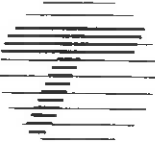
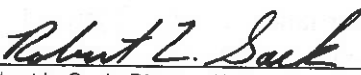


To: SUPERSEDED BY <i>EB02-024</i> <i>EFFECTIVE 7/11/02</i>		New York State Department of Transportation ENGINEERING INSTRUCTION	EI 02-002
Title: REVISIONS TO THE STANDARD SPECIFICATIONS (SECTIONS 701-01 AND 701-03)			
Distribution: ☐ Manufacturers (18) ☐ Surveyors (33) ☒ Main Office (30) ☒ Consultants (34) ☐ Local Govt. (31) ☐ Contractors (39) ☒ Regions/Agencies (32) ☐ ()		Approved:  Robert L. Sack, Director (Acting), Technical Services Division <i>1/4/02</i> Date	

ADMINISTRATIVE INFORMATION. This Engineering Instruction (EI) is effective with projects submitted for the letting of May 9, 2002. The materials transmitted herewith will be included in the 2002 Standard Specifications to become effective July 11, 2002. This EI does not supersede any previous issuances.

PURPOSE. This EI issues revisions to references in §701-01 (Portland Cement), of the 1995 Standard Specifications, and §701-03 (Blended Portland Cement) of Addendum #2 - adopted November 4, 1999.

TECHNICAL INFORMATION. All references to ASTM C 150 and ASTM C 595 will be removed from the 1995 Standard Specifications and Addendum No. 2. These references will be replaced with references to AASHTO M85, and AASHTO M240 respectively. AASHTO M85 limits the amounts of processing additions in cement manufacturing to 1% by weight of cement clinker. Certain classes of concrete, such as Class HP and DP, which rely on a specific blend of pozzolans in their cementitious composition, may be adversely affected by excessive additions. ASTM C-150 allows processing additions up to a pre-qualified percentage in accordance with the requirements of ASTM C 465. Some portland cements, manufactured under these limits, could contain more than 10 % Ground Granulated Blast Furnace Slag (GGBFS). The Materials Bureau, in conjunction with AASHTO, has determined that limiting the allowable processing additions to 1% by weight of clinker will maintain better control of concrete mixtures on Department projects.

IMPLEMENTATION. No special provisions are necessary for the immediate implementation of this EI. If the revisions to the Standard Specifications transmitted herewith are incorporated into ongoing construction projects, a copy of this EI shall be part of the project records, in accordance with the Department's Contract Administration Manual (CAM) Section 104-04, I.4. Implementation of this EI should not impact the cost of any projects. Changes to the Standard Specifications will be inserted into the contract proposals by the Design Quality Assurance Bureau.

BACKGROUND. Processing additions used during the manufacture of portland cement enhance the grinding process such that the process becomes cleaner, more efficient, and more cost effective. The cement may also be improved with regards to flowability and resistance to pack set during handling and storage. These are desirable characteristics, and the limited use of processing additions is encouraged. However, excessive use of grinding aids, such as GGBFS, may change the composition of concrete mixtures by disrupting the proportionate quantities of pozzolans in the cementitious portion of the mixture. Subsequently, the control of the mix design, admixtures, and the concrete's durability can be substantially affected.

REFERENCES. AASHTO M85-01: *Standard Specification for Portland Cement*. ASTM C150-99a: *Standard Specification for Portland Cement*. ASTM C465-99: *Standard Specification for Processing Additions for use in the Manufacture of Hydraulic Cement*. NYSDOT 1995 Standard Specifications (Addendum No. 2) §701-03: *Blended Portland Cement* and § 501-2.01: *Portland Cement Concrete , Materials* (updated by EI 00-019).

CONTACT. The Field Engineering 1 office of the Materials Bureau at (518) 457-5956.

Make the following changes to the Standard Specifications of January 2, 1995:

Page 7-1

Under **§701-01 - PORTLAND CEMENT - GENERAL:**

lines 13-19: *delete* the paragraph in its entirety and *replace* with the following:

- “GENERAL.** Portland cement, Types 1, 2, 3 and 5 shall conform to the chemical and physical requirements of those respective types as contained in AASHTO M-85 with the following:
- Type 6 cement shall meet the requirements for Type 1 cement except that the color shall be white.
 - Any cement with an alkali content in excess of 0.70% is restricted for use as per the requirements of §501.
 - The Department reserves the right to impose the “Optional Chemical and Physical Requirements” of AASHTO M-85 when, in the Department’s opinion, a cement contains undesirable constituents.
 - The temperature of the cement, measured immediately prior to entering the mixing unit at a batching facility, shall not exceed 76°C.”

line 22: *delete* “ASTM C150 ” and *replace* with “AASHTO M 85”.

Page 7-2

lines 9 and 10: *delete* “ASTM C150” and *replace* with “AASHTO M 85”.

Make the following changes to the Addendum No. 2 (Adopted November 4, 1999):

Page VII-1

line 9: *delete* “ASTM C595M” and *replace* with “AASHTO M 240”.

Page VII-2

lines 1 and 2: *delete* “ASTM C595M” and *replace* with “AASHTO M 240”.