

**SECTION 08 11 13
HOLLOW METAL DOORS AND FRAMES**

PART 1 - GENERAL

1.1 DESCRIPTION

- A. This section specifies steel doors, steel frames and related components.
- B. Terms relating to steel doors and frames as defined in ANSI A123.1 and as specified.

1.2 RELATED WORK

- A. Door Hardware: Section 08 71 00, DOOR HARDWARE.

1.3 TESTING

An independent testing laboratory shall perform testing.

1.4 SUBMITTALS

- A. Submit in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.
- B. Manufacturers Literature and Data:
 - 1. Fire rated doors and frames, showing conformance with NFPA 80 and Underwriters Laboratory, Inc., or Intertek Testing Services or Factory Mutual fire rating requirements.
 - 2. Sound rated doors, including test report from Testing Laboratory.

1.5 SHIPMENT

- A. Prior to shipment label each door and frame to show location, size, door swing and other pertinent information.
- B. Fasten temporary steel spreaders across the bottom of each door frame.

1.6 STORAGE AND HANDLING

- A. Store doors and frames at the site under cover.
- B. Protect from rust and damage during storage and erection until completion.

1.7 APPLICABLE PUBLICATIONS

- A. Publications listed below form a part of this specification to the extent referenced. Publications are referenced in the text by the basic designation only.
- B. Federal Specifications (Fed. Spec.):
 - L-S-125B.....Screening, Insect, Nonmetallic
- C. Door and Hardware Institute (DHI):
 - A115 Series.....Steel Door and Frame Preparation for Hardware, Series A115.1 through A115.17 (Dates Vary)

- D. Steel Door Institute (SDI):
 - 113-01.....Thermal Transmittance of Steel Door and Frame Assemblies
 - 128-1997.....Acoustical Performance for Steel Door and Frame Assemblies
 - A250.8-03.....Standard Steel Doors and Frames
- E. American Society for Testing and Materials (ASTM):
 - A167-99(R2004).....Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet, and Strip
 - A568/568-M-07.....Steel, Sheet, Carbon, and High-Strength, Low-alloy, Hot-Rolled and Cold-Rolled
 - A1008-08.....Steel, sheet, Cold-Rolled, Carbon, Structural, High Strength Low Alloy and High Strength Low Alloy with Improved Formability
 - B209/209M-07.....Aluminum and Aluminum-Alloy Sheet and Plate
 - B221/221M-08.....Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles and Tubes
 - D1621-04.....Compressive Properties of Rigid Cellular Plastics
 - D3656-07.....Insect Screening and Louver Cloth Woven from Vinyl Coated Glass Yarns
 - E90-04.....Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions
- F. The National Association Architectural Metal Manufacturers (NAAMM):
 - Metal Finishes Manual (1988 Edition)
- G. National Fire Protection Association (NFPA):
 - 80-09.....Fire Doors and Fire Windows
- H. Underwriters Laboratories, Inc. (UL):
 - Fire Resistance Directory
- I. Intertek Testing Services (ITS):
 - Certifications Listings...Latest Edition
- J. Factory Mutual System (FM):
 - Approval Guide

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Stainless Steel: ASTM A167, Type 302 or 304; finish, NAAMM Number 4.
- B. Sheet Steel: ASTM A1008, cold-rolled for panels (face sheets) of doors.

- C. Anchors, Fastenings and Accessories: Fastenings anchors, clips connecting members and sleeves from zinc coated steel.
- E. Aluminum Sheet: ASTM B209/209M.
- F. Aluminum, Extruded: ASTM B221/221M.
- G. Prime Paint: Paint that meets or exceeds the requirements of A250.8.

2.2 FABRICATION GENERAL

A. GENERAL:

1. Follow SDI A250.8 for fabrication of standard steel doors, except as specified otherwise. Doors to receive hardware specified in Section 08 71 00, DOOR HARDWARE. Tolerances as per SDI A250.8. Thickness, 44 mm (1-3/4 inches), unless otherwise shown.
2. Close top edge of exterior doors flush and seal to prevent water intrusion.
3. When vertical steel stiffeners are used for core construction, fill spaces between stiffeners with mineral fiber insulation.

B. Standard Duty Doors: SDI A250.8, Level 1, Model 2 of size and design shown. Use for interior locations only.

C. Smoke Doors:

1. Close top and vertical edges flush.
2. Provide seamless vertical edges.
3. Apply Steel astragal to the meeting stile at the active leaf of pair of doors or double egress doors.
4. Provide clearance at head, jamb and sill as specified in NFPA 80.

D. Fire Rated Doors (Labeled):

1. Conform to NFPA 80 when tested by Underwriters Laboratories, Inc., Inchcape Testing Services, or Factory Mutual for the class of door or door opening shown.
2. Fire rated labels of metal, with raised or incised markings of approving laboratory shall be permanently attached to doors.
3. Close top and vertical edges of doors flush. Vertical edges shall be seamless. Apply steel astragal to the meeting stile of the active leaf of pairs of fire rated doors, except where vertical rod exit devices are specified for both leaves swinging in the same direction.
4. Construct fire rated doors in stairwell enclosures for maximum transmitted temperature rise of 230 °C (450 °F) above ambient temperature at end of 30 minutes of fire exposure when tested in accordance with ASTM E152.

E. Sound Rated Doors:

1. SDI 114, except as specified otherwise.
2. Sound Transmission Class minimum of 45 when tested in accordance with ASTM E90.
3. Doors complete with integral spring type automatic door bottom seal and with integral continuous gaskets on the frames. Applied spring type automatic door bottom seal and applied continuous gaskets for the frames for doors that are not sound rated but sealed for flanking noises are specified in Section 08 71 00, DOOR HARDWARE.
4. Fabricate vision panels to receive double glazing where shown.

2.3 METAL FRAMES

A. General:

1. SDI A250.8, 1.3 mm (0.053 inch) thick sheet steel, types and styles as shown or scheduled.
2. Frames for labeled fire rated doors.
 - a. Comply with NFPA 80. Test by Underwriters Laboratories, Inc., Inchcape Testing Services, or Factory Mutual.
 - b. Fire rated labels of approving laboratory permanently attached to frames as evidence of conformance with these requirements. Provide labels of metal or engraved stamp, with raised or incised markings.
3. Frames for doors specified to have automatic door operators; Security doors (Type 36); service window: minimum 1.7 mm (0.067 inch) thick.
4. Knocked down frames are not acceptable.

B. Reinforcement and Covers:

1. SDI A250.8 for, minimum thickness of steel reinforcement welded to back of frames.

C. Terminated Stops: SDI A250.8.

D. Glazed Openings:

1. Integral stop on corridor, or secure side of door.
2. Design rabbet width and depth to receive glazing material or panel shown or specified.

E. Two piece frames:

1. One piece unequal leg finished rough buck sub-frames as shown, drilled for anchor bolts.

2. Unequal leg finished frames formed to fit subframes and secured to subframe legs with countersunk, flat head screws, spaced 300 mm (12 inches) on center at head and jambs on each side.
3. Preassemble at factory for alignment.

F. Frame Anchors:

1. Floor anchors:

- a. Where floor fills occur, provide extension type floor anchors to compensate for depth of fill.
- b. At bottom of jamb use 1.3 mm (0.053 inch) thick steel clip angles welded to jamb and drilled to receive two 6 mm (1/4 inch) floor bolts. Use 50 mm x 50 mm (2 inch by 2 inch) 9 mm by (3/8 inch) clip angle for lead lined frames, drilled for 9 mm (3/8 inch) floor bolts.
- c. Where mullions occur, provide 2.3 mm (0.093 inch) thick steel channel anchors, drilled for two 6 mm (1/4 inch) floor bolts and frame anchor screws.
- d. Where sill sections occur, provide continuous 1 mm (0.042 inch) thick steel rough bucks drilled for 6 mm (1/4 inch) floor bolts and frame anchor screws. Space floor bolts at 50 mm (24 inches) on center.

2. Jamb anchors:

- a. Locate anchors on jambs near top and bottom of each frame, and at intermediate points not over 600 mm (24 inches) apart, except for fire rated frames space anchors as required by labeling authority.
- b. Form jamb anchors of not less than 1 mm (0.042 inch) thick steel unless otherwise specified.
- c. Anchors set in masonry: Use adjustable anchors designed for friction fit against the frame and for extension into the masonry not less than 250 mm (10 inches). Use one of following type:
 - 1) Wire loop type of 5 mm (3/16 inch) diameter wire.
 - 2) T-shape or strap and stirrup type of corrugated or perforated sheet steel.
- d. Anchors for stud partitions: Either weld to frame or use lock-in snap-in type. Provide tabs for securing anchor to the sides of the studs.
- e. Anchors for frames set in prepared openings:

- 1) Steel pipe spacers with 6 mm (1/4 inch) inside diameter welded to plate reinforcing at jamb stops or hat shaped formed strap spacers, 50 mm (2 inches) wide, welded to jamb near stop.
 - 2) Drill jamb stop and strap spacers for 6 mm (1/4 inch) flat head bolts to pass thru frame and spacers.
 - 3) Two piece frames: Subframe or rough buck drilled for 6 mm (1/4 inch) bolts.
- f. Anchors for observation windows and other continuous frames set in stud partitions.
- 1) In addition to jamb anchors, weld clip anchors to sills and heads of continuous frames over 1200 mm (4 feet) long.
 - 2) Anchors spaced 600 mm (24 inches) on centers maximum.
- g. Modify frame anchors to fit special frame and wall construction and provide special anchors where shown or required.

2.4 SHOP PAINTING

SDI A250.8.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Plumb, align and brace frames securely until permanent anchors are set.
1. Use triangular bracing near each corner on both sides of frames with temporary wood spreaders at midpoint.
 2. Use wood spreaders at bottom of frame if the shipping spreader is removed.
 3. Protect frame from accidental abuse.
 4. Where construction will permit concealment, leave the shipping spreaders in place after installation, otherwise remove the spreaders after the frames are set and anchored.
 5. Remove wood spreaders and braces only after the walls are built and jamb anchors are secured.
- B. Floor Anchors:
1. Anchor the bottom of door frames to floor with two 6 mm (1/4 inch) diameter expansion bolts. Use 9 mm (3/8 inch) bolts on lead lined frames.
 2. Power actuated drive pins may be used to secure frame anchors to concrete floors.
- C. Jamb Anchors:

1. Anchors in masonry walls: Embed anchors in mortar. Fill space between frame and masonry wall with grout or mortar as walls are built.
 2. Coat frame back with a bituminous coating prior to lining of grout filling in masonry walls.
 3. Secure anchors to sides of studs with two fasteners through anchor tabs. Use steel drill screws to steel studs.
 4. Frames set in prepared openings of masonry or concrete: Expansion bolt to wall with 6 mm (1/4 inch) expansion bolts through spacers. Where subframes or rough bucks are used, 6 mm (1/4 inch) expansion bolts on 600 mm (24 inch) centers or power activated drive pins 600 mm (24 inches) on centers. Secure two piece frames to subframe or rough buck with machine screws on both faces.
- D. Install anchors for labeled fire rated doors to provide rating as required.
- E. Frames for Sound Rated Doors: Coordinate to line frames for sound rated doors with insulation.
- F. Overhead Bracing (Lead Lined Frames): Where jamb extensions extend to structure above, anchor clip angles with not less than two, 9 mm (3/8 inch) expansion bolts or power actuated drive pins to concrete slab. Weld to steel overhead members.

3.2 INSTALLATION OF DOORS AND APPLICATION OF HARDWARE

Install doors and hardware as specified in Sections Section 08 11 13, HOLLOW METAL DOORS AND FRAMES Section 08 14 00, INTERIOR WOOD DOORS and Section 08 71 00, DOOR HARDWARE.

- - - E N D - - -

Renovate Ward 5 East
Charles George VA Medical Center
Asheville, NC

VA Project Number 637-11-119

INTENTIONALLY LEFT BLANK

SECTION 08 14 00
INTERIOR WOOD DOORS
REVISED 1-25-13

PART 1 - GENERAL

1.1 DESCRIPTION

- A. This section specifies interior flush doors and stile and rail doors with prefinish, prefit option.
- B. Section includes fire rated doors, sound retardant doors, and smoke, doors.

1.2 RELATED WORK

- A. Metal door frames: Section 08 11 13, HOLLOW METAL DOORS AND FRAMES.
- B. Door hardware including hardware location (height): Section 08 71 00, DOOR HARDWARE.
- C. Installation of doors and hardware: Section 08 11 13, HOLLOW METAL DOORS AND FRAMES, Section 08 14 00, INTERIOR WOOD DOORS, or Section 08 71 00, DOOR HARDWARE.
- D. Glazing and ballistic rated glazing: Section 08 80 00, GLAZING.
- E. Finish: Section 09 06 00, SCHEDULE FOR FINISHES.

1.3 SUBMITTALS

- A. Submit in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.
- B. Samples:
 - 1. Corner section of flush veneered door 300 mm (12 inches) square, showing details of construction, labeled to show grade and type number and conformance to specified standard.
 - 2. Veneer sample 200 mm (8 inch) by 275 mm (11 inch) by 6 mm (1/4 inch) showing specified wood species sanded to receive a transparent finish. Factory finish veneer sample where the prefinished option is accepted.
- C. Shop Drawings:
 - 1. Show every door in project and schedule location in building.
 - 2. Indicate type, grade, finish and size; include detail of glazing, sound gasketing and pertinent details.
 - 3. Provide information concerning specific requirements not included in the manufacturer's literature and data submittal.
- D. Manufacturer's Literature and Data:
 - 1. Sound rated doors, including test report indicating STC rating per ASTM E90 from test laboratory.

2. Labeled fire rated doors showing conformance with NFPA 80.

E. Laboratory Test Reports:

1. Screw holding capacity test report in accordance with WDMA T.M.10.
2. Split resistance test report in accordance with WDMA T.M.5.
3. Cycle/Slam test report in accordance with WDMA T.M.7.
4. Hinge-Loading test report in accordance with WDMA T.M.8.

1.4 WARRANTY

- A. Doors are subject to terms and conditions of the contract, except that warranty shall be as follows:
1. For interior doors, manufacturer's warranty for lifetime of original installation.
 2. Specified STC RATING for sound retardant rated door assembly in place.

1.5 DELIVERY AND STORAGE

- A. Factory seal doors and accessories in minimum of 6 mill polyethylene bags or cardboard packages which shall remain unbroken during delivery and storage.
- B. Store in accordance with WDMA I.S.1-A, J-1 Job Site Information.
- C. Label package for door opening where used.

1.6 APPLICABLE PUBLICATIONS

Publications listed below form a part of this specification to extent referenced. Publications are referenced in text by basic designation only.

- A. Window and Door Manufacturers Association (WDMA):
- I.S.1-A-04.....Architectural Wood Flush Doors
 - I.S.4-07A.....Water-Repellent Preservative Non-Pressure Treatment for Millwork
 - I.S.6A-01.....Architectural Wood Stile and Rail Doors
 - T.M.5-90.....Split Resistance Test Method
 - T.M.6-08.....Adhesive (Glue Bond) Durability Test Method
 - T.M.7-08.....Cycle-Slam Test Method
 - T.M.8-08.....Hinge Loading Test Method
 - T.M.10-08.....Screwholding Test Method
- B. National Fire Protection Association (NFPA):
- 80-07.....Protection of Buildings from Exterior Fire
 - 252-08.....Fire Tests of Door Assemblies
- C. ASTM International (ASTM):

E90-04.....Laboratory Measurements of Airborne Sound
Transmission Loss

PART 2 - PRODUCTS

2.1 FLUSH DOORS

A. General:

1. Meet requirements of WDMA I.S.1-A, Extra Heavy Duty.
2. Adhesive: Type II
3. Thickness: 45 mm (1-3/4 inches) unless otherwise shown or specified.

B. Face Veneer:

1. In accordance with WDMA I.S.1-A.
2. One species throughout the project unless scheduled or otherwise shown.
3. For transparent finishes: Premium Grade, rotary cut, red oak.
 - a. A grade face veneer standard optional.
 - b. AA grade face veneer
 - c. Match face veneers for doors for uniform effect of color and grain at joints.
 - d. Door edges shall be same species as door face veneer except maple may be used for stile face veneer on birch doors.
 - e. In existing buildings, where doors are required to have transparent finish, use wood species and grade of face veneers to match adjacent existing doors.
4. For painted finishes: Custom Grade, mill option close grained hardwood, premium or medium density overlay. Do not use Lauan.
5. Factory sand doors for finishing.

C. Wood for stops, louvers, muntins and moldings of flush doors required to have transparent finish:

1. Solid Wood of same species as face veneer, except maple may be used on birch doors.
2. Glazing:
 - a. On non-labeled doors use applied wood stops nailed tight on room side and attached on opposite side with flathead, countersunk wood screws, spaced approximately 125 mm (5 inches) on centers.
 - b. Use stainless steel or dull chrome plated brass screws for exterior doors.

D. Stiles and Rails:

1. Option for wood stiles and rails:
 - a. Composite material having screw withdrawal force greater than minimum performance level value when tested in accordance with WDMA T.M.10.
2. Provide adequate blocking for bottom of doors having mechanically operated door bottom seal meeting or exceeding the performance duty level per T.M.10 for horizontal door edge screw holding.

E. Fire rated wood doors:

1. Fire Performance Rating:
 - a. "B" label, 1-1/2 hours.
 - b. "C" label, 3/4 hour.
2. Labels:
 - a. Doors shall conform to the requirements of ASTM E2074, or NFPA 252, and, carry an identifying label from a qualified testing and inspection agency for class of door or opening shown designating fire performance rating.
 - b. Metal labels with raised or incised markings.
3. Performance Criteria for Stiles of doors utilizing standard mortise leaf hinges:
 - a. Hinge Loading: WDMA T.M.8. Average of 10 test samples for Extra Heavy Duty doors.
 - b. Direct screw withdrawal: WDMA T.M.10 for Extra Heavy Duty doors. Average of 10 test samples using a steel, fully threaded #12 wood screw.
 - c. Cycle Slam: 1,000,000 cycles with no loose hinge screws or other visible signs of failure when tested in accordance with WDMA T.M.7.
4. Additional Hardware Reinforcement:
 - a. Provide fire rated doors with hardware reinforcement blocking.
 - b. Size of lock blocks as required to secure hardware specified.
 - c. Top, bottom and intermediate rail blocks shall measure not less than 125 mm (five inches) minimum by full core width.
 - d. Reinforcement blocking in compliance with manufacturer's labeling requirements.
 - e. Mineral material similar to core is not acceptable.
5. Other Core Components: Manufacturer's standard as allowed by the labeling requirements.

6. Provide steel frame approved for use in labeled doors for vision panels.

7. Provide steel astragal on pair of doors.

F. Smoke Barrier Doors:

1. For glazed openings use steel frames approved for use in labeled doors.

2. Provide a steel astragal on one leaf of pairs of doors, including double egress doors.

G. Sound Rated Doors:

1. Fabricated as specified for flush wood doors with additional construction requirements to meet specified sound transmission class (STC).

2. STC Rating of the door assembly in place when tested in accordance with ASTM E90 by an independent nationally recognized acoustical testing laboratory not less than 45.

3. Accessories:

a. Frame Gaskets: Continuous closed cell sponge neoprene with stop adjusters.

b. Automatic Door Bottom Seal:

1) Steel spring operated, closed cell sponge neoprene metal mounted removable in extruded aluminum housing with a medium matte 0.1 mm (4.0 mil) thick clear Anodized finish.

2) Concealed or Surface Mounted.

2.2 PREFINISH, PREFIT OPTION

A. Flush doors may be factory machined to receive hardware, bevels, undercuts, cutouts, accessories and fitting for frame.

B. Factory fitting to conform to specification for shop and field fitting, including factory application of sealer to tops, bottoms, edges and routings.

C. Flush doors to receive transparent finish (in addition to being prefit) shall be factory finished as follows:

1. WDMA I.S.1-A Section F-3 specification for System TR-4, Conversion Varnish or System TR-5, Catalyzed Vinyl.

2. Use stain when required to produce the finish specified in Section 09 06 00 SCHEDULE FOR FINISHES.

2.3 IDENTIFICATION MARK:

A. On top edge of door.

- B. Either a stamp, brand or other indelible mark, giving manufacturer's name, door's trade name, construction of door, code date of manufacture and quality.
- C. Accompanied by either of the following additional requirements:
 - 1. An identification mark or a separate certification including name of inspection organization.
 - 2. Identification of standards for door, including glue type.
 - 3. Identification of veneer and quality certification.
 - 4. Identification of preservative treatment for stile and rail doors.

2.4 SEALING:

- A. Give top and bottom edge of doors two coats of catalyzed polyurethane or water resistant sealer before sealing in shipping containers.

PART 3 - EXECUTION

3.1 DOOR PREPARATION

- A. Field, shop or factory preparation: Do not violate the qualified testing and inspection agency label requirements for fire rated doors.
- B. Clearances between Doors and Frames and Floors:
 - 1. Maximum 3 mm (1/8 inch) clearance at the jambs, heads, and meeting stiles, and a 19 mm (3/4 inch) clearance at bottom, except as otherwise specified.
 - 2. Maximum clearance at bottom of sound rated doors, light-proofed doors, doors to operating rooms, and doors designated to be fitted with mechanical seal: 10 mm (3/8 inch).
- C. Provide cutouts for special details required and specified.
- D. Rout doors for hardware using templates and location heights specified in Section, 08 71 00 DOOR HARDWARE.
- E. Fit doors to frame, bevel lock edge of doors 3 mm (1/8 inch) for each 50 mm (two inches) of door thickness undercut where shown.
- F. Immediately after fitting and cutting of doors for hardware, seal cut edges of doors with two coats of water resistant sealer.
- G. Finish surfaces, including both faces, top and bottom and edges of the doors smooth to touch.
- H. Apply a steel astragal on the opposite side of active door on pairs of fire rated doors.
- I. Apply a steel astragal to meeting style of active leaf of pair of doors or double egress smoke doors.

3.2 INSTALLATION OF DOORS APPLICATION OF HARDWARE

- A. Install doors and hardware as specified in this Section.

3.3 DOOR PROTECTION

- A. As door installation is completed, place polyethylene bag or cardboard shipping container over door and tape in place.
- B. Provide protective covering over knobs and handles in addition to covering door.
- C. Maintain covering in good condition until removal is accepted by COR.

- - - E N D - - -

Renovate Ward 5 East
Charles George VA Medical Center
Asheville, NC

VA Project Number 637-11-119

INTENTIONALLY LEFT BLANK

SECTION 08 31 13
ACCESS DOORS AND FRAMES

PART 1 - GENERAL

1.1 DESCRIPTION:

Section specifies access doors or panels.

1.2 RELATED WORK:

- A. Lock Cylinders: Section 08 71 00, DOOR HARDWARE.
- B. Access doors in gypsum board ceilings.
- D. Locations of access doors for duct work cleanouts: Section 23 31 00, HVAC DUCTS AND CASINGS and Section 23 37 00, AIR OUTLETS AND INLETS.

1.3 SUBMITTALS:

- A. Submit in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.
- B. Shop Drawings: Access doors, each type, showing construction, location and installation details.
- C. Manufacturer's Literature and Data: Access doors, each type.

1.4 APPLICABLE PUBLICATIONS

- A. Publications listed below form a part of this specification to extent referenced. Publications are referenced in the text by basic designation only.
- B. American Society for Testing and Materials (ASTM):
 - A167-99(R-2009).....Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet and Strip
 - A1008-10.....Steel Sheet, Cold-Rolled, Carbon, Structural, High Strength Low-Alloy
- C. American Welding Society (AWS):
 - D1.3-08.....Structural Welding Code Sheet Steel
- D. National Fire Protection Association (NFPA):
 - 80-10.....Fire Doors and Windows
- E. The National Association of Architectural Metal Manufacturers (NAAMM):
 - AMP 500 Series.....Metal Finishes Manual
- F. Underwriters Laboratories, Inc. (UL):
 - Fire Resistance Directory

PART 2 - PRODUCTS

2.1 FABRICATION, GENERAL

- A. Fabricate components to be straight, square, flat and in same plane where required.
 - 1. Slightly round exposed edges and without burrs, snags and sharp edges.
 - 2. Exposed welds continuous and ground smooth.
 - 3. Weld in accordance with AWS D1.3.
- B. Number of locks and non-continuous hinges as required to maintain alignment of panel with frame. For fire rated doors, use hinges and locks as required by fire test.
- C. Provide anchors or make provisions in frame for anchoring to adjacent construction. Provide size, number and location of anchors on four sides to secure access door in opening. Provide anchors as required by fire test.

2.2 ACCESS DOORS, FIRE RATED:

- A. Shall meet requirements for "B" label 1-1/2 hours with maximum temperature rise of 120 degree C (250 degrees F).
- B. Comply with NFPA 80 and have Underwriters Laboratories Inc., or other nationally recognized laboratory label for Class B opening.
- C. Door Panel: Form of 0.9 mm (0.0359 inch) thick steel sheet, insulated sandwich type construction.
- D. Frame: Form of 1.5 mm (0.0598 inch) thick steel sheet of depth and configuration to suit material and type of construction where installed. Provide frame flange at perimeter where installed in concrete masonry or gypsum board openings.
 - 1. Weld exposed joints in flange and grind smooth.
 - 2. Provide frame flange at perimeter where installed in concrete masonry or gypsum board.
- E. Automatic Closing Device: Provide automatic closing device for door.
- F. Hinge: Continuous steel hinge with stainless steel pin.
- G. Lock:
 - 1. Self-latching, with provision for fitting flush a standard screw-in type lock cylinder. Lock cylinder specified in Section 08 71 00, DOOR HARDWARE.
 - 2. Provide latch release device operable from inside of door. Mortise case in door.

2.3 ACCESS DOORS, FLUSH PANEL:

A. Door Panel:

1. Form of 1.9 mm (0.0747 inch) thick steel sheet.
2. Reinforce to maintain flat surface.

B. Frame:

1. Form of 1.5 mm (0.0598 inch) thick steel sheet of depth and configuration to suit material and type of construction where installed.
2. Provide surface mounted units having frame flange at perimeter where installed in concrete, masonry, or gypsum board construction.
3. Weld exposed joints in flange and grind smooth.

C. Hinge:

1. Concealed spring hinge to allow panel to open 175 degrees.
2. Provide removable hinge pin to allow removal of panel from frame.

D. Lock:

1. Flush, screwdriver operated cam lock.

2.4 ACCESS DOOR, RECESSED PANEL:

A. Door Panel:

1. Form of 1.2 mm (0.0478 inch) thick steel sheet to form a 25 mm (one inch) deep recessed pan to accommodate the installation of acoustical units or other materials where shown in walls and ceiling.
2. Reinforce as required to prevent sagging.

B. Frame:

1. Form of 1.5 mm (0.0598 inch) thick steel sheet of depth and configuration to suit installation in suspension system of ceiling or wall framing.
2. Extend sides of frame to protect edge of acoustical units when panel is in open position.
3. Provide shims, bushings, clips and other devices necessary for installation.

C. Hinge: Continuous steel hinge with stainless steel pin or concealed hinge.

D. Lock:

1. Flush screwdriver operated cam lock.
2. Provide sleeve of plastic or stainless steel grommet to protect hole made in acoustical unit for screwdriver access to lock.

2.5 FINISH:

- A. Provide in accordance with NAAMM AMP 500 series on exposed surfaces.
- B. Steel Surfaces: Baked-on prime coat over a protective phosphate coating.
- C. Stainless Steel: No. 4 for exposed surfaces.

2.6 SIZE:

Minimum 600 mm (24 inches) square door unless otherwise shown.

PART 3 - EXECUTION

3.1 LOCATION:

- A. Provide access panels or doors wherever any valves, traps, dampers, cleanouts, and other control items of mechanical, electrical and conveyor work are concealed in wall or partition, or are above ceiling of gypsum board or plaster.
- B. Use fire rated doors in fire rated partitions and ceilings.
- C. Use flush panels in partitions and gypsum board ceilings, except lay-in acoustical panel ceilings or upward access acoustical tile ceilings.

3.2 INSTALLATION, GENERAL:

- A. Install access doors in openings to have sides vertical in wall installations, and parallel to ceiling suspension grid or side walls when installed in ceiling.
- B. Set frames so that edge of frames without flanges will finish flush with surrounding finish surfaces.
- C. Set frames with flanges to overlap opening and so that face will be uniformly spaced from the finish surface.
- D. Set recessed panel access doors recessed so that face of surrounding materials will finish on the same plane, when finish in door is installed.

3.3 ANCHORAGE:

- A. Secure frames to adjacent construction using anchors attached to frames or by use of bolts or screws through the frame members.
- B. Type, size and number of anchoring device suitable for the material surrounding the opening, maintain alignment, and resist displacement during normal use of access door.
- C. Anchors for fire rated access doors shall meet requirements of applicable fire test.

3.4 ADJUSTMENT:

- A. Adjust hardware so that door panel will open freely.

Renovate Ward 5 East
Charles George VA Medical Center
Asheville, NC

VA Project Number 637-11-119
10-11

B. Adjust door when closed so door panel is centered in the frame.

- - - E N D - - -

Renovate Ward 5 East
Charles George VA Medical Center
Asheville, NC

VA Project Number 637-11-119

INTENTIONALLY LEFT BLANK

SECTION 08 71 00
DOOR HARDWARE
REVISED 1-25-13

PART 1 - GENERAL

1.1 DESCRIPTION

- A. Door hardware and related items necessary for complete installation and operation of doors.

1.2 RELATED WORK

- A. Caulking: Section 07 92 00, JOINT SEALANTS.
- B. Application of Hardware: Section 08 14 00, INTERIOR WOOD DOORS, Section 08 11 13, HOLLOW METAL DOORS AND FRAMES and Section 08 71 13, AUTOMATIC DOOR OPERATORS.
- C. Finishes: Section 09 06 00, SCHEDULE FOR FINISHES.
- D. Painting: Section 09 91 00, PAINTING.
- E. Electrical: Division 26, ELECTRICAL.
- F. Fire Detection: Section 28 31 00, FIRE DETECTION AND ALARM.

1.3 GENERAL

- A. All hardware shall comply with UFAS, (Uniform Federal Accessible Standards) unless specified otherwise.
- B. Provide rated door hardware assemblies where required by most current version of the International Building Code (IBC).
- C. Hardware for Labeled Fire Doors and Exit Doors: Conform to requirements of NFPA 80 for labeled fire doors and to NFPA 101 for exit doors, as well as to other requirements specified. Provide hardware listed by UL, except where heavier materials, large size, or better grades are specified herein under paragraph HARDWARE SETS. In lieu of UL labeling and listing, test reports from a nationally recognized testing agency may be submitted showing that hardware has been tested in accordance with UL test methods and that it conforms to NFPA requirements.
- D. Hardware for application on metal and wood doors and frames shall be made to standard templates. Furnish templates to the fabricator of these items in sufficient time so as not to delay the construction.
- E. The following items shall be of the same manufacturer, if possible, except as otherwise specified:
 - 1. Cylindrical locksets.
 - 2. Hinges for hollow metal and wood doors.
 - 3. Surface applied overhead door closers.
 - 4. Exit devices.

5. Floor closers.

1.4 WARRANTY

A. Automatic door operators shall be subject to the terms and conditions of the contract, except that the Warranty period shall be two years in lieu of one year for all items except as noted below:

1. Locks, latchsets, and panic hardware: 5 years.
2. Door closers and continuous hinges: 10 years.

1.5 MAINTENANCE MANUALS

A. In accordance with Section 01 00 00, GENERAL REQUIREMENTS Article titled "INSTRUCTIONS", furnish maintenance manuals and instructions on all door hardware.

1.6 SUBMITTALS

A. Submit in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA AND SAMPLES. Submit 6 copies of the schedule per Section 01 33 23 plus 2 copies to the VAMC Locksmith (VISN Locksmith if the VAMC does not have a locksmith).

B. Hardware Schedule: Prepare and submit hardware schedule in the following form:

Hardware Item	Quantity	Size	Reference Publication Type No.	Finish	Mfr. Name and Catalog No.	Key Control Symbols	UL Mark (if fire rated and listed)	ANSI/BHMA Finish Designation

C. Samples and Manufacturers' Literature:

1. Samples: All hardware items (proposed for the project) that have not been previously approved by Builders Hardware Manufacturers Association shall be submitted for approval. Tag and mark all items with manufacturer's name, catalog number and project number.
2. Samples are not required for hardware listed in the specifications by manufacturer's catalog number, if the contractor proposes to use the manufacturer's product specified.

D. Certificate of Compliance and Test Reports: Submit certificates that hardware conforms to the requirements specified herein. Certificates shall be accompanied by copies of reports as referenced. The testing

shall have been conducted either in the manufacturer's plant and certified by an independent testing laboratory or conducted in an independent laboratory, within four years of submittal of reports for approval.

1.7 DELIVERY AND MARKING

- A. Deliver items of hardware to job site in their original containers, complete with necessary appurtenances including screws, keys, and instructions. Tag one of each different item of hardware and deliver to COR for reference purposes. Tag shall identify items by Project Specification number and manufacturer's catalog number. These items shall remain on file in COR's office until all other similar items have been installed in project, at which time the COR will deliver items on file to Contractor for installation in predetermined locations on the project.

1.8 PREINSTALLATION MEETING

- A. Convene a preinstallation meeting not less than 30 days before start of installation of door hardware. Require attendance of parties directly affecting work of this section, including Contractor and Installer, Architect, COR and VA Locksmith, Hardware Consultant, and Hardware Manufacturer's Representative. Review the following:
1. Inspection of door hardware.
 2. Job and surface readiness.
 3. Coordination with other work.
 4. Protection of hardware surfaces.
 5. Substrate surface protection.
 6. Installation.
 7. Adjusting.
 8. Repair.
 9. Field quality control.
 10. Cleaning.

1.9 INSTRUCTIONS

- A. Hardware Set Symbols on Drawings: Except for protective plates, door stops, mutes, thresholds and the like specified herein, hardware requirements for each door are indicated on drawings by symbols. Symbols for hardware sets consist of letters (e.g., "HW") followed by a number. Each number designates a set of hardware items applicable to a door type.

B. Manufacturers' Catalog Number References: Where manufacturers' products are specified herein, products of other manufacturers which are considered equivalent to those specified may be used. Manufacturers whose products are specified are identified by abbreviations as follows:

Adams-Rite	Adams Rite Mfg. Co.	Pomona, CA
Best	Best Access Systems	Indianapolis, IN
Don-Jo	Don-Jo Manufacturing	Sterling, MA
G.E. Security	GE Security, Inc.	Bradenton, FL
Markar	Markar Architectural Products	Pomona, CA
Pemko	Pemko Manufacturing Co.	Ventura, CA
Rixson	Rixson	Franklin Park, IL
Rockwood	Rockwood Manufacturing Co.	Rockwood, PA
Securitron	Securitron Magnalock Corp.	Sparks, NV
Southern Folger	Southern Folger Detention Equipment Co.	San Antonio, TX
Stanley	The Stanley Works	New Britain, CT
Tice	Tice Industries	Portland, OR
Trimco	Triangle Brass Mfg. Co.	Los Angeles, CA
Zero	Zero Weather Stripping Co.	New York, NY

C. Keying: All cylinders shall be keyed into existing Grand Master Key System. Provide removable core cylinders that are removable only with a special key or tool without disassembly of knob or lockset. Cylinders shall be 7 pin type. Keying information shall be furnished at a later date by the COR.

1.10 APPLICABLE PUBLICATIONS

A. The publications listed below form a part of this specification to the extent referenced. The publications are referenced in the text by the basic designation only. In text, hardware items are referred to by series, types, etc., listed in such specifications and standards, except as otherwise specified.

B. American Society for Testing and Materials (ASTM):
 F883-04.....Padlocks
 E2180-07.....Standard Test Method for Determining the
 Activity of Incorporated Antimicrobial Agent(s)
 In Polymeric or Hydrophobic Materials

C. American National Standards Institute/Builders Hardware Manufacturers

Association (ANSI/BHMA):

- A156.1-06.....Butts and Hinges
- A156.2-03.....Bored and Pre-assembled Locks and Latches
- A156.3-08.....Exit Devices, Coordinators, and Auto Flush
Bolts
- A156.4-08.....Door Controls (Closers)
- A156.5-01.....Auxiliary Locks and Associated Products
- A156.6-05.....Architectural Door Trim
- A156.8-05.....Door Controls-Overhead Stops and Holders
- A156.12-05Interconnected Locks and Latches
- A156.14-07Sliding and Folding Door Hardware
- A156.15-06.....Release Devices-Closer Holder, Electromagnetic
and Electromechanical
- A156.16-08.....Auxiliary Hardware
- A156.17-04Self-Closing Hinges and Pivots
- A156.18-06.....Materials and Finishes
- A156.20-06Strap and Tee Hinges, and Hasps
- A156.21-09.....Thresholds
- A156.22-05.....Door Gasketing and Edge Seal Systems
- A156.23-04.....Electromagnetic Locks
- A156.24-03.....Delayed Egress Locking Systems
- A156.25-07Electrified Locking Devices
- A156.26-06.....Continuous Hinges
- A156.28-07Master Keying Systems
- A156.29-07Exit Locks and Alarms
- A156.30-03High Security Cylinders
- A156.31-07Electric Strikes and Frame Mounted Actuators
- A250.8-03.....Standard Steel Doors and Frames

D. National Fire Protection Association (NFPA):

- 80-10.....Fire Doors and Fire Windows
- 101-09.....Life Safety Code

E. Underwriters Laboratories, Inc. (UL):

Building Materials Directory (2008)

PART 2 - PRODUCTS

2.1 BUTT HINGES

- A. ANSI A156.1. Provide only three-knuckle hinges, except five-knuckle where the required hinge type is not available in a three-knuckle version (e.g., some types of swing-clear hinges). The following types of butt hinges shall be used for the types of doors listed, except where otherwise specified:
1. Interior Doors: Type A8112/A5112 for doors 900 mm (3 feet) wide or less and Type A8111/A5111 for doors over 900 mm (3 feet) wide. Hinges for doors exposed to high humidity areas (shower rooms, toilet rooms, kitchens, janitor rooms, etc. shall be of stainless steel material.
 2. Any door installed in structural steel frames: Type A2412, A8412, A2411 or A8411 as applicable, except where otherwise specified. Such hinges shall be of same quality and weight as other hinges listed above for applicable door sizes.
 3. Labeled Wood Fire Doors: Type 8411 or Type 8412; these hinges shall be thru bolted to door with hex nuts and bolts.
- B. See Articles "MISCELLANEOUS HARDWARE" and "HARDWARE SETS" for pivots and hinges other than butts specified above and continuous hinges specified below.

2.2 CONTINUOUS HINGES

- A. ANSI/BHMA A156.26, Grade 1-600.
1. Listed under Category N in BHMA's "Certified Product Directory."
- B. General: Minimum 0.120-inch- (3.0-mm-) thick, hinge leaves with minimum overall width of 4 inches (102 mm); fabricated to full height of door and frame and to template screw locations; with components finished after milling and drilling are complete
- C. Continuous, Barrel-Type Hinges: Hinge with knuckles formed around a Teflon-coated 6.35mm (0.25-inch) minimum diameter pin that extends entire length of hinge.
1. Base Metal for Interior Hinges: Stainless steel.
 2. Base Metal for Hinges for Fire-Rated Assemblies: Stainless steel
 3. Provide with non-removable pin (hospital tip option) at lockable outswing doors.
 4. Where required to clear adjacent casing, trim, and wall conditions and allow full door swing, provide wide throw hinges of minimum width required.

5. Provide with manufacturer's cut-outs for separate mortised power transfers and/or mortised automatic door bottoms where they occur.
6. Where thru-wire power transfers are integral to the hinge, provide hinge with easily removable portion to allow easy access to wiring connections.
7. Where models are specified that provide an integral wrap-around edge guard for the hinge edge of the door, provide manufacturer's adjustable threaded stud and machine screw mechanism to allow the door to be adjusted within the wrap-around edge guard.

2.3 DOOR CLOSING DEVICES

- A. Closing devices shall be products of one manufacturer for each type specified.

2.4 OVERHEAD CLOSERS

- A. Conform to ANSI A156.4, Grade 1.
- B. Closers shall conform to the following:
 1. The closer shall have minimum 50 percent adjustable closing force over minimum value for that closer and have adjustable hydraulic back check effective between 60 degrees and 85 degrees of door opening.
 2. Where specified, closer shall have hold-open feature.
 3. Size Requirements: Provide multi-size closers, sizes 1 through 6, except where multi-size closer is not available for the required application.
 4. Material of closer body shall be forged or cast iron or cast aluminum.
 5. Arm and brackets for closers shall be steel, malleable iron or high strength ductile cast iron.
 6. Closers shall have full size metal cover; plastic covers will not be accepted.
 7. Closers shall have adjustable hydraulic back-check, separate valves for closing and latching speed, adjustable back-check positioning valve, and adjustable delayed action valve.
 8. Provide closers with any accessories required for the mounting application, including (but not limited to) drop plates, special soffit plates, spacers for heavy-duty parallel arm fifth screws, bull-nose or other regular arm brackets, longer or shorter arm assemblies, and special factory templating. Provide special arms,

- drop plates, and templating as needed to allow mounting at doors with overhead stops and/or holders.
9. Closer arms or backcheck valve shall not be used to stop the door from overswing, except in applications where a separate wall, floor, or overhead stop cannot be used.
 10. Provide parallel arm closers with heavy duty rigid arm.
 11. Where closers are to be installed on the push side of the door, provide parallel arm type except where conditions require use of top jamb arm.
 12. Provide all surface closers with the same body attachment screw pattern for ease of replacement and maintenance.
 13. All closers shall have a 1 ½" (38mm) minimum piston diameter.

2.6 DOOR STOPS

- A. Conform to ANSI A156.16.
- B. Provide door stops wherever an opened door or any item of hardware thereon would strike a wall, column, equipment or other parts of building construction. For concrete, masonry or quarry tile construction, use lead expansion shields for mounting door stops.
- C. Where cylindrical locks with turn pieces or pushbuttons occur, equip wall bumpers Type L02251 (rubber pads having concave face) to receive turn piece or button.
- D. Wall bumpers, where used, must be installed to impact the trim or the door within the leading half of its width.
- E. Omit stops where floor mounted door holders are required and where automatic operated doors occur.
- F. Provide appropriate roller bumper for each set of doors (except where closet doors occur) where two doors would interfere with each other in swinging.
- G. Provide appropriate door mounted stop on doors in individual toilets where floor or wall mounted stops cannot be used.
- H. Provide overhead surface applied stop Type C02541, ANSI A156.8 on patient toilet doors in bedrooms where toilet door could come in contact with the bedroom door.
- I. Provide door stops on doors where combination closer magnetic holders are specified, except where wall stops cannot be used or where floor stops cannot be installed within 4-inches of the wall.

- J. Where the specified wall or floor stop cannot be used, provide concealed overhead stops (surface-mounted where concealed cannot be used).

2.7 OVERHEAD DOOR STOPS AND HOLDERS

- A. Conform to ANSI Standard A156.8. Overhead holders shall be of sizes recommended by holder manufacturer for each width of door. Set overhead holders for 110 degree opening, unless limited by building construction or equipment. Provide Grade 1 overhead concealed slide type: stop-only at rated doors and security doors, hold-open type with exposed hold-open on/off control at all other doors requiring overhead door stops.

2.8 FLOOR DOOR HOLDERS

- A. Conform to ANSI Standard A156.16. Provide extension strikes for Types L01301 and L01311 holders where necessary.

2.9 LOCKS AND LATCHES

- A. Conform to ANSI A156.2. Locks and latches for doors 45 mm (1-3/4 inch) thick or over shall have beveled fronts. Lock cylinders shall be small format and have not less than seven pins. Cylinders for all locksets shall be removable core type. Cylinder shall be removable by special key or tool. Construct all cores so that they will be interchangeable into the core housings of all rim locks, cylindrical locks, and any other type lock included in the Great Grand Master Key System. Disassembly of lever or lockset shall not be required to remove core from lockset. All locksets or latches on double doors with fire label shall have latch bolt with 19 mm (3/4 inch) throw, unless shorter throw allowed by the door manufacturer's fire label. Provide temporary keying device or construction core of allow opening and closing during construction and prior to the installation of final cores.
- B. In addition to above requirements, locks and latches shall comply with following requirements:
1. Cylindrical Lock and Latch Sets: levers shall meet ADA (Americans with Disabilities Act) requirements. Cylindrical locksets shall be series 4000 Grade I. All locks and latchsets shall be furnished with 122.55 mm (4-7/8-inch) curved lip strike and wrought box. At outswing pairs with overlapping astragals, provide flat lip strip with 21 mm (7/8-inch) lip-to-center dimension. Provide lever design to match design selected by Architect or to match existing lever design. Where two turn pieces are specified for lock F76, turn piece on inside knob shall lock and unlock inside knob, and turn piece on

outside knob shall unlock outside knob when inside knob is in the locked position. (This function is intended to allow emergency entry into these rooms without an emergency key or any special tool.)

3. Auxiliary locks shall be as specified under hardware sets and conform to ANSI A156.5.
4. Locks on designated doors in Psychiatric (Mental Health) areas shall be paddle type with arrow projection covers and UL Listed. Provide these locks with paddle in the down position on both sides of the door. Locks shall be fabricated of wrought stainless steel.
5. Privacy locks in non-mental-health patient rooms shall have an inside thumbturn for privacy and an outside thumbturn for emergency entrance. Single occupancy patient privacy doors shall typically swing out; where such doors cannot swing out, provide center-pivoted doors with rescue hardware (see HW-2B).

2.10 PUSH-BUTTON COMBINATION LOCKS

- A. ANSI/BHMA A156.13, Grade 1. Battery operated pushbutton entry.
- B. Construction: Heavy duty mortise lock housing conforming to ANSI/BHMA A156.13, Grade 1. Lever handles and operating components in compliance with the UFAS and the ADA Accessibility Guidelines. Match lever handles of locks and latchsets on adjacent doors.
- C. Special Features: Key override to permit a master keyed security system and a pushbutton security code activated passage feature to allow access without using the entry code.

2.11 ELECTROMAGNETIC LOCKS

- A. ANSI/BHMA A156.23; electrically powered, of strength and configuration indicated; with electromagnet attached to frame and armature plate attached to door. Listed under Category E in BHMA's "Certified Product Directory."
 1. Type: Full exterior or full interior, as required by application indicated.
 2. Strength Ranking: 1000 lbf (4448 N).
 3. Inductive Kickback Peak Voltage: Not more than 53V.
 4. Residual Magnetism: Not more than 4 lbf (18 Nto separate door from magnet.
- B. Delayed-Egress Locks: BHMA A156.24. Listed under Category G in BHMA's "Certified Product Directory".

1. Means of Egress Doors: Lock releases within 15 seconds after applying a force not more than 15 lbf (67 N) for not more than 3 seconds, as required by NFPA 101.
2. Security Grade: Activated from secure side of door by initiating device.
3. Movement Grade: Activated by door movement as initiating device.
4. The lock housing shall not project more than 4-inches (101mm) from the underside of the frame head stop.

2.12 KEYS

- A. Stamp all keys with change number and key set symbol. Furnish keys in quantities as follows:

Locks/Keys	Quantity
Cylinder locks	2 keys each
Cylinder lock change key blanks	100 each different key way
Master-keyed sets	6 keys each
Grand Master sets	6 keys each
Great Grand Master set	5 keys
Control key	1 key

2.13 KEY CABINET

- A. ANSI Standard A156.5. Provide key cabinet made of cold rolled, 1.2 mm (0.0478 inch) thick furniture steel electro-welded. Doors shall have "no sag" continuous brass-pin piano type hinge and be equipped with chrome plated locking door handles, hook cam and mechanical pushbutton door lock. Key Cabinet and Key Control System shall accommodate all keys for this project plus 25 percent. Provide minimum number of multiple cabinets where a single cabinet of largest size will not accommodate the required number of keys.
- B. Key tags shall consist of two sets: Permanent self-locking and loan key snaphook type with tag colors as follows: Red fiber marker of the permanent self-locking type approximately 32 mm (1-1/4 inch) in diameter engraved with the legend "FILE KEY MUST NOT BE LOANED." Also furnish for each hook a white cloverleaf key marker with snap-hooks engraved with the legend "LOAN KEY."
- C. The manufacturer of the lock cylinders and locks shall attach a key tag to keys of each lock cylinder and shall mark thereon the respective item number and key change number. Provide each group of keys in a key

gathering envelope (supplied by Key Cabinet Manufacturer) in which the lock manufacturer shall include the following information: Item number, key change number and door number. The contractor shall furnish the Key Cabinet Manufacturer the hardware and keying schedules and change keys.

- D. The Key Cabinet Manufacturer shall set up a three-way cross index system, including master keys, listing the keys alphabetically, the hooks numerically and the key changes numerically on different colored index cards. Index cards shall be typewritten and inserted in a durable binder. Attach the keys to the two sets of numbered tags supplied with the cabinet. (The permanent tag and the loan key tag). Instruct the owner in proper use of the system. Install cabinet as directed by the COR.

2.15 ARMOR PLATES, KICK PLATES, MOP PLATES AND DOOR EDGING

- A. Conform to ANSI Standard A156.6.
- B. Provide protective plates and door edging as specified below:
1. Kick-mop plates and armor plates plastic or metal, Type J100 series, color as required. When wood grain plastic plates are specified in Section 09 06 00, SCHEDULE FOR FINISHES, grain plates shall run in same direction as grain of face veneer of wood doors.
 2. Provide kick-mop plates for both sides of each new door, except where noted as not required. Kick-mop plates shall be 200 mm (8 inches) high. On push side of doors where jamb stop extends to floor, make combination kick-mop plates 38 mm (1-1/2 inches) less than width of door, except pairs of metal doors which shall have plates 25 mm (1 inch) less than width of each door. Extend all other combination kick-mop plates to within 6 mm (1/4 inch) of each edge of doors. Kick mop plates shall butt astragals. For jamb stop requirements, see specification sections pertaining to door frames.
 3. Kick plates and/or mop plates are not required on following door sides:
 - a) Armor plate side of doors;
 - b) Exterior side of exterior doors;
 - c) Closet side of closet doors;
 - d) Storage side of doors to or from storage spaces; and
 - e) Both sides of aluminum entrance doors.
 4. Armor plates for doors are listed under Article "Hardware Sets". Armor plates shall be 875 mm (35 inches) high and 38 mm (1-1/2 inches) less than width of doors, except on pairs of metal doors.

Plates on pairs of metal doors shall be 25 mm (1 inch) less than width of each door. Where top of intermediate rail of door is less than 875 mm (35 inches) from door bottom, extend armor plates to within 13 mm (1/2 inch) of top rail. On doors equipped with panic devices, extend armor plates to within 13 mm (1/2 inch) of panic bolt cross bar.

5. Where louver or grille occurs in lower portion of doors, substitute stretcher plate and kick-mop plate in place of armor plate. Size of stretcher plate and kick-mop plate shall be 200 mm (8 inches) high.

2.16 EXIT DEVICES

- A. Conform to ANSI Standard A156.3. Exit devices shall be Grade 1; type and function are specified in hardware sets. Provide flush with finished floor strikes for vertical rod exit devices in interior of building. Trim shall have cast satin stainless steel lever handles of design similar to locksets, unless otherwise specified. Provide key cylinders for keyed operating trim and, where specified, cylinder dogging.
- B. Exit devices for fire doors shall comply with Underwriters Laboratories, Inc., requirements for Fire Exit Hardware. Submit proof of compliance.

2.17 FLUSH BOLTS (LEVER EXTENSION)

- A. Conform to ANSI A156.16. Flush bolts shall be Type L24081 unless otherwise specified. Furnish proper dustproof strikes conforming to ANSI A156.16, for flush bolts required on lower part of doors.
- B. Lever extension manual flush bolts shall only be used at non-fire-rated pairs for rooms only accessed by maintenance personnel.
- C. Face plates for cylindrical strikes shall be rectangular and not less than 25 mm by 63 mm (1 inch by 2-1/2 inches).
- D. Friction-fit cylindrical dustproof strikes with circular face plate may be used only where metal thresholds occur.

2.18 DOOR PULLS

- A. Conform to ANSI A156.6. Pull plate 90 mm by 350 mm (3-1/2 inches by 14 inches), unless otherwise specified. Cut plates of door pulls for cylinders, or turn pieces where required.

2.19 PUSH PLATES

- A. Conform to ANSI A156.6. Metal, Type J302, 200 mm (8 inches) wide by 350 mm (14 inches) high. Provide metal Type J300 plates 100 mm (4 inches

wide by 350 mm (14 inches) high) where push plates are specified for doors with stiles less than 200 mm (8 inches) wide. Cut plates for cylinders, and turn pieces where required.

2.20 COMBINATION PUSH AND PULL PLATES

- A. Conform to ANSI 156.6. Type J303, stainless steel 3 mm (1/8 inch) thick, 80 mm (3-1/3 inches) wide by 800 mm (16 inches) high), top and bottom edges shall be rounded. Secure plates to wood doors with 38 mm (1-1/2 inch) long No. 12 wood screws. Cut plates for turn pieces, and cylinders where required. Pull shall be mounted down.

2.21 COORDINATORS

- A. Conform to ANSI A156.16. Coordinators, when specified for fire doors, shall comply with Underwriters Laboratories, Inc., requirements for fire door hardware. Coordinator may be omitted on interior pairs of nonlabeled open where open back strike is used. Open back strike shall not be used on labeled doors. Paint coordinators to match door frames, unless coordinators are plated. Provide bar type coordinators, except where gravity coordinators are required at acoustic pairs. For bar type coordinators, provide filler bars for full width and, as required, brackets for push-side surface mounted closers, overhead stops, and vertical rod panic strikes.

2.22 THRESHOLDS

- A. Conform to ANSI A156.21, mill finish extruded aluminum, except as otherwise specified. In existing construction, thresholds shall be installed in a bed of sealant with ¼-20 stainless steel machine screws and expansion shields. In new construction, embed aluminum anchors coated with epoxy in concrete to secure thresholds. Furnish thresholds for the full width of the openings.

2.23 AUTOMATIC DOOR BOTTOM SEAL AND RUBBER GASKET FOR LIGHT PROOF OR SOUND CONTROL DOORS

- A. Conform to ANSI A156.22. Provide mortise or under-door type, except where not practical. For mortise automatic door bottoms, provide type specific for door construction (wood or metal).

2.24 MISCELLANEOUS HARDWARE

- A. Access Doors (including Sheet Metal, Screen and Woven Wire Mesh Types): Except for fire-rated doors and doors to Temperature Control Cabinets, equip each single or double metal access door with Lock Type E76213, conforming to ANSI A156.5. Key locks as directed. Ship lock prepaid to the door manufacturer. Hinges shall be provided by door manufacturer.

- B. Cylinders for Various Partitions and Doors: Key cylinders same as entrance doors of area in which partitions and door occur, except as otherwise specified. Provide cylinders to operate locking devices where specified for following partitions and doors:
 - 1. Fire rated access doors Engineer's key set.
- C. Mutes: Conform to ANSI A156.16. Provide door mutes or door silencers Type L03011 or L03021, depending on frame material, of white or light gray color, on each steel or wood door frame, except at fire-rated frames, lead lined frames and frames for sound resistant, lightproof and electromagnetically shielded doors. Furnish 3 mutes for single doors and 2 mutes for each pair of doors, except double acting doors.

2.25 FINISHES

- A. Exposed surfaces of hardware shall have ANSI A156.18, finishes as specified below. Finishes on all hinges, pivots, closers, thresholds, etc., shall be as specified below under "Miscellaneous Finishes." For field painting (final coat) of ferrous hardware, see Section 09 91 00, PAINTING.
- B. 626 or 630: All surfaces on exterior and interior of buildings, except where other finishes are specified.
- C. Miscellaneous Finishes:
 - 1. Hinges: interior doors: 652 or 630.
 - 2. Pivots: Match door trim.
 - 3. Door Closers: Factory applied paint finish. Dull or Satin Aluminum color.
 - 4. Thresholds: Mill finish aluminum.
 - 5. Cover plates for floor hinges and pivots: 630.
 - 6. Other primed steel hardware: 600.
- D. Hardware Finishes for Existing Buildings: U.S. Standard finishes shall match finishes of hardware in (similar) existing spaces.
- E. Special Finish: Exposed surfaces of hardware for dark bronze anodized aluminum doors shall have oxidized oil rubbed bronze finish (dark bronze) finish on door closers shall closely match doors.
- F. Anti-microbial Coating: All hand-operated hardware (levers, pulls, push bars, push plates, paddles, and panic bars) shall be provided iwth an anti-microbial/anti-fungal coating that has passed ASTM E2180 tests. Coating to consist of ionic silver (AG+). Silver ions surround bacterial cells, inhibiting growth of bacteria, mold, and mildew by blockading food and respiration supplies.

2.26 BASE METALS

- A. Apply specified U.S. Standard finishes on different base metals as following:

Finish	Base Metal
652	Steel
626	Brass or bronze
630	Stainless steel

PART 3 - EXECUTION

3.1 HARDWARE HEIGHTS

- A. For existing buildings locate hardware on doors at heights to match existing hardware. The Contractor shall visit the site, verify location of existing hardware and submit locations to COR for approval.
- B. Hardware Heights from Finished Floor:
1. Exit devices centerline of strike (where applicable) 1024 mm (40-5/16 inches).
 2. Locksets and latch sets centerline of strike 1024 mm (40-5/16 inches).
 3. Deadlocks centerline of strike 1219 mm (48 inches).
 4. Hospital arm pull 1168 mm (46 inches) to centerline of bottom supporting bracket.
 5. Centerline of door pulls to be 1016 mm (40 inches).
 6. Push plates and push-pulls shall be 1270 mm (50 inches) to top of plate.
 7. Push-pull latch to be 1024 mm (40-5/16 inches) to centerline of strike.
 8. Centerline of deadlock strike to be 840 mm (33 inches) when used with push-pull latch.
 9. Locate other hardware at standard commercial heights. Locate push and pull plates to prevent conflict with other hardware.

3.2 INSTALLATION

- A. Closer devices, including those with hold open features, shall be equipped and mounted to provide maximum door opening permitted by building construction or equipment. Closers shall be mounted on side of door inside rooms, inside stairs, and away from corridors except security bedroom, bathroom and anteroom doors which shall have closer installed parallel arm on exterior side of doors. At exterior doors,

closers shall be mounted on interior side. Where closers are mounted on doors they shall be mounted with sex nuts and bolts; foot shall be fastened to frame with machine screws.

B. Hinge Size Requirements:

Door Thickness	Door Width	Hinge Height
45 mm (1-3/4 inch)	900 mm (3 feet) and less	113 mm (4-1/2 inches)
45 mm (1-3/4 inch)	Over 900 mm (3 feet) but not more than 1200 mm (4 feet)	125 mm (5 inches)
35 mm (1-3/8 inch) (hollow core wood doors)	Not over 1200 mm (4 feet)	113 mm (4-1/2 inches)

C. Hinge leaves shall be sufficiently wide to allow doors to swing clear of door frame trim and surrounding conditions.

D. Where new hinges are specified for new doors in existing frames or existing doors in new frames, sizes of new hinges shall match sizes of existing hinges. Existing hinges shall not be reused on door openings having new doors and new frames. Coordinate preparation for hinge cut-outs and screw-hole locations on doors and frames.

E. Hinges Required Per Door:

Doors 1500 mm (5 ft) or less in height	2 butts
Doors over 1500 mm (5 ft) high and not over 2280 mm (7 ft 6 in) high	3 butts
Doors over 2280 mm (7 feet 6 inches) high	4 butts
Dutch type doors	4 butts
Doors with spring hinges 1370 mm (4 feet 6 inches) high or less	2 butts
Doors with spring hinges over 1370 mm (4 feet 6 inches)	3 butts

F. Fastenings: Suitable size and type and shall harmonize with hardware as to material and finish. Provide machine screws and lead expansion shields to secure hardware to concrete, ceramic or quarry floor tile, or solid masonry. Fiber or rawl plugs and adhesives are not permitted. All fastenings exposed to weather shall be of nonferrous metal.

G. After locks have been installed; show in presence of COR that keys operate their respective locks in accordance with keying requirements. (All keys, Master Key level and above shall be sent Registered Mail to the Medical Center Director along with the bitting list. Also a copy of

the invoice shall be sent to the COR for his records.) Installation of locks which do not meet specified keying requirements shall be considered sufficient justification for rejection and replacement of all locks installed on project.

3.3 FINAL INSPECTION

- A. Installer to provide letter to COR that upon completion, installer has visited the Project and has accomplished the following:
1. Re-adjust hardware.
 2. Evaluate maintenance procedures and recommend changes or additions, and instruct VA personnel.
 3. Identify items that have deteriorated or failed.
 4. Submit written report identifying problems.

3.4 DEMONSTRATION

- A. Demonstrate efficacy of mechanical hardware and electrical, and electronic hardware systems, including adjustment and maintenance procedures, to satisfaction of COR and VA Locksmith.

3.5 HARDWARE SETS

- A. Following sets of hardware correspond to hardware symbols shown on drawings. Only those hardware sets that are shown on drawings will be required. Disregard hardware sets listed in specifications but not shown on drawings.

ELECTRIC HARDWARE ABBREVIATIONS LEGEND:	
ADO	= Automatic Door Operator
EMCH	= Electro-Mechanical Closer-Holder
MHO	= Magnetic Hold-Open (wall- or floor-mounted)

HW-1A - PATIENT ROOM (4'-0" DOORS)

ADD CLOSER 5E508A, 5E507A

1	CONTINUOUS HINGE	A51031BX INTEGRAL HINGE GUARD CHANNEL X ADJUSTA-SCREWS
1	HOSPITAL LATCH	F01X PADDLES POINTING DOWN
1	ARMOR PLATE (CORRIDOR SIDE)	J101X 1-275 MM (0.050") THICKNESS
1	MOP-PLATE (ROOM SIDE)	J102
1	EDGE GUARD (WITH WOOD DOORS)	J208 M/J211 (VERIFY), CUT: HARDWARE
1	OVERHEAD STOP	C01541 - ADJUSTABLE
3	SILENCERS	L03011

1 SET SEALS R3C164

HW-1B - 3'-0" SIDE DOOR, TOP & BOTTOM LOCKS ONLY

1 4.3

1 3.2

HW-2A - PATIENT TOILET DOOR (4'-0") DOORS

1 CONTINUOUS HINGE A51031B x INTEGRAL HINGE GUARD CHANNEL
X ADJUSTA-SCREWS

1 HOSPITAL LATCH F02 - MOD X TURNPIECE BOTH SIDES
X OCCUPANCY INDICATOR

1 KICK PLATE J102

1 MOP PLATE J102

1 EDGE GUARD (@ WOOD DOORS) J208M / J211 (VERIFY), CUT: HARDWARE

1 OVERHEAD STOP C01541-ADJUSTABLE

1 AUTO DOOR BOTTOM R0Y346 - HEAVY DUTY

2 SET SELF-ADHESIVE SEALS R0E154

SOLID SURFACE THRESHOLD BY OTHER TRADES.

HW-2B - PATIENT TOILET DOOR (3'-0" DOORS)

SAME AS 2A BUT (3) HINGES - QUANTITY/TYPE AS REQUIRED

HW-3 - OFFICE

HINGES - QUANTITY & TYPE AS REQUIRED

1 OFFICE LOCK F04

1 WALL STOP L52101 CONVEX

1 SET SELF-ADHESIVE SEALS R0E154

1 COAT HOOK L03121

OMIT COAT HOOK WHERE GLASS LITE PREVENTS INSTALLATION

HW-4 - CLASSROOM

HINGES - QUANTITY & TYPE AS REQUIRED

1 CLASSROOM LOCK F05

1 WALL STOP L52101 CONVEX

1 SILENCERS L03011

HW-5A - STOREROOM (3'-0" DOORS)

HINGES - QUANTITY & TYPE AS REQUIRED

1	STOREROOM LOCK	F07
1	CLOSER	C02011/C02021 (PT4D, PT4F, PTFH)
1	ARMOR PLATE	
1	KICK PLATE	J102
1	WALL STOP	L52101 CONVEX
1	SET SELF ADHESIVE SEALS	ROE154
	(5E526A CHEMO-LOCKABLE) KICK PLATE	

HW-5B

1	CONTINUOUS HINGE	A51031B X INTEGRAL HINGE GUARD CHANNEL X ADJUSTA-SCREWS
1	RIM EXIT DEVICE	TYPE 1 F08 LEVER
1	CLOSER (@RATED DOOR)	C02011/C02021 (PT4D, PT4F, PT4H)
1	ARMOR PLATE	J101 X 1.275 MM (0.050 INCH) THICKNESS
1	EDGE GUARD (@ WOOD DOORS)	J208M / J211 (VERIFY), CUT: HARDWARE
1	WALL STOP	L52101 CONVEX
1	SET SELF-ADHESIVE SEALS	ROE154

HW-6 - PASSAGE SET (STAFF LOUNGE)

HINGES - QUANTITY & TYPE AS REQUIRED

1	PASSAGE SET	F01
1	KICK PLATE	J102
1	MOP PLATE	J102
1	OVERHEAD STOP	C01541 - ADJUSTABLE
3	SILENCERS	L03011

HW-7 - PRIVACY (STAFF TOILET)

HINGES - QUANTITY & TYPE AS REQUIRED

1	PRIVACY LOCK	F02 - MOD X OCCUPANCY INDICATOR
1	KICK PLATE	J102
1	MOP PLATE	J102
1	WALL STOP	L52101 CONVEX
3	SILENCERS	L03011
	SOLID SURFACE THRESHOLD BY OTHER TRADES	

HW-8 - ANTE ROOMS

HINGES - QUANTITY & TYPE AS REQUIRED

1	PASSAGE SET	F01
1	KICK PLATE	J102
1	MOP PLATE	J102
1	OVERHEAD STOP	C01541 - ADJUSTABLE
1	CLOSER	C02011/C02021 (PT4D, PT4F, PT4H)
3	SILENCERS	L03011

HW-9 - AUTOMATIC DOORS

RATED - FIRE BARRIER

2	CONTINUOUS HINGE	A51031B X INTEGRAL HINGE GUARD CHANNEL X ADJUSTA-SCREWS
2	SURFACE VERTICAL ROD PANIC DEVICE	TYPE 2 F14 LBR
2	AUTOMATIC DOOR OPERATOR	SEE SPECIFICATION SECTION 08 71 13
2	ACTIVATING DOOR SWITCH	SEE SPECIFICATION SECTION 08 71 13
4	ARMOR PLATE	J101X 1-275 MM (0.050") THICKNESS
2	ELECTO-MAGNETIC HOLDER	C00011
1	SET SELF ADHESIVE SEALS	ROE154
2	SILENCERS	L03011

- - - E N D - - -

Renovate Ward 5 East
Charles George VA Medical Center
Asheville, NC

VA Project Number 637-11-119

INTENTIONALLY LEFT BLANK

SECTION 08 71 13
AUTOMATIC DOOR OPERATORS
REVISED 1-25-13

PART 1 - GENERAL

1.1 DESCRIPTION

- A. This section specifies equipment, controls and accessories for automatic operation of swing and sliding doors.

1.2 RELATED WORK

- A. Door hardware; Section 08 71 00, DOOR HARDWARE.
- B. Glass and glazing of doors and frames; Section 08 80 00, GLAZING.
- C. Electric general wiring, connections and equipment requirements; Division 26, ELECTRICAL.
- D. Section 28 31 00, FIRE DETECTION AND ALARM.

1.3 QUALITY ASSURANCE

- A. Automatic door operators, controls and other equipment shall be products of a manufacturer regularly engaged in manufacturing such equipment for a minimum of three years.
- B. One type of automatic door equipment shall be used throughout the building.
- C. Equipment installer shall have specialized experience and shall be approved by the manufacturer.

1.4 WARRANTY

- A. Automatic door operators shall be subject to the terms and conditions of the contract, except that the Warranty period shall be two years in lieu of one year.

1.5 MAINTENANCE MANUALS

- A. In accordance with Section 01 00 00, GENERAL REQUIREMENTS Article titled "INSTRUCTIONS", furnish maintenance manuals and instructions on automatic door operators.

1.6 SUBMITTALS

- A. Submit in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.
- B. Manufacturer's literature and data describing operators, power units, controls, door hardware and safety devices.
- C. Shop Drawings:
 - 1. Showing location of controls and safety devices in relationship to each automatically operated door.

2. Showing layout, profiles, product components, including anchorage, accessories, as applicable.

3. Submit templates, wiring diagrams, fabrication details and other information to coordinate the proper installation of the automatic door operators.

D. Submit in writing to COR that items listed in Article 1.3 are in compliance.

1.7 DESIGN CRITERIA

A. As a minimum automatic door equipment shall comply with the requirements of BHMA 156.10. Except as otherwise noted on drawings, provide operators which will move the doors from the fully closed to fully opened position in three seconds maximum time interval, when speed adjustment is at maximum setting.

B. Equipment: Conforming to UL 325. Provide key operated power disconnect wall switch for each door installation.

C. Electrical Wiring, Connections and Equipment: Provide all motor, starter, controls, associated devices, and interconnecting wiring required for the installation. Equipment and wiring shall be as specified in Division 26, ELECTRICAL.

1.8 APPLICABLE PUBLICATIONS

A. The publications listed below form a part of this specification to the extent referenced. The publications are referenced in the text by the basic designation only.

B. Builders Hardware Manufacturers Association, Inc. (BHMA):
A156.10-05.....Power Operated Pedestrian Doors (BHMA 1601)

C. National Fire Protection Association (NFPA):
101-09.....Life Safety Code

D. Underwriters Laboratory (UL):
325-10.....Door, Drapery, Gate, Louver, and Window
Operators and Systems

1.9 DELIVERY AND STORAGE

A. Delivery shall be in factory's original, unopened, undamaged container with identification labels attached.

PART 2 - PRODUCTS

2.1 SWING DOOR OPERATORS

A. General: Swing door operators shall be of institutional type, door panel size 600 mm to 1250 mm (2'-0" to 5'-0") width, weight not to

exceed 300 kg (600 pounds), electric operated for overhead mounting within the header or transom. Furnish metal mounting supports, brackets and other accessories necessary for the installation of operators at the head of the door frames. The motor on automatic door operator shall be provided with an interlock so that the motor will not operate when doors are electrically locked from opening.

- B. Operators shall have checking mechanism providing cushioning action at last part of door travel, in both opening and closing cycle. Operators shall be capable of recycling doors instantaneously to full open position from any point in the closing cycle when control switch is activated. Operators shall, when automatic power is interrupted or shut-off, permit doors to easily open manually without damage to automatic operator system.
- C. Operator, enclosed in housing, shall open door by energizing motor and shall stop by electrically reducing voltage and stalling motor against mechanical stop. Door shall close by means of spring energy, and close force shall be controlled by gear system and motor being used as dynamic break without power, or controlled by hydraulic closer in electro-hydraulic operators. System shall operate as manual door control in event of power failure. Opening and closing speeds shall be adjustable:
1. Operator Housing: Housing shall be a minimum of 112 mm (4-1/2 inches) wide by 140 mm (5.5 inches) high aluminum extrusions with enclosed end caps for application to 100 mm (4 inches) and larger frame systems. All structural sections shall have a minimum thickness of 3.2 mm (0.125 inch) and be fabricated of a minimum of 6063-T5 aluminum alloy.
 2. Power Operator: Completely assembled and sealed unit which shall include gear drive transmission, mechanical spring and bearings, all located in aluminum case and filled with special lubricant for extreme temperature conditions. Complete unit shall be rubber mounted with provisions for easy maintenance and replacement, without removing door from pivots or frame.
 3. Connecting hardware shall have drive arm attached to door with a pin linkage rotating in a self-lubricating bearing. Door shall not pivot on shaft of operator.
 4. Electrical Control: Operator shall have a self contained electrical control unit, including necessary transformers, relays, rectifiers,

and other electronic components for proper operation and switching of power operator. All connecting harnesses shall have interlocking plugs.

2.2 MICROPROCESSOR CONTROLS

- A. The system shall include a multi-function microprocessor control providing adjustable hold open time (1-30 seconds), LED indications for sensor input signals and operator status and power assist close options. Control shall be capable of receiving activation signals from any device with normally open dry contact output. All activation modes shall provide fully adjustable opening speed:
- B. The door shall be held open by low voltage applied to the continuous duty motor. The control shall include an adjustable safety circuit that monitors door operation and stops the opening direction of the door if an obstruction is sensed. The motor shall include a recycle feature that reopens the door if an obstruction is sensed at any point during the closing cycle. The control shall include a standard three position key switch with functions for ON, OFF, and HOLD OPEN, mounted on operator enclosure, door frame, or wall, as indicated in the architectural drawings.

2.3 POWER UNITS

Each power unit shall be self-contained, electric operated and independent of the door operator. Capacity and size of power circuits shall be in accordance with automatic door operator manufacturer's specifications and Division 26 - ELECTRICAL.

2.4 DOOR CONTROLS

- A. Opening and closing actions of doors shall be actuated by controls and safety devices specified, and conform to ANSI 156.10. Controls shall cause doors to open instantly when control device is actuated; hold doors in open positions; then, cause doors to close, unless safety device or reactivated control interrupts operation.
- B. Manual Controls:
 - 1. Push Plate Wall Switch: Recess type, stainless steel push plate minimum 100 mm by 100 mm (four-inch by four-inch), with 13 mm (1/2-inch) high letters "To Operate Door--Push" engraved on face of plate.

2.5 SAFETY DEVICES

- A. General: Area over which doors swing or slide shall be a safety section and anyone standing in path of door's movement shall be protected by a safety device.
- B. Each swing door shall have installed on the pull side a presence sensor to detect any person standing in the door swing path and prevent the door from opening.
- C. Time delay switches shall be adjustable between 3 to 60 seconds and shall control closing cycle of doors.
- D. Decals with sign "In" or "Do Not Enter" shall be installed on both faces of each door where shown.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Coordinate installation of equipment with other related work. Manual controls and power disconnect switches shall be recessed or semi-flush mounted in partitions. Secure operator components to adjacent construction with suitable fastenings. Conceal conduits, piping, and electric equipment, in finish work.
- B. Install power units in locations shown. Where units are to be mounted on walls, provide metal supports or shelves for the units. All equipment, including time delay switches, shall be accessible for maintenance and adjustment.
- C. Operators shall be adjusted and must function properly for the type of traffic (pedestrians, carts, stretchers and wheelchairs) expected to pass through doors. Each door leaf of pairs of doors shall open and close in synchronization. On pairs of doors, operators shall allow either door to be opened manually without the other door opening.
- D. Install controls at positions shown and make them convenient for particular traffic expected to pass through openings. Maximum height of push plate wall switches from finished floors shall be 40 inches unless otherwise accepted by the COR.

3.2 INSTRUCTIONS

- A. Following the installation and final adjustments of the door operators, the installer shall fully instruct VA personnel for 2 hours on the operating, servicing and safety requirements for the swing and sliding automatic door operators.
- B. Coordinate instruction to VA personnel with COR.

Renovate Ward 5 East
Charles George VA Medical Center
Asheville, NC

VA Project Number 637-11-119
12-09

- - - E N D - - -

SECTION 08 80 00
GLAZING
REVISED 2-05-13

PART 1 - GENERAL

1.1 DESCRIPTION

This section specifies glass, plastic, related glazing materials and accessories. Glazing products specified apply to factory or field glazed items.

1.2 RELATED WORK

- A. Factory glazed by manufacturer in following units:
1. Sound resistant doors: Section 08 11 13, HOLLOW METAL DOORS AND FRAMES, and Section 08 14 00, INTERIOR WOOD DOORS.
 2. Mirrors: Section 10 28 00, TOILET, BATH, AND LAUNDRY ACCESSORIES.

1.3 LABELS

- A. Temporary labels:
1. Provide temporary label on each light of glass identifying manufacturer or brand and glass type, quality and nominal thickness.
 2. Label in accordance with NFRC (National Fenestration Rating Council) label requirements.
 3. Temporary labels shall remain intact until glass is accepted by COR.
- B. Permanent labels:
1. Locate in corner for each pane.
 2. Label in accordance with ANSI Z97.1 and SGCC (Safety Glass Certification Council) label requirements.
 - a. Tempered glass.
 - b. Laminated glass or have certificate for panes without permanent label.

1.4. GLASS THICKNESS

1. Test in accordance with ASTM E 1300.
2. Thicknesses listed are minimum. Coordinate thicknesses with framing system manufacturers.

1.5 SUBMITTALS

- A. In accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.
- B. Manufacturer's Certificates:
1. Certificates stating that wire glass, meets requirements for safety glazing material as specified in ANSI Z97.1.

C. Warranty: Submit written guaranty, conforming to "Warranty of Construction" Article in this Section.

D. Manufacturer's Literature and Data:

1. Glass, each kind required.

E. Samples:

1. Size: 150 mm by 150 mm (6 inches by 6 inches).

1.6 DELIVERY, STORAGE AND HANDLING

A. Delivery: Schedule delivery to coincide with glazing schedules so minimum handling of crates is required. Do not open crates except as required for inspection for shipping damage.

B. Storage: Store cases according to printed instructions on case, in areas least subject to traffic or falling objects. Keep storage area clean and dry.

C. Handling: Unpack cases following printed instructions on case. Stack individual windows on edge leaned slightly against upright supports with separators between each.

1.7 PROJECT CONDITIONS

Field Measurements: Field measure openings before ordering tempered glass products. Be responsible for proper fit of field measured products.

1.8 WARRANTY

A. Warranty: Conform to terms and conditions of the contract, except extend warranty period for the following:

1. Bullet resistive plastic material to remain visibly clear without discoloration for 10 years.

2. Insulating glass units to remain sealed for 10 years.

3. Laminated glass units to remain laminated for 5 years.

4. Polycarbonate to remain clear and ultraviolet light stabilized for 5 years.

5. Insulating plastic to not have more than 6 percent decrease in light transmission and be ultraviolet light stabilized for 10 years.

1.9 APPLICABLE PUBLICATIONS

A. Publications listed below form a part of this specification to extent referenced. Publications are referenced in text by basic designation only.

B. American National Standards Institute (ANSI):

- Z97.1-04.....Safety Glazing Material Used in Building -
Safety Performance Specifications and Methods
of Test.
- C. American Society for Testing and Materials (ASTM):
- C542-05.....Lock-Strip Gaskets.
- C716-06.....Installing Lock-Strip Gaskets and Infill
Glazing Materials.
- C794-06.....Adhesion-in-Peel of Elastomeric Joint Sealants.
- C864-05.....Dense Elastomeric Compression Seal Gaskets,
Setting Blocks, and Spacers.
- C920-08.....Elastomeric Joint Sealants.
- C964-07.....Standard Guide for Lock-Strip Gasket Glazing.
- C1036-06.....Flat Glass.
- C1048-04.....Heat-Treated Flat Glass-Kind HS, Kind FT Coated
and Uncoated Glass.
- C1172-09.....Laminated Architectural Flat Glass.
- C1376-10.....Pyrolytic and Vacuum Deposition Coatings on
Flat Glass.
- D635-06.....Rate of Burning and/or Extent and Time of
Burning of Self-Supporting Plastic in a
Horizontal Position.
- D4802-02.....Poly (Methyl Methacrylate) Acrylic Plastic
Sheet.
- E84-09.....Surface Burning Characteristics of Building
Materials.
- E1300-09.....Determining Load Resistance of Glass in
Buildings.
- D. American Society of Civil Engineers (ASCE):
- ASCE 7-10.....Wind Load Provisions
- E. Code of Federal Regulations (CFR):
- 16 CFR 1201 - Safety Standard for Architectural Glazing Materials;
1977, with 1984 Revision.
- F. National Fire Protection Association (NFPA):
- 80-08.....Fire Doors and Windows.
- G. National Fenestration Rating Council (NFRC)
- H. Safety Glazing Certification Council (SGCC) 2009:
Certified Products Directory (Issued Semi-Annually).

- I. Underwriters Laboratories, Inc. (UL):
752-06.....Bullet-Resisting Equipment.
- J. Glass Association of North America (GANA):
Glazing Manual (Latest Edition)
Sealant Manual (2008)

PART 2 - PRODUCT

2.1 GLASS

- A. Use thickness stated unless specified otherwise in assemblies.
- B. Clear Glass:
 - 1. ASTM C1036, Type I, Class 1, Quality
 - 2. Thickness, 6 mm (1/4 inch) as indicated
- C. Patterned and Wired Flat Glass:
 - 1. ASTM C1036, Type II, Class 1 Form 1, Pattern Pl, Finish Fl, Quality Q5, Mesh
 - 2. Thickness, 6 mm (1/4 inch) as indicated
- D. Clear Tempered Glass:
 - 1. ASTM C1048, Kind FT, Condition A, Type I, Class 1, Quality q3
 - 2. Thickness, 6 mm (1/4 inch) as indicated

2.2 GLAZING ACCESSORIES

- A. As required to supplement the accessories provided with the items to be glazed and to provide a complete installation. Ferrous metal accessories exposed in the finished work shall have a finish that will not corrode or stain while in service.
- B. Setting Blocks; ASTM C864
 - 1. Channel shape; having 6 mm (1/4 inch) internal depth.
 - 2. Shore a hardness of 80 to 90 Durometer.
 - 3. Block lengths: 50 mm (two inches) except 100 to 150 mm (four to six inches) for insulating glass.
 - 4. Block width: approximately 1.6 mm (1/16 inch) less than the full width of the rabbet.
 - 5. Block thickness: Minimum 4.8 mm (3/16 inch). Thickness sized for rabbet depth as required.
- C. Spacers: ASTM C864
 - 1. Channel shape; having 6 mm (1/4 inch) internal depth.
 - 2. Flanges not less 2.4 mm (3/32 inch) thick and web 3 mm (1/8 inch) thick.

3. Lengths: One to 25 to 76 mm (one to three inches).
 4. Shore a hardness of 40 50 50 Durometer.
- D. Sealing Tapes:
1. Semi-solid polymeric based material exhibiting pressure-sensitive adhesion and withstanding exposure to sunlight, moisture, heat, cold and aging.
- E. Glazing Clips:
1. Galvanized steel spring wire designed to hold glass in position in rabbeted sash without stops.
- F. Glazing Gaskets: ASTM C864
1. Firm dense wedge shape for locking in sash.
 2. Soft, closed cell with locking key for sash key.
 3. Flanges may terminate above the glazing-beads or terminate flush with top of beads.
- G. Lock-Strip Glazing Gaskets: ASTM C542, shape, size, and mounting as indicated.
- H. Glazing Sealants: ASTM C920, silicone neutral cure:
1. Type S.
 2. Class 25
 3. Grade NS.
 4. Shore A hardness of 25 to 30 Durometer.
- I. Color:
1. Color of glazing gaskets, and sealants used for aluminum color frames shall match color of the finished aluminum and be nonstaining.
 2. Color of other glazing compounds, gaskets, and sealants which will be exposed in the finished work and unpainted shall be black, gray, or neutral color.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verification of Conditions:
1. Examine openings for glass and glazing units; determine they are proper size; plumb; square; and level before installation is started.
 2. Verify that glazing openings conform with details, dimensions and tolerances indicated on manufacturer's approved shop drawings.

- B. Advise Contractor of conditions which may adversely affect glass and glazing unit installation, prior to commencement of installation: Do not proceed with installation until unsatisfactory conditions have been corrected.
- C. Verify that wash down of adjacent masonry is completed prior to erection of glass and glazing units to prevent damage to glass and glazing units by cleaning materials.

3.2 PREPARATION

- A. For sealant glazing, prepare glazing surfaces in accordance with GANA-02 Sealant Manual.
- B. Determine glazing unit size and edge clearances by measuring the actual unit to receive the glazing.
- C. Shop fabricate and cut glass with smooth, straight edges of full size required by openings to provide GANA recommended edge clearances.
- D. Verify that components used are compatible.
- E. Clean and dry glazing surfaces.
- F. Prime surfaces scheduled to receive sealants, as determined by preconstruction sealant-substrate testing.

3.3 INSTALLATION - GENERAL

- A. Install in accordance with GANA-01 Glazing Manual and GANA-02 Sealant Manual unless specified otherwise.
- B. Glaze in accordance with recommendations of glazing and framing manufacturers, and as required to meet the Performance Test Requirements specified in other applicable sections of specifications.
- C. Set glazing without bending, twisting, or forcing of units.
- D. Do not allow glass to rest on or contact any framing member.
- E. Glaze doors and operable sash, in a securely fixed or closed and locked position, until sealant, glazing compound, or putty has thoroughly set.
- F. Fire Resistant Glass:
 - 1. Wire glass: Glaze in accordance with NFPA 80.
 - 2. Other fire resistant glass: Glaze in accordance with UL design requirements.
- G. Tempered Glass:
 - 1. Install with roller distortions in horizontal position unless otherwise directed.

3.4 INSTALLATION - DRY METHOD (TAPE AND GASKET SPLINE GLAZING)

- A. Cut glazing tape to length; install on glazing pane. Seal corners by butting and sealing junctions with butyl sealant.
- B. Place setting blocks at points with edge block no more than 150 mm (6 inches) from corners.
- C. Rest glazing on setting blocks and push against fixed stop with sufficient pressure to attain full contact.
- D. Install removable stops without displacing glazing spline. Exert pressure for full continuous contact.
- E. Do not exceed edge pressures stipulated by glass manufacturers for installing glass lites.
- F. Trim protruding tape edge.

3.5 INSTALLATION - INTERIOR WET/DRY METHOD (TAPE AND SEALANT)

- A. Cut glazing tape to length; install against permanent stops, projecting 1.6 mm (1/16 inch) above sight line.
- B. Place setting blocks at 1/4 points with edge block no more than 150 mm (6 inches) from corners.
- C. Rest glazing on setting blocks and push against tape to ensure full contact at perimeter of pane or unit.
- D. Install removable stops, spacer shims inserted between glazing and applied stops at 600 mm (24 inch) intervals, 6 mm (1/4 inch) below sight line.
- E. Trim protruding tape edge.

3.6 REPLACEMENT AND CLEANING

- A. Clean new glass surfaces removing temporary labels, paint spots, and defacement after acceptance by COR.
- B. Replace cracked, broken, and imperfect glass, or glass which has been installed improperly.
- C. Leave glass, putty, and other setting material in clean, whole, and acceptable condition.

3.7 PROTECTION

- A. Protect finished surfaces from damage during erection, and after completion of work. Strippable plastic coatings on colored anodized finish are not acceptable.

3.8 GLAZING SCHEDULE

- A. Fire Resistant Glass:
 - 1. Install clear wire glass in interior fire rated or labeled doors and windows.

2. Install clear wire glass in exterior windows and doors indicated to receive wire glass.

B. Tempered Glass:

1. Install in full and half glazed doors unless indicated otherwise.
2. Install in storefront, windows, and door sidelights adjacent to doors.
3. Use clear tempered glass on interior side lights and doors, and on exterior doors and sidelights unless otherwise indicated or specified.

C. Clear Glass:

1. Interior observation windows not specified otherwise.
2. Interior pane of dual glazed windows not receiving tempered, laminated or organic coated glass, or other special glass indicated or specified.

- - - E N D - - -

Renovate Ward 5 East
Charles George VA Medical Center
Asheville, NC

VA Project Number 637-11-119
10-11

**SECTION 09 06 00
SCHEDULE FOR FINISHES**

SECTION 09 06 00-SCHEDULE FOR FINISHES

VAMC: Charles George Veterans Affairs Medical Center
Location: Asheville, NC
Project no. and Name: Renovate Ward 5 East, Building 47
Submission: Final Construction Documents
Date: December 21, 2012

I - GENERAL

1.1 DESCRIPTION

This section contains a coordinated system in which requirements for materials specified in other sections shown are identified by abbreviated material names and finish codes in the room finish schedule or shown for other locations.

1.2 MANUFACTURERS

Manufacturer's trade names and numbers used herein are only to identify colors, finishes, textures and patterns. Products of other manufacturer's equivalent to colors, finishes, textures and patterns of manufacturers listed that meet requirements of technical specifications will be acceptable upon approval in writing by Contracting Officer's Representative (COR) for finish requirements.

1.3 SUBMITALS

Submit in accordance with SECTION 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES—provide quadruplicate samples for color approval of materials and finishes specified in this section.

1. DIGITAL COLOR PHOTOS-INTERIOR VIEWS:

Room Number and Name	Item/View to be Photographed
1. Typical Corridor	Elevation of All Finish Components
2. Typical Patient Room	Head Wall
3. Typical Patient Toilet	Elevation of Ceramic Wall
4. Typical Work Area	Elevation
5. Typical Office	Elevation

1.4 APPLICABLE PUBLICATIONS

A. Publications listed below form a part of this specification to the extent referenced. Publications are referenced in text by basic designation only.

B. MASTER PAINTING INSTITUTE: (MPI)

2001.....Architectural Painting Specification Manual

PART 2- PRODUCTS

2.1 DIGITAL COLOR PHOTOS

A. Size 24 x 35 mm.

B. Labeled for:

1. Renovate Ward 5 East, Building 47
2. Room Name and Number.

2.2 DIVISION 05 - METALS

A. SECTION 05 50 00, METAL FABRICATION

Item	Finish
Steel Grating and Frames	Galvanized
Platforms	Galvanized

B. SECTION 05 51 00, METAL STAIRS

Component	Finish	Color
Guard Rails	Galvanized	
Handrails	Galvanized	
Stringers	Galvanized	
Risers	Galvanized	
Underside	Galvanized	

2.3 DIVISION 06 WOOD, PLASTICS, AND COMPOSITES

A. SECTION 06 20 00, FINISH CARPENTRY

1. Typical Casework					
Room No. and Name	Component	Material	Manufacturer	Finish	Color
	Countertop	Laminate	Wilsonart		Green Soapstone, 4885-38
	Vertical Surface (s)	Laminate	Wilsonart		Wild Cherry, 7054-60
	Trim	None			
	Reveal	None			
	Base	Match Adjacent Area			

2. NURSES STATION					
Room No. and Name	Component	Material	Manufacturer	Finish/Color	
	Countertop	Solid Surface	Corian	Rosemary	
	Vertical Surface (s)	Laminate	Wilsonart	Wild Cherry, 7054-60	
	Reveal	Solid Surface	Corian	Rosemary	
	Trim	Solid Surface	Corian	Rosemary	
	Base	Rubber Base	Johnsonite	04-Butterscotch	

3. BENCH/MAIL STATION			
Room No. and Name	Material	Manufacturer	Finish/Color
Top	Laminate	Wilsonart	Wild Cherry, 7054-60
Vertical Surface	Laminate	Wilsonart	Wild Cherry, 7054-60

4. PEGBOARD		
Room No. and Name	Component	Finish/Color
Supply 5E522	Pegboard	Paint to match adjacent wall

5. PATIENT ROOM VANITIES /CHEMO. ROOM		
Room No. and Name	Component	Finish/Color
All Patient Rooms, Chemo	Countertop	Solid Surface, Rosemary
	Vertical Surface	Laminate, Wild Cherry, 7054-60

6. UPPER CABINETS/PATIENT WARDROBE/CORRIDOR STORAGE		
Room No. and Name	Component	Finish/Color
Typical	All Exposed Surfaces	Laminate, Wild Cherry, 7054-60

2.4 DIVISION 07 - THERMAL AND MOISTURE PROTECTION

A. SECTION 07 71 00 / 07 72 00, ROOF SPECIALITIES AND ACCESSORIES

Item	Material	Finish	Manufacturer	Manufacturer/Color Name/Number.
Equipment Support	Galv. Steel	Pre-finished	As specified	As specified

B. SECTION 07 95 13, EXPANSION JOINT COVER ASSEMBLIES

	Material	Finish	Manufacturer	Mfg. Color Name/No.
Floor Component Cover Plate Frame Casket or Sealant (interior only)	As specified	Match Existing	Balco	
Wall Component Cover Plate Frame Casket or Sealant (interior only)	As specified	Match Existing	Balco	
Ceiling Component Cover Plate, Gasket or Sealant (interior only)	As specified	Match Existing	Balco	White

C. SECTION 07 92 00, JOINT SEALANTS

Location	Color	Manufacturer	Manufacturer Color
New to Existing Walls	Match Adjacent Color	As Specified	
Building Expansion Joints	Match Adjacent Color	Balco	

2.5 DIVISION 08 - OPENINGS

A. SECTION 08 11 13, HOLLOW METAL DOORS AND FRAMES

Component	Color of Paint Type and Gloss
Frame	Semi-Gloss Enamel, Sherwin Williams, Alpaca SW7022

B. SECTION 08 14 00, WOOD DOORS

Component	Finish/Color
Doors	Plain cut Red Wood with Natural Finish

C. SECTION 08 31 13, ACCESS DOORS AND FRAMES

Material	Finish/Color
Steel	Painted to match adjacent finish
Stainless Steel	

D. WINDOW STOOLS

Room No. and Name	Material	Finish
All Patient Rooms, CNL Office	Solid Surface	Corian, Rosemary

E. SECTION 08 71 00, BUILDERS HARDWARE

Item	Material	Finish

Hinges	As specified	Match Existing
Door Closers	As specified	Match Existing
Floor Closers	As specified	Match Existing
Floor Pivot Sets	As specified	Match Existing
Closer/ Holder	As specified	Match Existing
Door Holders	As specified	Match Existing
Lock/ Latches	As specified	Match Existing
Armor Plates	Stainless Steel	Stainless Steel
Kick Mop Plates	Stainless Steel	Stainless Steel
Door Edging	As specified	Match Existing
Exit Device	As specified	Match Existing
Door Pulls	As specified	Match Existing
Push Plates	As specified	Match Existing
Combination Push Pull Plate	As specified	Match Existing
Weather Strip	As specified	Match Existing
Threshold	As specified	Match Existing

F. SECTION 08 80 00, GLAZING

Glazing Type	Manufacturer	Mfg. Color Name/No.
Clear, Tempered, Wire Glass as shown on Door Schedule	-	As specified

2.6 DIVISION 09 - FINISHES

A. SECTION 09 30 13, CERAMIC TILING

1. CERAMIC WALL TILE (CWT)					
Finish code	Size	Shape	Pattern	Manufacturer	Mfg. Color Name/No.
CWT-1	6"x6"	Square		Dal-Tile	X735 Matte Almond
CWT-2	6"x6"	Square		Dal-Tile	1452 Cypress

2. GROUT (GR)	
Finish code	Manufacturer
GR-1	Laticrete
	Mfg. Color Name/No. 85 Almond

3. PORCELAIN TILE (PT)					
Finish code	Size	Shape	Pattern	Manufacturer	Mfg. Color Name/No.
PT-1	2"x2" Sheets	Square	Keystones	Dal-Tile	D305 Marble

4. SECTION 09 30 13, SOLID SURFACE THRESHOLDS		
Type	Manufacturer	Mfg. Color Name/No.
TS-1 - 4'Lx4"W Transition Strip	Corian	Burled Beach

5. SECTION 09 30 13, SOLID SURFACE WINDOW STOOLS		
Type	Manufacturer	Mfg. Color Name/No.
Solid Surface Window Sill - 1/2"xWidth of Window	Corian	Rosemary

B. SECTION 09 51 00, ACOUSTICAL CEILINGS

Finish Code	Component	Color Pattern	Manufacturer	Mfg Name/No.
AT-1	ACOUSTICAL GRID & TILE	WHITE DONN DX/DXL	USG CORPORATION	FROST
AT-2	ACOUSTICAL GRID & TILE	WHITE DONN DX/DXL	USG CORPORATION	ASTRO CLIMAPLUS, SQUARE
AT-3	ACOUSTICAL GRID & TILE	WHITE DONN DX/DXL	USG CORPORATION	SHEETROCK BRAND LAY-IN CEILING PANEL CLIMAPLUS

C. SECTION 09 65 19, RESILIENT TILE FLOORING

Finish Code	Size	Material/Component	Manufacturer	Mfg Name/No.
LVT-1	12"X12"0.1"	LUXURY VINYL TILE	AMTICO	COLOR AND SERIES TBD BY VA
LVT-2	12"X12"0.1"	LUXURY VINYL TILE	AMTICO	COLOR AND SERIES TBD BY VA
LVT-3	12"X12"0.1"	LUXURY VINYL TILE	AMTICO	COLOR AND SERIES TBD BY VA

D. SECTION 09 65 13, RESILIENT BASE

Finish Code	Item	Height	Manufacturer	Mfg Name/No.
RB-1	Rubber Base (RB)	6"	JOHNSONITE	36-MANATEE
RB-2	Rubber Base (RB)	4"	JOHNSONITE	36-MANATEE
TS-2	TRANSITION STRIP	STANDARD CARPET EDGE TRANSITION STRIP	JOHNSONITE	36-MANATEE

E. SECTION 09 68 00, CARPET MODULES (CFT)

Finish Code	Size	Pattern direction	Manufacturer	Mfg. Color Name/No.
CP-1	AS SPECIFIED	ALTERNATING DIRECTION OF CARPET TILES	MOHAWK GROUP	DOCTOR BQ198 BY BIGELOW, 7879 SOCRATES

F. SECTION 09 91 00, PAINT AND COATINGS

1. MPI Gloss and Sheen Standards

Gloss Level 1	a traditional matte finish-flat	Gloss @60	max 5 units, and	Sheen @85	max 10 units
Gloss Level 2	a high side sheen flat-"a velvet-like" finish		max 10 units, and		10-35 units
Gloss Level 3	a traditional "egg-shell like" finish		10-25 units, and		10-35 units
Gloss Level 4	a "satin-like" finish		20-35 units, and		min. 35 units
Gloss Level 5	a traditional semi-gloss		35-70 units		
Gloss Level 6	a traditional gloss		70-85 units		
Gloss level 7	a high gloss		more than 85 units		

Epoxy shall be provided at all Patient Rooms, Chemo, Soiled Holding, etc. for washable surface

2. Paint code	**Gloss**	Manufacturer	Mfg. Color Name/No.
P-1	3	SHERWIN WILLIAMS	USEFUL GRAY, SW 7050
P-2	3	SHERWIN WILLIAMS	ALPACA, SW 7022
P-3	3	SHERWIN WILLIAMS	CONNECTED GRAY, SW 6165
P-4	3	SHERWIN WILLIAMS	BROWSE BROWN, SW 6012
PC-1	3	SHERWIN WILLIAMS	CONNECTED GRAY, SW 6165

PC-2	3	SHERWIN WILLIAMS	SIMPLE WHITE, SW 7021
3. Stain Code (S)	Gloss and Transparency	Manufacturer	Mfg. Color Name/No.
3. Stain Code (S)	Gloss and Transparency	Manufacturer	Mfg. Color Name/No.
S-1	MATCH EXISTING		NATURAL

2.7 DIVISION 10 - SPECIALTIES

A. SECTION 10 21 23, HOSPITAL CUBICLE CURTAINS

Finish Code	Manufacturer	Mfg. Color Name/No.
American Drape Master	Cubicle Curtains	Fantasia #15 Sandstone
Medline	Track & Harware-Carriers	MCD11Q100

B. SECTION 10 26 00, WALL GUARDS AND CORNER GUARDS

Item	Material	Manufacturer	Mfg. Color Name/No.
CG-1 - Corner Guards	VINYL	IN-PRO CORPORATION	0281 Smokey
HR-1 - Handrail	HARDWOOD	IN-PRO CORPORATION	Oak with Black and Gold Reveal Strip, Match Hospital Standard
BG-1 - Bumper Guard	VINYL	IN-PRO CORPORATION	0281 Smokey
WP-1 - Wall Protection with Top Cap	VINYL	IN-PRO CORPORATION	0281 Smokey
Door Frame Protection	STAINLESS STEEL	-	SIZE AS SPECIFIED

Renovate Ward 5 East
 Charles George VA Medical Center
 Asheville, NC

VA Project Number 637-11-119
 10-11

C. SECTION 10 13 00 / 10 14 00, INTERIOR SIGNS

Sign Type	Component	Manufacturer	Mfg. Color Name/No.
See Drawings	Match Existing	Match Existing	Match Existing

D. SECTION 10 44 13, FIRE EXTINGUISHER CABINETS

Component	Material	Finish
Cabinet	Steel	Baked-on semi-gloss white enamel

E. SECTION 10 28 00, TOILET AND BATH ACCESSORIES

Item	Material	Manufacturer	Mfg. Color Name/No.
TA2-BED PAN CABINET	Thermofoil and Gelcoat	Wellness Environments	Beige Thermofoil, Gelcoat in Biscuit
TA4-TOILET TISSUE DISPENSER	Stainless Steel	BOBRICK	Satin Finish
TA5-GRAB BARS	Stainless Steel	BOBRICK	Satin Finish
SHOWER CURTAIN ROD	Stainless Steel	BOBRICK	Satin Finish
TA6-SANITARY NAPKIN DISPOSAL	Stainless Steel	BOBRICK	Satin Finish
TA7-UNDER LAVATORY GUARD	High-impact, UV-protected vinyl	IPS CORPORATION	TRUEBRO LAV SHIELD PROTECTIVE LAVATORY ENCLOSURE
TA8-CLOTHES HOOKS	Stainless Steel	BOBRICK	Satin Finish
TA9-METAL FRAMED MIRROR	Steel	BOBRICK	Chrome Finish
TA10-MOP RACK	Stainless Steel	BOBRICK	Satin Finish
TA12-RECESSED SOAP DISH	Stainless Steel	BOBRICK	Matte-polished Finish
TA13-SHOWER CURTAIN ROD	Stainless Steel	BOBRICK	Satin Finish

2.7 DIVISION 12- FURNISHINGS

A. SECTION 12 36 00, COUNTERTOPS AND ACCESSORIES

Type	Manf/Finish/Color
Plastic Laminate	Wilsonart, Green Soapstone, 4885-38
Solid Surface	Corian, Rosemary

2.8 DIVISION 22 - PLUMBING

A. SECTION 22 40 00, PLUMBING FIXTURES AND TRIM

Item	Color
Water Closet	White Vitreous China
Lavatories	White Vitreous China
Sink in Countertop	Stainless Steel
Mop Sink	Terrazzo
Clinic Service Sink	White Vitreous China

2.9 DIVISION 26 - ELECTRICAL

A. SECTION 26 51 00, BUILDING LIGHTING INTERIOR

Fixture Type	Exterior Finish	Color
Sconce	Match Existing	Match Existing

B. SECTION 10 25 13, PATIENT BED SERVICE WALLS

Component	Material	Finish	Manufacturer	Mfg. Color/Name
Cabinet Frame	Plastic Laminate	Matte	Wilsonart	Wild Cherry 7054-60
Face Panel	Plastic Laminate	Matte	Wilsonart	Wild Cherry 7054-60
Doors	Plastic Laminate	Matte	Wilsonart	Wild Cherry 7054-60

PART III EXECUTION

3.1 FINISH SCHEDULES & MISCELLANEOUS ABBREVIATIONS

FINISH SCHEDULE & MISCELLANEOUS ABBREVIATIONS	
Term	Abbreviation
Acoustical Ceiling	AT
Bumper Guard	BG
Carpet	CP
Ceramic Tile	CT
Corner Guard	CG
Grout	GR
Gypsum Wallboard	GWB
Handrail	HR

Material	MAT
Natural Finish	NF
Paint	P
Plastic Laminate	L
Porcelain Tile	PT
Rubber Base	RB
Solid Surface Material	SS
Stain	ST
Vinyl Base	VB
Vinyl Composition Tile	VCT
Wall Protection	WP
Wood	WD

3.2 ROOM FINISH SCHEDULE

A. Refer to I-100 for Room Finish Schedule

---- E N D----

Renovate Ward 5 East
Charles George VA Medical Center
Asheville, NC

VA Project Number 637-11-119

INTENTIONALLY LEFT BLANK