

October 2022 ERRATA for *Standard Specifications for Transportation Materials and Methods of Sampling and Testing and Provisional Standards*, 42nd Edition (HM-42)

October 2022

Dear Customer:

AASHTO has issued an erratum, which includes technical changes, for the *Standard Specifications for Transportation Materials and Methods of Sampling and Testing and AASHTO Provisional Standards*, 42nd Edition (HM-42). Attached please find the full errata listing of changes and a set of replacement pages.

The current and previous corrections are detailed in a table just after this letter and are displayed on the affected pages as follows:

Gray Box in Page Header	Corrected Text Format
October 2022 Errata	<i>Italicized</i>
August 2022b Errata	<u>Underlined</u>
August 2022 Errata	Bold

Please feel free to download additional copies of this erratum from the AASHTO online Store at:

<https://downloads.transportation.org/HM-42-Errata.pdf>

AASHTO staff sincerely apologizes for any inconvenience.

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List of Errata for *Standard Specifications for Transportation Materials and Methods of Sampling and Testing and Provisional Standards*, 42nd Edition (HM-42)

Original Page	Section	Existing Text	Corrected Text
October 2022			
M 103M/ M 103	ASTM Designation	A27/A27M-17	A27/A27M-20
M 181	Section 15.1.1	<i>Adhesion Test</i> —Class A, extruded and bonded, must conform to the requirements of Section 15.2.1. Class B, bonded, must conform to the requirements of Section 15.2.2. Class A, extruded, is not subject to adhesion test.	<i>Adhesion Test</i> —Class A, extruded and bonded, must conform to the requirements of Section 15.1.1.1. Class B, bonded, must conform to the requirements of Section 15.1.1.2. Class A, extruded, is not subject to adhesion test.
	Section 15.1.2.1	The wire fails to withstand the mandrel bend test described in Section 15.4.	The wire fails to withstand the mandrel bend test described in Section 15.1.3.
R 51	Section 5.3.1	Filter sock netting materials are also available in biodegradable plastics for areas where removal and disposal are not planned.	Filter sock netting materials are also available in natural biodegradable materials (e.g., cotton, wood fiber) for areas where removal and disposal are not planned.
August 2022b			
All Parts, xv	List of Technical Changes, M 85	Revised to remove T 107 reference.	Revised to remove T 107 reference for harmonization with ASTM C150/C150M-22.
All Parts, xvii	List of Technical Changes, M 302	Revised as follows: [bulleted list]	Revised as follows for harmonization with ASTM C989/C989M-22: [bulleted list]
All Parts, xviii	List of Technical Changes, M 327	Revised to remove flexural strength requirement.	Revised to remove flexural strength requirement for harmonization with ASTM C465-22.
Part 1, cxlii	Table of Contents, Numerical	M 190-04 (2022)	M 190-22
		M 243-96 (2021)	M 243-22
Part 1, cxliii	Table of Contents, Numerical	M 246-15 (2019)	M 246-22
		M 278-15 (2019)	M 278-22
Part 1, cxliv	Table of Contents, Numerical	M 323-17 (2021)	M 323-22

List of Errata for *Standard Specifications for Transportation Materials and Methods of Sampling and Testing and Provisional Standards*, 42nd Edition (HM-42)

Original Page	Section	Existing Text	Corrected Text
Part 1, cxlvi	Table of Contents, Numerical	R 78-16 (2020)	R 78-22
Part 1, cxlviii	Table of Contents, Subject	M 323-17 (2021)	M 323-22
Part 1, cxlix	Table of Contents, Subject	R 78-16 (2020)	R 78-22
Part 1, cl	Table of Contents, Subject	M 190-04 (2022)	M 190-22
		M 243-96 (2021)	M 243-22
		M 246-15 (2019)	M 246-22
		M 278-15 (2019)	M 278-22
Part 2, cxlv	Table of Contents, Numerical	T 341-10 (2019)	T 341-22
Part 2, cl	Table of Contents, Subject	T 341-10 (2019)	T 341-22
Part 3, cxli and cxlv	Table of Contents	MP 42-20	MP 42-22
M 85-1 and M 85-15	ASTM Designation	ASTM C150/C150M-20	ASTM C150/C150M-22
M 86M/ M 86-1	Header	Change bar missing from AASHTO Designation and line after	Change bar added.
M 240M/ M 240-1	ASTM Designation	ASTM C595/C595M-20	ASTM C595/C595M-21 ¹
M 302-1	ASTM Designation	ASTM C989/C989M-18	ASTM C989/C989M-22
M 327-1	ASTM Designation	ASTM C465-19	ASTM C465-22
T 397-46	T 397, Appendix X6	Figure X6.4 did not render correctly.	Figure X6.4 has been replaced.

List of Errata for *Standard Specifications for Transportation Materials and Methods of Sampling and Testing and Provisional Standards*, 42nd Edition (HM-42)

Original Page	Section	Existing Text	Corrected Text
August 2022			
xxxix	List of Technical Changes	The Balloted Revisions column describes PP 114 as a “New provisional recommended practice.”	The Balloted Revisions column describes PP 114 as a “New provisional standard practice.”

¹ In addition, please note that the **41st Edition (HM-41)** List of Technical Changes listed the revisions but not harmonization information for M 240M/M 240. The bulleted list in that edition should be preceded by the following:

Revised as follows for harmonization with ASTM C595/C595M-21

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LIST OF TECHNICAL CHANGES—PART 1

The balloted technical changes listed below are also indicated in the specifications by a change bar in the left margin. Unballoted editorial changes do not receive the change bar; however, the subheader line below the designation number will indicate if the standard has been editorially revised.

Release: July 2022

Designation Number	Title	Technical Subcommittee Number	Balloted Revisions
M 6-13 (2022)	Fine Aggregate for Hydraulic Cement Concrete	1c	Reconfirmed for 2022 publication.
M 31M/M 31-22	Deformed and Plain Carbon and Low-Alloy Steel Bars for Concrete Reinforcement	4f	Revised as follows: - Updated for equivalency with ASTM A625/A615M-20. - Corrected editorial error in Table 1.
M 33M/M 33-22	Preformed Expansion Joint Filler for Concrete (Bituminous Type)	4e	Revised to update temperature-measuring devices.
M 43-05 (2022)	Sizes of Aggregate for Road and Bridge Construction	1c	Reconfirmed for 2022 publication.
M 54M/M 54-22	Welded Deformed Steel Bar Mats for Concrete Reinforcement	4f	Revised for equivalency with ASTM A184/A184M-19.
M 85-22	Portland Cement	3a	Revised to remove T 107 reference <u>for harmonization with ASTM C150/C150M-22.</u>
M 86M/M 86-22	Nonreinforced Concrete Sewer, Storm Drain, and Culvert Pipe	4a	Revised to update temperature-measuring devices.
M 102M/M 102-22	Steel Forgings, Carbon and Alloy, for General Industrial Use	4f	Revised for equivalency with ASTM A668/A668M-20a.
M 103M/M 103-19	Steel Castings, Carbon, for General Application	4f	Editorial revisions to Tables 1 and 2.
M 105-09 (2022)	Gray Iron Castings	4f	Reconfirmed for 2022 publication.
M 143-14 (2022)	Sodium Chloride	4c	Reconfirmed for 2022 publication.
M 144-14 (2022)	Calcium Chloride	4c	Reconfirmed for 2022 publication.
M 152M/M 152-22	Flow Table for Use in Tests of Hydraulic Cement	3a	Revised for equivalency with ASTM C230/C230M-21.
M 163M/M 163-22	Castings, Iron-Chromium, Iron-Chromium-Nickel, Corrosion Resistant, for General Application	4f	Revised for equivalency with ASTM A743/A743M-21.

Designation Number	Title	Technical Subcommittee Number	Balloted Revisions
M 170-22	Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe	4a	Revised to update temperature-measuring devices.
M 170M-22	Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe [Metric]	4a	Revised to update temperature-measuring devices.
M 190-22	Asphalt-Coated Corrugated Metal Culvert Pipe and Pipe-Arches	4b	Revised to update temperature-measuring devices.
M 195-22	Lightweight Aggregates for Structural Concrete	1c	Revised to update temperature-measuring devices.
M 199M/M 199-22	Precast Reinforced Concrete Manhole Sections	4a	Revised as follows: - Updated for equivalency with ASTM C478M-19a and C478-20a. - Updated temperature-measuring devices.
M 206M/M 206-22	Reinforced Concrete Arch Culvert, Storm Drain, and Sewer Pipe	4a	Revised to update temperature-measuring devices.
M 207M/M 207-22	Reinforced Concrete Elliptical Culvert, Storm Drain, and Sewer Pipe	4a	Revised to update temperature-measuring devices.
M 208-18 (2022)	Cationic Emulsified Asphalt	2a	Reconfirmed for 2022 publication.
M 213-22	Preformed Expansion Joint Fillers for Concrete Paving and Structural Construction (Nonextruding and Resilient Bituminous Types)	4e	Revised to update temperature-measuring devices.
M 216-22	Quicklime and Hydrated Lime for Soil Stabilization	3a	Revised to update temperature-measuring devices.
M 224-22	Use of Protective Sealers for Portland Cement Concrete	4c	Revised to update temperature-measuring devices.
M 235M/M 235-22	Epoxy Resin Adhesives	4c	Revised for equivalency with ASTM C881/C881M-20a.
M 243-22	Field-Applied Coating of Corrugated Metal Structural Plate for Pipe, Pipe-Arches, and Arches	4b	Revised to update temperature-measuring devices.
M 246-22	Steel Sheet, Metallic-Coated and Polymer-Precoated, for Corrugated Steel Pipe	4b	Revised to update temperature-measuring devices.
M 247-13 (2022)	Glass Beads Used in Pavement Markings	4c	Reconfirmed for 2022 publication.
M 251M/M 251-22	Plain and Laminated Elastomeric Bridge Bearings	4e	Revised as follows: - Revised to harmonize with relevant provisions in the AASHTO LRFD Bridge Design Specifications. - Updated temperature-measuring devices.

Designation Number	Title	Technical Subcommittee Number	Balloted Revisions
M 259-22	Precast Reinforced Concrete Box Sections for Culverts, Storm Drains, and Sewers Designed According to AASHTO LRFD	4a	Revised as follows: - Title change. - Incorporated LRFD changes from 2019. - Updated temperature-measuring devices.
M 261-22	Rib-Tread Standard Tire for Special-Purpose Pavement Frictional-Property Tests	5a	Revised to update temperature-measuring devices.
M 268-22	Retroreflective Sheeting for Flat and Vertical Traffic Control Applications	4d	Revised to update temperature-measuring devices.
M 269-96 (2022)	Turnbuckles and Shackles	4d	Reconfirmed for 2022 publication.
M 273-22	Precast Reinforced Concrete Box Sections for Culverts, Storm Drains, and Sewers with Less Than 2 ft of Cover Subjected to Highway Loadings	4a	Revised to update temperature-measuring devices.
M 278-22	Class PS46 Poly(Vinyl Chloride) (PVC) Pipe	4b	Revised to update temperature-measuring devices.
M 279-14 (2022)	Metallic-Coated, Steel Woven Wire Fence Fabric		Reconfirmed for 2022 publication.
M 280-22	Metallic-Coated (Carbon) Steel Barbed Wire	4d	Revised for equivalency with ASTM A121-19.
M 281-22	Steel Fence Posts and Assemblies, Hot-Wrought	4d	Revised for equivalency with ASTM A702-13(2018).
M 285M/M 285-22	Castings, Iron-Chromium-Nickel, Corrosion Resistant, for Severe Service	4f	Revised for equivalency with ASTM A744/A744M-21.
M 286-22	Smooth-Tread Standard Tire for Special-Purpose Pavement Frictional-Property Tests	5a	Revised to update temperature-measuring devices.
M 288-22	Geosynthetic Specification for Highway Applications	4g	Revised to update temperature-measuring devices.
M 292M/M 292-22	Carbon and Alloy Steel Nuts for Bolts for High-Pressure or High-Temperature Service, or Both	4f	Revised for equivalency with ASTM A194/A194M-20a.
M 300-22	Inorganic Zinc-Rich Primer	4c	Revised to update temperature-measuring devices.

AUGUST 2022b ERRATA

Designation Number	Title	Technical Subcommittee Number	Balloted Revisions
M 302-22	Slag Cement for Use in Concrete and Mortars	3a	Revised as follows <u>for harmonization with ASTM C989/C989M-22</u> : - Updated for equivalency with ASTM C989/C989M-18a. - Changed “slag” to “slag cement” in several places. - Rewrote Appendix X2.
M 307-22	Silica Fume Used in Cementitious Mixtures	3a	Revised as follows: - Updated for equivalency with ASTM C1240-20. - Updated temperature-measuring devices.
M 314-90 (2022)	Steel Anchor Bolts	4f	Reconfirmed for 2022 publication.
M 316-18 (2022)	Polymer-Modified Emulsified Asphalt	2a	Reconfirmed for 2022 publication.
M 320-22	Performance-Graded Asphalt Binder	2b	Revised as follows: - Minor language updates throughout. - Updated Tables 1 and 2. - New Note 4.
M 322M/M 322-22	Rail-Steel and Axle-Steel Deformed Bars for Concrete Reinforcement	4f	Revised for equivalency with ASTM A996/A996-16.
M 323-22	Superpave Volumetric Mix Design	2d	Revised extensively across multiple Sections.
M 326-18 (2022)	Polyethylene (PE) Liner Pipe, 300- to 1600-mm Diameter, Based on Controlled Outside Diameter	4b	Reconfirmed for 2022 publication.
M 327-22	Processing Additions for Use in the Manufacture of Hydraulic Cements	3a	Revised to remove flexural strength requirement <u>for harmonization with ASTM C465-22</u> .
M 328-14 (2022)	Inertial Profiler	5a	Reconfirmed for 2022 publication.
M 332-22	Performance-Graded Asphalt Binder Using Multiple Stress Creep Recovery (MSCR) Test	2b	Revised as follows: - Minor language updates regarding LTPPBind throughout. - Updated Tables 1 and 2. - New Section 4.2.5.
M 339M/M 339-22	Thermometers Used in the Testing of Construction Materials	5c	New standard specification.

Designation Number	Title	Technical Subcommittee Number	Balloted Revisions
M 340-22	Materials for Emulsified Asphalt Chip Seals	5b	Adopted standard practice, formerly MP 27.
M 341-22	Materials for Microsurfacing	5b	Adopted standard practice, formerly MP 28.
M 342-22	Materials for Slurry Seal	5b	Adopted standard practice, formerly MP 32.
M 343-22	Materials for Emulsified Asphalt Fog Seal	5b	Adopted standard practice, formerly MP 33.
M 344-22	Materials for Sand Seals	5b	Adopted standard practice, formerly MP 34.
M 345-22	Materials for Emulsified Asphalt Scrub Seal	5b	Adopted standard practice, formerly MP 43. Revised as follows: Updated temperature-measuring devices.
M 346-22	Materials for Ultrathin Bonded Wearing Course	5b	Adopted standard practice, formerly MP 44.
M 347-22	Materials for Full-Depth Reclamation Mixtures with Emulsified Asphalt	5b	Adopted standard practice, formerly MP 45.
M 348-22	Waterborne White and Yellow Traffic Paints	5b	Adopted standard practice, formerly MP 24. Revised as follows: Updated temperature-measuring devices.
M 349-22	Materials for Asphalt Tack Coat	2a	Adopted standard practice, formerly MP 36.
M 350-22	Reclaimed Asphalt Shingles for Use in Asphalt Mixtures	2d	Adopted standard practice, formerly MP 23.
R 9-05 (2022)	Acceptance Sampling Plans for Highway Construction	5c	Reconfirmed for 2022 publication.
R 10-22	Definition of Terms Related to Quality and Statistics as Used in Highway Construction	5c	Revised extensively throughout Section 4.
R 13-22	Conducting Geotechnical Subsurface Investigations	1b	Revised for equivalency with ASTM D420-18.
R 15-18 (2022)	Asphalt Additives and Modifiers	2b	Reconfirmed for 2022 publication.
R 18-18 (2022)	Establishing and Implementing a Quality Management System for Construction Materials Testing Laboratories	5c	Reconfirmed for 2022 publication.
R 23-99 (2022)	Chemical, Biological, and Physical Analysis of Water	5c	Reconfirmed for 2022 publication.

Designation Number	Title	Technical Subcommittee Number	Balloted Revisions
R 24-99 (2022)	Collection and Preservation of Water Samples	5c	Reconfirmed for 2022 publication.
R 25-22	Technician Training and Certification Programs	5c	Revised as follows: - Updated language in Section 7.2. - Added references for Appendixes.
R 26-01 (2022)	Certifying Suppliers of Performance-Graded Asphalt Binders	2b	Reconfirmed for 2022 publication.
R 28-22	Accelerated Aging of Asphalt Binder Using a Pressurized Aging Vessel (PAV)	2b	Revised to update temperature-measuring devices.
R 30-22	Mixture Conditioning of Hot Mix Asphalt (HMA)	2c	Revised as follows: - Updated procedure and information regarding short-term aging. - Updated temperature-measuring devices.
R 34-03 (2022)	Evaluating Deicing Chemicals	5c	Reconfirmed for 2022 publication.
R 35-22	Superpave Volumetric Design for Asphalt Mixtures	2d	Revised extensively across multiple Sections.
R 37-04 (2022)	Application of Ground Penetrating Radar (GPR) to Highways	5a	Reconfirmed for 2022 publication.
R 38-10 (2022)	Quality Assurance of Standard Manufactured Materials	5c	Reconfirmed for 2022 publication.
R 40-10 (2022)	Measuring Pavement Profile Using a Rod and Level	5a	Reconfirmed for 2022 publication.
R 44-07 (2022)	Independent Assurance (IA) Programs	5c	Reconfirmed for 2022 publication.
R 46-22	Designing Stone Matrix Asphalt (SMA)	2d	Revised to update temperature-measuring devices.
R 47-22	Reducing Samples of Asphalt Mixtures to Testing Size	2c	Revised to update temperature-measuring devices.
R 49-09 (2022)	Determination of Low-Temperature Performance Grade (PG) of Asphalt Binders	2b	Reconfirmed for 2022 publication.
R 50-09 (2022)	Geosynthetic Reinforcement of the Aggregate Base Course of Flexible Pavement Structures	4g	Reconfirmed for 2022 publication.
R 51-22	Compost for Erosion/Sediment Control (Filter Berms and Filter Socks)	4g	Revised as follows: - Updated Table 1. - Updated test methods.

Designation Number	Title	Technical Subcommittee Number	Balloted Revisions
R 52-22	Compost for Erosion/Sediment Control (Compost Blankets)	4g	Revised as follows: - Updated Table 1. - Updated test methods.
R 54-14 (2022)	Accepting Pavement Ride Quality When Measured Using Inertial Profiling Systems	5a	Reconfirmed for 2022 publication.
R 56-14 (2022)	Certification of Inertial Profiling Systems	5a	Reconfirmed for 2022 publication.
R 57-14 (2022)	Operating Inertial Profiling Systems	5a	Reconfirmed for 2022 publication.
R 58-22	Dry Preparation of Disturbed Soil and Soil–Aggregate Samples for Test	1a	Revised to update temperature-measuring devices.
R 59-22	Recovery of Asphalt Binder from Solution by Abson Method	2c	Revised to update temperature-measuring devices.
R 64-22	Sampling and Fabrication of 50-mm (2-in.) Cube Specimens Using Grout (Non-Shrink) or Mortar	3b	Revised to update temperature-measuring devices.
R 65-14 (2022)	Evaluating the Engineering and Environmental Suitability of Recycled Materials	5c	Reconfirmed for 2022 publication.
R 68-22	Preparation of Asphalt Mixtures by Means of the Marshall Apparatus	2d	Revised to update temperature-measuring devices.
R 70M/R 70-22	Use of Apparatus for the Determination of Length Change of Hardened Cement Paste, Mortar, and Concrete	3a	Revised to update temperature-measuring devices.
R 71-22	Sampling and Amount of Testing of Hydraulic Cement	3a	Revised for equivalency with ASTM C183/C183M-16.
R 72-22	Match Curing of Concrete Test Specimens	3c	Revised to update temperature-measuring devices.
R 74-22	Wet Preparation of Disturbed Soil Samples for Test	1a	Revised to update temperature-measuring devices.
R 78-22	Recovering Residue from Emulsified Asphalt Using Low-Temperature Evaporative Techniques	2a	Revised to update temperature-measuring devices.
R 79-22	Vacuum Drying Compacted Asphalt Specimens	2c	Revised to update temperature-measuring devices.
R 83-22	Preparation of Cylindrical Performance Test Specimens Using the Superpave Gyratory Compactor (SGC)	2d	Revised to update temperature-measuring devices.

Designation Number	Title	Technical Subcommittee Number	Balloted Revisions
R 85-18 (2022)	Preparation of Cylindrical Performance Test Specimens Using the Superpave Gyratory Compactor (SGC)	5a	Reconfirmed for 2022 publication.
R 86-18 (2022)	Collecting Images of Pavement Surfaces for Distress Detection	5a	Reconfirmed for 2022 publication.
R 87-18 (2022)	Determining Pavement Deformation Parameters and Cross Slope from Collected Transverse Profiles	5a	Reconfirmed for 2022 publication.
R 88-18 (2022)	Collecting the Transverse Pavement Profile	5a	Reconfirmed for 2022 publication.
R 89-18 (2022)	Accreditation Bodies Operating in the Fields of Construction Materials Testing and Inspection	5c	Reconfirmed for 2022 publication.
R 90-18 (2022)	Sampling Aggregate Products	1c	Reconfirmed for 2022 publication.
R 91-18 (2022)	Determining Aggregate Source Shape Values from Digital Image Analysis Shape Properties	1c	Reconfirmed for 2022 publication.
R 92-18 (2022)	Evaluating the Elastic Behavior of Asphalt Binders Using the Multiple Stress Creep Recovery (MSCR) Test	2b	Reconfirmed for 2022 publication.
R 95-22	Accelerated Aging of Hot-Poured Asphalt Crack Sealant Using a Vacuum Oven	4e	Revised to update temperature-measuring devices.
R 100-22	Making and Curing Concrete Test Specimens in the Field	3b	Revised to update temperature-measuring devices.
R 101-22	Developing Performance Engineered Concrete Pavement Mixtures	3c	Adopted standard practice, formerly PP 84.
R 102-22	Emulsified Asphalt Chip Seal Design	5b	Adopted standard practice, formerly PP 82.
R 103-22	Microsurfacing Design	5b	Adopted standard practice, formerly PP 83.
R 104-22	Slurry Seal Design	5b	Adopted standard practice, formerly PP 87.
R 105-22	Emulsified Asphalt Fog Seal Design	5b	Adopted standard practice, formerly PP 88.
R 106-22	Sand Seal Design	5b	Adopted standard practice, formerly PP 90.
R 107-22	Emulsified Asphalt Scrub Seal Design	5b	Adopted standard practice, formerly PP 91.
R 108-22	Ultrathin Bonded Wearing Course Design	5b	Adopted standard practice, formerly PP 100.

Designation Number	Title	Technical Subcommittee Number	Balloted Revisions
R 109-22	Emulsified Asphalt Content of Full-Depth Reclamation Mixture Design	5b	Adopted standard practice, formerly PP 101. Revised as follows: Updated temperature-measuring devices.
R 110-22	Continuous Thermal Profile of Asphalt Mixture Construction	5c	Adopted standard practice, formerly PP 80. Revised as follows: Extensively revised to reorganize standard.
R 111-22	Intelligent Compaction Technology for Embankment and Asphalt Pavement Applications	5c	Adopted standard practice, formerly PP 81. Revised as follows: Extensively revised to reorganize standard.
R 112-22	Asphalt Tack Coat Design	2a	Adopted standard practice, formerly PP 93.
R 113-22	Materials Selection and Mixture Design of Permeable Friction Courses (PFCs)	2d	Adopted standard practice, formerly PP 77. Revised as follows: Updated temperature-measuring devices.
R 114-22	Design Considerations When Using Reclaimed Asphalt Shingles (RAS) in Asphalt Mixtures	2d	Adopted standard practice, formerly PP 78.

LIST OF TECHNICAL CHANGES—PART 2

The balloted technical changes listed below are also indicated in the specifications by a change bar in the left. Unballoted editorial changes do not receive the change bar; however, the subheader line below the designation number will indicate if the standard has been editorially revised.

Release: July 2022

Designation Number	Title	Technical Subcommittee Number	Balloted Revisions
T 11-22	Materials Finer Than 75- μ m (No. 200) Sieve in Mineral Aggregates by Washing	1c	Revised to update temperature-measuring devices.
T 19M/T 19-22	Bulk Density ("Unit Weight") and Voids in Aggregate	1c	Revised to update temperature-measuring devices.
T 22M/T 22-22	Compressive Strength of Cylindrical Concrete Specimens	3c	Revised as follows: - Updated temperature-measuring devices. - Sections 6.1.1.1, 8.1, 8.3.1, 9.1.1, 12.1. - New terminology Section.
T 24M/T 24-22	Obtaining and Testing Drilled Cores and Sawed Beams of Concrete	3c	Revised as follows: - Updated temperature-measuring devices. - Additional information on measurements of cores.
T 27-22	Sieve Analysis of Fine and Coarse Aggregates	1c	Revised to update temperature-measuring devices.
T 44-22	Solubility of Bituminous Materials	2b	Revised to update temperature-measuring devices.
T 48-22	Flash Point of Asphalt Binder by Cleveland Open Cup	2b	Revised to update temperature-measuring devices.
T 49-22	Penetration of Bituminous Materials	2b	Revised to update temperature-measuring devices.
T 50-22	Float Test for Bituminous Materials	2a	Revised to update temperature-measuring devices.
T 51-22	Ductility of Asphalt Materials	2b	Revised to update temperature-measuring devices.
T 53-22	Softening Point of Bitumen (Ring-and-Ball Apparatus)	2b	Revised to update temperature-measuring devices.
T 59-22	Emulsified Asphalts	2a	Revised to update temperature-measuring devices.

Designation Number	Title	Technical Subcommittee Number	Balloted Revisions
T 71-22	Effect of Organic Impurities in Fine Aggregate on Strength of Mortar	1c	Revised to update temperature-measuring devices.
T 72-22	Saybolt Viscosity	2a	Revised as follows: - Updated temperature-measuring devices. - Updated apparatus. - Updated procedure, precision, and bias for emulsified asphalt.
T 78-22	Distillation of Cutback Asphalt Products	2a	Revised to update temperature-measuring devices.
T 79-22	Flash Point with Tag Open-Cup Apparatus for Use with Material Having a Flash Point Less Than 93°C (200°F)	2a	Revised to update temperature-measuring devices.
T 84-22	Specific Gravity and Absorption of Fine Aggregate	1c	Revised to update temperature-measuring devices.
T 85-22	Specific Gravity and Absorption of Coarse Aggregate	1c	Revised to update temperature-measuring devices.
T 88-22	Particle Size Analysis of Soils	1a	Revised as follows: - Updated temperature-measuring devices. - Added isopropyl alcohol to apparatus. - Added clarifications for hydrometer test.
T 89-22	Determining the Liquid Limit of Soils	1a	Revised to update temperature-measuring devices.
T 90-22	Determining the Plastic Limit and Plasticity Index of Soils	1a	Revised to update temperature-measuring devices.
T 96-22	Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine	1c	Revised to update temperature-measuring devices.
T 97-22	Flexural Strength of Concrete (Using Simple Beam with Third-Point Loading)	3c	Revised as follows: - Additional information on verifying the accuracy of testing machines. - New terminology Section.
T 99-22	Moisture–Density Relations of Soils Using a 2.5-kg (5.5-lb) Rammer and a 305-mm (12-in.) Drop	1b	Revised to update temperature-measuring devices.
T 100-22	Specific Gravity of Soils	1a	Revised to update temperature-measuring devices.
T 102-22	Spot Test of Asphaltic Materials	2b	Revised to update temperature-measuring devices.

Designation Number	Title	Technical Subcommittee Number	Balloted Revisions
T 103-22	Soundness of Aggregates by Freezing and Thawing	1c	Revised to update temperature-measuring devices.
T 104-22	Soundness of Aggregate by Use of Sodium Sulfate or Magnesium Sulfate	1c	Revised to update temperature-measuring devices.
T 105-22	Chemical Analysis of Hydraulic Cement	3a	Revised as follows: - Added and revised information on porcelain crucibles. - Updated temperature-measuring devices.
T 106M/T 106-22	Compressive Strength of Hydraulic Cement Mortar (Using 50-mm or 2-in. Cube Specimens)	3a	Revised to update temperature-measuring devices.
T 107M/T 107-22	Autoclave Expansion of Hydraulic Cement	3a	Revised as follows: - Updated temperature-measuring devices. - Updated for equivalency with ASTM C151/C151M-18.
T 111-22	Mineral Matter or Ash in Asphalt Materials	2b	Revised to update temperature-measuring devices.
T 112-22	Clay Lumps and Friable Particles in Aggregate	1c	Revised to update temperature-measuring devices.
T 113-22	Lightweight Particles in Aggregate	1c	Revised to update temperature-measuring devices.
T 119M/T 119-18 (2022)	Slump of Hydraulic Cement Concrete	3b	Reconfirmed for 2022 publication.
T 129-22	Amount of Water Required for Normal Consistency of Hydraulic Cement Paste	3a	Revised specifications for the Vicat apparatus.
T 131-22	Time of Setting of Hydraulic Cement by Vicat Needle	3a	Revised for equivalency with ASTM C191-19.
T 132-22	Tensile Strength of Hydraulic Cement Mortars	3a	Revised to update temperature-measuring devices.
T 133-22	Density of Hydraulic Cement	3a	Revised to update temperature-measuring devices.
T 134-22	Moisture–Density Relations of Soil–Cement Mixtures	1b	Revised as follows: - Added Appendix X1 and relevant references and notes. - Revised Table 1 and Section 6.4 regarding oversize particles.
T 135-22	Wetting-and-Drying Test of Compacted Soil–Cement Mixtures	1b	Revised to update temperature-measuring devices.
T 136-22	Freezing-and-Thawing Tests of Compacted Soil–Cement Mixtures	1b	Revised to update temperature-measuring devices.

Designation Number	Title	Technical Subcommittee Number	Balloted Revisions
T 137-22	Air Content of Hydraulic Cement Mortar	3a	Revised as follows: - Updated temperature-measuring devices. - Updated measure standardization instructions.
T 148-22	Measuring Length of Drilled Concrete Cores	3c	Revised as follows: - Added precision information. - Updated core specifications. - New terminology Section.
T 153-22	Fineness of Hydraulic Cement by Air Permeability Apparatus	3a	Revised as follows: - Updated temperature-measuring devices. - Updated for equivalency with ASTM C204-18.
T 154-22	Time of Setting of Hydraulic Cement Paste by Gillmore Needles	3a	Revised for equivalency with ASTM C266-20.
T 155-22	Water Retention by Liquid Membrane-Forming Curing Compounds for Concrete	3b	Revised to update temperature-measuring devices.
T 157-22	Air-Entraining Admixtures for Concrete	3b	Revised to update temperature-measuring devices.
T 158-22	Bleeding of Concrete	3b	Revised to update temperature-measuring devices.
T 160-22	Length Change of Hardened Hydraulic Cement Mortar and Concrete	3c	Revised as follows: - Updated temperature-measuring devices. - Updated instructions for molding and curing of specimens.
T 161-22	Resistance of Concrete to Rapid Freezing and Thawing	3c	Revised to update temperature-measuring devices.
T 162-22	Mechanical Mixing of Hydraulic Cement Pastes and Mortars of Plastic Consistency	3a	Revised for equivalency with ASTM C305-20.
T 164-22	Quantitative Extraction of Asphalt Binder from Hot Mix Asphalt (HMA)	2c	Revised as follows: - Updated temperature-measuring devices. - Added requirement to report asphalt binder content to the nearest 0.01 percent.
T 166-22	Bulk Specific Gravity (G_{mb}) of Compacted Asphalt Mixtures Using Saturated Surface-Dry Specimens	2c	Revised to update temperature-measuring devices.
T 167-22	Compressive Strength of Hot Mix Asphalt	2d	Revised to update temperature-measuring devices.

Designation Number	Title	Technical Subcommittee Number	Balloted Revisions
T 176-22	Plastic Fines in Graded Aggregates and Soils by Use of the Sand Equivalent Test	1a	Revised as follows: - Increased sample size for adequate testing and address discrepancies. - Updated temperature-measuring devices.
T 178-22	Portland Cement Content of Hardened Hydraulic-Cement Concrete	3c	Revised to update temperature-measuring devices.
T 179-22	Effect of Heat and Air on Asphalt Materials (Thin-Film Oven Test)	2b	Revised to update temperature-measuring devices.
T 180-22	Moisture–Density Relations of Soils Using a 4.54-kg (10-lb) Rammer and a 457-mm (18-in.) Drop	1b	Revised to update temperature-measuring devices.
T 185-22	Early Stiffening of Hydraulic Cement (Mortar Method)	3a	Revised as follows: - Updated temperature-measuring devices. - Updated for equivalency with ASTM C359-20.
T 186-22	Early Stiffening of Hydraulic Cement (Paste Method)	3a	Revised for equivalency with ASTM C451-19.
T 190-22	Resistance R-Value and Expansion Pressure of Compacted Soils	1a	Revised for equivalency with ASTM D2844/D2844M-18.
T 191-14 (2022)	Density of Soil In-Place by the Sand-Cone Method	1b	Reconfirmed for 2022 publication.
T 193-22	The California Bearing Ratio	1a	Revised to update temperature-measuring devices.
T 194-22	Determination of Organic Matter in Soils by Wet Combustion	1a	Revised to update temperature-measuring devices.
T 195-22	Determining Degree of Particle Coating of Asphalt Mixtures	2c	Revised to update temperature-measuring devices.
T 196M/T 196-22	Air Content of Freshly Mixed Concrete by the Volumetric Method	3b	Revised to update temperature-measuring devices.
T 197M/T 197-22	Time of Setting of Concrete Mixtures by Penetration Resistance	3b	Revised to update temperature-measuring devices.
T 198-22	Splitting Tensile Strength of Cylindrical Concrete Specimens	3c	Revised to add terminology references.
T 201-22	Kinematic Viscosity of Asphalts (Bitumens)	2b	Revised to update temperature-measuring devices.
T 202-22	Viscosity of Asphalts by Vacuum Capillary Viscometer	2b	Revised to update temperature-measuring devices.
T 206-22	Penetration Test and Split-Barrel Sampling of Soils	1b	Revised for equivalency with ASTM D1568-18.

Designation Number	Title	Technical Subcommittee Number	Balloted Revisions
T 207-22	Thin-Walled Tube Sampling of Soils	1b	Revised for equivalency with ASTM D1587/D1587M-15.
T 209-22	Theoretical Maximum Specific Gravity (G_{mm}) and Density of Asphalt Mixtures	2c	Revised as follows: - Updated temperature-measuring devices. - Improved precision estimates. - Changes to plant-produced sample drying in Section 7.2.1. - Minor edits for precision in Sections 5.4.5, 5.5., 9.1, and 10.1. - Updated Annex 1.
T 210-22	Aggregate Durability Index	1c	Revised to update temperature-measuring devices.
T 215-22	Permeability of Granular Soils (Constant Head)	1a	Revised as follows: - Updated temperature-measuring devices. - Updated significance and use. - Clarifications to apparatus. - Language updates to Method A and Method B.
T 216-22	One-Dimensional Consolidation Properties of Soils	1a	Revised to update temperature-measuring devices.
T 217-14 (2022)	Determination of Moisture in Soils by Means of a Calcium Carbide Gas Pressure Moisture Tester	1a	Reconfirmed for 2022 publication.
T 218-86 (2022)	Sampling Hydrated Lime	3a	Reconfirmed for 2022 publication.
T 219-22	Testing Lime for Chemical Constituents and Particle Sizes	3a	Revised to update temperature-measuring devices.
T 220-22	Determination of the Strength of Soil–Lime Mixtures	1a	Revised to update temperature-measuring devices.
T 226-22	Triaxial Compressive Strength of Undrained Rock Core Specimens without Pore Pressure Measurements	1a	Revised as follows: - Removed ASTM equivalency. - Extensive revisions across most Sections.
T 228-22	Specific Gravity of Semi-Solid Asphalt Materials	2b	Revised as follows: - Title change. - Updated for equivalency with ASTM D70/D70M-21. - Updated temperature-measuring devices.
T 232-90 (2022)	Determination of Lime Content in Lime-Treated Soils by Titration	3a	Reconfirmed for 2022 publication.