

ITEM 01555.7294 M - ARCHITECTURAL TREATMENT - VERTICAL CONCRETE SURFACES

DESCRIPTION:

This work shall consist of architecturally treating the vertical surface(s) of concrete retaining walls, structures, wing walls, or other similar vertical surfaces with a designated pattern(s) and texture(s). All work shall be in accordance with these specifications in and reasonably close conformity to the lines, grades and patterns shown on the plans.

MATERIALS:

Any commercially produced formliner meeting the requirements of this subsection will be acceptable. Polystyrene formliners are for one-time usage only and shall be allowed only if the formwork will not be reused. The formliners shall:

1. Produce the pattern required by the plans.
2. Be composed of a material(s) that will not bond to concrete.
3. Be attachable to standard plywood, or steel, concrete forms, such that no distortion, or stray markings, occur within the concrete surfaces.

Formliners will be acceptable at the work site upon written certification that the requirements of this subsection have been met.

Cast-in-place concrete - Class A or as shown in the contract documents shall meet the requirements of Section 501, Portland Cement Concrete - General.

Releasing Agents. If the formliner manufacturer requires the use of an agent to facilitate the release of the formliner panel from the concrete, or when its use is specified on the plans, such agent shall be non-staining and evenly spread over the entire linear surface. Formwork shall also be treated as needed.

Caulking Compound. When a caulking compound is required to seal any necessary concrete joints in the imprinted surface, such caulking compounds shall meet the material requirements of Subsection 705-06 of the Standard Specifications, Caulking Compound for Structures.

CONSTRUCTION DETAILS:

Special care shall be taken after installation to ensure that all formliner surfaces are thoroughly clean of all stray material of any nature. No concrete shall be placed prior to the Engineer's inspection and approval of formliner surfaces.

Approximately 2 mm of the formliner panel shall overlap on either side of the formwork panel so that when the formwork sections are forced together, the formliners compress at the edges to form a tight joint. Joints between panels shall be sealed, taped or fused to form a watertight seam, according to the manufacturer's instructions. Unless specified on the plans, texturing is not required on surfaces which will be below finished grade. Plastic snap tie cones are to be of the non-leaking type. Metal form ties are not to be placed closer than 38 mm to the interior surface.

Concrete shall be placed in accordance with Section 555, Structural Concrete

Construction joints shall extend to the full depth of the concrete at the locations shown on the plans. When construction joints are needed but are not shown on the plans, the Contractor and the Engineer shall agree on

the proper locations of such joints so as to not distract from the appearance of the imprinted pattern and to minimize the possibilities of cracking.

After formwork removal the Engineer will inspect architecturally patterned concrete surfaces. All such surfaces which do not exhibit the required architectural pattern shall be repaired in a manner satisfactory to the Engineer at no cost to the State. The repair shall match the concrete surface. Concrete repair material, if used, shall meet the requirements of Subsection 701-04, Concrete Repair Material of the Standard Specifications.

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METHOD OF MEASUREMENT:

Architecturally treated vertical concrete surfaces shall be measured by the number of square meters of concrete treated to the satisfaction of the Engineer. The quantity shall be as computed from payment lines shown on the plans or as established by the Engineer in writing. Measurement will be taken as the vertical plane projection of the treated location. No measurement will be taken of actual concrete surfaces.

BASIS OF PAYMENT:

The unit price bid per square meter shall include the cost of the formliners, the concrete needed to fill the formliner, releasing agents, caulking compounds, patch mix, and all other materials, equipment and labor necessary to complete the work as specified.