

ITEM 09603.67 M - PRECAST CONCRETE APRONS AND WINGWALLS FOR BOX CULVERTS

DESCRIPTION:

Design, detail, furnish and install precast concrete aprons and/or wingwalls as shown on the plans.

MATERIALS:

Supply precast concrete aprons and/or wingwalls meeting the requirements of §706-17, except as noted herein.

Design - Design requirements for wingwalls and minimum reinforcing requirements for aprons are contained in the AASHTO Standard Specifications For Highway Bridges.

Working Drawings - Include on the working drawings complete details for attaching the aprons and/or wingwalls to the box culvert. These details must agree with those shown on the box culvert working drawings. Include apron and/or wingwall drawings with the drawing submission for the culvert.

General - Use epoxy coated reinforcing steel in wall sections or use concrete containing calcium nitrite based corrosion inhibitor meeting the requirements of §711-13. Epoxy coated reinforcing steel is not required in aprons, footings or other buried elements. Provide 38 mm, minimum, concrete over reinforcing steel. The requirements for male and female joints do not apply to aprons and wingwalls.

CONSTRUCTION DETAILS:

Handling & Storage - Handle and store units in a manner that avoids damage to the units.

Excavation - Follow the requirements in §206 which apply to structures unless otherwise detailed in the contract plans.

Placement - Insure that the precast manufacturer has a representative available to assist in the installation of the precast units. Install precast units true to line and grade, in accordance with the contract plans and approved working drawings.

Adjust precast units so that the exposed faces of adjacent sections are not out of alignment with each other by more than 10 mm.

Joints - Install all connection hardware and joint gaskets in accordance with the contract plans and approved working drawings. When a shear key is used as part of the connection detail, fill the keyway with material meeting the requirements of §701-06. When welding is required as part of the connection detail, perform the welding in accordance with the New York State Steel Construction Manual. When external steel connection hardware is to be left in place, use steel hardware which has been galvanized in accordance with §719-01.

Backfilling - Use backfill material types and placement procedures conforming to the requirements of the contract plans and applicable provisions of §203-3.15. Avoid damage and misalignment of the precast units during the backfill operation. Reset misaligned units, at no additional cost to the department, as

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directed by the engineer.

Defective Units - The engineer will determine if defective units can be repaired or will be rejected. Repair defective units, at no additional cost to the department, as directed by the engineer. Replace, at no additional cost to the department, all units rejected by the engineer.

METHOD OF MEASUREMENT:

Aprons - Apron shall be measured as the number of square meters of top face of apron computed between the payment lines shown on the contract documents or between payment lines established in writing by the engineer. Payment will be based on limits shown on plans.

Wingwalls - Measurement will be taken as the number of square meters of front face of wall installed in accordance with the contract documents or between payment lines established in writing by the engineer. Measurement will be taken as the vertical plane projection of the wall face. Payment will be based on limits shown on plans.

BASIS OF PAYMENT:

Include the cost of all labor, materials, equipment and installation supervision by the precast manufacturers representative in the unit price bid for the aprons and/or wingwalls. Excavation and backfill will be paid for separately under their appropriate items.

Use 603.67----01