

ITEM 560.2021 11 - REMOVE, STORE AND RESET GRANITE STAIR TREADS

DESCRIPTION

This work shall consist of removing, match marking, cleaning, storing and reinstalling existing granite stair treads and risers in conformance with the details shown on the Contract Drawings, and where directed by the Engineer.

MATERIALS

Granite stair treads and risers: The provisions of Section 560-2, Materials, shall apply with the following additions and modifications:

- A. Color of grout and joint sealer shall match the color of the existing granite stair treads. After color selection, submit material samples of both grout and joint sealer to the Engineer for approval.
- B. Concrete base for stairs shall be repaired where required, as indicated in the Contract Drawings and as ordered by the Engineer. Concrete work shall conform to Section 582 of the Standard Specifications.
- C. Mortar shall conform to the requirements of subsection 705-21 Masonry Mortar of the Standard Specifications.
- D. Premolded Joint filler shall conform to subsection 705-07 Premolded Resilient Joint Filler.
- E. Granite material shall be as salvaged from the existing stairs.
- F. Stainless steel pins shall be 10 mm in diameter and 75 mm long. The stainless Steel shall be Type 304 (S30400)

CONSTRUCTION DETAILS

Before starting the work, Contractor shall survey the existing stairs layout, line and level. In case of a discrepancy in the uniformity of riser heights and tread widths, inform the Engineer for resolution.

Prior to starting any work, inspect the existing granite stair treads, in the presence of the Engineer. Mark all treads, which in the opinion of the Engineer are broken or are not to be reinstalled, as directed by the Engineer. Remove and dispose of all granite treads which are not to be reinstalled. It will be the Contractor's responsibility to preserve and maintain all granite stair treads which are designated for reinstallation.

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Carefully remove, match mark and store all granite stair treads which are to be reinstalled. The stair treads shall be cleaned with wet abrasive blast cleaning to remove all organic material, paint, etc. Drill holes on the underside of the treads for receiving the stainless steel pins. Holes shall be at 915 mm on center. Provide minimum two holes per tread. Refinishing of the stair treads is not required.

Prepare and submit Shop Drawings indicating existing and new treads to be installed. Clearly differentiate between existing and new treads. The Shop Drawings shall indicate the match mark numbers of the treads to be reinstalled. Indicate the location of the holes in the underside of the treads. Also locate the holes to be drilled in the concrete base.

Installation shall be in accordance with subsection 560-3 of the Standard Specifications as modified herein and on the Drawings.

Concrete base for stairs shall be repaired in accordance with Section 582. Drill holes in the concrete base to receive the stainless steel pins. The location of the holes shall be fully coordinated with the holes in the underside of the treads. The pins shall be embedded 40 mm minimum into the concrete base. The pins shall protrude 30 mm minimum into the granite tread.

Mortar for setting bed shall be mixed in such quantities as needed for immediate use. Materials that have been mixed for a period of more than 30 minutes shall not be used. Retempering of mortar for setting bed will not be permitted.

Expansion/contraction joints in the stair treads shall be as shown on the Contract Drawings. The location and layout of granite stair treads shall match existing.

Each granite stair tread shall be cleaned by brushing or other non-abrasive means immediately prior to installation. Prior to setting on the mortar bed, each granite stair tread shall be coated on the underside by troweling with a mixture of Portland Cement and water. The mixture shall be of stiff creamy consistency. Mortar droppings or smears on the exposed faces of stair treads shall be brushed off immediately after the stair tread is set. Any stair tread that becomes loose after the mortar bed has set shall be removed, cleaned, and re-laid with fresh mortar. The Engineer will inspect all stair treads that were designated to be reinstalled. Stair treads damaged during removal, cleaning, handling, storing, installation, etc. shall be removed and replaced at no extra cost.

After granite stair treads have been set, mortar shall be placed into the joints and struck smooth. A premolded resilient joint filler, §705.07, shall be installed at all joints between stair treads and granite pavement, adjacent stair treads or as directed by the Engineer.

The Contractor shall protect the granite stair treads for the duration of the contract. Any damage done to the adjacent areas shall be repaired by the Contractor at no expense to the State.

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Where defects in material or installation appear in the completed work, such areas shall be removed to the full depth of granite stair tread, including mortar and the defective material replaced with new at no expense to the State.

METHOD OF MEASUREMENT

This work will be measured as the number of square meters of granite stair treads satisfactorily removed, match marked, cleaned, stored and reinstalled, including stainless steel pins, mortar, drilling holes in granite and concrete, etc. all complete. The area of the treads shall be measured as the exposed plan area of the treads only. No separate measurement shall be made for the riser or for the tread overlap. The measurement shall be made only of the area of the granite stair tread which has been satisfactorily reinstalled. No measurement and payment shall be made for the area of the treads that are removed and disposed of.

BASIS OF PAYMENT

The unit price bid shall include the cost of furnishing all labor, materials, and equipment necessary to satisfactorily complete the work including inspection, removal, storage, match marking, cleaning and reinstallation. Repairing the existing concrete base and providing new granite stair treads where ordered shall be measured and paid for under their respective items.

Partial payment shall be made as noted below:

35% of the bid price per square meter for the area of the stair treads that are stored after removal.
55% of the bid price per square meter for the area of the stair tread that are reinstalled satisfactorily.

The remaining 10% of the price bid per square meter of stair treads upon inspection and acceptance by the Engineer.