



DEPARTMENT OF PURCHASING & CONTRACT COMPLIANCE

Winner 2000- 2009 Achievement of Excellence in Procurement Award
National Purchasing Institute

Cecil S. Moore, Director



REQUEST FOR QUOTE NUMBER:

10DW73966C

WILL BE RECEIVED UNTIL

2:00 PM

June 17, 2010

DESCRIPTION: DOORS, DOOR FRAMES & HARDWARE

DEPARTMENT: GENERAL SERVICES DEPARTMENT

Effective September 1, 2008, the Department of Purchasing & Contract Compliance will only accept responses to quotes electronically using our on-line Vendor Self Service system at www.fultonvendorelfservice.co.ga.us . You must be a registered vendor in order to respond to quotes.

ANY QUESTIONS REGARDING PURCHASING PROCEDURES OR THE SPECIFICATIONS SHOULD BE ADDRESSED ONLY TO THE PURCHASING CONTACT PERSON LISTED BELOW. BIDDERS MAY NOT HAVE CONTACT WITH COUNTY OFFICERS, ELECTED OFFICIALS OR COUNTY EMPLOYEES REGARDING THIS BID PRIOR TO AWARD OF PURCHASE ORDER. VIOLATION OF THIS INSTRUCTION WILL RESULT IN YOUR BID BEING FOUND NON-RESPONSIVE.

CONTACT NAME: DIANN WASHINGTON

E-Mail Address : diann.washington@fultoncountyga.gov

Telephone Number: 404-612-1100

All information requested on this sheet must be completed. Unless specifications indicate "NO SUBSTITUTE", items determined by Fulton County to be "EQUAL OR BETTER" will be given full consideration. All prices QUOTED must be "FOB DELIVERED" unless otherwise requested, and must be submitted in the format requested. The County reserves the right to cancel the solicitation and to reject any or all quotes in whole or in part and is not bound to accept any quote if rejection of that quote is determined to be contrary to the best interest of the County.

Company Name:

Company Address:

City

State

Zip Code

Telephone Number:

Fax Number:

E-Mail Address:

RESPONSES MUST BE SUBMITTED ON-LINE AT www.fultonvendorelfservice.co.ga.us BY THE TIME AND DATE INDICATED.

Person submitting QUOTE: (Please Print)

Date

Title

*Signature of the person submitting QUOTE:

*Person submitting this e-quote has binding authority to submit contracts on behalf of the responding company. By submitting a response, vendor agrees that their quote is an offer to sell. All bidders shall comply with all Fulton County purchasing laws, policies, and procedures, as well as relevant state and federal laws— including compliance with EEOC hiring guidelines and requirements under the Americans with Disabilities Act.

**REQUEST FOR QUOTE
GENERAL TERMS AND CONDITIONS**

The following provisions are hereby made a part of this Request for Quote. Any contract or purchase order awarded as the result of this request shall be governed by these General Terms and Conditions. By submission of your responses to this quote, vendor agrees to furnish the product(s) and/or service(s) pursuant to these conditions.

1. **GENERAL.** These provisions are standard for all County contracts. The County may delete or modify any of these standard provisions for a particular contract or purchase order by indicating a change in the special instructions or provisions. **Any vendor accepting a purchase order award as the result of this request agrees that the provisions included within this Request for Quote shall prevail over any conflicting provision within any standard form contract of the vendor.**
2. **SUBMISSION OF RESPONSES.** Responses must be submitted for quotes on-line via the Vendor Self Service system at www.fultonvendorelfservice.co.fulton.ga.us. Response to quotes must be received no later than 2:00 p.m. on the date indicated.
3. **AMENDMENTS TO THE REQUEST FOR QUOTE.** Any amendment to pricing is valid only if in writing and issued by the County.
4. **NON-COLLUSION.** Bidder certifies that this bid is made without prior understanding, agreement or connection with any other corporation, firm or person submitting a bid for the same work, labor or service to be done or the supplies, materials or equipment to be furnished and is in all respects fair and without collusion or fraud. Bidder further understands collusive bidding is a violation of state and federal law and can result in fines, prison sentences and civil damage awards. Bidder agrees to abide by all conditions of this bid and certifies that person signing is authorized to sign this bid or proposal for the bidder.
5. **CONFLICT OF INTEREST.** Vendor states that no County officer or employee, nor any business entity in which they have an interest: a) Has an interest in the contract awarded; b) Has been employed or retained to solicit or aid in the procuring of the resulting contract; c) Will be employed in the performance of such contract without immediate disclosure of such fact to the County.
6. **BASIS OF AWARD.** The County shall award to the overall lowest responsible and responsive vendor complying with the provisions of the Request for Quote. The following criteria may be considered by the County in selecting the most advantageous quote: a) Ability to perform the service required within the specified time; b) Conformance to specification; c) The quality of performance in previous contracts; d) Financial ability to perform the contract; e) Item pricing; f) vendor references. The County reserves the right to cancel the solicitation and to reject any or all quotes in whole or in part and is not bound to accept any quote if rejection of that quote is determined to be contrary to the best interest of the County.
7. **SAMPLES.** Samples of items when required, must be furnished free of expense to the County and upon request, be returned to the Vendor at the Vendor's expense. Samples of selected items may be retained for comparison purposes.
8. **BRAND NAME SPECIFICATIONS AND APPROVED EQUIVALENTS.** Unless otherwise specified, manufacturer's names, trade names, brand names, information and/or catalog numbers listed in the specifications are intended only to identify the quality and characteristics desired. They are not intended to limit competition. The Vendor may offer any equivalent product which meets or exceeds the specifications. If quotations are based on equivalent products, the quote must: a) Indicate the alternate manufacturer's name and catalog number; b) Include complete descriptive literature and/or specifications; c) Include proof that the proposed equivalent will meet the specifications. The County reserves the right to be the sole judge of what is equal and acceptable to meet its needs in all respects. If Bidder fails to name a substitute, goods identical to the published standard must be furnished.
9. **INDEMNIFICATION.** Contractor/Vendor hereby agrees to release, indemnify, defend and hold harmless the County, it's Commissioners, officers, employees, subcontractors, successors, assigns and agents from and against any and all losses (including death), claims, damages, liabilities, costs and expenses (including but not limited to all actions, proceedings, or investigations in respect thereof and any outcome of any such action, proceeding, or investigation), caused by, relating to, based upon or arising out of any act or omission by contractor, it's directors, officers, employees, subcontractors, successors, assigns or agents, or otherwise in connection with it's acceptance, of the performance, or nonperformance, of it's obligations under this agreements.

10. **TAXES.** Fulton County is exempt from the State of Georgia sales tax and exemption certificate will be furnished upon request.
11. **DELIVERY.** All prices must be FOB Destination, unloaded inside and assembled unless otherwise indicated.
12. **RIGHTS AND REMEDIES OF COUNTY FOR DEFAULT.** If any item furnished by the Vendor fails to conform to specifications, or to the sample submitted by the Vendor, the County may reject it. Upon rejection, the Vendor must promptly reclaim and remove such item without expense to the County, and shall immediately replace all such rejected items with others conforming to such specification and samples. If the Vendor fails to do so, the County has the right to purchase in the open market a corresponding quantity of any such items and to deduct from any monies due the Vendor the difference between the prices named in the purchase order and the actual cost to the County. If the Vendor fails to make prompt delivery of any item, the County has the right to purchase such item in the open market and to deduct from any monies due the Vendor the difference between the prices named in the purchase order and the actual replacement cost to the County. The rights and remedies of the County identified above are in addition to any other rights and remedies provided by law or under the purchase order.
13. **INVOICES AND PAYMENT TERMS.** Invoices are to be mailed to the County department specified on the resulting purchase order or master agreement. All invoices must include the purchase order number or master agreement number. Failure to comply may result in delayed payments. The County payment terms are Net 30 days unless a cash discount is allowed for payment within not less than twenty (20) days. The payment term shall begin on the date the merchandise is inspected, delivered and accepted by the County and the correct invoice is received in the office specified on the purchase order.
14. **LEGAL REQUIREMENTS.** Federal, State, County and local ordinances, rules and regulations, and policies shall govern development, submittal and evaluation of quote and disputes about quotes. Lack of knowledge by any Vendor about applicable law is not a defense.
15. **ASSIGNMENT.** Any purchase order awarded shall not be assignable by the Vendor without the express written approval of the County, and shall not become an asset in any bankruptcy, receivership or guardianship proceedings.
16. **REJECTION OF BID.** Bids may be considered irregular and may be rejected if they show omissions, alternations of form, additions not called for, conditions, limitations, unauthorized alternate bids or other irregularities of any kind. The County reserves the right to waive minor technicalities or irregularities of bid.
17. **TERMINATION.** In the event any of the provisions of the purchase order are violated, the County may serve written notice of its intention to terminate the purchase order. Such notice will state the reason(s) for such intention, and unless within ten (10) days after serving notice upon the contractor, such violation has ceased and satisfactory arrangements for correction made, the purchase order shall, upon expiration of ten (10) days, be terminated. Further, the County reserves the right to terminate for its convenience any purchase order in whole or in part upon giving thirty (30) days prior written notice to the other party.
18. **DEBARMENT.** If a Bidder is presently debarred, suspended, proposed for debarment, declared ineligible, or otherwise excluded from doing business with any government agency which prohibits your firm from participating in any procurement, the Bidder must provide the County with that information as part of its response to this solicitation. Failure to fully and truthfully provide the information required, may result in the disqualification of your bid from consideration or termination of the purchase order, once awarded.
19. **RIGHT TO PROTEST.** Any actual or prospective Bidder who is aggrieved in connection with a solicitation or award of a contract/purchase order must submit its protest in writing to the Director of Purchasing & Contract Compliance, 130 Peachtree St. S.W., Suite 1168, Atlanta, GA 30303. A protest must be submitted to the Director of Purchasing & Contract Compliance in writing within 14 days after such aggrieved entity knows or should have known of the solicitation, the award of contract/purchase order to another or other acts giving rise to a protest. An oral protest or a protest to an official, employee, user department, or other person apart from the Director of Purchasing does not comply with Fulton County Code Section 2-324 and does not toll the protest time period.

SIGNATURE BELOW IS THAT OF A PERSON AUTHORIZED TO SIGN CONTRACTS FOR THE QUOTING COMPANY WHO HAS READ, UNDERSTANDS, AND AGREES TO COMPLY WITH THE ABOVE GENERAL TERMS AND CONDITIONS.

COMPANY: _____ **SIGNATURE:** _____

NAME: _____ **TITLE:** _____ **DATE:** _____

THIS SIGNED FORM MUST BE SUBMITTED WITH YOUR BID. FAILURE TO DO SO MAY RESULT IN YOUR BID BEING FOUND NON-RESPONSIVE.

REQUEST FOR QUOTE SPECIFICATIONS

Quote Number: 10DW73966C

Opening Date: June 17, 2010

**Doors, Door Frames and Hardware
General Services Department**

1. DESCRIPTION

The Fulton County Department of Purchasing & Contract Compliance is soliciting quotes from qualified vendors to provide Doors, Door Frames and Hardware at 7741 Roswell Rd., Roswell, GA 30350 for the General Services Department.

2. CONTACT PERSON

Please contact Diann Wathington, Procurement Officer at (404) 612-1100 or by e-mail diann.wathington@fultoncountyga.gov, with any procedural or technical questions. All questions should be submitted in writing to the Purchasing contact person. Any responses made by the County will be provided in writing to all Bidders by addendum. No verbal responses shall be authoritative.

You must be registered in the County's AMS System in order for the Department of Purchasing & Contract Compliance to issue your company a Purchase Order or to receive payments. If you are not a registered vendor you may access and complete the vendor application via the County's Vendor Registration website (www.fultonvendorelfservice.co.fulton.ga.us). You must provide a copy of your current Business License in order to complete the vendor registration process.

If your company is a registered vendor, you can respond to all quotes online and in real time on this website.

3. PRODUCT/SERVICE SPECIFICATIONS

SECTION 1 – Steel Doors and Frames

PART 1 – GENERAL

1.1 SUMMARY

A. Section Includes:

1. Standard hollow metal doors and frames.

1.2 DEFINITIONS

- A. Minimum Thickness: Minimum thickness of base metal without coatings.
- B. Standard Hollow Metal Work: Hollow metal work fabricated according to ANSI/SDI A250.8.

1.3 SUBMITTALS

- A. Product Data: For each type of product indicated. Include construction details, material descriptions, core descriptions, fire-resistance rating and finishes.
- B. Shop Drawings: Include the following:
 - 1. Elevations of each door design.
 - 2. Details of doors, including vertical and horizontal edge details and metal thicknesses.
 - 3. Frame details for each frame type, including dimensioned profiles and metal thicknesses;
 - 4. Locations of reinforcement and preparations for hardware.
 - 5. Details of each different wall opening condition.
 - 6. Details of anchorages, joints, field splices, anti connections.
 - 7. Details of accessories.
 - 8. Details of moldings, removable stops, and glazing.
 - 9. Details of conduit and preparations for power, signal, and control systems.
- C. Samples for Initial Selection: For units with factory-applied color finishes
- D. Samples for Verification:
 - 1. For each type of exposed finish required, prepared on samples of not less than 3 by 5 inches.
 - 2. For the following items, prepared on Samples about 12 by 12 inches to demonstrate compliance with requirements for quality of materials and construction:
 - a. Doors: Show vertical-edge, top, and bottom construction; core construction; and hinge and other applied hardware reinforcement. Include separate section showing glazing if applicable.
 - b. Frames: Show profile, corner joint, and floor and wall anchors, and silencers. Include separate section showing fixed hollow metal panels and glazing if applicable.
- E. Other Action Submittals:
 - 1. Schedule: Provide a schedule of hollow metal work prepared by or under the supervision of supplier, using same reference

numbers for details and openings as those on Drawings.
Coordinate with door hardware schedule.

- F. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, for each type of hollow metal door and frame assembly.

1.4 QUALITY ASSURANCE

- A. Source Limitations: Obtain hollow metal work from single source from single manufacturer.
- B. Fire-Rated Door Assemblies: Assemblies complying with NFPA 80 that are listed and labeled by a qualified testing agency, for fire-protection ratings indicated, based on testing at as close to neutral pressure as possible according to NFPA 252.
 - 1. Temperature-Rise Limit At vertical exit enclosures and exit passageways, provide doors that have a maximum transmitted temperature end point of not more than 450 deg. F above ambient after 30 minutes of standard fire-test exposure.
- C. Smoke-Control Door Assemblies: Comply with NFPA 105.
- D. Pre-installation Conference: Conduct conference at Project site.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Deliver hollow metal; work palletized, wrapped, or crated to provide protection during transit and Project-site storage. Do not use non-ventilated plastic.
 - 1. Provide additional protection to prevent damage to finish of factory-finished units.
- B. Deliver welded frames with two removable spreader bars across bottom of frames, tack welded to jambs and mullions.
- C. Store hollow metal work under cover at Project site. Place in stacks of five units maximum in a vertical position with heads up, spaced by blocking, on minimum 4-inch high wood blocking. Do not store in a manner that traps excess humidity.
 - 1. Provide minimum 1/4-inch space between each stacked door to permit air circulation.

1.6 PROJECT CONDITIONS

- A. Field Measurements: Verify actual dimensions of openings by field measurements before fabrication.

1.7 COORDINATION

- A. For anchorages for hollow metal frames, furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors. Deliver such items to Project site in time for installation.

PART 2-PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the work include, but are not limited to, the following:

1. Amweld Building Products, ILC.
2. Benchmark; a division of Therma-Tru Corporation.
3. Ceco Door Products; an Assa Abloy Group company.
4. Curries Company; an Assa Abloy Group company.
5. Deansteel Manufacturing Company, Inc.
6. Firedoor Corporation.
7. Fleming Door Products Ltd.; an Assa Abloy Group company.
8. Habersham Metal Products Company.
9. Karpen Steel Custom Doors & Frames.
10. Kewanee Corporation (The).
11. Mesker Door, Inc.
12. Pioneer Industries, Inc.
13. Security Metal Products Corp.
14. Steelcraft; an Ingersoll-Rand company.
15. Windsor Republic Doors

2.2 MATERIALS

- A. Cold-Rolled Steel Sheet: ASTM A 1008/A 1008M, Commercial Steel (CS), Type B; suitable for exposed applications.
- B. Hot-Rolled Steel Sheet: ASTM A 1011/A 1011M, Commercial Steel (CS), Type B; free of scale, pitting, or surface defects; pickled and oiled.
- C. Metallic-Coated Steel Sheet: ASTM A 653/A 653M, Commercial Steel (CS), Type B; with minimum A60 metallic coating.
- D. Frame Anchors: ASTM A 591/A 591M, Commercial Steel (CS), 40Z coating designation; mill phosphatized.
1. For anchors built into exterior walls, steel sheet complying with ASTM A 1008/A 1008M or ASTM A 1011/A 1011M, hot-dip galvanized according to ASTM A 153/A 153M, Class B.
- E. Inserts, Bolts, and Fasteners: Hot-dip galvanized according to ASTM A 153/A 153M.
- F. Powder-Actuated Fasteners in Concrete: Fastener system of type

suitable for application indicated, fabricated from corrosion-resistant

materials, with clips or other accessory devices for attaching hollow metal frames of type indicated.

- F. Grout: ASTM C 476, except with a maximum slump of 4 inches, as measured according to ASTM C 143/C 143M.
- G. Mineral-Fiber Insulation: ASTM C 665, Type I (blankets without membrane facing); consisting of fibers manufactured from slag or rock wool with 6- to 12-lb/cu. ft. density; with maximum flame-spread and smoke-development indexes of 25 and 50, respectively; passing ASTM E 136 for combustion characteristics
- H. Glazing: Comply with requirements in Division 8 Section 08800.
- I. Bituminous Coating: Cold-applied asphalt mastic, SSPC-Paint 12, compounded for 1/5-mil dry film thickness per coat. Provide inert-type noncorrosive compound free of asbestos fibers, sulfur components, and other deleterious impurities.

2.3 STANDARD HOLLOW METAL DOORS

- A. General: Provide doors of design indicated, not less than thickness indicated; fabricated with smooth surfaces, without visible joints or seams on exposed faces unless otherwise indicated. Comply with ANS/SD1 A250.8.
 - 1. Design: Flush panel.
 - 2. Core Construction: Manufacturer's standard kraft-paper honeycomb, polystyrene, polyurethane, polyisocyanurate, mineral-board, or vertical steel-stiffener core.
 - a. Fire Door Core: As required to provide fire-protection and temperature-rise ratings indicated.
 - b. Thermal-Rated (Insulated) Doors: Where indicated, provide doors fabricated with thermal-resistance value (R-value) of not less than 6.0 deg F x h x sq./Btu when tested according to ASTM C 1363.
 - 1) Locations: Exterior doors and interior doors where indicated.
 - 3. Vertical Edges for Single-Acting Doors: Manufacturers standard.
 - a. Beveled Edge: 1/8 inch in 2 inches.
 - 4. Vertical Edges for Double-Acting Doors: Round vertical edges with 2-1/8-inch radius.
 - 5. Top and Bottom Edges: Closed with flush or inverted 0.042-inch-thick, end closures or channels of same material as face sheets.

6. Tolerances: Comply with SDI 117, Manufacturing Tolerances for Standard Steel Doors and Frames."

- B. Exterior Doors: Face sheets fabricated from metallic-coated steel sheet. Provide doors complying with requirements indicated below by referencing ANSI/SDI A250.8 for level and model and ANSI/SDI A250.4 for physical performance level:
 1. Level 2 and Physical Performance Level B (Heavy Duty), Model I (Full Flush).
 - a. Width: As indicated on Drawings.

- C. Interior Doors: Face sheets fabricated from cold-rolled steel sheet. Provide doors complying with requirements indicated below by referencing ANSI/SDI A250.8 for level and model and ANSI/SDI A250.4 for physical performance level:
 1. Level 2 and Physical Performance Level B (Heavy Duty), Model I (Full Flush).
 - a. Width: As indicated on Drawings.

- D. Hardware Reinforcement: Fabricate according to ANSI/SDI A250.6 with reinforcing plates from same material as door face sheets.

- E. Fabricate concealed stiffeners and hardware reinforcement from either cold- or hot-rolled steel sheet.

2.4 STANDARD HOLLOW METAL FRAMES

- A. General: Comply with ANSI/SDI A250.8 and with details indicated for type and profile.

- B. Exterior Frames: Fabricated from metallic-coated steel sheet.
 1. Fabricate frames with mitered or coped corners.
 2. Fabricate frames as face welded unless otherwise indicated.
 3. Frames for Level 2 Steel Doors; 0.053-inch- thick steel sheet.

- C. Interior Frames: Fabricated from cold-rolled steel sheet.
 1. Fabricate frames with mitered or coped corners.
 2. Fabricate frames as face welded unless otherwise indicated.
 3. Frames for Level 2 Steel Doors; 0.053-inch thick steel sheet.
 4. Frames for Wood Doors: 0.053-inch thick steel sheet.

- D. Hardware Reinforcement: Fabricate according to ANSI/SDI A2506 with reinforcement plates from same material as frames.

2.5 FRAME ANCHORS

A. Jamb Anchors:

1. Masonry Type: Adjustable strap-and-stirrup or T-shaped anchors to suit frame size, not less than 0.042 inch thick, with corrugated or perforated straps not less than 2 inches wide by 10 inches long; or wire anchors not less than 0.177 inch thick.
2. Stud-Wall Type: Designed to engage stud, welded to back of frames; not less than 0.042 inch thick.
3. Compression Type for Drywall Slip-on Frames: Adjustable compression anchors.
4. Post installed Expansion Type for In-Place Concrete or Masonry: Minimum 3/8-inch diameter bolts with expansion shields or inserts. Provide pipe spacer from frame to wall, with throat reinforcement plate, welded to frame at each anchor location.

B. Floor Anchors: Formed from same material as frames, not less than 0.042 inch thick, and as follows:

1. Monolithic Concrete Slabs: Clip-type anchors, with two holes to receive fasteners.
2. Separate Topping Concrete Slabs: Adjustable-type anchors with extension clips, allowing not less than 2-inch height adjustment. Terminate bottom of frames at finish floor surface.

2.6 HOLLOW METAL PANELS

A. Provide hollow metal panels of same materials, construction, and finish as specified for adjoining hollow metal work.

2.7 STOPS AND MOLDINGS

- A. Moldings for Glazed Lites in Doors: Minimum 0.032 inch thick, fabricated from same material as door face sheet in which they are installed.
- B. Fixed Frame Moldings: Formed integral with hollow metal frames, a minimum of 5/8 inch high unless otherwise indicated.
- C. Loose Stops for Glazed Lites in Frames: Minimum 0.032 inch thick, fabricated from same material as frames in which they are installed.
- D. Terminated Stops: Where indicated on interior door frames, terminate stops 6 inches above finish floor with a 90-degree angle cut, and close open end of stop with steel sheet closure. Cover opening in extension of frame with welded-steel filler plate, with welds ground smooth and flush with frame.
 1. Provide terminated stops where indicated.

2.8 LOUVERS

- A. Provide louvers for interior doors, where indicated, that comply with SDI 111 C, with blades or baffles formed of 0.020-inch- thick, cold-rolled steel sheet set into 0.032-inch- thick steel frame.
 - 1. Sight proof Louver: Stationary louvers constructed with inverted V-shaped or Y-shaped blades.
 - 2. Lightproof Louver: Stationary louvers constructed with baffles to prevent light from passing from one side to the other, any angle.
 - 3. Fire-Rated Automatic Louvers; Louvers constructed with movable blades closed by actuating fusible link, arid listed and labeled for use in fire-rated door assemblies of type and fire-resistance rating indicated by same testing and inspecting agency that established fire-resistance rating of door assembly.

2.9 ACCESSORIES

- A. Mullions and Transom Bars: Join to adjacent members by welding or rigid mechanical anchors.
- B. Ceiling Struts: Minimum 1/4-inch-thick by 1-inch- wide steel.
- C. Grout Guards: Formed from same material as frames, not less than 0.016 inches thick.

2.10 FABRICATION

- A. Fabricate hollow metal work to be rigid and free of defects, warp, or buckle. Accurately form metal to required sizes and profiles, with minimum radius for thickness of metal. Where practical, fit and assemble units in manufacturer's plant. To ensure proper assembly at Project site, clearly identify work that cannot be permanently factory assembled before shipment.
- B. Tolerances: Fabricate hollow metal work to tolerances indicated in SDI 117.
- C. Hollow Metal Doors:
 - 1. Exterior Doors: Provide weep-hole openings in bottom of exterior doors to permit moisture to escape. Seal joints in top edges of doors against water penetration.
 - 2. Glazed Lites: Factory cut openings in doors.
 - 3. Astragals: Provide overlapping astragal on one leaf of pairs of doors where required by NFPA 80 for fire-performance rating or where indicated. Extend minimum 3/4 inch beyond edge of door on which astragal is mounted.
- D. Hollow Metal Frames: Where frames are fabricated in sections due to shipping or handling limitations, provide alignment plates or angles at each joint, fabricated of same thickness metal as frames.

1. Welded Frames: Weld flush face joints continuously; grind, fill, dress, and make smooth, flush, and invisible.
 2. Transom Bar Frames: Provide closed tubular members with no visible face seams or joints, fabricated from same material as door frame. Fasten members at crossings and to jambs by butt welding.
 3. Provide countersunk, flat- or oval-head exposed screws and bolts for exposed fasteners unless otherwise indicated.
 4. Grout Guards: Weld guards to frame at back of hardware mortises in frames to be grouted.
 5. Floor Anchors: Weld anchors to bottom of jambs and mullions with at least four spot welds per anchor.
 6. Jamb Anchors; Provide number and spacing of anchors as follows:
 - a. Masonry Type: Locate anchors not more than 18 inches from top and bottom of frame. Space anchors not more than 32 inches o.c. and as follows:
 - 1) Two anchors per jamb up to 60 inches high.
 - 2) Three anchors per jamb from 60 to 90 inches high.
 - 3) Four anchors per jamb from 90 to 120 inches high.
 - 4) Four anchors per jamb plus 1 additional anchor per jamb for each 24 inches or fraction thereof above 120 inches high.
 - b. Compression Type: Not less than two anchors in each jamb.
 - c. Post installed Expansion Type: Locate anchors not more than 6 inches from top and bottom of frame, Space anchors not more than 26 inches o.c.
 7. Door Silencers: Except on weather-stripped doors, drill stops to receive door silencers as follows. Keep holes clear during construction.
 - a. Single-Door Frames: Drill stop in strike jamb to receive three door silencers.
 - b. Double-Door Frames: Drill stop in head jamb to receive two door silencers.
- E. Fabricate concealed stiffeners, edge channels, and hardware reinforcement from either cold- or hot-rolled steal sheet.
- F. Hardware Preparation: Factory prepare hollow metal work to receive templated mortised hardware; include cutouts, reinforcement, mortising, drilling, and tapping according to the Door Hardware Schedule and templates furnished as specified in Division 8 Section 'Door Hardware.'

1. Locate hardware as indicated, or if not indicated, according to ANSI/SDI A250.8.
 2. Reinforce doors and frames to receive non-templated, mortised and surface-mounted door hardware.
 3. Comply with applicable requirements in ANSI/SDI A250.6 and ANSI/DHI A115 Series specifications for preparation of hollow metal work for hardware.
 4. Coordinate locations of conduit and wiring boxes for electrical connections with Division 16 Sections.
- G. Stops and Moldings: Provide stops and moldings around glazed lites where indicated. Form corners of stops and moldings with butted or mitered hairline joints.
1. Single Glazed Lites: Provide fixed stops and moldings welded on secure side of hollow metal work.
 2. Multiple Glazed Lites: Provide fixed and -removable stops and moldings so that each glazed lite is capable of being removed independently.
 3. Provide fixed frame moldings on outside of exterior and on secure side of interior doors and frames.
 4. Provide loose stops and moldings on inside of hollow metal work.
 5. Coordinate rabbet width between fixed and removable stops with type of glazing and type of installation indicated.

2.11 STEEL FINISHES

- A. Prime Finish: Apply manufacturer's standard primer immediately after cleaning and pre-treating.
1. Shop Primer: Manufacturer's standard, fast-curing, lead- and chromate-free primer complying with ANSI/SDI A250.10 acceptance criteria; recommended by primer manufacturer for substrate compatible with substrate and field-applied coatings despite prolonged exposure.

PART 3-EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Examine roughing-in for embedded and built-in anchors to verify actual locations before frame installation.
- C. For the record, prepare written report, endorsed by Installer, listing conditions detrimental to performance of the Work.

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A steel stiffened metal door is significantly stronger.



So, at Mesker, we manufacture some of the industry's finest steel stiffened doors, because they were once innovative. But at Mesker, innovation never stops. So, if you want the strength of a steel stiffened door, consider our revolutionary, NVS seamless door, one of our newest innovations. Why?

Our NVS seamless door is lighter, stronger, and more attractive than a steel stiffened door, but it costs less.

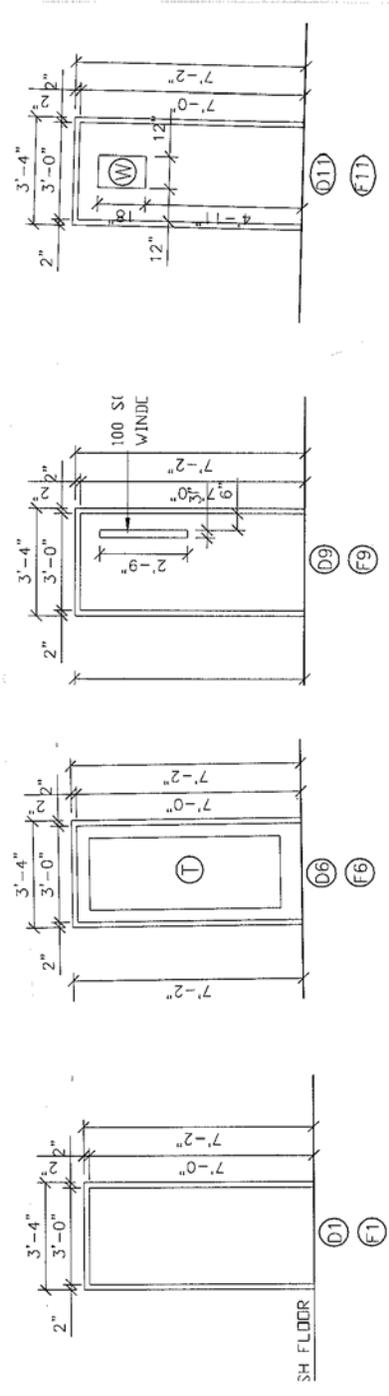
It's true. Stiffeners increase the weight of a steel door, putting significant pressure on the opening and sometimes making them difficult to open for seniors and children. The vertical stiffeners in a hollow metal door also mean that pressure on the corners or the sides of the door will cause it to twist. Last but not least, stiffeners are welded into a steel door every six inches which may result in blemishes on the surface.

But our fully welded seamless door does away with all of those disadvantages while saving you money. For more about our amazing NVS seamless doors, click on the link in the left

hand menu and visit [NVSDoor.com](#).

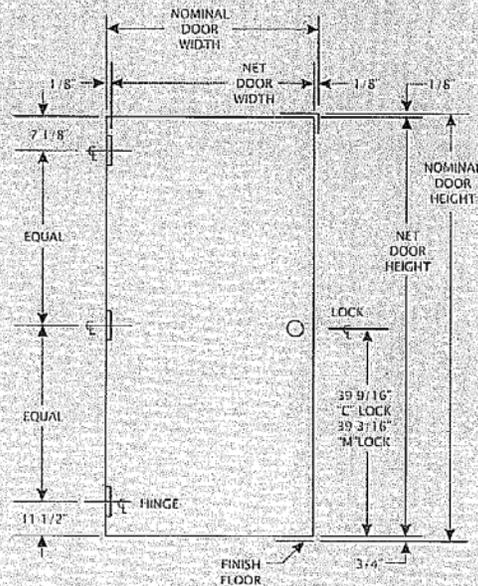
[Click to download a Tech Data Sheet.](#)

[Steel Stiffened Door](#)



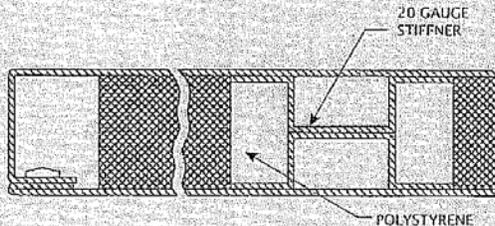
TECHNICAL DATA SHEET DS-105

STEEL STIFFENED DOOR (STIFFADOR) DOOR CONSTRUCTION



STANDARD DOOR WIDTHS	
NOMINAL DOOR WIDTHS	NET DOOR WIDTHS
2'-0"	23 3/4"
2'-4"	27 3/4"
2'-6"	29 3/4"
2'-8"	31 3/4"
3'-0"	35 3/4"
3'-4"	39 3/4"
3'-6"	41 3/4"
3'-8"	43 3/4"
3'-10"	45 3/4"
4'-0"	47 3/4"

STANDARD DOOR HEIGHTS	
NOMINAL DOOR HEIGHTS	NET DOOR HEIGHTS
6'-8"	79 1/8"
7'-0"	83 1/8"
7'-2"	85 1/8"
7'-10"	93 1/8"
8'-0"	95 1/8"



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January 2007

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FLUSH WOOD DOORS

PART 1- GENERAL

1.1 SUMMARY

A. Section Includes:

1. Solid-core doors with wood-veneer faces.
2. Factory fitting flush wood doors to frames and factory machining for hardware.

1.2 SUBMITTALS

A. Product Data: For each type of door indicated. Include details of core and edge construction and trim for openings.

B. Shop Drawings: Indicate location, size, and hand of each door elevation of each kind of door: construction details not covered in Product Data; location and extent of hardware blocking; and other pertinent data.

1. Indicate dimensions and locations of mortises and holes for hardware.
2. Indicate dimensions and locations of cutouts.
3. Indicate requirements for veneer matching.
4. Indicate doors to be factory finished and finish requirements.
5. Indicate fire-protection ratings for fire-rated doors.

C. Samples for Verification:

1. Corner sections of doors, approximately 8 by 10 inches, with door faces and edges representing actual materials to be used.
 - a. Provide samples for each species of veneer and solid lumber required.
 - b. Finish veneer-faced door samples with same materials proposed for factory finished doors.

D. Warranty: Sample of special warranty.

1.3 QUALITY ASSURANCE

A. Manufacturer Qualifications: A qualified manufacturer that is certified for chain of custody by an FSC-accredited certification body.

B. Source Limitations: Obtain flush wood doors from single manufacturer.

C. Quality Standard: In addition to requirements specified, comply with WDMA I.S.1-A, "Architectural Wood Flush Doors."

1. Provide WI-Certified Compliance Certificate indicating that doors comply with requirements of grades specified.

- D. Forest Certification: Provide doors made with all wood products obtained from forests certified by an FSC-accredited certification body to comply with FSC STD-01-001, "FSC Principles and Criteria for Forest Stewardship.
- E. Fire-Rated Wood Doors: Doors complying with NFPA 80 that are listed and labeled by a qualified testing agency, for fire-protection ratings indicated, based on testing at as close to neutral pressure as possible according to NFPA 252.
 - 1. Temperature-Rise Limit: At vertical exit enclosures and exit passageways, provide doors that have a maximum transmitted temperature end point of not more than 450 deg F above ambient after 30 minutes of standard fire-test exposure.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Comply with requirements of referenced standard and manufacturers written instructions.
- B. Package doors individually in plastic bags or cardboard cartons.
- C. Mark each door on top and bottom rail with opening number used on Shop Drawings.

1.5 PROJECT CONDITIONS

- A. Environmental Limitations: Do not deliver doors until spaces are enclosed and weather tight, wet work in spaces is complete and dry, and HVAC system is operating and maintaining ambient temperature and humidity conditions at occupancy levels during the remainder of the construction period.
- B. Environmental Limitations: Do not deliver or install doors until spaces are enclosed and weather tight, wet work in spaces is complete and dry, and HVAC system is operating and maintaining temperature between 60 and 90 deg F and relative humidity between 25 and 55 percent during the remainder of the construction period.

1.6 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace doors that fail in materials or workmanship within specified warranty period.
 - 1. Failures include, but are not limited to, the following:
 - a. Warping (bow, cup, or twist) more than 1/4 inch in a 42-by-84-inch section.
 - b. Telegraphing of core construction in face veneers exceeding 0.01 inch in a 3 inch span.
 - 2. Warranty shall also include installation and finishing that may be required due to repair or replacement of defective doors.

3. Warranty Period for Solid-Core Interior Doors: Life of installation.

PART 2- PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the work include, but are not limited to, the following:
1. Algoma Hardwoods, Inc.
 2. Ampco, Inc.
 3. Buell Door Company Inc.
 4. Chappell Door Co.
 5. Eagle Plywood & Door Manufacturing, Inc.
 6. Eggers Industries.
 7. Graham; an Assa Abloy Group company.
 8. Haley Brothers, Inc.
 9. Ideal Architectural Doors & Plywood.
 10. Ipik Door Company.
 11. Lambton Doors.
 12. Marlite.
 13. Marshfield Door Systems, Inc.
 14. Mohawk Flush Doors, Inc.; a Masonite company.
 15. Oshkosh Architectural Door Company.
 16. Poncraft Door Company.
 17. Vancouver Door Company.
 18. VT Industries Inc.

2.2 DOOR CONSTRUCTION, GENERAL

- A. Low-Emitting Materials: Provide doors made with adhesives and composite wood products that do not contain urea formaldehyde.
- B. WDMA I.S.1-A Performance Grade: Heavy Duty.
- C. WDMA I.S.1-A Performance Grade:
1. Heavy Duty unless otherwise indicated.
- D. Structural-Composite-Lumber-Core Doors:
1. Structural Composite Lumber: WDMA I.S.10.
 - a. Screw Withdrawal Pace: 700 lbf.
 - b. Screw Withdrawal, Edge: 400 lbf.
- E. Fire-Protection-Rated Doors: Provide core specified or mineral core as needed to provide fire protection rating indicated.
1. Edge Construction: Provide edge construction with in tumescent seals concealed by outer stile. Comply with specified requirements for exposed edges.

2. Pairs: Provide fire-retardant stiles that are listed and labeled for applications

indicated without formed-steel edges and astragals. Comply with specified requirements for exposed edges.

3. Pairs: Provide formed-steel edges and astragals.
 - a. Finish steel edges and astragals with baked enamel same color as doors.
 - b. Finish steel edges and astragals to match door hardware (locksets or exit devices).

F. Mineral-Core Doors:

1. Core: Noncombustible mineral product complying with requirements of referenced quality standard and testing and inspecting agency for fire-protection rating indicated.
2. Blocking: Provide composite blocking with improved screw-holding capability approved for use in doors of fire-protection ratings indicated as needed to eliminate through-bolting hardware:
 - a. 5-inch top-rail blocking.
 - b. 5-inch bottom-rail blocking, in doors indicated to have protection plates.
 - c. 5-inch mid-rail blocking, in doors indicated to have armor plates.
 - d. 4-1/2-by-10-inch lock blocks, in doors indicated to have exit devices.
3. Edge Construction: At hinge stiles, provide laminated-edge construction with improved screw-holding capability and split resistance. Comply with specified requirements for exposed edges.

2.3 VENEERED-FACED DOORS FOR TRANSPARENT FINISH

A. Interior Solid-Core Doors:

1. Grade: Custom Grade A faces.
2. Species: Select white birch.
3. Cut: Rotary cut.
4. Match between Veneer Leaves: Pleasing match.
5. Assembly of Veneer Leaves on Door Faces: Center-balance snatch.
6. Pair and Set Match: Provide for doors hung in same opening.
7. Room Match: Match door faces within each separate room or area of building. Corridor door faces do not need to match where they are separated by 20 feet or more.
8. Room Match: Provide door faces of compatible color and grain within each separate room or area of building.
9. Exposed Vertical and Top Edges: Applied wood edges of same species as faces and covering edges of cross bands.
10. Core: Glued wood stave.
11. Construction: Five plies. Stiles and rails are bonded to core, and then entire unit abrasive planed before veneering. Faces are bonded to core using a hot press.

12. WDMA I.S.1-A Performance Grade: Heavy Duty.

2.4 LOUVERS AND LIGHT FRAMES

- A. Wood Beads for Light Openings in Wood Doors: Provide manufacturer's standard wood beads as follows unless otherwise indicated.
 - 1. Wood Species: Same species as door faces.
 - 2. Profile: Manufacturer's standard shape.
 - 3. At wood-core doors with 20-minute fire-protection ratings, provide wood beads and metal glazing clips approved for such use.

- B. Wood-Veneered Beads for Light Openings in Fire-Rated Doors: Manufacturer's standard wood-veneered noncombustible beads matching veneer species of door faces and approved for use in doors of fire-protection rating indicated. Include concealed metal glazing clips where required for opening size and fire-protection rating indicated.

2.5 FABRICATION

- A. Factory fit doors to suit frame-opening sizes indicated. Comply with clearance requirements of referenced quality standard for fitting unless otherwise indicated.
 - 1. Comply with requirements in NFPA 80 for fire-rated doors.

- B. Factory machine doors for hardware that is not surface applied. Locate hardware to comply with DHI-WDHS-3. Comply with final hardware schedules, door frame Shop Drawings, DHI A115-W series standards, and hardware templates.
 - 1. Coordinate with hardware mortises in metal frames to verify dimensions and alignment before factory machining.
 - 2. Metal Astragals: Factory machine astragals and formed-steel edges for hardware for pairs of fire-rated doors.

- C. Openings: Cut and trim openings through doors in factory.
 - 1. Light Openings: Trim openings with moldings of material and profile indicated.
 - 2. Glazing: Factory install glazing in doors indicated to be factory finished. Comply with applicable requirements.
 - 3. Louvers: Factory install louvers in prepared Openings.

2.6 SHOP PRIMING

- A. Doors for Transparent Finish: Shop prime doors with stain (if required, other required pre-treatments and first coat of finish. Seal all four edges, edges of cutouts, and mortises with first coat of finish.

DOOR HARDWARE

PART 1 – GENERAL

1.1 SUMMARY

- A. This Section includes the following:
1. Commercial door hardware for the following:
 - a. Swinging doors
 - b. Other doors to the extent indicated.
 2. Cylinders for doors specified in other Section
- B. Installation: General types and approximate quantities of door hardware are indicated in the list of door hardware sets to provide a basis for the cost of installation and other Work that is part of the Contract Sum but not included in door hardware allowance.

1.2 SUBMITTALS

- A. Product Data: Include construction and installation details, material descriptions, dimensions of individual components and profiles, and finishes.
- B. Samples for Verification: Submit minimum Samples of each type of finish required, except primed finish.
- C. Maintenance Data: For each type of door hardware to include in maintenance manuals. Include final hardware and keying schedule.
- D. Warranty: Special warranty specified in this Section.
- E. Other Action Submittals:
1. Door Hardware Sets: Prepared by or under the supervision of Architectural Hardware Consultant, detailing fabrication and assembly of door hardware, as well as procedures and diagrams. Coordinate the final door hardware sets with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of door hardware.
 - a. Format: Comply with scheduling sequence and vertical format in DHI's "Sequence and Format for the Hardware Schedule." Double space entries, and number and date each page.
 - b. Content: Include the following information:
 - 1) Identification number, location, hand, fire rating, and material of each door and frame.
 - 2) Type, style, function, size, quantity, and finish of each door hardware item.
 - 3) Complete designations of every item required for each door or

opening including name and manufacturer.

- 4) Fastenings and other pertinent information.
 - 5) Location of each door hardware set, cross-referenced to Drawings, both on floor plans and in door and frame schedule.
 - 6) Explanation of abbreviations, symbols, and codes contained in schedule.
 - 7) Mounting locations for door hardware.
 - 8) Door and frame sizes and materials.
 - 9) List of related door devices specified in other Sections for each door and frame.
- c. Submittal Sequence: Submit initial draft of final schedule along with essential Product Data to facilitate the fabrication of other work that is critical in Project construction schedule. Submit the final door hardware sets after Samples, Product Data, coordination with Shop Drawings of other work, delivery schedules, and similar information has been completed and accepted.
2. Keying Schedule: Prepared by or under the supervision of Architectural Hardware Consultant detailing Owner's final keying instructions for locks. Include schematic keying diagram and index each key set to unique door designations.

1.3 QUALITY ASSURANCE

- A. Source Limitations: Obtain each type and variety of door hardware from a single manufacturer unless otherwise indicated.
- B. Fire-Rated Door Assemblies: Assemblies complying with NFPA 80 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire ratings indicated, based on testing according to NFPA 252,

Test Pressure: After 5 minutes into the test, neutral pressure level in furnace shall be established at 40 inches or less above the soil.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Inventory door hardware on receipt and provide secure lock-up for door hardware delivered to Project site.
- B. Tag each item or package separately with identification related to the final door hardware sets, and include basic installation instructions, templates, and necessary fasteners with each item or package.
- C. Templates: Distribute door hardware templates for doors, frames, and other work specified to be factory prepared for installing door hardware. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing door hardware to comply with indicated requirement.

1.5 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of door hardware that fails in materials or workmanship within specified warranty period.
 - 1. Failures include, but are not limited to, the following:
 - a. Structural failures including excessive deflection, cracking, or breakage.
 - b. Faulty operation of operators and door hardware.
 - c. Deterioration of metals, metal finishes, and other materials beyond normal weathering and use.
 - 2. Warranty Period: Two years from date of Substantial Completion, except as follows:
 - a. Exit Devices: Two years from date of Substantial Completion.
 - b. Manual Closers: 10 years from date of Substantial Completion.

1.6 MAINTENANCE SERVICE

- A. Maintenance Tools and Instructions: Furnish a complete set of specialized tools and maintenance instructions as needed for Owner's continued adjustment, maintenance, and removal and replacement of door hardware.

PART 2 – PRODUCTS

2.1 SCHEDULED DOOR HARDWARE

- A. General: Provide door hardware for each door to comply with requirements in this Section and door hardware sets indicated.
 - 1. Door Hardware Sets: Provide quantity, item, size finish or color indicated, and named manufacturers' products.
 - 2. Sequence of Operation: Provide electrified door hardware function, sequence of operation, and interface with other building control systems indicated.
- B. Designations: Requirements for design, grade, function, finish, size, and other distinctive qualities of each type of door hardware are indicated in Part 3 "Door Hardware Sets" Article. Products are identified by using door hardware designations, as follows:
 - 1. References to I3HMA Standards: Provide products complying with these standards and requirements for description, quality, and function.
- C. In other Part 2 articles where titles below introduce lists, the following requirements apply to product selection:

1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, manufacturers specified.

2. Manufacturers: Subject to compliance with requirements, provide products by the manufacturers specified.

2.2 HINGES, GENERAL

- A. Quantity: Provide the following, unless otherwise indicated:
 1. Two Hinges: For doors with heights up to 60 inches.
 2. Three Hinges: For doors with heights 61 to 90 inches.
 3. Four Hinges: For doors with heights 91 to 120 inches.
 4. For doors with heights more than 120 inches, provide 4 hinges, plus 1 hinge for every 30 inches of door height greater than 120 inches.
- B. Template Requirements: Except for hinges and pivots to be installed entirely (both leaves) into wood doors and frames, provide only template-produced units.
- C. Hinge Weight: Unless otherwise indicated, provide the following:
 1. Doors with Closers: Antifriction-bearing hinges.
 2. Interior Doors: Standard-weight hinges.
- D. Hinge Base Metal: Unless otherwise indicated, provide the following:
 1. Exterior Hinges: Stainless steel, with stainless-steel pin
 2. Interior Hinges: Steel, with steel pin
 3. Hinges for Fire-Rated Assemblies: Steel, with steel pin
- E. Hinge Options: Where indicated in door hardware sets or on Drawings:
 1. Non-removable Pins: Provide set screw in hinge barrel that, when tightened into a groove in hinge pin, prevents removal of pin while door is closed; for out swinging exterior doors
 2. Corners: Square
- F. Fasteners: Comply with the following:
 1. Machine Screws: For metal doors and frames. Install into drilled and tapped holes.
 2. Wood Screws: For wood doors and frames.
 3. Threaded to the Head Wood Screws: For fire-rated wood doors.
 4. Screws: Phillips flat-head; machine screws (drilled and tapped holes) for metal doors wood screws for wood doors and frames
Finish screw heads to match surface of hinges.

2.3 HINGES

- A. Butts and Hinges: BUMA A156.1. Listed under Category A in BHMA's "Certified Product Directory."
- B. Template Hinge Dimensions: BHMA A156.7.

C. Manufacturers:

1. Hager Companies (HAG).
2. McKinney Products Company; an ASSA ABLOY Group Company
3. Stanley Commercial Hardware; Div. of the Stanley Works (STH).
1. Ives(IVE)

2.4 SPRING HINGES

A. Self-Closing Hinges: BHMA A156.17 Listed under Category A in BHMA's "Certified Product Directory."

B. Manufacturers:

1. Bommer Industries, Inc. (BI).
2. Hager Companies (HAG).
3. McKinney Products Company; an ASSA ABLOY Group Company (MCK)
4. Stanley Commercial Hardware; Div. of the Stanley Works (STH).
5. Ives(IVE)

2.5 CONTINUOUS HINGES

A. General: Minimum 0.120 inch thick, hinge leaves with minimum overall width of 4 inches; fabricated to full height of door and frame and to template screw locations; with components finished after milling and drilling are complete.

1. Fire Pins: Steel pins to hold labeled fire doors in place if required by tested listing.

B. Continuous, Gear-Type Hinges: Extruded-aluminum, pinless, geared hinge leaves; joined by a continuous extruded-aluminum channel cap; with concealed, self-lubricating thrust bearings.

1. Manufacturer
 - a. Pemko Manufacturing Co. (PEM).
 - b. Select Products Limited (SPL).
 - c. Zero International (ZRO).
 - d. Ives(WE)

2.6 LOCKS AND LATCHES, GENERAL

A. Accessibility Requirements: Where indicated to comply with accessibility requirements, comply with the U.S. Architectural & Transportation Barriers Compliance Board's "Americans with Disabilities Act (ADA).

1. Provide operating devices that do not require tight grasping, pinching, or twisting of the wrist and that operate with a force of not more than 5 lbf.

- B. Latches and Locks for Means of Egress Doors: Comply with NFPA 101. Latches shall not require more than 15 lbf to release the latch. Locks shall not require use of a key, tool, or special knowledge for operation.
 - 1. Dummy Trim: Match lock trim and escutcheons.
 - 2. Lockset Designs: Schlage 93A

- C. Lock Throw: Comply with testing requirements for length of bolts required for labeled fire doors, and as follows:
 - 1. Mortise Locks: Minimum 3/4-inch latch bolt throw.
 - 2. Deadbolts: Minimum 1-inch bolt throw.

- D. Backset: 2-3/4 inches, unless otherwise indicated.

- E. Strikes: Manufacturer's standard strike with strike box for each latch bolt or lock bolt, with curved lip extended to protect frame, finished to match door hardware set, and as follows:

2.7 MECHANICAL LOCKS AND LATCHES

- A. Lock Functions: Function numbers and descriptions indicated in door hardware sets comply with the following:
 - 1. Mortise Locks: BHMA A156

- B. Mortise Locks: Stamped steel case with steel or brass parts; BHMA A156.13 Grade 1.
 - 1. Manufacturers:
 - a. Best Access Systems; Div. of the Stanley Works WAS) to conform to County's standard locks.

2.8 AUXILIARY LOCKS AND LATCHES

- A. Auxiliary Locks: BHMA A156.5 Grade 1.
 - 1. Manufacturers:
 - a. Best Access Systems; Div. of the Stanley Works WAS) to conform to County's standard locks.

2.9 DOOR BOLTS

- A. Bolt Throw: Comply with testing requirements for length of bolts required for labeled fire doors, and as follows
 - 1. Fire-Rated Surface Bolts: Minimum 1-inch throw; listed and labeled for fire-rated doors.
 - 2. Mortise Flush Bolts: Minimum 3/4-inch throw.

B. Dustproof Strikes: BHMA A156.16, Grade 1.

- C. Manual Flush Bolts: BEIMA A156.16, Grade I designed for mortising into door edge.
 - 1. Manufacturers:
 - a. Door Controls International (DCI).
 - b. Glynn-Johnson; an Ingersoll-Rand Company (GJ).
 - c. Hager Companies (HAG).
 - d. IVES Hardware; an Ingersoll-Rand Company (IVS).

- D. Automatic and Self-Latching Flush Bolts: BHMA A156.3, Grade 1 designed for mortising into door edge.
 - 2. Manufacturers:
 - a. Door Controls International (DCI).
 - b. Glyne-Johnson; an Ingersoll-Rand Company (GJ).
 - c. Hager Companies (HAG).
 - d. IVES Hardware; an Ingersoll-Rand Company (IVE).

2.10 EXIT DEVICES

- A. Exit Devices: BHMA A156. Grade I

- B. Accessibility Requirements: Where handles, pulls, latches, locks, and other operating devices are indicated to comply with accessibility requirements, comply with the US. Architectural & Transportation Barriers Compliance Board's "Americans with Disabilities Act (ADA), Accessibility Guidelines for Buildings and Facilities (ADAAG)."
 - 1. Provide operating devices that do not require tight grasping, pinching, or twisting of the wrist and that operate with a force of not more than 5 lbf.

- C. Exit Devices for Means of Egress Doors: Comply with NFPA 101. Exit devices shall not require more than 15 lbf to release the latch. Locks shall not require use of a key, tool, or special knowledge for operation.

- D. Panic Exit Devices: Listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for panic protection, based on testing according to UL 305.

- E. Fire Exit Devices: Devices complying with NFPA 80 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire and panic protection, based on testing according to UL 305 and NFPA 252.

- F. Removable Mullions: BHMA A156.3.

- G. Outside Trim: material and finish to match locksets, unless otherwise indicated.

1. Match design for locksets and latch sets, unless otherwise indicated.

H. Through Bolts: For exit devices and trim.

2.11 LOCK CYLINDERS

- A. Standard Lock Cylinders: BHMA A156.5, Grade 2.
- B. Cylinders: Manufacturer's standard tumbler type, constructed from brass or bronze, stainless steel, or nickel silver, and complying with the following:
 1. Number of Pins: Six
 2. Mortise Type: Threaded cylinders with rings and straight- or clover-type cam.
 3. Rim Type: Cylinders with back plate, flat-type vertical or horizontal tailpiece, and raised trim ring.
- C. Permanent Cores: Manufacturer's standard; finish face to match lockset; complying with the following:
- D. Construction Keying: Comply with the following:
 1. Construction Master Keys: Provide cylinders with feature that permits voiding of construction keys without cylinder removal. Provide 10 construction master keys.
- E. Manufacturers:
 1. Best Access Systems; Div. of The Stanley Works (.BAS) to conform to County's standard cores.

2.12 KEYING

- A. Keying System; Factory registered, complying with guidelines in BHMA A156.28, Appendix A. Incorporate decisions as follows:
 1. Master Key System: Cylinders are operated by a change key and a master key.
- B. Keys: Nickel silver.
 1. Stamping: Permanently inscribe each key with a visual key control number.
 2. Quantity: In addition to one extra key blank for each lock, provide the following:
 - a. Cylinder Change Keys: Three.
 - b. Master Keys: Five.

2.13 KEY CONTROL SYSTEM

- A. Key Control Cabinet: BHMA A156.5, Grade I; metal cabinet with baked-enamel finish; containing key-holding hooks, labels, 2 sets of key tags with self-locking key holders, key gathering envelopes, and temporary and permanent markers; with key capacity of 20 keys.
 - 1. Wall-Mounted Cabinet: Cabinet with hinged-panel door equipped with key-holding panels and pin-tumbler cylinder door lock.
- B. Cross-Index System: Multiple-index system for recording key information. Include three receipt forms for each key-holding hook. Set up by Owner.

Manufacturers:

- a. Key Control Systems, The. (KCS).
- b. Lund Equipment Co., Inc. (LUN).
- c. MMF Industries (MMF).
- d. Sunroc Corporation (SUN).Key Lock Boxes:
- e. Knox Company (KNX).

2.14 CLOSERS

- A. Accessibility Requirements: Where handles, pulls, latches, locks, and other operating devices are indicated to comply with accessibility requirements, comply with the U.S. Architectural & Transportation Barriers Compliance Board's "Americans with Disabilities Act."
 - 1. Comply with the following maximum opening-force requirements:
 - a. Interior, Non-Fire-Rated Hinged Doors: 5 lbf applied perpendicular to door.
 - b. Sliding or Folding Doors: 5 lbf applied parallel to door at latch.
 - c. Fire Doors: Minimum opening force allowable by authorities having jurisdiction.
- B. Door Closers for Means of Egress Doors: Comply with NFPA 101. Door closers shall not require more than 30 lbf to set door in motion and not more than 15 lbf to open door to minimum required width.
- C. Size of Units: Unless otherwise indicated, comply with manufacturer's written recommendations for size of door closers depending on size of door, exposure to weather, and anticipated frequency of use. Provide factory-sized closers, adjustable to meet field conditions and requirements for opening force.
- D. Surface Closers: BIIMA A156.4, Grade 1 Provide type of arm required for closer to be located on non-public side of door, unless otherwise indicated.

Manufacturers:

- a. Corbin Russwin Architectural Hardware; an ASSA ABLOY Group company

- b. LCN Closers; an Ingersoll-Rand Company (LCN).
- c. Norton Door Controls; an ASSA ABLOY Group company (NDC).

- d. SARGENT Manufacturing Company; an ASSA ABLOY Group company (SOT).

E. Coordinators: BHMA A156.3.

2.15 PROTECTIVE TRIM UNITS

- A. Size: 1-1/2 inches less than door width on push side and 1/2 inch less than door width on pull side, by height specified in door hardware sets.
- B. Fasteners: Manufacturers standard machine or self-tapping screws.
- C. Metal Protective Trim Units: BHMA A 156.6; beveled top and 2 sides; fabricated from the following material:
 - 1. Material: 0.050-inch- thick stainless steel
 - 2. Manufacturers:
 - a. Baldwin Hardware Corporation (BH).
 - b. Burns Manufacturing Incorporated (EM)
 - c. Hager Companies (HAG)
 - d. IVES Hardware; an Ingersoll-Rand Company (P18).
 - e. Rockwood Manufacturing Company (RM)

2.16 STOPS AND HOLDERS

- A. Stops and Bumpers: BRMA A156.16, Grade 1
 - 1. Provide floor stops for doors unless wall or other type stops are scheduled or indicated. Do not mount floor stops where they will impede traffic. Where floor or wall stops are not appropriate, provide overhead holders
- B. Mechanical Door Holders: BHMAA1S6.16, Grade 1.
- C. Silencers for Metal Door Frames: BHMA A156.16, Grade 1; neoprene or rubber, minimum diameter 1/2 inch; fabricated for drilled-in application to frame.
- D. Manufacturers:
 - 1. Baldwin Hardware Corporation (BH).
 - 2. Glynn-Johnson; an Ingersoll-Rand Company (GJ).
 - 3. Hager Companies (HAG)
 - 4. IVES Hardware; an Ingersoll-Rand Company (IVS).
 - 5: Rockwood-Manufacturing Company (RM)

2.17 DOOR GASKETING

- A. Standard: BHMA A15 6.22. Listed under Category I in BHMA's "Certified Product Directory"
- B. General: Provide continuous weather-strip gasketing on exterior doors and

provide smoke, light, or sound gasketing on interior doors where indicated or scheduled. Provide noncorrosive fasteners for exterior applications and elsewhere as indicated.

1. Perimeter Gasketing: Apply to head and jamb, forming seal between door and frame.
 2. Meeting Stile Gasketing: Fasten to meeting stiles, forming seat when doors are closed.
 3. Door Bottoms: Apply to bottom of door, forming seal with threshold when door is closed.
- C. Air Leakage: Not to exceed 0.50 cftn per foot of crack length for gasketing other than for smoke control, as tested according to ASTM B 283.
- D. Smoke labeled Gasketing: Assemblies complying with NFPA 105 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for smoke control ratings indicated, based on testing according to UL 1784.
1. Provide smoke-labeled gasketing on 20 minute rated doors and on smoke-labeled doors.
- E. Fire-Labeled Gasketing: Assemblies complying with NFPA 80 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire ratings indicated, based on testing according to NFPA 252.
1. Test Pressure: After 5 minutes into the test, neutral pressure level in furnace shall be established at 40 inches or less above the sill
- F. Replaceable Seal Strips: Provide only those units where resilient or flexible seal strips are easily replaceable and readily available from stocks maintained by manufacturer.
- G. Gasketing Materials: ASTM D 2000) and AAMA 701/702.
- H. Manufacturers:
1. Hager Companies (HAG).
 2. National Guard Products (NGP).
 3. Pemko Manufacturing Co. (PEM).
 4. Reese Enterprises (RE).

2.18 TIRESHOLDS

- A. Standard: BHMA A156.21. Listed wider Category J in BHMA's "Certified Product Directory."

- B. Accessibility Requirements: Where thresholds are indicated to comply with accessibility requirements, comply with the U.S. Architectural & Transportation Barriers Compliance Board's "Americans with Disabilities Act (ADA).
 - 1. Bevel raised thresholds with a slope of not more than 1:2. Provide thresholds not more than 1 1/2 inches high.
- C. Thresholds for Means of Egress Doors: Comply with NFPA 101. Maximum 1/2 inch high.
- D. Manufacturers:
 - 1. Hager Companies (HAG).
 - 2. National Guard Products (NOP).
 - 3. Pemko Manufacturing Co. (PF.M).
 - 4. Reese Enterprises (RE).

2.19 MISCELLANEOUS DOOR HARDWARE

- A. Boxed Power Supplies: Modular unit in NEMA ICS 6, Type 4 enclosure; filtered and regulated; voltage rating and type matching requirements of door hardware served; and listed and labeled for use with fire alarm systems.
- B. Auxiliary Hardware: BHMA A156.16, Grade 1.
 - 1. Manufacturers:
 - a. Baldwin Hardware Corporation (BR).
 - b. Rockwood Manufacturing Company (RM).
 - c. Stanley Commercial Hardware Div. of The Stanley Works (Sm).
 - d. Ives

2.20 FABRICATION

- A. Manufacturer's Nameplate: Do not provide products that have manufacturer's name or trade name displayed in a visible location except in conjunction with required fire-rated labels and as otherwise approved by Construction Manager.
 - 1. Manufacturer's identification is permitted on rim of lock cylinders only.
- B. Base Metals: Produce door hardware units of base metal, fabricated by forming method indicated, using manufacturer's standard metal alloy, composition, temper, and hardness. Furnish metals of a quality equal to or greater than that of specified door hardware units and BHMA A156.18. Do not furnish manufacturer's standard materials or forming methods if different from specified standard.
- C. Fasteners: Provide door hardware manufactured to comply with published templates generally prepared for machine, wood, and sheet metal screws. Provide screws according to commercially recognized industry standards for application intended, except aluminum fasteners are not permitted. Provide Phillips flat-head screws with finished heads to match surface of door hardware, unless otherwise indicated.

1. Concealed Fasteners: For door hardware units that are exposed when door is closed, except for units already specified with concealed fasteners. Do not use through bolts for installation where bolt head or nut on opposite face is exposed unless it is the only means of securely attaching the door hardware. Where through bolts are used on hollow door and frame construction, provide sleeves for each through bolt.
2. Steel Machine or Wood Screws for the following fire-rated applications:
 - a. Mortise hinges to doors.
 - b. Strike plates to frames.
 - c. Closers to doors and frame
3. Fasteners for Wood Doors: Comply with requirements in DHI WDHS.2, "Recommended Fasteners for Wood Doors."

2.21 FINISHES

- A. Standard: BHMA A 156.18, as indicated in door hardware sets.
- B. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
- C. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in the same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

PART 3-EXECUTION

3.1 EXAMINATION

- A. Examine doors and frames, with Installer present, for compliance with requirements for installation tolerances, labeled fire door assembly construction, wall and floor construction, and other conditions affecting performance.

4. PRICING SHEET

<u>LINE</u>	<u>DESCRIPTION</u>	<u>TOTAL UNIT PRICE</u>
1	Doors, Door Frames & Hardware	\$ _____

Please price lump sum.