

ITEM 08607.9907 M - NOISE BARRIER SYSTEM (RECYCLED MATERIAL)

DESCRIPTION:

This work shall consist of furnishing and erecting noise barrier systems of the size and location indicated on the plans. The Engineer may make certain modifications to the barrier as required to suit location, and terrain as approved by the Regional Landscape Architect.

MATERIALS:

A. Structural Columns

Steel shall meet the requirements of Subsections 564-2 and 715-01. Concrete shall be NYSDOT Class HP Concrete conforming to the requirements of Section 501.

1. Steel columns(if used) shall be fabricated from ASTM A36 steel and galvanized per Subsection 719-01, Type 1.
2. High strength bolts, nuts, and washers used in connection detail(as shown on plans or shop drawings) shall be galvanized ASTM A325.

B. Recycled Materials

The wall panes shall be of the size, shape, texture and color shown on the plans. Differently sized and shaped panels may be submitted for approval with acceptance at the discretion of the department. Any substitute panel must maintain the aesthetic standard depicted on the plan. Wall panels must be of a plastic or fiberglass material containing or made from a minimum of 40% post consumer material by volume. This material may be molded or extruded and must meet the construction details as described below and certified test results must be submitted prior to use. It will be necessary to build a sample wall on site for approval before material will be accepted. The contractor must supply a list of places where the wall has been installed and a reference and phone number of the maintaining agency.

CONSTRUCTION DETAILS:

The barrier system shall be fabricated to conform to the shapes, sizes, textures, and colors shown on the Plans and Specifications. Both the front and back of the barrier system shall have the same appearance unless otherwise specified on the plans. The barrier must conform to the following FHWA guidelines for reflective noise barriers: minimum panel density of 19.5 kg/m², minimum design life of 20 years, free of noise “leaks” and excessive (headlight or solar) glare, and be weather resistant to all natural elements. The Contractor shall fabricate structural columns and other parts as shown on Plans and Specifications and in accordance with the provisions of the Contract Documents. Manufacturer suggested material and techniques shall be used to prevent noise leaks between all joints within the barrier system and between the wall units and the columns.

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The Contractor shall submit shop drawings for approval to the Engineer 30 days before fabrication commences. The noise barrier system shall be installed in the position and manner indicated on the Plans and as approved by the Engineer. The Contractor shall employ a method approved by the Engineer to set structural columns in the foundations to assure proper center to center spacing and plumbness of columns. The Contractor shall be responsible for all damage to noise barrier components incurred during transportation and installation. Damaged components shall be replaced at the contractors expense.

Erection - All components shall be installed and handled in accordance with the manufacturer's instructions, plans and specifications.

Backfill - Before backfilling around bottom panel of barrier system, the Engineer shall inspect the base units for any damage and any remedial work shall be accomplished at this time as ordered by the Engineer. The noise barrier footings shall be backfilled prior to the erection of the posts and panels.

METHOD OF MEASUREMENT:

The erection of the noise barrier system shall be measured by the number of square meters of barrier satisfactorily completed in accordance with this specification and as approved by the Engineer. The number of square meters be computed using the following payment lines:

- Upper payment lines shall be the top of the highest panel set or as ordered by the Engineer in charge.
- Lower payment limits shall be the bottom of the lowest panel set.
- Longitudinal payment lines shall be the outer extremities of the wall.
- Only one side of the barrier will be measured for payment.

BASIS OF PAYMENT:

The unit price bid per square meter shall include the cost of furnishing all labor, materials, equipment and tools necessary to complete the work. Disposal of surplus materials shall be included in the unit price of this item.

The cost of excavation, backfill, and footing concrete will be made in separate items.