

Technical Specifications for concrete for sidewalk improvement program

1. References.

A. Building Codes:

BOCA National Building Codes, SBCCI Standard Building Code, ICBO, UBC.

B. American Concrete Institute (ACI):

ACI 211, Standard Practices for Selecting Proportions for Normal, Heavyweight, and Mass Concrete

ACI 318, Building Code Requirements for Reinforced Concrete

*optional*

ACI 544, State of the Art Report of Fiber Reinforced Concrete

*optional*

ACI 544.2R, Measurement of Properties of Fiber Reinforced Concrete

C. American Society of Testing and Materials (ASTM):

ASTM C-1116, Standard Specification for Fiber Reinforced Concrete

ASTM C-1018, Standard Test Method for Flexural Toughness and First-Crack Strength of Fiber-Reinforced Concrete

ASTM C-94, Standard Specifications for Ready-Mix Concrete

2. Products.

A. CONCRETE:

The Concrete mixture shall be a minimum of 6 sack mix, meeting Class B requirements per Missouri State Highway Department standard specifications.

B. MICRO-FIBROUS CONCRETE REINFORCEMENT:

*optional*

Use only 100 percent virgin polypropylene, fibrillated fibers containing no reprocessed olefin materials and specifically manufactured to an optimum gradation for use as concrete secondary reinforcement. Fibers shall be 3/4" multifilament polypropylene fibers. One pound shall contain no less than 50 million individual fibers (W.R. Grace & Co.-Conn., Cambridge, MA 02140). Micro-fibers shall be added to the concrete during the batch mixing process at 1 pound per cubic yard, and mixed as per manufacturer's instructions.