

**ITEM 04608.0111 M - EXPOSED AGGREGATE CONCRETE SURFACING
(ONE-COURSE METHOD)**

Description:

This work shall consist of the construction of a portland cement concrete surfacing with an exposed aggregate finish. All work shall be in accordance with NYSDOT Standard Specifications - Section 608 and as contained herein, and as shown on the plans.

Materials:

Materials shall meet the requirements specified in the following subsections of Section 700, Materials.

Portland Cement	701-01
Premoulded Resilient Joint Filler	705-07
Wire Fabric for Concrete Reinforcement	709-02
Water	712-01

Also:

A. Concrete:

1. Concrete shall meet the requirements of Subsection 501-2. Concrete shall be Class D.

B. Coarse Aggregate:

1. CA 1 aggregate shall meet the requirements of Subsection 703-02 No. 1 Crushed Stone and/or No. 2 Crushed Gravel. The color and properties of aggregate shall be as specified in the contract documents. Samples must be submitted to the Regional Landscape Architect for inspection and written approval prior to construction.

C. Wire Fabric: Wire fabric shall consist of No. 6 gauge wire at 150 mm centers transversely and longitudinally.

D. Retarding Agent: Retarding agent shall comply with the requirements of 40 CFR 59, Subpart D. Documentation must be submitted to the EIC for approval prior to construction.

E. Sealer Material: Sealer on all exposed aggregate surfaces shall be a transparent, non-glossy 100% acrylic (methyl methacrylate) water based emulsion to protect and waterproof the slabs. Material shall be unaffected by atmospheric contaminants from car or industrial exhaust, fuels and roadway salts and meet the following ASTM standards:

1. D-1653 - Maximum Moisture Vapor Transmission of .550 mgm/cm²/mm/24 hours
2. C-291 - 60 Cycles without deterioration
3. E-239 - 800 Hour Exposure without change in appearance

Construction Details:

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The general construction details for manufacturing, transporting and placing concrete shall meet the requirements of Section 501, Portland Cement Concrete - General. The exposed aggregate concrete surfacing shall be constructed by a method employing a retarding agent. The concrete shall be poured in one course to the full depth shown on the plans, screeded and finished. The concrete shall not be vibrated. Curing procedures shall begin immediately upon finishing the surface. Within one hour after the concrete is placed, the retarding agent shall be sprayed on the concrete surface according to the manufacturer's recommendation. The surfacing shall be wet-cured using a minimum 6 mil black plastic cover for 12 - 16 hours, then the aggregate shall be exposed by washing off the cement paste using a high pressure water hose. * The finished surface shall be completely covered with aggregate with a uniform appearance, as determined by the Engineer and the Regional Landscape Architect. The aggregate exposed shall have a 4 mm depth of exposure. The depth of exposure shall be measured by laying a straight edge across the plane of the surface and measuring down to the concrete matrix. The surfacing shall then be air-dried for thirty (30) days. The concrete surface shall be scored at intervals as indicated on the plans. The method of scoring along with the width and depth of score lines shall be as indicated on the plans. The concrete shall then receive two (2) applications of an approved acrylic sealer in accordance with the manufacturers' recommendations.

A sample segment of exposed aggregate concrete sidewalk (measuring approximately 10 square meters) shall be constructed in a portion of the flatwork area to determine the suitability of the appearance. If the sample segment is suitable to the Engineer and Regional Landscape Architect, it shall become part of the finished flatwork. If unsatisfactory, it shall be removed and a new segment constructed. There will be no limitation of the number of sample segments required before approval is given. Subsequent segments shall be accepted based on conformance to the approved sample segment.

Wire fabric for concrete reinforcement shall be embedded at mid-depth in the slab, unless otherwise shown on the plans.

A premoulded resilient joint filler shall be installed at all joints between surfacing and curb, pavement, building, etc.

Method of Measurement:

Exposed aggregate concrete surfacing will be measured as the number of surface square meters measured in place.

Basis of Payment:

The unit price bid per square meter shall include the cost of preparing the subgrade, all materials,

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including wire fabric reinforcement, equipment and labor necessary to complete the work as specified except that any necessary excavation and subbase course will be paid for under their appropriate items. Payment at the unit price will be made after the concrete surfacing and curing application have been properly placed.

- * The Contractor shall refer to water pollution control provisions, elsewhere in this contract, that would apply to this operation.