

## **SECTION 03300 CONCRETE**

### **PART 1 -- GENERAL**

#### **1.01 WORK INCLUDED**

- A. Provide the concrete shown on the Plans.
- B. Include reinforcing steel and anchor bolts as shown on the drawings.

#### **1.02 RELATED SECTIONS**

- A. Section 02223 - Backfilling
- B. Section 02231 - Aggregate Base Course
- C. Section 13201 - Underground Storage Tanks
- D. Section 13202 - Aboveground Storage Tanks

#### **1.03 REFERENCES**

- A. American Concrete Institute Publication:
  - 1. ACI 302 -- Guide for Concrete Floor and Slab Construction.
  - 2. ACI 306 -- Cold Weather Concreting.
- B. American Society for Testing and Materials Publications:
  - 1. ASTM C 33 -- Concrete Aggregates
  - 2. ASTM C 150 -- Portland Cement.
  - 3. ASTM C 260 -- Air-Entraining Admixtures for Concrete.
  - 4. ASTM C 94 -- Ready-Mixed Concrete.
  - 5. ASTM C 685 -- Concrete Made by Volumetric Batching and Continuous Mixing.

#### **1.04 QUALITY ASSURANCE**

- A. Obtain all concrete from the same source.

#### **1.05 WEATHER LIMITATIONS**

- A. No concrete shall be placed when the air temperature is less than 40 degrees F or approaching 40 degrees F without following the provisions of ACI 306..

## 1.06 SUBMITTALS

### A. Material Submittals:

1. Concrete mix design.
2. Test results showing that the proposed concrete mix design has produced concrete which conforms to this specification.
3. Manufacturer's instructions for the concrete curing compound.

### B. Project Control Submittals:

1. Batch ticket for each truckload of concrete delivered to the job site. The following information shall be on the ticket:
  - a. Name of concrete plant.
  - b. Ticket serial number.
  - c. Date of delivery.
  - d. Truck number.
  - e. Name of Contractor.
  - f. Name and location of project.
  - g. Concrete classification.
  - h. Amount of concrete delivered.
  - i. Time when the concrete is loaded onto the truck.

## PART 2 -- PRODUCTS

See drawings for specifications for concrete materials and concrete mixture.

### 2.01 CONCRETE CURING MATERIALS

- A. Conform to ACI 302.

### 2.02 CONCRETE FORMING MATERIAL

- A. Conform to ACI 302.

### 2.03 REINFORCING STEEL

- A. Conform to ACI 302.

## PART 3 -- EXECUTION

### 3.01 INSPECTION

- A. Ensure that the base material is not frozen and is free of debris, standing water, snow and ice.
- B. Ensure that the base material is compacted and at the proper grade.

### 3.02 PREPARATION

- A. Moisten the base material, if dry, to minimize water absorption from the fresh concrete.

### 3.03 FORMWORK

- A. Provide formwork in accordance with ACI 302, where the excavation edge cannot be used for form for the concrete.
- B. See Section 02680, Fuel Distribution for specifications for the metal island formwork.

### 3.04 REINFORCING STEEL PLACEMENT

- A. Place the reinforcing steel as shown on the drawings, and in accordance with ACI 302.

### 3.05 CONCRETE PLACEMENT

- A. Place the concrete in accordance with ACI 302. Ensure that all joint filler material remains in place during placement.
- B. Install contraction joints as described in ACI 302.

### 3.06 CONCRETE FINISHING

- A. Provide a floated finish.

### 3.07 CONCRETE CURING

- A. Cure the concrete in accordance with ACI 302.

### 3.08 PROTECTION

- A. Protect the concrete from damage and defacement during the curing period.

END OF SECTION