

SECTION 462 CONCRETE FOR INCIDENTAL CONSTRUCTION - CLASS M (I)

462.1 DESCRIPTION

This work consists of site preparation, form construction and the furnishing, handling, placing, curing, and finishing of concrete for minor structures and incidental construction.

462.2 MATERIALS

Material shall conform to the following Sections:

- A. **Cement:** Section 750. Type II cement shall be used, unless otherwise specified.
- B. **Fine Aggregate:** Section 800.
- C. **Coarse Aggregate:** Section 820.
- D. **Water:** Section 790.
- E. **Admixtures:** Sections 751 and 752.
- F. **Reinforcing Steel:** Section 1010.
- G. **Curing Materials:** Section 821.
- H. **Joint Filler:** Section 860.
- I. **Joint Sealer:** Section 870.
- J. **Fly Ash:** Sections 605 and 753.

462.3 CONSTRUCTION REQUIREMENTS

The supplier of Class M (I) concrete will be required to furnish a written statement certifying that the concrete furnished meets the applicable requirements of Section 462 for Class M (I) concrete.

- A. **Concrete Quality and Proportion:** The concrete specified in this section will be designated as Class M6 (I28) concrete.
 - 1. The following requirements shall apply for Class M6 (I28) concrete:
 - a. The concrete aggregate mixture shall contain a minimum of 50 percent coarse aggregate by weight.
 - b. The mixture shall contain at least 500 pounds (360 kg) of cement per cubic yard (cubic meter).

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- c. The minimum 28 day compressive strength shall be 4000 psi (28 MPa).

When Class M6 (I28) concrete is specified, the design mix for Class A40 (A28) concrete may be substituted when approved.

2. Class M6 (I28) concrete shall conform to the following slump and entrained air requirements:

- a. The slump at time of placement shall be maintained between 1 (25 mm) and 4½ inches (115 mm).
- b. The concrete shall contain between 5.0 and 8.0 percent entrained air.

3. **Computerized Batching Equipment:** The following provisions shall apply to all Class M6 (I28) concrete batched by computerized ready mix plants:

A printed, computer generated, ticket shall be automatically produced for each load of concrete batched. The printed computer ticket shall accompany each load of concrete to the project and shall be presented to the Engineer prior to discharging the load at the project site.

Batching equipment shall be automatic. Manual operations will be permitted when automatic controls fail provided concrete meeting specified results is produced. However, the automatic operation shall be restored before work may commence the day following the failure.

The printed ticket must contain the following minimum information.

Truck Number
Date and Time batched
Total volume of the load, in cubic yards (cubic meters)
Mix Identification (ID)
Actual weight or volume of each component of the mix:
 course aggregate
 fine aggregate
 cement
 fly ash
 water
 admixtures

The above information must be automatically printed in such a manner that the Engineer may verify that the mix adheres to the proportions specified by the design mix.

The revolution counter on the truck mixers shall be set to zero as each new batch is loaded.

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- B. Forms:** Wood and metal forms shall meet the requirements of Section 423.
- C. Limitations of Mixing:** Limitations of mixing shall conform to Section 460.3 F.
- D. Concrete Delivery Requirements:** Concrete delivery requirements shall conform to Section 460.3 G.
- E. Concrete Placing Requirements:** Concrete placing requirements shall conform to Section 460.3 H.
- F. Underwater Concrete Placement:** Depositing concrete in water shall conform to Section 460.3 I.
- G. Protection of Concrete:** Concrete shall be maintained above 32EF (0EC) until it has attained a compressive strength of 1500 psi (11 MPa).
- H. Subsequent Construction:** Removal of formwork, construction of superimposed elements, backfilling, and application of liveloads shall conform to Section 460.3 K.
- I. Joints:** Joints shall conform to Section 460.3 M.
- J. Curing Concrete:** Curing concrete shall conform to Section 460.3 N.
- K. Surface Finish:** Surface finish shall conform to Section 460.3 O.

462.4 METHOD OF MEASUREMENT

Class M (I) concrete will be measured in accordance with neat line dimensions shown on the plans, unless changes are ordered during construction. Volumes will be computed to the nearest 0.1 cubic yard (0.1 cubic meter).

Deductions will not be made for concrete displaced by pipes or conduits less than 6 inches (150 mm) in diameter, reinforcing and structural steel, weep holes, joints, drains, and chamfers or fillets less than one square inch (10 square centimeters) in cross section.

462.5 BASIS OF PAYMENT

The accepted quantity of Class M (I) concrete will be paid for at contract unit price per cubic yard (cubic meter).

Payment will be full compensation for labor, equipment, materials, and incidentals required.