

# Recommended Long Form Specification for Structural Glazed Facing Tile (SGFT)

Section 04210

## Structural Glazed Facing Tile

### 1.0 General

#### 1.1 Summary

- A. System Description: Work described in this section covers requirements for Structural Glazed Facing Tile Unit Masonry and its installation and maintenance.
- B. Products installed but not furnished in this section:
  - 1. Section 04100: Mortar
  - 2. Section 04150: Masonry Accessories

#### 1.2 References

- A. Applicable Standards of the following as referenced:
  - 1. American Society for Testing and Materials (ASTM)
  - 2. Brick Industry Association (BIA)
  - 3. Underwriters' laboratories, Inc. (UL)

#### 1.3 Definitions

- A. Terms
  - 1. Structural Glazed Facing Tile: SGFT, extruded and manufactured clay masonry unit with a ceramic glazed face that is a structural unit which can be load bearing masonry.
  - 2. Glazed Face: Exposed ceramic glazed face on SGFT.
  - 3. Bed Joint: Horizontal mortar joint between two SGFT.
  - 4. Head Joint: Vertical mortar joint between two SGFT.

#### 1.4 Submittals

- A. Strap Samples: Submit three samples to indicate the full range of color and texture to be expected in the completed wall for each color or texture.
- B. Certificates:
  - 1. Material Safety Data Sheet (MSDS)
  - 2. Certification Letter: Submit a certified letter from manufacturer prior to delivery of SGFT to job site for compliance of specification requirements.

#### 1.5 Quality Assurance

- A. Sample Field Panel: Construct a wall panel 4' wide and 4' high for SGFT work. Locate as directed by Architect.
- B. Panel to indicate quality representation of:
  - 1. SGFT color and texture range.
  - 2. Bonding pattern.
  - 3. Mortar color.
  - 4. Joint tooling.
  - 5. Reinforcement/Ties.
  - 6. Workmanship.
- C. Sample field Panel should be erected at least 14 days prior to shipment of the SGFT to the job site.
- D. Approved Sample Panel shall act as the standard of comparison and quality to be expected throughout the work.
- E. Approved Sample Panel should be maintained through job completion and not destroyed until instructed by the Architect.
- F. Erect separate Sample Panels for each color and texture, mortar color or combinations specified or as indicated on drawings.

### **1.6 Delivery, Storage and Handling**

- A. Deliver SGFT to Project Site as packaged by manufacturer. Offload SGFT packages using equipment that will not damage SGFT. No SGFT is allowed to be in direct contact with the ground.
- B. Cover SGFT with non-staining waterproof membrane covering. Keep units dry. Allow air circulation around stacked units. Installation of wet or stained SGFT is prohibited.

### **1.7 Project Conditions**

- A. Environmental Requirements:
  - 1. Do not lay SGFT and mortar when ambient temperatures are below 40 degrees F., unless properly protected in a heated enclosure and accepted means are provided to heat units and mortar, with specific written approval from Architect. (Reference: BIA Technical Notes for Guide Specifications for Brick Masonry.)
  - 2. Maintain air temperature above 40 degrees F. on both sides of masonry for at least 72 hours after erection of walls.
  - 3. Protect masonry construction from direct exposure to wind and sun when erected in ambient air temperatures of 95 degrees F. in shade with relative humidity less than 50%.
  - 4. Take all precautions necessary to protect units from damage.
    - a. Handle and store in protective cartons or trays until actual installation in the wall.
    - b. Damaged units will not be accepted in the wall.

### **2.0 Products**

## **2.1 Structural Glazed Facing Tile**

### **A. Pattern or Type:**

1. As detailed and required.

### **A. Characteristics:**

1. Meet ASTM C-126 for grade (S) Select or grade (SS) Select Size quality as specified. Type I (one face units) or Type II (double face units).
2. Must meet UL requirements for zero flame spread and zero smoke developed.
3. Nominal Face dimensions as required:
  - a. 6T Series - 5-1/3" high x 12" long.
  - b. 4W Series - 8" high x 8" long.
  - c. 8W Series - 8" high x 16" long.
4. Bed Depth: As required.
5. Shapes: Furnished as shown on the plans in accordance with current standard production of the manufacturer. All external corners, sills and jambs shall be bullnosed unless otherwise noted. Lintels and internal corners shall be square unless otherwise noted. The base course is coved (recessed or non-recessed as required) or as shown on the drawings.
6. Approved manufacturer:
  - a. Or approved equal

## **2.2 Accessories**

A. Mortar: As specified in mortar section.

B. Joint Reinforcing: Masonry joint reinforcing as specified in Masonry Accessories section. Single plane construction recommended. Joint assembly should be one thickness in height after welding.

## **3.0 Execution**

### **3.1 Preparation**

#### **A. Protection of Work:**

1. Protect the surfaces of the installed SGFT. Cover freshly-laid weather exposed masonry at the end of each day or the start of each shut down period, with non-staining waterproof material in such a manner which will ensure that the covering will overhand the masonry not less than 2' on each side of the masonry. Anchor on each side of wall. Finished walls to be covered with 15# felt paper or erect wooden barriers to protect walls at areas that are subject to large amounts of construction traffic or material movement. Protect glazed face from exposure to welding burns, stains, etc.

### **3.2 Installation**

- A. Workmanship:
  - 1. Lay only dry masonry units.
  - 2. Lay masonry plumb, level and true to line.
  - 3. Lay units in bonding pattern as specified.
  - 4. Cut units with masonry saw using a wet diamond blade. Do not use units less than 4" in length.
- B. Build in work of other trades indicated to be built-in with SGFT as work progresses.
- C. Mortar Joints:
  - 1. Lay joints of each first course in full width bed of mortar.
  - 2. Horizontally cored units:
    - a. Bed Joint: Full.
    - b. Head Joint: Face shell thickness.
  - 3. Vertically cored units:
    - a. Head and Bed Joints: Face shell thickness.
  - 4. Remove and replace mortar with fresh mortar where adjustment must be made after mortar has started to set.
  - 5. Keep bed and head joints uniform in width, except for minor variations required to maintain bond and locate returns.
  - 6. Both bed and head mortar joints standard thickness:
    - a. 6T Series - 5-1/3" high x 12" long use 5/16", +/- 1/16".
    - b. 4W Series - 8" high x 8" long use 3/8", +/- 1/16".
    - c. 8W Series - 8" high x 16" long use 3/8", +/- 1/16".
- D. Rake mortar joints 1/4" to 3/8" deep.
  - 1. Install graded aggregate (sanded) cement based joint filler or
  - 2. Install non-sagging sanitary epoxy mortar for vertical applications in strict accordance with manufacturer's directions.

### **3.3 Application**

- A. Acceptable Tolerances:
  - 1. Walls must be straight in plane.
  - 2. Maximum variation from plumb: 1/4" in 10'0"; not exceeding 3/8" in 20'0".
  - 3. Maximum variation from level: 1/4" in 20'0"; not exceeding 1/2" in 40'0" or more.
  - 4. Maximum variation in linear building line from location indicated: 1/4" in 20'0".

### **3.4 Cleaning**

- A. It is intended that with careful adherence to this specification that extensive cleaning will not be necessary. In event of unexpected contamination of SGFT walls, party or parties responsible for contamination or soiling will be responsible for its removal and/or replacement. Perform any cleaning other than with a non-

- metallic scraper, stiff bristled brush or wooden paddle only after approval by Architect and necessary tests to insure against any wall damage.
- B. During construction, wipe glazed surface clean after tooling of joints or within 30 minutes after laying. Keep wall clean as work progresses to avoid difficult cleanup. Use no metal scrapers, abrasive powders or unauthorized cleaning agents. Use wooden paddles or scrappers to clean away mortar residue or lumps. Wash with clean water. Wipe with clean cloths, sponges or similar item.

End of Section 04210