

DIVISION 8 DOORS AND WINDOWS

1 2004/04/30

2

SECTION 08220

3

FIBERGLASS REINFORCED PLASTIC (FRP) DOORS AND FRAMES

4

PART 1 - GENERAL

5

1.1 SUMMARY

6

A. Section Includes:

7

1. FRP doors and frames.

8

2. Grouting of door frames.

9

B. Related Sections include but are not necessarily limited to:

10

1. Division 0 - Bidding Requirements, Contract Forms, and Conditions of the Contract.

11

2. Division 1 - General Requirements.

12

3. Section 08700 - Finish Hardware.

13

1.2 QUALITY ASSURANCE

14

A. Referenced Standards:

15

1. American National Standards Institute (ANSI):

16

a. A115, Door and Frame Preparation.

17

b. A151.1, Test Procedure and Acceptance Criteria for Physical Endurance for Steel Doors and Hardware Reinforcings.

18

2. ASTM International (ASTM):

19

a. A153, Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware.

20

b. E152, Methods of Fire Tests of Door Assemblies.

21

3. Steel Door Institute (SDI):

22

a. All applicable SDI publications.

23

24

B. Qualifications:

25

1. Manufacturer shall have been producing products specified for minimum of 5 years.

26

2. Installer shall have minimum of 5 years experience in the installation of fiberglass reinforced plastic doors and frames. Experience shall include field repair of fiberglass and gel coating.

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28

29

C. Doors and frames shall be fabricated by single manufacturer.

30

D. Door hardware and accessories may be provided by door manufacturer and installed at the factory or, at door manufacturer's option, may be provided by others and installed in the field.

31

32

1.3 DEFINITIONS

33

A. Installer or Applicator: Installer or applicator is the person actually installing or applying the product in the field at the Project site.

34

35

1. Installer or applicator are synonymous.

36

1.4 SUBMITTALS

37

A. Shop Drawings:

38

1. See Section 01340.

39

2. Product technical data including:

40

a. Acknowledgement that products submitted meet requirements of standards referenced.

41

b. Manufacturer's installation instructions.

42

3. Schedule of doors and frames using same reference numbers as used on Drawings.

43

4. Certification of manufacturer's qualifications.

44

B. Samples:

- 1 1. Provide one 6 IN long sample of frame and one 6 x 6 IN sample of door specified.
- 2 a. Frame sample shall show corner construction.
- 3 b. Door sample shall show core specified and reinforcing construction.
- 4 C. Operation and Maintenance Manuals:
- 5 1. See Section 01300.
- 6 2. Certification that doors and frames have been protected against chemical exposures listed.
- 7 3. Certification of installer's experience.

8 **1.5 DELIVERY, STORAGE, AND HANDLING**

- 9 A. Store doors and frames under protective covering. Place units on wood skids providing a
- 10 minimum 4 IN air space above the ground. Do not store units flat, set frames and doors on edge
- 11 providing a minimum 1/2 IN air circulation space between each unit. Provide covering which
- 12 will ensure air flow around each unit to prevent trapping moisture. If door wrapper becomes wet,
- 13 remove immediately and provide dry protection equivalent to wrapper removed.
- 14 B. Storage recommendations by unit manufacturer shall take precedence over the above
- 15 requirements.

16 **1.6 WARRANTY**

- 17 A. Warranty all FRP components to be free of defects in materials and workmanship for 1 year and
- 18 from degradation or failure due to corrosion for minimum of 5 years from date of acceptance.
- 19 Warranty against door warpage of more than 1:100 when measured diagonally across the door.

20 **PART 2 - PRODUCTS**

21 **2.1 ACCEPTABLE MANUFACTURERS**

- 22 A. Subject to compliance with the Contract Documents, the following manufacturers are
- 23 acceptable:
- 24 1. FRP doors and frames:
- 25 a. Corrim Company.
- 26 b. Chempruf.

27 **2.2 MATERIALS**

- 28 A. Face Panel: Fiberglass reinforced plastic.
- 29 B. Supports and Reinforcing: Non-swelling polymer or equivalent non-corrosive material.
- 30 C. Inserts, Bolts and Fasteners: Stainless steel.
- 31 D. Grout: As specified in Section 03308.
- 32 E. Core:
- 33 1. Non-fire rated:
- 34 a. Rigid end grain balsa.
- 35 b. Thickness: Minimum 1-1/2 IN.
- 36 c. Density: 8.5 - 9.0 pcf.
- 37 d. Compressive strength: Minimum 1400 psi.
- 38 F. Frames:
- 39 1. Non-fire rated: Fiberglass reinforced plastic.

40 **2.3 ACCESSORIES**

- 41 A. Frame Anchors:
- 42 1. Jamb anchors in masonry:

- 1 a. 16 GA, steel masonry "T" anchor, or masonry wire anchor galvanized per ASTM A153,
- 2 G60 coating.
- 3 2. Floor anchors:
- 4 a. 12 GA, steel galvanized per ASTM A153, G60 coating.
- 5 B. Glass Panels in Doors:
- 6 1. Fixed, applied stops on each face with snap-in retainer and trim fabricated from non-
- 7 corrosive materials.
- 8 a. No exposed fasteners on exterior of door allowed.
- 9 b. Doors may be glazed at the factory or at manufacturer's option may be glazed in the
- 10 field.
- 11 2. Reinforce cut-out in door panel with minimum 1.5 IN SQ fiberglass tubing.
- 12 3. Glass: 1/4 IN wire glass.

13 2.4 FABRICATION

- 14 A. General:
- 15 1. Fabricate rigid, neat in appearance and free from defects.
- 16 2. Form to sizes and profiles indicated on Drawings.
- 17 a. Sizes indicated in DOOR SCHEDULE are nominal. Coordinate for actual conditions
- 18 affecting actual size of rough openings, specifically at all concrete walls.
- 19 3. Fit and assemble in shop wherever practical.
- 20 4. Mark work that cannot be fully assembled in shop to assure proper assembly at site.
- 21 5. All surfaces, both exposed and concealed, shall be gel coated to prevent acid attack of the
- 22 glass reinforcing.
- 23 6. Fabricate doors and frames to tolerance requirements of SDI-117.
- 24 7. Fit doors to SDI clearances.
- 25 8. Doors shall be fabricated to withstand splash and spillage attack from chemicals for a period
- 26 of 8 HRS.
- 27 B. FRP Doors:
- 28 1. General:
- 29 a. Construction:
- 30 1) 1-3/4 IN thick, minimum.
- 31 2) Face sheets, 0.125 IN thick, minimum.
- 32 3) Fabricate with flush top closure.
- 33 4) Doors with a maximum size of 48 IN wide x 96 IN tall shall be fabricated in one
- 34 piece.
- 35 5) Fill and dress all joints.
- 36 6) Resin: Polyester or vinyl ester as required to meet chemical resistance
- 37 requirements.
- 38 7) Fiberglass content (by weight): Minimum 30 percent, maximum 40 percent.
- 39 8) UV stabilized.
- 40 9) Core: End grain balsa for non-fire rated doors.
- 41 b. Finish:
- 42 1) Minimum 15 mil gel coat thickness.
- 43 2) Gel coat color:
- 44 a) Selected by Engineer from manufacturer's premium color series.
- 45 2. Exterior and Interior:
- 46 a. Similar to SDI Grade III, Model 4, seamless.
- 47 1) Face sheet 0.125 IN thickness.
- 48 C. Frames:
- 49 1. General:
- 50 a. One piece.
- 51 b. Minimum thickness: 0.1875 IN.
- 52 c. Resin: Polyester or vinyl ester as required to meet chemical resistance requirements.
- 53 d. Fiberglass content (by weight): Minimum 30 percent, maximum 40 percent.

- 1 e. UV stabilized.
- 2 2. FRP frames:
- 3 a. Provide mortar guard boxes at back of all hardware cutouts.
- 4 b. Corner reinforcement: Minimum 4 x 4 x 0.25 IN FRP angle attached to top reinforcing
- 5 bar with concealed stainless steel screws.
- 6 c. Hinge reinforcement: Minimum 0.25 IN thick polymer plate attached to frame.
- 7 d. Minimum 0.25 IN thick polymer plate reinforcement bonded and mechanically fastened
- 8 to frame for strikes, closers and surface-mounted hardware.
- 9 D. Prepare for finish hardware in accordance with hardware schedule, templates provided by
- 10 hardware supplier, and ANSI A115.
- 11 1. Locate finish hardware in accordance with SDI.
- 12 2. See Section 08700 for hardware.

13 **PART 3 - EXECUTION**

14 **3.1 INSTALLATION**

- 15 A. Install doors and frames, in accordance with SDI and manufacturer's instructions.
- 16 B. Place frames prior to construction of enclosing walls and ceilings.
- 17 C. Plumb, align, and brace securely until permanently anchored.
- 18 D. After completion of walls, remove temporary braces and spreaders.
- 19 E. Use plastic plugs to keep silencer holes clear during construction.
- 20 F. Grout fill all hollow door frames, which are installed in concrete construction.
- 21 1. See Section 03308 for grout.
- 22 G. Immediately after erection, repair damaged areas of gel coat.
- 23 1. Fill corner miter joints with fiberglass resin compound as recommended by frame
- 24 manufacturer.
- 25 a. Filling miter joints with sealant is not acceptable.
- 26 2. Sand filled area to match adjacent frame and coat with minimum 15 mil gel coating to
- 27 match adjacent frame finish.
- 28 H. On doors not requiring weatherstripping install three silencers on strike jamb of single door
- 29 frame and two on head of double door frame.
- 30 I. Number and location of anchors shall be in accordance with frame manufacturer's
- 31 recommendation with minimum of three anchors per jamb.
- 32 J. Protect frames during construction.
- 33 K. Cover all thru bolts and stainless steel "H" channels used in panelized door construction with
- 34 minimum 15 mil gel coating to match door.

35 **3.2 FIELD QUALITY CONTROL**

- 36 A. Provide for services of manufacturer's authorized representative to be present during and observe
- 37 the installation of doors and frames.
- 38 1. Manufacturer's representative shall instruct installer on proper methods for installing doors
- 39 and frames, repairing damaged gel coating, repairing scratches in finish and filling and
- 40 finishing all joints.

41 **END OF SECTION**

1 2004/05/4

2 **SECTION 08306**
3 **WATERTIGHT ACCESS DOORS**

4 **PART 1 - GENERAL**

5 **1.1 SUMMARY**

6 A. Section Includes:

- 7 1. Watertight access doors.

8 B. Related Sections include but are not necessarily limited to:

- 9 1. Division 0 - Bidding Requirements, Contract Forms, and Conditions of the Contract.
10 2. Division 1 - General Requirements.

11 **1.2 QUALITY ASSURANCE**

12 A. Referenced Standards:

- 13 1. AWS Structural Welding Code D1.1.
14 2. ASME Structural Welding Code Section IX.

15 **1.3 SUBMITTALS**

16 A. Shop Drawings:

- 17 1. See Section 01340.
18 2. Product technical data including:
19 a. Acknowledgement that products submitted meet requirements of standards referenced.
20 b. Manufacturer's installation instructions.

21 B. Operation and Maintenance Manuals:

- 22 1. See Section 01340.

23 C. Submit certification that the closure, or a closure of similar design has been satisfactorily tested
24 to verify that it will handle the design hydrostatic pressure.

25 **1.4 EXPERIENCE**

- 26 A. The manufacturer shall present evidence attesting to at least 5 years of successful experience in
27 the design and manufacture of the model specified and also in the design and manufacture of its
28 component sealing system.

29 **PART 2 - PRODUCTS**

30 **2.1 ACCEPTABLE MANUFACTURERS**

31 A. Subject to compliance with the Contract Documents, the following manufacturers are
32 acceptable:

- 33 1. Watertight access doors.
34 a. Presray Corporation.
35 1) Presray D3DQA quick acting.

36 **2.2 MANUFACTURED UNITS**

37 A. Watertight Access Doors:

- 38 1. Frame: Aluminum 6061-T6.
39 2. Door: Aluminum 6061-T6.
40 3. Hinges: Stainless steel, presray type PR5804.

1 2004/04/30

2

SECTION 08334

3

ALUMINUM ROLLING OVERHEAD DOORS

4

PART 1 - GENERAL

5

1.1 SUMMARY

6

A. Section Includes:

7

1. Aluminum rolling overhead doors.

8

- a. Insulated.

9

B. Related Sections include but are not necessarily limited to:

10

1. Division 0 - Bidding Requirements, Contract Forms, and Conditions of the Contract.

11

2. Division 1 - General Requirements.

12

3. Section 11005 - Equipment: Basic Requirements.

13

1.2 QUALITY ASSURANCE

14

A. Referenced Standards:

15

1. The Aluminum Association (AA):

16

- a. 45, Designation System for Aluminum Finishes.

17

2. ASTM International (ASTM):

18

- a. A123, Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.

19

- b. B209, Specification for Aluminum and Aluminum-Alloy Sheet and Plate.

20

- c. B308, Standard Specification for Aluminum-Alloy 6061-T6 Standard Structural Profiles.

21

- d. E283, Test Method for Rate of Air Leakage Through Exterior Windows, Curtain Walls and Doors Under Specified Pressure Differences Across the Specimen.

22

23

24

25

B. Qualifications:

26

1. Installer to be licensed or approved in writing by door manufacturer.

27

1.3 DEFINITIONS

28

A. Installer or Applicator: Installer or applicator is the person actually installing or applying the product in the field at the Project site.

29

1. Installer or applicator are synonymous.

30

31

1.4 SUBMITTALS

32

A. Shop Drawings:

33

1. See Section 01340.

34

2. Product technical data including:

35

- a. Acknowledgement that products submitted meet requirements of standards referenced.

36

- b. Manufacturer's installation instructions.

37

3. Schedule of doors using same reference number for openings as indicated on Drawings.

38

4. Certifications:

39

- a. Certification of Installer's qualifications.

40

B. Samples:

41

1. Actual metal color samples of manufacturer's full line of colors available.

42

C. Miscellaneous Submittals:

43

1. See Section 01340.

44

D. Operation and Maintenance Manuals:

1 1. See Section 01340.

2 **PART 2 - PRODUCTS**

3 **2.1 ACCEPTABLE MANUFACTURERS**

4 A. Subject to compliance with the Contract Documents, the following manufacturers are
5 acceptable:

- 6 1. Aluminum rolling overhead doors:
7 a. Atlas Door, Clopay Building Products Co.
8 b. The Cookson Company.
9 c. Cornell Iron Works.
10 d. Wayne Dalton.
11 e. Overhead Door Corp.
12 f. Raynor.

13 B. Submit requests for substitution in accordance with Specification Section 01640.

14 **2.2 MATERIALS**

15 A. Door Curtain and Hood: Aluminum, ASTM B209.

16 B. Insulation: Closed cell polyurethane foam.
17 1. CFC free.

18 C. Weatherproofing: Neoprene or vinyl.

19 D. Guides: Extruded aluminum, ASTM B209.

20 E. Headplates and Pipe Barrel: Galvanized steel, ASTM A123.

21 F. Fasteners: Aluminum or stainless steel.

22 **2.3 FABRICATION**

23 A. Door Curtain:

24 1. Insulated flat profile with interlocking face sheets:

- 25 a. 2-5/8 IN high.
26 b. Exterior face: 0.040 IN.
27 c. Interior face: 0.024 IN.
28 d. Aluminum endlocks.
29 e. Core: Insulated.

30 2. Weatherstripping:

31 a. Guide sealing adjustable weatherstripping at jambs and lintel (exterior doors only).

32 3. Bottom bar: Reversing electric safety edge with weatherseal. Photo electric sensor
33 entrapment protection.

34 4. Finish:

35 a. Powder coat:

- 36 1) Factory prime and finish coats.
37 2) Prime coat: Minimum 0.2 mil baked-on prime paint.
38 3) Finish coat: Minimum 0.6 mil baked-on polyester powder coat.
39 4) Color: To be selected by Engineer from manufacturer's complete offering,
40 including premium colors.

41 B. Hood: Minimum 0.040 IN aluminum or minimum 24 GA stainless steel.

42 1. Air baffle weatherstripping extending full length of all exterior door hoods.

43 C. Guides:

44 1. Mounting:

45 a. Interior face of wall.

- 1 2. Manufacturer's standard aluminum or stainless steel angle guide system for size of door
- 2 specified.
- 3 a. Rolled guides are not acceptable.
- 4 b. Finish to match door.
- 5 3. Furnish aluminum wind curtain locks.
- 6 D. Headplates: Galvanized steel or stainless steel plate mounted to guides.
- 7 1. Sized to support counterbalance assembly, curtain, and hood.
- 8 E. Counterbalance Assembly:
- 9 1. Pipe barrel: Galvanized steel pipe shaft.
- 10 a. Maximum deflection: 0.03 IN/FT.
- 11 2. Torsion springs: Oil-tempered helical torsion springs on cast anchors.
- 12 a. 100,000 cycle.
- 13 b. 25 percent safety factor.
- 14 3. Adjustable tension wheel.
- 15 F. Trim Pieces: Material and finish to match door curtain.
- 16 G. Wind Load: 20 psf minimum.
- 17 H. Operation:
- 18 1. Chain operated.
- 19 I. Manual Locking:
- 20 1. Slide bolts.

21 **2.4 SOURCE QUALITY CONTROL**

- 22 A. Air infiltration: 1.55 CFM/SF of opening maximum when tested in accordance with ASTM
- 23 E283 with 25 mph wind load.

24 **2.5 MAINTENANCE MATERIALS**

- 25 A. Provide 2 OZ of touch-up paint properly labeled for each different color of door.

26 **PART 3 - EXECUTION**

27 **3.1 INSTALLATION**

- 28 A. Install products in accordance with manufacturer's instructions.
- 29 B. Installation shall be done by manufacturer's authorized representative.
- 30 C. Provide all required trim, weatherstripping, closures etc. for complete weather tight installation.
- 31 D. Adjust for proper counter balance.
- 32 E. Seal along bottom of vertical track (guides), seal the vertical joint between the two separate track
- 33 angles (if not filled by welding) and seal all holes in vertical track (not being used for fasteners)
- 34 to provide a completely weather tight track and door system.
- 35 1. At fastener locations provide aluminum washers under bolt head to completely cover the
- 36 slotted holes in the vertical guide.
- 37 F. Provide dissimilar materials protection on all surfaces coming in contact with dissimilar
- 38 materials.

39 **3.2 ADJUSTMENT**

- 40 A. Prior to occupancy, adjust door for smooth operation.

41 **END OF SECTION**

1 2004/04/30

2 **SECTION 08700**
3 **FINISH HARDWARE**

4 **PART 1 - GENERAL**

5 **1.1 SUMMARY**

6 A. Section Includes:

- 7 1. Finish hardware.

8 B. Related Sections include but are not necessarily limited to:

- 9 1. Division 0 - Bidding Requirements, Contract Forms, and Conditions of the Contract.
10 2. Division 1 - General Requirements.
11 3. Section 08220 - Fiberglass Reinforced Plastic (FRP) Doors and Frames.

12 **1.2 QUALITY ASSURANCE**

13 A. Referenced Standards:

- 14 1. American National Standards Institute (ANSI):
15 a. A156.1, Butts and Hinges.
16 b. A156.5, Auxiliary Locks and Associated Products.
17 c. A156.6, Architectural Door Trim.
18 d. A156.7, Template Hinge Dimensions.
19 e. A156.13, Mortise Locks and Latches.
20 f. A156.16, Auxiliary Hardware.
21 g. A156.18, Materials and Finishes.
22 h. A156.21, Thresholds.
23 2. Builders Hardware Manufacturers Association (BHMA).
24 3. Steel Door Institute (SDI):
25 a. 107, Hardware on Steel Doors (Reinforcement-Application).
26 b. 109, Hardware for Standard Steel Doors and Frames.
27 c. 112, Galvanized Standard Steel Doors and Frames.
28 4. Underwriters Laboratories, Inc. (UL):
29 a. Building Materials Directory.

- 30 B. All hardware provided for this Project shall meet the requirements of the 2000 International
31 Building Code.

32 **1.3 DEFINITIONS**

- 33 A. Installer or Applicator: Installer or applicator is the person actually installing or applying the
34 product in the field at the Project site.

- 35 1. Installer or applicator are synonymous.

- 36 B. All weather: Capable of operation from -50 to +120 DegF.

- 37 C. Active Leaf: Right-hand leaf when facing door from keyed side.

38 **1.4 SUBMITTALS**

39 A. Shop Drawings:

- 40 1. See Section 01340.
41 2. Product technical data including:
42 a. Acknowledgement that products submitted meet requirements of standards referenced.
43 b. Manufacturer's installation instructions.

- 1 3. Schedule of all hardware being used on each door. Number hardware sets and door
- 2 references same as those indicated on Drawings.
- 3 4. Technical data sheets on each hardware item proposed for use.
- 4 B. Miscellaneous Submittals.
- 5 1. See Section 01340.

6 **PART 2 - PRODUCTS**

7 **2.1 ACCEPTABLE MANUFACTURERS**

- 8 A. Subject to compliance with the Contract Documents, the following manufacturers are
- 9 acceptable:
- 10 1. Locksets and latchsets:
- 11 a. Best access.
- 12 2. Hinges:
- 13 a. Stanley Works.
- 14 b. Hager Hinge Co.
- 15 c. McKinney Manufacturing Co.
- 16 3. Door stops and holders:
- 17 a. Trimco/BBW/Quality.
- 18 b. Rockwood.
- 19 c. Glynn-Johnson Corp.
- 20 4. Door trim:
- 21 a. Trimco/BBW/Quality.
- 22 b. Rockwood.
- 23 c. Hiawatha, Inc.
- 24 5. Weatherstripping and thresholds:
- 25 a. Pemko Manufacturing Co.
- 26 b. Reese Enterprises, Inc.
- 27 c. Zero Weatherstripping, Inc.
- 28 d. National Guard Products, Inc.
- 29 6. Door bolts and strikes:
- 30 a. Ives Division/Leigh Products Inc.
- 31 b. Trimco/BBW/Quality/Glynn-Johnson Corp.
- 32 c. Rockwood.
- 33 d. Stanley.
- 34 7. Other materials: As noted and scheduled on drawings.
- 35 B. Submit requests for substitution in accordance with Specification Section 01630.

36 **2.2 MATERIALS**

- 37 A. Fasteners: Stainless steel or aluminum.
- 38 B. Locking, Latching and Retracting Mechanism and Lock Case: Corrosion resistant.
- 39 C. Kickplates and Push/Pulls: Stainless steel.
- 40 D. Thresholds: Aluminum.
- 41 E. Keys: Brass or bronze.
- 42 F. Weatherstripping: Silicone.

43 **2.3 ACCESSORIES**

- 44 A. Strikes:
- 45 1. Stainless steel.
- 46 2. Provide with curved lips.

- 1 3. Extended lips when required.
- 2 4. Furnish strike boxes.
- 3 5. Appropriate for function and hardware listed.

4 **2.4 FABRICATION**

- 5 A. Hardware - General:
 - 6 1. Generally prepare for Phillips head machine screw installation.
 - 7 2. Exposed screws to match hardware finish or, if exposed in surfaces of other work, to match
 - 8 finish of other work as closely as possible.
 - 9 3. Provide concealed fasteners unless thru bolted.
 - 10 4. Furnish items of hardware for proper door swing.
 - 11 5. Furnish lock devices which allow door to be opened from inside room without a key or any
 - 12 special knowledge.

- 13 B. Hardware:
 - 14 1. Provide integral serrated knurling on lever for doors leading to the following rooms or areas
 - 15 (Grit covered tape applied to lever is not acceptable):
 - 16 a. Electrical and pump rooms.
 - 17 2. Provide stainless steel dustproof strikes for all doors with flush bolts or other bolts into
 - 18 floor.
 - 19 3. Provide following BHMA/ANSI A156.18 finishes:
 - 20 a. Locks: 626.
 - 21 b. Kickplates: 626.
 - 22 c. Butts: 626.
 - 23 d. Door stops, dead locks, mortise bolts, and miscellaneous hardware: 626.

- 24 C. Mortise Locks and Latches:
 - 25 1. ANSI A156.13, Series 1000, Grade 1.
 - 26 2. Antifriction 2 piece mechanical latchbolt with stainless steel anti-friction insert.
 - 27 a. One-piece stainless steel deadbolt, minimum 1 1/4 IN x 9/ 16 IN thick with 1 IN throw.
 - 28 b. 2-3/4 IN backset.
 - 29 c. Cylinder: Brass, 7 pin, with interchangeable core.
 - 30 d. Corbin/Ruswin.
 - 31 1) Trim design "NSP" for all doors requiring lever handle operation.
 - 32 e. Functions as indicated in following table in accordance with ANSI A156.13.

| MORTISE LOCK NUMBERS | | |
|----------------------|-----------------|----------------|
| ANSI | FUNCTION | CORBIN/RUSSWIN |
| | Half Dummy Trim | ML2050 |
| F01 | Passage | ML2010 |
| F13 | Entrance | ML2065 |

- 34
- 35 D. Butts and Hinges:
 - 36 1. ANSI A156.1.
 - 37 2. Hinge numbers:

| | HAGER | STANLEY |
|--------|--------|---------|
| Type 1 | BB1199 | FBB199 |

- 39
- 40 3. Flat button tips on all butts.
- 41 4. Butt types:
 - 42 a. Type 1. Provide NRP (non-removable pin) on all exterior doors.
 - 43 b. All other doors: Type 1.
- 44 5. Butt quantities:
 - 45 a. Doors 61-90 IN in height: Three butts.

- 1 b. Doors 91-114 IN in height: Four butts.
2 6. Butt sizes:
3 a. 1.75 IN doors: 4.5 x 4.5 IN for all doors up to and including 36 IN wide.
- 4 E. Door Stops:
5 1. ANSI A156.16.
6 a. Floor stop and holder: Glynn Johnson F20x.
- 7 F. Kickplates:
8 1. ANSI A156.6.
9 2. 8 IN high x 2 IN less than door width.
10 3. Beveled on all edges.
11 4. 0.050 IN thick.
- 12 G. Thresholds:
13 1. ANSI A156.21.
14 2. One piece unit.
15 a. Maximum 1/2 IN high.
16 b. Width as scheduled.
17 3. Provide required bolt cutouts.
- 18 H. Weatherstripping:
19 1. At jambs and head: Self-adhesive strip similar to Reese #797W.
20 2. At bottom of doors: Similar to Reese 701C.
21 3. Meeting edges at pairs of doors: Astragal type weather seal.
- 22 I. Keying:
23 1. Establish keying with Owner.
24 a. Provide and set up complete visible card indexed system with key tags and control
25 slips.
26 b. Tag and identify keys.
27 c. Provide three keys for each lock or cylinder.
28 d. Master key and key in groups as directed.
29 e. Provide construction master keys for all exterior doors.
- 30 J. Bolts:
31 1. ANSI 156.16.
32 2. Surface bolts similar to Glynn-Johnson GJ 1631 and GJ 1632.

33 **PART 3 - EXECUTION**

34 **3.1 INSTALLATION**

- 35 A. Install products in accordance with manufacturer's installation instructions, supervised or
36 inspected by an AHC.
- 37 B. Fit hardware before final door finishing.
- 38 C. Permanently install hardware after door finishing operations are complete.
- 39 D. Use SDI mounting heights for hardware.
- 40 E. Provide coordinator when required by hardware specified.
- 41 F. Floor Mount Door Stops: Provide at all doors and include door holder.
- 42 G. Install weatherproof astragal on all pairs of doors.
- 43 H. Provide weatherstripping and threshold at all exterior and interior doors.
44 1. Set thresholds in a full bed of sealant.
45 2. Mount door sweeps on exterior face of door.

