SECTION 055000

MISCELLANEOUS METALS

THIS SECTION TO BE INCLUDED IN SUB BID FOR SECTION 050001 – MISCELLANEOUS AND ORNAMENTAL IRON

PART 1  GENERAL

1.01  GENERAL REQUIREMENTS

A.  PART A and DIVISION 1 of PART B are hereby made a part of this SECTION.

B.  Examine all conditions as they exist at the project prior to submitting a bid for the work of this SECTION.

1.02  SCOPE OF WORK

A.  Furnish and install the following, as shown on the Drawings and specified herein:

   1.  Expansion joint frames, covers, and accessories.
   2.  Fire barriers at expansion joint conditions.
   3.  Clip angles and plates at tops of interior existing and new masonry partitions.
   4.  Stainless steel kitchen corner guards at all outside corners in the kitchen.
   5.  Elevator vent louver.
   6.  All other items designated "miscellaneous metals" or "SECTION 055000" on the Drawings.

B.  Perform all shop painting, and touch-up after erection, as specified hereunder.

C.  Furnish the following, for installation under the designated SECTIONS:

   1.  Steel lintels (loose), not attached to structural steel, galvanized when used on exterior openings, as per lintel schedule on Structural Drawings, and over all new openings in new masonry or concrete walls and partitions, including openings for ducts, doors, and other openings in these surfaces as required SECTION 040001-MASONRY.

   2.  Anchor bolts, inserts, and sleeves required to attached miscellaneous metal items to concrete and to masonry: SECTION 03300-CONCRETE AND SECTION 040001-MASONRY.

D.  The following related work is to be performed under the designated SECTIONS:

   1.  Metal items requiring custom fabrication: SECTION 050001-MISCELLANEOUS AND ORNAMENTAL IRON.
2. Structural steel items, including all attached lintels, relieving angles, leveling plates and related anchors bolts, and other steel shapes shown on the Drawings, not specified hereunder: SECTION 051200 - STRUCTURAL STEEL.

3. Manufactured metal items in conjunction with millwork: SECTION 062000 - FINISH CARPENTRY.

4. Finish painting of miscellaneous metal items except factory finished items: SECTION 090007 - PAINTING.

5. Expansion joints in gypsum wallboard and veneer plaster surfaces: SECTION 092116 - GYPSUM DRYWALL.

6. Thresholds not specified herein: SECTION 087100 - HARDWARE AND SPECIALTIES.

7. Access panels furnished under mechanical and electrical sections: SECTION 220001 - PLUMBING, SECTION 210001 - FIRE PROTECTION, SECTION 230001 - HVAC and SECTION 260001 - ELECTRICAL.

8. Damper and controls for elevator vent louver: SECTION 230001 - HVAC.

1.04 SUBMITTALS

A. Submit complete shop drawings in accordance with the requirements of SECTION 013300-SUBMITTALS.

B. Include large-scale details of items of miscellaneous metals, specified herein, showing proposed methods of anchorage to surrounding structure, complete schedules showing locations and sizes to be furnished hereunder.

C. Each field piece shall be marked plainly with suitable erection marks, which shall also be shown on the shop drawings.

D. Submit color samples for prefinished items.

1.05 JOB CONDITIONS

A. Be responsible for location and levels of all work of this SECTION, except such parts as may be delivered to other and set by them. In such cases assist them in properly locating said parts.

B. Furnish anchorage items and other items required to be built into the concrete or masonry to the job at the proper time and include instructions and/or templates for their installation.
1.06 COORDINATION OF FINISH

A. Coordinate finish of louver assemblies with the manufacturer of metal windows furnished and installed under SECTION 080001 - METAL WINDOWS, and wall panels furnished and installed under SECTION 074213 - PREFORMED CLADDING. If so directed by the Architect, color and sheen of louvers shall exactly match those selected for windows and wall panels.
PART 2 PRODUCTS

2.01 METALS AND METAL TREATMENTS

A. General

1. Standard products meeting the detailed requirements of the miscellaneous metal items required hereunder will be considered for approval by the Architect.

2. Provide all supplemental parts necessary to complete each miscellaneous metals item whether or not such parts are shown and specified. Provide all anchorage for securing the work required hereunder.

3. Provide only new metals, free from defects impairing strength, durability, and of the commercial quality specified.

4. Curved work shall be true to radii, with smooth finished surfaces unless otherwise specified.

5. Provide fastenings of the same material, color and finish, as the metal to which applied unless otherwise noted.

B. Steel shapes, plates, and bars - Conforming to the requirements of Standard Specifications for Steel for Bridges and Buildings, ASTM Designation A 36.

C. Hydraulic cement, for installing bolts and fastenings into masonry and concrete - Quick setting, non-staining type.

D. Bolts, nuts, and washers for field or stop connections - Galvanized, nuts retapped to fit, for all galvanized structural steel elements.

E. Galvanizing - All metal fabrications indicated to be galvanized on the Drawings or specified hereunder to be galvanized, shall conform to the requirements of the latest edition of the following ASTM Reference Standards: A123, A153, A143, A384, A385 and A780. Fabricated steel shall be galvanized by the hot-dip process conforming to the requirements of ASTM A123, latest edition with the addition of .05 to .09 percent nickel and other earthly materials to the galvanizing kettle forming an alloy, DELTAGALV by Duncan Galvanizing or approved equal meeting all requirements of this specification. Provide thickness of galvanizing specified in referenced standards. To prevent flux inclusions and entrapment, the steel shall be immersed in a bath of zinc ammonium chloride prior to galvanizing. The use of the wet kettle process shall be prohibited.

Wherever possible, perform galvanizing after assembly of items. Only where items are too large for galvanizing tanks will galvanizing before assembly be acceptable. Each galvanized piece shall bear the stamp of the galvanizing processing firm indicating the ASTM Specification Number and the weight of the nickel zinc coating per square foot.
F. Shop priming and touch-up paint for non-galvanized steel - Tnemec 99 Red Metal Primer, Rust Oleum 1069 Heavy Duty Inhibitive Red Primer, or Pratt and Lambert Noxi De Red Primer.

2.02 EXPANSION JOINTS

A. Expansion joint frames and covers shall be extruded aluminum and/or resilient materials of design shown in the drawings with finish/color to be selected by the Architect.

B. Interior expansion joint covers shall be as detailed by C/S – Construction Specialties, as follows:

1. Flat masonry walls – Model SM-200, SMC-200
2. Floor to floor: (“hard” floor finishes) – Model GFPS-200
3. Floor to wall: (“hard” floor finishes) – Model GFPSW-200

C. Fire barriers – “Pyro-Flex” fire rated system by MM Systems, fire ratings to match wall and floor conditions as shown on the drawings.

D. Similar covers by other manufacturers will be considered as equal by the Architect upon receipt of adequate supporting data.

2.03 KITCHEN CORNER GUARDS

A. Guards shall be 16 gauge type 304 non-magnetic stainless steel with #4 satin finish, as manufactured by Pauling Corporation, Pauling NY, or approved equal.

B. Guards shall be 48 inches in length, 3 1/2 inches x 3 1/2 inches x 90 degree angle section, with 1/8 inch radius. Guards shall include stainless steel screws for mounting to concrete masonry unit construction.

2.04 ELEVATOR VENT LOUVER

A. Louver shall be Model 4097 (4 inch deep) as manufactured by Construction Specialties, or approved equal. Refer to Drawings for sizes and details.

B. All louvers shall be extruded aluminum of weatherproof construction complete with aluminum mesh insect screen and frame over the entire louver free area

C. Louver shall provide at minimum 55% free area.

D. Finish: Louver shall be factory-finished, following specifications issued by the finish manufacturer and meeting or exceeding AAMA Spec. 605.2 for high performance organic coatings on architectural extrusions and panels. Application of the finish shall be by an applicator approved by the finish manufacturer. Custom color shall be selected by the Architect.
PART 3  EXECUTION

3.01  WORKMANSHIP, FABRICATION AND INSTALLATION

A. Grind all edges of bars and plates completely free from nicks and machine marks, prior to galvanizing and/or shop priming.

B. Where field welding is necessary, completely coat all such welds with a cold liquid galvanizing, Z.R.C., Galvicon, or approved equal, after performing grinding operations.

C. Countersink all screw heads and bolt heads as far as practicable. Use not less than two screws, bolts or other anchorage items, at each connection point.

D. Use only screws and bolts of sufficient size to assure against loosening form normal usage of miscellaneous metal items furnished hereunder.

E. Install expansion joints and other miscellaneous metal items in strict accordance with the details, the approved shop drawings, and manufacturer's recommendations.

F. Adequately isolate all miscellaneous metal items from adjacent dissimilar materials and fastenings to minimize corrosion.

3.03  SHOP PAINTING AND TOUCH-UP OF NON-GALVANIZED STEEL

A. Surface preparation of steel - Thoroughly clean all steel of all loose mill scale by power wire brushing or sand-blasting. Remove all rust, dirt, weld flux, weld splatter, and other foreign matter by wire brushing or scraping (power wire brushing, if necessary). Grind smooth any sharp projections. Remove oil and grease deposits with solvent.

B. Shop painting - All non-galvanized steel members shall be painted before shipping. All surfaces shall be painted except surfaces, which are to be welded, and surfaces to be encased in masonry. Paint shall be applied thoroughly and evenly on the surfaces and worked in to the joints and other open areas on the surfaces. Dry mil thickness per coat of prime paint shall not be less than 2.4 mils.

C. Touch-up - After erection, touch-up all abrasions and field welds with same paint used on shop coat.

END OF SECTION