

SUPERSEDED BY EB 15-031 EFFECTIVE 9/28/15		New York State Department of Transportation ENGINEERING INSTRUCTION	EI 11-012
Title: REVISIONS TO STANDARD SPECIFICATIONS 555 - STRUCTURAL CONCRETE & 582 - REMOVAL AND REPLACEMENT OF STRUCTURAL CONCRETE			
Target Audience : ☒ Manufacturers (18) ☒ Local Govt.(31) ☒ Agencies (32) ☐ Surveyors (33) ☒ Consultants (34) ☒ Contractors (39) ☐ _____ ()		Approved:  Anthony Torre, P.E. Acting Deputy Chief Engineer, Research 07-25-2011 Date	

ADMINISTRATIVE INFORMATION:

- **Effective Date:** This Engineering Instruction (EI) is effective beginning with projects submitted for the letting of 01/12/12.
- **Superseded Issuances:** None.
- **Disposition of Issued Materials:** The revisions issued with this EI will be incorporated into a future update of the Standard Specifications.

PURPOSE: This EI revises §555 – STRUCTURAL CONCRETE and §582 - REMOVAL AND REPLACEMENT OF STRUCTURAL CONCRETE of the Standard Specifications.

TECHNICAL INFORMATION:

- **Cost Impact:** Savings will be realized by adopting the proposed changes as a result of: (1) Selecting the most economical material alternative for pedestal rehabilitation as the contractor executes the work. (2) Using smaller pumps as a result of allowing the use of mixtures with smaller aggregates (CA1 gradation). (3) Additionally, the clarity incorporated into the revised specification should reduce any misinterpretation for bidding purposes.
- **Changes Being Affected By This Issuance:** This issuance allows Class D or Class DP concrete as an alternative for pedestal repairs where depths of placement are greater than 1½ inches (37.5 mm) but do not exceed 12 inches (300 mm). Class A or Class HP concrete should be specified for pedestals greater than 12 inches (300 mm) in height.
- **Revised Specifications:** §555 and §582.

IMPLEMENTATION: The Design Quality Assurance Bureau will insert the revised specifications into contract proposals beginning with projects submitted for the letting of January 12, 2012.

TRANSMITTED MATERIALS: Attached are revisions for both the Metric and English versions of §555 - STRUCTURAL CONCRETE and §582 REMOVAL AND REPLACEMENT OF STRUCTURAL CONCRETE of the Standard Specifications.

BACKGROUND: Pedestal rehabilitation or replacement is difficult when progressed under existing superstructures because of limited access. Furthermore, the safety of the operation is compromised when larger equipment is specified for concrete placement. In order to enhance operational safety and final product quality, it is best to allow a concrete with a smaller aggregate and place it by pumping with a small diameter hose. The Department has historically allowed the use of Class D or DP concrete for pedestals on a case by case basis and this revision only streamlines the process within the standard specifications, thus eliminating the need for any project specific requests.

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CONTACT: For any questions on this EI please contact Don Streeter at (dstreeter@dot.state.ny.us or 518-457-4593) or Michael Mathioudakis at (mmathioudakis@dot.state.ny.us or 518-457-9800) of the Materials Bureau.

Make the following changes to the Standard Specifications dated May 1, 2008:

Add the following text after the first sentence of **Section 555-2.02 Concrete for Structures**:

“Mixtures using a CA2 gradation shall be used when the minimum placement dimension is 5 inches or greater, except for pedestal repairs, where Class D or DP concrete may be used when placement dimensions are greater than 1½ inches but do not exceed 12 inches.”

Add the following sentence after the first sentence of the second paragraph of **Section 555-3.04B. Conveyance**:

“Concrete pumps with smaller hose diameters may be used for small placements, where mixtures using a CA1 gradation (smaller aggregates) are allowed, and where access is limited.”

Delete the content of **Section 582--3.01 A. Horizontal or Essentially Horizontal Locations** in its entirety and **replace** it with the following:

“Class A, Class D or Class DP concrete shall be used. Class A concrete shall be placed only at locations where removal depths average greater than 5 inches. Class D concrete shall be placed only at locations where removal depths average between 1½ and 5 inches. Class D or DP may be used for pedestal repairs when access is limited and where placement dimensions are greater than 1½ inches but do not exceed 12 inches. Average depth shall be determined by a measurement procedure acceptable to the Engineer”

Delete the content of **Section 582-3.01 C. Overhead** in its entirety and **replace** it with the following:

“Class A, Class D or approved patching material shall be used when formwork is provided. Concrete classes shall be restricted to the depth limitations noted for horizontal locations. Approved patching material may be used without formwork provided lift thicknesses do not exceed 1 inch. Anchoring devices shall be used when patching material is used for repair depths of 1½ inches or greater.”

Make the following changes to the Standard Specifications dated May 4, 2006:

Add the following text after the first sentence of Section 555-2.02 Concrete for Structures:

"Mixtures using a CA2 gradation shall be used when the minimum placement dimension is 125 mm or greater, except for pedestal repairs, where Class D or DP concrete may be used when placement dimensions are greater than 37.5 mm but do not exceed 300 mm".

Add the following sentence after the first sentence of the second paragraph of Section 555-3.04B. Conveyance:

"Concrete pumps with smaller hose diameters may be used for small placements, where mixtures using a CA1 gradation (smaller aggregates) are allowed, and where access is limited."

Delete the content of Section 582--3.01 A. Horizontal or Essentially Horizontal Locations in its entirety and replace it with the following:

"Class A, Class D or Class DP concrete shall be used. Class A concrete shall be placed only at locations where removal depths average greater than 125mm. Class D concrete shall be placed only at locations where removal depths average between 37.5 mm and 125 mm. Class D or DP may be used for pedestal repairs when access is limited and where placement dimensions are greater than 37.5 mm but do not exceed 300 mm. Average depth shall be determined by a measurement procedure acceptable to the Engineer"

Delete the content of Section 582-3.01 C. Overhead in its entirety and replace it with the following:

"Class A, Class D or approved patching material shall be used when formwork is provided. Concrete classes shall be restricted to the depth limitations noted for horizontal locations. Approved patching material may be used without formwork provided lift thicknesses do not exceed 25 mm. Anchoring devices shall be used when patching material is used for repair depths of 37.5 mm or greater."