



## SECTION \_\_\_\_\_

### 81R™ FACTORY PREFABRICATED SOLID GLASS BULLET AND CAST IRON PANEL

#### PART 1 - GENERAL

##### 1.1 DESCRIPTION OF WORK

- A. Extent of the Glass Bullet and Cast Iron Panels as indicated on the drawings.
- B. Principal Work in this section includes:
  - 1. 81R™ Cast Iron Framed Glass Bullet Panels
  - 2. Glazing materials and sealant for panels

##### 1.2 DESCRIPTION OF PANELS

- A. Panels shall be Circle Redmont® factory prefabricated and glazed 81R™ Panels shipped from Circle Redmont Inc.'s production facility, Melbourne, Florida (800) 358-3888. Panels shall be of overall sizes as detailed on the drawings. Cast Iron framework shall be produced to meet or exceed the specified structural performance. Solid Glass Bullet units shall be Circle Redmont standard, traffic bearing, replaceable type, glass units. Glass units shall be initially factory installed in respective cell openings using Circle Redmont® standard waterproof sealant and bedding material.

##### 1.3 QUALITY ASSURANCE

- A. Structural Performance: Design, engineer and fabricate the panels to provide live load capacity as required. The completed panel shall be capable of supporting a live load of not less than 100 pounds per square foot supported on four sides.
- B. Thermal Movement: Design the framing system to provide for such expansion and contraction of component materials as will be caused by the outside air temperature range of -10 degrees F to 120 degrees F, without causing excessive stress on glass bullets, failure of joint seals, undue stress on structural elements, damaging loads on fasteners, reduction in performance, or other detrimental effects.
- C. Water Penetration: Water penetration is defined as the appearance or damage from water, other than condensation, on the underside of the panels. The panels shall be totally watertight.
- D. Manufacturer of Panels: The manufacturer of the prefabricated panels shall be a firm with successful experience in supplying the same type of panels as required for this project.
- E. Design Criteria: The drawings and specifications are based on a specific type of panel by a single manufacturer. Equivalent type panels by another manufacturer may be acceptable only if deviations in dimension, profile, appearance and performance history are minor and do not materially detract from the design concept of intended performances, as judged solely by the Architect.

- F. In addition, if a substitute is being offered as an "Or Equal" to the specified products, in order to be considered, the Contractor will notify the Architect within 5 business days of award of contract of such intent of substitution and upon notification by the Architect the Contractor will have three business days to provide adequate proof of equivalency, i.e.; documentation that the "Or Equal" meets the minimum characteristics of the ordering description or specification. Submission of proof of equivalency and samples shall be at the bidders expense and no compensation shall be offered by Architect or Owner.

Failure to provide this documentation which must include Substitute's [Manufacturer History, Technical Specifications, Specifications, Brochures, Samples, Catalogues, Etc.] will render your substitution non responsive and ineligible for award.

- G. Warranty: Submit written warranty signed by the manufacturer, installer and contractor, agreeing to repair or replace defective materials and workmanship during the warranty period. Manufacturer must be able to document its warranty based upon at least 50 projects with at least 5 years of successful field performance. Defective materials and workmanship include:

1. Abnormal deterioration, aging or weathering of all work.
2. Leakage of water, structural failure, deterioration or dislocation of finishes in excess of normal weathering and aging.
3. Glass Bullet unit breakage.

The manufacturer warrants the panels to be free from manufacturing defects in either materials or workmanship for a period of one (1) year from the date of shipment. The manufacturer's warranty does not include damage caused by improper handling or use, vandalism, abuse or natural conditions exceeding standard performance requirements.

In all cases where manufacturer is contacted and upon inspection finds that performance failure is due to defective materials or fabrication of the factory prefabricated **81R™ Glass Bullet & Cast Iron Panels**, all materials necessary to repair will be provided by the manufacturer at no extra cost to the customer.

The manufacturer's liability is limited to materials in the factory prefabricated panels only and Circle Redmont shall not be liable for installation procedures, consequential damages or expenses.

The Contractor's warranty period shall extend for one (1) year upon completion of installation.

#### **SUBMITTALS:**

- A. Shop Drawings: Submit shop and erection drawings at large scale clearly showing sections of panels with all connections, joinery techniques, provisions for expansion/contraction, metal thickness and profiles. Identify all materials including metal alloys and fasteners. Locate and identify shop and field sealants on drawings. Show adjacent structural elements.
- B. Samples: Submit full size sample of the Glass Bullet units which are to be factory installed in the cast iron frame.
- C. Structural Calculations: Submit structural calculations for live and dead loads on framing members confirming the panels capacity to withstand the specified load requirements.

## **PART 2 - PRODUCTS**

### **2.1 MATERIALS**

- A. Panels shall be factory prefabricated Circle Redmont® 81R™ Solid Glass Bullet and Cast, Iron Panels as manufactured by Circle Redmont, Inc.®, 2760 Business Center Blvd., Melbourne, Florida, 32940 (321) 259-7374 (800-358-3888). Panels by other manufacturers will be considered only if the manufacturer and the panels comply fully with this specification and the drawings.

- B. The factory prefabricated panels shall consist of the following:
1. Panels shall be factory cast and glazed, of overall sizes as detailed on the drawings. Cast iron materials and form work shall be manufacturer's standard and shall be produced to meet or exceed the specified structural performance.
  2. Cast Iron shall be ASTM A48, Cast Grade 30, Gray
  3. Circle Redmont standard traffic bearing, replaceable type, glass bullets properly spaced according to manufacturer's standard on center dimensions. Glass units shall be initially factory installed in respective cell openings, weather sealed using Circle Redmont standard waterproof sealant material.
  4. Metal flashings, frame and accessories as shown, or as recommended by the panel manufacturer where not indicated.

## **2.2 FABRICATION AND WORKMANSHIP**

- A. Maintain the visual design concept including member sizes, profiles and alignment components. Coordinate this work with that of other trades.
- B. Shop assemble each panel in the manufacturing facility employing qualified personnel solely engaged in prefabricated panel production.

## **PART 3 - EXECUTION**

### **3.1 STORAGE AND HANDLING**

- A. Handle panels in a manner which will prevent undue stress on component parts, sealants and structural members. Do not rack, torque, or cause load forces in an inappropriate manner. Lift panels from top only unless specifically instructed by manufacturer. Prevent damage to finished surfaces. Do not install components which have been damaged or stained.
- B. Store panels in a dry place, off the ground. Bear fully along all supported edges on level and true structural supports.

### **3.2 PANEL INSTALLATION**

- A. Contractor shall install panels so that panels shall bear fully along all supported edges on structural framing supports. Top of panels shall finish flush with adjoining surfaces unless shown otherwise on drawings. Where necessary, build up support ledges and beams as required with materials similar to support framing members, prior to placement of panels. Panels shall be set to proper pitch and crossfalls to ensure proper drainage of surface water and avoid ponding. Then fastened as indicated on shop drawings.
- B. Allow 3/8" spacing between panels and adjacent surfaces and between adjoining panels to permit installation of backer rod and sealant. All joints which are exposed to the weather and to surface traffic shall be sealed with manufacturer's recommended sealant.
- C. Protect installed panels from damage during ensuing construction operations. Prior to date of substantial completion replace any cracked, broken or otherwise damaged glazing units.

### **3.3 FIELD TESTING**

- A. After panel installations are completed they shall be field tested for leakage. Test shall be conducted by flooding the surface of panels with a sprinkler hose for a period of 15 minutes while observations are made of the undersides. Correct any deficiencies which are found in a manner to make panels completely water tight. Conduct testing in the presence of the Architect or the Architect's designated representative.

### **3.4 PAINTING**

- A. Cast Iron to receive initial factory applied blackened patina which tends to allow for an even appearance while 81R™ cast iron panels naturally season. Cast iron can be painted, but painted walking surfaces will wear and require maintenance (scuffed painted surfaces left unattended will season and CR does not recommend painted cast iron walking surfaces. All interior surfaces of the prefabricated cast iron grid which are exposed to view shall be finished after installation in accordance with the requirements of Special Coating Section. Care shall be taken so that the coating will not extend onto the glazing units. If spray application is used, mask all glazing.

### **3.5 CLEANING**

- A. Maintain installed panels, including glazing, in reasonable clean condition during construction operations. Remove any stains or materials which may have an adverse effect on panel materials and finishes. Remove any excess glazing compound and sealants.
- B. Immediately prior to Date of Substantial Completion clean glazing units to remove any accumulations of dirt, paint stains, etc. Glazing shall be cleaned on both inside and outside surfaces.

### **3.6 REPLACEMENT INSTRUCTION**

- A. Furnish the Owner with a copy the panel manufacturer's complete printed instructions for the replacement of damaged glazing units.

### **END OF SECTION**

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