

SECTION 03361 – COLORED IMPRINTED CONCRETE FINISHES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes: Colored imprinted concrete where indicated to provide patterned or textured concrete finish noted as follows:
 - 1. Patterned Concrete Area (Detectable Warning Area) – Exterior slab.
- B. Related Requirements:
 - 1. Section 03010 – Cast-In-Place Concrete

1.2 REFERENCES

- A. The publications listed below form a part of this specification to the extent referenced. Publications are referenced within the text by the basic designation only.
- B. Occupational Safety and Health Administration (OSHA):
 - 1. OSHA 01926.1153 Respirable Crystalline Silica.

1.3 QUALITY ASSURANCE

- A. Imprinted Concrete Field Samples:
 - 1. Prior to commencing imprinted concrete work, prepare a 24 inch x 24 inch reference sample of each type imprinted concrete surface for approval by Owner. The sample shall be the standard for acceptance for imprinted concrete.
- B. Installer Qualifications:
 - 1. Installer shall be certified by the imprinting tool manufacturer .
 - 2. Installer shall have completed a minimum of 10 projects within the last 3 years of similar in type, size and complexity to Work of this contract.

1.4 ENVIRONMENTAL REQUIREMENTS

- A. Minimize dust emissions or provide equipment that suppresses dust.

1.5 PROJECT CONDITIONS

- B. Apply concrete surface coatings only when moisture content of surfaces is within manufacturer's acceptable ranges for type of coatings being applied.
- C. Maintain maximum surface temperatures or ambient air temperatures and relative humidity as recommended by the manufacturer. Do not apply protectant coatings when rain is expected.
- D. Provide continuous ventilation and heating facilities to maintain temperatures above minimum surface and air temperature specified above for 24 hours prior to, during, and 48 hours after application of protectant materials.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Subject to compliance with project requirements, provide products for imprinted concrete as manufactured by the following to the extent as specified hereinafter for the specific product:
 - 1. [Bomanite Corporation](#), (303) 369-1115.
 - 2. [H&C Concrete](#) distributed by Sherwin-Williams. (800) 867-8246.

 DESIGN	03361	COLOR IMPRINTED CONCRETE FINISHES	01/22/19
	SPC		1 OF 4

3. [Increte Systems Inc.](#), (800) 752-4626.
4. [L. M. Scofield Co.](#), (800) 800-9900.
5. [Patterned Concrete Industries, Inc.](#), (800) 252-4619.
6. [Brickform](#) by Solomon Colors, Inc., (800) 624-0261. Contact: Ross Urshan (407) 792-6446 or (407) 257-5967, rurshan@solomoncolors.com
7. [Diversey Care Floor Products](#), (800) 668-7171.

B. Substitutions: Comply with the requirements of Section 01250.

2.2 CONCRETE MATERIALS, ADDITIVES, AND CONCRETE MIX

A. Conform to the requirements of Section 03310 as applicable.

2.3 IMPRINT TOOLS

A. Provide rigid imprint tool as follows:

1. Patterned Concrete Detectable Warning Area 6 inch x 6 inch :
 - a. Increte Granite Tile.
 - b. Bomanite Granite Setts stamp.
 - c. Brickform Granite Sets (FM-250).

B. Provide flexible mat type imprint tool as follows:

1. Textured Concrete Entry Vestibule Floor:
 - a. Bomanite English Slate Frayed Edge (TL-03290).
 - b. Equivalent products by other approved manufacturers.

2.4 COLORED HARDENER

A. Dry-shake Colored Hardener: Subject to compliance with project requirements, provide colored hardener as manufactured by one of the following:

1. Patterned Concrete Detectable Warning Area:
 - a. Lithochrome Color Hardener by Scofield. #A-21 "Deep Charcoal" with Release Agent of same color.
 - b. Bomanite Color Hardener Color: #CH-00061-60, BC-1, "Cobblestone Gray" with Release Agent #CH-00167-60, BC-1, "Natural Gray".
 - c. Increte Systems Color Hardener by Increte, "Gray" with Release Agent "Gray" or "Clear".
 - d. Brickform Color Hardener #CH-200 "Medium Gray" with Release Agent of same color.
2. Textured Concrete Entry Vestibule Floor:
 - a. Lithochrome Color Hardener by Scofield. #A-57 "Platinum Gray" with Antiquing Release Agent #A-33 "Classic Gray."
 - b. Equivalent matching products by other manufacturers.

2.5 SEALER

A. Imprinted Concrete Sealer: Mixture of 20 parts of sealer to one part skid-resistant additive.

1. Sealer: Solvent based, non-yellowing, acrylic resin concrete sealer, minimum 25 percent solids. Provide the following or equivalent:
 - a. [Clear Seal](#) by Increte Systems, Inc.
 - b. [Gem-Seal 700](#) by Brickform.
2. Sealer: Solvent based concrete sealer low VOC (<100 g/L). Provide the following:
 - a. [Clear Seal 100](#) by Increte Systems Inc.
 - b. [Gem-Seal 100](#) by Brickform.
3. Texturing Additive: Micronized polymer powder. Provide the following or equivalent:
 - a. [SharkGrip Slip Resistant Additive](#) by H&C Concrete.

PART 3 - EXECUTION

3.1 PREPARATION AND CONCRETE PLACING AND FINISHING

 DESIGN	03361	COLOR IMPRINTED CONCRETE FINISHES	01/22/19
	SPC		2 OF 4

- A. Conform to the requirements of Section 03310 and 03312 as applicable.
- B. Prior to color texturing, float freshly placed concrete with wood float to create an open and uniform surface.

3.2 COLORING AND IMPRINTING PROCESS

- A. Color Hardener Application:
 - 1. Dry-Shake Method: Evenly apply color hardener in two or more applications to fresh concrete. Apply at a minimum rate of 100 pounds per 100 square feet. Wood float after each shake.
 - 2. Release Agent: Apply evenly to troweled surface before imprinting.
- B. Imprinting:
 - 1. Patterned Concrete Detectable Warning Area: Layout defined pattern as indicated with proper alignment with respect to building lines. Apply imprint to concrete surface with a consistent pressure while concrete is plastic providing a uniform texture.
 - a. Layout imprinted area at 90 degrees to edge of sidewalk. Provide uniform balance of stamp spacing, centering pattern between ends of patterned concrete area.
 - b. Hand-tool in areas where imprinting tools are not practical.
 - 2. Textured Concrete Entry Vestibule Floor: Lay out defined texture pattern as indicated on Drawings with proper alignment with respect to building lines. Apply imprinting mat to concrete surface while concrete is plastic.
 - a. Apply imprinting mat with consistent pressure to create uniform seamless texture without discernable pattern repeats. Provide uniform spacing of imprinted texture, centering texture pattern between ends of the entire textured concrete area. Do not provide tool joints within the texture pattern.
 - b. Hand-tool in areas where imprinting tools are not practical.
 - c. Saw cut 1/8" x 1/4" deep joints within entry area in grid pattern at 90 degrees to building lines as shown on Drawings (1/4" x 3/4" deep at control joints). Use saw cutting equipment and follow saw cutting method as defined within Section 03312.
 - 1) Verify proper dust control and joint cleanout methods as specified in Section 03312.
 - 2) Observe minimum curing times for fresh concrete.
 - 3. Detailing: When necessary, after concrete has set for at least 24 hours, chisel to remove marks left by imprinting tool.

3.3 CURING

- A. Exterior Slabs: Cure imprinted concrete floor surfaces by the moisture cure method in accordance with applicable requirements of Section 03310 and ACI 308 or when curing compound is permitted as specified in Section 03310 when surfaces are subject to freezing temperatures.
- B. Interior Slabs: Cure imprinted concrete floor surfaces in accordance with applicable requirements of Section 03312.

3.4 SEALING

- A. Preparation for Sealing Imprinted Concrete: Wait 28 days after placement of imprinted concrete to prepare surface for sealer.
 - 1. Prepare the concrete surface free of dirt, dust, oil, grease, curing compound, or other contamination that may interfere with adhesion of sealer.
 - 2. Clean concrete surface by a method necessary to achieve permeability.
 - a. If pressure washing is used, allow the surface to dry for 24 hours before applying sealer.
 - b. If acid etching is used, dilute a proprietary muriatic solution in accordance with the sealer manufacturer's written recommendations. Flush with clean water and neutralize with a pH neutralizer such as ammonia, baking soda, or TSP. Repeat rinsing and neutralizing. Allow the surface to dry for 24 hours before applying sealer.
- B. Sealing Imprinted Concrete: When surface has fully dried after cleaning and preparing, apply imprinted concrete sealer according to sealer manufacturer's written recommendations. Do not apply sealer prior to 28 days after placement of imprinted concrete.

 DESIGN	03361	COLOR IMPRINTED CONCRETE FINISHES	01/22/19
	SPC		3 OF 4

1. If dissipating curing compound has been applied on exterior slab, remove compound prior to application of sealer using the preparation methods for sealing specified herein.
2. If excess brittle curing compound remains on interior imprinted concrete surfaces, remove compound prior to application of sealer using the preparation methods for sealing specified herein.

3.5 PROTECTION

- A. Immediately after placement, protect concrete from premature drying, excessively hot or cold temperatures, and damage.
- B. After curing and after application of sealer, cover imprinted concrete area with polyethylene. Lay panels of hardboard over polyethylene at traffic paths. Remove protection material from finish surfaces only after work in the area has been completed.
- C. Patch or replace damaged portions of concrete. For patching and replacement required under this Section, provide tools equipped with a HEPA-rated filter dust collection system recommended by the manufacturer to maintain dust emissions below the permissible level.

3.6 CLEANING

- A. General: Dispose of construction waste in accordance with the requirements of Section 01351 Regulatory Compliance Supplement.

END OF SECTION

 DESIGN	03361	COLOR IMPRINTED CONCRETE FINISHES	01/22/19
	SPC		4 OF 4