## ITEM 569.30 09M – NORMAL WEIGHT HP CONCRETE BRIDGE BARRIER

### DESCRIPTION.

Furnish and place reinforcing steel and normal weight HP concrete to construct concrete bridge barrier as shown in the contract plans. Precast barrier will not be allowed.

### MATERIALS.

Use materials meeting §569-2. Perform additional work as follows:

Manufacture normal weight HP concrete according to §501, and the following modifications:

1. Achieve an average compression strength of 25 MPa, or greater, with no individual cylinder compressive strength less than 21 MPa.

### CONSTRUCTION DETAILS.

Apply the provisions of §569-3 and the following modifications:

1. Install epoxy coated reinforcing steel and Uncoated Bar Reinforcement for Concrete Structures in accordance with Section 556 - Reinforcing Steel for Concrete Structures and as shown on the plans.

2. All damaged or defective concrete shall be repaired or replaced at the Contractor's expense. Damage or defects are defined as, but not limited to, spalling, irregular cracking, tearing, honeycombing, scaling, surface imperfections or irregularities, and lack of smoothness. After the concrete has hardened, the Engineer will examine it for damage as appropriate. Using the Contractor's straight edge surface irregularities and smoothness requirements will be checked. Surface irregularities greater than 5 millimeters in 3 meters shall be corrected in a manner acceptable to the Department.

   Repairs to remove excess concrete or irregularities shall be performed using methods and equipment that does not damage the concrete to remain. Further, removal of concrete shall be performed to maintain the appropriate cover of reinforcement.

   Repairs to remove and replace damaged or defective concrete shall be performed by making all repair areas rectangular in shape and as close to square as possible. Sawcut the perimeter of the repair area to a depth of 20 millimeters ± 3 millimeters. Chip out concrete, using chisel bits only, to a uniform level, removing all damaged or defective concrete. Angle the walls of the repair area at 45º toward the center of the repair, from the bottom of the perimeter sawcut. Do not undercut existing concrete. Surface preparation, placement, and curing of the repair concrete shall be in accordance with specifications and Department directives for the material used.

   Unless otherwise directed by the Regional Materials Engineer, the concrete used for repairs shall be of the same materials as that used for the original placement. Small repair

areas may be repaired with concrete repair materials appearing on the Department's Approved List providing the repair materials have similar characteristics as the original concrete.

5. The Engineer will reject any concrete represented by a cylinder set with an average compressive strength less than 25 MPa, or an individual cylinder with a compressive strength less than 21 MPa.

## METHOD OF MEASUREMENT.

Payment will be made at the unit price bid per meter for the number of meters of bridge barrier installed. Measurement will be taken along the centerline of the top of the barrier. No deductions will be made for joints.

## BASIS OF PAYMENT.

Include the cost of all labor, materials and equipment necessary to complete the work in the bid price.

Progress payments will be made on a per span basis as follows:

1. 40 percent of the estimate area after all reinforcing is properly placed.

2. 40 percent of the estimate area after concrete placement, and curing initiated.

3. The remainder after curing and necessary corrective work is complete.