

ITEM 603.81 06 - PRECAST CONCRETE WINGWALL UNITS WITH FOOTINGS

DESCRIPTION:

This work shall consist of designing, detailing, furnishing and placing precast reinforced concrete wingwall sections with footing of the length and height indicated in the plans in accordance with these specifications in the locations indicated and in a manner approved by the Engineer.

MATERIALS:

The Material Requirements contained in §706-17, Precast Concrete Box Culverts shall apply except as noted herein.

A. Fabrication requirements contained in §706-17, along with the following shall apply.

1. Design. When the contract plans contain complete design details for the wingwall, alternate designs will not be considered. When the contract plans do not contain complete design details for the wingwall, the contractor shall be responsible for providing them.

All wingwall designs shall be submitted by the contractor, to the Department, for approval. The processing, approval and transmittal of wingwall designs will be in accordance with procedural directive of the Materials Bureau. Designs shall be submitted at least 45 days prior to the start of fabrication and shall include a complete set of working drawings and a complete set of design calculations. The drawings and design calculations shall be stamped by a Professional Engineer Licensed, and registered to practice in New York State. When the contract plans contain a complete design for the wingwalls, working drawings are still required. However, they do not have to be stamped by a Professional Engineer and design calculations are not required.

2. Drawings. Working drawings shall include complete and accurate details for connecting wingwalls to culverts. These details shall agree with those shown on the culvert working drawings. Working drawings and when required, design calculations shall be submitted to the Department for approval at least 45 days prior to the start of fabrication. The processing, approval and transmittal of working drawings will be in accordance with procedural directive of the Materials Bureau.

3. General. Epoxy coated reinforcement shall be used in all elements of the wingwall exposed to chlorides in order to protect the reinforcement from corrosion. The concrete cover over reinforcing steel shall be 38 mm, minimum.

CONSTRUCTION DETAILS:

- A. Inspection, Storage and Handling. Precast wingwall sections will be inspected at the construction site to determine any damage during shipment. An additional inspection will be made prior to placement of precast wingwall sections to determine any damage during storage.

ITEM 603.81 06 - PRECAST CONCRETE WINGWALL UNITS WITH FOOTINGS

B. Installation.

1. **Excavation.** The requirements specified in Section 206, Trench, Culvert and Structure Excavation, that apply to walls shall govern, except as modified in the plans or as directed by the Engineer.
2. **Placement.** Precast wingwalls shall be installed, true to line and grade, in accordance with the contract plans.
3. **Joint Seals.** These shall be impervious membrane joints, or an equivalent, specified by the units fabricator. The size and type of joints shall be as specified by the units fabricator and approved by The Department.
4. **Joints.** All dowels, joint filler material, tie rods, connectors, waterproofing strips or other sealing materials supplied by the Manufacturer, shall be furnished and installed by the Contractor in accordance with the Manufacturer's directions And as approved by the Engineer. All welding required shall be performed in accordance with the provisions of the New York State Steel Construction Manual.
5. **Backfilling.** The types of materials to be used in backfilling and the procedure of placement shall conform to the contract plans and the applicable provisions of Subsection 203-3.15 of the Standard Specifications. Movement of construction equipment, vehicles and loads over and adjacent to the wingwall shall be done at the Contractor's risk.

METHOD OF MEASUREMENT:

Measurement will be taken as the number of square meters of front face of wall installed. Measurement will be taken as the vertical plane projection of the wall face. The height of the wall will be measured from a horizontal line 600 mm above and parallel to the bottom of footing. The bottom of footing elevation used for measurement will be that given on the plans. Length of wall will be that given on the plans. No measurements will be taken beyond the wall face limits.

BASIS OF PAYMENT:

The unit prices bid shall include the cost of all labor, materials, and equipment necessary to complete the work. Excavation and backfill will be paid for separately

Payment will be made under:

<u>ITEM NO.</u>	<u>ITEM DESCRIPTION</u>	<u>PAY UNIT</u>
603.81 06	Precast Reinforced P.C.C. Wingwall Units w/Footings	Square Meter