

**STANDARD SPECIFICATIONS FOR ROADS,
BRIDGES, FACILITIES AND INCIDENTAL CONSTRUCTION
FORM 817**

SUMMARY OF CHANGES

The new Form 817 is in English units only and replaces the Form 816 and Supplements through January 2016. Some of the most significant changes are summarized below. Other changes, too numerous to mention, include but are not limited to replacement of outdated references to recognized industry standards (such as ASTM and AASHTO requirements) and the deletion of obsolete sections. It is the user's responsibility to read and become familiar with the content of the Standard Specifications, Form 817.

- **Section 1.01 - Definitions of Terms and Permissible Abbreviations:**
 1. Updated the list of permissible abbreviations primarily related to facilities construction.
 2. Additions, deletions and revisions to definitions and abbreviations.
- **Section 1.02 – Proposal Requirements and Conditions:** Revision to **1.02.01 Contract Bidding and Award** to direct that bids be submitted electronically.
- **Section 1.03 – Award and Execution of Contract:** Complete revision to **1.03.07 Insurance** to eliminate outdated coverages, require limits of insurance coverage proportionate to contract amount and address issues with facilities projects and builders risk insurance. Also included deleted requirement that subcontractors carry Railroad Protective Liability Insurance since the Prime Contractor's coverage should suffice.
- **Section 1.05 – Control of the Work:**
 1. **1.05.17 Welding** was added to clearly identify basic welding requirements.
 2. Introduced requirements for construction schedules submitted by the Contractor.
 3. Revision to better align with Connecticut and United States Department of Labor requirements.
 4. Correction to citation of State Statutes in **1.05.15 Markings for Underground Facilities** including replacement of "Department of Public Utility Control (DPUC)" with "Public Utility Regulatory Agency (PURA)."
 5. Addition of Voluntary Partnering in **1.05.05 Cooperation by Contractor**, revising and incorporating the Owned Special Provision. Also: **1.05.02 – Plans, Working Drawings, Shop Drawings, Product Data, Submittal Preparation and Processing, and Designer's Action** updates include change to article title and change from submission of mylar drawings to electronic copy.
- **Section 1.06 - Control of Materials:** Revisions to **1.06.02 Samples and Test** and **1.06.07 Certified Test Reports and Materials Certificates** to correct conflicting language regarding conditional incorporation of materials into the Project prior to approval of Materials Certificates and Certified Test Reports.
- **Section 1.07 – Legal Relations and Responsibilities:**
 1. Addition to and renaming of **1.07.07 Safety and Public Convenience** to direct that Contractors submit and maintain a company Safety Plan.
 2. **1.07.05 Load Restrictions** was updated to outline restrictions on Contractor vehicles (size and weight) and storage of construction materials/equipment on structures. This information was previously used as a Notice to Contractor. **1.07.18 Use of State Property** now includes information about gore areas.
 3. Form 817 includes a "clear zone" table in **1.07.07 Safety and Public Convenience** derived from the Department's Highway Design Manual.
- **Section 1.08 – Prosecution and Progress:**
 1. Incorporates "Substantial Completion" language in various articles to address when

contract time stops.

2. Changes to various articles regarding contract time, including specifying the Commissioner as the authority to accept the work and certify that the non-administrative Project work is satisfactorily completed.
 3. Various articles revised to eliminate retainage on payments to subcontractors by the Contractor.
 4. Revision to **1.08.07 Determination of Contract Time** to remove the sentence that project schedules are available at Department Headquarters.
- **Section 1.09—Measurement and Payment:**
 1. Replaced the table for the Contractor’s administrative expenses with a fixed percentage in **1.09.04 Extra and Cost Plus Work**.
 2. Changes due to elimination of retainage on payments made to the Contractor by the Department.
 3. Revisions to **1.09.02 Value Engineering Change Proposal (VECP)** lowering the estimated cost savings minimum at which the Department will consider Contractor proposals to \$100,000 and allowing time saving proposals to be considered as VECPs.
 - **Section 1.10 - Environmental Compliance:**
 1. Added **1.10.08 Vehicle Emissions** to address vehicle emissions standards for construction equipment.
 2. Complete revision of the Section, including update of the “Required Best Management Practices.”
 - **Section 1.11 – Claims:**

New section added to the Standard Specifications to address Contactor construction claims.

- **Section 1.20 - General Clauses for Facilities Construction:**
 1. Incorporated the new CSI specifications format and language. The new State building and fire codes were also included.
 2. Revisions in the following articles:
 - a. **1.20-1.02-13 Knowledge of Applicable Laws:** Several Code references updated
 - b. **1.20-1.03-1 Consideration of Bids:** Schedule of values simplified and line items added to Schedule of Values for Mobilization, General Conditions, Insurance/Bonding
 - c. **1.20-1.05.08 Schedules and Reports:** Created from 1.20-1.05.25, including daily construction report requirements modified to ensure all workers sign-in
 - d. **1.20-1.06.08 Warranties:** Deleted requirement for subcontractors to countersign warranties
 - e. **1.20-1.09.06 Partial Payments:** Contractor payment forms modified
 3. Revised articles include **1.20-1.03.01 Consideration of Bids** and **1.20-9.75.04 Mobilization and Project Closeout** to revise the Schedule of Values and Mobilization item related to elimination of retainage.
 4. Entire Section updated in preparation for inclusion in Form 817 as stand-alone Division I section. Note that Section 1.20 will have a colored background in the pdf version and be printed on a different color paper in the Form 817 book.
- **Section 2.05 – Trench Excavation:** When working outside the limits of roadway and structure excavation, the removal of stormwater pipes was handled inconsistently by designers. This revision specifically added the removal of reinforced concrete pipe to be paid as “Rock-in-Trench” when it meets the 1/2 c.y. or more criteria. Also, the removal of metal or plastic pipes will not be paid for separately; instead, the cost shall be included in the trench excavation item(s).

- **Section 2.11 – Anti-Tracking Pad:** New Section added incorporating existing OEP special provision used on many Department projects.
- **Section 2.12 – Subbase:** Eliminated requirement to use only Grading B since **M.02.02 Subbase** allows Grading A or B depending on the parent material being used.
- **Section 2.16 – Pervious Structure Backfill and**
- **Section 7.25 – Bagged Stone (deleted):** Bagged stone included in **2.16**.
- **Section 2.18 – Sedimentation Control Bales (deleted) and**
- **Section 2.19 – Sedimentation Control System:** Sedimentation Control Bales information merged into **2.19**.
- **Section 3.04 – Processed Aggregate Base:** Changes the unit of measure from weight to volume and makes other miscellaneous changes.
- **Section 4.01 – Concrete for Pavement:** Revisions based on July 2014 Supplemental Specifications for **6.01 Concrete for Structures and M.03 Portland Cement Concrete**, and to update air entrainment requirement and incorporate temperature limitations.
- **Section 4.06 – Bituminous Concrete and**
- **Section M.04 – Bituminous Concrete Materials:** Owned Special Provisions dated January 28, 2015 were incorporated. A committee that meets regularly plans to update these Standard Specifications via Supplemental Specifications, probably annually.
- **Section 5.04 – Railroad Protection:** Owned Special Provision dated October 9, 2002 incorporated changing the unit of measure from “hr” to “est.”
- **Section 5.08 – Shear Connectors:** Changed the unit of measure from “l.s.” to “ea.” and added information on stacked studs.
- **Section 6.01 – Concrete for Structures and**
- **M.03 – Portland Cement Concrete:** Both Sections were entirely rewritten to reflect current industry practice.
- **Section 6.03 – Structural Steel and**
- **Section M.06 – Metals:**
 1. The Standard Specifications for Structural Steel and **M.06.02 Structural Steel and Other Structural Materials** were completely rewritten by a working group from several offices.
 2. **6.03** was revised to delete paragraphs referring to “Materials for Structural Steel” which is no longer used.
- **Section 6.12 - Concrete Cylinder Curing Box:** Updated material requirements and added language relative to the Contractor’s responsibilities.
 - **Section 6.51 – Culverts:** Replaced the phrase “gravel fill” with “granular fill.”
- **Section 7.01 Drilled Shafts and**
- **Section 7.06 Micropiles:** Incorporated Owned Special Provisions, which reflect current industry practice.
- **Section 7.02 – Piles:** The entire Section, which had been used as an Owned Special Provision for 4 years, was replaced. The comprehensive update adds specifications for Dynamic Pile Driving Analysis (PDA) Tests and pre-augering of piles.
- **Section 7.16 – Temporary Earth Retaining System and**
- **Section 7.17 - Earth Retaining System Left in Place:** Owned Special Provisions dated May 21, 2008 were incorporated.
- **Section 8.11 Concrete Curbing and**
- **Section 8.13 Stone Curbing:** Updates made to match the Standard Drawings and to make the two Sections consistent.

- **Section 9.10 - Metal Beam Rail:** Includes radius rail other than Curved Guide Rail Treatment in the cost of metal beam rail of the type designated.
- **Section 9.10 - Metal Beam Rail:** Metal beam rail delineator material requirements were updated due to changes to **M.18 Signing**.
- **Section 9.21 – Concrete Sidewalks and Ramps:** Adoption of the Owned Special Provision, including specifying Class “F” Concrete and changing the name to reflect that ramps are covered in this Section.
- **Section 9.22 – Bituminous Concrete Sidewalk and Bituminous Concrete Driveway:** Added language that the cost of saw cutting is included in the general cost of the pay item. Related to this change, **2.02 Roadway Excavation, Formation of Embankment and Disposal of Surplus Material** was modified to eliminate the reference to bituminous driveways being considered bituminous concrete pavement.
- **Section 9.49 - Furnishing, Planting, and Mulching Trees, Shrubs, Vines and Ground Cover Plants:**
 1. Significant revisions were made to the specification requirements for pits, backfill, setting plants, and watering. The establishment period for plantings was also revised to allow the Engineer flexibility to establish the start or end of the one-year establishment period.
 2. Planting season dates were extended and instructions for setting plants was updated.
- **Section 9.50 – Turf Establishment:** Seeding season language changed to “optimal calendar dates for seeding” and the dates have been extended.
- **Section 9.70 – Trafficperson:** Owned Special Provision dated June 19, 2015 was incorporated.
- **Section 9.75 – Mobilization and Project Closeout:** Revised the Method of Measurement to make payment dependent on submittal of construction schedules required by **1.05.08 Schedules and Reports**. Also, allows a percentage of the lump sum to be withheld, related to elimination of retainage.
- **Section 9.80 – Construction Staking:** Adoption of and revisions to the Owned Special Provision.
- **Section 10.00 – General Clauses for Highway Illumination and Traffic Signal Projects:** Added of **10.00.14 Maintenance of Illumination During Construction** which was used as a Special Provision for over 10 years.
- **Section 10.01- Trenching and Backfilling:** Revisions adopted that were used in an Owned Special Provision for 2 years.
- **Section 10.10 – Concrete Handhole:** Excludes payment for grounding wire in the cost of Concrete Handhole and changes the pay item from “Cast Iron Handhole” to “Cast Iron Handhole Cover.”
- **Section 12.10 – Epoxy Resin Pavement Markings:** The Special Provision Owned by the Traffic Unit was incorporated.
- **Section M.06 – Metals:** The epoxy coating was previously specified indirectly through the specification for the field repair of the coating. The epoxy coating is now clearly specified in **M.06.01** so that persons unfamiliar with the specifications can find the information promptly.
- **Section M.08 – Drainage:** The entire Section has been rewritten, including a complete reorganization and updating of reference specifications.
- **Section M.11: Masonry Facing, Cement and Dry Rubble Masonry Brick Mortar:** **M.11.04 Mortar** was rewritten to allow for use of, and provide requirements for, preblended or prepackaged mortar mix. The revised article still allows mortar to be mixed on the Site and includes the requirements for it.

- **Section M.13 – Roadside Development:**

1. **M.13.04 Seed Mixtures** includes the revised seed mixture chart, to eliminate an invasive species plant, Birdsfoot Trefoil.
2. **M.13.01 Topsoil** changes include: the organic content range for topsoil was changed from 6-20% to 5-20%; additional textural classes were added ; sand content was limited to 80% maximum; the planting soil mix must now contain compost.

- **Section M.16 – Traffic Control Signals:**

1. Changed the specified color for Pedestrian Push Buttons from yellow to dark green.
2. Changed the paint color for the third coat on traffic signals.
3. Revisions made to include the requirements for High Strength Span Wire.

Traffic Items: Reflective sheeting types were revised based on the proposed update of the Qualified Products List. The following Sections were revised:

- a. 9.77 - TRAFFIC CONE
- b. 9.78 - TRAFFIC DRUM
- c. 9.79 - CONSTRUCTION BARRICADES
- d. 9.81 - 42 INCH (1 METER) TRAFFIC CONE
- e. 12.05 - DELINEATORS
- f. 12.07 - SIGN FACE – EXTRUDED ALUMINUM
- g. 12.08 - SIGN FACE – SHEET ALUMINUM
- h. 12.20 - CONSTRUCTION SIGNS
- i. 18.00 - GENERAL CLAUSES – IMPACT ATTENUATION SYSTEMS
- j. 18.06 - TYPE D PORTABLE IMPACT ATTENUATION SYSTEM
- k. M.18 - SIGNING

Traffic Items: Various Sections have been corrected to change “reflective” to “retroreflective,” to meet MUTCD requirements. The following Sections were revised:

- a. 8.22 - TEMPORARY PRECAST CONCRETE BARRIER CURB
- b. 9.18 - THREE-CABLE GUIDE RAILING (I-BEAM POSTS) AND ANCHORAGES
- c. 9.30 - OBJECT MARKER
- d. 9.79 - CONSTRUCTION BARRICADES
- e. 12.05 - DELINEATORS
- f. 12.07 - SIGN FACE – EXTRUDED ALUMINUM
- g. 12.08 - SIGN FACE – SHEET ALUMINUM
- h. 12.20 - CONSTRUCTION SIGNS
- i. 18.06 - TYPE D PORTABLE IMPACT ATTENUATION SYSTEM
- j. M.18 - SIGNING

The following Sections were deleted either from lack of use of the item, or use of project-specific special provisions:

- a. 3.02 - ROLLED GRANULAR BASE
- b. 3.03 - CONCRETE BASE
- c. 4.03 - COLD RECLAIMED ASPHALT PAVEMENT
- d. 4.14 - BITUMINOUS SURFACE TREATMENT
- e. 7.25 - BAGGED STONE
- f. 9.07 - BARWAYS
- g. 9.41 - SERVICE BRIDGES
- h. 9.45 - WILDFLOWER ESTABLISHMENT
- i. 9.73 - SAFETY PATROL SERVICE
- j. 18.04 - TYPE C AND NC – IMPACT ATTENUATION SYSTEMS