate or surface of the insulation board.
2. Base Coat:
   a. General:
      1. Surface of the insulation board shall be inspected by the installer as follows:
         a. For flatness, using a straight edge. High areas and out-of-plane insulation board joints shall be sanded flat. Low areas shall not be built-up with adhesive mixture to form a flat surface.
         b. For damage and foreign materials. Deficiencies shall be corrected.
         c. For deterioration, visible as discoloration, due to weathering. Affected areas shall be sanded to remove deterioration while maintaining the flatness of the surface.
         d. The reinforcing mesh shall be embedded into the wet adhesive mixture with its concave surface facing the wall.
   b. Base Coat:
      1. Using a stainless steel trowel the adhesive mixture shall be applied to the surface of the insulation board to a uniform thickness of 3/32".
      2. The mesh shall immediately be embedded into the wet adhesive mixture using the trowel. The surface of the adhesive mixture shall be smoothed with the trowel until the mesh is fully embedded. The pattern of the mesh shall not be visible beneath the surface of the adhesive mixture.
      3. Ends of adjacent mesh pieces shall be tightly abutted. Mesh pieces shall not be lapped. Mesh pieces shall be worked into the adhesive mixture from the center to the edges while smoothing out wrinkles.
      4. A period of 24 hours shall lapse to allow the first layer of the mesh base coat to form a positive bond and shall be protected from damage and weather while curing.
      5. The surface of the first layer shall be examined after curing for projections, loose strands of mesh and corrected to produce a flat surface.
      6. Details of the installation of the base coat at the ends of walls, windows, panel edges, corners, etc., shall be in accordance with manufacturer's latest published detailed installation instructions.
3. Finish:
   a. General:
      1. The finish shall be applied continuously and in one operation to the entire wall surface. A wet edge shall be maintained. The finish shall not be allowed to set up in a distinct area. Sufficient manpower, scaffolding and equipment shall be employed to insure a continuous operation and a uniform appearance.
      2. Work shall proceed toward the joints and corners.
      3. A clean stainless steel trowel shall be used.
      4. A small amount of water may be used to adjust the workability of the finish. The water shall be clear and potable.
      5. Until dry, the finish shall be protected from air- born contamination due to dust, soot, etc., and from weather and other damage.
      6. A tight coat of finish shall be applied to the Base Coat. Leveling and texturing shall take place in one operation.
      7. The maximum thickness of the finish shall be no greater than that of the largest aggregate.

END OF SECTION

SECTION 07430 - METAL ROOF PANELS

PART 1 - GENERAL

1.1 SUMMARY

A. Providing and installation of standing seam metal roof units on exterior areas including connection parts and miscellaneous pieces as required for a complete weatherproof installation.

1.2 Related work specified elsewhere:

A. Section 05120 Structural Steel: Structural support system for exterior roofing.

B. Section 05400 Light Gage Metal Framing: Interior metal stud wall framing

C. Section 06100 Rough Carpentry: Sheathing for exterior canopy areas and interior

D. Section 07600 Flashing and Sheet Metal: Exterior trim and fittings.

E. Section 07900 Sealants: Joint moisture control.

1.3 Quality Assurance

A. Provide manufactured roof panel assemblies complying with performance requirements indicated and capable of withstanding structural movement, thermally induced movement, and exposure to weather without failure or infiltration of water into the building interior.

B. Installer Qualifications: Installation shall be by competent and skilled sheet metal applicators, with at least five (5) years experience applying these types of materials with successful completion of projects of similar scope.

1.4 Delivery, Storage, and Handling

A. Delivery of materials shall be made only after suitable facilities for it's storage and protection are available on the site. Upon receipt of performed metal panels, flat sheets, flashing and panel accessories, Installer shall examine each shipment for damage and or completeness.

B. Store materials out of weather, in a clean, dry place. One end of each container should be slightly elevated to allow any moisture to run off. Panels and/or flashing with strippable film must not be stored in areas exposed to sunlight. Care should be taken to prevent contact with substances, which may cause discoloration in the finish during storage. Store materials to provide ventilation and prevent bending, abrasion or twisting.

C. Materials should be handed with care to avoid gouging, scratching or denting.

1.5 Project Conditions

A. Verify location of structural members and openings in substrates by field measurements before fabrication and indicate measurements on Shop Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the work.

1.6 Warranty

A. Exterior Panel Finish Warranty: Submit a written warranty, signed by manufacturer, covering failure of the factory-applied exterior finish on metal roof panels within the specified warranty period and agreeing to repair finish or replace roof panels that show evidence of finish deterioration. Deterioration of finish includes, but is not limited to, color fade, chalking, cracking, peeling and loss of film integrity.
1. Warranty: Submit manufacturer's 20 year warranty covering finish fade, caulk and peel.

PART 2 - PRODUCTS

2.

2.1 Acceptable Manufacturers

A. Approved Products:
1. Centria Architectural Products; System ADP-100, 12 inch.
2. MBCI Metal Products; Craftsman Series SB-12.
3. Berridge Tee-Panel Standing Seam Roof System (12 ¾ inch wide and 1 inch tee clips); Berridge Manufacturing Company, Houston, TX

2.2 Materials

A. Panel:
1. Material: 24 gage ASTM A653 aluminum-zinc (Galvalume) or ASTM A792, Grade 50 sheet steel.
2. Finish: Kynar 500 creating a 1.0 mil minimum total dry film thickness.
3. Color: As indicated on drawings.
4. Panel profile: As indicated in 2.01 Acceptable Manufacturer's.

B. Protection of Product
1. The prefinished side shall be provided with a factory applied strippable film for protection of finish during shipping and handling. (Contractor to remove immediately upon installation).

2.3 Accessories

A. Provide exposed accessory clips, trim, cap and connection material to match finish of roofing panels. Trim to be fabricated as per Section 07610.

B. Concealed accessories shall be 24 gage hot-dipped galvanized metal with G-60 finish or as per manufacturers standard accessory finish material for concealed application.

PART 3 - EXECUTION

2.

3.1 Examination / Preparation

A. Contractor Inspection/Acceptance
1. This contractor shall examine surfaces on which his work has to be applied, and shall notify the architect in writing if it is not suitable to receive his work. Work on any surface shall constitute acceptance of this surface by the installer.

B. Field Measurements
1. Workmanship shall conform to set standard set forth in the Architectural Sheet Metal Manual as published by the SMACNA.
2. Panels shall be installed in such a manner that, horizontal lines are true and level, and vertical lines are plumb.
3. All starter and edge flashings should be installed prior to the panels.
4. Do not allow panels or trim to come into contact with dissimilar materials.
5. Exposed edges are permissible due to the galvanic action of the system where the zinc migrates to protect the exposed areas.
6. Modifications to be made as per MFG. recommendations where roof slope is less than 3:12.

SECTION 07430 - METAL ROOF PANELS CONTINUED

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C. Coordinate metal panel roofing with rain drainage work; flashing; trim; and construction of decks, parapets, walls, and other adjoining work to provide a leak proof, secure, and noncorrosive installation.

3.2 Installation

A. Exterior roofing application, comply with panel manufacturer's written instructions and recommendations for installation, as applicable to project conditions and supporting substrates. Anchor panels and other components of the work securely in place, with provisions for thermal and structural movement.

B. Coordinate with Section 07910 for sealant application to joints and connection to dissimilar materials.

C. Caulk edge joints and wall connections to stop light leaks from displays.

3.3 Adjusting and Cleaning

A. Work Site: Leave work areas clean, free from grease, finger marks and stains. Remove scrap and debris from surrounding areas and grounds.

B. Damaged Units: Replace panels and other components of the Work that have been damaged or have deteriorated beyond successful repair by finish touch-up or similar minor repair procedures.

C. Remove temporary coverings and strippable films, if any, as soon as each panel is installed. On completion of panel installations, clean finished surfaces as recommended by panel manufacturer and maintain in a clean condition during construction.

3.4 Protection

A. Touch up / Replacement of Product: Only minor scratches and abrasions will be allowed to be touched up. Any other damaged material shall be replaced.

B. Do not allow foot or equipment traffic on completed roof.

C. Protect installed products from damage caused by foreign objects and adjacent construction until completion of project.

END OF SECTION

SECTION 07475

METAL SOFFITS

PART 1 – GENERAL

1.01 SECTION INCLUDES

A. Furnish all labor and materials to install linear aluminum soffits.

1.02 SUBMITTALS

A. Shop Drawings: Submit Shop Drawings of material and installation details.

B. Submit samples of soffit material, including molding and trim, for approval.

1.03 PRODUCT DELIVERY, STORAGE AND HANDLING

A. Protect materials from damage during transportation and storage. Store panels under cover, in dry location. Materials scarred or dented shall not be used.

PART 2 – PRODUCTS

2.01 MATERIALS

A. Linear Aluminum Soffit: Shall be Donn Paraline II, Hunter Douglas Luxalon Box Square Edge, or Chicago Interfinish Planar Square Edge Plus, .024 aluminum pan, linear metal ceiling system with integral recessed flange, or approved equal. Finish to be smooth with matte black flange. Provide perforated pans at indicated spacing.
1. Suspension System: Shall be Donn aluminum symmetrical carrier suspension system, or approved equal, with main support tees capable of supporting 16 lb. per lineal foot on a four foot span.

PART 3 – EXECUTION

3.01 INSTALLATION

A. Install linear soffits according to manufacturer's instructions and approved Shop Drawings.

B. Provide 1/2" x 3/4", 16 gauge steel furring channel and vertical supports around perimeter of light fixtures in soffits.

C. Wires used to suspend any system shall be not less than 12 gauge. Each hanger shall be capable of supporting 150 lbs.

D. Linear aluminum soffits shall be constructed to resist a 30 psf wind uplift. Provide galvanized steel stud down post as required by the linear soffit manufacturer. Provide trim channel at vertical surfaces, color to match panel.

E. Construct access panels using downward access door kit. Panels shall be square and flat, with uniform margins at perimeter. Provide concealed safety chain to limit door swing and prevent bending.

F. Upon completion, clean all panels of all dirt, excess sealant, and other foreign substances.

END OF SECTION

SECTION 07530

MECHANICALLY ATTACHED SINGLE-PLY ROOFING SYSTEM

PART 1 – GENERAL

1.01 SECTION INCLUDES

A. Furnish and install a mechanically attached roofing membrane, accessories and related work as indicated on the drawings and as specified.

1.02 QUALITY ASSURANCE

A. All materials used as a component of the roofing system shall be supplied or approved in writing by the roofing system manufacturer. Warrantor shall be the manufacturer of the membrane.

B. The complete roofing system shall be installed by a pre-approved roofing Contractor licensed, factory trained and approved by the roofing system manufacturer and employing full time personnel experienced and skilled in the application of the manufacturer's roofing system. Provide at least one thoroughly trained, full time and experienced superintendent on the job at all times roofing work is in progress. The Contractor shall have a minimum of 3 years experience installing the system, have installed a minimum of 500,000 square feet. The roofing contractor shall be fully knowledgeable of all requirements of the contract documents and shall make themselves aware of job site conditions that will affect their work.

C. Upon completion of the installation, an inspection shall be made by the system manufacturer's non-sales technical representative to ascertain that the roofing system has been installed according to the applicable manufacturer's specifications and details, and the contract drawings. The results of the warranty inspection shall be submitted in writing to Centro Watt for their review and records. Warranty commencement shall be the same date as substantial project completion.

1.03 PROJECT CONDITIONS

A. Proceed with roofing work only when weather conditions are in compliance with the manufacturer's recommended limitations, and when conditions will permit the work to proceed in accordance with the manufacturer's requirements and recommendations.

B. New roofing shall be complete and weathertight at the end of the work day.

C. Contaminants such as grease, fats and oils shall not be allowed to come in direct contact with the roofing membrane.

D. Materials shall be applied to properly prepared dry areas.

E. Roofing shall be applied only in dry weather.

1.04 REFERENCES

A. ASTM: American Society for Testing and Materials.

B. FM: Factory Mutual Research Corporation:
1. Loss and Prevention Data Sheet I-28 and I-29.
2. Approval Standard 4470.
3. Loss and Prevention Data Sheet I-29 and I-7.

C. UL: Underwriters' Laboratories, Inc.
1. UL 790: Tests for Fire Resistance of Roof Covering Materials.

1.05 SUBMITTALS

A. Submit manufacturer's literature and data sheets on each component of the roofing system.

B. Blank sample of manufacturer's and Contractor's warranty forms.

C. A letter from the membrane manufacturer acknowledging the condition of the roof application.

D. Submit manufacturer's approved Shop Drawings.

1.06 PRODUCT DELIVERY, STORAGE AND HANDLING

A. Deliver materials to the job site in the manufacturer's original, unopened containers or wrappings with the manufacturer's name, brand name and installation instructions intact and legible. Deliver in sufficient quantity to permit work to continue without interruption.

B. Comply with the manufacturer's written instructions for proper material storage.

C. Materials which are found to be damaged shall be removed and replaced at the applicator's expense.

D. The loads of construction shall not exceed 25 pounds per square foot.

E. Weather protection shall mean the temporary protection of that work adversely affected by moisture, wind, heat, and cold by covering, patching and sealing, enclosing, ventilating, cooling and/or heating.

SECTION 07530

MECHANICALLY ATTACHED SINGLE-PLY ROOFING SYSTEM (CONTINUED)

1.07 PROJECT/SITE CONDITIONS

A. Roof system shall be designed to meet FM Class 1, and I-90 requirements.

B. Prior to the commencement of work, the Contractor shall inspect all roof surfaces to ensure their compliance with the provisions of this specification and the manufacturer's published literature.

C. All surfaces shall be smooth, dry, clean, free of fins or sharp edges, loose or foreign materials, oil or grease.

D. No work shall proceed when moisture is present on the roof or in the materials.

E. Completed roof areas shall not be trafficked.

F. Temporary waterstops shall be installed at the end of each work day and shall be removed before proceeding with the next day's work per manufacturer's published specification.

G. Do not overload any portion of the building, either by use of or placement of equipment, storage of debris, or storage of materials.

H. Protect against fire and flame spread. Maintain proper and adequate fire extinguishers.

I. Take precautions to prevent drains from clogging during the roofing application. Remove debris at the completion of each day's work and clean drains, if required. At completion, test drains to ensure the system is free running and drains are watertight. Remove strainers and plug drains in areas where work is in progress. Install flags or other telltales on plugs. Remove plugs each night and screen drain.

J. Remove all traces of piled bulk materials and return the job site to its original condition upon completion of the work.

1.08 WARRANTY

A. The Roofing Contractor shall furnish Centro Watt with 15-year written warranty covering labor and materials with no dollar limitation. Certification is required with bid submittal indicating the manufacturer has reviewed and agreed to insurance mandated wind coverage. Warrantor shall be the manufacturer of the membrane. Warranty shall be "No Dollar Limit" (NDL). The warranty shall be written to the building Owner.

B. Upon completion of the work and prior to acceptance of the work, the Roofing Contractor shall submit a guarantee to the Owner. The guarantee shall be for a 2-year period and shall cover any defect in the work or materials. The guarantee shall be submitted in a form acceptable to Shaw's. Warranty commencement shall be the same date as substantial project completion.

C. When the warrantor is notified that there is a problem (leak or damage) with the warranted roofing system and/or accessories by telephone, and/or in writing (fax or mail) response time to physically start the repairs shall be within twenty-four (24) hours from time of telephone or date of written notification.

D. The Contractor shall thoroughly inspect all substrates prior to the application of new materials. Upon acceptance of the substrates, the Contractor's guarantee will include the entire roof system for water-tightness.

E. All details relating to the installation of the roofing system shall be approved prior to installation by the roofing system manufacturer and installed in such a manner that the manufacturer will furnish its standard extended 72 mph warranty.

1.09 SPECIAL CONDITIONS

A. All materials used in the roofing systems shall be as furnished or approved in writing by the roofing system manufacturer.

B. Coordinate work with that of other trades affecting or affected by the work of this section. Cooperate with such trades to ensure the steady progress of all work under this contract.

PART 2 – PRODUCTS

2.01 MATERIALS

A. Membrane: To match existing shopping center roof.

B. Adhesives and Cleaners, Fasteners, Roof Edge Strip: Products shall be furnished by roofing manufacturer and specifically formulated for the intended purpose.

PART 3 – EXECUTION

3.01 MEMBRANE INSTALLATION

A. Comply with the manufacturer's published instructions and approved shop drawings for the installation of the membrane roofing system including proper substrate preparation, jobsite considerations and weather restrictions.

B. Position sheets to accommodate contours of the roof deck and shingle splices to avoid bucking water.

3.02 MEMBRANE PLACEMENT AND ATTACHMENT

A. Unroll and position membrane without stretching. Provide and secure both perimeter and field membrane sheets in accordance with the manufacturer's most current specifications and details.
1. Provide 4 target half sheets, 2 foot 6 inches wide when installed perpendicular with deck and 4 foot 3 inches wide when installed parallel to deck, fastened 6 inches on center at perimeter.

B. Secure the membrane with the required Fasteners and Plates spaced a maximum of 12 inches on center (centered over the pre-printed marks approximately 1-1/2 inches from the edge of the membrane sheet).

C. Install adjoining membrane sheets in the same manner in accordance with the manufacturer's specifications.

D. Perimeter fixation shall be provided.

E. Perimeter membrane areas left exposed prior to fascia installation shall either be fully adhered to the vertical face or retained by a continuous cleat. Membrane shall extend down wall at least 1 inch past the bottom of the wood nailer, lapping over the wall finish, but not exposed below the flashing.

3.03 FLASHING

A. Flashing of parapets, curbs, expansion joints and other parts of the roof must be performed using the manufacturer's reinforced membrane.

B. Follow manufacturer's approved shop drawing flashing details and typical procedures for all wall, curb, and penetration flashing including metal edging/coping and roof drain applications.

C. Perimeter flashing and flashing around vents, curbs, etc., shall be done with manufacturer's flashing, using uninterrupted full height pieces.

D. Flash all projections passing through the membrane.

E. Base Flashing: The tops of elastomeric base flashing are shall be secured with a continuous aluminum termination bar and counterflashed.

F. All vertical flashings and membranes shall be adhered to substrates regardless of height.

G. Inside and Outside Corners: All corners shall be flashed with uncured membrane conforming to manufacturer's requirements. A minimum overlap of 3" is required.

H. Membrane manufacturer's recommended flashing detail may be considered by the Architect when no detail is provided.

3.04 CLEAN UP

A. Perform daily clean-up to collect all wrappings, empty containers, paper, and other debris from the project site. Upon completion, all debris must be disposed of in a legally acceptable manner.

B. Prior to the manufacturer's inspection for warranty, the applicator must perform a pre-inspection to review all work and to verify all flashing has been completed as well as the application of all caulking.

END OF SECTION

SECTION 07600

METAL FLASHING

PART 1 – GENERAL

1.01 SECTION INCLUDES

A. Furnish and install flashing.

1.02 SHOP DRAWINGS AND PRODUCT DATA

A. Submit Shop Drawings and product data.

B. Indicate material profile and gauges, jointing details, fastening methods and spacing, and installation details.

C. Submit manufacturer's data sheets and color charts for all required metal finishes.

1.03 PROTECTION

A. Exercise care when working on or about roof surfaces to avoid damaging or puncturing membrane or flexible flashings.

B. Place plywood panels on roof surfaces adjacent to work of this Section and on access routes. Keep in place until completion of work.

1.04 COORDINATION

A. Coordinate work with that of all other trades affecting or affected by work of this Section. Cooperate with such trades to assure the steady progress of all work under the Contract.

1.05 STANDARDS

A. Except as Modified by the Requirements of Other Governing Codes and by this Specification, Conform to the Provisions and Recommendations of the Following Codes and Standards:
1. Metal installation shall be in accordance with the Architectural Sheet Metal Manual published by the Sheet Metal and Air Conditioning Contractor National Association, Inc. (SMACNA) fifth edition.
2. Factory Mutual loss prevention data sheet I-49.

SECTION 07600

METAL FLASHING (CONTINUED)

PART 2 – PRODUCTS

2.01 MATERIALS

A. Flashing and Sheet Metal Materials:
1. Lead-coated Copper: ASTM B101, Type I, Class A coating on a base sheet of cold-rolled temper copper meeting ASTM B370, weighing not less than 16 oz./sq. ft., unless indicated otherwise.
2. Copper: ASTM B370, light cold-rolled temper.
3. Prefinished Metal: .040" thickness, unless indicated otherwise; aluminum; Reynolds Metals Co.; Colorweld 300 coating with Kynar 500 resin; smooth finish, color, as indicated on Drawings.
4. Fasteners: Continuous concealed clip type; of same material as flashings; sized to suit application. Nails, screws and washers; copper, bronze or stainless steel; nails, ring shank, 3/8" diameter head; stainless steel or copper.
5. Masonry flashing specified in Section 04200.

B. For attaching sheetmetal to masonry, use Rawl "Zamac" plugs, Tapcon screws by Filco Industries, Inc., or Con Fixx by Fabco; stainless steel.

C. Bituminous Coating: FS TT-C-494 or SSPC - Paint 12, solvent type bituminous mastic, nominally free of sulpher, compounded for 15-mil dry film thickness per coat.

D. Mastic Sealant: Polyisobutylene; non-hardening, non-skinning, non-drying, non-migrating sealant.

E. Metal Accessories: Provide sheet metal clips, straps, anchoring devices and similar accessory units as required for installation of work, matching or compatible with material being installed, non-corrosive, size and gauge required for performance.

F. Roofing Cement: ASTM D2822, asphaltic.

G. Solder: For use with steel or copper, provide 50-50 tin/lead solder (ASTM B32), with resin flux.

H. Flash Vent: Alcoa, Air Vent Inc., or approved equal; pre-finished aluminum; 9 sq. in. net free area per linear foot.

2.02 FABRICATION

A. Flashing Schedule
1. Roof Edge Strip for EPDM: SMACNA, Figure 2.5C; continuous edge clip; 4-inch flange on roof; pre-finished metal.
2. Metal Coping: .080" pre-finished metal; shop formed to detail; joint detail SMACNA Table 3-1, J-12 Double S., edge style E1; Attachment Figure 3-7A.
3. Trim Flashing - Pre-finished Metal: shop formed to detail.

B. General Metal Fabrication: Shop fabricate work to greatest extent possible.

C. Seams: Fabricate non-moving seams in sheet metal with flat lock seams. For metal other than aluminum, tin edges to be seamed, form seams and solder. Form aluminum seams with epoxy seam sealer; rivet joints for additional strength where required.

D. Expansion Provisions: Where lapped or bayonet-type expansion provisions in work cannot be used, or would not be sufficiently water/weatherproof, form expansion joints of intermeshing hooked flanges, not less than 1" deep, filled with mastic sealant (concealed within joints).

E. Sealant Joints: Where movable, non-expansion type joints are indicated or required for proper performance of work, form metal to provide for proper installation of elastomeric sealant in compliance with industry standards.

F. Separations: Provide for separation of metal from non-compatible metal or corrosive substrates by coating concealed surfaces at locations of contact with bituminous coating or other permanent separation as recommended by manufacturer/fabricator.

PART 3 – EXECUTION

3.01 INSTALLATION

A. Construct all metalwork neatly and securely reinforce, and stiffen as required to present and maintain true and regular surfaces. All edge strips shall be neatly folded external and internal corners shall be mitered and soldered for lead coated copper, and sealed in full bed of water cut off mastic for pre-finished metal. Install work with permanently watertight and weatherproof joints, laps and seams. Conceal all fasteners. Provide for thermal expansion of metal.

B. Metal edgestrips shall be set on roofing membrane. Bottom edge shall be secured with a continuous concealed clip. No face nailing allowed. Nail the top flange with annular-threaded nails three inches (3") o.c. and strip with flashing.

C. Where back-up plates are specified, set flashing ends in full bed of water cut-off mastic, allowing 1/4 inch between sections.

D. Where stacks or vents pass through roof, install preformed factory pipe seals around pipes embedded into roof. Flash into roofing with elastomeric flashing.

E. Provide metal counter flashing where elastomeric base flashing is used. Flashing shall be built-in and turned up to provide positive weather protection.

F. Lap counterflashing over vertical leg of base flashing 4 inches minimum.

G. Electrolytic Action: Where two (2) dissimilar metals adjoin or lap each other (example: galvanized metal ducts and copper cap flashing), an approved separating strip or other insulating material shall be installed.

H. All exposed sheet metalwork shall be cleaned at completion of installation. All exposed metal surfaces shall be free of dents, creases, waves, scratch marks and solder or weld marks.

END OF SECTION

SECTION 07900

SEALANTS

PART 1 – GENERAL

1.01 SECTION INCLUDES

A. Sealing of control joints in exterior and interior masonry work and joints between masonry and metalwork and cementitious materials.

B. Sealing of exterior joints between perimeters of window frames, door frames, and other items occurring in openings in exterior walls, and the surrounding masonry construction, including bed sealing of thresholds.

C. Caulking of interior perimeter joints around window frames, door frames, and other items occurring in openings in exterior or interior walls or joints.

D. All other exterior sealing and interior caulking called for, and as required to provide tight conditions in walls and partitions.

1.02 REFERENCES

A. ASTM C 920-79: Elastomeric Joint Sealants.

B. F.S. TT-S-8227E: Sealing Compound, Elastomeric Type, Multi-Component (for Caulking, Sealing and Glazing in Building Construction.

C. F.S. TT-S-00230C: Sealing Compound, Elastomeric Type, Single Component (For Caulking, Sealing and Glazing in Buildings and Other Structures)

1.03 SUBMITTALS

A. Submit manufacturer's descriptive literature, color samples, technical samples and data sheets on each type of caulking and sealant material proposed.

B. Submit manufacturer's material safety data sheets (MSDS) for all system products to be utilized for record.

1.04 QUALITY CONTROL

A. All caulking and sealant installation shall be installed by a specialty Subcontractor proficient in this trade.

1.05 DELIVERY AND HANDLING

A. Sealants shall be delivered to the job site in sealed containers bearing the manufacturer's name; mixed, stored, handled and applied in strict accordance with manufacturer's detailed instruction.

1.06 MATERIAL LIFE

A. Manufacturer's label shall indicate date of manufacture of sealants, or manufacturer shall otherwise attest to date of manufacture. Period of time no longer than 6 months for polyurethane shall have elapsed from date of manufacture to date of usage on job.

PART 2 – PRODUCTS

2.01 SEALANT MATERIALS

A. General Sealant: Low modulus, one component, moisture cured, non-sag, permanently flexible polyurethane sealant with 100 to 50 percent movement capabilities. Conforms to Fed. Spec. TT-S-00230C, Type II, Class A, ASTM C-920, Type S, Class 25, Grade NS, Sika Sikaflex 1a, Sonneborn NP-1, Tremco Dymonic, or approved equal.
1. Custom colored sealant shall be equal to Tremco Dymeric, or Sonneborn NP-2. Provide custom colored sealants at exterior to match adjacent masonry and exterior insulated finish system.

B. Epoxy Joint Filler: The epoxy joint filler shall be a two- component, 100% solids compound, with a minimum shore D hardness of 50, "Euco Soff-Cut" by The Euclid Chemical Company, Joint Master JF-80 by Century Floors, or MM-80 by Metzger & McGuire.

C. Seam Sealant (At Small Metal to Metal Joints): Tremco Seam Sealer, or approved equal.

D. Sidewalk Joint Sealant: Self-leveling; Tremco THC 900 or Thiokol T-2407.

2.02 ACCESSORIES

A. Backer Rod Material: Closed cell polyethylene foam, or butyl and neoprene rods. Do not use an asphalt treated packing material.

B. Primer: As recommended by sealant manufacturer.

C. Bond Breaker Tape: Polyethylene tape as recommended by sealant manufacturer.

PART 3 – EXECUTION

3.01 WORKMANSHIP

A. Joints and spaces to be sealed shall be clean, dry and free of dust, loose mortar, and other foreign matter. Clean ferrous metal of all rust, mill scale and coatings by wire brush, grinding or sandblasting. Remove oils and grease with solvent, such as xylol, toluol, or methyl-ethyl-ketone. Remove protective coatings from aluminum surfaces against which caulking materials are to be placed.

B. Pack all recesses or joints to be caulked to within 1/2" of surface with one of the specified packing materials. Joints to be caulked shall not be over 1" wide or less than 1/4". Depth of sealant shall equal joint width up to 1/2" wide; depth of sealant shall equal 1/2 width of joint for joints over 1/2" wide. Use bond breaker tape in masonry control joints that have been raked.

C. Mask exposed surfaces on both sides of joints to prevent contact with sealant.

D. Immediately prior to caulking with sealant, prime both sides of joint.

E. After joints have been completely filled, neatly tool the joint.

F. Immediately clean adjacent materials which have been soiled; leave work in a neat, clean condition.

G. Place no sealant when the temperature is below 40˚F.

H. No sealant shall be left feather-edged out onto adjacent surfaces.

I. Cure sealants and caulking compounds in compliance with manufacturer's instructions and recommendations, to obtain high early bond strength, internal cohesive strength and surface durability. Protect joint sealers during construction period to prevent damage or deterioration.

SECTION 07900

SEALANTS CONTINUED

3.01 WORKMANSHIP

J. Bond Breaker Tape: Shall be applied to sealant-contact surfaces where bond to substrate or joint filler must be avoided for proper performance of sealant. Provide self-adhesive tape where applicable.

K. Epoxy Joint Filler: All sawn joints at interior exposed sealed concrete floors, sidewalks and concrete paving shall be filled with epoxy joint filler. Compound shall be mixed and installed in strict accordance with the directions of the manufacturer. Joints shall not be filled sooner than 90 days after the slab placement. Prior to filling, all joints shall be picked and brushed clean.

3.02 GUARANTEE

A. Provide written guarantee, on approved format, guaranteeing all sealant work against defective material and workmanship for a period of 5 years, commencing on the date of substantial completion of the building.

END OF SECTION

SECTION 08410

ALUMINUM ENTRANCES AND STORE FRONT

PART 1 – GENERAL

1.01 SECTION INCLUDES

A. Furnish and install, complete, aluminum frames and related items as shown and herein specified.

1.02 RELATED WORK SPECIFIED ELSEWHERE

A. Section 07900: Sealants.

B. Section 08415: Automatic Door Openers.

C. Section 08800: Glazing.

1.03 SUBMITTALS

A. Submit Shop Drawings showing details of materials, reinforcing, connections, fasteners to rough opening, and all layouts.

1.04 PROTECTION AND CLEANING

A. Protect all aluminum surfaces against damage at all times, store off the ground, under cover and in a dry place. After erection, they shall be adequately protected against staining, smearing and damage during construction and finishing operations.

PART 2 – PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

A. Aluminum storefront and framing materials shall be Kawneer 451T Thermal Framing and 451 non-thermally broken framing or Vista Wall Thermal Slot 3000 and 3000S non-thermally broken framing.

2.02 MATERIALS

A. Framing System:
1. Exterior Frames: Thermal-break construction, extruded aluminum 6063-T5; wind loading 35 psf. Clear anodic coating AA-M12C22A31 Class II mechanical finish, non-specular, with medium-matte chemical etch, minimum thickness 0.4 mil (0.010mm). Provide internal horizontal and vertical reinforcement indicated and any additional support required by the manufacturer of the framing system. All framing faces shall be seamless with neoprene glazing gaskets.
   a. Use thermal break construction at interior for Meat Prep Room with insulating glass.
2. Interior Frames: Extruded aluminum 6063-T5; clear acrylic coating resin; all framing faces shall be seamless with neoprene glazing gaskets.

B. Hardware Preparation: All cutouts, recesses, mortising or milling operations required for hardware shall be accurately made and reinforced with backing plates, as required to insure adequate strength of the connection.

C. Fasteners: All fasteners shall be aluminum or stainless steel. Exposed fasteners shall match frame and door finish.

D. Aluminum Breakmetal: .060" thick; clear acrylic coating finish to match storefront framing for aluminum sill and bent covers. All fasteners shall be concealed. Sill shall have continuous clip.

PART 3 – EXECUTION

3.01 INSTALLATION

A. Install all work in its proper position on the structure, level, plumb, straight and square at the correct elevation and plane and in alignment with the adjacent construction.

B. Aluminum in contact with dissimilar metals shall have contact surfaces painted with zinc-chromate paint or other approved separator.

C. Exterior installation shall be weathertight.

END OF SECTION

SECTION 08415

AUTOMATIC DOOR OPENERS

PART 1 – GENERAL

1.01 SECTION INCLUDES

A. Furnish and install automatic door units and related items.

1.02 SHOP DRAWINGS

A. Submit Shop Drawings and product data showing materials and installation details.

1.03 RELATED WORK SPECIFIED ELSEWHERE

A. Section 08410: Aluminum Entrances and Store Front.

B. Section 08800: Glazing.

1.04 WARRANTY

A. Provide a one-year warranty for 100% of all labor and material costs for all work done under this Section. Subcontractor for this work shall provide 24-hour, 4-hour response time on-call service for the warranty period.

PART 2 – PRODUCTS

2.01 MANUFACTURERS

A. Aluminum slide door package and motion detector fabricated by Horton Automatics, Dallas, Texas or approved equal.

B. Provide entrance and exit decals on entry doors.

2.02 DOOR CONSTRUCTION

A. Sliding Doors: Sliding doors shall be medium stile and part of a complete door package. Sliding doors shall be supported from the hanger assembly by a factory adjusted cantilever support and pivot assembly. This assembly shall allow the sliding and stationary panels to swing outward for emergency egress without the need for a lower door pivot support. Slide doors and panels to be prepped for 1/4" tempered glass. Provide security latches on panels at head of doors, to receive Best cylinders on exterior doors.

2.03 DOOR OPERATORS

A. Slide: Horton Series #2310 SO-SX-SX-SO door package with Series #2003 operator. Provide winter/summer limiting switch located in door frame.

2.04 OPENING AND SAFETY CONTROLS

A. Slide Doors:
1. Control: BEA CPSS-12 overhead motion and threshold detecting control sensors.
2. Safety Control: Each opening equipped with double LED safety beams.

2.05 GLASS GUARDS

A. Aluminum Glass Guards: One set shall consist of two horizontal and two vertical bars. Provide 2 sets per swing door leaf. Provide one set of two horizontal bars per slide door leaf and individual fixed leafs.

PART 3 – EXECUTION

3.01 INSTALLATION

A. Install doors, operators and related equipment in accordance with manufacturer's instructions. Make electrical connection at junction box provided under Division 16.

B. Adjust operators and equipment and leave in perfect working condition.

C. Clean and polish installed units. Protect completed system and repair or replace as directed all damaged or scratched sections.

END OF SECTION

SECTION 08800

GLAZING

PART 1 – GENERAL

1.01 SECTION INCLUDES

A. Furnish and install, complete, all glass and glazing.

1.02 STORAGE AND HANDLING

A. Material shall be delivered when and as required and stored in a safe location. Material shall not be unpacked until it is to be used. All glass shall be factory-labeled on each pane and labels shall remain on glass until final cleaning.

1.03 SUBMITTALS

A. Submit Shop Drawings showing material type and location.

PART 2 – PRODUCTS

2.01 MATERIALS

A. Tempered Glass: 1/4" thick heat tempered glass; ASTM C-1048.

B. Plate Glass: 1/4" thick clear plate glass; ASTM C-1036.

C. Insulating Glass Units: Shall be manufactured by Solar Seal Co., or approved equal, consisting of 2 lites of glass separated by a spacer filled with moisture absorbing desiccant. Units shall have clear glass for outboard lite and clear for interior lite with Low-E coating on #3 surface. Units shall be two-part hermetically sealed, having a primary butyl rubber sealant, and a secondary polysulfide sealant, with fused or welded corners, with 10-year warranty against seal failure.
1. Insulating Values:
   a. Clear Glass shall have a U value of 0.30 and a shading coefficient of 0.76.
2. Lites for tempered insulating glass units shall be 1/4" tempered glass with 1/2" spacers for a total composite thickness of 1".
3. Lites for all other insulating glass units shall be 1/4" plate glass with 1/2" spacers.
4. All units shall be certified to Class CBA of ASTM E-6 P3 test requirements through IGCC and have the IGCC label and A Classification permanently etched in the corner of the insulating glass units.

Rev. #	Issue	Description	Date	Rev. #	Issue	Description	Date
0	05/14/07	BID					

Drawing Description: FACADE IMPROVEMENTS SPECIFICATIONS

Market/Project Name: PINE TREE SHOPPING CENTER, BRIGHTON AVE., PORTLAND, ME

Des./Dftr	Drawn By	Checked By
GWS	RMS	GWS
Scale	**Date**	**Approved**
AS NOTED	05/14/2007	

A/E Project No. 05120

Architect/Engineer: SCHNEE ARCHITECTS INCORPORATED, 339 AUBURN ST. SUITE 6 NEWTON, MA 02466, TEL: 617-630-1900 FAX: 617-630-1959

Seal

OWNER: CENTRO HERITAGE SPE 4LLC
40 SKOKIE BLVD., SUITE 600
NORTHBROOK, IL 60062

State: ME Site: PINE TREE

Phase: BID

Sheet No. SP100