SPECIFICATIONS FOR PRECAST CONCRETE WALL PANELS

PART 1 GENERAL

1.1 SUMMARY

A. Provide Precast Concrete Wall Panels as shown on the drawings and specified herein.

B. Provide all related materials, equipment, and labor required to complete the work specified.

1.2 QUALITY STANDARDS

A. Provide experienced, well-trained workers competent to complete the work as specified.

B. Use only materials approved by the panel manufacturer for use with its product.

C. All work shall comply with governing building and safety codes.

1.3 SUBMITTALS

A. Submit dimensioned template drawings for all custom shapes prior to fabrication.

B. Submit sample of specified color for review.

1.4 MATERIALS HANDLING

A. Provide all materials required to complete the work as shown on the drawings and specified herein.

B. Deliver, store, and transport materials to avoid damage to the product or to any other work and return any products or materials delivered in an unsatisfactory condition.

C. Materials and products delivered will be certified by the manufacturer to be as specified.

D. Store materials in a safe, secure location, protected from moisture, corrosion and damage until installation.

1.5 PRECONSTRUCTION AND PREPARATION

A. Examine and verify that supporting structure is designed or analyzed for structural integrity to support specified wall panels.

B. Examine and verify that job conditions are satisfactory for speedy and acceptable work.

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D. Cold-Weather Protection: Do not use materials subjected to ice, frost or tempera-tures less than 50 degrees.

1.6 PROJECT CONDITIONS

A. Maintain minimum temperature of 70 degrees in spaces to receive precast wall panels for at least 48 hours before, during and after installation. Store materials in space where they will be installed for at least 48 hours or as required to ensure that the materials have reached 70 degrees before starting installation

PART 2 MATERIALS

2.1 MANUFACTURER

A. Precast concrete wall panels shall be manufactured by Get Real Surfaces, Inc., Poughkeepsie, NY (845.452.3988).

B. Dimensional tolerances (from plan) for wall panels shall be as follows:

- **1.** Length +0, minus 1/16"
- 2. Width +0, minus 1/16"
- **3.** Thickness +1/16, minus 1/8"

C. Panel Sizes - Precast concrete wall panels can be a maximum of 24 square feet for each panel and no larger than 6'-0" in any direction (width or height). Typical thickness is 1".

D. Joint width to be a minimum of 1/8".

E. Panel Weight: Maximum panel weight is 220 Lbs.

F. Typical Reinforcement and Concrete Mix Design:

1. Concrete to be a minimum of 4000psi @ 28 days.

2. Integral glass fiber dosage rate: 800 grams per 100 Lbs cement minimum.

3. #2 Grade 60 perimeter reinforcing, continuous all panel sections 2" clear of panel perimeter (where panel thickness exceeds 1").

2.2 ACCESSORIES

- A. Wall Adhesive
 - **1.** 'Thin-set' latex modified portland cement mortar.
- B. Sealer and Finish

1. Penetrating sealer/hardener as recommended and installed by the wall panel manufacturer.

2. Finish coat as recommended and installed by wall panel manufacturer.

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PART 3 CONSTRUCTION AND INSTALLATION

3.1 GENERAL

A. Do not use wall panels with chips, cracks, voids, discolorations or other defects without written acceptance by architect.

B. Mix wall panels from several pallets or crates, as they are placed, to produce uniform blend of colors and textures (unless otherwise specified by plan).

C. Joint pattern as indicated; 1/8" wide joints.

D. Tolerances: Do not exceed 1/16-inch (0.4-mm) unit-to-unit offset from flush (lippage) nor 1/8 inch in 10 feet (3 mm in 3 m) from level, or indicated slope, for finished surface of wall.

E. Always follow manufacturers instructions for mixing and application of thinset.

F. Do not use rubber mallet directly on panels; instead use a beating block to adjust panel if needed.

G. Clean all wall panel surfaces as they are installed; do not leave thin-set or mortar-set residue, or 'cement haze', on the panels.

H. Never use acids to clean concrete wall panels or grout.

I. Start of work constitutes acceptance that all conditions are satisfactory.

3.2 SUBSTRATE PREPARATION

A. Panels to be installed on a framed structure sheathed with plywood as a substrate. The plywood substrate must be attached with construction adhesive as well as mechanically fastened with screws.

3.3 THIN-SET

A. Mix thin-set per manufacturer's instructions; do not re-temper thin-set.

B. Spread and press thin-set in both directions with the trowel's flat side to break 'surface tension'.

C. 'Backbutter' all wall panels; obtain 100% coverage by pressing thinset onto individual panels with the flat side of trowel.

D. Do not allow thin-set to 'skin-over'.

3.4 SECONDARY ATTACHMENT

A. Use cast-in fasteners or galvanized "tie backs" or through-bolting as required when panels are installed more than one panel high (stacked).

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C. A minimum of two tie backs per panel at approximately 4 inches in from top corners are required and must be screwed into substrate as installed.

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3.5 SECURING PANELS

A. Secure panels into place until adhesive is cured. See adhesive manufacturer's instructions for cure time.

B. Remove temporary fasteners and grout or caulk all joints.

3.6 GROUTING

A. Use 'Saltillo' type coarse, sanded grout for joints up to ½" wide.

B. If mixing own grout, use a mixed gradation of 30/60/90 silica sand in a 2 to 2-1/2 ratio to 1 cement.

C. Do not use excessive water.

D. Do not under any circumstances use acids to clean wall panels after grouting.

E. If bag grouting (recommended) fill joints higher than wall panels surface and tool when grout starts to set up.

F. If spread grouting, clean wall panels surface frequently with clean water and avoid excess abrading of surface.

G. Damp cure entire installation when finished.

H. Use appropriate caulk in lieu of grout between panel edges and adjacent surfaces.

3.7 GROUT SEALING

A. Seal all grout per manufacturer's recommendations. Test in an inconspicuous area for appearance and penetration as per grout manufacturer.

3.8 CLEANUP

A. Thoroughly clean all surfaces of dirt and debris. Protect all panels from abrasion and construction damage until construction is complete.

3.9 MAINTENANCE

A. Routine cleaning

1. Dust surface with clean cloth

2. Use a pH-neutral cleaner such as Tile Lab Grout and Tile cleaner $^{\scriptscriptstyle 0}$ or Kemiko Nutra-Clean $^{\scriptscriptstyle 0}$

B. To remove scuff marks

1. Use a fine grade Scotchbrite[®] pad with a low-ph cleaner and gently buff to remove the scuff marks.

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Do not use cleaners containing ammonia, acids or bleach.

END SECTION

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