

## **DIVISION 8 - DOORS, WINDOWS, GLASS (SUBJECT TO DIVISION 1)**

### **8. GENERAL**

1. Doors shall be 1-3/4" minimum thickness for exterior main entrance doors unless specified differently on the Bid Document. Exterior flush type doors shall be of steel, mahogany, birch or oak finish (or equal) solid core construction.
2. All other exterior pane doors shall be 1/4" minimum thickness, white pine or equal with glass, unless specified differently on the Bid Document.
3. Interior doors shall be minimum 1-3/8" thick wood, hollow core or panel, stock sizes and design unless otherwise specified in the Bid Document.
4. Where 20-minute fire doors are called for, they shall be flush type, 1-3/4" thick solid core or flush steel door, or equivalent, equipped with self-closing device and all other necessary hardware.
5. The term door unit shall mean the installation of jambs, casing (both sides) if needed, butt hinges, lock set and the door, including aluminum or wood threshold in exterior openings.
6. The choice of door, including glass requirements, shall be made by the homeowner.
7. All exterior doors shall have a dead bolt lock (turn button) and three hinges.
8. When pre-hung metal clad doors are to be installed, the price shall include all needed modification to opening, trims, moldings, repair to exterior and interior wall surface. Replacement metal clad door may be substituted with approval.
9. All exterior doors shall be made weather tight. A watertight threshold shall be provided. Doors shall be weather-stripped to prevent infiltration of dust, snow, and weather.
10. All new doors shall be finished inside and out with two coats of paint or stain and varnish at owner's option unless specified in the painting portion of the Bid Document. Painting and varnishing of doors to be done prior to being installed and shall have no physical defects such as runs, rough areas, etc.

### **8.A. DOORS - METAL/WOOD**

1. Materials
  - A. Insulated Steel Entry Door (Exterior) - shall be 3'0" x 6'8" x 1-3/4" embossed 20 gauge steel door with polyurethane foam insulation mounted on Ponderosa Pine frame and trim or approved equal. Door shall come pre-fit complete with aluminum or oak sill, and all necessary hardware such as hinges, locksets and weather stripping. Style to be selected by owner. Price for door installation shall include cost of painting door, jamb and all trim.
  - B. Wood Entry Door (Exterior) - shall be 3'0" x 6'8" x 1-3/4" pre-hung fir or Ponderosa Pine panel doors. Frame shall be 5/4" pine frame complete with 1 1/2" x 6-3/4" oak sill, trim, and all necessary hardware such as hinges, locksets and weather-stripping. Price for door installation shall include cost of painting/staining door, jamb and all trim.

- C. Interior Wood Doors - to be 1-3/8" hollow core lauan or birch unless specified in the bid document, with solid wood stiles and rails adequate for a minimum two-inch reduction in height without impairing the strength of the door. Where called for, doors to come pre-hung complete with hardware and jamb trim. If door needs to be cut down to fit opening more than allowed by the stile, the original stile shall be cleaned and reinstalled in the door bottom with glue, and clamped overnight. Price for door installation shall include cost of painting/staining door, jamb and all trim.
- D. Cellar Door Wood - where called for to be wood matched tongue and groove fir or yellow pine. Door to be constructed of 1" x 4" boards mounted on 1" x 6" wood cross braced frame. Door to be installed with all necessary hinges, surface mounted lock and strike, and aluminum metal threshold. Treated lumber shall be used.
- E. Cellar Areaway Hatch Door - to be an all-steel door of appropriate size to fit areaway opening leading to cellar. Door shall be a Bilco or approved equal.
- F. Bi-Fold Closet Door - to be 1-3/8" flush hollow core mahogany veneer with complete Stanley bi-fold hardware kit provided or approved equal. Price for door installation shall include cost of painting/staining door, jamb and all trim.
- G. Sliding Closet Door - to be 1-3/8" flush hollow core lauan or mahogany veneer with Stanley sliding hardware kit provided, or approved equal. Price for door installation shall include cost of painting/staining door, jamb and all trim.
- H. Note: a salvaged door may be used upon approval by the Rehab Office and Owner.

## 2. Installation

- A. Wood Doors (exterior, interior) - shall be installed with door and frame set plumb, straight and true. All doors shall be undercut, including closet doors to allow for carpeting, thresholds, and weather-stripping. Doors shall be cut and planed to allow 1/8" clearance at head and jambs. All hardware shall be installed using templates provided by the manufacturer, or shall come pre-fit. Mount door and hardware so door shall swing freely without springing of door hinges or binding of door.
- B. Insulated Steel Doors and Frames - Remove existing exterior entry door and jambs and replace with new insulated steel door and frame. Door and frame to be installed plumb and true and to come complete with three (3) hinges, entry locks and keyed dead bolts. Doors and frames shall come primed, and shall be finished with two coats of enamel paint. Door and frame shall be installed in complete accordance with manufacturer's instructions. Knocked down metal frames, where used, shall be installed with tightly fitting corners, and with close fit where they abut other finished surfaces. Pre-fit, pre-hung doors shall fit frame squarely with minimum 1/8" even allowance at head and jambs. Door frame is to be securely anchored to framing in accordance with manufacturer's instruction.
- C. Wooden basement hatch door - Remove deteriorated door and frame and install new framing of 2" x 6" pressure treated lumber and secure frame to existing wall with anchoring that will hold frame firmly in place. Repair any defective wall area where frame is to be installed to allow for an airtight frame. Caulk after installation. Door to be T. & G. wood floor boards mounted on 1" x 6" wood frame and cross bracing. Hinges to be 3"-6" Tee hinges and lockset to be keyed surface

mounted entry lock, complete with knobs and surface mounted enclosed strike. Mount door and hardware so door shall swing freely without binding of door. An oil based primer shall be applied to the door with two topcoats of good quality exterior paint.

- D. Metal basement hatch door - Hatch door to basement to be a Bilco or approved equal, and shall be installed in complete accordance with manufacturer's instructions. Repair any defective areaway walls where metal door framing is to be affixed to wall prior to installing new areaway door. Caulk perimeter upon completion of installation.
- E. Special doors, such as closet bi-fold doors, sliding doors, and garage doors are to be installed in complete accordance with instructions supplied by door and hardware manufacturer. All doors are to be installed with door and frame set plumb, straight and true and to come with all necessary hardware and accessories for a complete and smooth operating installation.

## **8.B. STORM DOORS**

Doors, frames, trim, threshold, and hardware, unless otherwise specified in the Bid Document, shall be extruded metal or wood and shall conform to the following standards:

### 1. Insulated Metal Storm Doors

- A. Doors shall be equipped with glass and screen inserts and shall match existing opening unless Bid Document states otherwise. Extruded door frame construction shall be a minimum of 1" thick. Door shall be insulated self-storing with safety or Plexiglas glazing.
- B. Metal door color to be baked enamel or mill finish, owner's choice.
- C. All hardware, including hydraulic door closer, storm chain, and weather-stripping to be furnished by contractor and shall be included in this installation.
- D. The door shall be installed with door and frame set plumb, straight and true. Door shall be installed in complete accordance with manufacturer's directions, and shall come complete with adjustable frame, continuous hinge, closures, latch and chain stop.

### 3. Wood Storm Door

A solid wood storm door shall be installed in the location specified in the Bid Document. It shall be sized to fit the opening properly, and shall include a hydraulic closer, latch hardware with a lock, three corrosion resistant hinges, a chain stop, and a bottom sweep. It shall be primed and painted with two top coats of oil based exterior paint, color to be chosen by owner. All sides of door must be fully painted. The door shall include either a self storing storm window and screen, or have an interchangeable storm window and screen insert, owners choice.

### 4. Repair

Existing storm door shall be repaired with matching parts and hardware as required to restore weather integrity, soundness and smooth operation. Repair storm inserts with safety glazing. Install new chain guard. Broken joints shall be doweled, glued and clamped.

### **8.C. GARAGE DOORS**

1. Door shall be a good quality wood garage door or written approved substitution or equal.
2. Doors shall be stock wooden overhead doors, 4-paneled, 1-3/8" Hemlock or approved equal having 1/4" exterior grade hardwood panels and factory installed glass, unless otherwise specified in the Bid Document. Wood shall be guaranteed for life of door against splintering or cracking due to weather conditions. Bottom rails shall include weather-stripping. Door to be complete with all necessary operating hardware, brackets, latches and key locking hardware.
3. Furnish and install 2" x 6" to side of each jamb and across head; allow for door to overlap 1" on each side. Suspend tracks from overhead framing with metal angles. Brace rigidly and adjust vertical track to wedge door tightly against rough buck. Apply 1" x 4" stops at jambs and head. Furnish and install additional framing as required to accomplish installation.
4. Door shall be finished if not bid as part of the painting section of this contract. The door shall be protected with one (1) coat of primer and two (2) coats of finish exterior paint to match structure and/or trim at owner's option.

### **8.D. REPAIR EXISTING DOOR**

Repairs to existing doors are to be made as called for in Bid Document. Remove deteriorated stops, casing, trim, and jambs, and replace with new as necessary. Repair and/or replace damaged door and missing hardware with materials of matching design and finish, or existing hardware. Install new locksets at existing exterior doors, over old cutouts with new cover escutcheon plates as necessary. Rehang door with new hardware and new bronze tension type weather-stripping to provide a tight fit and smoothly operating doors.

Where casing trim is to be retained, remove existing deteriorated finishes, sand surfaces, and fill holes and dents to provide a smooth surface ready for new paint. Provide new weather-stripping at exterior door.

### **8.E. REHANG DOOR**

Rehang existing door(s), location as set forth in Bid Document. Restore to sound, free operating condition. Cut and plane as necessary. Adjust jambs, head, and threshold as required.

### **8.F. UNDERCUT DOOR**

Remove and undercut door to allow a full swing without drag on floor surface or covering. Dress cut edge free of all tool marks. Re-mount door and adjust to a good working condition. Hinges and lockset shall be tightened if loose. Seal bottom of door before rehang. If cutting a hollow core door, refer to Division 8.A.1.D.

### **8.G. THRESHOLD & WEATHER-STRIPPING**

1. Thresholds for wood doors shall be aluminum or pre-cut hardwood in full bed of caulking, shimmed level and secured with a minimum of four (4) countersunk brass flat head woodscrews. If hardwood is used, threshold shall be painted or varnished.
2. Weather-stripping for wood doors shall be extruded aluminum with neoprene or felt insert, surface mounted on frame or stop. Spring bronze in door opening is acceptable or as specified in Bid Document.

3. Thresholds for wood doors shall have a rubber neoprene insert.
4. Weather-stripping for metal doors shall be furnished by the door manufacturer.

## 8.H. WINDOWS

### 1. **General - The term window unit shall mean the installation of frame, sill, sash, trim, hardware, repair to interior and exterior wall surfaces.**

- A. All window units shall be set plumb and level, finished and trimmed as required. All interior and exterior surfaces, including walls, casing, siding, and all associated trim shall be completely repaired.
- B. New window units shall be of good quality. Type and size as called out in the Bid Document. All frames, sashes, stops and exterior casings shall be of clear pine, or be consistent with the type of window installed.
- C. Exterior side of all wood surfaces shall be painted with one (1) coat of primer sealer before installation, and after installation shall be painted with two (2) finish coats of exterior type paint to match structure and/or trim.
- D. Metal windows shall have a thermal break.

### 2. WINDOW TYPES

- A. Double Hung Windows - shall be a good quality, wood or vinyl clad, medium priced window. Submit brand to Rehab Office and owner for approval. Windows shall be of 1-3/8" thick pine sash, with pine frames. If wood, exterior shall be primed and painted, glazed and puttied, and shall contain spring, spiral, or unique corrosion-resistant balances. Windows to have brass metal lifts and locks. Style shall match existing or be selected by owner. Window to be free operating, containing double strength glass not less than B quality.
- B. Casement or Sliding Windows - to be a good quality medium priced window. Submit brand to Rehab Office and owner for approval. Window to be 1-3/8" thick or greater pine, and shall be primed before installation and then furnished with two coats of exterior paint to match structure. Window to be factory glazed, secured properly to the frame, and level.
- C. Basement Window - to be wood or vinyl awning type. If wood unit is used, it shall be prime coated before installation and then finished with two coats of exterior paint to match structure. Window to be factory glazed, secured to the frame, and level.
- D. A salvaged window may be used upon approval by the Rehab Office.
- E. Vinyl windows may be used only with the approval of the owner and Rehab Office.

### 3. REPAIR EXISTING WINDOWS

Remove and replace all broken sash cords and replace with new sash cords at all double hung windows. Where windows are not equipped with sash cords, new cam type locks shall be installed. All deteriorated or damaged stops, sills, aprons, parting stop sash and frame trim (select those parts needing replacement) are to be replaced. Replace all deteriorated sash with matching units.

Replace all cracked, broken and missing lights with double strength "B" quality glass, or glass of thickness as recommended for size of light. Install new sash lifts and locks where missing or broken.

**4. REPAIR EXISTING ALUMINUM STORM WINDOWS**

Repair storm windows with matching parts and hardware as necessary to restore window to weather tightness and operating condition. Repair storm inserts with the proper thickness of glass. Repair screen inserts with new coated aluminum screening.

**5. REPLACE EXISTING STORM WINDOWS**

Remove and properly dispose of existing storm window and provide and install a new moderately priced aluminum double track storm window in existing opening. Owner shall choose color and manufacturer. Window to be measured at the blind stop.

**8.I. GLASS & GLAZING**

Glass shall be of a strength required for the size of light as recommended by glass manufacturer, and shall be free from flaws and distortion. In no case shall the glass be less than "B" strength.

Glass shall be sized to set free in the wood opening and shall be secured with metal glazing points before glazing compound is applied. Glazing compound shall be applied neatly and have a smooth appearance. It shall be painted when properly cured. See 8.k.

**8.J. RESCREEN & REPAIR WOOD SCREENS (WINDOWS & DOORS)**

Remove all torn or rusted screening along with the wooden screen molding. New screening shall be 16 x 16 x 14 mesh, aluminum wire. Screening shall then be stretched taut and securely fastened to frame with metallic staples and screen molding. Replace split or broken wooden screen mold, along with any broken framing as required. Broken joints to be doweled, glued with exterior glue, and clamped overnight. Metal "L" brackets are not allowed.

**8.K. REMOVE WINDOW & CLOSE OPENING**

Remove existing window as indicated in Bid Document. Close in opening with studding to match thickness of existing wall, 16" o.c., with plywood sheathing to match existing thickness. Finish interior and exterior to match existing surfaces. Prime and paint new surfaces.

**8.L. REPUTTY WINDOWS**

Remove all dried, deteriorated, broken, and cracked sections of putty from windows. Sweep clean and back putty with glazing compound in strict adherence to manufacturer's instructions. Before glazing compound is applied, area shall be primed, and all glazing points secure. Windows to be repotted prior to painting exterior final coat.

**8.M. REPLACE SASH CORDS**

Open window frame and remove existing sash weights. Re-cord with #8 sash cord. Replace weight, frame, sash and stop as required, to assure a smooth operating window. Dress window framing free of unsightly scarring caused by repair work. Clean surface prior to job completion, refinish to match existing. Some windows have an access opening located between the window stops.

#### **8.N. WINDOW SASH LOCK**

Furnish and install new brass-plated sash lock, securely and properly fastened to upper and lower sash to window.

Note: A salvaged lock may be used upon approval by the Rehab Office.

#### **8.O. WINDOW SASH LIFT**

Furnish and install new brass-plated sash lift, securely and properly fastened to the lower sash of the window.

Note: A salvaged lift may be used upon approval by the Rehab Office.

#### **8.P. HARDWARE**

Shall be good residential quality and shall be suitable for use intended and installed as per manufacturer's printed instructions. Lock sets shall be Schlage, Wiser, or approved equal. Window curtain rods shall be Kirsch or approved equal. Hinges, pushes or pulls shall be National, Amerock, Stanley, or approved equal.

#### **8.Q. DOOR AND WINDOW CASINGS**

Furnish and install new casings as specified in Bid Document. Casings are to match those in the structure. All nails are to be set, holes to be filled, stained or painted.

Note: A salvage casing may be used upon approval by the Rehab Office.

#### **8.R. WINDOW SILL**

Replace Window Sill: Remove and properly dispose of existing window sill as specified in Bid Document. Ensure no damage is caused to other window members. Provide and install all new window sills of matching dimension.

#### **8.S. BASEMENT WINDOW, HEADER, JAMB, SILL**

Remove all deteriorated jamb, sill and header parts where specified in Bid Document. Replacement materials to be pressure treated lumber and same size as those removed. Secure frame members to existing foundation and repair any defective wall area where replacement materials are to be secured. Installation shall be air tight. Caulk after installation.

#### **8.T. EGRESS WINDOWS**

Egress windows are required when replacing bedroom windows or installing basement windows. According to section 310.4 of the Uniform Building Code as amended and adopted by the City of Iowa City, each bedroom is required to have one approved escape and rescue window. Basements are required to have either an escape window or a door. However, if a bedroom is located in the basement, the egress must be located in the bedroom.

#### **1. Bedrooms**

Install an approved egress window in the opening designated in the bid document. Unless otherwise directed, the window shall match the existing windows in the house as closely as possible, and the brand shall be approved by the Owner and the Rehab Office. (See section 8.H.)

## **2. Basement Egress Window**

- A. Install an approved egress window in the location designated in the bid document. If it is necessary to cut through a poured concrete foundation or a concrete block foundation, an appropriate dust barrier shall be constructed to minimize dust infiltration to the rest of the house. If possible, concrete shall be cut with a wet saw. The rough opening shall be constructed with treated lumber and fastened to the concrete with appropriate concrete anchors. The window shall match the existing windows of the house as closely as possible; however, a casement window may be used if approved by the Owner and Rehab Office. Brand and style of the window shall be approved by the Owner and Rehab Office. The exterior of the window shall be trimmed and painted to match the existing house. The interior shall be finished to conform to the interior of the house.
- B. The window well shall conform to the Uniform Building Code as adopted by the City of Iowa City. If the exterior of the house is equipped with drainage tile, a 10" diameter vertical shaft shall be drilled from the bottom of the window well to the top of the rock bed of the drainage tile. A 6" perforated plastic drain tile shall then be inserted in the shaft, and rock fill shall be installed around the tile. A perforated cap shall be installed over the exposed top of the tile. A minimum of 4" of washed river rock shall be installed in the bottom of the window well to act as a drainage bed. Any concrete or block removed from the wall to make an opening for the window shall be removed from window well before drainage bed is installed.
- C. Unless otherwise directed by the bid document, the standard window well retaining wall shall be constructed with 6"x6" timbers treated to a level of .6 CCA. If the finished window well exceeds 44" in depth, an escape ladder shall be constructed out of treated 2x4 lumber and attached permanently to the timber wall.
- D. For safety reasons a grill shall be installed over the top of window wells. This grill shall consist of a 1" x 3/16" aluminum bar grill. It shall sit on a ledge consisting of a treated 2x2 fastened to the interior of the window well and shall sit flush to the top of the window well. The grill shall not interfere with the operation of the window, and it may be installed in two sections to make it easier to remove in an emergency.

## **8.U. NEW WOOD STORM AND SCREEN WINDOWS**

New storm or screen windows shall be constructed to match windows on existing house as closely as possible. Clear pine or clear redwood of the proper dimension shall be used. Windows shall be primed with an oil based primer, and painted to match existing windows with two coats of exterior paint. All joints shall be properly doweled, and only exterior grade glue shall be used.