SECTION 05401

COLD FORMED METAL STUD FRAMING

PART 1 GENERAL

1.01 WORK INCLUDED: This Section covers the Work necessary to furnish and install, complete, the following:

A. All studs, track, bridging and related accessories as indicated on the Contract Drawings or can be reasonably determined as being required to provide a complete system of metal stud framing for both interior and exterior walls.

B. Framing at soffits and ceilings.

C. All accessories required for a complete installation, ready for following work of other trades.

1.02 RELATED WORK SPECIFIED AND PERFORMED UNDER OTHER SECTIONS

A. SECTION 09215 - VENEER PLASTER SYSTEM.

1.03 REFERENCES

A. ASTM Standards and Test Procedures as referenced herein.

B. Military Specifications (MIL) as referenced herein.

C. AISI "Specification for the Design of Cold-Formed Steel Structural Members" as referenced herein, latest edition.

D. Federal and State Codes.

E. American Welding Society (A.W.S.)D. 1.3, 1989 Structural Welding Code - Sheet Metal.

F. American Institute of Steel Construction, Ninth Edition (A.I.S.C.)

1.04 SUBMITTALS: Submittals during construction shall be made in accordance with SECTION 01300, SUBMITTALS. In addition, the following specific information shall be provided:

A. Erection Drawings:

1. Submit drawings prepared by the manufacturer for approval by the Architect. These drawings shall include:

a. Cross-sections, plans and/or elevations depicting components locations.

b. Connection details showing screw types spacing and locations, weld lengths and locations or other related fastener requirements.

1.05 DELIVERY, STORAGE AND HANDLING

A. Deliver, store and handle materials or equipment under provisions of SECTION 01600, MATERIALS AND EQUIPMENT.

B. Do not allow copper or other metals not compatible with galvanized steel to contact or provide drainage to galvanized steel. Do not store metal studs in a "nested" fashion. Store metal studs off grade on wood blocking and stack separated by Visqueen or other approved separation sheets under cover.

1.06 FIELD MEASUREMENTS

A. The Contractor shall verify all dimensions, shall make any field measurements necessary and shall be fully responsible for accuracy and layout of work. The Contractor shall review the Drawings and any discrepancies shall be reported to the Architect for clarification prior to starting fabrication, application or installation.

B. Check Drawings carefully for any critical or control dimensions and lay out the work so as to achieve finished dimensions exactly. Failure to do so will require removal and reinstallation.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. The use of a manufacturer's name and specification number is for the purpose of establishing the standard of quality and general configuration desired only. Products of other manufacturer's, meeting the requirements specified herein, will be considered in accordance with SECTION 01600, MATERIALS AND EQUIPMENT.

B. The tabulation of items herein is not intended to be all inclusive, and it shall be the Contractor's responsibility to provide all components of the metal stud framing system shown on the Drawings, specified, or which can be reasonably inferred as necessary to complete this Project.

C. Metal studs for V.P.B. ceilings, walls and wall closures shall be as shown on the Drawings, screw type standard galvanized metal studs or joists for gypsum wallboard, sheathing and veneer plaster backing board systems, as manufactured by Unimast Incorporated, 9595 Grand Ave., Franklin Park, IL. 60131, 1-800-969-4110. Metal studs for Non-load bearing walls shall be 20 gauge minimum.

D. Metal furring strips shall be sized as noted on Drawings and shall be furnished by metal stud manufacturer.

E. Furnish metal runner channels, hat channels and all required accessories, whether or not specifically called on the Drawings and Details to provide maximum 16" spacing for support of V.P.B.

F. All studs required for structural purposes and accessories, shall be equal in all respects to those manufactured by Unimast Incorporated type 356 SJ, 16 gauge minimum. Locate all studs at maximum spacing of 16" O.C. Place studs directly under each beam bearing.

G. Galvanized Stud Material:

1. All structural studs and joists shall be galvanized 12, 14 and 16 gauge as called for on the Drawings and shall be formed from steel that corresponds to the minimum requirements of A.S.T.M. A446, Grade D with a minimum yield of 50,000 psi.

2. All galvanized 18 and 20 gauge studs, channels and joists, all galvanized track, bridging, and closures and accessories shall be formed from steel that corresponds to the requirements of A.S.T.M. A446, Grade A with a minimum yield of 33,000 psi.

3. All galvanized studs, joists, track, bridging and accessories shall be formed from steel having a G-60 galvanized coating meeting the requirements of A.S.T.M. A525.

2.02 FRAMING MATERIALS

A. Like items of material or equipment specified herein shall be the end products of one manufacturer in order to achieve standardization for appearance, operation, maintenance, spare parts and manufacturer's service.

B. Straps shall be 3/4" wide, minimum 20 gauge or heavier as Detailed, galvanized steel straps of steel conforming to ASTM A446 Grade A, with galvanizing in accordance with ASTM A525 G90.

C. Fasteners:

1. Self-drilling, Self-tapping Screws, Bolts, Nuts and Washers: ASTM A90, hot dip galvanized at all exterior locations and at roof areas.

2. Anchorage Devices: Power driven, Powder actuated, Drilled expansion bolts and Screws with sleeves.

D. Formed Steel Finish: Galvanized with G90 zinc coating in accordance with ASTM A525.

2.03 FABRICATION

A. Prior to fabrication of framing, the Contractor shall submit Fabrication and Erection Drawings to the Architect to obtain approval.

B. Prefabricated panels, if used, shall be square, with components attached in a manner as to prevent racking and to minimize distortion while lifting.

C. All framing components shall be cut squarely for attachment to perpendicular members, or as required, for an angular fit against butting members.

D. Axially loaded studs shall be installed in a manner which will assure that their ends are positioned against the inside of runner web prior to fastening.

E. Fastening of components shall be with self-drilling screws or welding depending on requirements of the Drawings. Screws shall be of sufficient size to insure the full strength of members being connected. All welds shall be touched up with a zinc-rich paint. **Where Drawings call for welded connections, substitution of screwed connections will NOT be allowed.**

PART 3 EXECUTION

3.01 INSPECTION

A. Verify that steel framing components are ready to receive work.

B. Walls, Floor and other structures:

1. Handling and lifting of prefabricated panels shall be done in a manner as to not cause distortion in any member.

2. Studs shall be plumbed, aligned and securely attached to the flange or webs of both upper and lower tracks.

3. Wall stud bridging shall be attached in a manner to prevent stud rotation. Bridging rows shall be spaced according to the details on the Drawings, **but in no case less than once in every eight (8) feet vertically.** Note carefully requirements at openings.

4. Temporary bracing shall be provided until wall or structure is completed.

5. Beginning of installation means acceptance of existing conditions.

6. All welding shall conform to the current provisions of AWS D1.3 "Structural Welding Code Sheet Steel." All welding shall be performed by currently certified welders. Provide copies of welder's certificates to the Architect, upon request.

3.02 INSTALLATION

A. The erection of metal stud framing system shall be in strict accordance with the manufacturer's printed instructions, and conforming with ASTM C1007 and ASTM C754, and shall be ready to receive finish materials.

B. Runners shall be aligned accurately at floor or base and structure above and anchored with suitable fasteners spaced 24-inch on centers, or as required by specific Fire Ratings indicated on the Drawings.

C. Studs shall be positioned vertically and plumb in the runners, spaced no greater than 16-inches on center. Anchor all studs located adjacent to door frames, partition intersections, and corner to runner flanges by positive screw engagement through each stud flange and runner flange. When necessary, studs shall be securely spliced with a minimum 8-inch nested lap in which two screws per flange is required, no more than 1-inch from ends of splice.

D. Double studs shall be erected at jambs of all openings. Studs shall be securely anchored to the jamb and head anchor clips of each door frame at bolt or screw attachment at a minimum of three (3) locations.

E. Studs shall be located no more than 2-inches from all abutting partitions, partition corners and other construction. Where Fire Rated partitions required, install as required to achieve rating designated.

3.03 GALVANIZING REPAIR

A. Galvanized surfaces that are abraded or damaged at any time after the application of the zinc coating shall be repaired by solvent cleaning (SSPC SP-1) followed by hand or power tool cleaning (SSPC SP-2 or SP-3) the damaged areas; after which the cleaned areas shall be painted with two coats of galvanizing repair paint (MIL-P-21035).

END OF SECTION

SECTION 05500

METAL FABRICATIONS

PART 1 GENERAL

1.01 WORK INCLUDED: This Section covers the Work necessary to furnish and install, complete, the following:

A. Miscellaneous metal fabrications and castings.

B. Anchoring Systems.

C. Steel Lintels and Angle Framing.

D. Equipment Hangers and Supports.

E. The tabulation of items herein is not intended to be all-inclusive. It shall be the Contractor's responsibility to provide all metal fabrications and castings shown on the Drawings, specified, or which can reasonably be inferred as necessary for the completion of this Project.

1.02 GENERAL

A. See GENERAL and SUPPLEMENTARY GENERAL CONDITIONS and Division 1, GENERAL REQUIREMENTS, which contain information and requirements that apply to the Work specified herein and are mandatory for this Project.

1.03 RELATED WORK SPECIFIED AND PERFORMED UNDER OTHER SECTIONS

A. SECTION 09900 - PAINTING: Finish painting.

1.04 REFERENCES

A. ASTM Standards and Test Procedures as referenced herein.

B. AWS D1.1 - Structural Welding Code.

C. Military Specifications (MIL) as referenced herein.

1.05 SUBMITTALS:

A. Shop Drawings: Indicate profiles, sizes, connection attachments, reinforcing, anchorage, size and type of fasteners, and accessories of miscellaneous metal fabrications, castings and steel mesh as specified herein.

B. Manufacturer's Mill Certificate: Submit certification that products meet or exceed specified requirements.

C. Submit catalog data and design information; submit test data or calculations signed, dated and sealed by an engineer registered in the State of Florida indicating load and deflection due to load showing compliance with specified live load requirements, as applicable.

1.06 FIELD MEASUREMENTS

A. The Contractor shall verify all dimensions, shall make any field measurements necessary and shall be fully responsible for accuracy and layout of work. The Contractor shall review the Drawings and any discrepancies shall be reported to the Architect for clarification prior to starting fabrication.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. The use of a manufacturer's name and specification number is for the purpose of establishing the standard of quality and general configuration desired only. Products of other manufacturers, meeting the requirements specified herein, will be considered.

B. Like items of material or equipment specified herein shall be the end products of one manufacturer in order to achieve standardization for appearance, operation, maintenance, spare parts and manufacturer's service.

2.02 MATERIALS: Unless otherwise shown or specified, conform to the following:

A. Steel Sections: ASTM A36.

B. Steel Tubing: ASTM A500, Grade B.

C. Pipe: ASTM A 501 OR ASTM A53, Types E or S, Grade B, Schedule 40.

D. Bolts, Nuts, and Washers: ASTM A325.

E. Anchor Bolts: ASTM A307, or A36.

F. Welding Materials: AWS D1.1; type required for materials being welded.

G. Stainless Steel:
Bars and Shapes: ASTM A 276, Type 316
Steel Plate, Sheet and Strip: ASTM A 167, Type 316
Bolts: ASTM A 193, Type 316
Nuts: ASTM A 194, Type 316

H. Aluminum, Structural Shapes and Plates: Alloy 6061-T6, or 6063-T6, ASTM B209.

I. Galvanized Bolts: ASTM A 307, A 153

J. Cast Iron: ASTM A 48, Class 30

K. Shop and Touch-Up Primer: Rust-inhibitive primer single packaged steel primers with anti-corrosive pigment loading; may be alkyd, vinyl epoxy ester, chlorinated rubber; 40% volume solids minimum).

L. Isolation Coating: Single-component, coal-tar pitch based bituminous paint, 68% minimum solids by volume, brush applied, on coat.

2.03 SHOP PAINT PRIMER

A. Prepare ferrous metal surfaces in accordance with SSPC SP-2 or SP-3; insure that all oil, grease, dirt, loose rust, mill scale and other foreign substances are removed from all surfaces.

B. Shop prime; do not prime at welds, bolts, and where embedded in concrete. Apply one (1) coat of specified rust-inhibitive primer at 2 mils minimum dry film thickness.

2.04 GALVANIZING

A. Galvanizing of steel plates, shapes, bars (and products fabricated from these items) shall conform to ASTM A123. Pipe, welded or seamless steel, shall conform to ASTM A 120. Material thinner than 1/8 inch shall either be galvanized before fabrication in conformance with the requirements of ASTM A 525, Coating Designation G 210; after fabrication, in conformance with the requirements of ASTM A 123.

B. All welded areas shall be thoroughly cleaned prior to galvanizing to remove all slag or other material that would interfere with the adherence of the zinc coating. When it is necessary to straighten any Sections after galvanizing, such work shall be performed without damage to the zinc coating.

C. Components of bolted assemblies shall be galvanized separately before assembly.

2.05 ANCHORING SYSTEMS

A. Wedge Anchors: Stainless steel, manufactured by ITT Phillips Drill Division, Michigan City, IN; Hilti Kwik-Bolt, stud type, manufactured by Hilti, Inc., Stamford, CT; or equal. Furnish sizes shown on Drawings or as required to develop full strength of materials being anchored or connected.

B. Expansion Anchors: Expansion anchors shall not be used except in dry areas where future corrosion is not a problem. In wet or damp areas, use wedge anchors as specified above. Self-drilling anchors, snap-off type or flush type. ITT Phillips Drill Division, Michigan City, IN; Hilti HDI Drop-In Anchors, Hilti, Inc., Stanford, CT; or equal. **Plastic anchors not allowed on this Project.**

C. Toggle Clamps: Toggle clamps shall be stainless steel and designed similar to Series 235-USS, manufactured by De-Sta-Co, Division of Dover Corporation, Detroit, MI; Series CL-351-TC, manufactured by Carr Lane, Los Angeles, CA; or equal.

2.06 STEEL LINTELS ANGLES AND ANGLE FRAMING

A. Provide all loose steel lintels (or shelf angles), embedded angles at sills of roll up doors and angle framing required to include the support of masonry, roof mounted equipment and all other items requiring support that are not already provided for in the Contract Documents and other construction that is not part of, or attached to, the structure. **All angles and lintels shall be galvanized as specified above.**

2.07 EQUIPMENT HANGERS AND SUPPORTS

A. Provide Unistrut Framing System, as manufactured by Unistrut Corporation, Wayne, MI; or equal; unless specified otherwise in applicable Mechanical/Electrical Plumbing Section; sizes, quantities and configurations as detailed on the Drawings or as required to properly support items of equipment. Provide 1/2" - 3/4" - 1" diameter threaded rods depending on weight of equipment to be supported. Length as required.

PART 3 EXECUTION

3.01 PREPARATION

A. Make provision for erection loads with temporary bracing. Keep work in alignment.

B. Supply items required to be cast into concrete or embedded in masonry with setting templates to appropriate trades.

3.02 WORKMANSHIP

A. Workmanship of all metal fabrications and castings specified under this Section shall be the highest grade and equal to the best practice of modern shops for the respective work. Provide all necessary rabbets, lugs, and brackets so that the work can be assembled in a neat, substantial manner. Conceal fastenings where practical. Drill metal fabrications as required for attaching hardware or other materials; torch cut holes are NOT permitted. Weld connections, unless otherwise shown or required.

3.03 ELECTROLYTIC PROTECTION

A. Where aluminum is in contact with dissimilar metals, or to be embedded in masonry or concrete, protect surfaces with isolation coating approved by the Architect. Allow paint to dry before installation of the material. Protect painted surfaces during installation; should coating become marred, prepare and touch up surface per paint manufacturer's instructions.

3.04 INSTALLATION

A. Install items plumb and level, accurately fitted, free from distortion or defects.

B. Install in accordance with the shop drawings, the Drawings, and these Specifications. Perform field welding and erection work by skilled mechanics. The completed installations shall, in all cases, be rigid, substantial, and neat in appearance. Erect structural steel in accordance with the applicable portions of AISC Code of Standard Practice.

C. Install premanufactured and prefabricated products in accordance with manufacturers' printed instructions.

D. Touch-up Painting: Immediately after erection, clean field welds, bolted connections, and abraded areas of the shop paint primer. Apply touch-up paint primer by brush or spray which is the same thickness and material as that used for the shop paint primer.

E. Galvanizing Repair: Galvanized surfaces that are abraded or damaged at any time after the application of the zinc coating shall be repaired by solvent cleaning (SSPC SP-1) followed by hand or power tool cleaning (SSPC SP-2 or SP 3) the damaged areas, removing all loose and cracked coating; after which the cleaned areas shall be painted with two coats of galvanizing repair paint (MIL-P 21035).

END OF SECTION

SECTION 05522

METAL RAILING SYSTEM

PART 1 GENERAL

1.01 WORK INCLUDED: This Section covers the Work necessary to furnish and install, complete, the following:

A. RAILING SYSTEMS: Galvanized steel pipe guardrails, posts and related fittings as detailed on Drawings.

1. Provide 1-5/8" O.D. round galvanized steel pipe guardrails with wall brackets at locations where indicated. Refer to the Drawings for locations required.

1.02 GENERAL

A. See GENERAL and SUPPLEMENTARY GENERAL CONDITIONS and Division 1, GENERAL REQUIREMENTS, which contain information and requirements that apply to the Work specified herein and are mandatory for this Project.

B. All railing systems shall comply with the A.D.A. Code as to mounting heights, strength of mountings and attachments. In case of conflicts between A.D.A. Code requirements and Contract Documents, A.D.A. Code will govern.

1.03 RELATED WORK SPECIFIED AND PERFORMED UNDER OTHER SECTIONS

A. SECTION 05500 - METAL FABRICATIONS.

1.04 STRUCTURAL REQUIREMENTS

A. Railing assemblies including wall rails, shall resist lateral force requirement of 200 pounds at any point and in any direction without damage.

B. Guardrails and components of guardrails shall be designed to resist a horizontal thrust of 50 pounds per linear foot applied at those points which produce maximum stress in each of the components.

1.05 SUBMITTALS: Submittals during construction shall be made in accordance with SECTION 01300, SUBMITTALS. In addition, the following specific information shall be provided for the Base Bid System:

A. Submit Shop Drawings for all railings, including splices and expansion joints. Indicate railings in related and dimensional position with scaled elevations or with details, as applicable.

1.06 DELIVERY, STORAGE AND HANDLING

A. Deliver, store and handle materials under provisions of the Specifications.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. The use of a manufacturer's name is for the purpose of establishing the standard of quality and general configuration desired only. Products of other manufacturers, meeting the requirements specified herein, will be considered.

B. Like items of material or equipment specified herein shall be the end products of one manufacturer in order to achieve standardization for appearance, operation, maintenance, spare parts and manufacturer's service.

2.02 METAL RAILING SYSTEM

A. Approved Bidders for the Base Bid System are:

1. Dixie Metal Products, Ocala, FL, Tel. No. (352) 873-2554.

2. Powell Custom Metals, Jacksonville, FL, Tel. No. (904) 356-8651.

3. Gainesville Ironworks, Gainesville, FL, Tel. No. (352) 352-373-4004.

Equal products from other manufacturers will be considered subject to the POST-BID SUBSTITUTIONS Section of the Specifications.

B. Description: Rails shall be furnished in lengths to meet job requirements. All fasteners shall be tightened to sufficient torque to completely eliminate play at connections and fittings.

C. Handrails, Posts, Tees and Elbows: 1-5/8-inch round galvanized steel pipe.

D. Fittings: Manufacturer's standard galvanized tee-shapes, wall brackets, escutcheons and related ancillary components. Provide as required.

E. Mounting: brackets and flanges, as required for mounting(s) as shown on Drawings. All anchor bolts shall be stainless steel bolts, flat head where possible. No tapcons or other unfinished type bolts allowed.

PART 3 EXECUTION

3.01 INSTALLATION

A. Install guardrails in accordance with approved Shop Drawings and manufacturer's instructions.

B. Erect work square, plumb and level, free from distortion or defects detrimental to appearance or performance. Where installed at stairs, railings shall be perfectly parallel with slope of stairs.

C. Anchor hand railings to structure using stainless steel finish bolts specified above.

3.02 PROTECTION FROM ENTRAPPED WATER

A. All interior installations subject to high humidity shall have provisions made to drain water from the railing system. When posts are mounted in concrete or when elbows occur at low points, weep holes of 1/4-inch diameter shall be drilled at the lowest possible elevations, one hole per post or rail.

3.03 PROTECTION OF FINISH

A. Contractor shall protect all the finish materials from scratches, nicks, gouges, dents, or other damage during assembly and installation.

B. Any railings bent or damaged beyond repair, in the sole opinion of the Architect, shall be removed and replaced at no cost to the Owner.

END OF SECTION

SECTION 06100

ROUGH CARPENTRY

PART 1 GENERAL

1.01 WORK INCLUDED: This Section covers the Work necessary to furnish and install, complete, the following:

A. General framing, plates, blocking, braces, furring and nailers.

B. Concealed wood blocking and framing for support of toilet room accessories, millwork, shelving, electrical devices, plumbing fixtures, mechanical and all other wall mounted items in stud walls and all other areas where blocking is required for proper anchorage of wall or ceiling mounted items.

C. Rough carpentry hardware, including, but not limited to, nails, screws, toggle bolts and other anchorage devices.

D. Treated wood products.

1.02 SUBMITTALS: Submittals during construction shall be made in accordance with SECTION 01300, SUBMITTALS.

1.03 RELATED WORK SPECIFIED AND PERFORMED UNDER OTHER SECTIONS

A. SECTION 03100 - CONCRETE FORMWORK.

B. SECTION 05500 - METAL FABRICATIONS.

C. SECTION 06200 - FINISH CARPENTRY: Finish carpentry items.

D. SECTION 06416 - PREFABRICATED MILLWORK: Shop fabricated custom casework.

1.04 FIELD MEASUREMENTS

A. The Contractor shall verify all dimensions, shall make any field measurements necessary and shall be fully responsible for accuracy and layout of work. The Contractor shall review the Drawings and any discrepancies shall be reported to the Architect for clarification prior to starting fabrication.

1.05 DELIVERY, STORAGE AND HANDLING

A. Deliver, store and handle materials or equipment under provisions of SECTION 01600, MATERIAL AND EQUIPMENT.

B. Immediately upon delivery to site, place materials in an area protected from weather.

C. Store materials a minimum of 6 inches above ground on wood blocking and cover with protective waterproof covering providing for adequate air circulation or ventilation.

D. Do not store materials in wet or damp portions of building.

PART 2 PRODUCTS

2.01 QUALITY ASSURANCE

A. Lumber grading rules and wood species shall be in conformance with U.S. Product Standard PS 20 and the National Forest Products Association. The wood members shall conform to the requirements above and provide design values equal to those published in the "Design Values for Wood Construction", a supplement to the 1977 edition of National Design Specification for Wood Construction, published by the National Forests Products Association.

2.02 GRADE MARKS

A. Each piece of lumber shall be stamped with the grade as determined by an approved grading association indicating conformance with U.S. Product Standard PS 20.

B. Moisture content shall not exceed 19 percent, unless otherwise specified.

C. Preservative and pressure treated material shall conform to American Wood Preservers Association Standards (AWPA) and bear the appropriate American Wood Preservers Bureau (AWPB) quality mark designation.

2.03 LUMBER

A. Dimensions given are nominal. Surface four sides (S4S); unless indicated otherwise, lumber shall be No. 2 Southern Yellow Pine for general framing, plates, blocking, braces, studs, furring, and nailers.

2.04 PRESSURE TREATED WOOD

A. Provide pressure treated wood in accordance with AWPA C2 and the quality control standards stated below.

1. AWPB LP-2, above ground application in contact with masonry or concrete.

2. AWPB LP-22, ground contact application.

2.05 PLYWOOD

A. All plywood for this project shall be minimum 5/8" thick, unless specifically noted as other thickness on the Drawings, exterior grade, minimum 4-ply, C-D plugged, EXT-APA. Store plywood on job site up off grade, stacked flat to prevent warping. Cover with plastic or felt to keep dry.

2.06 ROUGH CARPENTRY HARDWARE

A. Nails: Steel common nails in accordance with the Fastening Schedule of the Florida Building Code, sizes as indicated on Drawings or as required. Use hot-dipped zinc-coated nails wherever exposed to exterior, high humidity and treated wood locations.

B. Bolts and Screws: Conforming to ASTM A 307, sizes as indicated on Drawings, or as required. Use galvanized where exposed to exterior, high humidity and treated wood locations.

C. Anchors: Toggle bolt type for anchorage to hollow masonry. Expansion shield and lag bolt type for anchorage to solid masonry or concrete. Bolts or ballistic fasteners for anchorages to steel. No plastic anchors of any type allowed on this Project.

PART 3 EXECUTION

3.01 GENERAL

A. Use only skilled workers and the highest standards of the craft. Plan work in advance and perform in proper sequence to facilitate prompt and continuous progress of the Work. Lay out, cut, fit, and install all rough carpentry items. Anchor sufficiently to ensure rigidity and permanence and as noted on Drawings.

B. Install items accurate to dimension, true to line, level, and square unless indicated otherwise on Drawings. Provide for installation and support of other work. Comply with recommendations of the "Manual for House Framing" of National Forest Products Association, and N.E.R. No. 108 for all blocking and sheathing installations.

C. Anchorage and nailing of all blocking, sheathing and framing shall comply with the "Recommended Nailing Schedule" of the "Manual for House Framing".

D. Provide pressure treated wood for all wood blocking, furring, and nailing strips in contact with concrete and concrete masonry units.

END OF SECTION

SECTION 06200

FINISH CARPENTRY

PART 1 GENERAL

1.01 WORK INCLUDED: This Section covers the Work necessary to furnish and install, complete, the following:

A. Installation of wood doors and application of finish hardware to wood doors.

B. Miscellaneous wood trim.

1.02 PRODUCTS INSTALLED BUT NOT FURNISHED UNDER THIS SECTION

A. SECTION 08210 - WOOD DOORS: Supply of wood doors for installation under this Section.

B. SECTION 08710 - FINISH HARDWARE: Supply of door hardware for installation to wood doors under this Section.

1.03 RELATED WORK SPECIFIED AND PERFORMED UNDER OTHER SECTIONS

A. SECTION 06100 - ROUGH CARPENTRY: Wood blocking, furring, nailers, etc.

B. SECTION 06416 - PREFABRICATED MILLWORK: Shop Fabricated Custom Millwork.

C. SECTION 09900 - PAINTING: Finish painting of finish carpentry items.

1.04 SUBMITTALS:

A. Submit Shop Drawings on all finish carpentry items, including wood gates, indicating materials, component profiles, fastening methods, jointing details, finishes, and accessories.

1.05 FIELD MEASUREMENTS

A. The Contractor shall verify all dimensions, shall make any field measurements necessary and shall be fully responsible for accuracy and layout of work. The Contractor shall review the Drawings and any discrepancies shall be reported to the Architect for clarification prior to starting fabrication.

1.06 QUALITY ASSURANCE

A. The "Quality Standards" of the Architectural Woodwork Institute (AWI) shall apply and by reference are hereby made a part of these Specifications. Any reference to Premium, Custom or Economy shall be as defined in the latest edition of the AWI "Quality Standards". Any item not given a specific quality grade shall be Custom grade.

1.07 DELIVERY, STORAGE, AND HANDLING

A. Store materials in dry and well-ventilated areas, and do not subject to extreme changes of temperature or humidity.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. The use of a manufacturer's name and specification number is for the purpose of establishing the standard of quality and general configuration desired. Products of other manufacturers, meeting the requirements specified herein, will be considered.

2.02 HARDWARE

A. Provide all fasteners and miscellaneous hardware required for assembling finish carpentry items.

2.03 WOOD TRIM

A. As detailed on Drawings. Provide oak, if designated, otherwise clear fir, larch or white pine acceptable.

PART 3 EXECUTION

3.01 GENERAL

A. Use only skilled craftsmen and the highest standards of workmanship. Plan work in advance and perform in proper sequence to facilitate prompt and continuous progress of the Work.

B. Verify that surfaces or openings are ready to receive work and field measurements are as shown on shop drawings.

C. Verify mechanical, electrical, and building items affecting Work of this Section are placed and ready to receive this Work.

D. Beginning of installation means acceptance of substrate.

3.02 PREPARATION

A. Before installation, prime paint surfaces of items or assemblies to be in contact with cementitious materials.

3.03 INSTALLATION OF FINISH CARPENTRY ITEMS

A. Install work in accordance with AWI Custom quality standard.

B. Set and secure materials and components in place, plumb and level.

3.04 INSTALLATION OF WOOD DOORS AND FINISH HARDWARE

A. Doors in general shall be hung with equal margins and shall, when closed, bear equally on all stops. Entire assembly shall swing freely and latch easily. See SECTION 08210, WOOD DOORS, for additional requirements.

B. Application of finish hardware shall be made in accordance with the manufacturers' directions and templates, and executed in a neat and workmanlike manner. See SECTION 08710, FINISH HARDWARE, for additional requirements.

END OF SECTION

SECTION 06416

PREFABRICATED MILLWORK

PART 1 GENERAL

1.01 WORK INCLUDED: This Section covers the Work necessary to furnish and install, complete, the following:

A. Base cabinets, upper cabinets, countertops, shelving and high pressure decorative laminate (HPDL) and other related items as noted on the Drawings.

B. Cut outs and grommets for electrical receptacles, telephone outlets, and other items requiring cut outs for installation under this Contract.

1.02 GENERAL

A. See GENERAL and SUPPLEMENTARY GENERAL CONDITIONS and Division 1, GENERAL REQUIREMENTS, which contain information and requirements that apply to the Work specified herein and are mandatory for this Project.

1.03 RELATED WORK SPECIFIED AND PERFORMED UNDER OTHER SECTIONS

A. SECTION 06100 - ROUGH CARPENTRY.

B. SECTION 06200 - FINISH CARPENTRY.

C. SECTION 07900 - JOINT SEALANTS.

D. DIVISION 15000 - PLUMBING.

E. DIVISION 16000 - ELECTRICAL.

1.04 REFERENCES

A. ASTM Standards and ANSI Standards as referenced herein.

B. Manufacturers' recommendations and specifications.

C. National Electrical Manufacturer's Association (NEMA): Standards LQ1 and LD3 for plastic laminates.

D. American National Standard Institute (ANSI): A20B.1, Grade 1-M-2, "Mat-Formed Wood Particleboard".

E. PS 1 - Construction and Industrial Plywood.

F. PS58 - Basic Hardboard.

1.05 SUBMITTALS: Submittals during construction shall be made in accordance with SECTION 01300, SUBMITTALS. In addition, the following specific information shall be provided:

A. Samples: Submit color and pattern samples of each finish to be applied by the millwork manufacturer for selection by Architect.

B. Manufacturers' Literature: Submit manufacturers' descriptive literature of specialty items, including but not limited to, plastic laminates, as specified or referenced herein. Manufacturers' literature shall be clearly marked for each proposed item; indiscriminate submittal of unmarked literature will NOT be accepted.

C. Shop Drawings: Prior to fabrication, shop drawings shall be submitted to the Architect for review. Shop Drawings shall completely describe and illustrate all features of the design, materials, fabrication, profiles, layout of all Laminate Clad items, including cutouts for electrical receptacles, and shall indicate compliance with these Specifications.

1.06 FIELD MEASUREMENTS

A. The Contractor shall verify all dimensions, shall make any field measurements necessary and shall be fully responsible for accuracy and layout of work. The Contractor shall review the Drawings and any discrepancies shall be reported to the Architect for clarification prior to starting fabrication, application or installation.

1.07 QUALITY ASSURANCE

A. The "Quality Standards", Section 1600, Modular Casework of the Architectural Woodwork Institute (AWI) shall apply and by reference are hereby made a part of these Specifications. In the event of conflict between these Specifications and AWI Section 1600, then these Specifications shall take precedence.

1.08 WARRANTY

A. This Contractor shall fully guarantee all items furnished and installed under this Section, including materials and workmanship.

B. Millwork shall be guaranteed against chipping, delamination, warping of doors, drawers and backsplashes, and all caulking associated with this installation for a period of one (1) year from date of Substantial Completion of the Project.

1.09 DELIVERY, STORAGE, AND HANDLING

A. Deliver, store and handle materials or equipment under provisions of SECTION 01600, MATERIAL AND EQUIPMENT.

B. Store millwork and related materials in dry and well-ventilated interior locations under constant minimum ambient temperature of 65 degrees F. and maximum relative humidity of 70 percent.

C. Do not store any millwork on project site until building has been secured with lockable doors and windows.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Preapproved Prefabricated Millwork Manufacturers:

1. Ace Cabinets & Woodwork, Ocala, FL.

2. Commercial Casework, Inc., Orange Park, FL.

3. Gulf Millwork, Tampa, FL.

4. Interstate of Florida.

5. McCallum Cabinets, Gainesville, FL.

6. N & N Cabinets and Millwork.

7. R H Design, Inc.

B. Products of other Millwork Manufacturers, meeting the requirements specified herein, will be considered in accordance with the INSTRUCTIONS TO BIDDERS for **Pre-Bid Substitutions.**

C. All High Pressure Laminate (HPL) shall be as manufactured by WILSONART DESIGN GROUP I, # 6 Matte finish.

2.02 GENERAL INFORMATION

A. Colors of Plastic Laminate: Contractor will be required to provide different colors of plastic laminate at various locations up to a maximum of four colors. Provide full range of all colors available from WILSONART, Design Group I.

2.03 PREFABRICATED MILLWORK

A. Surface Materials and Edging Requirements for Laminate Clad Millwork:

1. Exposed Surfaces - WILSONART, Design Group I, Matte # 6 finish, High Pressure Laminate (HPL), nominal 0.028-inch thick; nominal 0.028-inch thick at top horizontal surfaces. Provide manufacturer's Group I color range for selection by Architect. **No substitutions allowed from WILSONART.**

2. All corners of tops and countertops shall have 1-1/2" radius at all exterior corner locations.

3. Directions and matching of patterns or grains shall be as directed by the Architect and may not be standard.

2.04 HIGH PRESSURE DECORATIVE LAMINATE (HPDL) COUNTERTOPS

A. Finish thickness shall be nominal 1-1/4-inch consisting of a 3/4-inch core material as specified above with a buildup strip applied at the perimeter of the underside of the top. **Note requirement for radiused outside corners at all counter tops.**

B. Core material for laminate tops shall be medium density particle board at dry locations and **exterior grade plywood at wet locations.** Exterior grade plywood counter tops at wet locations shall be continuous the entire length of counter top.

C. Face laminate shall be WILSONART High Pressure Decorative Laminate (HPDL) nominal 0.050-inch thickness for horizontal work surfaces.

D. Tops shall have nominal 0.020-inch balancing sheet wherever unsupported area exceeds 6 square feet.

E. **All backsplashes** shall be constructed of exterior grade plywood and shall have the back side sealed.

F. Sequence of High Pressure Decorative Laminate (HPDL) edgebanding application shall be Manufacturer's and/or Millwork Shop's option.

G. Deck-splash joint shall be Manufacturer's standard; sealant specified for "Millwork Applications" in Section 07900, SEALANTS shall be field applied.

2.05 GROMMETS

A. Where required, grommets shall be ABS, 3-1/2" round, nominal 2-7/8" inside diameter, with notched removable cap. Notch shall be 7/8" wide for use with computer plugs. Grommets shall be as manufactured by BRODART, 1609 Memorial Avenue, Williamsport, PA 17705, Telephone (800) 233-8467, or equal.

B. Provide plastic grommets in locations as indicated on the Drawings, and at any locations where computer cabling or electrical power cords will be required to pass through countertops to the nearest computer terminal outlet, receptacle, or for electrical connections through shelving, whether or not called for on the Drawings. Coordinate location of hole/grommet size with the Architect prior to cutting holes.

PART 3 EXECUTION

3.01 INSPECTION AND COORDINATION

A. Examine all grounds, wood blocking and supports of millwork for adequate anchorage, foreign material, moisture, and unevenness that would prevent quality installation of millwork. Assure that electrical and plumbing rough-ins for millwork are complete. Do not proceed with installation until all defects are corrected.

B. Contractor shall coordinate with other trades for blocking, backing and reinforcement in walls, floors, and ceilings where required for support or attachment of millwork specified herein.

3.02 INSTALLATION

A. Set and secure Millwork in place rigid, plumb, and level.

B. Carefully scribe Millwork which abuts other building materials, leaving gaps within 1/16-inch tolerance. Do not use additional overlay trim for this purpose.

C. Install matching knee space panels, filler and scribe panels with concealed screws or adhesive where shown or required for a complete and finished installation.

D. High Pressure Decorative Laminate (HPDL) Countertops: Shall be installed level to within 1/16-inch in 10-feet and in the largest possible increments. All joints required in countertop runs or corners shall be within 1/32-inch tolerance and shall utilize bolt-type joint fasteners.

3.03 CLEANING

A. Clean and wipe down all countertops prior to Substantial Completion Inspection.

END OF SECTION

SECTION 07190

VAPOR & SOIL GAS RETARDER

PART 1 GENERAL

1.01 WORK INCLUDED: This Section covers the Work necessary to furnish and install, complete, the following:

A. Underslab vapor and soil gas (radon) retarder.

B. Install under all new concrete slabs on grade, interior and exterior, including all sidewalks.

1.02 REFERENCES

A. ASTM Standards and Test Procedures as referenced herein.

1.03 SUBMITTALS - NOT REQUIRED.

1.04 DELIVERY, STORAGE AND HANDLING

A. Deliver, store and handle materials as recommended by the manufacturer.

B. Deliver materials to the site in original packages with the manufacturer's labels thereon.

PART 2 PRODUCTS

2.01 BARRIER

A. Barrier shall be **minimum 6-mil polyethylene material** equal to Visqueen as manufactured by W.R. Meadows, Inc.

PART 3 EXECUTION

3.01 PREPARATION

A. Verify substrate materials are dry and clean, ready to receive work of this Section.

B. Coordinate the work of all trades so that all items to be placed under the slab are in place prior to the laying of any barrier.

3.02 INSTALLATION

A. Underslab Barrier: Install barrier under all concrete floor slabs on grade or fill, both interior and exterior. After base for the slab has been leveled and tamped, and AFTER soil treatment work has been performed, apply the barrier with the roll width parallel to the direction of the pour; all joints lapped and continuously taped 12 inches, minimum.

B. Caution shall be maintained to provide a puncture-free barrier. Any tears or holes shall be repaired by removing defective sheet and replacing with a new sheet.

C. All penetrations in barrier shall be sealed with same material, lapped 12" from edge of penetration and taped.

D. Barrier shall be turned up at foundation wall behind the expansion joint material and sealed to the foundation wall so as to completely seal the joint between the foundation and fill.

3.03 CLEANUP

A. Upon completion of the barrier installation clean up all waste materials and debris resulting from this operation and dispose of such waste materials off the site.

END OF SECTION

SECTION 07210

BUILDING INSULATION

PART 1 GENERAL

1.01 WORK INCLUDED: This Section covers the Work necessary to furnish and install, complete, the following:

A. Batt insulation and related fasteners at stud walls.

B. Fire safing at two hour fire rated wall.

1.02 GENERAL

A. See GENERAL and SUPPLEMENTARY GENERAL CONDITIONS and Division 1, GENERAL REQUIREMENTS, which contain information and requirements that apply to the Work specified herein and are mandatory for this Project.

1.03 RELATED SECTIONS

A. SECTION 09215 - VENEER PLASTER SYSTEM.

B. SECTION 13120 – PREFABRICATED METAL BUILDING.

1.04 REFERENCES

A. ASTM Standards and Test Procedures as referenced herein.

B. Federal Specifications as referenced herein.

1.05 SUBMITTALS: Submittals during construction shall be made in accordance with SECTION 01300, SUBMITTALS. In addition, the following specific information shall be provided:

A. Manufacturer's Literature: Submit manufacturers' technical literature for each type of building insulation specified herein.

1.06 DELIVERY, STORAGE AND HANDLING

A. Deliver, store and handle materials or equipment under provisions of SECTION 01600, MATERIAL AND EQUIPMENT.

B. Clearly identify manufacturer, contents, brand name, applicable standard, and "R" value.

C. Store materials off ground and keep dry at all times. Protect against weather, condensation, and damage. Immediately remove damaged material from site.

PART 2 PRODUCTS

2.01 MATERIALS

A. Batt Insulation and Fasteners: Where required by the Drawings, provide 3-1/2" or 6" thick fiberglass or mineral wool batts conforming to Federal Specification HH-I-521, Type 1 with no vapor barrier, and ANSI/NFPA NO. 101, "Life Safety Code" noncombustible classification, with minimum "R" value of 11. Fasteners shall be as recommended by insulation manufacturer for each condition. Insulation shall have a flame spread rating of not more than 75 and a smoke development rating of not more than 450.

B. Provide Fire Safing insulation where called for at all Fire Rated walls at gap between roof deck and tops of walls and at all other penetrations.

PART 3 EXECUTION

3.01 GENERAL

A. Coordinate installation where other trades whose work, or the required inspection of their work, could be affected.

B. Note the vinyl faced insulation at the underside of the roof deck is furnished under SECTION 13120 - PREFABRICATED METAL BUILDING.

3.02 INSTALLATION

A. Batt Insulation and Fire Safing: Install in designated areas in accordance with the manufacturer's instructions.

3.03 CLEANUP

A. Remove all containers, wrappings, and scrap insulation material from site weekly at a minimum. Leave floors broom clean. Do not allow wrappings and scrap material to blow off the site.

END OF SECTION

SECTION 07215

FOAM CORE FILL INSULATION

PART 1 GENERAL

1.01 WORK INCLUDED: This Section covers the Work necessary to complete, the following products furnished and installed under this Section:

A. Foamed-in-place thermal insulation in all exterior masonry walls.

B. This product is to be used only in CMU walls.

1.02 GENERAL

A. See GENERAL and SUPPLEMENTARY GENERAL CONDITIONS and Division 1, GENERAL REQUIREMENTS, which contain information and requirements that apply to the Work specified herein and are mandatory for this Project.

1.03 RELATED SECTIONS

A. SECTION 04340 - REINFORCED UNIT MASONRY SYSTEM.

B. SECTION 07210 - BUILDING INSULATION.

1.04 QUALITY ASSURANCE

A. Insulation shall be manufactured and installed in compliance with the Florida Building Code and other applicable building codes.

B. Provide certification that insulation is noncombustible.

1.05 SUBMITTALS: Submittals during construction shall be made in accordance with SECTION 01300, SUBMITTALS. In addition, the following specific information shall be provided:

A. Manufacturer's Literature: Submit manufacturers' technical literature for type of building insulation specified herein. **Insulation shall be noncombustible.** Provide documentation with Shop Drawing submittals.

B. Submit Certified Test by an independent third party nationally recognized Testing Laboratory indicating that the product emits less than one (1) part per million formaldehyde out gassing under twenty-four (24) hours. **Contractor shall retain bag/product labels and Material Specification Data Sheet (MSDS) data on-site for review by the Architect.**

1.05 DELIVERY, STORAGE AND HANDLING

A. Deliver, store and handle materials or equipment under provisions of SECTION 01600, MATERIAL AND EQUIPMENT.

B. Clearly identify manufacturer, contents, brand name, applicable standard, and "R" value.

C. Store materials off ground and keep dry at all times. Protect against weather, condensation, and damage. Immediately remove damaged material from site.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Tailored Chemical Company. Florida Distributor: Tailored Foam of Florida, Inc., P.O. Box 520986, Longwood, FL 32752, Phone: (407) 332-0333, FAX: (407) 830-9174.

B. Air Krete, Inc., P.O. Box 380, Weedsport, New York, 13166; Phone: (315) 934-6609

C. Thermco, P.O. Box 860, Mt. Pleasant, Iowa, 52641; Phone 9319) 385-3744.

2.02 MATERIALS

A. Foamed-in-place thermal insulation shall be equal in all respects to:

1. CORE-FILL 500 Non-toxic Amino-plast resin.

2. Products as manufactured by companies listed above are acceptable, provided they meet all the requirements of the specifications.

2.03 THERMAL INSULATION REQUIREMENTS

A. Provide minimum R-14 in 8-inch CMU walls.

B. Provide minimum R-20 in 12-inch CMU walls.

C. Provide written Certification as to insulation rating provided upon completion of installation.

PART 3 EXECUTION

3.01 GENERAL

A. Coordinate installation where other trades whose work, or the required inspection of their work, could be affected.

3.02 INSTALLATION

A. Foamed-in-place installation shall be installed in full accordance with approved manufacturer's instructions and requirements.

B. To the greatest extent possible, holes for insertion of foam shall be placed above finish ceilings or behind base at floor. Note all interior and exterior faces of CMU walls at Apparatus Bays are to be left exposed.

C. Fill all cells completely with foam insulation material.

D. Repair CMU wall to "like new" condition. All exposed holes shall be grouted flush with adjacent surface with colored grout to match the colored CMU.

3.03 CLEANUP

A. Remove all containers, wrappings, and scrap insulation material from site weekly at a minimum. Leave floors broom clean. Do not allow wrappings and scrap material to blow off the site.

END OF SECTION

SECTION 07610

FLASHINGS, SHEET METAL AND SOFFITS

PART 1 GENERAL

1.01 WORK INCLUDED: This Section covers the Work necessary to furnish and install, complete, the following:

A. All field fabricated metalwork not furnished under Section 13120 – PREFABRICATED METAL BUILDING.

B. Through-Wall, Window and Sill flashings.

C. Ancillary items related to field fabricated flashings.

D. Soffit Panels.

1.02 GENERAL

A. See GENERAL and SUPPLEMENTARY GENERAL CONDITIONS and Division 1, GENERAL REQUIREMENTS, which contain information and requirements that apply to the Work specified herein and are mandatory for this Project.

1.03 RELATED WORK SPECIFIED AND PERFORMED IN OTHER SECTIONS

A. SECTION 07900 - JOINT SEALANTS.

B. SECTION 13120 – PREFABRICATED METAL BUILDING.

1.04 SUBMITTALS: Submittals during construction shall be made in accordance with SECTION 01300, SUBMITTALS. In addition, the following specific information shall be provided:

A. Shop Drawings: Shop Drawings of field fabricated work indicating joints, types and location of fasteners, and special shapes.

B. Manufacturers Literature: Catalog data for stock prefabricated items.

C. Samples: Manufacturers' standard color ranges for color selection.

1.05 REFERENCES

A. Manufacturers' recommendations and specifications.

B. Sheet Metal and Air Conditioning Contractors National Association (SMACNA): "Architectural Sheet Metal Manual."

C. Federal Specifications as referenced herein.

D. ASTM Standards and Test Procedures as referenced herein.

1.06 FIELD MEASUREMENTS

A. The Contractor shall verify all dimensions, shall make any field measurements necessary and shall be fully responsible for accuracy and layout of work. The Contractor shall review the Drawings and any discrepancies shall be reported to the Architect for clarification prior to starting fabrication, application or installation.

1.07 DELIVERY, STORAGE AND HANDLING

A. Deliver, store and handle materials or equipment under provisions of SECTION 01600, MATERIAL AND EQUIPMENT.

B. Stack prefabricated materials on wood blocking off grade to prevent twisting, bending, or abrasion, and to provide ventilation. Cover all stored sheet metal to keep well dry.

C. Prevent contact with materials during storage which may cause discoloration, staining, or damage. Replace any materials damaged with new materials.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. The use of a manufacturer's name and specification number is for the purpose of establishing the standard of quality and general configuration desired. Products of other manufacturers, meeting the requirements specified herein, will be considered in accordance with SECTION 01600, MATERIAL AND EQUIPMENT.

B. Like items of material or equipment specified herein shall be the end products of one manufacturer in order to achieve standardization for appearance, operation, maintenance, spare parts and manufacturer's service.

2.02 GENERAL

A. The tabulation of items herein is not intended to be all inclusive, and it shall be the Contractor's responsibility to provide all sheet metal flashings and related work shown on the Drawings, specified, or which can be reasonably inferred as necessary to complete this Project.

2.03 FIELD FABRICATED METALWORK

A. Miscellaneous Metal Flashings and Counter Flashings: Steel sheet metal to match the Metal Building metal. Minimum thickness 26 gauge, except where otherwise noted on the Drawings. Finish shall be Kynar, 70% solids. Provide 3" x 4" metal color samples (chips) of full range of Kynar colors for color selection by the Architect.

B. Vents-Through Roof Flashing and exhaust fan flashing: Provided by Metal Building supplier.

2.04 SILL FLASHING

A. For window sill flashing application, flashing shall be .032 Kynar finish aluminum to match metal building color. Size and configuration as detailed and as required by window installation.

2.05 SOFFIT PANELS

A. Soffit Panels shall be twenty-two (22) gauge, solid, unperforated, flush type, white factory finished, 1" deep x 12" wide (equal to MBCI ARTISAN L12) with interlocking seams to permit sequential installation with concealed fasteners.

B. Panel material shall be galvanized steel (G90) conforming to requirements of ASTM A 255, Grade D with a minimum yield stress of 50 ksi.

C. Panels shall be provided in continuous lengths in full width of the overhangs and other areas of construction. See details.

D. All finish and supporting trim shall match the material and finish of the soffit panels. **All trim shall have tight hemmed edges where exposed to view. No single metal thickness edges will be permitted.** Panel and trim finish shall be factory primed and finished with a siliconized polyester. Color shall be white.

E. Provide and install all required framing members, whether or not specifically detailed. Provide minimum 16 gauge channels at 24" O.C. to support the soffit panels. See Details for additional information.

F. All exposed fasteners shall be stainless steel. **No ferrous or plated fasteners shall be used where exposed.**

2.06 ANCILLARY ITEMS

A. Fastening Devices: In conjunction with sheet metal work, shall be in accordance with manufacturers' recommendations and in general, shall be large headed nails, rivets or screws of the same metal which is being fastened.

B. Sealer Tape: Polyisobutylene sealer tape. Install behind all surface mounted reglets.

C. Isolation Paint for Aluminum and Dissimilar Metals: Single-components, coal-tar pitch based bituminous paint, 68% minimum solids by volume, brush applied at minimum 10 mils dry film thickness at all locations where dissimilar metals join or come in contact.

PART 3 EXECUTION

3.01 COORDINATION

A. Schedule and coordinate the work of this Section with the work of SECTION 07800, ROOF ACCESSORIES.

3.02 INSPECTION

A. INSTALLATION OF WORK SPECIFIED IN THIS SECTION SHALL NOT START UNTIL ALL ITEMS THAT WILL BE CONCEALED HAVE BEEN INSPECTED BY THE ARCHITECT. Notify the Architect a minimum of 48 hours in advance of the time this Contractor plans to install this work.

3.03 INSTALLATION

A. All workmanship shall be equal to the best standards of practice in modern sheet metal. Work shall be accurately formed to sizes, shapes and dimensions indicated and detailed. Sheet metal work shall be neat, straight, true and without imperfections.

B. Run of sheet metal work shall have provision for expansion control at eight to ten foot centers in accordance with SMACNA standards. **Joints in flashing and counterflashing shall be lapped minimum six (6) inches.**

C. All other joints in sheet metal work shall be riveted and sealed. Sealant shall be of proper type for use with the particular metal.

D. At any point where two different types of metal join, they shall be separated with bitumastic isolation paint.

E. Installation of prefabricated metal systems and flexible flashings shall be in strict accordance with the system manufacturer's latest printed instructions.

F. Field fabricated metalwork shall be formed of metal specified hereinbefore in configurations indicated on Drawings, and shall be installed in accordance with applicable NRCA and SMACNA standards.

END OF SECTION

SECTION 07800

ROOF ACCESSORIES

PART 1 GENERAL

1.01 WORK INCLUDED: This Section covers the Work necessary to furnish and install, complete, the following:

A. Vents Through Roof Provided by Metal Building supplier.

B. Coordination of the extension of ductwork, exhaust fans, intake ducts and other items if required to be extended through the applicable Roofing System.

1.02 GENERAL

A. See GENERAL and SUPPLEMENTARY GENERAL CONDITIONS and Division 1, GENERAL REQUIREMENTS, which contain information and requirements that apply to the Work specified herein and are mandatory for this Project.

1.03 RELATED WORK SPECIFIED AND PERFORMED UNDER OTHER SECTIONS:

A. SECTION 07610 – FLASHINGS, SHEET METAL AND SOFFITS.

B. SECTION 13120 – PREFABRICATED METAL BUILDING.

1.04 SUBMITTALS: Submittals during construction shall be made in accordance with SECTION 01300, SUBMITTALS. In addition, the following specific information shall be provided:

A. Shop Drawings: Showing materials, details, flashing, anchorage, and relation to adjacent structure.

B. Manufacturer's Literature: Catalog cuts of all items specified herein.

1.05 FIELD MEASUREMENTS

A. The Contractor shall verify all dimensions, shall make any field measurements necessary and shall be fully responsible for accuracy and layout of work. The Contractor shall review the Drawings and specifications and any discrepancies shall be reported to the Architect for clarification prior to starting fabrication.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. The use of a manufacturer's name and specification number is for the purpose of establishing the standard of quality and general configuration desired. Products of other manufacturers, meeting the requirements specified herein, will be considered in accordance with SECTION 01600, MATERIAL AND EQUIPMENT.

B. Like items of material or equipment specified herein shall be the end products of one manufacturer in order to achieve standardization for appearance, operation, maintenance, spare parts and manufacturer's service.

2.02 VENTS THROUGH ROOF

A. All vents through roof (V.T.R.) flashings and curbs associated with curb extensions shall be installed by the Metal Building System installer.

PART 3 EXECUTION

3.01 EXAMINATION

A. Examine surfaces and structures to receive the work of this Section. Do not proceed until unsuitable conditions have been corrected. Starting work constitutes acceptance of conditions as suitable to the proper execution of the work.

3.02 COORDINATION

A. Schedule and coordinate the work of this Section with the work of all other Sections involved, including but not limited to the Roofing System, sheet metal flashing work, and related Sections as applicable.

3.03 INSTALLATION

A. Install all items specified herein as detailed and in accordance with manufacturers' printed instructions.

B. Work shall be weathertight and free of expansion and contraction noise.

C. Work shall be designed, fabricated, and installed to compliment the design and installation of the work of other related Sections including wind loading and thermal expansion/contraction.

END OF SECTION

SECTION 07900

JOINT SEALANTS

PART 1 GENERAL

1.01 WORK INCLUDED: This Section covers the Work necessary to furnish and install, complete, the following:

A. This Contractor will be responsible for caulking and sealing all joints between dissimilar materials, expansion joints, and all other areas required to properly seal the building from moisture intrusion.

B. Sealants and caulking for all joints related to buildings and structures, both interior and exterior as specified below.

1.02 RELATED WORK SPECIFIED AND PERFORMED UNDER OTHER SECTIONS

A. SECTION 03251 - EXPANSION AND CONTRACTION JOINTS: Concrete Expansion and Construction Joint Materials.

B. SECTION 08111 - STEEL DOORS AND FRAMES.

C. SECTION 08411 - ALUMINUM STOREFRONTS.

D. DIVISION 15000 - MECHANICAL: Plumbing Fixtures.

1.03 REFERENCES

A. Federal Specifications as referenced herein.

1.04 ENVIRONMENTAL CONDITIONS

A. The ambient temperature shall be between 40 and 90 degrees F when sealant is applied, unless recommended otherwise by sealant manufacturer.

B. Surfaces shall be dry to the touch.

1.05 QUALITY ASSURANCE

A. Applicator shall have a minimum of two (2) years of experience installing sealants in projects of similar scope.

B. Color(s) of sealants selected and/or specified by the Architect shall be utilized throughout the Project; the use of multiple colors on a given bead run shall NOT be accepted.

1.06 SUBMITTALS:

A. Samples and Certificates: Submit small samples of each sealant type specified herein showing full color range. Samples shall be accompanied by a Certificate of Compliance with requirements specified herein for each sealant type.

B. Applicator's Affidavit: Submit applicator's affidavit of qualification compliance.

1.07 GUARANTEE

A. Installed sealants and accessories shall be guaranteed for a period of one (1) year from date of Substantial Completion of the Project. Written guarantee shall include coverage of installed sealants, caulking and accessories which fail to achieve air tight and watertight seal, exhibit loss of adhesion or cohesion, or do not cure.

1.08 DELIVERY, STORAGE AND HANDLING

A. Deliver all sealants to the site in sealed containers, each bearing manufacturer's name and product designation.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. The use of a manufacturer's name and specification number is for the purpose of establishing the standard of quality and general configuration desired. Products of other manufacturers, meeting all of the requirements specified herein, will only be considered upon submission of complete data in the form of a Shop Drawing with detailed information on proposed products.

2.02 SEALANTS

A. Sealants shall be self-leveling (S/L) for horizontal and sloping joints with a maximum slope of 1 percent. Nonsag sealants (N/S) shall be used for steeper sloped joints, vertical joints, and overhead joints. **Silicone sealants not acceptable on the exterior of this project, but acceptable at plumbing fixtures.**

B. **Vertical joints in Cast-In-Place concrete and Concrete Masonry Units:** Two-part polyurethane sealant conforming to Federal Specification TTS-00227E, Type II, N/S; Mameco Vulken 227; Pecora Dynatrol II, or equal. Color shall be selected by the Architect.

C. **Horizontal Joints In Cast-In-Place Concrete, Expansion Joints and other Horizontal Joints:** Two-part polyurethane sealant conforming to Federal Specification TT-S-00227E, Type I, Class A, S/L; Mameco Vulkem 245; Pecora NR-200; or equal. Color shall be selected by the Architect.

D. **Exterior Door, Louver, Window Frames, Storefronts and Special Applications:** One-part polyurethane sealant conforming to Federal Specification TT-S-00230C, Type II, Class A, N/S; Mameco Vulkem 116; Sika Sikaflex IA; or equal. Color for both sides of framing shall match frame color. Color shall be manufacturer's standard gray for special applications. Typical special applications: sealant bed for aluminum thresholds; sealant bed and sealant bead fill at prefabricated reglets; miscellaneous joints. **Note: Exterior side of windows and storefronts shall be caulked and sealed by installer.**

E. **Sanitary Applications:** One-part silicone rubber sealant conforming to Federal Specification TT-S-001543A, Class A, mildew resistant, N/S; Dow Corning Bathtub Caulk; General Electric Sanitary Sealant; or equal. Color shall be white. Typical locations: water closets, wall-mounted urinals, service sinks, and drinking fountains; food preparation and vanity counter tops, splashes, and deck-mounted lavatories and sinks.

F. **Fire Stop Sealant:** Sealants specified below shall be equal in all respects to that as manufactured by Dow Corning 2000. Sealants shall meet Fire Test data per ASTM E 814. Apply in accordance with manufacturer's detailed specifications. Fire Stop Sealants shall be used at all locations of fire rated walls, joints at walls and ceilings, or other joints between materials at fire rated areas. Apply minimum 1/4" X full depth of sealant at head, base and intersections of joints at all fire rated walls. Apply at all penetrations of electrical or plumbing piping as required to meet NFPA 2002 Code requirements.

2.03 FIRE RATED SEALANTS APPLICATIONS

A. **Concrete Floor to Floor Joints:**

F-Rating (Hr).	UL-Classified System	Firestop Product
1	FFD-1012, FFD-1013	CP606, CP672
2	FFD-1012, FFD-1013	CP680, FS 657, FS-ONE
3	FFD-1011, FFD-1026, FFD-1039	CP601S, CP672, CP604
4	FFD-1047	CP601S

B. **Concrete Floor to Wall Joints:**

F-Rating (Hr).	UL-Classified System	Firestop Product
1 and 2	FWD-1012, FWD-1013, FWD-1037, FWD-1043, FWD-1046	CP606, CP672, CP604, CP606, CP601S
3	FWD-1011, FWD-1021	CP601S, CP672

C. **Head of Wall Joints - Gypsum Wall:**

F-Rating (Hr).	UL-Classified System	Firestop Product
1or 2	HWD-0042, HWD-0045, HWD-0046, HWD-0049, HWD-0076, HWD-0077, HWD-0080, HWD-0085, HWD-0087, HWD-0089, HWD-0106, HWD-0154, HWD-0184	CP672, CP606, CP601S, CP672, CP601S, CP606, CP601S, CP606, CP672, CP672, CP762, CP606, CP606
3 or 4	HWD-0292	CP672

D. **Head of Wall Joints - Concrete / Block Wall:**

F-Rating (Hr).	UL-Classified System	Firestop Product
1or 2	HWD-0081, HWD-0097, HWD-0098, HWD-0155, HWD-0181, HWD-0225, HWD-0258, HWD-0268, HWD-0286, HWD-1009, HWD-1037, HWD-1041	CP606, CP672 CP662, CP606, CP672, CP606, CP672, CP606, CP672, CP606, CP672, CP672
3 or 4	HWD-1008, HWD-1042	CP601S, CP601S

2.04 FIRE RATED PENETRATIONS

A. **Concrete Floors:**

1. Circular Blank Openings:

F-Rating (Hr.)	UL-Classified System
1	F-A-0006, C-AJ-0055, C-AJ-0070
2	F-A-0006, C-AJ-0055-C-AJ-0070
3	F-A-006, C-AJ-0055

2. Single Metal Pipes or Conduit:

F-Rating (Hr.)	UL-Classified System
1	C-AJ-1226, F-A-1017
2	C-AJ-1226, F-A-1017
3	C-AJ-1226, F-A-1017
4	C-BJ-1037, C-BJ-1034

3. Single Non-Metallic Pipes or Conduit:

F-Rating (Hr.)	UL-Classified System
1	F-A-2053, F-A-2025, C-AJ-2109, C-AJ-2098, C-AJ-2141, C-AJ-2167, C-BJ-2021
2	F-A-2053, F-A-2025, C-AJ-2109, C-AJ-2098, C-AJ-2141, C-AJ-2167, C-BJ-2021
3	C-AJ-2109, C-AJ-2098

4. Single or Bundled Cables:

F-Rating (Hr.)	UL-Classified System
1	F-A-3007, C-AJ-3095, C-AJ-3096
2	F-A-3007, C-AJ-3095, C-AJ-3096
3	F-A-3007, C-AJ-3095, C-AJ-3096

5. Cable Tray:

F-Rating (Hr.)	UL-Classified System
1	C-AJ-4034, C-AJ-4035
2	C-AJ-4034, C-AJ-4035
3	C-AJ-4034, C-AJ-4035

6. Single Insulated Pipes:

F-Rating (Hr.)	UL-Classified System
1	F-A-5015, F-A-5016, C-AJ-5090, C-AJ-5091, C-AJ-5098
2	F-A-5015, F-A-5016, C-AJ-5090, C-AJ-5091, C-AJ-5098
3	F-A-5016, C-AJ-5090
4	C-BJ-5006

7. Electrical Busway:

F-Rating (Hr.)	UL-Classified System
1	C-AJ-6006, C-AJ-6017
2	C-AJ-6006, C-AJ-6017
3	C-AJ-6006, C-AJ-6017

8. Non-Insulated Mechanical Ductwork without Dampers:

F-Rating (Hr.)	UL-Classified System
1	C-AJ-7046, C-AJ-7051
2	C-AJ-7046, C-AJ-7051
3	C-AJ-7046, C-AJ-7051

9. Mixed Penetrants:

F-Rating (Hr.)	UL-Classified System
1	C-AJ-8041, C-AJ-8056
2	C-AJ-8041, C-AJ-8056
3	C-AJ-8041, C-AJ-8056
4	C-BJ-8010

B. **Concrete or Block Walls:**

1. Circular Blank Openings:

F-Rating (Hr.)	UL-Classified System
1	C-AJ-0055, C-AJ-0070
2	C-AJ-00FF, C-AJ-0070
3	C-AJ-0055

2. Single Metal Pipes or Conduit:

F-Rating (Hr.)	UL-Classified System
1	C-AJ-1226, W-J-1021
2	C-AJ-1226, W-J-1021
3	C-AJ-1226, C-AJ-1041, W-J-1042
4	C-BJ-1034, C-BJ-1037, W-J-1041, W-J-1042

3. Single Non-Metallic Pipes or Conduit:

F-Rating (Hr.)	UL-Classified System
1	C-AJ-2109, C-AJ-2098, C-AJ-2167
2	C-AJ-2109, C-AJ-2098, C-AJ-2167
3	C-AJ-2109, C-AJ-2098

4. Single or Bundled Cables:

F-Rating (Hr.)	UL-Classified System
1	C-AJ-3036, C-AJ-3095, C-AJ-3096
2	F-A-3007, C-AJ-3095, C-AJ-3096
3	C-AJ-3095, C-AJ-3096

5. Cable Tray:

F-Rating (Hr.)	UL-Classified System
1	W-J-4016, C-AJ-4034, C-AJ-4035
2	W-J-4016, C-AJ-4034, C-AJ-4035
3	C-AJ-4034, C-AJ-4035

6. Single Insulated Pipes:

F-Rating (Hr.)	UL-Classified System
1	C-AJ-5090, C-AJ-5091, C-AJ-5061
2	C-AJ-5090, C-AJ-5092, C-AJ-5061
3	C-AJ-5090, C-AJ-5061
4	C-BJ-5006, W-J-5028

7. Electrical Busway:

F-Rating (Hr.)	UL-Classified System
1	C-AJ-6006, C-AJ-6017
2	C-AJ-6006, C-AJ-6017
3	C-AJ-6006, C-AJ-6017

8. Non-Insulated Mechanical Ductwork without Dampers:

F-Rating (Hr.)	UL-Classified System
1	C-AJ-7046, C-AJ-7051, W-J-7021, W-J-7022
2	C-AJ-7046, C-AJ-7051, W-J-7021, W-J-7022
3	C-AJ-7046, C-AJ-7051

9. Mixed Penetrants:

F-Rating (Hr.)	UL-Classified System
1	C-AJ-8041, C-AJ-8056, W-J-8007
2	C-AJ-8041, C-AJ-8056, W-J-8007
3	C-AJ-8041, C-AJ-8056, W-J-8007
4	C-BJ-8010, W-J-8007

C. **Gypsum Wallboard Assemblies:**

1. Metal Pipes or Conduit:

F-Rating (Hr.)	UL-Classified System
1	W-L-1054, W-L-1058, W-L-1164
2	W-L-1054, W-L-1058, W-L-1164
4	W-L-1110, W-L-1111

2. Single Non-Metallic Pipes or Conduit:

F-Rating (Hr.)	UL-Classified System
1	W-L-2078, W-L-2075, W-L-2128
2	W-L-2078, W-L-2075, W-L-2128
4	W-L-2184

3. Single or Bundled Cables:

F-Rating (Hr.)	UL-Classified System
1	W-L-3065, W-L-3111, W-L-3112
2	W-L-3065, W-L-3111, W-L-3112
4	W-L-3139

4. Cable Tray:

F-Rating (Hr.)	UL-Classified System
1	W-L-4011, W-L-4019
2	W-L-4011, W-L-4019
3	W-L-8014

5. Insulated Pipes:

F-Rating (Hr.)	UL-Classified System
1	W-L-5028, W-L-5029, W-L-5047
2	W-L-5028, W-L-5029, W-L-5047
3	W-L-5073

6. Non-Insulated Mechanical Ductwork without Dampers:

F-Rating (Hr.)	UL-Classified System
1	W-L-7017, W-L-7040, W-L-7042
2	W-L-7040, W-L-7042

9. Mixed Penetrants:

F-Rating (Hr.)	UL-Classified System
1	W-L-1095, W-L-8013
2	W-L-1095, W-L-8013
3	W-L-8014

2.05 BACKUP MATERIAL

A. Use closed-cell polyethylene foam rod conforming to ASTM D 1751 and compatible with sealant used. Size as shown or as recommended by manufacturers for all joints greater than 3/16 inch wide.

2.06 BOND BREAKER

A. As recommended by sealant manufacturer.

2.07 PRIMER

A. As recommended by sealant manufacturer.

PART 3 EXECUTION

3.01 PREPARATION

A. All surfaces to be sealed shall be clean, dry, sound, and free of dust, loose mortar, and other foreign materials. Mask adjacent surfaces where necessary to maintain neat edge. Starting of Work will be construed as acceptance of all subsurfaces.

3.02 INSTALLATION

A. Apply all materials following manufacturer's recommendation and instructions.

B. Fill sealant joint completely from bottom to top, without voids.

C. Tool sealant joints slightly concave after sealant is installed on vertical and horizontal joints that are flush with adjacent surfaces. On flashing reglets, etc., sealant shall be installed with convex surface to shed water.

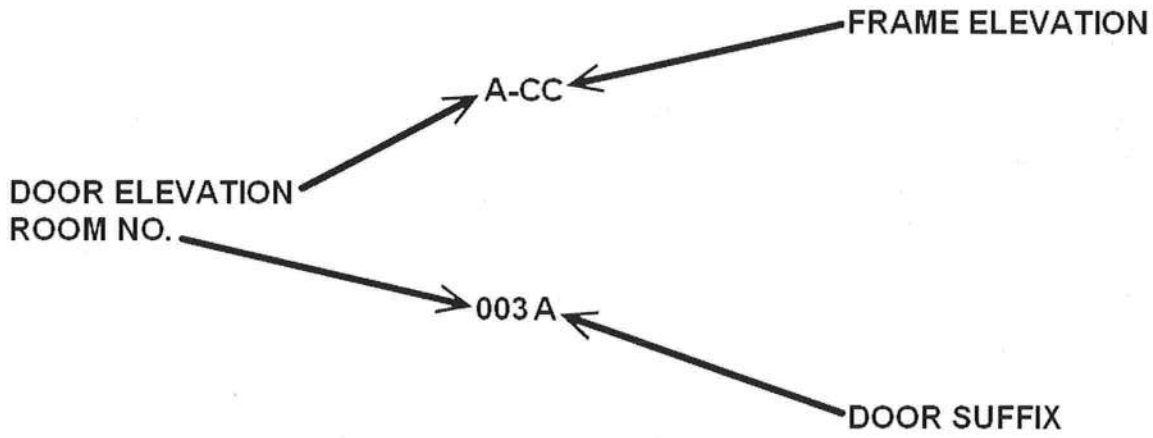
3.03 CLEANING

A. The surfaces next to the sealed joints shall be cleaned of smears or other soiling resulting from sealant applications. At no additional cost to Owner, replace or repair to Owner's satisfaction any damaged surfaces resulting from sealant application or cleaning.

END OF SECTION

DOOR SCHEDULE ABBREVIATIONS

ALUM.	ALUMINUM	MFR	BY MANUFACTURER
DET.	DETAIL	MT'L.	METAL
DR.	DOOR	NO.	NUMBER
ELEV.	ELEVATION	OPEN'G.	OPENING
FR.	FRAME	PR.	PAIR
GRP.	GROUP	RAT'G.	RATING
HDWR.	HARDWARE	SCWD.	SOLID CORE WOOD
H.M.	HOLLOW METAL	SFX.	SUFFIX
HT.	HEIGHT	THK.	THICK
LBL.	LABEL	THRS.	THRESHOLD
MAT'L.	MATERIAL	WD.	WOOD
MBL.	MARBLE		



GENERAL NOTES

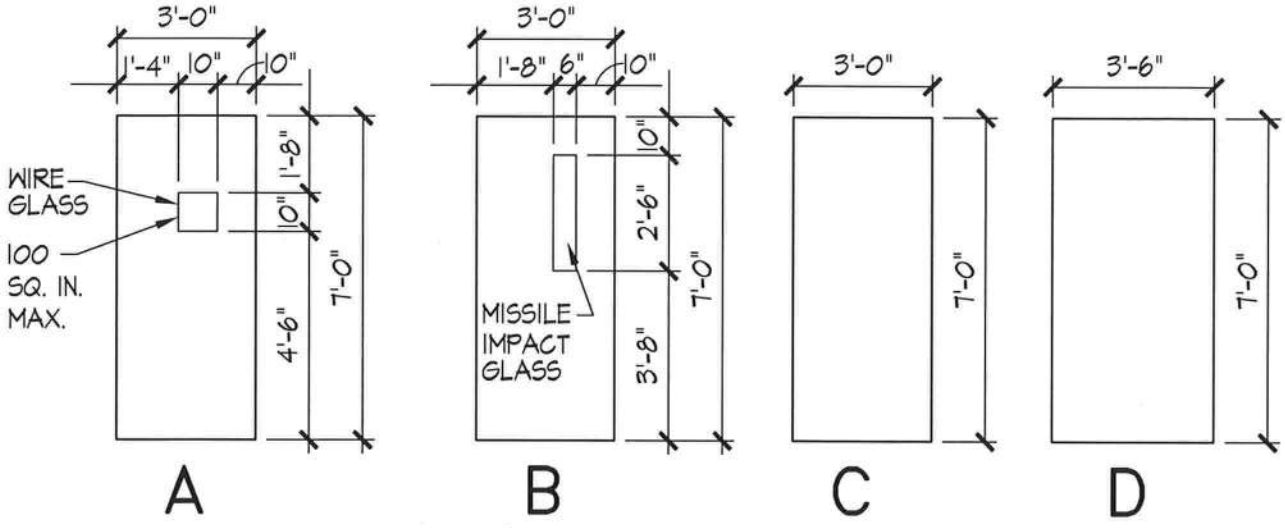
1. REFER TO THE DRAWINGS FOR ALL DETAILS.
2. IF DOOR IS NOT SCHEDULED IN FINISH HARDWARE SCHEDULE, EACH DOOR SHALL RECEIVE A MINIMUM OF 3 HINGES, LOCKSET AND CLOSER.
3. CAREFULLY REVIEW MECHANICAL DRAWINGS AND PROVIDE GRILLES FOR DOORS AND UNDERCUTS AS INDICATED. DO NOT INSTALL ANY GRILLES IN RATED DOORS WITHOUT PROVIDING A FUSIBLE LINK TO MAINTAIN FIRE RATING.
4. ALL FIRE RATED DOORS SHALL BE GLAZED WITH WIRE GLASS. ALL EXTERIOR DOOR LITES SHALL BE MISSILE IMPACT GLASS.
5. PROVIDE DRIP CAP'S AT ALL EXTERIOR DOORS.

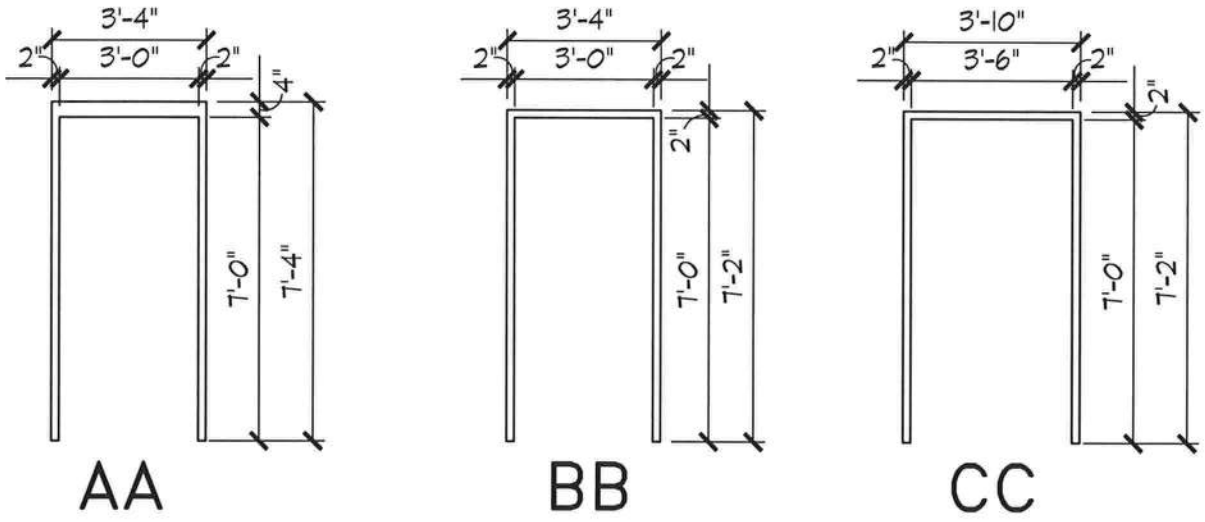
DOOR SCHEDULE

OPEN'G NO.	SFX	DOOR WIDTH	DOOR HT.	DOOR THK	DOOR MAT'L	PR DR	FRAME MAT'L	HEAD DET.	JAMB DET.	DR/FR ELEV	THRS	RAT'G LBL	HDWR GRP	REMARKS
100	A	3'-0"	7'-0"	1-3/4"	H.M.		H.M.	H/A-2	R/A-2	B/AA	ALUM.		2	
100	B	3'-0"	7'-0"	1-3/4"	SCWD.		H.M.	D/A-2	D/A-2	A/BB	ALUM.	90	3	
101	A	3'-0"	7'-0"	1-3/4"	H.M.		H.M.	H/A-2	R/A-2	B/AA	ALUM.		2	
103	A	3'-0"	7'-0"	1-3/4"	SCWD.		H.M.	D/A-2	D/A-2	C/BB			1	
104	A	3'-0"	7'-0"	1-3/4"	SCWD.		H.M.	D/A-2	D/A-2	C/BB			1	
105	A	3'-0"	7'-0"	1-3/4"	SCWD.		H.M.	D/A-2	D/A-2	C/BB			1	
106	A	3'-0"	7'-0"	1-3/4"	SCWD.		H.M.	D/A-2	D/A-2	C/BB	MBL.		7	
107	A	3'-0"	7'-0"	1-3/4"	SCWD.		H.M.	D/A-2	D/A-2	C/BB	MBL.		7	
108	A	3'-0"	7'-0"	1-3/4"	SCWD.		H.M.	D/A-2	D/A-2	C/BB			1	
109	A	3'-0"	7'-0"	1-3/4"	SCWD.		H.M.	D/A-2	D/A-2	C/BB			6	
110	A	3'-0"	7'-0"	1-3/4"	SCWD.		H.M.	D/A-2	D/A-2	C/BB			6	
111	A	3'-0"	7'-0"	1-3/4"	SCWD.		H.M.	D/A-2	D/A-2	C/BB			6	
112	A	3'-0"	7'-0"	1-3/4"	SCWD.		H.M.	D/A-2	D/A-2	C/BB			6	
113	A	3'-6"	7'-0"	1-3/4"	SCWD.		H.M.	D/A-2	D/A-2	D/CC	ALUM.		5	
114	A	3'-6"	7'-0"	1-3/4"	SCWD.		H.M.	D/A-2	D/A-2	D/CC	ALUM.		4	
115	A	3'-6"	7'-0"	1-3/4"	SCWD.		H.M.	D/A-2	D/A-2	D/CC	ALUM.		4	
116	A	3'-6"	7'-0"	1-3/4"	SCWD.		H.M.	D/A-2	D/A-2	D/CC	ALUM.		4	
117	A	3'-6"	7'-0"	1-3/4"	SCWD.		H.M.	D/A-2	D/A-2	D/CC			8	
118	A	14'-0"	14'-0"	MFR.	MFR.		MFR.	MFR.	B/A-6				9	
118	B	14'-0"	14'-0"	MFR.	MFR.		MFR.	MFR.	B/A-6				9	

DOOR SCHEDULE

OPEN'G NO.	SFX	DOOR WIDTH	DOOR HT.	DOOR THK	DOOR MAT'L	PR DR	FRAME MAT'L	HEAD DET.	JAMB DET.	DR/FR ELEV	THRS	RAT'G LBL	HDWR GRP	REMARKS
118	C	14'-0"	14'-0"	MFR.	MFR.		MFR.	MFR.	B/A-6				9	
118	D	14'-0"	14'-0"	MFR.	MFR.		MFR.	MFR.	B/A-6				9	
118	E	14'-0"	14'-0"	MFR.	MFR.		MFR.	MFR.	B/A-6				9	
118	F	14'-0"	14'-0"	MFR.	MFR.		MFR.	MFR.	B/A-6				9	
118	G	14'-0"	14'-0"	MFR.	MFR.		MFR.	MFR.	B/A-6				9	
118	H	14'-0"	14'-0"	MFR.	MFR.		MFR.	MFR.	B/A-6				9	
118	J	14'-0"	14'-0"	MFR.	MFR.		MFR.	MFR.	B/A-6				9	
118	K	14'-0"	14'-0"	MFR.	MFR.		MFR.	MFR.	B/A-6				9	
118	L	3'-0"	7'-0"	1-3/4"	H.M.		H.M.	H/A-2	R/A-2	B/AA	ALUM.		2	





DOOR & FRAME ELEVATIONS

1/4" = 1'-0"

SECTION 08111

STEEL DOORS AND FRAMES

PART 1 GENERAL

1.01 WORK INCLUDED: This Section covers the Work necessary to furnish and install, complete, the following:

A. Hollow metal doors and frames, including fire rated where applicable.

B. Door louvers, if required. See Door Schedule and Mechanical Drawings.

1.02 GENERAL

A. See GENERAL and SUPPLEMENTARY GENERAL CONDITIONS and Division 1, GENERAL REQUIREMENTS, which contain information and requirements that apply to the Work specified herein and are mandatory for this Project.

1.03 RELATED WORK SPECIFIED AND PERFORMED UNDER OTHER SECTIONS

A. SECTION 04340 - REINFORCED UNIT MASONRY SYSTEM: Grouting steel door frames.

B. SECTION 08210 - WOOD DOORS.

C. SECTION 08710 - FINISH HARDWARE.

D. SECTION 08800 - GLASS AND GLAZING.

E. SECTION 09900 - PAINTING: Field painting of doors and frames.

1.04 REFERENCES

A. ASTM Standards and Test Procedures as referenced herein.

B. SDI-100 - Standard Steel Doors and Frames.

C. SDI-105 - Recommended Erection Instructions for Steel Frames.

1.05 SUBMITTALS: Submittals during construction shall be made in accordance with SECTION 01300, SUBMITTALS. In addition, the following specific information shall be provided:

A. Shop Drawings:

1. Indicate frame configuration, anchor types and spacings, location of cutouts for hardware, reinforcement, and finish. No fabrication of metal doors or door frames shall be performed until the manufacturer has an approved copy of the Door Hardware Schedule. The Manufacturer shall coordinate fabrication of doors and frames with approved Hardware Schedule.

2. Indicate door elevations, fire rating, internal reinforcement, closure method, and cut outs for glazing and louvers.

3. Location of each door shall be noted with the same reference as used on Drawings.

1.06 DELIVERY, STORAGE AND HANDLING

A. Deliver, store and handle materials or equipment under provisions of SECTION 01600, MATERIAL AND EQUIPMENT.

B. Deliver, store, and handle steel doors and frames in a manner to prevent damage and deterioration. Provide packaging such as cardboard or other containers, separators, banding, spreaders, and paper wrappings for protection.

C. Store doors upright, in a protected dry area, at least 1-inch or more off the ground or floor and at least 1/4 inch between individual pieces. Follow special storage and handling requirements of manufacturer.

1.07 FIELD MEASUREMENTS

A. The Contractor shall verify all dimensions, shall make any field measurements necessary and shall be fully responsible for accuracy and layout of work. The Contractor shall review the Drawings and any discrepancies shall be reported to the Architect for clarification prior to starting fabrication.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Ceco Corporation.

B. Steelcraft Manufacturing Company.

C. Curries Company.

D. Amweld Building Products, Inc.

E. Republic Steel Corporation.

2.02 DOORS AND FRAMES

A. Exterior Doors: Galvanized after fabrication, SDI-100 Grade III (Extra heavy duty), (seamless). Tops of doors shall be manufactured flush. No recess permitted. **Non-factory applied top channel not acceptable.** 16 gauge, 1,000,000 ANSI Cycle Tested; Provide proof of test with Shop Drawings.

B. Exterior and Interior Frames: 16 gage, welded, galvanized after welding. All exterior frames shall meet the Wind Load requirements of the Florida Building Code 2004 Edition and 2005 and 2006 Supplements. Inside of frames shall be coated with bitumastic and shall be grouted solid.

C. All doors to have 12 gage gauge reinforcing plates required for closer, exit devices, locks, etc., even if S.N.B. are specified. **All exterior doors shall meet the EHPA Certified (Hurricane Resistant) Wind Load requirements of the Florida Building Code 2004 Edition and 2005 and 2006 Supplements.**

D. The use of "Stock" modified doors will not be permitted.

2.03 DOOR CORE

A. Core: Polyurethane, Polystyrene insulation, or as required for fire rating.

2.04 ACCESSORIES

A. Furnish manufacturer's standard anchors, fasteners, etc. Minimum 3 anchors per jamb, each side.

B. Louvers: Roll formed galvanized, after fabrication, minimum 18 gauge, steel material, slat blade, minimum 30 percent free area; factory installed; installed with **all cuts made in door faces prior to galvanizing**; size as noted on Drawings. Factory Installed.

C. Silencers: As specified in SECTION 08710, FINISH HARDWARE.

D. Glazing Stops: If required, shall be rolled steel channel shape, galvanized after fabrication prepared for countersink style screws. Glazing stops shall accommodate glass of the type and thickness indicated on the Drawings and as specified in SECTION 08800, GLASS AND GLAZING. Screws shall be stainless steel.

E. Glazing frames in metal doors shall lap skin of door, in compliance with the Wind Load requirements of the Florida Building Code 2004 Edition and 2005 and 2006 Supplements. Frames shall be security type, bevel profile, mitered and welded at corners. Galvanized after fabrication; factory installed. Cut out for lite or louvers to be channel reinforced in the door at factory. **All cut outs shall be made at the factory prior to galvanizing.**

2.05 FABRICATION

A. Fabricate all frames of welded assembly, fire rated as required.

B. Fabricate frames and doors with hardware reinforcement plates welded in place and then galvanized. Provide 12 gauge galvanized reinforcement plates at all door closer locations, both sides of door and panic device locations.

C. Prepare frame for silencers; provide three for single doors on strike side, and four on frame head at double doors without mullions. Delete where weatherstripping specified.

D. **Interior surfaces of all hollow metal door frames shall be coated with Carbolene #60 bitumastic and then a minimum of 1" thick grout applied to the interior of the frame prior to installation.**

E. The new doors shall be custom fabricated to fit hinge spacing to accommodate specified door hardware. Pairs of doors shall fit and operate properly with the standard clearances between doors and frames at the jambs, heads and center.

2.06 FINISH

A. All exterior metal doors and frames louvers and lite kits specified herein shall be galvanized with "A60" including a secondary galvannealing process.

B. All interior metal doors and frames specified herein shall be same as exterior, with exception of zinc galvanizing.

C. Finish painting shall be as indicated on the Drawings and as specified in SECTION 09900, PAINTING. **Doors, including tops and bottoms, shall receive one full coat of red primer prior to hanging, then shall be finish painted prior to hanging and installation of finish hardware.**

D. **Should the Contractor hang the door prior to specified primer and finish applications, Contractor shall be responsible for removing door from frame and removing finish hardware for painter.** Upon completion of finish, Contractor shall reinstall finish hardware and rehang door.

E. **Note, all interior door frames are to be grout filled under this Section.**

PART 3 EXECUTION

3.01 INSTALLATION

A. Install frames in accordance with SDI-105. Install doors in accordance with SDI 100.

B. Coordinate with masonry construction for anchor placement. After bitumastic coating has been applied to the interior of the frames, grout frames solid with cement grout.

C. Coordinate installation of glass and glazing.

D. The use of self drilling screws will not be permitted.

3.02 PRIME COAT TOUCH-UP

A. **Note requirement for additional field coat of primer and painting required for all doors, prior to hanging.**

B. Immediately after erection of frames, areas where prime coat has been damaged shall be sanded smooth and touched up with same primer as applied at shop. Remove rust and treat with field applied galvanizing before above specified touch-up is applied. Touch-up shall not be obvious.

3.03 ADJUSTING AND CLEANING

A. Adjust all hardware, including cylinders, for smooth and balanced door movement.

3.04 PROTECTION

A. Protect installed steel doors and frames and related work against damage from other construction work. Replace all doors which, in the opinion of the Architect, are not repairable.

END OF SECTION

SECTION 08210

WOOD DOORS

PART 1 GENERAL

1.01 WORK INCLUDED: This Section covers the Work necessary to furnish and install, complete, the following:

A. Wood doors. Fire Rated and Non-Rated.

1.02 GENERAL

A. See GENERAL and SUPPLEMENTARY GENERAL CONDITIONS and Division 1, GENERAL REQUIREMENTS, which contain information and requirements that apply to the Work specified herein and are mandatory for this Project.

1.03 RELATED WORK SPECIFIED AND PERFORMED UNDER OTHER SECTIONS

A. SECTION 06200 - FINISH CARPENTRY: Installation of finish hardware to wood doors.

B. SECTION 08710 - FINISH HARDWARE.

C. SECTION 08800 - GLASS AND GLAZING.

D. SECTION 09900 - PAINTING: Field painting of wood doors.

1.04 QUALITY ASSURANCE

A. The "Quality Standards" of the Architectural Woodwork Institute (AWI) shall apply and by reference are hereby made a part of these Specifications. Any reference to Premium, Custom or Economy shall be as defined in the latest edition of the AWI "Quality Standards".

1.05 SUBMITTALS:

A. Shop Drawings:

1. Indicate door elevations, stile and rail reinforcement, internal blocking for hardware attachment, and cutouts for glazing.

2. Location of each door shall be noted with the same reference as used on Drawings.

1.06 DELIVERY, STORAGE, AND PROTECTION

A. Deliver doors to Project site after moisture-producing construction operations are complete and building has reached average prevailing relative humidity of locality. Seal all four edges of doors when delivered to Project site. Do not drag doors across one another.

B. Stack flat on 2 x 4 lumber, laid 12-inches from ends and across center. Under bottom door and over top of stack provide plywood or corrugated cardboard to protect door surface. Store doors in well ventilated enclosed area.

1.07 FIELD MEASUREMENTS

A. The Contractor shall verify all dimensions, shall make any field measurements necessary and shall be fully responsible for accuracy and layout of work. The Contractor shall review the Drawings and any discrepancies shall be reported to the Architect for clarification prior to starting fabrication.

1.08 WARRANTY

A. Warranty: Provide written guarantee from door manufacturer stating that doors will not delaminate or show a warpage from a true plane of more than 1/4-inch for a period of one-year from the date of Substantial Completion of the Project. Doors failing these requirements will be replaced with matching finish at the Contractor's sole expense.

PART 2 PRODUCTS

2.01 DOOR TYPES

A. Flush Interior Doors: 1-3/4 inches thick; solid core construction; wood veneer faces. Fire rated as required on the Door Schedule.

2.02 DOOR CONSTRUCTION (AWI QUALITY STANDARD)

A. Solid, Non-Rated Core: AWI Section 1300, PC5 Hot pressed, with 1-1/2 inch minimum width top and bottom hardwood rails. Styles shall match face veneer, 5 ply hot pressed.

B. Solid, Rated Core: AWI SLC-5 Hot pressed, glued block doors shall have 1-1/2 inch minimum width top and bottom hardwood rails. Styles shall match face veneer, 5 ply hot pressed.

2.03 FLUSH DOOR FACING

A. Facing Quality: AWI premium grade.

B. Flush Interior Door Veneer: Yellow Birch "Natural" species wood, rotary sliced with random matched grain, for transparent finish.

2.04 ACCESSORIES

A. Adhesives: Door manufacturer's standard for interior doors.

B. Glass Stops: Rolled metal type designed to conform to U.L. requirements.

2.05 FABRICATION

A. Fabricate doors in accordance with AWI Quality Standards requirements.

B. Factory Premachine doors for finish hardware. Coordinate the work with SECTION 08710, FINISH HARDWARE.

PART 3 EXECUTION

3.01 INSPECTION

A. Verify that door frames are of type required for door and are installed as required for proper installation of doors. Do not install doors in frames which would hinder the operation of the doors.

3.02 INSTALLATION

A. Install doors in accordance with manufacturer's instructions. Installed door and frame assembly shall conform to A.W.I. specifications.

B. Trim door width by cutting equally on both jamb edges.

C. Trim door height by cutting equally on top and bottom edges to a maximum of 3/4 inch at non-smoke separated areas.

D. Coordinate installation of glass and glazing with SECTION 08800, GLAZING.

E. Finish all job site cut surfaces with specified door finish material before final hanging of doors. Refer to SECTION 09900, PAINTING for finish required.

F. Should the Contractor hang the door prior to specified finish application, Contractor shall be responsible for removing door from frame and removing finish hardware for painter. Upon completion of finish and approval by the Architect, Contractor shall reinstall finish hardware and rehang door.

3.03 ADJUSTING AND CLEANING

A. Adjust for smooth and balanced door movement.

B. Replace or rehang doors which are hinge-bound and do not swing or operate freely.

C. Replace doors damaged during installation at Contractor's sole expense.

END OF SECTION

SECTION 08300

SPECIAL DOORS

PART1 GENERAL

1.01 WORK INCLUDED: This Section covers the Work necessary to furnish and install, complete, the following:

A. Roll-up doors; Exterior type, Electrically Operated Hoist. Doors shall be rated for 140 MPH Wind Loading. **Note, the Electric Hoist Operator is specified as a NO SUBSTITUTION item.**

B. Access Panels.

1.02 GENERAL

A. See GENERAL and SUPPLEMENTARY GENERAL CONDITIONS and Division 1, GENERAL REQUIREMENTS, which contain information and requirements that apply to the Work specified herein and are mandatory for this Project.

1.03 RELATED WORK SPECIFIED AND PERFORMED UNDER OTHER SECTIONS

A. SECTION 05500 - METAL FABRICATIONS: Miscellaneous Metals.

B. SECTION 08111 - STEEL DOORS AND FRAMES.

C. SECTION 08710 - FINISH HARDWARE.

D. SECTION 09900 - PAINTING: Field Painted Items.

E. DIVISION 16 - ELECTRICAL - Electrical power connections to electrically operated roll-up doors in this Section.

1.04 REFERENCES

A. ASTM Standards and Test Procedures as referenced herein.

1.05 SUBMITTALS: Submittals during construction shall be made in accordance with SECTION 01300, SUBMITTALS. In addition, the following specific information shall be provided:

A. Shop Drawings:

1. Prior to ordering or fabricating any doors, submit to the Architect for review shop drawings and manufacturer's literature showing construction and installation details.

2. Location of each door shall be noted with the same reference as used on Drawings. Review the Mechanical and Electrical Drawings for any access panels and provide as required.

B. Provide two copies of Operation and Maintenance Manuals for each type of door provided.

1.06 DELIVERY, STORAGE AND HANDLING

A. Deliver, store and handle materials or equipment under provisions of SECTION 01600, MATERIAL AND EQUIPMENT.

B. Deliver, store, and handle doors in a manner to prevent damage and deterioration.

1.07 FIELD MEASUREMENTS

A. The Contractor shall verify all dimensions, shall make any field measurements necessary and shall be fully responsible for accuracy and layout of work. The Contractor shall review the Drawings and any discrepancies shall be reported to the Architect for clarification prior to starting fabrication.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Only products of the manufacturers listed herein are acceptable. **Products of other manufacturers will not be considered.**

B. Like items of material or equipment specified herein shall be the end products of one manufacturer in order to achieve standardization for appearance, operation, maintenance, spare parts and manufacturer's service.

2.02 EXTERIOR ELECTRICALLY OPERATED ROLL-UP DOOR

A. Furnish Face-of-Wall Mounted exterior type 140M.P.H. rated, electrically operated roll-up doors, in size scheduled, complete with curtain, barrel, brackets, hood and guides. Note the electrically operated mechanism and controls are specified separately and shall be compatible with the roll-up door provided. See below for electric hoist operator specifications. Locking device, hand operating chain and special features as specified below, as manufactured by:

1. The Cookson Co.
2. Cornell Ironworks
3. Kinnear Rolling Doors

4. North American Rolling Doors, Inc.

No other manufacturers will be acceptable.

B. Curtain: Composed of interlocking minimum 20-gauge (U.S. Standard) hot dipped galvanized steel flat slats, approximate size 2 5/8 inches, designed to withstand wind load in accordance with the requirements of ASCE 7-05. **Design wind velocity for these doors shall be ASCE 7-05, 140 M.P.H., Importance Factor 1.15.** Provide signed and sealed wind load calculations with Shop Drawings.

C. Side Guides: ASTM A-36 hot-rolled hot dipped galvanized steel shapes as appropriate of conditions. Anchorage of jamb tracks shall be rated for wind velocity noted in Paragraph B above.

D. Coil Box Mechanism Hood: Manufacturer's standard, made with minimum 24 gauge (U.S. Standard) galvanized steel.

E. Brackets and Barrel: Manufacturer's standard, of galvanized steel.

F. Locking: Manufacturer's standard.

G. Finish: Hot dipped G-90 galvanizing.

H. Special Features:

1. The bottom bar shall consist of hot dipped galvanized tubular steel 2" high x 1-1/4" deep.

2. The guides shall consist of 3 box sections of galvanized steel.

3. The brackets shall be constructed of steel not less than 1/4" thick and shall be bolted to the wall angle with minimum 3/8" fasteners at 12" O.C. or as required for Wind Loading. **The finish on the brackets shall be hot dipped galvanized.**

4. The barrel shall be steel tubing of not less than 4" in diameter. Oil tempered torsion springs shall be capable of correctly counter balancing the weight of the curtain. The barrel shall be designed to limit the maximum deflection to .03" per foot of opening width. The springs shall be adjusted by means of an exterior wheel. **The finish on the barrel shall be hot dipped galvanized.**

5. The hood shall be fabricated from 24 gauge galvanized steel and shall be formed to fit the curvature of the brackets. The hood shall be corrugated every 1" along the curvature for the entire length of the hood.

2.03 ELECTRIC HOIST OPERATOR

A. For each roll up door shall be provided as manufactured by Power-Master, Model "H-53" Industrial Duty V-Belt, 1/2 H.P. 208V., 3 Phase, Hoist Operator. Florida Representative/Supplier: John Greene Corp., 3516 East Norvell Bryant Hwy., Hernando, FL 34442. Phone 800-323-3674; Fax 352-726-8999. **NO SUBSTITUTIONS.**

B. Provide each roll up door with the following Power-Master accessories:

1. Open/Close/Stop #3B4X NEMA 4X switch.

2. Access Alliance Photo Beam Kit with brackets, with wire length as required. **Provide power as required for Photo Beam tied into an Emergency Power circuit.**

2.04 INSTALLATION

A. Roll up doors and electrical hoist operators shall be installed in full accordance with the manufacturer's instructions. Installation shall be by the manufacturer's trained and certified installer.

B. Completed installation shall operate smoothly in both directions. Adjust spring counter balance mechanism for minimum effort in both up and down directions, when operated manually.

2.05 WALL ACCESS PANELS: Bar-Co, Milcor, or equal, for masonry and stud wall installation; with anchor strips, frame, concealed spring hinges and key operated cylinder lock. Provide at all locations where required for access to valves and other items required by Code to have access whether or not specifically called out in the Documents. If size not specified, provided minimum 24" X 24". **Review particularly the Mechanical / Electrical portions of the Documents for locations requiring access panels and provide all access panels requred.**

2.06 CEILING ACCESS PANEL: Bar-Co, Milcor, or equal, for acoustical or suspended V.P.B. ceilings, complete with frame and key operated cylinder locks. Size as shown on the drawings. If size not specified, provide minimum 48" x 48". Provide and install at all locations required for access to valves, dampers, and other items required by Code to have access whether or not specifically called out in the Documents. **Review particularly the Mechanical/Electrical portions of the Documents for locations requiring access panels and provide all access panels required.**

2.07 Provide Fire Rated Wall and Ceiling Access panels at all locations where located in a Fire Rated wall or ceiling. Carefully review Life Safety Plan, Mechanical and Electrical plans for these locations.

PART 3 EXECUTION

3.01 INSTALLATION

A. Install special doors as shown in accordance with the manufacturers' recommendations and printed instructions. Adjust doors for smooth, satisfactory operation. Installation shall be by an experienced factory-authorized installer.

3.02 PRIME COAT TOUCH-UP

A. Immediately after erection of special doors, where applicable, areas where galvanizing has been damaged shall be wire brushed and touched up with liquid galvanizing. Remove rust before above specified touch-up is applied. Touch-up shall not be obvious.

3.03 PROTECTION

A. The Contractor shall protect installed special doors against damage from other construction work.

B. Special doors which are damaged beyond repair in the sole opinion of the Architect shall be replaced at no expense to the Owner.

3.04 WARRANTY

A. Roll up Doors, Electric Hoist Operators and Access Panels shall be warranted against defects in workmanship and materials for a period of twelve (12) months from date of Substantial Completion of the project.

END OF SECTION

SECTION 08411

ALUMINUM STOREFRONTS

PART I GENERAL

1.01 WORK INCLUDED: This Section covers the Work necessary to furnish and install, complete, the following:

A. Aluminum storefront framing for 140 M.P.H. Wind Loading.

B. Sealant associated with the work of this Section.

1.02 GENERAL

A. See GENERAL and SUPPLEMENTARY GENERAL CONDITIONS and Division 1, GENERAL REQUIREMENTS, which contain information and requirements that apply to the Work specified herein and are mandatory for this Project.

1.03 RELATED WORK SPECIFIED AND PERFORMED UNDER OTHER SECTIONS

A. SECTION 07900 - JOINT SEALANTS.

B. SECTION 08710 - FINISH HARDWARE.

C. SECTION 08800 - GLASS AND GLAZING.

1.04 REFERENCES

A. Manufacturer's recommendations and specifications.

B. The Aluminum Association (AA): "Designation System for Aluminum Finishes".

C. ASTM Standards and Test Procedures as referenced herein.

1.05 SUBMITTALS: Submittals during construction shall be made in accordance with SECTION 01300, SUBMITTALS. In addition, the following specific information shall be provided:

A. Samples: Six-inch long samples of anodized extruded aluminum.

B. Shop Drawings:

1. Details of framing, and anchorage to structure.

2. Location of each storefront framing type shall be noted with the same reference as used on the Drawings.

3. Field measure existing conditions prior to preparation of Shop Drawings and make dimensional adjustments as required on the Shop Drawings.

4. Provide information related to 140 MPH Wind Loading for exterior installations, anchorage design and related work.

1.06 DELIVERY, STORAGE AND HANDLING

A. Deliver, store and handle materials or equipment so as not to damage materials or equipment.

1.07 FIELD MEASUREMENTS

A. The Contractor shall field verify all dimensions and existing conditions and shall make any field measurements necessary. Contractor shall be fully responsible for accuracy and layout of work and shall make adjustments as required for a complete installation at no additional cost to the Owner. The Contractor shall review the Drawings and any discrepancies shall be reported to the Architect for clarification prior to starting fabrication.

1.08 GUARANTEE

A. Provide a written Guarantee to make, at Contractor's sole expense, any repairs necessary because of faulty materials or workmanship for a period of one (1) year from date of Substantial Completion of the Project.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. All components for the aluminum framing and storefronts as herein specified shall, for the purpose of establishing the standard of quality and general configuration desired, be as manufactured by VISTAWALL ARCHITECTURAL PRODUCTS FG-5000 HURRICANE IMPACT SYSTEM. Equal products as manufactured or supplied by other manufacturers, provided they can meet the hurricane impact requirements of these specifications, will be considered under the provisions of **SECTION 01300, SUBMITTALS as a PRE-BID SUBMITTAL. Submit all requests for substitutions a minimum of 10 days prior to Bid Opening to allow time for evaluation.**

2.02 STOREFRONT MATERIALS

A. The tabulation of items herein is not intended to be all inclusive, and it shall be the Contractor's responsibility to provide all components for aluminum storefronts shown on the Drawings, specified, or which can be reasonably inferred as necessary to complete this Project.

B. All aluminum framing and extrusions shall have a face dimension as specified herein. The framing shall be accurately assembled with unexposed fasteners utilizing extruded splines, clips and/or snap-in features. Glass shall be held in place by E.P.D.M. glazing gaskets on both sides. No applied stops shall be permitted.

C. Details are based on VISTAWALL ARCHITECTURAL PRODUCTS FG-5000 HURRICANE IMPACT SYSTEM.

D. Finish shall be clear anodized.

E. The framing shall be accurately assembled with unexposed fasteners utilizing extruded splines, clips and/or snap-in features. **All glazing in the Building shall be installed with impact resistant laminate glass. See Section 08800 for glass and glazing.** Glass shall be set in the center of the section. Glass shall be held in place by E.P.D.M. glazing gaskets on both sides. All exposed surfaces shall be free of unsightly scratches and blemishes.

F. Materials: All framing sections shall be of extruded aluminum alloy and tempered to meet or exceed finishing and structural criteria as specified. Storefront framing shall be 2 1/2" x 5". All weathering on exterior installations shall be hardbacked silicone treated polypropylene. Any exposed fasteners shall be aluminum, stainless steel or other non-corrosive material.

G. Finish: All exposed surfaces shall be free of unsightly scratches and blemishes.

2.03 DESIGN CRITERIA FOR WIND LOADS

A. Wind loads shall be in accordance with ASCE-7-05 Design Wind Velocity of 140 MPH, Building Importance Factor of 1.15.

2.04 FABRICATION

A. Cut out, reinforce, drill, and tap for specified hardware.

B. Reinforce mullions as necessary to limit deflection to 1/175 of span per Wind Load requirements specified herein.

PART 3 EXECUTION

3.01 INSTALLATION

A. All items shall be set in their correct locations as shown on the Drawings and shall be level, square, plumb, and at proper elevations and in alignment with other work.

B. Seal all joints. Framing members shall be screwed in place using backing, anchor plugs, or straps as required. Where moldings are joined, they shall be accurately cut and fitted to result in a tightly closed hairline joint. No unfinished aluminum shall be visible.

3.02 CLEANING

A. After erection, the Contractor shall protect exposed portions from damage by machines, plaster, lime, paint, acid, cement, or other harmful compounds. The Contractor shall be responsible for removal of protective materials and cleaning per storefront framing manufacturer's printed instructions.

END OF SECTION

SECTION 08710

FINISH HARDWARE

PART 1 - GENERAL

1.01 SUMMARY

A. This Section includes the following:

1. Commercial door hardware for the following:

a. Swinging doors.
b. Other doors to the extent indicated.

2. Cylinders for the door specified in the other Sections

3. It is intended that the hardware listed herein will cover all finish hardware to complete the project. Note that this building shall be an EHPA Certified Building (Hurricane Shelter) so all hardware shall meet EHPA requirements, whether or not specifically noted. It shall be the supplier's responsibility to furnish hardware in accordance with the intent of this Section. Omissions and discrepancies shall be brought to the Architect's attention during the bid period. Where by virtue of design or function, a change is necessary, hardware of equal design and quality shall be furnished at no additional cost to the Owner. Provide all hardware required for this Project, whether or not specifically called in the Hardware Schedule, which may not be all inclusive.

1.02 GENERAL

A. See GENERAL and SUPPLEMENTARY GENERAL CONDITIONS and Division 1, GENERAL REQUIREMENTS, which contain information and requirements that apply to the Work specified herein and are mandatory for this Project.

1.03 RELATED SECTIONS:

A. SECTION 08111 - STEEL DOORS AND FRAMES.

B. SECTION 08210 - WOOD DOORS.

1.04 REFERENCES

A. In addition to the current Florida Building Code, 2004 Edition and 2005 and 2006 Supplements, State and Local Building Codes, comply the documents and standards of the following:

1. BHMA/ANSI Standards A156.1-30.

2. ICC/ANSI A117.1 1998 Usable Building and Facilities.

3. NFPA- 80 Fire Door and Windows – 2000.

4. NFPA-101 Life Safety Code – 2000.

5. NFPA-105 Installation of Smoke Control Door Assemblies–2000.

6. DHI Standards.

7. Florida Building Code Wind Load Requirements, for an EHPA Certified Building, per ASCE 7-05 wind speed for a 140 M.P.H., Building Importance Factor 1.15.

1.05 SUBMITTALS

A. General requirements: All submittals shall be in accordance with Section 01300.

B. SCHEDULES: Provide Finish Hardware Schedules detailing each opening individually within two weeks after receipt of contract. Use the Vertical format scheduling method as outlined in the DHI brochure "Sequence and Format for the Hardware Schedule". The horizontal format will not be allowed. **Separate fire rated doors and non rated doors using different headings.** Separate doors of different sizes in headings that have all doors of the same size and like hardware. Provide six (6) copies. **All exterior doors shall have EHPA rated Hardware.**

C. SAMPLES: Provide samples of the products listed in the Schedule as required by the Architect. Furnish one (1) item that is representative of the manufacturers' series that is being supplied.

D. TEMPLATES: Within one (1) week after receipt of an approved Hardware Schedule provide template information to related door and frame suppliers to prepare for the installation of mortise hardware and reinforcement of surface mounted hardware. Provide three (3) copies for distribution.

E. PRODUCT DATA: Together with the Finish Hardware Schedule provide catalog cuts highlighting each item that is being proposed, including appropriate ANSI/BHMA criteria and special mounting instructions. Provide six (6) copies.

F. KEYING SCHEDULE: **Schedule a meeting with the Owner's Representative, Art Butler, for keying information.** Incorporate the keying information as outlined in DHI's manual "Keying Procedures, Systems and Nomenclature". Provide six (6) copies.

G. CYCLE TESTING: Submit independent lab test verifying the minimum cycle test requirements listed within this specification for locksets, door closers and exit devices. Any product that does not meet the specified cycle testing is not acceptable. Provide six (6) copies.

1.05 QUALITY ASSURANCE

A. The supplier to be a directly franchised distributor of the products to be furnished and have in their employ an AHC (Architectural Hardware Consultant). This person is to be available for consultation to the Architect, Owner and the General Contractor at reasonable times during the course of work.

B. The finish hardware supplier shall prepare and submit to the Architect six (6) copies of a complete schedule identifying each door and each set number, following the numbering system and not creating any separate system himself. He shall submit the schedule for review, make corrections as directed and resubmit the corrected schedule for final approval. Approval of schedule will not relieve Contractor of the responsibility for furnishing all necessary hardware, including the responsibility for furnishing correct quantities.

C. No manufacturing orders shall be placed until detailed schedule has been submitted to the Architect and written approval received.

D. After hardware schedule has been approved, furnish templates required by manufacturing contractors for making proper provisions in their work for accurate fitting, finishing hardware setting. Furnish templates in ample time to facilitate progress of work.

E. Hardware supplier shall have an office and warehouse facilities to accommodate the materials used on this project. The supplier must be an authorized distributor of the products specified.

F. The hardware manufactures are to supply both pre-installation instruction as well as a post-installation walk-thru. This is to insure proper installation and provide for any adjustments or replacements of hardware as required.

G. Furnish Hardware for fire rated openings that meet NFPA 80. Furnish only hardware that has been tested and listed by UL or FM for fire rated openings. All labeled doors to have ball bearing steel hinges, a door closer and a lockset to meet the requirements of NFPA 80. Where exit devices are specified or required on Fire Rated Doors furnish only those devices that have been tested and listed "FIRE EXIT HARDWARE."

1.06 DELIVERY, STORAGE, AND HANDLING

A. Wrap, protect finishing hardware items for shipment. Deliver to manufacturing contractors hardware items required by them for their application; deliver balance of hardware to job; store in designated location. Each item shall be clearly marked with its intended location.

B. STORAGE: Store material in a dry, secured area, within the building, free from dust and dirt within a controlled environment.

C. HANDLING: Provide strict control over access to the storage area so that completion of the work will not be delayed due to hardware losses.

1.07 WARRANTY

A. General Warranty: All hardware shall comply with warranties under requirements of the Contract Documents.

B. Written Warranty: Provide a written warranty on materials and workmanship are guaranteed against defects for a period of one year from the date of Substantial Completion. Defective hardware shall be repaired or replaced at no expense to the Owner.

C. Special Warranty: Provide separate written warranties as follows:

1.	Manual Closers	10 years
2.	Exit Devices	10 years
3.	Cylindrical Locks	7 years
4.	Mortise Locks	5 years

PART 2 - PRODUCTS

2.01 MANUFACTURERS

A. The descriptive plate numbers as used in the Hardware Schedule establish the type, quality, material and finish acceptable for each item and are listed from current catalogs of the following firms:

ITEM		SPECIFIED MANUFACTURER
1.	Hinges	IVES
2.	Locks	SCHLAGE
3.	Door Closers	LCN
4.	Cylinders	SCHLAGE
5.	Kick Plates	IVES
6.	Door Stops	IVES
7.	Silencers	IVES

2.02 FINISHES:

A. The designation used in the hardware groups is to be industry recognized standards for commercial finishes as established by BHMS.

1.	Hinges – Exterior	630
2.	Hinges – Interior	652
3.	Locks	626
4.	Exit Devices	626
5.	Closers	689
6.	Trim	626 630

2.03 KEYING:

A. Provide master key only; master key with #1 bitting all 6 pins. SC1 keyway.

B. Hardware supplier to provide temporary cylinders or cores during the Construction Phase. The Contractor is to change out the temporary cylinders for the permanent cylinders after Final Acceptance of the Project. Contactor to return temporary cores to distributor.

C. Furnish all change keys with manufacturer's standard key bow. All keys shall be stamped "DO NOT DUPLICATE" on the opposite side. In addition, all change keys shall be stamped with the key set number as listed on the approved key schedule. Master keys shall be stamped as directed by Owner.

PART 3 - EXECUTION

3.01 INSTALLATION:

A. All hardware shall be applied and installed in accordance with the Finish Hardware schedule. Care shall be exercised not to mar or damage adjacent work.

B. Contractor to provide a secure lock-up for hardware delivered to the project but not yet installed. Control the handling and installation of hardware items that are not immediately replaceable, so that the completion of the work will not be delayed by hardware losses both before and after installation.

C. No hardware is to be installed until the hardware manufactures have provided a pre-installation class to insure proper installation of the specified products. A post installation inspection by a manufacturer's representative will be provided to insure proper installation.

3.02 ADJUSTING AND CLEANING:

A. Contractor shall adjust all hardware in strict compliance with manufacturer's instructions. Prior to turning project over to the Owner, Contractor shall clean and make any final adjustments to the finish hardware.

3.03 PROTECTION:

A. Contractor shall protect the hardware, as it is stored on construction site in a covered and dry place.

B. Contractor shall protect exposed hardware installed on doors during the construction phase.

3.04 KEY CABINET:

A. Set up and index one (1) Key Cabinet that allows room for expansion for 150% of the number of keys for the project.

3.05 HARDWARE SCHEDULE:

A. The following schedule is furnished for whatever assistance it may afford the Contractor; do not consider it as entirely inclusive. Should any particular door or item be omitted in any scheduled hardware group, provide door or item with hardware same as required for similar purposes. Quantities listed are for each pair of doors or for each single door.

HARDWARE GROUPS SPECIFIED BELOW AND ON THE FOLLOWING PAGES

HW SET: 01
DOOR NUMBER:
103A 104A 105A 108A

EACH TO HAVE:

3	EA	HINGE	5PB1 4.5 X 4.5	652 IVE
1	EA	ENTRY/OFFICE	SCND91 RHO	626 SCH
1	EA	WALL STOP	WS406CVX	628 IVE
3	EA	SILENCER	SR64	GRY IVE

HW SET: 02
DOOR NUMBER:
100A 101A 118L

EACH TO HAVE:

3	EA	HINGE	5BB1 4.5 X 4.5 NRP	630	IVE
1	EA	ENTRY/OFFICE	SCND91 RHO	626	SCH
1	EA	SURFACE CLOSER	4041 CUSH SRI	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW	630	IVE
1	SET	WEATHERSTRIP	PS-074 HEAD AND JAMBS	BLK	STE
1	EA	DRIP CAP	16A	AL	NGP
1	EA	THRESHOLD	950V	AL	NGP
1	EA	LOCK GUARD	LG10	630	IVE

HW SET: 03
DOOR NUMBER:
100B

EACH TO HAVE:

3	EA	HINGE	5BB1 4.5 X 4.5 NRP	630	IVE
1	EA	PASSAGE	SCND10 RHO	626	SCH
1	EA	SURFACE CLOSER	4041 CUSH SRI	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW	630	IVE
1	SET	WEATHERSTRIP	PS-074 HEAD AND JAMBS	BLK	STE
1	EA	THRESHOLD	950V	AL	NGP

HW SET: 04
DOOR NUMBER:
114A 115A 116A

EACH TO HAVE:

6	EA	HINGE	5PB1 4.5 X 4.5	630	IVE
2	EA	MANUAL FLUSH BOLT	FB358	626	IVE
1	EA	DUST PROOF STRIKE	DP2	626	IVE
1	EA	PASSAGE	SCND10 RHO	626	SCH
1	EA	ASTRAGAL	BY DOOR SUPPLIER		B/O
2	EA	OVERHEAD HOLDER	900H	630	GLY
2	EA	KICK PLATE	8400 10" X 1" LDW	630	IVE
2	EA	SILENCER	SR64	GRY	IVE
1	EA	THRESHOLD	950V	AL	NGP

HW SET: 05
DOOR NUMBER:
113A

EACH TO HAVE:

3	EA	HINGE	5PB1 4.5 X 4.5	630 IVE
1	EA	PASSAGE	SCND10 RHO	626 SCH
1	EA	WALL STOP	WS406CVX	628 IVE
3	EA	SILENCER	SR64	GRY IVE
1	EA	THRESHOLD	950V	AL NGP

HW SET: 06
DOOR NUMBER:
109A 110A 111A 112A

EACH TO HAVE:

3	EA	HINGE	5PB1 4.5 X 4.5	652 IVE
1	EA	PASSAGE	SCND10 RHO	626 SCH
1	EA	WALL STOP	WS406CVX	628 IVE
3	EA	SILENCER	SR64	GRY IVE

HW SET: 07
DOOR NUMBER:
106A 107A

EACH TO HAVE:

3	EA	HINGE	5BB1 4.5 X 4.5	652 IVE
1	EA	PRIVACY	SCND40 RHO	626 SCH
1	EA	SURFACE CLOSER	4041	689 LCN
1	EA	KICK PLATE	8400 10" X 2" LDW	630 IVE
1	EA	WALL STOP	WS406CVX	628 IVE
3	EA	SILENCER	SR64	GRY IVE

HW SET: 08
DOOR NUMBER:
117A

EACH TO HAVE:

3	EA	HINGE	5BB1 4.5 X 4.5	652 IVE
1	EA	PASSAGE	SCND10 RHO	626 SCH
1	EA	SURFACE CLOSER	4041	689 LCN
1	EA	KICK PLATE	8400 10" X 2" LDW	630 IVE
1	EA	WALL STOP	WS406CVX	628 IVE
3	EA	SILENCER	SR64	GRY IVE

HW SET: 09 – ROLL UP DOORS

DOOR NUMBER:

118A	118B	118C	118D	118E	118F
118G	118H	118J	118K		

ALL HARDWARE BY ROLL UP DOOR SUPPLIER

END OF SECTION

SECTION 08800

GLASS AND GLAZING

PART 1 GENERAL

1.01 WORK INCLUDED: This Section covers the Work necessary to furnish and install, complete, the following:

A. Glass and glazing.

B. All exterior glass shall be EHPA rated, Impact Resistant.

1.02 GENERAL

A. See GENERAL and SUPPLEMENTARY GENERAL CONDITIONS and Division 1, GENERAL REQUIREMENTS, which contain information and requirements that apply to the Work specified herein and are mandatory for this Project.

1.03 RELATED WORK SPECIFIED AND PERFORMED UNDER OTHER SECTIONS

A. SECTION 07900 - JOINT SEALANTS.

B. SECTION 08111 - STEEL DOORS AND FRAMES.

C. SECTION 08210 - WOOD DOORS.

D. SECTION 08411 - ALUMINUM STOREFRONTS.

1.04 REFERENCES

A ANSI Z97.1, "Performance Specifications and Methods of Tests for Safety Glazing Material Used in Buildings".

B. Flat Glass Marketing Association: "Glazing Manual".

C. ASTM Standards and Test Procedures as referenced herein.

D. Sealed Insulating Glass Manufacturer's Association Standards and Specifications.

E. Manufacturer's recommendations and specifications.

F. Safety Standard for Architectural Glazing Materials (16 CAR 1201) issued by the Consumer Product Safety Commission.

1.05 QUALITY ASSURANCE

A. Glazier shall be regularly engaged in the installation of glass and glazing, and shall have previous experience within the last two (2) years on project similar in scope. Upon request, submit evidence of qualification compliance with complete references.

1.06 SUBMITTALS: Submittals during construction shall be made in accordance with SECTION 01300, SUBMITTALS. In addition, the following specific information shall be provided:

A. Shop Drawings: Prior to delivery or fabrication, submit Shop Drawings of the following from Architect's review:

1. Complete schedule of glass and glazing material to be used for each purpose.

2. Shop Drawings showing in detail method of glazing for each type of glazing condition. **Impact resistant glass shall meet the Missile Impact and EHPA Requirements for Hurricane resistant structures. Provide test certificates.**

3. Catalog cuts of each glass type with inclusion of glass edge cutting procedures.

B. Samples: Prior to delivery or fabrication submit samples for Architect's review as directed:

1. Two samples of each glass type at least 4 inches by 8 inches properly labeled.

2. Two samples of each different type of glazing materials.

1.07 DELIVERY, STORAGE AND HANDLING

A. Deliver, store and handle materials or equipment under provisions of SECTION 01600, MATERIAL AND EQUIPMENT.

1.08 FIELD MEASUREMENTS

A. The Contractor shall verify all dimensions, shall make any field measurements necessary and shall be fully responsible for accuracy and layout of work. The Contractor shall review the Drawings and any discrepancies shall be reported to the Architect for clarification prior to starting fabrication.

1.09 MANUFACTURERS' WARRANTY

A. Furnish manufacturers' warranty as called for herein.

PART 2

2.01 MANUFACTURERS

A. Acceptable Glass Manufacturers for Impact Resistant glass:

1. ROMAG Hurricane Resistant Glazing

2. HRG - 2 by Viracon Co.

3. R380 by Globe Amarada Co.

4. Safe Glas by Security Impact Glass Co.

5. Security Impact Glass Co.

B. Products of other manufacturers, meeting the requirements specified herein, will be considered in accordance with SECTION 01600, MATERIAL AND EQUIPMENT.

2.02 GLASS

A. Factory labeled and labels to remain until final cleaning. Nonlabeled glass will be rejected. Keep glass free from contamination by materials capable of staining glass.

B. Glass Types:

Factory labeled and labels to remain until final cleaning. Nonlabeled glass will be rejected. Keep glass free from contamination by materials capable of staining glass.

1. Type 1: Glass in all Exterior locations: Provide in all exterior windows and doors (Storefront Windows Included) Missile Impact Glass "Hurricane Resistant" glass equal in all respects to that as manufactured by those listed above. Glass shall be tinted in bronze color with 52 percent visible daylight transmittance.

2. Type 2: Interior Glass within 4 feet in any direction of any door and within 18" of finish floor shall be tempered float glass, glazing quality, conforming to ASTM C1048-85 ANSI Z97.1, and 16 CFR 1201, CI or CII, as applicable, 1/4-inch minimum thickness. **All interior glass shall be clear.**

2.03 ANCILLARY ITEMS

A. Setting Blocks: Neoprene 70-90 Shore A durometer hardness, chemically compatible with sealant used.

B. Glazing Tape: Polyisobutylene, color as selected, Presstite, Hapco, or equal.

C. Glazing Channels: As provided with frames to be glazed.

PART 3 EXECUTION

3.01 PREPARATION

A. No glazing work permitted in damp, foggy, or rainy weather, or when temperatures are not within range recommended by glass manufacturer.

B. Installation of materials will be considered as evidence of glazier's acceptance of storefront and window frames and surfaces as proper for glazing.

C. Surfaces shall be smooth, even, sound, dry and clean.

D. Measure size of frames to receive glass and compute actual glass size allowing for edge clearances in accordance with glass manufacturers' specifications and the requirements for Hurricane Resistant glass installation.

3.02 INSTALLATION OF GLASS

A. Installation shall be in accordance with applicable glass reference standards and the window or frame and glass manufacturers' printed instruction.

3.03 HOSE TEST

A. Use 3/4-inch minimum hose without nozzle at all exterior windows and glazing. Flood glazing from bottom to top. Any leaks disclosed by hose test shall be corrected by reglazing and retesting until eliminated.

3.04 CLEANING

A. Leave glass and glazing in undamaged condition and ready for final cleaning. On completion, there shall be no shifting or rattling of glass. Remove excess glazing compound from installed glass. Remove labels from glass surface as soon as installed. Wash and polish both faces of glass. Remove debris from Project immediately upon completion.

3.05 PROTECTION OF COMPLETED WORK

A. Protection: Install tape across lights secured to frames or structure. NO TAPE OR MARKING ALLOWED ON GLASS.

B. Replacements and Repairs: Replace broken, defective, or scratched glass until Final Acceptance of the Project by the Owner, or occupancy, whichever is the earlier date.

END OF SECTION

FINISH SCHEDULE ABBREVIATIONS

A.T.	SUSPENDED ACOUSTICAL TILE CEILING
C.T.	CERAMIC TILE
E.P.	EPOXY PAINT
E.P. /V.P.B.	VENEER PLASTER BOARD WITH EPOXY PAINT
HDR.	CONCRETE HARDENER
P.C.S.	PAINTED CONCRETE SLAB
S.GL.	SEMI-GLOSS PAINT
S.GL./V.P.B.	VENEER PLASTER BOARD WITH SEMI-GLOSS PAINT
V.T.	VINYL COMPOSITION TILE
VINYL	VINYL BASE

GENERAL NOTES

1. EVERY INTERIOR SPACES SHALL RECEIVE THE FOLLOWING MINIMUM FINISH UNLESS OTHERWISE NOTED AND SCHEDULED:

WALLS	-	PAINT
FLOOR	-	VINYL TILE
BASE	-	VINYL
CEILING	-	SUSPENDED ACOUSTICAL TILE
EXPOSED CEILING	-	GL. SYSTEM FOR GALVANIZED METALS

2. ALL TRIM, EXTERIOR DOORS AND HOLLOW METAL FRAMES SHALL BE PAINTED WITH GLOSS PAINT.

3. ALL COLOR SELECTIONS WILL BE MADE DURING CONSTRUCTION AFTER SHOP DRAWINGS AND SAMPLES ARE RECEIVED.

REMARKS

1. PRIME AND PAINT ALL EXPOSED METAL BUILDING FRAMES IN THE APPARATUS BAY AREA ONLY.

FINISH SCHEDULE

SPACE #	SPACE NAME	FLOOR	WALL FINISHES				BASE	CEIL'G	CEIL'G HT.	REMARKS
			NORTH	SOUTH	EAST	WEST				
100	HALL	V.T.	S.GL.	S.GL.	S.GL.	S.GL.	VINYL	A.T.	9'-0"	
101	LIVING AREA	V.T.	S.GL.	S.GL.	S.GL.	S.GL.	VINYL	A.T.	9'-0"	
102	KITCHEN	V.T.	-	E.P.	E.P.	S.GL.	VINYL	A.T.	9'-0"	
103	OFFICE	V.T.	S.GL.	S.GL.	S.GL.	S.GL.	VINYL	A.T.	9'-0"	
104	ELECTRIC	V.T.	S.GL.	S.GL.	S.GL.	S.GL.	VINYL	A.T.	9'-0"	
105	OFFICE	V.T.	S.GL.	S.GL.	S.GL.	S.GL.	VINYL	A.T.	9'-0"	
106	SHOWER/RESTROOM	C.T.	E.P.	E.P.	E.P.	E.P.	C.T.	E.P./V.P.B.	9'-0"	
107	SHOWER/RESTROOM	C.T.	E.P.	E.P.	E.P.	E.P.	C.T.	E.P./V.P.B.	9'-0"	
108	OFFICE	V.T.	S.GL.	S.GL.	S.GL.	S.GL.	VINYL	A.T.	9'-0"	
109	DORM	V.T.	S.GL.	S.GL.	S.GL.	S.GL.	VINYL	A.T.	9'-0"	
110	DORM	V.T.	S.GL.	S.GL.	S.GL.	S.GL.	VINYL	A.T.	9'-0"	
111	DORM	V.T.	S.GL.	S.GL.	S.GL.	S.GL.	VINYL	A.T.	9'-0"	
112	SLEEPING	V.T.	S.GL.	S.GL.	S.GL.	S.GL.	VINYL	A.T.	9'-0"	
113	LAUNDRY	V.T.	E.P.	E.P.	E.P.	E.P.	VINYL	E.P./V.P.B.	8'-0"	
114	STORAGE	V.T.	S.GL.	S.GL.	S.GL.	S.GL.	VINYL	S.GL./V.P.B.	8'-0"	
115	STORAGE	V.T.	S.GL.	S.GL.	S.GL.	S.GL.	VINYL	S.GL./V.P.B.	8'-0"	
116	STORAGE	V.T.	S.GL.	S.GL.	S.GL.	S.GL.	VINYL	S.GL./V.P.B.	8'-0"	
117	MECHANICAL	P.C.S.	S.GL.	S.GL.	S.GL.	S.GL.	VINYL	EXPOSED	-	
118	APPARATUS BAYS	HDR.	-	-	-	S.GL.	-	EXPOSED	-	1

SECTION 09215

VENEER PLASTER SYSTEM

PART 1 GENERAL

1.01 WORK INCLUDED: This Section covers the Work necessary to furnish and install, complete, the following:

A. Veneer plaster (V.P.) system.

B. Gypsum Backing Board (referenced as "Veneer Plaster Board or "V.P.B." on Drawings).

1.02 RELATED WORK SPECIFIED AND PERFORMED UNDER OTHER SECTIONS

A. SECTION 05401 - COLD FORMED METAL STUD FRAMING.

B. SECTION 09900 - PAINTING.

1.03 REFERENCES

A. ASTM Standards and Test Procedures as referenced herein.

B. Recommended Specifications for the Application and Finishing of Gypsum Board, GA-216, as published by the Gypsum Association.

1.04 QUALITY ASSURANCE

A. Veneer Plaster System Contractor: Shall be regularly engaged in the application of veneer plaster system and shall have previous experience within the last two (2) years on projects similar in scope. Upon request, submit evidence of qualification compliance with complete references.

1.05 ENVIRONMENTAL CONDITIONS

A. Temperature: During cold weather, in areas receiving wallboard installation, maintain ambient temperature between 50° and 80° F. for 24 hours before, during, and after veneer plaster system.

B. Ventilation: Provide ventilation during and following adhesives and joint treatment application. Use temporary air circulators in enclosed areas lacking natural ventilation. Under slow drying conditions, allow additional drying time between coats of joint treatment. Protect installed materials from drafts during hot, dry weather.

1.06 SUBMITTALS: Submittals during construction shall be made in accordance with SECTION 01300, SUBMITTALS. In addition, the following specific information shall be provided:

A. Submit product data for each component specified herein. Submit light, medium and heavy texture skip trowel finishes on 12" X 12" sample boards.

1.07 DELIVERY, STORAGE AND HANDLING

A. Deliver, store and handle materials or equipment under provisions of SECTION 01600, MATERIALS AND EQUIPMENT.

B. Deliver materials to the Project site with manufacturers' labels intact and legible. Handle materials with care to prevent damage. Deliver fire-rated materials bearing testing agency label and required fire classification number.

C. Store materials inside, under cover, stacked flat, off floor. Stack backing board so that long lengths are not over short lengths. Store adhesives and finishing compounds in dry areas; provide protection against freezing at all times.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. The use of a manufacturer's name and specification number is for the purpose of establishing the standard of quality and general configuration desired. Products of other manufacturers, meeting the requirements specified herein, will be considered in accordance with SECTION 01600, MATERIALS AND EQUIPMENT.

B. Like items of material or equipment specified herein shall be the end products of one manufacturer in order to achieve standardization for appearance, operation, maintenance, spare parts and manufacturer's service.

2.02 VENEER PLASTER SYSTEM

A. Gypsum Backing Board: ASTM C588, standard type; Fire Rated Type X, 5/8-inch thick; tapered edges, ends square.

B. At restrooms and showers and any wet areas, provide Georgia-Pacific DensShield Tile Backer Board. Provide 5/8" thick, Type X, and install per manufacturer's instructions.

C. Gypsum Veneer Plaster: ASTM C587. Develop plaster mix in accordance with manufacturer's instructions.

D. Bond Coat: ASTM C631, as applicable.

E. Fasteners:

1. Annular Ring Nail: ASTM C 380, 1-3/8-inch long for 5/8-inch backing board.

2. Smooth Shank Nail: ASTM C 514, 1-1/2-inch long for 5/8-inch backing board.

3. Screws: ASTM C 646, self-drilling, self-tapping, bugle head, for use with power-driven tool. Use Type S, 1-inch long for backing bard to sheet metal and Type W, 1-1/4-inch long for backing board to wood application.

F. Joint Treatment Materials:

1. Joint Tape: ASTM C 475, perforated tape.

2. Joint Compound: ASTM C 475, all purpose, ready-mixed compound.

G. Adhesives: As recommended by backing board manufacturer for intended use.

H. Metal Accessories: Galvanized metal conforming to ASTM A 525:

1. Corner Bead: 1-1/4-inch by 1-1/4-inch USG Dur-A-Bead; Gold Bond standard cornerbead; or equal.

2. Casing Bead: USG 200B metal trim; Gold Bond No. 200 casing bead; or equal.

3. Metal control joint: USG No. 093; Gold Bond E-Z strip control joint; or equal.

2.03 SUSPENDED METAL FURRING SYSTEM

A. Carrying or Main Runner Channels: Cold-rolled steel, "C" shaped 16-gauge, free to rust, coated with factory-applied rust-inhibitive paint, 1-1/2-inches deep, weighing not less than 475 pounds per 1,000 linear feet.

B. Furring Channels: Roll-formed, hat-shaped section of 25-gauge galvanized steel with a face width of 1-3/8-inches and depth of 7/8-inch. At contractor's option, use cold-rolled steel, "C" shaped channels meeting requirements of Carrying Channels specified herein, except 3/4-inch deep, weighing not less than 300 pounds per 1,000 linear feet.

C. Tie Wire: Galvanized soft annealed steel, 18-gauge minimum.

D. Hanger Wire: Galvanized wire, 8-gauge minimum.

PART 3 EXECUTION

3.01 INSPECTION

A. Check framing for accurate spacing and alignment. Verify that spacing of installed framing does not exceed maximum allowable for thickness of backing board to used. Do not proceed with installation of backing board until deficiencies are corrected and surfaces to receive backing board are acceptable. Protrusions of framing, twisted framing members, or unaligned members must be repaired before installation of backing board is started.

B. Verify backing board substrate is flat, joints are taped and sanded, and surface is ready to receive veneer plaster. Verify joint and surface perimeter accessories are in place.

3.02 PREPARATION

A. Clean surfaces of dust or loose matter.

B. Remove projections greater than 1/8-inch and fill depressions greater than 1/4-inch with latex filler.

3.03 INSTALLATION - GYPSUM BACKING BOARD

A. Install backing board in accordance with ASTM C844 and GA 216.

B. Use screws to fasten backing board to metal framing. Use nails to fasten backing board to wood framing.

C. Erect single layer backing board in direction most practical and economical, subject to specific requirements for fire-rated assemblies indicated, with ends occurring over firm bearing.

D. For double layer application, place second layer either perpendicular or parallel to first layer in accordance with specific requirements for fire-rated assemblies if indicated.

E. Tape, fill, and sand filled joints, edges, corners, openings, and fixings to produce surface ready to receive veneer plaster finish. Feather coats onto adjoining surfaces so that camber is maximum 1/32 inch.

F. Finishes: Gypsum backing board shall receive:

1. Light to medium skip trowel veneer plaster finish and painting at all exposed applications.

2. No finish other than joint treatment at all concealed applications.

3. Light to medium skip trowel finish typical all exposed surfaces.

3.04 APPLICATION - VENEER PLASTER

A. Apply gypsum veneer plaster in accordance with ASTM C843.

B. Install angle, corner, and joint reinforcement.

C. Apply single coat work over substrate to a thickness of 3/16 inch, plus or minus 1/64 inch.

D. At veneer plaster system contractor's option, apply base coat to a thickness of 1/8 inch, plus or minus 1/64 inch. Apply final coat over slightly green, almost dry base coat, to a thickness of 1/16 inch, plus or minus 1/64 inch.

3.05 PROTECTION AND CLEANUP

A. The veneer plaster system contractor shall provide protection of other materials that may be damaged by this Work and shall keep the areas free of excessive debris from this Work on a daily basis. Plaster droppings shall be immediately cleaned from adjacent materials.

END OF SECTION