SECTION 08110 - STEEL DOORS AND FRAMES

PART 1 - GENERAL

RELATED DOCUMENTS:

Drawings and general provisions of Contract, including General and Supplementary Conditions and Division-1 Specification sections, apply to work of this section.

DESCRIPTION OF WORK:

Extent of standard steel doors and frames is indicated and scheduled on drawings.

Finish hardware is specified elsewhere in Division 8.

Glass and glazing is specified elsewhere in Division 8.

Wood doors are specified elsewhere in Division 8.

QUALITY ASSURANCE:

Provide doors and frames complying with Steel Door Institute "Recommended Specifications: Standard Steel Doors and Frames" (SDI-100) and as herein specified.

SUBMITTALS:

Product Data: Submit manufacturer's technical product data substantiating that products comply with requirements.

Shop Drawings: Submit for fabrication and installation of steel doors and frames. Include details of each frame type, elevations of door design types, conditions at openings, details of construction, location and installation requirements of finish hardware and reinforcements, and details of joints and connections. Show anchorage and accessory items.

Indicate coordination of glazing frames and stops with glass and glazing requirements.

DELIVERY, STORAGE AND HANDLING:

Deliver hollow metal work cartoned or crated to provide protection during transit and job storage. Provide additional sealed plastic wrapping for factory finished doors.

Inspect hollow metal work upon delivery for damage. Minor damages may be repaired provided refinished items are equal in all respects to new work and acceptable to Architect; otherwise, remove and replace damaged items as directed.

Store doors and frames at building site under cover. Place units on minimum 4" high wood blocking. Avoid use of non-vented plastic or canvas shelters which could create humidity chamber. If cardboard wrapper on door becomes wet, remove carton immediately. Provide 1/4" spaces between stacked doors to promote air circulation.

PART 2 - PRODUCTS

ACCEPTABLE MANUFACTURERS:

Available Manufacturers: Subject to compliance with requirements, provide steel doors and frames of one of the following:

Steel Doors and Frames, (General):

Allied Steel Product, Inc.
Amweld/Div. American Welding & Mfg. Co.
Ceco Corp.
Copco Door Co.
Curries Mfg., Inc.
Dittco Products, Inc.
Fenestra Corp.
Kewanee Corp.
Mesker Industries, Inc.
Pioneer Bldrs. Products Corp./Div. CORE Industries, Inc.
Steelcraft/Div. American Standard Co.
Trussbilt, Inc.
Republic Builders Products Corp./Subs. Republic Steel.

Thermal Rated Steel Door and Frame Assemblies:

Ceco Corp.
Copco Door Co.
Curries Mfg., Inc.
Fenestra Corp.
Mesker Industries, Inc.
Pioneer Bldrs. Products Corp./Div. CORE Industries, Inc.

MATERIALS:

Hot-Rolled Steel Sheets and Strip: Commercial quality carbon steel, pickled and oiled, complying with ASTM A 569 and ASTM A 568.

Cold-Rolled Steel Sheets: Commercial quality carbon steel, complying with ASTM A 366 and ASTM A 568.

Supports and Anchors: Fabricate of not less than 18- gage galvanized sheet steel.

Inserts, Bolts and Fasteners: Manufacturer's standard units, except hot-dip galvanized items to be built into exterior walls, complying with ASTM A 153, Class C or D as applicable.

Shop Applied Paint:

Primer: Rust-inhibitive enamel or paint, either air-drying or baking, suitable as a base for specified finish paints.

Finish: Manufacturer's standard baking epoxy or enamel paint.

FABRICATION, GENERAL:

Fabricate steel door and frame units to be rigid, neat in appearance and free from defects, warp or buckle. Wherever practicable, fit and assemble units in manufacturer's plant. Clearly identify work that cannot be permanently factory-assembled before shipment, to assure proper assembly at project site. Comply with SDI-100 requirements as follows:

Interior Doors: SDI-100, Grade II, heavy-duty, Model 1, minimum 18-gage faces.

Exterior Doors: SDI-100, Grade III, extra heavy-duty, Model 2, minimum 16-gage faces.

Fabricate exposed faces of doors and panels, including stiles and rails of nonflush units, from only cold-rolled steel.

Fabricate frames, concealed stiffeners, reinforcement, edge channels, louvers and moldings from either cold-rolled or hot-rolled steel (at fabricator's option).

Exposed Fasteners: Unless otherwise indicated, provide countersunk flat Phillips heads for exposed screws and bolts.

Thermal-Rated (Insulating) Assemblies:

At exterior locations and elsewhere as shown or scheduled, provide doors which have been fabricated as thermal insulating door and frame assemblies and tested in accordance with ASTM C 236.

Unless otherwise indicated, provide thermal-rated assemblies with U factor of 0.24 Btu/(hr. x ft.sq. x $^{\circ}$F).

Finish Hardware Preparation: Prepare doors and frames to receive mortised and concealed finish hardware in accordance with final Finish Hardware Schedule and templated provided by hardware supplier. Comply with applicable requirements of ANSI A115 series specifications for door and frame preparation for hardware.

Reinforce doors and frames to receive surface-applied hardware. Drilling and tapping for surface-applied finish hardware may be done at project site.

Locate finish hardware as indicated on final shop drawings or, if not shown, in accordance with "Recommended Locations for Builder's Hardware," published by Door and Hardware Institute.

Shop Painting:

Clean, treat, and paint exposed surfaces of steel door and frame units.

Clean steel surfaces of mill scale, rust, oil, grease, dirt, and other foreign materials before application of paint.

Apply shop coat of prime paint of even consistency to provide a uniformly finished surface ready to receive finish paint.

Apply finish coat to all doors by electrostatically spraying and baking, to produce a paint thickness of 1.25 mils.

Finish wood trim preparation: Prepare steel frames to receive wood trim in accordance with door and frame schedule.

STANDARD STEEL DOORS:

Provide metal doors of types and styles indicated on drawings or schedules.

Door Louvers:

Provide sightproof louvers for interior doors shere indicated, constructed of inverted V-shaped or Y-shaped blades formed of 24- gage cold rolled steel sheet.

STANDARD STEEL FRAMES:

Provide metal frames for doors, transoms, sidelights, borrowed lights, and other openings, of types and styles as shown on drawings and schedules. Conceal fastenings, unless otherwise indicated. Fabricate frames of minimum 16-gage cold-rolled furniture steel.

Fabricate frames with mitered corners, welded construction for exterior applications and knocked-down for field assembly at interior applications.

Door Silencers: Except on weatherstripped frames, drill stops to receive 3 silencers on strike jambs of single-swing frames and 2 silencers on heads of double-swing frames.

Plaster Guards: Provide 26-gage steel plaster guards or mortar boxes, welded to frame, at back of finish hardware cutouts where mortar or other materials might obstruct hardware operation and to close off interior of openings.

PART 3 - EXECUTION

INSTALLATION:

General: Install standard steel doors, frames, and accessories in accordance with final shop drawings, manufacturer's data, and as herein specified.

Placing Frames: Comply with provisions of SDI-105 "Recommended Erection Instructions for Steel Frames", unless otherwise indicated.

Except for frames located at in-place concrete or masonry and at drywall installations, place frames prior to construction at enclosing walls and ceilings. Set frames accurately in position, plumbed, aligned, and braced securely until permanent anchors are set. After wall construction is completed, remove temporary braces and spreaders leaving surfaces smooth and undamaged.

Door Installation:

Fit hollow metal doors accurately in frames, within clearances specified in SDI-100.

ADJUST AND CLEAN:

Prime Coat Touch-up: Immediately after erection, sand smooth any rusted or damaged areas of prime coat and apply touch-up of compatible air-drying primer.

Protection Removal: Immediately prior to final inspection, remove protective plastic wrappings from prefinished doors.

Final Adjustments: Check and readjust operating finish hardware items, leaving steel doors and frames undamaged and in complete and proper operating condition.

END OF SECTION 08110

SECTION 08210 - WOOD DOORS

PART 1 - GENERAL

RELATED DOCUMENTS

Drawings and general provisions of Contract, including General and Supplementary Conditions and Division-1 Specification sections, apply to of this section.

RELATED SECTIONS:

Section 08110. Steel Doors and Frames.
Section 08710. Finish Hardware.
Section 08800. Glass and Glazing.

DESCRIPTION OF WORK:

Extent and location of each type of wood door is shown on drawings and in schedules.

Types of doors required include the following:

Solid core interior flush doors with mirror faces
Solid core interior flush doors with hardboard faces.
Hollow core interior flush doors with hardboard faces.

Factory-finishing of wood doors and frames is included in this section.

Factory-fitting: Factory-preparation for hardware (premachining) for wood doors is included in this section.

QUALITY ASSURANCE:

Quality Standards: Provide wood flush doors complying with the following standards:

ANSI/NWMA I.S.1: "Industry Standard for Wood Flush Doors", published by National Woodwork Manufacturers Association (NWMA).

AWI Quality Standards: Section 1300 "Architectural Flush Doors" of "Architectural Woodwork Quality Standards" published by Architectural Woodwork Institute (AWI). Designations for grade and door construction under types of doors refers to this standard.

Fire-Rated Wood Doors: Provide wood doors which are identical in materials and construction to units tested in door and frame assemblies per ASTM E 152 and which are labeled and listed for ratings indicated by UL, Warnock Hersey or other testing and inspection agency acceptable to authorities having jurisdiction.

Manufacturer: Obtain doors from a single manufacturer to ensure uniformity in quality of appearance and construction, unless otherwise indicated.

SUBMITTALS:

Product Data: Submit door manufacturer's product data for each type of wood door, including details of core and edge construction, trim for openings and louvers, and finishing specifications for doors to receive factory finish.

Shop Drawings: Submit shop drawings indicating location and size of each door, elevation of each kind of door, details of construction, location and extent of hardware blocking, fire ratings, requirements for factory finishing and other pertinent data.

Samples: Submit samples for the following:

Factory-finished Doors: Submit samples, 1'0" square, for each type of factory finish required.

PRODUCT DELIVERY, STORAGE, AND HANDLING:

Protect wood doors during transit, storage and handling to prevent damage, soiling and deterioration. Comply with requirements of referenced ANSI standard and recommendations of NWMA pamphlet "How to Store, Handle, Finish, Install, and Maintain Wood Doors", as well as with manufacturer's instructions.

Package doors at factory prior to shipping using manufacturer's standard method.

Identify each door with individual opening numbers which correlate with designation system used on shop drawings for door, frames and hardware, using temporary, removable or concealed markings.

SPECIFIED PRODUCT WARRANTY:

Door Manufacturer's Warranty: Submit written agreement on door manufacturer's standard form signed by Manufacturer, Installer and Contractor, agreeing to repair or replace defective doors which have warped (bow, cup or twist) or which show telegraphing of core construction in face veneers, or do not conform to tolerance limitations of NWMA and AWI.

Warranty shall be in effect during following period of time after date of substantial completion.

Solid Core Flush Interior Doors:

Life of installation.

Hollow Core Flush Interior Doors:

One year.

Contractor shall be responsible for replacement or refinishing of doors where Contractor's work contributed to rejection or to voiding of manufacturer's warranty.

PART 2 - PRODUCTS

ACCEPTABLE MANUFACTURERS:

Available Manufacturers: Subject to compliance with requirements, provide products of one of the following:

Manufacturers of Doors:

American Doors. Inc.
Landquist and Son, Inc.
Graham Manufacturing Corp.
Ipik Door Co., Inc.
Weyerhauser Company.
VT Industries

INTERIOR FLUSH WOOD DOORS:

Solid Core Doors for Semi-transparent Stain Finish: Comply with the following requirements:

Faces: "A" Grade wood veneer selected by Interior Designer or Owner.

Construction: Inner stiles to be 1-3/8" wide (before prefitting), structural composite lumber (SCL) with the outer stile to be the same species as the face veneer. The outer stile shall be applied after beveling and prior to face application. The door manufacturer shall drill 5/32" diameter polot holes for all honges.

Rails to be SCL, minimum 1-3/8" wide before prefitting.

The core shall be particleboard, 28-32 pounds per cubic foot average density. Comply with particleboard standard ANSI A208.1, Grade 1-LD-2.

Fire-Rated Solid Core Doors: Comply with the following requirements:

Faces and AWI Grade: Provide faces and grade to match non-rated doors in same area of building, unless otherwise indicated.

Construction: Manufacturer's standard core construction as required to provide fire-resistance rating indicated.

Edge Construction: Provide manufacturer's standard laminated edge construction for improved screw-holding capability and split resistance as compared to edges composed of a single layer of treated lumber

Pairs: Furnished formed steel edges and astragals for pairs of fire-rated doors, unless otherwise indicated.

Provide 20-minute rated pairs with fire-retardant stiles which are labeled and listed for kinds of applications indicated without formed steel edges and astragals.

INTERIOR FLUSH WOOD DOORS:

Hollow Core Doors for Opaque Finish: Comply with the following requirements:

Faces: Stain or paint grade wood veneer.
Grade: Custom.
Construction: IHC (Institutional hollow core).

FACTORY-FINISHING:

General: Comply with applicable requirements of Section 01500 of referenced AWI standard for types of finish systems indicated.

Pre-finish doors at factory.

Opaque Finish: Comply with requirements indicated for grade, finish system, color and sheen.

Grade: Custom.

Finish: Manufacturer's standard system with performance characteristics comparable to AWI System #7 catalyzed lacquer.

Color: To match approved sample for color selected by Architect from manufacturer's standard colors.

Sheen: Semi-gloss.

PRE-PREPARATION FOR HARDWARE:

Pre-machine wood doors at factory.

Comply with tolerance requirements of AWI for pre-fitting. Machine doors for hardware requiring cutting of doors Comply with final hardware schedules and door frame shop drawings and with hardware templates and other essential information required to ensure proper fit of doors and hardware.

Take accurate field measurements of hardware mortises in metal frames to verify dimensions and alignment before proceeding with machining in factory.

Metal Astragals: Premachine astragals and formed steel edges for hardware where required for pairs of fire-rated doors.

PART 3 - EXECUTION

INSPECTION:

Require Installer to examine door frames, after their installation, and doors, prior to their hanging, for the following purposes:

To verify that frames comply with indicated requirements for type, size, location, and swing characteristics and have been installed with plumb jambs and level heads.

To verify that doors are free of defects that could cause their rejection.

Obtain Installer's written report listing conditions detrimental to compliance with requirements of this section.

Do not allow Installer to proceed with installation until unsatisfactory conditions have been corrected.

INSTALLATION:

Condition doors to average prevailing humidity in installation areas prior to hanging.

Hardware: For installation see Division-8 "Builders Hardware" section of these specifications.

Manufacturer's Instructions: Install wood doors to comply with manufacturer's instructions and of referenced AWI standard and as indicated.

Install fire-rated doors in corresponding fire-rated frames in accordance with requirements of NFPA No. 80.

Prefit Doors: Fit to frames and machine for hardware to whatever extent not previously worked at factory as required for fit and uniform clearance at each edge.

Shop-finished Doors: Restore finish on edges of shop-finished doors before installation, if fitting or machining is required at the job site.

ADJUST AND CLEAN:

Operation: Rehang or replace doors which do not swing or operate freely, as directed by Architect.

Finished Doors: Refinish or replace doors damaged during installation, as directed by Architect.

Institute protective measures as recommended and accepted by door manufacturer to assure that wood doors will be without damage or deterioration at time of subsequent completion.

END OF SECTION 08210

SECTION 08305 - ACCESS DOORS

PART I - GENERAL

RELATED DOCUMENTS:

Drawings and general provisions of Contract, including General and Supplementary Conditions and Division-l Specification sections, apply to work of this section.

SUMMARY:

Extent, location, and size of each type of access door required shall be submitted by respective supplier(s) for trades requiring access to concealed equipment to Architect for review and final placement.

SUBMITTALS:

Product Data: Submit manufacturer's technical data and installation instructions for each type of access door assembly, including setting drawings, templates, instructions and directions for installation of anchorage devices.

Include complete schedule, including types, general locations, sizes, wall and ceiling construction details, finishes, latching or locking provisions, and other data pertinent to installation.

Verification: Obtain specific locations and sizes for required access doors from trades requiring access to concealed equipment, and indicate on submittal schedule.

QUALITY ASSURANCE:

Fire-Resistance Ratings: Wherever a fire-resistance classification is required, provide access door assembly with panel door, frame, hinge, and latch from manufacturers listed in Underwriters Laboratories, Inc.; "Building Materials Directory" for rating shown.

Provide UL label on each fire-rated access door.

Size Variations: Obtain Architect's acceptance of manufacturer's standard size units which may vary slightly from sizes indicated.

Coordination: Furnish inserts and anchoring devices which must be built into other work for installation of access doors. Coordinate delivery with other work to avoid delay.

PART 2 - PRODUCTS

MANUFACTURERS:

Manufacturers: Subject to compliance with requirements, provide access doors by one of the following:

Babcock-Davis
J.L. Industries
Karp Associates, Inc.

Milcor Div.; Inryco, Inc.
Nystrom, Inc.

MATERIALS AND FABRICATION:

General: Furnish each access door assembly manufactured as an integral unit, complete with all parts and ready for installation.

Steel Access Doors and Frames: Fabricate units of continuous welded steel construction, unless otherwise indicated. Grind welds smooth and flush with adjacent surfaces. Furnish attachment devices and fasteners of type required to secure access panels to types of support shown.

Frames: Fabricate from l6-gage steel.

For gypsum drywall or gypsum plaster, furnish perforated frames with drywall bead.

Flush Panel Doors: Fabricate from not less than l4-gage sheet steel, with concealed spring hinges or concealed continuous piano hinge set to open l75 degrees. Finish with manufacturer's factory-applied prime paint.

For fire-rated and non-rated units, provide manufacturer's standard insulated flush panel/doors, with continuous piano hinge, self-closing mechanism, and automatic latch.

Ceiling Access Hatches: Provide 1 hour rated insulated access hatch to mechanical attic, 4'6" x 2'6". Provide 1 hour rated access hatch to 2nd floor corridor attics, 2'0" x 2'0".

PART 3 - EXECUTION

INSTALLATION:

Comply with manufacturer's instructions for installation of access doors.

Coordinate installation with work of other trades.

Set frames accurately in position and securely attach to supports with face panels plumb or level in relation to adjacent finish surfaces.

ADJUST AND CLEAN:

Adjust hardware and panels after installation for proper operation.

Remove and replace panels or frames which are warped, bowed or otherwise damaged.

END OF SECTION 08305

SECTION 08410 - ALUMINUM ENTRANCES AND STICK FRAMING

PART 1 - GENERAL

RELATED DOCUMENTS:

Drawings and general provisions of Contract, including General and Supplementary Conditions and Division-1 Specification sections, apply to work of this section.

SUMMARY:

Section includes standard aluminum entrances (doors), fixed openings and framing as indicated on drawings and schedules. Glazing, specified in Section 08800, shall be 1" insulated at all exterior walls.

Section also includes extruded aluminum and 1/8" break metal infill sections and extension finished in color to match framing, where shownand required at corners, infill sections and other special conditions.

Hardware is specified in Section 08710, except for weatherstripping and sweeps, which is a part of this section.

Colors and types of sealants shall be as specified in Section 07900.

RELATED WORK:

Section 07900, Joint Sealers.
Section 08710, Hardware.
Section 08800, Glass and Glazing.

QUALITY ASSURANCE:

1. Thermal Movement: Systems shall withstand temperature range of 120 deg. F (67 deg. C), that could cause a metal surface temperature range of 180 deg. F (100 deg. C) within the framing system.

2. Wind Loading: Uniform pressure of 25 psf inward and 25 psf outward when tested in accordance with ASTM E 330. Design system in accordance with UBC exposure "B", and for buildings of the height designed on this project.

3. Fixed Framing Transmission Characteristics: Comply with the following:

Air Infiltration: Not more than 0.06 CFM per sq. ft. of fixed area when tested in accordance with ASTM E 283 (at 1.567 psf).

Water Penetration: No water penetration as defined in the test method when tested in accordance with ASTM E 331, (test pressure of 6.24 psf).

Condensation Resistance: Not less than 54 CRF min. per AAMA 1502.7.

SYSTEMS DESCRIPTION

System shall be as follows:

Equal to Kawneer, "450 Trifab II" with 1" glass, 1-3/4" faceplate and 4-1/2" total system depth, at all horizontal, vertical and perimeter frames. Provide system at Lobby windows, Breakfast Area windows and entire length of viewpanel separating Spa and Fitness Area.

Provide sub-frame as required at entrance doors.

Provide 1/8" break metal sections for base, jamb head and accent trim, where required and shown, where straight/non-formed pieces can be used.

Entrance doors shall be manufacturer's standard medium stile doors.

SUBMITTALS:

1. Product Data: Manufacturer's product specifications, details, and installation recommendations for all components.

2. Shop Drawings: Shop drawings indicating all layouts, details and elevations.

3. Samples: Submit two samples of each selected finish.

QUALITY ASSURANCE:

1. Manufacturer's Qualifications: Provide products produced by a single manufacturer with not less than 5 years successful experience in the fabrication of assemblies of the type and quality required.

2. Installer's Qualifications: 5-years min.successful exper- ience in the installation of systems similar to those required.

3. Manufacturer shall be responsible for design intent and performances specified. If manufacturer is other than Kawneer, it shall be the manufacturer's responsibility to conform to the specified systems.

PROJECT CONDITIONS:

Field Measurements: Field measure before fabrication to ensure proper fitting of work; show measurements on final shop drawings. Coordinate fabrication schedule with construction progress to avoid delay in the work. Where necessary, proceed with fabrication without field measurement, and coordinate fabrication tolerances to ensure proper fit.

WARRANTY:

Special Product Warranty: Submit written 3 year warranty, executed by the Contractor, Installer and Manufacturer, agreeing to repair or replace units (including reglazing) which fail in materials or workmanship within the specified warranty period. Failures include, but are not necessarily limited to structural failures including excessive deflection, excessive leakage or air infiltration, faulty operation, and deterioration of metals, metal finishes and other materials beyond normal weathering.

PART 2 - PRODUCTS

MANUFACTURERS:

Subject to compliance with the specified requirements, provide systems from one of the following:

Kawneer Company, Inc.
PPG Industries, Inc.
Vistawall, Inc.
EFCO Corp.
CMI-Cronstroms, Inc.

MATERIALS:

Aluminum Members: ASTM B 221 for extrusions and ASTM B 209 for sheet or plate.

Fasteners: Provide fasteners of aluminum, nonmagnetic stainless steel, or other materials warranted by the manufacturer to be noncorrosive and compatible with aluminum components, hardware, anchors and other components. Provide concealed fasteners wherever possible.

Concealed Flashing: 26 gage minimum dead-soft stainless steel, or 0.026" minimum extruded aluminum of alloy.

Brackets and Reinforcements: Where feasible, provide high- strength aluminum brackets and reinforcements; otherwise provide nonmagnetic stainless steel or hot-dip galvanized steel complying with ASTM A 386.

Concrete/Masonry Inserts: cast-iron, malleable iron, or hot-dip galvanized steel complying with ASTM A 386.

Compression Weather-Stripping: Molded neoprene complying with ASTM D 2000 or molded PVC complying with ASTM D 2287.

Sliding Weather-Stripping: Replaceable weather-stripping of wool, polypropylene, or nylon woven pile, with nylon fabric or aluminum strip backing, complying with AAMA 701.2.

Sweeps shall include factory paint finish on the exposed metal to match doors.

FRAMING SYSTEMS:

Framing System: Provide systems as shown on the drawings, each to be a thermally improved/broken framing system with 1" insulated glass and section sizes as specified, with provisions for glass replacement.

Provide all necessary elements and components of the system including corner covers, plates, vents, sub-frames, clips, dams, and other accessories for a complete system.

ALUMINUM DOORS:

Stile and Rail Aluminum Door: Provide 1-3/4" thick medium stile doors fabricated of tubular and channel frame assemblies, as indicated, with removable stops. Provide welded or mechanical joints in accordance with manufacturer's standards; reinforce as necessary to support required loads using heavy inserted rein
forcing plates and concealed tie-rods or j-bolts. Include snap- on, extruded aluminum stops for glass removal from the inside.

Provide products from Kawneer, Milco, PPG, Tubecraft, Tubelite or Vistawall.

Hardware: Provide manufacturer's standard weatherstripping and sweep strips, with any metal components finished

in color to match framing system. Refer to hardware section in Division-8 for all other requirements for hardware items.

FABRICATION:

Prefabrication: Before shipment to the project site, complete fabrication, assembly, finishing, hardware application, and other work to the greatest extent possible. Disassemble components only as necessary for shipment and installation.

Do not drill and tap for surface-mounted hardware items until time of installation of project site.

Welding: Comply with AWS recommendations; grind exposed welds smooth and restore mechanical finish.

Reinforcing: Install reinforcing as required for hardware and necessary for performance requirements, sag resistance and rigidity.

Dissimilar Metals: Separate dissimilar metals with zinc chromate primer, bituminous paint, or other separator that will prevent corrosion.

Continuity: Maintain accurate relation of planes and angles, with hairline fit of contacting members.

Uniformity of Finish: Abutting extruded aluminum members shall not have an integral color or texture variation greater than half the range indicated in the sample pair submittal.

Weather-Stripping: For exterior doors, provide compression weather-stripping against fixed stops; at other edges, provide sliding weather-stripping retained in adjustable strip mortised into door edge.

Provide finger guards of collapsible neoprene or PVC gasketing securely anchored into frame at hinge-jamb of center-pivoted doors.

FINISHES:

Fluoropolymer Coating: At all doors, framing systems and aluminum components, provide manufacturer's special kynar (Kynar 500) pigmented 2-coat baked enamel coating system of 33% thermoplastic polymer of vinylidine fluoride, 1.2 mils dry film thickness, medium gloss per ASTM D 523. All exposed components shall have even, consistent finish throughout.

One custom color shall be selected (not to be an "exotic"), for all components and systems.

PART 3 - EXECUTION

INSTALLATION:

Comply with manufacturer's instructions and recommendations for installation.

Set units plumb, level, and true to line, without warp or rack of framing members, doors, or panels. Provide proper support and anchor securely in place.

Drill and tap frames and doors and apply surface-mounted hardware items. Comply with hardware manufacturer's instructions and template requirements. Use concealed fasteners wherever possible.

Set sill members and other members in bed of sealant as indicated, or with joint fillers or gaskets as indicated to provide weathertight construction. Comply with requirements of Division 7 for sealant, fillers, and gaskets.

ADJUSTING AND CLEANING:

Adjust operating hardware to function properly, for smooth operation without binding, and for weathertight closure.

Clean the completed system, inside and out, promptly after installation, exercising care to avoid damage to coatings.

PROTECTION:

Institute protective measures required throughout the remainder of the construction period to ensure that aluminum entrances and storefronts will be without damage or deterioration, other than normal weathering, at time of acceptance.

END OF SECTION 08410

SECTION 08461 – AUTOMATIC ENTRANCE SYSTEMS

PART 1 - GENERAL

RELATED DOCUMENTS:

Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division-1 Specification sections, apply to the work of this section.

DESCRIPTION OF WORK:

Furnish and install automatic equipment as indicated on drawing and specifications

RELATED WORK:

ELECTRICAL INSTALLER shall furnish and install all conduit and electrical wiring for activating devices and door operators. A minimum of 5 amperes, 115 volts, A/C, 1-phase circuit shall be furnished for each door operator, terminate and connect to operator control panel, in operator housing.

CONCRETE INSTALLER shall prepare floor at location of automatic entrance system to accommodate the surface or recessed electric switch mats indicated on drawings.

QUALITY ASSURANCE:

A. Manufacturer's Qualifications:
Products specified shall be represented by a factory authorized and trained distributor. Distributor shall maintain a parts inventory and trained service personnel capable of providing service.

B. All automatic equipment to comply with ANSI A156.10.

C. Gyro Tech equipment as manufactured by NABCO ENTRANCES, INC. has been specified and shall be quoted as a base bid. Other systems can be quoted along with information specifically detailing the differences from the following specification.

SUBMITTALS:

A. Shop drawings showing complete elevations, details and methods of anchorage to location; installation of hardware; size, shape, joints and connections; and details of joining with other construction.

B. Templates and diagrams and/or shop drawings as needed shall be furnished to fabricators and installers of related work for coordination of sliding door system with concrete work, electrical work, and other related work.

C. A copy of appropriate manual shall be provided to owner's representative upon completion of installation.

WARRANTY:

Warranty power operators, controls and labor provided by automatic sliding door equipment installer against defects in material and workmanship, at no cost to owner, for a period of one year from date of substantial completion. Provide warranty to owner after completion of installation.

COMPLIANCE:

A completed American Association of Automatic Door Manufacturer (AAADM) compliance form shall be submitted as proof of compliance with ANSI A156.10 Standard for power operated pedestrian doors. Door(s) shall be inspected and form shall be signed by an AAADM certified inspector prior to placing door(s) in operation.

PART 2 - PRODUCTS

MANUFACTURERS:

Subject to compliance with requirements, provide products equal to that as supplied by the following:

Automatic equipment and controls shall be manufactured by:
NABCO ENTRANCES INC.
S82 W18717 Gemini Drive
P.O .Box 906
Muskego, W I53150
Phone: (877)622-2694
Fax: (888) 679-3319

MATERIALS:

A. GT Model #1175 Whisperslide as indicated on door schedule and details.

B. Mode of operation: Sliding door shall be driven by an electro-mechanical operator with a micro-computer control system. The door will be pulled from closed to open and open to close position stopping the door in both directions by electrically reducing the voltage, stalling door against mechanical stop. Opening, closing speeds and hold open time shall be adjustable. A reinforced timing belt shall be used to convert rotating motion from the operator sprocket into horizontal motion of the door

C. Components:

1. Aluminum doors, sidelites, operator housing and frame.
2. Rollers-support, anti-riser and guide.
3. Door carrier hanger assembly, breakaway latch, limiting arm and door lock.
4. Air infiltration and intrusion protection equipment.
5. Gyro Tech Whisperslide power close operator with micro-computer control.
6. (Optional) Access Security Equipment

1a) Door panel(s) and sidelite(s) panel shall be factory assembled with 3/8"-16 threaded tie rods spanning full length of top and bottom rails. Snap-in glass stop with integral extruded vinyl standoff to accommodate glass flexing. Provide a horizontal muntin bar to provide glass protection.

1b) Operator housing section shall be three piece construction 6-1/2"(165.10 mm) by 7-1/2"(190.5 mm) extrusion with enclosed end caps. All header sections shall have a minimum thickness of 0.140" (3.6mm) and shall be fabricated of 6063-T5 aluminum alloy.

1c)Sidelite configuration shall be fixed type.

1d) Finish: Aluminum shall have a factory white finish

1e) Vertical jambs shall be of 1-3/4" (44.4mm) by 4-1/2" (114.3mm) extruded aluminum tubes.

2a) The door assembly shall ride on two 2-11/16" (68.3mm) dia. support rollers incorporating lubricated sealed ball bearings rated at 250 lbs. each. The door shall be held on the track by means of two 2-7/16" (62.2mm) anti-riser rollers. Lateral adjustment of the door assembly shall provide positive sealing at door edges. Door height shall be adjustable by ± 9/32" (7.1mm).

2b) Fixed Sidelite and Pocket Units - Each door shall include one guide assembly incorporating double rollers with sleeve bushings. Guide assembly shall be attached to the door with 10 gage (3.44mm) thick formed guide bracket. All steel brackets and fittings shall be plated for corrosion resistance.

3a) Entrance systems shall have door panels attached to a door carrier hanger assembly by means of an adjustable support rod pivot assembly and corrosion resistant adjustable breakaway release latch holding panel in the closed position under normal automatic operation. The support rod pivot assembly allows the door panel to be broken outward at any point in the door's opening or closing cycle allowing for safe emergency egress in compliance with NFPA 101. The door panel in the breakout mode disconnects the power to the control circuit inhibiting automatic door operation. The control circuit shall be resettable by re-engaging the door panel with the door carrier hanger assembly. Breakaway pressure shall be field adjustable (5-50 lbs.) To meet local building code requirements but will be factory set at 50 lbs. maximum.

3b) Door assembly shall have a limiting arm to control the door as it swings in the direction of egress.

3c) The active door will incorporate a two point lock securing the lead stiles and door carrier hanger assembly. The lock assembly will incorporate a key cylinder on the exterior and a thumb turn on the interior in accordance with NFPA 101.

4) Double pile weatherstripping on the lead edge of the sliding door(s) .36" thick (9.1mm) including the area of the lock.

4a) 11/16" (17.3mm) wide nylon brush weatherstripping on the vertical stile of both the sliding door panel(s) and sidelite(s) panels

4b) 11/16" (17.3mm) wide nylon brush weatherstripping mounted on door bottom.

5) GyroTech Whisperslide Power Operator: Completely assembled and sealed unit which shall include gear-driven transmission, and bearings, all located in cast aluminum housing and filled with special lubricant for extreme temperature conditions. Attached to transmission system shall be a DC shunt-wound permanent magnet motor with sealed ball bearings. 1/10 HP motor shall operate from 115-volt supply and require less than 5 amps at full stall.

5a) Power Operator Control: Shall be a microprocessor unit. To facilitate service and continuing operations, the unit supplied with the slider shall also be able to operate other doors supplied for the project including swing or folding types. The microprocessor control shall allow the opening speed, closing speed, back check speed and latch check speed each to be adjusted separately and independently from each other to meet specific site conditions. The doors shall be set to be held closed with the motor. The control system shall also be set up to provide a count of the number of operations of the doors for maintenance purposes. Adjustable opening and closing speeds shall be set in accordance with ANSI 156.10. All adjustments shall be specific and reproducible. Settings with rotary switches are not allowed.

6) Access Security Equipment: Shall consist of Gyro Tech 24 V.D.C. power locking device. Lock shall be concealed in header. Sliding door to be fitted with Adams Rite 8600 Concealed Vertical Rod tamper proof exit device.

SENSOR DEVICES:

Acusensor: Manufactured by NABCO ENTRANCES, INC.
Sensors for door activation and threshold sensing shall provide a rectangular shaped pattern with a sensing area next to the door system. To provide optimum coverage to meet specific site conditions the sensing pattern shall be adjustable both in width and depth of coverage while remaining at a full power setting. Units shall be supplied and installed on both sides of the operator housing to activate doors for single or two-way traffic. Units shall be sealed for protection against dust, moisture and the elements.

PART 3 - EXECUTION

INSTALLATION:

Automatic door equipment shall be installed by factory-trained installers in compliance with manufacturer's recommendations and approved shop drawings.

CLEANING & PROTECTION:

After installation, clean framing members as recommended by the manufacturer. Aluminum surfaces in contact with masonry, concrete or steel shall be protected from contact by use of neoprene gaskets, where indicated, or a coat of bituminous paint to prevent galvanic or corrosive action. Advise general contractor to protect unit from damage during subsequent construction activities

END OF SECTION 08461

SECTION 08520 - ALUMINUM WINDOWS

PART 1 - GENERAL

RELATED DOCUMENTS:

Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division-1 Specification sections, apply to the work of this section.

DESCRIPTION OF WORK:

Section includes commercial grade aluminum, single hung and fixed window units as shown on the drawings and as specified herein.

RELATED WORK:

Section 07900, Joint Sealers.
Section 08410, Aluminum Entrances and Stick Framing.
Section 08800, Glass and Glazing.

SYSTEM DESCRIPTION:

Design Requirements: Comply with air infiltration, water penetration and structural performance requirements indicated in AAMA 101-85 for the type, grade and performance class of window units required.

Optional Performance Class Requirements: Where the required design pressure exceeds the minimum for the specified window grade, comply with requirements of AAMA 101-85, Section 3, "Optional Performance Classes" for higher than minimum performance class.

Heights of window units above grade at the window centerline, are indicated or can be determined from the drawings. Consult with the Architect for clarification needed to confirm required loading and test pressures.

Design wind velocity at the project site is 70 mph.
Design wind pressure for all windows is 50 lbs./ft. sq.

Testing: Test each type and size of required window unit through a recognized testing laboratory or agency, in accordance with ASTM E 330 for structural performance, with ASTM E 283 for air infiltration and with ASTM E 547 for water penetration. Provide certified test results.

Air Infiltration: Provide units with an air infiltration rate of not more than 0.37 cfm/ft. of operable sash joint for an inward test pressure of 6.24 psf.

Water Penetration: Provide units with no water penetration as defined in the test method at an inward test pressure of 8.00 lbf/sq. ft., for 15 minutes.

Condensation Resistance: Where window units are indicated to be of "thermal-break construction", provide units which have been tested for thermal performance in accordance with AAMA 1502 showing at condensation resistance factor (CRF) of 50.

Thermal Transmittance: Provide window units which have a "U"- value maximum of 0.69 BTU/hour/sq. ft./deg. F at 15 mph exterior wind velocity.

SUBMITTALS:

1. Shop Drawings: Submit shop drawings for each type of window including information not fully detailed in the manufacturer's standard product data including typical unit elevations, details, anchors, hardware, operators, accessories and glazing details.

2. Product Data: Submit manufacturer's product specifications, technical product data, recommendations and standard details for each type of aluminum window unit required.

3. Samples: Submit samples of the specified finish on l2" lengths of window members.

4. Certification: Provide certification by the manufacturer showing that each type, grade and size of window unit complies with requirements where the manufacturer's standard window units have been tested in accordance with specified tests and meet performance requirements specified. Where such testing has not been accomplished, perform required tests through a recognized testing laboratory or agency and provide certified test results.

QUALITY ASSURANCE:

1. Standards: Requirements for aluminum windows, terminology and standards of performance, and fabrication workmanship are those specified and recommended in AAMA 101-85 and applicable general recommendation published by AAMA and AA.

2. Single Source Responsibility: Provide aluminum windows produced by a single manufacturer capable of showing prior production of units similar to those required.

PROJECT CONDITIONS:

Field Measurements: Where possible, check actual window openings in construction work by accurate field measurement before fabrication; show recorded measurements on final shop drawings. Coordinate fabrication schedule with construction progress as directed by the Contractor to avoid delay of work. Where necessary, proceed with fabrication without field measurements, and coordinate fabrication tolerances to ensure proper fit of window units.

PART 2 - PRODUCTS

MANUFACTURERS:

Manufacturers: Subject to compliance with requirements, provide products equal to the following:

All Seasons 200 Series, 1/2" insulated glass, factory white finish approved by Architect.
As manufactured by ALL SEASONS SASH & DOOR MFG., Longview, TX.

MATERIALS:

Aluminum Extrusions: Provide alloy and temper recommended by the window manufacturer for the strength, corrosion-resistance, and application of required finish, but not less than 22,000 psi ultimate tensile strength and not less than 0.062" thickness at any location for main frame and sash members.

Fasteners: Provide aluminum, non-magnetic stainless steel, epoxy adhesive , or other materials warranted by the manufacturer to be non-corrosive and compatible with aluminum window members, trim, hardware, anchors and other components of window units.

Reinforcement: Where fasteners screw-anchor into aluminum less than 0.125" thick, reinforce interior with aluminum or non-magnetic stainless steel to receive screw threads, or provide standard non-corrosive pressed-in splined grommet nuts.

Exposed Fasteners: Except where unavoidable for application of hardware, do not use exposed fasteners. For application of hardware, use fasteners that match the finish of the member or hardware being fastened, as appropriate.

Anchors, Clips and Window Accessories: Fabricate anchors, clips and window accessories of aluminum, non-magnetic stainless steel or hot-dip zinc coated steel or iron complying with the requirements of ASTM A 386; provide sufficient strength to withstand design pressure indicated.

Compression Type Glazing Strips and Weatherstripping: Unless otherwise indicated, and at the manufacturer's option, provide compressible stripping for glazing and weatherstripping such as molded EPDM or neoprene gaskets complying with AAMA SG-1 or with ASTM D 2000 Designation 2BC415 to 3BC620, or molded PVC gaskets complying with ASTM D 2287, or molded expanded EPDM or neoprene gaskets complying with ASTM C 509, Grade 4.

Sealant: For sealants required within fabricated window units, provide type recommended by the manufacturer for joint size and movement. Sealant shall remain permanently elastic, non- shrinking, and non-migrating. Comply with Division-7 "Joint Sealants" section of these specifications for selection and installation of sealants.

Wire Fabric Insect Screen: Provide 18 x 16 mesh of 0.013" diameter extruded aluminum wire, complying with FS RR-W-365, Type VII. Frame shall include spring loaded plungers for removal, and shall be structurally adequate in supporting screens with no sag or warpage.

WINDOW PERFORMANCE CLASSIFICATION:

Heavy Commercial Windows: Provide window units complying with requirements of AAMA Grade and Performance Class HC40.

WINDOW UNITS:

General: The following paragraphs define the operating arrangement for the types of sash required in window units and specify minimum provisions for each type. Window units shall contain the manufacturer's prefered thermal break design for separating interior metal from exterior metal, and shall be continuous throughout the entire window unit. Windows shall include 5/8" thick insulated glass units, which are specified in Section 08800, Glass and Glazing. Refer to the drawings which indicate which panels of each window unit are operable sash and which are fixed.

Single-Hung windows are window units containing a fixed upper sash at the outer side of the frame and an operating lower sash at the inboard side of the frame. Sash operation shall permit inside cleaning of the glass.

Fixed windows are window units consisting of a glazed frame installed into one opening and are not operable.

HARDWARE:

General: Except to the extent that more specific or stringent requirements are indicated, provide the manufacturer's standard hardware fabricated from aluminum, stainless steel, or other corrosion-resistant material compatible with aluminum and of sufficient strength to perform the function for which it is intended.

Sash lock shall be provided at interior side of all single hung window units in compliance with AAMA.

Glides: Manufacturer's standard jamb glides.

Position Devices: Manufacturer's standard details for positioning open sash at a variety of locations up and down the jamb.

Limit Device: As required.

ACCESSORIES:

General: Except to the extent that more specific or stringent requirements are indicated, provide the manufacturer's standard accessories that comply with indicated standards.

Insect Screens: Provide insect screen units for each operable exterior sash or vent. Locate screen units on either the inside or outside of the sash, depending upon window type and location shown. Where possible, design window units and hardware to accommodate screens in a tight-fitting removable arrangement, with a minimum of exposed fasteners and latches, and without the necessity of wickets for hardware access. Where wickets are necessary, provide either sliding or hinged type, framed and trimmed for durability during handling, and for a tight fit.

Fabricate screen frames of extruded or formed aluminum tubular-shaped members of 0.040" minimum wall thickness, with miteredor coped joints and concealed mechanical fasteners. Provide removable PVC spline-anchor concealing the edge of the screen frame. Finish frames to match window units, unless otherwise indicated.

Weatherstripping: Provide sliding-type weatherstripping at locations where sash rails slide horizontally or vertically along the unit frame. Unless otherwise indicated, provide double compression-type weatherstripping at the perimeter of each operating sash where sliding-type weatherstripping is not appropriate.

Provide weatherstripping locked-in to extruded grooves in the sash.

FABRICATION:

General: Except to the extent that more specific or stringent requirements are indicated, provide manufacturer's standard fabrication that complies with indicated standards and that produces units that are reglazable without dismantling sash framing. Include a complete system for assembly of components and anchorage of window units, and prepare sash for glazing except where preglazing at the factory is indicated.

Sizes and Profiles: Required sizes for window units and profile requirements are indicated on the drawings. Variable dimensions are indicated along with maximum and minimum dimensions as required to achieve design requirements and coordination with other work.

Details shown are based upon standard details by one or more manufacturers. Similar details by other manufacturers will be acceptable, provided they comply with size requirements, minimum/maximum profile requirements, and performance standards as indicated or specified.

Thermal-Break Connection: Manufacturer's standard, prefered thermal barrier design, located between exterior materials and window members exposed on the interior, in a manner that eliminates direct metal-to-metal contact. Provide thermal-break construction which has been in use for not less than 3 years, has been tested to demonstrate resistance to thermal conductance and condensation, and has been tested to show adequate strength and security of glass retention.

Provide hardware with low conductivity or non-metallic material for hardware bridging thermal breaks at frame or vent sash.

Provide weepholes and internal water passages to conduct infiltrating water to the exterior.

Provide water-shed members above side-hinged ventilators and similar lines of natural water penetration.

Provide subframes and panning with anchors for window units where shown, of profile and dimensions indicated but not less than 0.062" thick extruded aluminum. Miter or cope corners, and weld and dress smooth with concealed mechanical joint fasteners. Finish to match window units.

Provide mullions and cover plates as shown, matching window units, complete with anchors for support to structure and installation of window units. Allow for erection tolerances and provide for movement of window units due to thermal expansion and building deflections, in the manner indicated.

Glazing Stops: Provide screw-applied or snap-on glazing stops, coordinated with glass selection and glazing system indicated. Finish glazing stops to match window units.

Preglazing Fabrication: Preglaze window units at the factory where possible and practical for applications indicated. Comply with glass and glazing requirements of the "Glass and Glazing" sections of these specifications, and AAMA 101-85.

FINISHES:

Fluorocarbon Coating System: Manufacturer's special, 2-coat thermocured system, complying with AAMA 605.2, and ASTM D 523, composed of specially formulated inhibitive primer and fluorocarbon color topcoat containing polyvinyldene fluoride resin, equal to Kynar 500.

Color and Gloss: Factory white.

PART 3 - EXECUTION

INSPECTION:

Inspect openings before beginning installation. Verify that rough or masonry opening is correct and the sill plate is level.

Surfaces shall be visibly dry and free of excess mortar, sand and other construction debris.

Wood framing shall be dry, clean, sound and well-nailed, free of voids and without offsets at joints. Ensure that nail heads are driven flush with surfaces in the opening and within 3 inches of the opening.

Metal surfaces shall be dry, clean, free of grease, oil, dirt, rust and corrosion, and welding slag, without sharp edges or offsets at joints.

INSTALLATION:

Comply with manufacturer's specifications and recommendations for installation of window units, hardware, operators, and other components of the work.

Set units plumb, level and true to line, without warp or rack of frames or sash. Provide proper support and anchor securely in place.

Separate aluminum and other corrodible surfaces from sources of corrosion or electrolytic action at points of contact with other materials by complying with the requirements specified under paragraph "Dissimilar Materials" in the Appendix to AAMA 101-85.

Set sill members and other members in a bed of compound or with joint fillers or gaskets, as shown, to provide weathertight construction. Refer to the "Joint Sealer" sections of Division-7 for compounds, fillers, and gaskets to be installed concurrently with window units. Coordinate installation with wall flashings and other components of the work.

Compounds, joint fillers and gaskets to be installed after installation of window units are specified as work in another section in Division-7.

FIELD QUALITY CONTROL:

Owner shall choose to conduct on-site tests for air and water infiltration with the window manufacturer's representative present. The Architect will select 3 units to be tested. Test units not meeting specified requirements shall cause testing of all similar units shall be tested and corrected at no cost to the Owner. Testing shall be performed by an accredited testing agency selected by the Architect.

Air Infiltration Tests: Conduct tests in accordance with the requirements of ASTM E 783. Allowable infiltration shall not exceed 1.5 times the amount indicated.

Water Resistance Tests: Conduct tests in accordance with the requirements of AAMA 501.3. No water leakage is permitted after a 15 minute test.

If window units fail during testing the window supplier shall pay for all tests prior to and after the failure(s) until units are replaced and repaired to meet specified performances.

ADJUSTING:

Adjust operating sash and hardware to provide a tight fit at contact points and at weatherstripping, for smooth operation and a weathertight closure.

CLEANING:

Clean aluminum surfaces promptly after installation of windows. Exercise care to avoid damage to protective coatings and finishes. Remove excess glazing and sealant compounds, dirt and other substances. Lubricate hardware and other moving parts.

Clean glass of preglazed units promptly after installation of windows; comply with requirements of the "Glass and Glazing" section for cleaning and maintenance.

PROTECTION:

Initiate and maintain protection and other precautions required through the remainder of the construction period, to ensure that, except for normal weathering, window units will be free of damage or deterioration at the time of substantial completion.

END OF SECTION 08520

SECTION 08710 - FINISH HARDWARE

PART 1 - GENERAL

RELATED DOCUMENTS:

Drawings and general provisions of Contract, including General and Supplementary Conditions and Division-1 Specification sections, apply to the work of this section.

DESCRIPTION OF WORK:

This section includes items known commercially as builders hardware which are required for swinging, sliding and folding doors, except special types of unique and non-matching hardware specified in the same section as the door and door frame.

Section includes finish hardware as indicated or implied on drawings and specified herein.

RELATED WORK:

Section 06200. Finish Carpentry.
Section 08110. Steel Doors and Frames.
Section 08210. Wood Doors.
Section 08410. Aluminum Storefronts, Fixed openings & Entrances.

Hardware for millwork, such as cabinets, reception desk and other items, is outlined and provided under Section 06400, Architectural Millwork.

QUALITY ASSURANCE:

1. Manufacturer: Obtain each type of hardware from only one manufacturer.

2. Supplier: A recognized architectural finish hardware supplier, with warehousing facilities, furnishing hardware in the project's vicinity for a period of not less than 5 years, and who is, or who employs an experienced architectural consultant who is available, at reasonable times during the course of the work, for consultation about project's hardware requirements, to Owner, Architect and Contractor.

3. Fire-Rated Openings: Provide hardware for fire-rated openings in compliance with NFPA Standard No. 80 and local building code requirements. Provide only hardware which has been tested and listed by UL or FM for types and sizes of doors required and complies with requirements of door and door frame labels.

4. Keying: Coordinate the keying with the new set of cylinders and locking devices with Owner's requirements and master keying of locks. Verify the masterkey system of lock cylinders.

SUBMITTALS:

1. Product Data: Manufacturers product data for all hardware.

2. Hardware Schedule: Submit five copies of final hardware schedule. Coordinate hardware with doors, frames and related work to ensure proper size, thickness, hand, function and finish of hardware.

3. Samples: Provide samples of hardware as required by Architect. Samples may be used after review as a part of the Work.

4. Templates: Furnish hardware templates to each fabricator of doors, frames and other work to be factory-prepared for the installation of hardware. Upon request, check shop drawings of such other work, to confirm that adequate provisions are made for proper location and installation of hardware.

PRODUCT HANDLING:

Tag each item or package separately, with identification related to final hardware schedule, and include basic installation instructions with each item or package.

Packaging of hardware, is responsibility of supplier. As material is received by hardware supplier from various manufacturers, sort and repackage in containers clearly marked with appropriate hardware set number to match set numbers of approved hardware schedule. Two or more identical sets may be packed in same container.

Deliver individually packaged hardware items at the proper times to the proper locations (shop or project site) for installation.

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

PART 2 - PRODUCTS

HARDWARE FINISHES:

Provide quality of finish, including thickness of plating or coating (if any), composition, hardness and other qualities complying with manufacturer's standards, but in no case less than specified for the applicable units of hardware by referenced standards.

In general, exposed hardware shall be satin brass at all interior doors and exterior doors, Duronodic aluminum and brushed chrome where noted.

The designations used in schedules and elsewhere to indicate hardware finishes are the industry-recognized standard commercial finishes, except as otherwise noted.

Fasteners: Provide hardware manufactured to conform to published templates, generally prepared for machine screw installation. Do not provide hardware which has been prepared for self-tapping sheet metal screws, except as specifically indicated.

Furnish screws for installation, with each hardware item. Provide Phillips flat-head screws except as otherwise indicated. Finish exposed (exposed under any condition) screws to match hardware finish or, if exposed in surfaces of other work, to match finish of such other work as closely as possible, including "prepared for paint" in surfaces to receive painted finish.

Tools and Maintenance Instructions for Maintenance: Furnisha complete set of specialized tools and maintenance instructions as needed for Owner's continued adjustment, maintenance, and removal and replacement of finish hardware.

PART 3 - EXECUTION

INSTALLATION:

Mount hardware units at heights indicated in "Recommended Locations for Builders Hardware for Standard Steel Doors and Frames" by the Door and Hardware Institute, except as specifically indicated or required to comply with governing regulations, and except as may be otherwise directed by Architect.

Install each hardware item in compliance with the manufacturer's instructions and recommendations. Wherever cutting and fitting is required to install hardware onto or into surfaces which are later to be painted or finished in another way, coordinate removal, storage and reinstallation or application of surface protections with finishing work specified in the Division-9 sections. Do not install surface-mounted items until finishes have been completed on the substrate.

Set units level, plumb and true to line and location. Adjust and reinforce the attachment substrate as necessary for proper installation and operation.

Drill and countersink units which are not factory-prepared for anchorage fasteners. Space fasteners and anchors in accordance with industry standards.

Set thresholds for exterior doors in full bed of butyl-rubber or polyisobutylene mastic sealant.

ADJUST AND CLEAN:

Adjust and check each operating item of hardware and each door, to ensure proper operation or function of every unit. Replace units which cannot be adjusted to operate freely and smoothly as intended for the application made.

Clean adjacent surfaces soiled by hardware installation.

Final Adjustment: Wherever hardware installation is made more than one month prior to acceptance or occupancy of a space or area, return to the work during the week prior to acceptance or occupancy, and make final check and adjustment of all hardware items in such space or area. Clean operating items as necessary to restore proper function and finish of hardware and doors. Adjust door control devices to compensate for final operation of heating and ventilating equipment.

Instruct Owner's Personnel in proper adjustment and maintenance of hardware and hardware finishes, during the final adjustment of hardware.

ACCEPTABLE MANUFACTURERS:

Manufacturer's product designations: One or more manufacturers are listed for each hardware type required. An asterisk (*) after name indicates product designation listed in hardware schedule. Provide product of manufacturer specified or from the following approved list, which comply with requirements specified elsewhere in this section.

Butt Hinges: McKinney, Hager*, Lawrence or Stanley.

Flush Bolts: Yale, Door Controls, Glynn-Johnson, Ives* or Quality.

Locks: Yale*, Schlage, Russwin, or Corbin.

Lever Handles: Yale*, Schalage.

Pulls: Yale, Hiawatha, Hager*.

Panic Hardware: Yale*, Von Duprin.

Coordinators: Door Controls*, Glynn-Johnson or Ives.

Closers: LCN, Yale*.

Protective Plates: Hager*, Hiawatha, or Yale.

Overhead Stops: Glynn-Johnson* or Rixson-Firemark.

Floor or Wall Stops: Glynn-Johnson, Ives* or Quality.

Thresholds and weatherstrips: Reese*, Pemko, or National Guard.

*indicates base specification

REFER TO HARDWARE SCHEDULE ATTACHED AT THE END OF THIS SECTION

END OF SECTION

HARDWARE SCHEDULE

2007-460H COMFORT SUITES
VICKSBURG MS

Architect: RICHARD MOLENAAR

Customer: -

Schedule Date: 10/15/07

Revision Date:

NOTE: THE FOLLOWING SCHEDULE OF HARDWARE GROUPS IS TO BE CONSIDERED A GUIDE ONLY. THE SUPPLIER IS CAUTIONED TO REFER TO GENERAL CONDITIONS, SPECIAL CONDITIONS, AND THE PREAMBLE TO THIS SECTION. IT IS THE HARDWARE SUPPLIER'S RESPONSIBILITY TO FURNISH ALL REQUIRED HARDWARE. SHOULD ANY PARTICULAR DOOR OR ITEM BE OMITTED IN ANY SCHEDULED HARDWARE SET, PROVIDE DOOR OR ITEM WITH HARDWARE SAME AS REQUIRED FOR SIMILAR PURPOSES. THIS HARDWARE CAN BE PURCHASED BY CONTACTING HOTEL RESOURCES GROUP AT 1-800-679-5768.

HARDWARE SCHEDULE

2007-460H

Revised: 10/15/07

Manufacturers

AIPHONE
BOMMER IND
DON-JO MANUFACTURING
DORMA CLOSERS
DORMA EXITS
HAGER COMPANIES
KABA ILCO
MCDONALD DASH
NT FALCON LOCK
P.D.Q. MANUFACTURING
PEMKO
TESA ENTRY SYSTEMS(ONITY)

FINISHES:
26D SATIN CHROME
32D SATINLESS STEEL

KEYING INFO:
ALL LOCKS AND CYLINDER TO BE MASTER KEYED

MASTER KEYING:
10 EA. MASTER "A"

EXCEPTIONS:

Printed: 10/15/07

Door Index

2007-460H COMFORT SUITES - VICKSBURG, MS

Door	Set #
101	1
102	1
103	3
104	4
105	2
106	2
107	2
108	4
109	3
110	3
111	8
112	6
113	5
114	9
115	9
116	13
117	15
118	11
119	14
120	12

Door	Set #
121	16
122	16
123	7
124	17
125	15
126	15
127	5
128	18
129	19
130	10
131	7
132	7
133	7
134	15
135	20
136	6
201	6
202	10
203	6
204	10

Door	Set #
301	6
302	10
303	6
304	10
401	6
402	10
403	6
404	10
A	22
A	22
B	23
B	23
B	28
C	27
D	24
E	28
F	26
G	25
R1	21

2007-460H

Revised:

SET # 1

Keyset	Tag	Quantity	Mark	Door Location
		1	101	EXTERIOR FROM VESTIBULE
		1	102	VESTIBULE FORM LOBBY 2-3/0 X 7/0 GLD ALF

		Vendor
1.0 EA INTERCOM	ILCO REMOTE READER LEM-1DLS DOOR 102 BALANCE OF HARDWARE BY DOOR SUPPLIER	AIPHONE

SET # 2

Keyset	Tag	Quantity	Mark	Door Location
		1	105	EXTERIOR FROM ELEC EQUIP RM, PRS. 2-3/0 X 7/0 1-3/4 MD X MF
		1	106	EXTERIOR FROM POOL EQUIP. PRS. 2-3/0 X 7/0 1-3/4 MD X MF
		1	107	EXTERIOR FROM WATER HEATERS, PRS. 2-3/0 X 7/0 1-3/4 MD X MF

		Vendor
9.0 PR HINGES	BB5000450-652-NRP	BOMMER IND
3.0 EA LOCKSET	GT115 PHIL 2-3/4 ASA 26D ABRA.CTG	P.D.Q. MANUFACTURING
3.0 EA DOOR CLOSER WITH H/O	8616 SPAT SNB AL	DORMA CLOSERS
3.0 EA THRESHOLD	172A-72"	PEMKO
6.0 EA FLUSH BOLT	282D 26D	HAGER COMPANIES
3.0 EA WEATHERSTRIP	S88D-21'	PEMKO
3.0 EA RAIN DRIP	346C-76"	PEMKO
6.0 EA DOOR SWEEP	315CN-36"	PEMKO
6.0 EA FLOOR STOP	267F 26D	HAGER COMPANIES

SET # 3

Keyset	Tag	Quantity	Mark	Door Location
		1	103	EXTERIOR FROM CORRIDOR, LHR
		1	109	EXTERIOR FROM CORRIDOR, LHR
		1	110	EXTERIOR FROM POOL, LHR 3/0 X 7/0 GLD ALF

SET # 3 (Continued)

		Vendor
3.0 EA RIM PANIC INTERFACE	TESA RIM PANIC INTERFACE 626 ALUMINUM DOOR MUST HAVE 5" STILE BALANCE OF HARDWARE BY DOOR SUPPLIER	TESA ENTRY SYSTEMS(ONITY)

SET # 4

Keyset	Tag	Quantity	Mark	Door Location
		1	104	EXTERIOR FROM STAIR, LHR
		1	108	EXTERIOR FROM STAIR , RHR 3/0 X 7/0 1-3/4 MD X MF

		Vendor
3.0 PR HINGES	BB5000450-652-NRP	BOMMER IND
2.0 EA RIM DEVICE	9300 EO SNB US32D	DORMA EXITS
2.0 EA DOOR CLOSER	8616 AF86P FC SNB1 AL	DORMA CLOSERS
2.0 EA THRESHOLD	172A-36" WSLS	PEMKO
2.0 EA DOOR SWEEP	315CN-36"	PEMKO
2.0 EA WEATHERSTRIP	S88D-17'	PEMKO
2.0 EA RAIN DRIP	346C-40"	PEMKO
2.0 EA FLOOR STOP	267F 26D	HAGER COMPANIES

SET # 5

Keyset	Tag	Quantity	Mark	Door Location
		1	113	CORRIDOR TO GUEST LAUNDRY, LH 45 MIN
		1	127	CORRIDOR TO FITNESS CENTER, LH 20 MIN 3/0 X 6/8 1-3/4 WD X MF

		Vendor
3.0 PR HINGES	BB5000-450-26D	BOMMER IND
2.0 EA UTILITY CARD LOCK	E-771 K US26D	KABA ILCO
2.0 EA DOOR CLOSER	7414 ARP COV SNB1 689/AL	DORMA CLOSERS
2.0 EA WEATHERSTRIP	S88D-17'	PEMKO
2.0 EA KICK PLATE	190S 6" X 34" US32D	HAGER COMPANIES
2.0 EA WALL STOP	236W US32D	HAGER COMPANIES

SET # 6

Keyset	Tag	Quantity	Mark	Door Location
		1	112	STAIR FROM CORRIDOR, LHR
		1	136	STAIR FROM CORRIDOR, RHR
		1	201	STAIR FROM CORRIDOR, RHR
		1	203	STAIR FROM CORRIDOR, LHR
		1	301	STAIR FROM CORRIDOR, RHR
		1	303	STAIR FROM CORRIDOR, LHR
		1	401	STAIR FROM CORRIDOR, RHR
		1	403	STAIR FROM CORRIDOR, LHR
				3/0 X 6/8 1-3/4 WDX MF 90 MIN

			Vendor
12.0	PR HINGES	BB5000-450-26D	BOMMER IND
8.0	EA RIM EXIT DEVICE	F9300 YR23 SNB US32D	DORMA EXITS
8.0	EA DOOR CLOSER	7414 ARP COV SNB1 689/AL	DORMA CLOSERS
8.0	EA WEATHERSTRIP	S88D-17'	PEMKO
8.0	EA KICK PLATE	190S 6" X 34" US32D	HAGER COMPANIES
8.0	EA WALL STOP	236W US32D	HAGER COMPANIES

SET # 7

Keyset	Tag	Quantity	Mark	Door Location
		1	123	WORK AREA FROM TELE/AUD, RHR
		1	132	LAUNDRY TO MAINT RM., RH
		1	131	LAUNDRY TO CLEAN LAUNDRY, LH
		1	133	PANTRY FROM STORAGE, RHR
				3/0 X 6/8 1-3/4 WDX MF

			Vendor
6.0	PR HINGES	BB5000-450-26D	BOMMER IND
4.0	EA LOCKSET	GT116 PHIL 2-3/4 ASA 26D	P.D.Q. MANUFACTURING
4.0	EA WALL STOP	236W US32D	HAGER COMPANIES

SET # 8

Keyset	Tag	Quantity	Mark	Door Location
		1	111	GUEST LAUNDRY TO WATER HEATER, LH
				3/0 X 6/8 1-3/4 W DX MF

SET # 8 (Continued)

		Vendor
1.5 PR SPRING HINGE	4310 4-1/2" 4-1/2" 652	BOMMER IND
1.0 EA LOCKSET	GT115 PHIL 2-3/4 ASA 26D ABRA.CTG	P.D.Q. MANUFACTURING
1.0 EA WEATHERSTRIP	S88D-17'	PEMKO
1.0 EA WALL STOP	236W US32D	HAGER COMPANIES

SET # 9

Keyset	Tag	Quantity	Mark	Door Location
		1	114	CORRIDOR TO WOMEN TOILET, RH
		1	115	CORRIDOR TO MEN TOILET, LH
				3/0 X 6/8 1-3/4 WDX MF 45 MIN

		Vendor
3.0 PR HINGES	BB5000-450-26D	BOMMER IND
2.0 EA PRIVACY SET	GT176 PHIL 2-3/4 ASA 26D	P.D.Q. MANUFACTURING
2.0 EA DOOR CLOSER	7414 ARP COV SNB1 689/AL	DORMA CLOSERS
2.0 EA WEATHERSTRIP	S88D-17'	PEMKO
2.0 EA WALL STOP	236W US32D	HAGER COMPANIES

SET # 10

Keyset	Tag	Quantity	Mark	Door Location
		1	130	CORRIDOR TO STORAGE, RH
		1	204	CORRIDOR TO STORAGE, LH
		1	304	VENDING TO STORAGE, LH
		1	404	CORRIDOR TO STORAGE,
				3/0 X 6/8 1-3/4 WDX MF 45 MIN
		1	202	CORRIDOR FROM LINEN CHUTE, RHR
		1	302	CORRIDOR FROM LINEN CHUTE, RHR
		1	402	CORRIDOR FROM LINEN CHUTE, RHR
				3/0 X 6/8 1-3/4 WDX MF

		Vendor
10.5 PR SPRING HINGE	4310 4-1/2" 4-1/2" 652	BOMMER IND
7.0 EA UTILITY CARD LOCK	E-771 K US26D	KABA ILCO
7.0 EA WEATHERSTRIP	S88D-17'	PEMKO
7.0 EA KICK PLATE	190S 6" X 34" US32D	HAGER COMPANIES
7.0 EA WALL STOP	236W US32D	HAGER COMPANIES

SET # 11

Keyset	Tag	Quantity	Mark	Door Location
		1	118	CORRIDOR TO LAUNDRY, LH 4/0 X 6/8 1-3/4 WDX MF

		Vendor
4.0 PR HINGES	BB5000-450-26D	BOMMER IND
1.0 EA UTILITY CARD LOCK	E-771 K US26D	KABA ILCO
1.0 EA DOOR CLOSER	8616 AF86P FC SNB1 AL	DORMA CLOSERS
1.0 EA ARMOR PLATE	190S 34 X 46 X US32D	HAGER COMPANIES
1.0 EA WEATHERSTRIP	S88D-20'	PEMKO
1.0 EA WALL STOP	236W US32D	HAGER COMPANIES

SET # 12

Keyset	Tag	Quantity	Mark	Door Location
		1	120	CORRIDOR TO WORK AREA, LH 3/0 X 6/8 1-3/4 WDX MF 20 MIN

		Vendor
1.5 PR HINGES	BB5000-450-26D	BOMMER IND
1.0 EA ALARM LOCK	DL2700- US26D	MCDONALD DASH
1.0 EA DOOR CLOSER	7414 ARP COV SNB1 689/AL	DORMA CLOSERS
1.0 EA KICK PLATE	190S 6" X 34" US32D	HAGER COMPANIES
1.0 EA WEATHERSTRIP	S88D-17'	PEMKO
1.0 EA WALL STOP	236W US32D	HAGER COMPANIES

SET # 13

Keyset	Tag	Quantity	Mark	Door Location
		1	116	LAUNDRY FROM EMPLOYEE TOILET,LHR 3/0 X 6/8 1-3/4 WD X MF

		Vendor
1.5 PR HINGES	BB5000-450-26D	BOMMER IND
1.0 EA PRIVACY SET	GT176 PHIL 2-3/4 ASA 26D	P.D.Q. MANUFACTURING
1.0 EA WALL STOP	236W US32D	HAGER COMPANIES

SET # 14

Keyset	Tag	Quantity	Mark	Door Location
		1	119	LAUNDRY TO DRYERS, RH 3/0 X 6/8 1-3/4 WDX MF

		Vendor
1.5 PR HINGES	BB5000-450-26D	BOMMER IND
1.0 EA PASSAGE LATCH	GT126 PHIL 2-3/4 ASA US26D	P.D.Q. MANUFACTURING
1.0 EA WALL STOP	236W US32D	HAGER COMPANIES

SET # 15

Keyset	Tag	Quantity	Mark	Door Location
		1	117	WORK AREA FROM MECH, LHR
		1	126	WORK AREA FROM MECH, RHR
		1	134	STOR FROM MECH RM. LHR
		1	125	MANAGER OFFICE FROM CLOSET, LHR 2/6 X 6/8 1-3/4 WD X MF

		Vendor
6.0 PR SPRING HINGE	4310 4-1/2" 4-1/2" 652	BOMMER IND
4.0 EA STOREROOM LOCK	GT115 PHL 2-3/4 ASA US26D	P.D.Q. MANUFACTURING
4.0 EA WALL STOP	236W US32D	HAGER COMPANIES

SET # 16

Keyset	Tag	Quantity	Mark	Door Location
		1	122	WORK AREA TO MANAGER OFFICE, LH 3/0 X 6/8 1-3/4 WDX MF 45 MIN
		1	121	WORK AREA TO LAUNDRY, RH 3/0 X 6/8 1-3/4 WDX MF 45 MIN

		Vendor
3.0 PR HINGES	BB5000-450-26D	BOMMER IND
2.0 EA LOCKSET	GT116 PHIL 2-3/4 ASA 26D	P.D.Q. MANUFACTURING
2.0 EA DOOR CLOSER	7414 ARP COV SNB1 689/AL	DORMA CLOSERS
2.0 EA WALL STOP	236W US32D	HAGER COMPANIES

SET # 17

Keyset	Tag	Quantity	Mark	Door Location
		1	124	WORK AREA FROM RECPT, RHR 3/0 X 6/8 1-3/4 WD X MF

		Vendor
1.5 PR HINGES	BB5000-450-26D	BOMMER IND
1.0 EA PASSAGE LATCH	GT126 PHIL 2-3/4 ASA US26D	P.D.Q. MANUFACTURING
1.0 EA DOOR CLOSER	7414 ARP COV SNB1 689/AL	DORMA CLOSERS
1.0 EA WALL STOP	236W US32D	HAGER COMPANIES

SET # 18

Keyset	Tag	Quantity	Mark	Door Location
		1	128	FITNESS CENTER FROM ELEVATOR LOBBY, RHR 3/0 X 6/8 1-3/4 WD X MF

		Vendor
1.5 PR SPRING HINGE	4310 4-1/2" 4-1/2" 652	BOMMER IND
1.0 EA LOCKSET	GT115 PHIL 2-3/4 ASA 26D ABRA.CTG	P.D.Q. MANUFACTURING
1.0 EA WEATHERSTRIP	S88D-20'	PEMKO
1.0 EA WALL STOP	236W US32D	HAGER COMPANIES

SET # 19

Keyset	Tag	Quantity	Mark	Door Location
		1	129	CORRIDOR FROM POOL AREA, LHR 3/0 X 6/8 1-3/4 WD X MF

		Vendor
1.5 PR S.S. HINGES	BB1191 4-1/2 X 4-1/2 X 32D	HAGER COMPANIES
	ILCO EXIT DEVICE W/ CARD TRIM INTERFACE	
1.0 EA DOOR CLOSER	7414 ARP COV SNB1 689/AL	DORMA CLOSERS
1.0 EA WEATHERSTRIP	S88D-17'	PEMKO
2.0 EA KICK PLATE	190S 6" X 34" US32D	HAGER COMPANIES
1.0 EA WALL STOP	236W US32D	HAGER COMPANIES

SET # 20

Keyset	Tag	Quantity	Mark	Door Location
		1	135	BREAKFAST AREA TO PANTRY, RH 3/0 X 6/8 1-3/4 WD X MF 45 MIN

			Vendor
1.5	PR HINGES	BB5000-450-26D	BOMMER IND
1.0	EA CLASSROOM LOCK	GT148 PHIL 2-3/4 ASA US26D	P.D.Q. MANUFACTURING
1.0	EA DOOR CLOSER	7414 ARP COV SNB1 689/AL	DORMA CLOSERS
1.0	EA WEATHERSTRIP	S88D-17'	PEMKO
1.0	EA KICK PLATE	190S 6" X 34" US32D	HAGER COMPANIES
1.0	EA WALL STOP	236W US32D	HAGER COMPANIES

SET # 21

Keyset	Tag	Quantity	Mark	Door Location
		1	R1	STAIR TO ROOF VERIFY HAND 3/0 X 6/8 1-3/4 MD X MF

			Vendor
1.5	PR HINGES	BB5000450-652-NRP	BOMMER IND
1.0	EA STOREROOM LOCK	GT115 PHL 2-3/4 ASA US26D	P.D.Q. MANUFACTURING
1.0	EA DOOR CLOSER	7414 ARP COV SNB1 689/AL	DORMA CLOSERS
1.0	EA THRESHOLD	172A-36" WSLS	PEMKO
1.0	EA WEATHERSTRIP	S88D-17'	PEMKO
1.0	EA DOOR SWEEP	315CN-36"	PEMKO
1.0	EA FLOOR STOP	267F 26D	HAGER COMPANIES

SET # 22

Keyset	Tag	Quantity	Mark	Door Location
		62	A	CORRIDOR TO GUEST ROOMS
		4	A	CORRIDOR TO ACC GUEST ROOMS 3/0 X 6/8 1-3/4 WD X MF

SET # 22 (Continued)

			Vendor
93.0	PR SPRING HINGE	4310 4-1/2" 4-1/2" 652	BOMMER IND
6.0	PR HINGES	BB5000-450-26D ACC ROOM ILCO GUEST ROOM CARD LOCKS	BOMMER IND
66.0	EA DOOR GUARD	1604 US26D	DON-JO MANUFACTURING
70.0	EA DOOR VIEWER	ULDV-180 DEGREE US26D	DON-JO MANUFACTURING
66.0	EA WEATHERSTRIP	S88D-17' ILCO FRONT DESK SYSTEM	PEMKO
6.0	EA DOOR CLOSER	7414 AR COV SNB1 689/AL ACC RM	DORMA CLOSERS
66.0	EA WALL STOP	236W US32D	HAGER COMPANIES

SET # 23

Keyset	Tag	Quantity	Mark	Door Location
		62	B	GUEST ROOM TO BATH
		4	B	ACC GUEST FROM BATH 3/0 X 6/8 1-3/4 WD X MF

			Vendor
99.0	PR HINGES	5000-450-652	BOMMER IND
66.0	EA PRIVACY LOCK	GP176PHL 2-3/4 ASA US26D	P.D.Q. MANUFACTURING
62.0	EA DOME STOP	243F 26D	HAGER COMPANIES
4.0	EA O.H. DOOR STOP	702S AL ACC DOORS	DORMA CLOSERS

SET # 24

Keyset	Tag	Quantity	Mark	Door Location
		8	D	CONNECTING BETWEEN GUEST ROOM 2-3/0 X 6/8 1-3/4 WDX MF 20 MIN

			Vendor
12.0	PR SPRING HINGE	4310 4-1/2" 4-1/2" 652	BOMMER IND
8.0	EA CONN DOOR LOCK	GP125PHL 2-3/4 ASA US26D	P.D.Q. MANUFACTURING
8.0	EA CONNECTING DOOR DEAD	D861M 2-3/4" BS 26D	NT FALCON LOCK
8.0	EA WEATHERSTRIP	S88D-17'	PEMKO
8.0	EA WALL STOP	236W US32D	HAGER COMPANIES

SET # 25

Keyset	Tag	Quantity	Mark	Door Location
		4	G	ACC GUEST ROOM FROM CLOSET, PRS 2-1/6 X 6/8 1-3/4 WD X MF

		Vendor
12.0 PR HINGES	5000-450-652	BOMMER IND
4.0 EA PASSAGE SET	GP126PHL 2-3/4 ASA US26D	P.D.Q. MANUFACTURING
8.0 EA FLUSH BOLT	283D 26D	HAGER COMPANIES

SET # 26

Keyset	Tag	Quantity	Mark	Door Location
		3	F	BEDROOM FROM CLOSET 2-1/6 X 6/8 BI-PASS MIRROR DOOR

Vendor

ALL HARDWARE BY DOOR SUPPLIER

SET # 27

Keyset	Tag	Quantity	Mark	Door Location
		62	C	GUEST ROOM FROM CLOSET 2/6 X 6/8 1-3/4 WD X MF

		Vendor
93.0 PR HINGES	1279 4-1/2 X 4-1/2 26D	HAGER COMPANIES
62.0 EA PASSAGE SET	GP126PHL 2-3/4 ASA US26D	P.D.Q. MANUFACTURING
62.0 EA DOME STOP	243F 26D	HAGER COMPANIES

SET # 28

Keyset	Tag	Quantity	Mark	Door Location
		3	E	EXECUTIVE SUITES TO BEDROOM 3/0 X 6/8 1-3/4 WD X MF
		3	B	EXECUTIVE BEDROON TO BATH 3/0 X 6/8 1-3/4 WD X MF

SET # 28 (Continued)

		Vendor
9.0 PR HINGES	5000-450-652	BOMMER IND
6.0 EA PRIVACY LOCK	GP176PHL 2-3/4 ASA US26D	P.D.Q. MANUFACTURING
6.0 EA PROJECTION STOP	1506 US26D	DON-JO MANUFACTURING

COMFORT SUITES

SECTION 08800 - GLASS AND GLAZING

PART 1 - GENERAL

RELATED DOCUMENTS:

Drawings and general provisions of Contract, including General and Supplementary Conditions and Division-1 Specification sections, apply to work of this section.

RELATED WORK:

Section 08210,Wood Doors.
Section 08410,Aluminum Entrances.
Section 08520,Operable Windows.
Section 10800,Toilet and Bath Accessories.

SUMMARY:

Extent of glass and glazing work is indicated on drawings and schedules.

Types of work in this section include glass and glazing requirements for:

Window units, indicated as "preglazed".
Entrances and other doors, indicated as "preglazed".
Guestroom Bath and Restroom Mirrors.

Not Included in this section are decorative mirrors supplied by owner for the Lobby area.

SYSTEM DESCRIPTION:

Provide glass and glazing that has been produced, fabricated and installed to withstand normal thermal movement, wind loading and impact loading (where applicable), without failure including loss or breakage of glass, failure of sealants or gaskets to remain watertight and airtight, deterioration of glass and glazing materials and other defects in the work.

Normal thermal movement is defined as that resulting from an ambient temperature range of 120 deg. F (67 deg. C) and from a consequent temperature range within glass and glass framing members of 180 deg. F (100 deg. C).

Deterioration of insulating glass is defined as failure of hermetic seal due to other causes than breakage which results in intrusion of dirt or moisture, internal condensation or fogging, deterioration of protected internal glass coating, if any, resulting from seal failure, and any other visual evidence of seal failure or performance.

SUBMITTALS:

Product Data: Submit manufacturer's technical data for each glazing material and fabrication glass product required, including installation and maintenance instructions.

Samples: Submit, for verification purposes, 12" square samples of each type of glass indicated except for clear single pane units, and 12" long samples of each color required (except black) for each type of sealant or gasket

exposed to view. Install sealant or gasket sample between two strips of material representative of adjoining framing system in color.

Certificate: Submit certificates from respective manufacturers attesting that glass and glazing materials furnished for project comply with requirements.

Separate certification will not be required for glazing materials bearing manufacturer's permanent labels designating type and thickness of glass, provided labels represent a quality control program involving a recognized certification agency or independent testing laboratory acceptable to authorities having jurisdiction.

Compatibility and Adhesion Test Report: Submit statement from sealant manufacturer indicating that glass and glazing materials have been tested for compatibility and adhesion with glazing sealants and interpreting test results relative to material performance, including recommendations for primers and substrate preparation needed to obtain adhesion.

QUALITY ASSURANCE:

Glazing Standards: Comply with recommendations of Flat Glass Marketing Association (FMGA) "Glazing Manual" and "Sealant Manual" except where more stringent requirements are indicated. Refer to those publications for definitions of glass and glazing terms not otherwise defined in this section or other referenced standards.

Safety Glazing Standard: Where safety glass is indicated or required by authorities having jurisdiction, provide type of products indicated which comply with ANSI Z97.1 and testing requirements of 16 CFR Part 1201 for category II materials.

Subject to compliance with requirements, provide safety glass permanently marked with certification label of Safety Glazing Certification Council (SGCC) or other certification agency acceptable to authorities having jurisdiction.

Insulating Glass Certification Program: Provide insulating glass units permanently marked either on spacers or at least one component pane of units with appropriate certification label of inspecting and testing organization indicated below:

Associated Laboratories, Inc. (ALI).

Fire Rated Glass Certification: Provide fire rated glass units permanently marked either on spacers or at least one component pane of units with appropriate certification label indicating glass has met the following test standards:

UL 263,UL 10B, ASTM E-119, ASTM E-152, NFPA 251, NFPA 252, ANSI Z97.1, CFR 1201.

Single Source Responsibility For Glass: To ensure consistent quality of appearance and performance, provide materials produced by a single manufacturer or fabricator for each kind and condition of glass indicated and composed of primary glass obtained from a single source for each type and class required.

DELIVERY, STORAGE, AND HANDLING:

Protect glass and glazing materials during delivery, storage and handling to comply with manufacturer's directions and as required to prevent edge damage to glass, and damage to glass and glazing materials from effects of moisture including condensation, of temperature changes, of direct exposure to sun, and from other causes.

Where insulating glass units will be exposed to substantial altitude changes, avoid hermetic seal ruptures by complying with insulating glass fabricator's recommendations for venting and sealing.

PROJECT CONDITIONS:

Environmental Conditions: Do not proceed with glazing when ambient and substrate temperature conditions are outside the limits permitted by glazing material manufacturer or when joint substrates are wet due to rain, frost, condensation or other causes.

Install liquid sealants at ambient and substrate temperatures above 40 deg. F (4.4 deg. C).

WARRANTY:

General: Warranties shall be in addition to, and not a limitation of, other rights the Owner may have under the Contract Documents.

Manufacturer's Special Project Warranty on Insulating Glass: Provide written warranty signed by manufacturer of insulating glass agreeing to furnish f.o.b. point of manufacture, freight allowed project site, within specified warranty period indicated below, replacements for those insulating glass units developing manufacturing defects. Manufacturing defects are defined as failure or hermetic seal of air space (beyond that due to glass breakage) as evidenced by intrusion of dirt or moisture, internal condensation or fogging, deterioration of protected internal glass coatings, if any, and other visual indications of seal failure or performance; provided the manufacturer's instructions for handling, installing, protecting and maintaining units have been complied with during the warranty period.

Warranty Period: Manufacturer's standard but not less than 10 years after date of substantial completion.

PART 2 - PRODUCTS

MANUFACTURERS:

Manufacturers: Subject to compliance with requirements, provide products of one of the following:

Manufacturers of Clear and Tinted Float Glass:

AFG Industries, Inc.
Ford Glass Division.
LOF Glass, Inc.
PPG Industries, Inc.
Saint-Gobain/Euroglass.

Manufacturers of Fire Rated Glass:

Advanced Glass Systems Corp.
Globe-Amerada Glass Co.
Saint-Gobain/Euroglass.
Viracon, Inc.

Manufacturers of Insulating Glass:

Advanced Coating Technology.
AFG Industries, Inc.
Cardinal IG.
Environmental Glass Products.
Falconer Glass Industries.
Ford Glass Division.
Hordis Brothers, Inc.

Independent Insulating Glass.
PPG Industries, Inc.
Spectrum Glass Prod. Div., H.H. Robertson Co.
Viracon, Inc.

GLASS PRODUCTS, GENERAL:

Primary Glass Standard: Provide primary glass which complies with ASTM C 1036 requirements, including those indicated by reference to type, class, quality, and if applicable, form, finish, mesh and pattern.

Heat-Treated Glass Standard: Provide heat-treated glass which complies with ASTM C 1048 requirements, including those indicated by reference to kind, condition, type, quality, class, and, if applicable, form, finish, and pattern.

Sizes: Fabricate glass to sizes required for glazing openings indicated, with edge clearances and tolerances complying with recommendations of glass manufacturer. Provide thicknesses indicated or, if not otherwise indicated, as recommended by glass manufacturer for application indicated.

PRIMARY GLASS PRODUCTS:

Clear Float Glass: Type I, (transparent glass, flat), Class 1, Quality q3 (glazing select).

HEAT-TREATED GLASS PRODUCTS:

Manufacturing Process: Manufacture heat-treated glass as follows:

By horizontal (roller hearth) process with roll wave distortion parallel with bottom edge of glass as installed, unless otherwise indicated.

Uncoated Clear Heat-Treated Float Glass: Condition A (uncoated surfaces), Type I (transparent glass, flat), Class 1 (clear), Quality q3 (glazing select), kind as indicated below.

Kind FT (fully tempered) where indicated.

SEALED INSULATING GLASS UNITS:

General: Provide preassembled units consisting of organically sealed panes of glass enclosing a hermetically sealed dehydrated air space and complying with ASTM E 774 for performance classification indicated as well as with other requirements specified for glass characteristics, air space, sealing system, sealant, spacer material, corner design and dessicant.

For properties of individual glass panes making up units, refer to product requirements specified elsewhere in this section applicable to types, classes, kinds and conditions of glass products indicated.

Provide heat-treated panes of kind and at locations indicated or, if not indicated, provide heat-strengthened panes where recommended by manufacturer for application indicated and tempered where indicated or where safety glass is designated or required.

Thickness of Each Pane: Manufacturer's standard.
Air Space Thickness: Manufacturer's standard.
Sealing System: Dual seal; primary and secondary sealant:
manufacturer's standard materials.
Spacer Material: Manufacturer's standard metal.

Dessicant: Manufacturer's standard; either molecular sieve or silica gel or blend of both.
Corner Construction: Manufacturer's standard corner construction.

Uncoated Insulating Glass Units: Manufacturer's standard units complying with the following requirements:

Exterior Pane: Clear float glass.
Kind: As indicated.

Interior Pane of Glass: Clear float glass.
Kind: As indicated.

Fire Rated Insulating Glass Units: Manufacturer's standard units complying with the following requirements:

Exterior Pane: Fire rated clear glass.
Kind: As indicated.

Interior Pane of Glass: Clear float glass.
Kind: As indicated.

ELASTOMERIC GLAZING SEALANTS AND PREFORMED GLAZING TAPES:

General: Provide products of type indicated and complying with the following requirements:

Compatibility: Select glazing sealants and tapes of proven compatibility with other materials with which they will come into contact, including glass products, seals of insulating glass units, and glazing channel substrates, under conditions of installation and service, as demonstrated by testing and field experience.

Suitability: Comply with recommendations of sealant and glass manufacturers for selection of glazing sealants and tapes which have performance characteristics suitable for applications indicated and conditions at time of installation.

Elastomeric Sealant Standard: Provide manufacturer's standard chemically curing, elastomeric sealant of base polymer indicated which complies with ASTM C 920 requirements, including those for Type, Grade, Class and Uses.

Colors: Provide color of exposed sealants indicated or, if not otherwise indicated, as selected by Architect from manufacturer's standard colors.

One-Part Non-Acid-Curing Silicone Glazing Sealant: Type S; Grade NS, Glass 25; Uses NT, G, A, and, as applicable to uses indicated, O; and complying with the following requirements for modulus and additional joint movement capability.

Low Modulus: Tensile strength of 45 psi or less at 100 percent elongation when tested per ASTM D 412 after 14 days at 77 deg. F (20 deg. C) and 50 percent relative humidity.

Additional capability, when tested per ASTM C 719 for adhesion and cohesion under maximum cyclic movement, to withstand the following percentage increase and decrease of joint width, as measured at time of application, and remain in compliance with other requirements of ASTM C 920.

50 percent.

Preformed Butyl-Polyisobutylene Glazing Tape: Provide manufacturer's standard solvent-free butyl-polyisobutylene formulation with a solids content of 100 percent; complying with AAMA A 804.1; in extruded tape form; non-staining and non- migrating in contact with nonporous surfaces; packaged on rolls with a release paper on one side; with or

without continuous spacer rod as recommended by manufacturers of tape and glass for application indicated.

Products: Subject to compliance with requirements, provide one of the following:

One-Part Non-Acid Curing Low-Modulus Silicone Glazing Sealant:

"Chem-Calk 1000"; Bostik Construction Products Div.
"Dow Corning 790"; Dow Corning Corp.
"864"; Pecora Corp.
"Omniseal"; Sonneborn Building Products Div., Rexnord Chemical Products Inc.
"Spectrum 1"; Tremco, Inc.

Preformed Butyl-Polyisobutylene Glazing Tape Without Spacer Rod:

"Chem-Tape 40"; Bostik Construction Products Div.
"Extru-Seal"; Pecora Corp.
"PTI 303"; Glazing Tape; Protective Treatments, Inc.
"Tremco 440 Tape"; Tremco Inc.

Preformed Butyl-Polyisobutylene Glazing Tape With Spacer Rod:

"Chem-Tape 60"; Bostik Construction Products Div.
"Shim-Seal"; Pecora Corp.
"PTI 303" Shim Tape; Protective Treatments, Inc.
"Pre-shimmed Tremco 440 Tape"; Tremco Inc.

MISCELLANEOUS GLAZING MATERIALS:

Compatibility: Provide materials with proven record of compatibility with surfaces contacted in installation.

Cleaners, Primers, and Sealers: Type recommended by sealant or gasket manufacturer.

Setting Blocks: Neoprene, EPDM or silicone blocks as required for compatibility with glazing sealants, 80 to 90 Shore A durometer hardness.

Spacers: Neoprene, EPDM or silicone blocks, or continuous extrusions, as required for compatibility with glazing sealant, of size, shape and hardness recommended by glass and sealant manufacturers for application indicated.

Edge Blocks: Neoprene, EPDM or silicone blocks as required for compatibility with glazing sealant, of size and hardness required to limit lateral movement (side-walking) of glass.

Compressible Filler Rods: Closed-cell or waterproof-jacketed rod stock of synthetic rubber or plastic foam, flexible and resilient, with 5-10 psi compression strength for 25 percent deflection.

PART 3 - EXECUTION

EXAMINATION:

Require Glazier to inspect work of glass framing erector for compliance with manufacturing and installation tolerances, including those for size, squareness, offsets at corners; for presence and functioning of weep system; for existence of minimum required face or edge clearances; and for effective sealing of joinery. Obtain Glazier's written report listing conditions detrimental to performance of glazing work. Do not allow glazing work to proceed until

unsatisfactory conditions have been corrected.

PREPARATION:

Clean glazing channels and other framing members to receive glass, immediately before glazing. Remove coatings which are not firmly bonded to substrates. Remove lacquer from metal surfaces where elastomeric sealants are indicated for use.

GLAZING, GENERAL:

Comply with combined printed recommendations of glass manufacturers, of manufacturers of sealants, gaskets and other glazing materials, except where more stringent requirements are indicated, including those of referenced glazing standards.

Glazing channel dimensions as indicated in details are intended to provide for necessary bite on glass, minimum edge and face clearances, and adequate sealant thicknesses, with reasonable tolerances. Adjust as required by job conditions at time of installation.

Protect glass from edge damage during handling and installation; use a rolling block in rotating glass units to prevent damage to glass corners. Do not impact glass with metal framing. Use suction cups to shift glass units within openings; do not raise or drift glass with a pry bar. Rotate glass with flares or bevels along one horizontal edge which would occur in vicinity of setting blocks so that these are located at top of opening. Remove from project and dispose of glass units with edge damage or other imperfections of kind that, when installed, weakens glass and impairs performance and appearance.

Apply primers to joint surfaces where required for adhesion of sealants, as determined by proconstruction sealant-substrate testing.

GLAZING:

Install setting blocks of proper size in sill rabbet, located one quarter of glass width from each corner, but with edge nearest corner not closer than 6" from corner unless otherwise required. Set blocks in thin course of sealant which is acceptable for heel bead use.

Provide spacers inside and out, of correct size and spacing to preserve required face clearances, for glass sizes larger than 50 united inches (length plus height), except where gaskets or glazing tapes with continuous spacer rods are used for glazing. Provide 1/8" minimum bite of spacers on glass and use thickness equal to sealant width, except with sealant tape use thickness slightly less than final compressed thickness of tape.

Provide edge blocking to comply with requirements of referenced glazing standard, except where otherwise required by glass unit manufacturer.

Set units of glass in each series with uniformity of pattern, draw, bow and similar characteristics.

Provide compressible filler rods or equivalent back-up material, as recommended by sealant and glass manufacturers, to prevent sealant from extruding into glass channel weep systems and from adhering to joints back surface as well as to control depth of sealant for optimum performance, unless otherwise indicated.

Force sealants into glazing channels to eliminate voids and to ensure complete "wetting" or bond of sealant to glass and channel surfaces.

Tool exposed surfaces of sealants to provide a substantial "wash" away from glass. Install pressurized tapes and gaskets to protrude slightly out of channel, so as to eliminate dirt and moisture pockets.

PROTECTION AND CLEANING:

Protect exterior glass from breakage immediately upon installation by use of crossed streamers attached to framing and held away from glass. Do not apply markers to surfaces of glass. Remove nonpermanent labels and clean surfaces.

Protect glass from contact with contaminating substances resulting from construction operations. If, despite such protection, contaminating substances do come into contact with glass, remove immediately by method recommended by glass manufacturer.

Examine glass surfaces adjacent to or below exterior concrete and other masonry surfaces at frequent intervals during construction, but not less often than once a month, for build-up of dirt, scum, alkali deposits or staining. When examination reveals presence of these forms of residue, remove by method recommended by glass manufacturer.

Remove and replace glass which is broken, chipped, cracked, abraded or damaged in other ways during construction period, including natural causes, accidents and vandalism.

END OF SECTION 08800