

**PART 1: GENERAL**

1.01 Scope of Standard

- A. The scope of this standard includes recommendations for the specification of cast in-place concrete.

1.02 Reference Standards

- A. The current editions of the applicable American Concrete Institute (ACI) publications, to the extent applicable in each reference.
- B. The current editions of the applicable American Society for Testing and Materials (ASTM) specifications, to the extent applicable in each reference.
- C. Concrete Reinforcing Steel Institute (CRSI) Manual of Standard Practices.

1.03 Environmental Controls

- A. Rinsing out of the transit mix trucks, washing or wetting of concrete, site cleanup, or other activity related to water at the site shall be in strict conformance with all EPA requirements for the prevention of water runoff to ~~water~~ sewers or creeks.

**PART 2: PRODUCTS**

2.01 Materials

- A. All concrete shall be normal weight concrete weighing not more than 145 pcf, unless otherwise required.

B. Cement

- 1. Cement shall conform to one of following:

<b>Type/ASTM No.</b>	<b>Description</b>
IA/C150	Standard portland cement.
IIA/C150	Provides moderate sulfate resistar or moderate heat of hydration.
IIIA/C150	Produces high early strength.

- 2. Only one type and brand of each type of cement will be permitted in any one structure.

C. Flyash

1. Conform to ASTM C618, Class F. Class F flyash is generally the best class of flyash to use. However, flyash varies from area to area and from year to year so the source and quality should always be checked carefully.
2. Flyash shall be produced from a single known and consistent source.
3. The amount of flyash used shall be no greater than 20 percent by volume of specified cement volume (cement is specified by weight, which can be converted to an equivalent volume).
4. Flyash shall not be used in architecturally exposed concrete.

**D. Aggregates**

1. Aggregates shall conform to ASTM C33.
2. Use coarse aggregate from only one source and fine aggregate from only one source for exposed concrete in a single structure.

**E. Mixing Water shall be potable.**

**F. Admixtures**

1. The use of a super-plasticizer is recommended, especially where waterproofing is required since it helps to produce a denser, more water-resistant concrete.

**G. Chlorides are not permitted in any form.**

**H. Reinforcing Steel**

1. Conform to ASTM A615, Grade 60 (#3 bars shall be Grade 40).
2. Welded wire fabric shall not be used without written permission from SHSU Project Manager.

**I. Waterstops**

1. The drawings and/or specifications should carefully address proper placement of flexible waterstops.
2. Waterstops shall be installed as per manufacturer's recommendations.
3. Where

**SAM HOUSTON STATE UNIVERSITY**

**DIVISION 03 CONCRETE**

**SECTION 03300 – CAST-IN-PLACE CONCRETE**

**DESIGN AND CONSTRUCTION STANDARDS**



