

**SECTION 7.11**  
**CONCRETE CRIB RETAINING WALL**

**7.11.01--Description:** This item shall consist of furnishing and erecting a concrete crib type retaining wall as detailed on the plans.

**7.11.02--Materials:**

1. Portland Cement Concrete shall conform to M.14.01, amended as follows:

- (a) Concrete shall have a minimum 28-day strength (f'c) of 28 MPa.
- (b) Cementitious material may be used in the concrete in conformance with M.03.
- (c) The air content of the concrete when deposited in the forms shall be  $6 \pm 1$  percent.
- (d) Coarse aggregate shall conform to M.03.01-1 and to the gradation requirements for either Class 'F' or Class 'C' concrete.
- (e) The manufacturer's identification and the date of manufacture shall be permanently marked on precast units.

2. Reinforcing steel shall conform to M.06.01. The reinforcing steel shall be epoxy coated in conformance with AASHTO M284.

3. Pervious structure backfill shall conform to M.02.05.

4. Expansion joint material shall conform to AASHTO M213.

5. Protective penetrating sealer shall be clear and conform to the requirements of Section 8.19.

**7.11.03--Construction Methods:** Portland Cement Concrete units shall be precast in an approved plant in conformance with the applicable requirements of Subarticles 5.14.03--4, 6, 7 & 8. All surfaces of the precast units shall receive a penetrating sealer at the place of manufacture of the unit. The penetrating sealer shall be applied as recommended by the penetrating sealer manufacturer.

The foundation for the crib retaining wall shall be excavated as required and shall be approved by the Engineer prior to the assembly of the wall.

Pervious structure backfill shall be placed under the bottom of the cribbing to the depth shown on the plans or as ordered by the Engineer.

The cribbing members shall be handled carefully and installed as shown on the plans or as ordered. The assembling of the various components shall be performed in such a manner that no undue strain or stress is placed on any of the members that constitute the completed structure.

Precast units shall meet the 28-day strength requirements before shipping.

Damaged units shall be replaced by the Contractor at no cost to the State.

Pervious structure backfill shall be constructed in layers not exceeding 300 mm in depth in the cribbing and shall be thoroughly tamped. No puddling of the pervious structure backfill will be allowed.

The erection of the cribwall and backfill, both inside and outside of the crib, shall progress simultaneously.

**7.11.04--Method of Measurement:** This work will be measured for payment by the number of square meters of the area of the front face projected on a plane parallel to the front face of the completed and accepted wall.

**7.11.05--Basis of Payment:** This work will be paid for at the contract unit price per square meter for "Concrete Crib Retaining Wall," complete in place, which price shall include cribbing, protective penetrating sealer, excavation, backfill, pervious structure backfill in the cribbing and to the depth under the wall as shown on the plans, material, equipment, tools and labor incidental thereto.

Pay Item	Pay Unit
Concrete Crib Retaining Wall	m <sup>2</sup>