PART 1—STANDARD SPECIFICATIONS AND STANDARD PRACTICES

Numerical Sequence Table of Contents

Standard Number	Title
M 153-20 (2024)	Preformed Sponge Rubber, Cork, and Recycled Rubber Expansion Joint Fillers for Concrete Paving and Structural Construction
M 154M/M 154-24	Air-Entraining Admixtures for Concrete
M 156-13 (2025)	Requirements for Mixing Plants for Hot-Mixed, Hot-Laid Bituminous Paving Mixtures
M 157-25	Ready-Mixed Concrete
M 163M/M 163-24	Castings, Iron-Chromium, Iron-Chromium-Nickel, Corrosion Resistant, for General Application
M 167M/M 167-24	Corrugated Steel Structural Plate, Zinc-Coated, for Field-Bolted Pipe, Pipe-Arches, and Arches
M 168-07 (2024)	Wood Products
M 169-25	Steel Bars, Carbon and Alloy, Cold-Finished
M 170-24	Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe
M 170M-24	Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe [Metric]
M 175M/M 175-23	Perforated Concrete Pipe
M 176M/M 176-23	Porous Concrete Pipe
M 178M/M 178-23	Concrete Drain Tile
M 180-25	Steel Components for Highway Guardrail
M 181-10 (2023)	Chain-Link Fence
M 182-05 (2025)	Burlap Cloth Made from Jute or Kenaf and Cotton Mats
M 190-22	Asphalt-Coated Corrugated Metal Culvert Pipe and Pipe-Arches
M 194M/M 194-23	Chemical Admixtures for Concrete
M 195-25	Lightweight Aggregates for Structural Concrete
M 196M/M 196-24	Corrugated Aluminum Pipe for Sewers and Drains
M 197M/M 197-24	Aluminum Alloy Sheet for Corrugated Aluminum Pipe
M 199M/M 199-24	Precast Reinforced Concrete Manhole Sections
M 201-25	Mixing Rooms, Moist Cabinets, Moist Rooms, and Water Storage Tanks Used in the Testing of Hydraulic Cements and Concretes
M 202M/M 202-25	Steel Sheet Piling
M 203M/M 203-25	Steel Strand, Low-Relaxation Uncoated Seven-Wire for Concrete Reinforcement
M 204M/M 204-24	Stress-Relieved Steel Wire for Prestressed Concrete
M 205M/M 205-23	Molds for Forming Concrete Test Cylinders Vertically
M 206M/M 206-24	Reinforced Concrete Arch Culvert, Storm Drain, and Sewer Pipe

Standard Number	Title
M 207M/M 207-24	Reinforced Concrete Elliptical Culvert, Storm Drain, and Sewer Pipe
M 208-18 (2022)	Cationic Emulsified Asphalt
M 213-25	Preformed Expansion Joint Fillers for Concrete Paving and Structural Construction (Nonextruding and Resilient Asphalt Types)
M 216-22	Quicklime and Hydrated Lime for Soil Stabilization
M 218-03 (2025)	Steel Sheet, Zinc-Coated (Galvanized), for Corrugated Steel Pipe
M 219M/M 219-25	Corrugated Aluminum Alloy Structural Plate for Field-Bolted Pipe, Pipe-Arches, and Arches
M 224-23	Protective Sealers for Portland Cement Concrete
M 226-80 (2025)	Viscosity-Graded Asphalt Binder
M 227M/M 227-25	Steel Bars, Carbon, Merchant Quality, Mechanical Properties
M 230-07 (2024)	Expanded and Extruded Foam Board (Polystyrene)
M 231-95 (2023)	Weighing Devices Used in the Testing of Materials
M 232M/M 232-25	Zinc Coating (Hot-Dip) on Iron and Steel Hardware
M 233-86 (2023)	Boiled Linseed Oil Mixture for Treatment of Portland Cement Concrete
M 235M/M 235-24	Epoxy Resin Adhesives
M 237-24	Epoxy Resin Adhesives for Bonding Traffic Markers to Hardened Portland Cement and Asphalt Concrete
M 240M/M 240-25	Blended Hydraulic Cement
M 241M/M 241-23	Concrete Made by Volumetric Batching and Continuous Mixing
M 242M/M 242-23	Reinforced Concrete D-Load Culvert, Storm Drain, and Sewer Pipe
M 243-22	Field-Applied Coating of Corrugated Metal Structural Plate for Pipe, Pipe-Arches, and Arches
M 245M/M 245-24	Corrugated Steel Pipe, Polymer-Precoated, for Sewers and Drains
M 246M/M 246-25	Steel Sheet, Metallic-Coated and Polymer-Precoated, for Corrugated Steel Pipe
M 247-13 (2022)	Glass Beads Used in Pavement Markings
M 249-12 (2024)	White and Yellow Reflective Thermoplastic Striping Material (Solid Form)
M 251M/M 251-22	Plain and Laminated Elastomeric Bridge Bearings
M 252-25	Corrugated Polyethylene Pipe, 75- to 250-mm (3- to 10-in.) Diameter
M 254-06 (2023)	Corrosion-Resistant Coated Dowel Bars
M 255M/M 255-19 (2023)	Steel Bars, Carbon, Hot-Wrought, Special Quality, Mechanical Properties

Standard Number	Title
M 259-24	Precast Reinforced Concrete Monolithic Box Sections for Culverts, Storm Drains, and Sewers According to the AASHTO LRFD Bridge Design Specifications
M 261-22	Rib-Tread Standard Tire for Special-Purpose Pavement Frictional-Property Tests
M 262-23	Concrete Pipe and Related Products
M 268-22	Retroreflective Sheeting for Flat and Vertical Traffic Control Applications
M 269-96 (2022)	Turnbuckles and Shackles
M 270M/M 270-23	Structural Steel for Bridges
M 274-87 (2025)	Steel Sheet, Aluminum-Coated (Type 2), for Corrugated Steel Pipe
M 275M/M 275-20 (2024)	High-Strength Steel Bars for Prestressing Concrete
M 277-06 (2023)	Wire Rope and Sockets for Movable Bridges
M 278-22	Class PS46 Poly(Vinyl Chloride) (PVC) Pipe
M 279-25	Metallic-Coated, Steel Woven Wire Fence Fabric
M 280-24	Metallic-Coated (Carbon) Steel Barbed Wire
M 281-24	Steel Fence Posts, Hot-Wrought
M 285M/M 285-24	Castings, Iron-Chromium-Nickel, Corrosion Resistant, for Severe Service
M 286-22	Smooth-Tread Standard Tire for Special-Purpose Pavement Frictional-Property Tests
M 288M/M 288-24	Geosynthetics for Highway Applications
M 289-91 (2025)	Aluminum-Zinc Alloy Coated Sheet Steel for Corrugated Steel Pipe
M 292M/M 292-25	Carbon Steel, Alloy Steel, and Stainless Steel Nuts for Bolts for High-Pressure or High-Temperature Service, or Both
M 294-25	Corrugated Polyethylene Pipe, 300- to 1500-mm (12- to 60-in.) Diameter
M 295-25	Coal Ash and Raw or Calcined Natural Pozzolan for Use in Concrete
M 297-10 (2025)	Preformed Polychloroprene Elastomeric Joint Seals for Bridges
M 300-22	Inorganic Zinc-Rich Primer
M 302-24	Slag Cement for Use in Concrete and Mortars
M 303-89 (2023)	Lime for Asphalt Mixtures
M 304-25	Poly(Vinyl Chloride) (PVC) Profile Wall Drain Pipe and Fittings Based on Controlled Inside Diameter
M 306-10 (2023)	Drainage, Sewer, Utility, and Related Castings
M 307-22	Silica Fume Used in Cementitious Mixtures
M 314-90 (2022)	Steel Anchor Bolts

Standard Number	Title
M 316-23	Polymer-Modified Emulsified Asphalt
M 318-02 (2023)	Glass Cullet Use for Soil–Aggregate Base Course
M 319-02 (2023)	Reclaimed Concrete Aggregate for Unbound Soil–Aggregate Base Course
M 320-23	Performance-Graded Asphalt Binder
M 321-04 (2025)	High-Reactivity Pozzolans for Use in Hydraulic-Cement Concrete, Mortar, and Grout
M 322M/M 322-22	Rail-Steel and Axle-Steel Deformed Bars for Concrete Reinforcement
M 323-22	Superpave Volumetric Mix Design
M 325-08 (2025)	Stone Matrix Asphalt (SMA)
M 326-18 (2022)	Polyethylene (PE) Liner Pipe, 300- to 1600-mm Diameter, Based on Controlled Outside Diameter
M 327-25	Processing Additions for Use in the Manufacture of Hydraulic Cements
M 328-14 (2022)	Inertial Profiler
M 329M/M 329-11 (2023)	Stainless Clad Deformed and Plain Round Steel Bars for Concrete Reinforcement
M 330-25	Corrugated Polypropylene Pipe, 300- to 1500-mm (12- to 60-in.) Diameter
M 331-17 (2025)	Smoothness of Pavement in Weigh-in-Motion (WIM) Systems
M 332-23	Performance-Graded Asphalt Binder Using Multiple Stress Creep Recovery (MSCR) Test
M 333-16 (2024)	Detectable Warning Surfaces
M 334M/M 334-17 (2025)	Uncoated, Corrosion-Resistant, Deformed and Plain Chromium Alloyed, Billet-Steel Bars for Concrete Reinforcement and Dowels
M 335-19 (2023)	Steel-Reinforced Polyethylene (PE) Ribbed Pipe, 300- to 1500-mm (12- to 60-in.) Diameter
M 336M/M 336-25	Steel Wire and Welded Wire, Plain and Deformed, for Concrete Reinforcement
M 337-21 (2025)	Fiber-Reinforced Polymer Composite Materials for Highway and Bridge Structures
M 338-21 (2025)	Performance-Graded Hot-Poured Asphalt Crack Sealant
M 339M/M 339-22	Thermometers Used in the Testing of Construction Materials
M 340-22	Materials for Emulsified Asphalt Chip Seals
M 341-22	Materials for Microsurfacing
M 342-22	Materials for Slurry Seal
M 343-22	Materials for Emulsified Asphalt Fog Seal
M 344-22	Materials for Sand Seals

Standard Number	Title
M 345-24	Materials for Emulsified Asphalt Scrub Seal
M 346-22	Materials for Ultrathin Bonded Wearing Course
M 347-22	Materials for Full-Depth Reclamation Mixtures with Emulsified Asphalt
M 348-22	Waterborne White and Yellow Traffic Paints
M 349-22	Materials for Asphalt Tack Coat
M 350-22	Reclaimed Asphalt Shingles for Use in Asphalt Mixtures
M 351M/M 351-25	Cotton Duck Fabric Bridge Bearings
M 352-23	Materials Used in Cold Recycled Mixtures with Emulsified Asphalt
M 353-24	Thin Overlay Treatments Using a Binder Resin System and Aggregate for Concrete Surfaces
M 354-24	High Friction Surface Treatment for Asphalt and Concrete Pavements Using Calcined Bauxite
M 355M/M 355-24	Geosynthetic Pavement Interlayers for Highway Applications
M 356M/M 356-25	Nonwoven Geotextile Bond Breakers for Highway Applications
M 357-25	Mix Design Used in Cold Recycled Mixtures with Foamed Asphalt
M 358-25	Balanced Mix Design
R 5-17 (2025)	Selection and Use of Emulsified Asphalts
R 8-96 (2023)	Evaluation of Transportation-Related Earthborne Vibrations
R 9-05 (2022)	Acceptance Sampling Plans for Highway Construction
R 10-22	Definition of Terms Related to Quality and Statistics as Used in Highway Construction
R 13-22	Conducting Geotechnical Subsurface Investigations
R 15-18 (2022)	Asphalt Additives and Modifiers
R 18-23	Establishing and Implementing a Quality Management System for Construction Materials Testing Laboratories
R 20-99 (2025)	Procedures for Measuring Highway Noise
R 21-96 (2023)	Drilling for Subsurface Investigations—Unexpectedly Encountering Suspected Hazardous Material
R 22-97 (2023)	Decommissioning Geotechnical Exploratory Boreholes
R 23-99 (2022)	Chemical, Biological, and Physical Analysis of Water
R 24-99 (2022)	Collection and Preservation of Water Samples
R 25-22	Technician Training and Certification Programs
R 26-01 (2022)	Certifying Suppliers of Performance-Graded Asphalt Binders

Standard Number	Title
R 27-01 (2023)	Assessment of Corrosion of Steel Piling for Non-Marine Applications
R 28-22	Accelerated Aging of Asphalt Binder Using a Pressurized Aging Vessel (PAV)
R 29-15 (2023)	Grading or Verifying the Performance Grade (PG) of an Asphalt Binder
R 30-24	Short-Term Laboratory Conditioning of Asphalt Mixtures
R 31-09 (2023)	Evaluation of Protective Coating Systems for Structural Steel
R 32-20 (2024)	Calibrating the Load Cell and Deflection Sensors for a Falling Weight Deflectometer
R 33-20 (2024)	Calibrating the Reference Load Cell Used for Reference Calibrations for a Falling Weight Deflectometer
R 34-03 (2022)	Evaluating Deicing Chemicals
R 35-22	Superpave Volumetric Design for Asphalt Mixtures
R 36-21 (2025)	Evaluating Faulting of Concrete Pavements
R 37-04 (2022)	Application of Ground Penetrating Radar (GPR) to Highways
R 38-10 (2022)	Quality Assurance of Standard Manufactured Materials
R 39M/R 39-25	Casting and Curing Concrete Test Specimens in the Laboratory
R 40-10 (2022)	Measuring Pavement Profile Using a Rod and Level
R 42-06 (2024)	Developing a Quality Assurance Plan for Hot Mix Asphalt (HMA)
R 43-13 (2025)	Quantifying Roughness of Pavements
R 44-07 (2022)	Independent Assurance (IA) Programs
R 45-13 (2025)	Installing, Monitoring, and Processing Data of the Traveling Type Slope Inclinometer
R 46-22	Designing Stone Matrix Asphalt (SMA)
R 47-23	Reducing Samples of Asphalt Mixtures to Testing Size
R 49-09 (2022)	Determination of Low-Temperature Performance Grade (PG) of Asphalt Binders
R 50-09 (2022)	Geosynthetic Reinforcement of the Aggregate Base Course of Flexible Pavement Structures
R 51-22	Compost for Erosion/Sediment Control (Filter Berms and Filter Socks)
R 52-22	Compost for Erosion/Sediment Control (Compost Blankets)
R 54-14 (2022)	Accepting Pavement Ride Quality When Measured Using Inertial Profiling Systems
R 56-25	Certification of Inertial Profiling Systems
R 57-14 (2022)	Operating Inertial Profiling Systems
R 58-22	Dry Preparation of Disturbed Soil and Soil–Aggregate Samples for Test
R 59-24	Recovery of Asphalt Binder from Solution by Abson Method

Standard Number	Title
R 60M/R 60-23	Sampling Freshly Mixed Concrete
R 61-12 (2024)	Establishing Requirements for Equipment Calibrations, Standardizations, and Checks
R 62-13 (2021)	Developing Dynamic Modulus Master Curves for Asphalt Mixtures
R 63-13 (2025)	Solid Wall High-Density Polyethylene (HDPE) Conduit for Non-Pressure Applications Used for the Protection of Power and Telecommunications Cables
R 64-22	Sampling and Fabrication of 50-mm (2-in.) Cube Specimens Using Grout (Non-Shrink) or Mortar
R 65-14 (2022)	Evaluating the Engineering and Environmental Suitability of Recycled Materials
R 66-16 (2024)	Sampling Asphalt Materials
R 67-20 (2024)	Sampling Asphalt Mixtures after Compaction (Obtaining Cores)
R 68-22	Preparation of Asphalt Mixtures by Means of the Marshall Apparatus
R 69-20 (2024)	Determination of Long-Term Strength for Geosynthetic Reinforcement
R 70M/R 70-23	Use of Apparatus for the Determination of Length Change of Hardened Cement Paste, Mortar, and Concrete
R 71-25	Sampling and Amount of Testing of Hydraulic Cement
R 72-22	Match Curing of Concrete Test Specimens
R 73-16 (2024)	Evaluation of Precast Concrete Drainage Products
R 74-22	Wet Preparation of Disturbed Soil Samples for Test
R 75-24	Developing Soil Moisture–Density Relations
R 76-23	Reducing Samples of Aggregate to Testing Size
R 77-16 (2024)	Certifying Suppliers of Emulsified Asphalt
R 78-22	Recovering Residue from Emulsified Asphalt Using Low-Temperature Evaporative Techniques
R 79-22	Vacuum Drying Compacted Asphalt Specimens
R 80-17 (2025)	Determining the Reactivity of Concrete Aggregates and Selecting Appropriate Measures for Preventing Deleterious Expansion in New Concrete Construction
R 81-17 (2025)	Static Segregation of Hardened Self-Consolidating Concrete (SCC) Cylinders
R 82-25	Pipe Joint Selection for Highway Culvert and Storm Drains
R 83-22	Preparation of Cylindrical Performance Test Specimens Using the Superpave Gyratory Compactor (SGC)
R 84-17 (2025)	Developing Dynamic Modulus Master Curves for Asphalt Mixtures Using the Asphalt Mixture Performance Tester (AMPT)
R 85-18 (2022)	Quantifying Cracks in Asphalt Pavement Surfaces from Collected Pavement Images Utilizing Automated Methods

Standard Number	Title
R 86-18 (2022)	Collecting Images of Pavement Surfaces for Distress Detection
R 87-18 (2022)	Determining Pavement Deformation Parameters and Cross Slope from Collected Transverse Profiles
R 88-18 (2022)	Collecting the Transverse Pavement Profile
R 89-18 (2022)	Accreditation Bodies Operating in the Fields of Construction Materials Testing and Inspection
R 90-18 (2022)	Sampling Aggregate Products
R 91-18 (2022)	Determining Aggregate Source Shape Values from Digital Image Analysis Shape Properties
R 92-18 (2022)	Evaluating the Elastic Behavior of Asphalt Binders Using the Multiple Stress Creep Recovery (MSCR) Test
R 93-19 (2023)	Service Life Determination of Corrugated HDPE Pipes Manufactured with Recycled Content
R 94-19 (2023)	Quality Assurance, Job Site Quality Control, and Reapplication of Protective Sealers for Portland Cement Concrete
R 95-22	Accelerated Aging of Hot-Poured Asphalt Crack Sealant Using a Vacuum Oven
R 96-19 (2023)	Installation, Operation, and Maintenance of Ignition Furnaces
R 97-19 (2024)	Sampling Asphalt Mixtures
R 98-20 (2024)	Determination of Size and Shape of Glass Beads Used in Traffic Markings by Means of Computerized Optical Method
R 99-21 (2025)	Troubleshooting Asphalt Specimen Volumetric Differences between Superpave Gyratory Compactors (SCGs) Used in the Design and the Field Management of Superpave Mixtures
R 100M/R 100-25	Casting and Curing Concrete Strength Test Specimens in the Field
R 101-25	Developing Performance Engineered Concrete Pavement Mixtures
R 102-22	Emulsified Asphalt Chip Seal Design
R 103-22	Microsurfacing Design
R 104-22	Slurry Seal Design
R 105-22	Emulsified Asphalt Fog Seal Design
R 106-22	Sand Seal Design
R 107-22	Emulsified Asphalt Scrub Seal Design
R 108-22	Ultrathin Bonded Wearing Course Design
R 109-22	Emulsified Asphalt Content of Full-Depth Reclamation Mixture Design
R 110-22	Continuous Thermal Profile of Asphalt Mixture Construction

Standard Number	Title
R 111-22	Intelligent Compaction for Embankment and Asphalt Pavement Applications
R 112-22	Asphalt Tack Coat Design
R 113-22	Materials Selection and Mixture Design of Permeable Friction Courses (PFCs)
R 114-22	Design Considerations When Using Reclaimed Asphalt Shingles (RAS) in Asphalt Mixtures
R 115-23	Mechanical Mixing of Hydraulic Cement Pastes and Mortars of Plastic Consistency
R 116-23	Grading or Verifying the Sealant Grade (SG) of a Hot-Poured Asphalt Crack Sealant
R 117-23	Emulsified Asphalt Content of Cold Recycled Mixture Designs
R 118-23	Characterizing the Relaxation Behavior of Asphalt Binders Using the Delta T_c (ΔT_c) Parameter
R 119M/R 119-24	Grinding the Ends of Cylindrical Concrete Specimens
R 120-24	Preparation of Test Specimens Using the Plastic Mold Compaction Device
R 121-24	Long-Term Laboratory Conditioning of Asphalt Mixtures
R 122-25	Quality Assurance of Concrete
R 123-25	Quality Assurance of Cold Central Plant Recycling
R 124-25	Quality Assurance of Cold In-Place Recycling
R 125-25	Diamond Core Drilling for Site Investigation
R 126-25	Progressing Auger Borings for Geotechnical Explorations
R 127-25	Time Evaluation for Mechanical Shakers
R 128-25	Determination of Optimum Asphalt Content of Cold Recycled Mixture with Foamed Asphalt
R 129-25	Preparation of Indirect Tension Performance Test Specimens
R 130-25	Developing Dynamic Modulus Master Curves for Asphalt Mixtures Using the Indirect Tension Testing Method
R 131-25	Preparation of Small Cylindrical Performance Test Specimens Using the Superpave Gyratory Compactor (SGC) or Field Cores
R 132-25	Balanced Design of Asphalt Mixtures

PART 1—STANDARD SPECIFICATIONS AND STANDARD PRACTICES

Subject Sequence Table of Contents

Standard Number	Title
M 332-23	Performance-Graded Asphalt Binder Using Multiple Stress Creep Recovery (MSCR) Test
M 338-21 (2025)	Performance-Graded Hot-Poured Asphalt Crack Sealant
M 340-22	Materials for Emulsified Asphalt Chip Seals
M 341-22	Materials for Microsurfacing
M 342-22	Materials for Slurry Seal
M 343-22	Materials for Emulsified Asphalt Fog Seal
M 349-22	Materials for Asphalt Tack Coat
M 350-22	Reclaimed Asphalt Shingles for Use in Asphalt Mixtures
M 352-23	Materials Used in Cold Recycled Mixtures with Emulsified Asphalt
M 357-25	Mix Design Used in Cold Recycled Mixtures with Foamed Asphalt
M 358-25	Balanced Mix Design
R 5-17 (2025)	Selection and Use of Emulsified Asphalts
R 15-18 (2022)	Asphalt Additives and Modifiers
R 26-01 (2022)	Certifying Suppliers of Performance-Graded Asphalt Binders
R 28-22	Accelerated Aging of Asphalt Binder Using a Pressurized Aging Vessel (PAV)
R 29-15 (2023)	Grading or Verifying the Performance Grade (PG) of an Asphalt Binder
R 30-24	Short-Term Laboratory Conditioning of Asphalt Mixtures
R 35-22	Superpave Volumetric Design for Asphalt Mixtures
R 46-22	Designing Stone Matrix Asphalt (SMA)
R 47-23	Reducing Samples of Asphalt Mixtures to Testing Size
R 49-09 (2022)	Determination of Low-Temperature Performance Grade (PG) of Asphalt Binders
R 59-24	Recovery of Asphalt Binder from Solution by Abson Method
R 62-13 (2021)	Developing Dynamic Modulus Master Curves for Asphalt Mixtures
R 66-16 (2024)	Sampling Asphalt Materials
R 67-20 (2024)	Sampling Asphalt Mixtures after Compaction (Obtaining Cores)
R 68-22	Preparation of Asphalt Mixtures by Means of the Marshall Apparatus
R 77-16 (2024)	Certifying Suppliers of Emulsified Asphalt
R 78-22	Recovering Residue from Emulsified Asphalt Using Low-Temperature Evaporative Techniques
R 79-22	Vacuum Drying Compacted Asphalt Specimens

Standard Number	Title
R 83-22	Preparation of Cylindrical Performance Test Specimens Using the Superpave Gyratory Compactor (SGC)
R 84-17 (2025)	Developing Dynamic Modulus Master Curves for Asphalt Mixtures Using the Asphalt Mixture Performance Tester (AMPT)
R 92-18 (2022)	Evaluating the Elastic Behavior of Asphalt Binders Using the Multiple Stress Creep Recovery (MSCR) Test
R 99-21 (2025)	Troubleshooting Asphalt Specimen Volumetric Differences between Superpave Gyratory Compactors (SCGs) Used in the Design and the Field Management of Superpave Mixtures
R 102-22	Emulsified Asphalt Chip Seal Design
R 103-22	Microsurfacing Design
R 104-22	Slurry Seal Design
R 105-22	Emulsified Asphalt Fog Seal Design
R 112-22	Asphalt Tack Coat Design
R 113-22	Materials Selection and Mixture Design of Permeable Friction Courses (PFCs)
R 114-22	Design Considerations When Using Reclaimed Asphalt Shingles (RAS) in Asphalt Mixtures
R 116-23	Grading or Verifying the Sealant Grade (SG) of a Hot-Poured Asphalt Crack Sealant
R 117-23	Emulsified Asphalt Content of Cold Recycled Mixture Designs
R 118-23	Characterizing the Relaxation Behavior of Asphalt Binders Using the Delta T_c (ΔT_c) Parameter
R 121-24	Long-Term Laboratory Conditioning of Asphalt Mixtures
R 128-25	Determination of Optimum Asphalt Content of Cold Recycled Mixture with Foamed Asphalt
R 129-25	Preparation of Indirect Tension Performance Test Specimens
R 130-25	Developing Dynamic Modulus Master Curves for Asphalt Mixtures Using the Indirect Tension Testing Method
R 131-25	Preparation of Small Cylindrical Performance Test Specimens Using the Superpave Gyratory Compactor (SGC) or Field Cores
R 132-25	Balanced Design of Asphalt Mixtures
	Box Culvert, Culvert Pipe, and Drain Tile
M 36M/M 36-24	Corrugated Steel Pipe, Metallic-Coated, for Sewers and Drains
M 86M/M 86-23	Nonreinforced Concrete Sewer, Storm Drain, and Culvert Pipe
M 167M/M 167-24	Corrugated Steel Structural Plate, Zinc-Coated, for Field-Bolted Pipe, Pipe-Arches, and Arches

Standard Number	Title
M 170-24	Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe
M 170M-24	Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe [Metric]
M 175M/M 175-23	Perforated Concrete Pipe
M 176M/M 176-23	Porous Concrete Pipe
M 178M/M 178-23	Concrete Drain Tile
M 190-22	Asphalt-Coated Corrugated Metal Culvert Pipe and Pipe-Arches
M 196M/M 196-24	Corrugated Aluminum Pipe for Sewers and Drains
M 197M/M 197-24	Aluminum Alloy Sheet for Corrugated Aluminum Pipe
M 199M/M 199-24	Precast Reinforced Concrete Manhole Sections
M 206M/M 206-24	Reinforced Concrete Arch Culvert, Storm Drain, and Sewer Pipe
M 207M/M 207-24	Reinforced Concrete Elliptical Culvert, Storm Drain, and Sewer Pipe
M 218-03 (2025)	Steel Sheet, Zinc-Coated (Galvanized), for Corrugated Steel Pipe
M 219M/M 219-25	Corrugated Aluminum Alloy Structural Plate for Field-Bolted Pipe, Pipe-Arches, and Arches
M 242M/M 242-23	Reinforced Concrete D-Load Culvert, Storm Drain, and Sewer Pipe
M 243-22	Field-Applied Coating of Corrugated Metal Structural Plate for Pipe, Pipe-Arches, and Arches
M 245M/M 245-24	Corrugated Steel Pipe, Polymer-Precoated, for Sewers and Drains
M 246M/M 246-25	Steel Sheet, Metallic-Coated and Polymer-Precoated, for Corrugated Steel Pipe
M 252-25	Corrugated Polyethylene Pipe, 75- to 250-mm (3- to 10-in.) Diameter
M 259-24	Precast Reinforced Concrete Monolithic Box Sections for Culverts, Storm Drains, and Sewers According to the AASHTO LRFD Bridge Design Specifications
M 262-23	Concrete Pipe and Related Products
M 274-87 (2025)	Steel Sheet, Aluminum-Coated (Type 2), for Corrugated Steel Pipe
M 278-22	Class PS46 Poly(Vinyl Chloride) (PVC) Pipe
M 289-91 (2025)	Aluminum-Zinc Alloy Coated Sheet Steel for Corrugated Steel Pipe
M 294-25	Corrugated Polyethylene Pipe, 300- to 1500-mm (12- to 60-in.) Diameter
M 304-25	Poly(Vinyl Chloride) (PVC) Profile Wall Drain Pipe and Fittings Based on Controlled Inside Diameter
M 306-10 (2023)	Drainage, Sewer, Utility, and Related Castings
M 326-18 (2022)	Polyethylene (PE) Liner Pipe, 300- to 1600-mm Diameter, Based on Controlled Outside Diameter

Standard Number	Title
M 330-25	Corrugated Polypropylene Pipe, 300- to 1500-mm (12- to 60-in.) Diameter
M 335-19 (2023)	Steel-Reinforced Polyethylene (PE) Ribbed Pipe, 300- to 1500-mm (12- to 60-in.) Diameter
M 337-21 (2025)	Fiber-Reinforced Polymer Composite Materials for Highway and Bridge Structures
R 63-13 (2025)	Solid Wall High-Density Polyethylene (HDPE) Conduit for Non-Pressure Applications Used for the Protection of Power and Telecommunications Cables
R 73-16 (2024)	Evaluation of Precast Concrete Drainage Products
R 82-25	Pipe Joint Selection for Highway Culvert and Storm Drains
R 93-19 (2023)	Service Life Determination of Corrugated HDPE Pipes Manufactured with Recycled Content
	Box Culvert, Culvert Pipe, and Drain Tile
M 345-24	Materials for Emulsified Asphalt Scrub Seal
M 346-22	Materials for Ultrathin Bonded Wearing Course
M 347-22	Materials for Full-Depth Reclamation Mixtures with Emulsified Asphalt
R 108-22	Ultrathin Bonded Wearing Course Design
R 109-22	Emulsified Asphalt Content of Full-Depth Reclamation Mixture Design
	Concrete, Curing Materials, and Admixtures
M 154M/M 154-24	Air-Entraining Admixtures for Concrete
M 157-25	Ready-Mixed Concrete
M 182-05 (2025)	Burlap Cloth Made from Jute or Kenaf and Cotton Mats
M 194M/M 194-23	Chemical Admixtures for Concrete
M 205M/M 205-23	Molds for Forming Concrete Test Cylinders Vertically
M 224-23	Protective Sealers for Portland Cement Concrete
M 233-86 (2023)	Boiled Linseed Oil Mixture for Treatment of Portland Cement Concrete
M 241M/M 241-23	Concrete Made by Volumetric Batching and Continuous Mixing
M 295-25	Coal Ash and Raw or Calcined Natural Pozzolan for Use in Concrete
M 302-24	Slag Cement for Use in Concrete and Mortars
R 39M/R 39-25	Casting and Curing Concrete Test Specimens in the Laboratory
R 60M/R 60-23	Sampling Freshly Mixed Concrete
R 64-22	Sampling and Fabrication of 50-mm (2-in.) Cube Specimens Using Grout (Non-Shrink) or Mortar

Standard Number	Title
R 70M/R 70-23	Use of Apparatus for the Determination of Length Change of Hardened Cement Paste, Mortar, and Concrete
R 72-22	Match Curing of Concrete Test Specimens
R 80-17 (2025)	Determining the Reactivity of Concrete Aggregates and Selecting Appropriate Measures for Preventing Deleterious Expansion in New Concrete Construction
R 81-17 (2025)	Static Segregation of Hardened Self-Consolidating Concrete (SCC) Cylinders
R 100M/R 100-25	Casting and Curing Concrete Strength Test Specimens in the Field
R 101-25	Developing Performance Engineered Concrete Pavement Mixtures
R 119M/R 119-24	Grinding the Ends of Cylindrical Concrete Specimens
R 122-25	Quality Assurance of Concrete
	Environmental Tests
R 23-99 (2022)	Chemical, Biological, and Physical Analysis of Water
R 24-99 (2022)	Collection and Preservation of Water Samples
	Guardrail and Fencing
M 180-25	Steel Components for Highway Guardrail
M 181-10 (2023)	Chain-Link Fence
M 269-96 (2022)	Turnbuckles and Shackles
M 279-25	Metallic-Coated, Steel Woven Wire Fence Fabric
M 280-24	Metallic-Coated (Carbon) Steel Barbed Wire
M 281-24	Steel Fence Posts, Hot-Wrought
	Hydraulic Cement
M 85-24	Portland Cement
M 240M/M 240-25	Blended Hydraulic Cement
M 307-22	Silica Fume Used in Cementitious Mixtures
M 321-04 (2025)	High-Reactivity Pozzolans for Use in Hydraulic-Cement Concrete, Mortar, and Grout
R 71-25	Sampling and Amount of Testing of Hydraulic Cement
R 115-23	Mechanical Mixing of Hydraulic Cement Pastes and Mortars of Plastic Consistency
	Joint Filler and Asphalt Plank
M 33M/M 33-22	Preformed Expansion Joint Filler for Concrete (Bituminous Type)
M 153-20 (2024)	Preformed Sponge Rubber, Cork, and Recycled Rubber Expansion Joint Fillers for Concrete Paving and Structural Construction

Standard Number	Title
M 213-25	Preformed Expansion Joint Fillers for Concrete Paving and Structural Construction (Nonextruding and Resilient Asphalt Types)
M 251M/M 251-22	Plain and Laminated Elastomeric Bridge Bearings
M 297-10 (2025)	Preformed Polychloroprene Elastomeric Joint Seals for Bridges
R 95-22	Accelerated Aging of Hot-Poured Asphalt Crack Sealant Using a Vacuum Oven
	Metallic Materials for Bridges
M 102M/M 102-25	Steel Forgings, Carbon and Alloy, for General Industrial Use
M 103M/M 103-19 (2023)	Steel Castings, Carbon, for General Application
M 105-23	Gray Iron Castings
M 111M/M 111-23	Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products
M 163M/M 163-24	Castings, Iron-Chromium, Iron-Chromium-Nickel, Corrosion Resistant, for General Application
M 169-25	Steel Bars, Carbon and Alloy, Cold-Finished
M 202M/M 202-25	Steel Sheet Piling
M 227M/M 227-25	Steel Bars, Carbon, Merchant Quality, Mechanical Properties
M 232M/M 232-25	Zinc Coating (Hot-Dip) on Iron and Steel Hardware
M 255M/M 255-19 (2023)	Steel Bars, Carbon, Hot-Wrought, Special Quality, Mechanical Properties
M 270M/M 270-23	Structural Steel for Bridges
M 277-06 (2023)	Wire Rope and Sockets for Movable Bridges
M 285M/M 285-24	Castings, Iron-Chromium-Nickel, Corrosion Resistant, for Severe Service
M 292M/M 292-25	Carbon Steel, Alloy Steel, and Stainless Steel Nuts for Bolts for High-Pressure or High-Temperature Service, or Both
M 314-90 (2022)	Steel Anchor Bolts
M 334M/M 334-17 (2025)	Uncoated, Corrosion-Resistant, Deformed and Plain Chromium Alloyed, Billet-Steel Bars for Concrete Reinforcement and Dowels
M 336M/M 336-25	Steel Wire and Welded Wire, Plain and Deformed, for Concrete Reinforcement
	Miscellaneous
M 143-14 (2022)	Sodium Chloride
M 144-14 (2022)	Calcium Chloride
M 230-07 (2024)	Expanded and Extruded Foam Board (Polystyrene)

Standard Number	Title
M 235M/M 235-24	Epoxy Resin Adhesives
M 333-16 (2024)	Detectable Warning Surfaces
M 351M/M 351-25	Cotton Duck Fabric Bridge Bearings
R 8-96 (2023)	Evaluation of Transportation-Related Earthborne Vibrations
R 10-22	Definition of Terms Related to Quality and Statistics as Used in Highway Construction
R 25-22	Technician Training and Certification Programs
R 34-03 (2022)	Evaluating Deicing Chemicals
R 44-07 (2022)	Independent Assurance (IA) Programs
R 89-18 (2022)	Accreditation Bodies Operating in the Fields of Construction Materials Testing and Inspection
R 110-22	Continuous Thermal Profile of Asphalt Mixture Construction
R 111-22	Intelligent Compaction for Embankment and Asphalt Pavement Applications
	Painting, Traffic Marking, and Signing
M 237-24	Epoxy Resin Adhesives for Bonding Traffic Markers to Hardened Portland Cement and Asphalt Concrete
M 247-13 (2022)	Glass Beads Used in Pavement Markings
M 249-12 (2024)	White and Yellow Reflective Thermoplastic Striping Material (Solid Form)
M 268-22	Retroreflective Sheeting for Flat and Vertical Traffic Control Applications
M 300-22	Inorganic Zinc-Rich Primer
M 348-22	Waterborne White and Yellow Traffic Paints
R 31-09 (2023)	Evaluation of Protective Coating Systems for Structural Steel
R 98-20 (2024)	Determination of Size and Shape of Glass Beads Used in Traffic Markings by Means of Computerized Optical Method
	Pavement Surface Characteristics
M 328-14 (2022)	Inertial Profiler
M 331-17 (2025)	Smoothness of Pavement in Weigh-in-Motion (WIM) Systems
M 344-22	Materials for Sand Seals
M 353-24	Thin Overlay Treatments Using a Binder Resin System and Aggregate for Concrete Surfaces
M 354-24	High Friction Surface Treatment for Asphalt and Concrete Pavements Using Calcined Bauxite
R 36-21 (2025)	Evaluating Faulting of Concrete Pavements

Standard Number	Title
R 37-04 (2022)	Application of Ground Penetrating Radar (GPR) to Highways
R 40-10 (2022)	Measuring Pavement Profile Using a Rod and Level
R 43-13 (2025)	Quantifying Roughness of Pavements
R 54-14 (2022)	Accepting Pavement Ride Quality When Measured Using Inertial Profiling Systems
R 56-25	Certification of Inertial Profiling Systems
R 57-14 (2022)	Operating Inertial Profiling Systems
R 85-18 (2022)	Quantifying Cracks in Asphalt Pavement Surfaces from Collected Pavement Images Utilizing Automated Methods
R 86-18 (2022)	Collecting Images of Pavement Surfaces for Distress Detection
R 87-18 (2022)	Determining Pavement Deformation Parameters and Cross Slope from Collected Transverse Profiles
R 88-18 (2022)	Collecting the Transverse Pavement Profile
R 106-22	Sand Seal Design
R 107-22	Emulsified Asphalt Scrub Seal Design
	Quality Assurance
R 9-05 (2022)	Acceptance Sampling Plans for Highway Construction
R 18-23	Establishing and Implementing a Quality Management System for Construction Materials Testing Laboratories
R 20-99 (2025)	Procedures for Measuring Highway Noise
R 38-10 (2022)	Quality Assurance of Standard Manufactured Materials
R 42-06 (2024)	Developing a Quality Assurance Plan for Hot Mix Asphalt (HMA)
R 61-12 (2024)	Establishing Requirements for Equipment Calibrations, Standardizations, and Checks
R 65-14 (2022)	Evaluating the Engineering and Environmental Suitability of Recycled Materials
R 94-19 (2023)	Quality Assurance, Job Site Quality Control, and Reapplication of Protective Sealers for Portland Cement Concrete
R 123-25	Quality Assurance of Cold Central Plant Recycling
R 124-25	Quality Assurance of Cold In-Place Recycling
	Reinforcing Steel and Wire Rope
M 30-25	Metallic-Coated Steel Wire Rope and Fittings for Highway Guardrail
M 31M/M 31-24	Deformed and Plain Carbon and Low-Alloy Steel Bars for Concrete Reinforcement
M 54M/M 54-22	Welded Deformed Steel Bar Mats for Concrete Reinforcement
M 203M/M 203-25	Steel Strand, Low-Relaxation Uncoated Seven-Wire for Concrete Reinforcement

Standard Number	Title
M 204M/M 204-24	Stress-Relieved Steel Wire for Prestressed Concrete
M 254-06 (2023)	Corrosion-Resistant Coated Dowel Bars
M 275M/M 275-20 (2024)	High-Strength Steel Bars for Prestressing Concrete
M 322M/M 322-22	Rail-Steel and Axle-Steel Deformed Bars for Concrete Reinforcement
M 329M/M 329-11 (2023)	Stainless Clad Deformed and Plain Round Steel Bars for Concrete Reinforcement
	Soils and Stabilization
M 57-80 (2025)	Materials for Embankments and Subgrades
M 145-91 (2025)	Classification of Soils and Soil–Aggregate Mixtures for Highway Construction Purposes
M 146-91 (2025)	Terms Relating to Subgrade, Soil–Aggregate, and Fill Materials
M 147-17 (2025)	Materials for Aggregate and Soil–Aggregate Subbase, Base, and Surface Courses
M 216-22	Quicklime and Hydrated Lime for Soil Stabilization
M 288M/M 288-24	Geosynthetics for Highway Applications
M 318-02 (2023)	Glass Cullet Use for Soil–Aggregate Base Course
M 319-02 (2023)	Reclaimed Concrete Aggregate for Unbound Soil–Aggregate Base Course
M 355M/M 355-24	Geosynthetic Pavement Interlayers for Highway Applications
M 356M/M 356-25	Nonwoven Geotextile Bond Breakers for Highway Applications
R 13-22	Conducting Geotechnical Subsurface Investigations
R 21-96 (2023)	Drilling for Subsurface Investigations—Unexpectedly Encountering Suspected Hazardous Material
R 22-97 (2023)	Decommissioning Geotechnical Exploratory Boreholes
R 27-01 (2023)	Assessment of Corrosion of Steel Piling for Non-Marine Applications
R 50-09 (2022)	Geosynthetic Reinforcement of the Aggregate Base Course of Flexible Pavement Structures
R 51-22	Compost for Erosion/Sediment Control (Filter Berms and Filter Socks)
R 52-22	Compost for Erosion/Sediment Control (Compost Blankets)
R 58-22	Dry Preparation of Disturbed Soil and Soil–Aggregate Samples for Test
R 69-20 (2024)	Determination of Long-Term Strength for Geosynthetic Reinforcement
R 74-22	Wet Preparation of Disturbed Soil Samples for Test
R 75-24	Developing Soil Moisture–Density Relations
R 120-24	Preparation of Test Specimens Using the Plastic Mold Compaction Device

Standard Number	Title
R 125-25	Diamond Core Drilling for Site Investigation
R 126-25	Progressing Auger Borings for Geotechnical Explorations
	Testing Equipment
M 152M/M 152-25	Flow Table for Use in Tests of Hydraulic Cement
M 201-25	Mixing Rooms, Moist Cabinets, Moist Rooms, and Water Storage Tanks Used in the Testing of Hydraulic Cements and Concretes
M 231-95 (2023)	Weighing Devices Used in the Testing of Materials
M 261-22	Rib-Tread Standard Tire for Special-Purpose Pavement Frictional-Property Tests
M 286-22	Smooth-Tread Standard Tire for Special-Purpose Pavement Frictional-Property Tests
M 339M/M 339-22	Thermometers Used in the Testing of Construction Materials
R 32-20 (2024)	Calibrating the Load Cell and Deflection Sensors for a Falling Weight Deflectometer
R 33-20 (2024)	Calibrating the Reference Load Cell Used for Reference Calibrations for a Falling Weight Deflectometer
R 45-13 (2025)	Installing, Monitoring, and Processing Data of the Traveling Type Slope Inclinometer
	Timber and Preservatives
M 133-23	Preservatives and Pressure Treatment Processes for Timber
M 168-07 (2024)	Wood Products

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 in reconformed standards; however, the subheader line below the designation number will indicate if the standard has been editorially revised.

Release: 2025

Designation Number	Title	TS	Technical Changes
M 30-25	Metallic-Coated Steel Wire Rope and Fittings for Highway Guardrail	4d	Revised for equivalency with ASTM A741-23: Revised Sections 2, 4 through 6, and 13. Added Section 1.3.
M 57-80 (2025)	Materials for Embankments and Subgrades	1b	Reconfirmed for 2025 publication.
M 80-13 (2025)	Coarse Aggregate for Hydraulic Cement Concrete	1c	Reconfirmed for 2025 publication.
M 81-92 (2025)	Cutback Asphalt (Rapid-Curing Type)	2a	Reconfirmed for 2025 publication.
M 82-17 (2025)	Cutback Asphalt (Medium-Curing Type)	2a	Reconfirmed for 2025 publication.
M 102M/M 102-25	Steel Forgings, Carbon and Alloy, for General Industrial Use	4f	Revised for equivalency with ASTM A668/A668M-23: Modified Section 7.2 to define multiple forgings and to define weight excludes test prolongations; added sentence defining weight. Minor revisions to Sections 7.3 and 10. Added new Section 7.3.
M 145-91 (2025)	Classification of Soils and Soil–Aggregate Mixtures for Highway Construction Purposes	1a	Reconfirmed for 2025 publication.
M 146-91 (2025)	Terms Relating to Subgrade, Soil–Aggregate, and Fill Materials	1b	Reconfirmed for 2025 publication.
M 147-17 (2025)	Materials for Aggregate and Soil–Aggregate Subbase, Base, and Surface Courses	1c	Reconfirmed for 2025 publication.
M 152M/M 152-25	Flow Table for Use in Tests of Hydraulic Cement	3a	Editorially revised the safety caveat in Section 1.
M 156-13 (2025)	Requirements for Mixing Plants for Hot-Mixed, Hot-Laid Bituminous Paving Mixtures	2c	Reconfirmed for 2025 publication.
M 157-25	Ready-Mixed Concrete	3b	Revised Sections 2 through 11 and 15 through 17, including tables and section names; extensively revised Sections 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13, 15, 16, and 17. Editorially revised Sections 2.3, 3.1, 7.1, and 7.2; and Note 2.
M 169-25	Steel Bars, Carbon and Alloy, Cold-Finished	4f	Revised for equivalency with ASTM A108-24: Section 6.3.1 and Annex A tables. Revised Section 4.1.1, 4.1.6, and 6.2 to add "cold-finish".

Designation Number	Title	TS	Technical Changes
M 180-25	Steel Components for Highway Guardrail	4d	Revised Sections 7.2 and 9.1.1.
M 182-05 (2025)	Burlap Cloth Made from Jute or Kenaf and Cotton Mats	3b	Reconfirmed for 2025 publication.
M 195-25	Lightweight Aggregates for Structural Concrete	1c	Minor changes to M 195 for ASTM equivalency; revised Sections 2.1, 2.4, 5.1.6, new 8.7, and 8.10.
M 201-25	Mixing Rooms, Moist Cabinets, Moist Rooms, and Water Storage Tanks Used in the Testing of Hydraulic Cements and Concretes	3a	Revised Sections 1.1, 5.2, and 6.1 through 6.4. Editorially revised Section 6.2. Editorially revised to add a safety caveat in Section 1.
M 202M/M 202-25	Steel Sheet Piling	4f	Revised for equivalency with ASTM A328/A328M-24. Revised Sections 5.2 and 6.1.
M 203M/M 203-25	Steel Strand, Low-Relaxation Uncoated Seven-Wire for Concrete Reinforcement	4f	Revised for equivalency with ASTM A416/A416M-24. Revised Section 3.1.4. Added Section 5.2.1 on traceability. Removed all references to "reel" or reelless" did some rewording in Sections 8.4, 9.1, 12.2, 12.3, and 14.1 and in Notes 1 and 2.
M 213-25	Preformed Expansion Joint Fillers for Concrete Paving and Structural Construction (Nonextruding and Resilient Asphalt Types)	4e	Revised for equivalency with ASTM D1751-23: Title changed. Revised Sections 5.1 and 11.
M 218-03 (2025)	Steel Sheet, Zinc-Coated (Galvanized), for Corrugated Steel Pipe	4b	Reconfirmed for 2025 publication.
M 219M/M 219-25	Corrugated Aluminum Alloy Structural Plate for Field-Bolted Pipe, Pipe-Arches, and Arches	4b	Revised for equivalency with ASTM B746/B746M-24a: Revised Sections 2.2, 5.3, 6.2, 6.3, and 7.2; added Sections 6.3.1 and 6.3.2 and Tables 4 and 7. Editorially revised parentheses to brackets to make dual unit references consistent.
M 226-80 (2025)	Viscosity-Graded Asphalt Binder	2b	Reconfirmed for 2025 publication.
M 227M/M 227-25	Steel Bars, Carbon, Merchant Quality, Mechanical Properties	4f	Revised for equivalency with ASTM A663/A663M-23. Revised Section 6.1 to add third decimal place to phosphorus and sulfur percentages.
M 232M/M 232-25	Zinc Coating (Hot-Dip) on Iron and Steel Hardware	4f	Revised for equivalency with ASTM A153/A153M-23. Revised Sections 4.4, 5.2, 5.4, 7.6, and 8.1 and Notes 3, 4, and 6. Editorially revised Section 1 safety caveat.

Designation Number	Title	TS	Technical Changes
M 240M/M 240-25	Blended Hydraulic Cement	3a	Revised for equivalency with ASTM C23/C230M-25: Revised Sections 2.2 and 15.5; Tables 1 and 4; and Figure X1.1. Editorially revised "fly ash" to "coal ash" for consistency.
M 246M/M 246-25	Steel Sheet, Metallic-Coated and Polymer-Precoated, for Corrugated Steel Pipe	4b	Revised for equivalency with ASTM A742/A742M-23a: Revised Sections 5.2.6, 6.2, and 7.7 and Table 1. Editorially revised Section 7.7 to change parentheses to flat brackets to match format of other dual unit references.
M 252-25	Corrugated Polyethylene Pipe, 75- to 250-mm (3- to 10-in.) Diameter	4b	Revised Sections 6.1.1 through 6.1.3, 7.8, 9.4, 11.1, and 11.2; added Annex A.
M 274-87 (2025)	Steel Sheet, Aluminum-Coated (Type 2), for Corrugated Steel Pipe	4b	Reconfirmed for 2025 publication.
M 279-25	Metallic-Coated, Steel Woven Wire Fence Fabric	4d	Revised for equivalency with ASTM A116-22
M 289-91 (2025)	Aluminum-Zinc Alloy Coated Sheet Steel for Corrugated Steel Pipe	4b	Reconfirmed for 2025 publication.
M 292M/M 292-25	Carbon Steel, Alloy Steel, and Stainless Steel Nuts for Bolts for High-Pressure or High-Temperature Service, or Both	4f	Revised for equivalency with ASTM A194/A194M-23. Revised Section 8.2.1 related to proof-load test requirements to clarify cross-sectional hardness testing requirements.
M 294-25	Corrugated Polyethylene Pipe, 300- to 1500-mm (12- to 60-in.) Diameter	4b	Revised Sections 1.4, 6.1, 7.6, 9.3, and 11.2. Editorially revised Section 1 safety caveat.
M 295-25	Coal Ash and Raw or Calcined Natural Pozzolan for Use in Concrete	3a	Revised Section 2.2 and Table 1. Editorially revised to correct table references.
M 297-10 (2025)	Preformed Polychloroprene Elastomeric Joint Seals for Bridges	4e	Reconfirmed for 2025 publication.
M 304-25	Poly(Vinyl Chloride) (PVC) Profile Wall Drain Pipe and Fittings Based on Controlled Inside Diameter	4b	Revised Sections 1.4, 7.6, 8.1.1, and 8.5.
M 321-04 (2025)	High-Reactivity Pozzolans for Use in Hydraulic-Cement Concrete, Mortar, and Grout	3a	Reconfirmed for 2025 publication. Editorially revised the safety caveat in Section 1.
M 325-08 (2025)	Stone Matrix Asphalt (SMA)	2d	Reconfirmed for 2025 publication.
M 327-25	Processing Additions for Use in the Manufacture of Hydraulic Cements	3a	Revised Sections 2.1 and 11.2.1. Editorially revised the safety caveat in Section 1.
M 330-25	Corrugated Polypropylene Pipe, 300- to 1500-mm (12- to 60-in.) Diameter	4b	Title changed. Revised Sections 1.1.2, 1.3, 2.1.1, , 6.1.1, 7.2.2, 9.3, and 11.2. Editorially revised Section 1 safety caveat.

Designation Number	Title	TS	Technical Changes
M 331-17 (2025)	Smoothness of Pavement in Weigh-in-Motion (WIM) Systems	5a	Reconfirmed for 2025 publication.
M 334M/M 334-17 (2025)	Uncoated, Corrosion-Resistant, Deformed and Plain Chromium Alloyed, Billet-Steel Bars for Concrete Reinforcement and Dowels	4f	Reconfirmed for 2025 publication.
M 336M/M 336-25	Steel Wire and Welded Wire, Plain and Deformed, for Concrete Reinforcement	4f	Revised for equivalency with ASTM A1064/A1064M-24. Removed size limitation on smaller wire and set consistent weld shear strength in Sections 6.4.4 and 6.4.4.1. Minor revisions to Sections 6.4.5.3, 6.4.5.4.3, 7.1, 11.1, and 14.3. Editorially revised Section 6.4.5.3 to add missing units.
M 337-21 (2025)	Fiber-Reinforced Polymer Composite Materials for Highway and Bridge Structures	5b	Reconfirmed for 2025 publication.
M 338-21 (2025)	Performance-Graded Hot-Poured Asphalt Crack Sealant	4e	Reconfirmed for 2025 publication.
M 351M/M 351-25	Cotton Duck Fabric Bridge Bearings	4e	In Section 8.9.1, revised from “samples” to “test specimens” for clarification. In Sections 9.1.1, 9.1.2, 9.1.6, and 9.1.7, revised from “samples” to “specimens” or “sample” to “specimen” for clarification. In Sections 9.2.4, 9.2.5, and 9.2.6.2, revised to include measuring and recording thickness to the nearest 1 mm [0.01 in.]. Added new Section 9.2.8. to require calculating the average percent of permanent set of the two test specimens and using the average value for evaluating conformance to Table 5, Permanent Set of CDP.
M 356M/M 356-25	Nonwoven Geotextile Bond Breakers for Highway Applications	4g	New full standard specification.
M 357-25	Mix Design Used in Cold Recycled Mixtures with Foamed Asphalt	2d	Adopted MP 38 as full standard specification M 357. Editorially revised the safety caveat in Section 1.
M 358-25	Balanced Mix Design	2d	Adopted MP 46 as full standard specification M 358. Editorially revised the safety caveat in Section 1.
R 5-17 (2025)	Selection and Use of Emulsified Asphalts	2a	Reconfirmed for 2025 publication.
R 20-99 (2025)	Procedures for Measuring Highway Noise	5a	Reconfirmed for 2025 publication.
R 36-21 (2025)	Evaluating Faulting of Concrete Pavements	5a	Reconfirmed for 2025 publication. Editorially revised Section 1 safety caveat.
R 39M/R 39-25	Casting and Curing Concrete Test Specimens in the Laboratory	3b	Changed title; revised Sections 1, 2, and 5. Editorially revised the safety caveat in Section 1.
R 43-13 (2025)	Quantifying Roughness of Pavements	5a	Reconfirmed for 2025 publication. Editorially revised Section 1 safety caveat.

Designation Number	Title	TS	Technical Changes
R 45-13 (2025)	Installing, Monitoring, and Processing Data of the Traveling Type Slope Inclinometer	1b	Reconfirmed for 2025 publication.
R 56-25	Certification of Inertial Profiling Systems	5a	Based on NCHRP Research Report 941, revised Sections 8.1, 8.2.1, 8.5, and 10. Added Sections 8.2.4 through 8.2.7 and 8.3.3 through 8.3.7. Editorially revised Section 1 safety caveat.
R 63-13 (2025)	Solid Wall High-Density Polyethylene (HDPE) Conduit for Non-Pressure Applications Used for the Protection of Power and Telecommunications Cables	4b	Reconfirmed for 2025 publication.
R 71-25	Sampling and Amount of Testing of Hydraulic Cement	3a	Revised Section 11; Note 4; and Appendix X1 including Figures X1.1 and X1.2 and Table X1.1. Added Figures X1.3 and X1.4. Editorially revised to update the safety caveat in Section 1 and add units to Note 4.
R 80-17 (2025)	Determining the Reactivity of Concrete Aggregates and Selecting Appropriate Measures for Preventing Deleterious Expansion in New Concrete Construction	3c	Reconfirmed for 2025 publication. Editorially revised the safety caveat in Section 1.
R 81-17 (2025)	Static Segregation of Hardened Self-Consolidating Concrete (SCC) Cylinders	3c	Reconfirmed for 2025 publication. Editorially revised the safety caveat in Section 1.
R 82-25	Pipe Joint Selection for Highway Culvert and Storm Drains	4b	Revised Sections 3.1.11 and 3.1.13 to clarify particle size and No. 200 sieve; moved requirement for verification of silt-tight joints per D3212 from Section 6.2.4.3. to 6.2.4.2; revised added Section 6.2.4.3 to add language requiring wrapping of joints with geotextile, matching requirements for other pipe types within the standard. Editorially revised Section 1 safety caveat.
R 84-17 (2025)	Developing Dynamic Modulus Master Curves for Asphalt Mixtures Using the Asphalt Mixture Performance Tester (AMPT)	2d	Reconfirmed for 2025 publication.
R 99-21 (2025)	Troubleshooting Asphalt Specimen Volumetric Differences between Superpave Gyratory Compactors (SCGs) Used in the Design and the Field Management of Superpave Mixtures	2d	Reconfirmed for 2025 publication.
R 100M/R 100-25	Casting and Curing Concrete Strength Test Specimens in the Field	3b	Updated for equivalency with ASTM C31/C31M-24. Changed title; revised Sections 1, 2, 4 through 6, and 8 through 11. Editorially revised the safety caveat in Section 1.
R 101-25	Developing Performance Engineered Concrete Pavement Mixtures	3c	Revised extensively; editorially revised Sections 6 and 7.

Designation Number	Title	TS	Technical Changes
R 122-25	Quality Assurance of Concrete	5c	New standard practice.
R 123-25	Quality Assurance of Cold Central Plant Recycling	5c	New standard practice.
R 124-25	Quality Assurance of Cold In-Place Recycling	5c	New standard practice.
R 125-25	Diamond Core Drilling for Site Investigation	1b	Reclassified T 225 as standard practice R 125.
R 126-25	Progressing Auger Borings for Geotechnical Explorations	1b	Reclassified T 306 as standard practice R 126.
R 127-25	Time Evaluation for Mechanical Shakers	1c	New full standard practice.
R 128-25	Determination of Optimum Asphalt Content of Cold Recycled Mixture with Foamed Asphalt	2d	Adopted PP 94 as full standard practice R 128. Editorially revised the safety caveat in Section 1.
R 129-25	Preparation of Indirect Tension Performance Test Specimens	2d	Adopted PP 95 as full standard practice R 129. Editorially revised the safety caveat in Section 1.
R 130-25	Developing Dynamic Modulus Master Curves for Asphalt Mixtures Using the Indirect Tension Testing Method	2d	Adopted PP 96 as full standard practice R 130. Editorially revised the safety caveat in Section 1.
R 131-25	Preparation of Small Cylindrical Performance Test Specimens Using the Superpave Gyratory Compactor (SGC) or Field Cores	2d	Adopted PP 99 as full standard practice R 131. Editorially revised the safety caveat in Section 1.
R 132-25	Balanced Design of Asphalt Mixtures	2d	Adopted PP 105 as full standard practice R 132. Editorially revised the safety caveat in Section 1.

PART 2—STANDARD METHODS OF TEST

Numerical Sequence Table of Contents

Standard Number	Title
T 106M/T 106-25	Compressive Strength of Hydraulic Cement Mortar (Using 50-mm or 2-in. Cube Specimens)
T 107M/T 107-25	Autoclave Expansion of Hydraulic Cement
T 110-03 (2024)	Moisture or Volatile Distillates in Asphalt Mixtures
T 111-22	Mineral Matter or Ash in Asphalt Materials
T 112-23	Clay Lumps and Friable Particles in Aggregate
T 113-25	Lightweight Particles in Aggregate
T 119M/T 119-23	Slump of Hydraulic Cement Concrete
T 121M/T 121-25	Density (Unit Weight), Yield, and Air Content (Gravimetric) of Concrete
T 129-25	Amount of Water Required for Normal Consistency of Hydraulic Cement Paste
T 131-23	Time of Setting of Hydraulic Cement by Vicat Needle
T 132-22	Tensile Strength of Hydraulic Cement Mortars
T 133-22	Density of Hydraulic Cement
T 134-25	Moisture–Density Relations of Soil–Cement Mixtures
T 135-22	Wetting-and-Drying Test of Compacted Soil–Cement Mixtures
T 136-22	Freezing-and-Thawing Tests of Compacted Soil–Cement Mixtures
T 137-22	Air Content of Hydraulic Cement Mortar
T 140-20 (2024)	Compressive Strength of Concrete Using Portions of Beams Broken in Flexure
T 143-13 (2025)	Sampling and Testing Calcium Chloride for Roads and Structural Applications
T 148-22	Measuring Length of Drilled Concrete Cores
T 152-24	Air Content of Freshly Mixed Concrete by the Pressure Method
T 153-25	Fineness of Hydraulic Cement by Air Permeability Apparatus
T 154-23	Time of Setting of Hydraulic Cement Paste by Gillmore Needles
T 155-23	Water Retention by Liquid Membrane-Forming Curing Compounds for Concrete
T 157M/T 157-23	Air-Entraining Admixtures for Concrete
T 158M/T 158-23	Bleeding of Concrete
T 160-22	Length Change of Hardened Hydraulic Cement Mortar and Concrete
T 161-22	Resistance of Concrete to Rapid Freezing and Thawing
T 164-24	Quantitative Extraction of Asphalt Binder from Asphalt Mixtures
T 166-25	Bulk Specific Gravity (G_{mb}) of Compacted Asphalt Mixtures Using Saturated Surface-Dry Specimens
T 167-22	Compressive Strength of Hot Mix Asphalt
T 176-22	Plastic Fines in Graded Aggregates and Soils by Use of the Sand Equivalent Test
T 177M/T 177-17 (2025)	Flexural Strength of Concrete (Using Simple Beam with Center-Point Loading)
T 178-22	Portland-Cement Content of Hardened Hydraulic-Cement Concrete
T 179M/T 179-23	Effect of Heat and Air on Asphalt Materials (Thin-Film Oven Test)
T 180-25	Moisture–Density Relations of Soils Using a 4.54-kg (10-lb) Rammer and a 457-mm (18-in.) Drop
T 185-23	Early Stiffening of Hydraulic Cement (Mortar Method)
T 186-23	Early Stiffening of Hydraulic Cement (Paste Method)
T 188-05 (2025)	Evaluation by Freezing and Thawing of Air-Entraining Additions to Hydraulic Cement

Standard Number	Title
T 190M/T 190-25	Resistance R-Value and Expansion Pressure of Compacted Soils
T 191-14 (2022)	Density of Soil In-Place by the Sand-Cone Method
T 192-23	Fineness of Hydraulic Cement by the 45-μm (No. 325) Sieve
T 193-22	The California Bearing Ratio
T 194-22	Determination of Organic Matter in Soils by Wet Combustion
T 195-22	Determining Degree of Particle Coating of Asphalt Mixtures
T 196M/T 196-25	Air Content of Freshly Mixed Concrete by the Volumetric Method
T 197M/T 197-25	Time of Setting of Concrete Mixtures by Penetration Resistance
T 198-22	Splitting Tensile Strength of Cylindrical Concrete Specimens
T 201-22	Kinematic Viscosity of Asphalts (Bitumens)
T 202-22	Viscosity of Asphalts by Vacuum Capillary Viscometer
T 206-22 (2025)	Penetration Test and Split-Barrel Sampling of Soils
T 207-22	Thin-Walled Tube Sampling of Soils
T 208M/T 208-25	Unconfined Compressive Strength of Cohesive Soil
T 209-25	Theoretical Maximum Specific Gravity (G_{mm}) and Density of Asphalt Mixtures
T 210-25	Aggregate Durability Index
T 211-90 (2025)	Determination of Cement Content in Cement-Treated Aggregate by the Method of Titration
T 213M/T 213-24	Mass [Weight] of Coating on Aluminum-Coated Iron or Steel Articles
T 215M/T 215-25	Permeability of Granular Soils (Constant Head)
T 216M/T 216-25	One-Dimensional Consolidation Properties of Soils
T 217-14 (2022)	Determination of Moisture in Soils by Means of a Calcium Carbide Gas Pressure Moisture Tester
T 218-86 (2022)	Sampling Hydrated Lime
T 219-22	Testing Lime for Chemical Constituents and Particle Sizes
T 220-22	Determination of the Strength of Soil–Lime Mixtures
T 221M/T 221-24	Repetitive Static Plate Tests of Soils and Flexible Pavement Components for Use in Evaluation and Design of Airport and Highway Pavements
T 222M/T 222-25	Nonrepetitive Static Plate Load Test of Soils and Flexible Pavement Components for Use in Evaluation and Design of Airport and Highway Pavements
T 223-96 (2025)	Field Vane Shear Test in Cohesive Soil
T 225-16 (2024)	Diamond Core Drilling for Site Investigation
T 226-25	Triaxial Compressive Strength of Undrained Rock Core Specimens without Pore Pressure Measurements
T 228-22	Specific Gravity and Density of Semi-Solid Asphalt Materials
T 231-25	Capping Cylindrical Concrete Specimens
T 232-90 (2022)	Determination of Lime Content in Lime-Treated Soils by Titration
T 233-22	Density of Soil In-Place by Block, Chunk, or Core Sampling
T 236-22	Direct Shear Test of Soils under Consolidated Drained Conditions
T 237-25	Epoxy Resin Adhesives for Bonding Traffic Markers to Hardened Portland Cement and Asphalt Concrete
T 240-23	Effect of Heat and Air on a Moving Film of Asphalt Binder (Rolling Thin-Film Oven Test)
T 241-95 (2025)	Helical Continuously Welded Seam Corrugated Steel Pipe

Standard Number	Title
T 242-18 (2022)	Frictional Properties of Paved Surfaces Using a Full-Scale Tire
T 243M/T 243-19 (2023)	Sampling Procedure for Impact Testing of Structural Steel
T 244-25	Mechanical Testing of Steel Products
T 245-22	Resistance to Plastic Flow of Asphalt Mixtures Using Marshall Apparatus
T 246-22	Resistance to Deformation and Cohesion of Hot Mix Asphalt (HMA) by Means of Hveem Apparatus
T 247-22	Preparation of Test Specimens of Hot Mix Asphalt (HMA) by Means of California Kneading Compactor
T 249-03 (2025)	Helical Lock Seam Corrugated Pipe
T 250-23	Thermoplastic Traffic Line Material
T 252-19 (2023)	Measurements of Pore Pressures in Soils
T 253M/T 253-24	Coated Dowel Bars
T 255-25	Total Evaporable Moisture Content of Aggregate by Drying
T 256-01 (2024)	Pavement Deflection Measurements
T 258-81 (2022)	Determining Expansive Soils
T 259-02 (2025)	Resistance of Concrete to Chloride Ion Penetration
T 260-21 (2025)	Sampling and Testing for Chloride Ion in Concrete and Concrete Raw Materials
T 265-22	Laboratory Determination of Moisture Content of Soils
T 267-22	Determination of Organic Content in Soils by Loss on Ignition
T 269-24	Percent Air Voids in Compacted Dense and Open Asphalt Mixtures
T 272-18 (2022)	One-Point Method for Determining Maximum Dry Density and Optimum Moisture
T 273-86 (2022)	Soil Suction
T 275-22	Bulk Specific Gravity (G_{mb}) of Compacted Asphalt Mixtures Using Paraffin-Coated Specimens
T 276-22	Measuring Early-Age Compression Strength and Projecting Later-Age Strength
T 277-23	Electrical Indication of Concrete's Ability to Resist Chloride Ion Penetration
T 278-24	Surface Frictional Properties Using the British Pendulum Tester
T 279-25	Accelerated Polishing of Aggregates Using the British Wheel
T 280M/T 280-24	Concrete Pipe, Manhole Sections, or Tile
T 281-24	Vitrified Clay Pipe
T 282M/T 282-24	Calibrating a Wheel Force or Torque Transducer Using a Calibration Platform (User Level)
T 283-22	Resistance of Compacted Asphalt Mixtures to Moisture-Induced Damage
T 285M/T 285-24	Bend Test for Bars for Concrete Reinforcement
T 287-25	Asphalt Binder Content of Asphalt Mixtures by the Nuclear Method
T 288-25	Determining Minimum Laboratory Soil Resistivity
T 289-22	Determining pH of Soil for Use in Corrosion Testing
T 290-95 (2024)	Determining Water-Soluble Sulfate Ion Content in Soil
T 291-22	Determining Water-Soluble Chloride Ion Content in Soil
T 295-22	Specific Gravity or API Gravity of Liquid Asphalts by Hydrometer Method
T 296-22	Unconsolidated, Undrained Compressive Strength of Cohesive Soils in Triaxial Compression

Standard Number	Title
T 298-15 (2023)	High-Strain Dynamic Testing of Piles
T 300-22	Force Ductility Test of Asphalt Materials
T 301-22	Elastic Recovery Test of Asphalt Materials by Means of a Ductilometer
T 302-22	Polymer Content of Polymer-Modified Emulsified Asphalt Residue and Asphalt Binders
T 303-22	Accelerated Detection of Potentially Deleterious Expansion of Mortar Bars Due to Alkali–Silica Reaction
T 304-22	Uncompacted Void Content of Fine Aggregate
T 305-22	Determination of Draindown Characteristics in Uncompacted Asphalt Mixtures
T 306-11 (2023)	Progressing Auger Borings for Geotechnical Explorations
T 307-99 (2025)	Determining the Resilient Modulus of Soils and Aggregate Materials
T 308-25	Determining the Asphalt Binder Content of Asphalt Mixtures by the Ignition Method
T 309-22	Temperature of Freshly Mixed Portland Cement Concrete
T 310-22	In-Place Density and Moisture Content of Soil and Soil–Aggregate by Nuclear Methods (Shallow Depth)
T 311-20 (2024)	Grain-Size Analysis of Granular Soil Materials
T 312-22	Preparing and Determining the Density of Asphalt Mixture Specimens by Means of the Superpave Gyratory Compactor
T 313-25	Determining the Flexural Creep Stiffness of Asphalt Binder Using the Bending Beam Rheometer (BBR)
T 314-22	Determining the Fracture Properties of Asphalt Binder in Direct Tension (DT)
T 315-24	Determining the Rheological Properties of Asphalt Binder Using a Dynamic Shear Rheometer (DSR)
T 316-22	Viscosity Determination of Asphalt Binder Using Rotational Viscometer
T 317-04 (2022)	Prediction of Asphalt-Bound Pavement Layer Temperatures
T 318-15 (2023)	Water Content of Freshly Mixed Concrete Using Microwave Oven Drying
T 319-25	Quantitative Extraction and Recovery of Asphalt Binder from Asphalt Mixtures
T 320-22	Determining the Permanent Shear Strain and Stiffness of Asphalt Mixtures Using the Superpave Shear Tester (SST)
T 321-22	Determining the Fatigue Life of Compacted Asphalt Mixtures Subjected to Repeated Flexural Bending
T 322-07 (2020)	Determining the Creep Compliance and Strength of Hot Mix Asphalt (HMA) Using the Indirect Tensile Test Device
T 323-03 (2024)	Determining the Shear Strength at the Interface of Bonded Layers of Portland Cement Concrete
T 324-23	Hamburg Wheel-Track Testing of Compacted Asphalt Mixtures
T 325-22	Estimating the Strength of Concrete in Transportation Construction by Maturity Tests
T 326-22	Uncompacted Void Content of Coarse Aggregate (As Influenced by Particle Shape, Surface Texture, and Grading)
T 327-22	Resistance of Coarse Aggregate to Degradation by Abrasion in the Micro-Deval Apparatus
T 329-22	Moisture Content of Asphalt Mixtures by Oven Method
T 330-22	The Qualitative Detection of Harmful Clays of the Smectite Group in Aggregates Using Methylene Blue
T 331-25	Bulk Specific Gravity (G_{mb}) and Density of Compacted Asphalt Mixtures Using Automatic Vacuum Sealing Method

Standard Number	Title
T 332-22	Determining Chloride Ions in Concrete and Concrete Materials by Specific Ion Probe
T 333-22	Linear Coefficient of Shrinkage on Cure of Adhesive Systems
T 334-08 (2024)	Estimating the Cracking Tendency of Concrete
T 335-09 (2023)	Determining the Percentage of Fracture in Coarse Aggregate
T 336-22	Coefficient of Thermal Expansion of Hydraulic Cement Concrete
T 337-09 (2023)	Non-Instrumental Determination of Metallic Zinc in Zinc-Rich Primers
T 338-09 (2024)	Analysis of Structural Steel Coatings for Hindered Amine Light Stabilizer (HALS)
T 339-22	Analysis of Structural Steel Coatings for Isocyanate Content
T 340-23	Determining Rutting Susceptibility of Asphalt Mixtures Using the Asphalt Pavement Analyzer (APA)
T 341-22	Determination of Compression Capacity for Profile Wall Plastic Pipe by Stub Compression Loading
T 342-22	Determining Dynamic Modulus of Hot Mix Asphalt (HMA)
T 343-12 (2024)	Density of In-Place Asphalt Pavement by Electronic Surface Contact Devices
T 344-22	Evaluation of Superpave Gyratory Compactor (SGC) Internal Angle of Gyration Using Simulated Loading
T 345-25	Passing Ability of Self-Consolidating Concrete (SCC) by J-Ring
T 346-22	Glass Beads Used in Pavement Markings
T 347-13 (2025)	Slump Flow of Self-Consolidating Concrete (SCC)
T 348-22	Air-Void Characteristics of Freshly Mixed Concrete by Buoyancy Change
T 349-13 (2025)	Filling Capacity of Self-Consolidating Concrete Using the Caisson Test
T 350-25	Multiple Stress Creep Recovery (MSCR) Test of Asphalt Binder Using a Dynamic Shear Rheometer (DSR)
T 351-14 (2022)	Visual Stability Index (VSI) of Self-Consolidating Concrete (SCC)
T 352-14 (2022)	Determining Formwork Pressure of Fresh Self-Consolidating Concrete (SCC) Using Pressure Transducers
T 353-14 (2022)	Particle Size Analysis of Hydraulic Cement and Related Materials by Light Scattering
T 354-22	Specific Gravity and Absorption of Aggregate by Volumetric Immersion Method
T 355-22	In-Place Density of Asphalt Mixtures by Nuclear Methods
T 356-22	Determining Air Content of Hardened Portland Cement Concrete by High-Pressure Air Meter
T 357-22	Predicting Chloride Penetration of Hydraulic Cement Concrete by the Rapid Migration Procedure
T 358-24	Surface Resistivity Indication of Concrete's Ability to Resist Chloride Ion Penetration
T 359M/T 359-18 (2022)	Pavement Thickness by Magnetic Pulse Induction
T 360-16 (2024)	Measurement of Tire/Pavement Noise Using the On-Board Sound Intensity (OBSI) Method
T 361-22	Determining Asphalt Binder Bond Strength by Means of the Binder Bond Strength (BBS) Test
T 362-17 (2025)	Quantitative Determination of the Percentage of Lime in Asphalt Mixtures
T 363-22	Evaluating Stress Development and Cracking Potential due to Restrained Volume Change Using a Dual Ring Test

Standard Number	Title
T 364-22	Determination of Composite Activation Energy of Aggregates due to Alkali–Silica Reaction (Chemical Method)
T 365-20 (2024)	Quantifying Calcium OxychlorideFormation Potential of Cementitious Pastes Exposed to Deicing Salts
T 366-22	Apparent Viscosity of Hot-Poured Asphalt Crack Sealant Using Rotational Viscometer
T 368-22	Measuring Low-Temperature Flexural Creep Stiffness of Hot-Poured Asphalt Crack Sealant by Bending Beam Rheometer (BBR)
T 369-22	Evaluation of the Low-Temperature Tensile Property of Hot-Poured Asphalt Crack Sealant by Direct Tension Test
T 370-22	Measuring Adhesion of Hot-Poured Asphalt Crack Sealant Using Direct Adhesion Tester
T 371-22	Measuring Interfacial Fracture Energy of Hot-Poured Asphalt Crack Sealant Using a Blister Test
T 372M/T 372-17 (2025)	Sensitivity of Stainless Steel to Intergranular Attack
T 373M/T 373-17 (2025)	Comparative Qualitative Corrosion Characterization of Steel Bars Used for Concrete Reinforcement (Linear Polarization Resistance and Potentiodynamic Polarization Tests)
T 374M/T 374-17 (2025)	Comparative Qualitative Corrosion Characterization of Uncoated Chromium-Alloyed Steel Bars Used for Concrete Reinforcement (Tombstone Test)
T 375M/T 375-17 (2025)	Identification of Iron-Based Alloy Steel Bars for Concrete Reinforcement or Dowels by Handheld X-Ray Fluorescence (XRF) Spectrometer
T 376M/T 376-24	Macrocell Slab Chloride Threshold
T 377-22	Detecting the Presence of Phosphorous in Asphalt Binder
T 378-22	Determining the Dynamic Modulus and Flow Number for Asphalt Mixtures Using the Asphalt Mixture Performance Tester (AMPT)
T 379-18 (2022)	Nonlinear Impact Resonance Acoustic Spectroscopy (NIRAS) for Concrete Specimens with Damage from Alkali-Silica Reaction (ASR)
T 380-22	Potential Alkali Reactivity of Aggregates and Effectiveness of ASR Mitigation Measures (Miniature Concrete Prism Test, MCPT)
T 381-22	Determining Aggregate Shape Properties by Means of Digital Image Analysis
T 382-22	Determining the Viscosity of Emulsified Asphalt by a Rotational Paddle Viscometer
T 383-23	Evaluation of Asphalt Release Agents (ARAs)
T 384-23	Protective Sealers for Portland Cement Concrete
T 385-19 (2023)	Deep Foundation Elements under Bidirectional Static Axial Compressive Load
T 386-19 (2023)	Rapid Axial Compressive Load Testing of Deep Foundation Units
T 387-19 (2023)	Determining the Cracking Temperature of Asphalt Binder Using the Asphalt Binder Cracking Device (ABCD)
T 388-22	Detectable Warning Systems
T 389-22	Determining the Influence of Road Surfaces on Vehicle Noise Using the Statistical Isolated Pass-By (SIP) Method
T 390-22	Determining the Influence of Road Surfaces on Traffic Noise Using the Continuous-Flow Traffic Time-Integrated Method (CTIM)
T 391-20 (2024)	Estimating Fatigue Resistance of Asphalt Binders Using the Linear Amplitude Sweep
T 392-21 (2025)	Determination of Heavy Metal Content of Glass Beads Using X-Ray Fluorescence (XRF)
T 393-22	Determining the Fracture Potential of Asphalt Mixtures Using the Illinois Flexibility Index Test (I-FIT)

Standard Number	Title
T 394-22	Determining the Fracture Energy of Asphalt Mixtures Using the Semicircular Bend Geometry (SCB)
T 395-24	Characterization of the Air-Void System of Freshly Mixed Concrete by the Sequential Pressure Method
T 396-22	Box Test in Slip Form Paving of Fresh Portland Cement Concrete
T 397-24	Uniaxial Tensile Response of Ultra-High Performance Concrete
T 398-25	Measuring Retroreflectivity of Longitudinal Pavement Marking Materials Using a Mobile Retroreflectometer Unit
T 399-22	Determining In-Place Density and Moisture Content of Soil and Soil–Aggregate Using Complex Impedance Methodology
T 400-24	Determining the Damage Characteristic Curve and Failure Criterion Using the Asphalt Mixture Performance Tester (AMPT) Cyclic Fatigue Test
T 401-22	Cantabro Abrasion Loss of Asphalt Mixture Specimens
T 402-24	Electrical Resistivity of a Concrete Cylinder Tested in a Uniaxial Resistance Test
T 403-23	Vibrating Kelly Ball (VKelly) Penetration in Fresh Portland Cement Concrete
T 404-23	Evaluation of the Tracking Resistance of Hot-Poured Asphalt Crack Sealant by Dynamic Shear Rheometer (DSR)
T 405-23	Determination of Asphalt Binder Resistance to Ductile Failure Using Double-Edge-Notched Tension (DENT) Test
T 406-23	Determination of Performance Grade of Physically Aged Asphalt Binder Using Extended Bending Beam Rheometer (BBR) Method
T 407-23	Determining the Interlayer Shear Strength (ISS) of Asphalt Pavement Layers
T 408-23	Determining the Quality of Tack Coat Adhesion to the Surface of an Asphalt Pavement in the Field or Laboratory
T 409-23	Determination of the Voids of Dry Compacted Filler
T 410-23	Rutting and Fatigue Resistance of Asphalt Mixtures Using Incremental Repeated Load Permanent Deformation (iRLPD)
T 411-24	Determining the Damage Characteristic Curve and Failure Criterion Using Small Specimens in the Asphalt Mixture Performance Tester (AMPT) Cyclic Fatigue Test
T 412-24	Real-Time Estimate of In-Place Concrete Strength Using Acoustical Resonance Method
T 413-25	Estimating the Early Opening Strength of Concrete Pavements by Maturity Tests
T 414-24	Determining the Dielectric Constant of Compacted Asphalt Mixture Specimens
T 415-24	Weight and Diameter for Carbon-Steel for Steel Wire and Welded Wire Reinforcement for Concrete
T 416-25	Determination of Alkali Threshold for Alkali–Silica Reactivity in Aggregates Used in Concrete (ATT)
T 417-24	Pore Index for Carbonate Coarse Aggregate
T 418-24	Measuring Asphalt Binder Yield Energy and Elastic Recovery Using the Dynamic Shear Rheometer
T 419-24	Determining the Flexural Creep Stiffness of Asphalt Mixtures Using the Bending Beam Rheometer (BBR)
T 420-25	Evaluation of Oxidation Level of Asphalt Mixtures by a Portable Infrared Spectrometer
T 421-25	Determining the Dynamic Modulus of Asphalt Mixtures Using the Indirect Tension Test
T 422-25	Stress Sweep Rutting (SSR) Test Using Asphalt Mixture Performance Tester (AMPT)

Standard Number	Title
T 423-25	Moisture Sensitivity Using Hydrostatic Pore Pressure to Determine Cohesion and Adhesion Strength of Compacted Asphalt Mixture Specimens
T 424-25	Determining the Indirect Tensile Nflex Factor to Assess the Cracking Resistance of Asphalt Mixtures

PART 2—STANDARD METHODS OF TEST

Subject Sequence Table of Contents

Standard Number	Title
T 53-22	Softening Point of Bitumen (Ring-and-Ball Apparatus)
T 59-25	Emulsified Asphalts
T 72-22	Saybolt Viscosity
T 78-22	Distillation of Cutback Asphalt Products
T 79-22	Flash Point with Tag Open-Cup Apparatus for Use with Material Having a Flash Point Less Than 93ºC (200ºF)
T 102-22	Spot Test of Asphaltic Materials
T 110-03 (2024)	Moisture or Volatile Distillates in Asphalt Mixtures
T 111-22	Mineral Matter or Ash in Asphalt Materials
T 164-24	Quantitative Extraction of Asphalt Binder from Asphalt Mixtures
T 166-25	Bulk Specific Gravity (G_{mb}) of Compacted Asphalt Mixtures Using Saturated Surface-Dry Specimens
T 167-22	Compressive Strength of Hot Mix Asphalt
T 179M/T 179-23	Effect of Heat and Air on Asphalt Materials (Thin-Film Oven Test)
T 195-22	Determining Degree of Particle Coating of Asphalt Mixtures
T 201-22	Kinematic Viscosity of Asphalts (Bitumens)
T 202-22	Viscosity of Asphalts by Vacuum Capillary Viscometer
T 209-25	Theoretical Maximum Specific Gravity (G_{mm}) and Density of Asphalt Mixtures
T 228-22	Specific Gravity and Density of Semi-Solid Asphalt Materials
T 240-23	Effect of Heat and Air on a Moving Film of Asphalt Binder (Rolling Thin-Film Oven Test)
T 245-22	Resistance to Plastic Flow of Asphalt Mixtures Using Marshall Apparatus
T 246-22	Resistance to Deformation and Cohesion of Hot Mix Asphalt (HMA) by Means of Hveem Apparatus
T 247-22	Preparation of Test Specimens of Hot Mix Asphalt (HMA) by Means of California Kneading Compactor
T 269-24	Percent Air Voids in Compacted Dense and Open Asphalt Mixtures
T 275-22	Bulk Specific Gravity (G_{mb}) of Compacted Asphalt Mixtures Using Paraffin-Coated Specimens
T 283-22	Resistance of Compacted Asphalt Mixtures to Moisture-Induced Damage
T 287-25	Asphalt Binder Content of Asphalt Mixtures by the Nuclear Method
T 295-22	Specific Gravity or API Gravity of Liquid Asphalts by Hydrometer Method
T 300-22	Force Ductility Test of Asphalt Materials
T 301-22	Elastic Recovery Test of Asphalt Materials by Means of a Ductilometer
T 302-22	Polymer Content of Polymer-Modified Emulsified Asphalt Residue and Asphalt Binders
T 305-22	Determination of Draindown Characteristics in Uncompacted Asphalt Mixtures
T 308-25	Determining the Asphalt Binder Content of Asphalt Mixtures by the Ignition Method
T 312-22	Preparing and Determining the Density of Asphalt Mixture Specimens by Means of the Superpave Gyratory Compactor
T 313-25	Determining the Flexural Creep Stiffness of Asphalt Binder Using the Bending Beam Rheometer (BBR)
T 314-22	Determining the Fracture Properties of Asphalt Binder in Direct Tension (DT)
T 315-24	Determining the Rheological Properties of Asphalt Binder Using a Dynamic Shear Rheometer (DSR)

Standard Number	Title
T 316-22	Viscosity Determination of Asphalt Binder Using Rotational Viscometer
T 319-25	Quantitative Extraction and Recovery of Asphalt Binder from Asphalt Mixtures
T 320-22	Determining the Permanent Shear Strain and Stiffness of Asphalt Mixtures Using the Superpave Shear Tester (SST)
T 321-22	Determining the Fatigue Life of Compacted Asphalt Mixtures Subjected to Repeated Flexural Bending
T 322-07 (2020)	Determining the Creep Compliance and Strength of Hot Mix Asphalt (HMA) Using the Indirect Tensile Test Device
T 324-23	Hamburg Wheel-Track Testing of Compacted Asphalt Mixtures
T 329-22	Moisture Content of Asphalt Mixtures by Oven Method
T 331-25	Bulk Specific Gravity (G_{mb}) and Density of Compacted Asphalt Mixtures Using Automatic Vacuum Sealing Method
T 340-23	Determining Rutting Susceptibility of Asphalt Mixtures Using the Asphalt Pavement Analyzer (APA)
T 342-22	Determining Dynamic Modulus of Hot Mix Asphalt (HMA)
T 343-12 (2024)	Density of In-Place Asphalt Pavement by Electronic Surface Contact Devices
T 344-22	Evaluation of Superpave Gyratory Compactor (SGC) Internal Angle of Gyration Using Simulated Loading
T 350-25	Multiple Stress Creep Recovery (MSCR) Test of Asphalt Binder Using a Dynamic Shear Rheometer (DSR)
T 355-22	In-Place Density of Asphalt Mixtures by Nuclear Methods
T 361-22	Determining Asphalt Binder Bond Strength by Means of the Binder Bond Strength (BBS) Test
T 362-17 (2025)	Quantitative Determination of the Percentage of Lime in Asphalt Mixtures
T 377-22	Detecting the Presence of Phosphorous in Asphalt Binder
T 378-22	Determining the Dynamic Modulus and Flow Number for Asphalt Mixtures Using the Asphalt Mixture Performance Tester (AMPT)
T 382-22	Determining the Viscosity of Emulsified Asphalt by a Rotational Paddle Viscometer
T 383-23	Evaluation of Asphalt Release Agents (ARAs)
T 387-19 (2023)	Determining the Cracking Temperature of Asphalt Binder Using the Asphalt Binder Cracking Device (ABCD)
T 391-20 (2024)	Estimating Fatigue Resistance of Asphalt Binders Using the Linear Amplitude Sweep
T 393-22	Determining the Fracture Potential of Asphalt Mixtures Using the Illinois Flexibility Index Test (I-FIT)
T 394-22	Determining the Fracture Energy of Asphalt Mixtures Using the Semicircular Bend Geometry (SCB)
T 400-24	Determining the Damage Characteristic Curve and Failure Criterion Using the Asphalt Mixture Performance Tester (AMPT) Cyclic Fatigue Test
T 401-22	Cantabro Abrasion Loss of Asphalt Mixture Specimens
T 404-23	Evaluation of the Tracking Resistance of Hot-Poured Asphalt Crack Sealant by Dynamic Shear Rheometer (DSR)
T 405-23	Determination of Asphalt Binder Resistance to Ductile Failure Using Double-Edge-Notched Tension (DENT) Test
T 406-23	Determination of Performance Grade of Physically Aged Asphalt Binder Using Extended Bending Beam Rheometer (BBR) Method

Standard Number	Title
T 407-23	Determining the Interlayer Shear Strength (ISS) of Asphalt Pavement Layers
T 408-23	Determining the Quality of Tack Coat Adhesion to the Surface of an Asphalt Pavement in the Field or Laboratory
T 409-23	Determination of the Voids of Dry Compacted Filler
T 410-23	Rutting and Fatigue Resistance of Asphalt Mixtures Using Incremental Repeated Load Permanent Deformation (iRLPD)
T 411-24	Determining the Damage Characteristic Curve and Failure Criterion Using Small Specimens in the Asphalt Mixture Performance Tester (AMPT) Cyclic Fatigue Test
T 418-24	Measuring Asphalt Binder Yield Energy and Elastic Recovery Using the Dynamic Shear Rheometer
T 419-24	Determining the Flexural Creep Stiffness of Asphalt Mixtures Using the Bending Beam Rheometer (BBR)
T 420-25	Evaluation of Oxidation Level of Asphalt Mixtures by a Portable Infrared Spectrometer
T 421-25	Determining the Dynamic Modulus of Asphalt Mixtures Using the Indirect Tension Test
T 422-25	Stress Sweep Rutting (SSR) Test Using Asphalt Mixture Performance Tester (AMPT)
T 423-25	Moisture Sensitivity Using Hydrostatic Pore Pressure to Determine Cohesion and Adhesion Strength of Compacted Asphalt Mixture Specimens
T 424-25	Determining the Indirect Tensile Nflex Factor to Assess the Cracking Resistance of Asphalt Mixtures
	Box Culvert, Culvert Pipe, and Drain Tile
T 241-95 (2025)	Helical Continuously Welded Seam Corrugated Steel Pipe
T 249-03 (2025)	Helical Lock Seam Corrugated Pipe
T 280M/T 280-24	Concrete Pipe, Manhole Sections, or Tile
T 281-24	Vitrified Clay Pipe
T 341-22	Determination of Compression Capacity for Profile Wall Plastic Pipe by Stub Compression Loading
	Concrete, Curing Materials, and Admixtures
T 22M/T 22-25	Compressive Strength of Cylindrical Concrete Specimens
T 24M/T 24-22	Obtaining and Testing Drilled Cores and Sawed Beams of Concrete
T 97M/T 97-23	Flexural Strength of Concrete (Using Simple Beam with Third-Point Loading)
T 119M/T 119-23	Slump of Hydraulic Cement Concrete
T 121M/T 121-25	Density (Unit Weight), Yield, and Air Content (Gravimetric) of Concrete
T 140-20 (2024)	Compressive Strength of Concrete Using Portions of Beams Broken in Flexure
T 148-22	Measuring Length of Drilled Concrete Cores
T 152-24	Air Content of Freshly Mixed Concrete by the Pressure Method
T 155-23	Water Retention by Liquid Membrane-Forming Curing Compounds for Concrete
T 157M/T 157-23	Air-Entraining Admixtures for Concrete
T 158M/T 158-23	Bleeding of Concrete
T 160-22	Length Change of Hardened Hydraulic Cement Mortar and Concrete
T 161-22	Resistance of Concrete to Rapid Freezing and Thawing
T 177M/T 177-17 (2025)	Flexural Strength of Concrete (Using Simple Beam with Center-Point Loading)
T 178-22	Portland-Cement Content of Hardened Hydraulic-Cement Concrete

Standard Number	Title
T 196M/T 196-25	Air Content of Freshly Mixed Concrete by the Volumetric Method
T 197M/T 197-25	Time of Setting of Concrete Mixtures by Penetration Resistance
T 198-22	Splitting Tensile Strength of Cylindrical Concrete Specimens
T 231-25	Capping Cylindrical Concrete Specimens
T 253M/T 253-24	Coated Dowel Bars
T 259-02 (2025)	Resistance of Concrete to Chloride Ion Penetration
T 260-21 (2025)	Sampling and Testing for Chloride Ion in Concrete and Concrete Raw Materials
T 276-22	Measuring Early-Age Compression Strength and Projecting Later-Age Strength
T 277-23	Electrical Indication of Concrete's Ability to Resist Chloride Ion Penetration
T 285M/T 285-24	Bend Test for Bars for Concrete Reinforcement
T 303-22	Accelerated Detection of Potentially Deleterious Expansion of Mortar Bars Due to Alkali–Silica Reaction
T 309-22	Temperature of Freshly Mixed Portland Cement Concrete
T 318-15 (2023)	Water Content of Freshly Mixed Concrete Using Microwave Oven Drying
T 325-22	Estimating the Strength of Concrete in Transportation Construction by Maturity Tests
T 332-22	Determining Chloride Ions in Concrete and Concrete Materials by Specific Ion Probe
T 334-08 (2024)	Estimating the Cracking Tendency of Concrete
T 336-22	Coefficient of Thermal Expansion of Hydraulic Cement Concrete
T 345-25	Passing Ability of Self-Consolidating Concrete (SCC) by J-Ring
T 347-13 (2025)	Slump Flow of Self-Consolidating Concrete (SCC)
T 348-22	Air-Void Characteristics of Freshly Mixed Concrete by Buoyancy Change
T 349-13 (2025)	Filling Capacity of Self-Consolidating Concrete Using the Caisson Test
T 351-14 (2022)	Visual Stability Index (VSI) of Self-Consolidating Concrete (SCC)
T 352-14 (2022)	Determining Formwork Pressure of Fresh Self-Consolidating Concrete (SCC) Using Pressure Transducers
T 356-22	Determining Air Content of Hardened Portland Cement Concrete by High-Pressure Air Meter
T 357-22	Predicting Chloride Penetration of Hydraulic Cement Concrete by the Rapid Migration Procedure
T 358-24	Surface Resistivity Indication of Concrete's Ability to Resist Chloride Ion Penetration
T 359M/T 359-18 (2022)	Pavement Thickness by Magnetic Pulse Induction
T 363-22	Evaluating Stress Development and Cracking Potential due to Restrained Volume Change Using a Dual Ring Test
T 364-22	Determination of Composite Activation Energy of Aggregates due to Alkali–Silica Reaction (Chemical Method)
T 365-20 (2024)	Quantifying Calcium OxychlorideFormation Potential of Cementitious Pastes Exposed to Deicing Salts
T 379-18 (2022)	Nonlinear Impact Resonance Acoustic Spectroscopy (NIRAS) for Concrete Specimens with Damage from Alkali-Silica Reaction (ASR)
T 395-24	Characterization of the Air-Void System of Freshly Mixed Concrete by the Sequential Pressure Method
T 396-22	Box Test in Slip Form Paving of Fresh Portland Cement Concrete
T 397-24	Uniaxial Tensile Response of Ultra-High Performance Concrete

Standard Number	Title
T 402-24	Electrical Resistivity of a Concrete Cylinder Tested in a Uniaxial Resistance Test
T 403-23	Vibrating Kelly Ball (VKelly) Penetration in Fresh Portland Cement Concrete
T 412-24	Real-Time Estimate of In-Place Concrete Strength Using Acoustical Resonance Method
T 413-25	Estimating the Early Opening Strength of Concrete Pavements by Maturity Tests
	Hydraulic Cement
T 98M/T 98-12 (2025)	Fineness of Portland Cement by the Turbidimeter
T 105-25	Chemical Analysis of Hydraulic Cement
T 106M/T 106-25	Compressive Strength of Hydraulic Cement Mortar (Using 50-mm or 2-in. Cube Specimens)
T 107M/T 107-25	Autoclave Expansion of Hydraulic Cement
T 129-25	Amount of Water Required for Normal Consistency of Hydraulic Cement Paste
T 131-23	Time of Setting of Hydraulic Cement by Vicat Needle
T 132-22	Tensile Strength of Hydraulic Cement Mortars
T 133-22	Density of Hydraulic Cement
T 137-22	Air Content of Hydraulic Cement Mortar
T 153-25	Fineness of Hydraulic Cement by Air Permeability Apparatus
T 154-23	Time of Setting of Hydraulic Cement Paste by Gillmore Needles
T 185-23	Early Stiffening of Hydraulic Cement (Mortar Method)
T 186-23	Early Stiffening of Hydraulic Cement (Paste Method)
T 188-05 (2025)	Evaluation by Freezing and Thawing of Air-Entraining Additions to Hydraulic Cement
T 192-23	Fineness of Hydraulic Cement by the 45-µm (No. 325) Sieve
T 323-03 (2024)	Determining the Shear Strength at the Interface of Bonded Layers of Portland Cement Concrete
T 353-14 (2022)	Particle Size Analysis of Hydraulic Cement and Related Materials by Light Scattering
	Joint Filler and Asphalt Plank
T 366-22	Apparent Viscosity of Hot-Poured Asphalt Crack Sealant Using Rotational Viscometer
T 368-22	Measuring Low-Temperature Flexural Creep Stiffness of Hot-Poured Asphalt Crack Sealant by Bending Beam Rheometer (BBR)
T 369-22	Evaluation of the Low-Temperature Tensile Property of Hot-Poured Asphalt Crack Sealant by Direct Tension Test
T 370-22	Measuring Adhesion of Hot-Poured Asphalt Crack Sealant Using Direct Adhesion Tester
T 371-22	Measuring Interfacial Fracture Energy of Hot-Poured Asphalt Crack Sealant Using a Blister Test
	Metallic Materials for Bridges
T 65M/T 65-24	Mass [Weight] of Coating on Iron and Steel Articles with Zinc or Zinc-Alloy Coatings
T 213M/T 213-24	Mass [Weight] of Coating on Aluminum-Coated Iron or Steel Articles
T 243M/T 243-19 (2023)	Sampling Procedure for Impact Testing of Structural Steel
T 244-25	Mechanical Testing of Steel Products
T 337-09 (2023)	Non-Instrumental Determination of Metallic Zinc in Zinc-Rich Primers
T 338-09 (2024)	Analysis of Structural Steel Coatings for Hindered Amine Light Stabilizer (HALS)
T 339-22	Analysis of Structural Steel Coatings for Isocyanate Content

Standard Number	Title
T 372M/T 372-17 (2025)	Sensitivity of Stainless Steel to Intergranular Attack
T 373M/T 373-17 (2025)	Comparative Qualitative Corrosion Characterization of Steel Bars Used for Concrete Reinforcement (Linear Polarization Resistance and Potentiodynamic Polarization Tests)
T 374M/T 374-17 (2025)	Comparative Qualitative Corrosion Characterization of Uncoated Chromium-Alloyed Steel Bars Used for Concrete Reinforcement (Tombstone Test)
T 375M/T 375-17 (2025)	Identification of Iron-Based Alloy Steel Bars for Concrete Reinforcement or Dowels by Handheld X-Ray Fluorescence (XRF) Spectrometer
T 376M/T 376-24	Macrocell Slab Chloride Threshold
T 415-24	Weight and Diameter for Carbon-Steel for Steel Wire and Welded Wire Reinforcement for Concrete
	Miscellaneous
T 256-01 (2024)	Pavement Deflection Measurements
T 384-23	Protective Sealers for Portland Cement Concrete
T 388-22	Detectable Warning Systems
T 414-24	Determining the Dielectric Constant of Compacted Asphalt Mixture Specimens
	Painting, Traffic Marking, and Signing
T 143-13 (2025)	Sampling and Testing Calcium Chloride for Roads and Structural Applications
T 237-25	Epoxy Resin Adhesives for Bonding Traffic Markers to Hardened Portland Cement and Asphalt Concrete
T 250-23	Thermoplastic Traffic Line Material
T 333-22	Linear Coefficient of Shrinkage on Cure of Adhesive Systems
T 346-22	Glass Beads Used in Pavement Markings
T 392-21 (2025)	Determination of Heavy Metal Content of Glass Beads Using X-Ray Fluorescence (XRF)
T 398-25	Measuring Retroreflectivity of Longitudinal Pavement Marking Materials Using a Mobile Retroreflectometer Unit
	Pavement Surface Characteristics
T 242-18 (2022)	Frictional Properties of Paved Surfaces Using a Full-Scale Tire
T 278-24	Surface Frictional Properties Using the British Pendulum Tester
T 282M/T 282-24	Calibrating a Wheel Force or Torque Transducer Using a Calibration Platform (User Level)
T 317-04 (2022)	Prediction of Asphalt-Bound Pavement Layer Temperatures
T 360-16 (2024)	Measurement of Tire/Pavement Noise Using the On-Board Sound Intensity (OBSI) Method
T 389-22	Determining the Influence of Road Surfaces on Vehicle Noise Using the Statistical Isolated Pass-By (SIP) Method
T 390-22	Determining the Influence of Road Surfaces on Traffic Noise Using the Continuous-Flow Traffic Time-Integrated Method (CTIM)
	Soils and Stabilization
T 88-22	Particle Size Analysis of Soils
T 89-22	Determining the Liquid Limit of Soils
T 90-22	Determining the Plastic Limit and Plasticity Index of Soils
T 99-25	Moisture–Density Relations of Soils Using a 2.5-kg (5.5-lb) Rammer and a 305-mm (12-in.) Drop

Standard Number	Title
T 100-25	Specific Gravity of Soils
T 134-25	Moisture–Density Relations of Soil–Cement Mixtures
T 135-22	Wetting-and-Drying Test of Compacted Soil–Cement Mixtures
T 136-22	Freezing-and-Thawing Tests of Compacted Soil–Cement Mixtures
T 176-22	Plastic Fines in Graded Aggregates and Soils by Use of the Sand Equivalent Test
T 180-25	Moisture–Density Relations of Soils Using a 4.54-kg (10-lb) Rammer and a 457-mm (18-in.) Drop
T 190M/T 190-25	Resistance R-Value and Expansion Pressure of Compacted Soils
T 191-14 (2022)	Density of Soil In-Place by the Sand-Cone Method
T 193-22	The California Bearing Ratio
T 194-22	Determination of Organic Matter in Soils by Wet Combustion
T 206-22 (2025)	Penetration Test and Split-Barrel Sampling of Soils
T 207-22	Thin-Walled Tube Sampling of Soils
T 208M/T 208-25	Unconfined Compressive Strength of Cohesive Soil
T 211-90 (2025)	Determination of Cement Content in Cement-Treated Aggregate by the Method of Titration
T 215M/T 215-25	Permeability of Granular Soils (Constant Head)
T 216M/T 216-25	One-Dimensional Consolidation Properties of Soils
T 217-14 (2022)	Determination of Moisture in Soils by Means of a Calcium Carbide Gas Pressure Moisture Tester
T 218-86 (2022)	Sampling Hydrated Lime
T 219-22	Testing Lime for Chemical Constituents and Particle Sizes
T 220-22	Determination of the Strength of Soil–Lime Mixtures
T 221M/T 221-24	Repetitive Static Plate Tests of Soils and Flexible Pavement Components for Use in Evaluation and Design of Airport and Highway Pavements
T 222M/T 222-25	Nonrepetitive Static Plate Load Test of Soils and Flexible Pavement Components for Use in Evaluation and Design of Airport and Highway Pavements
T 223-96 (2025)	Field Vane Shear Test in Cohesive Soil
T 225-16 (2024)	Diamond Core Drilling for Site Investigation
T 226-25	Triaxial Compressive Strength of Undrained Rock Core Specimens without Pore Pressure Measurements
T 232-90 (2022)	Determination of Lime Content in Lime-Treated Soils by Titration
T 233-22	Density of Soil In-Place by Block, Chunk, or Core Sampling
T 236-22	Direct Shear Test of Soils under Consolidated Drained Conditions
T 252-19 (2023)	Measurements of Pore Pressures in Soils
T 258-81 (2022)	Determining Expansive Soils
T 265-22	Laboratory Determination of Moisture Content of Soils
T 267-22	Determination of Organic Content in Soils by Loss on Ignition
T 272-18 (2022)	One-Point Method for Determining Maximum Dry Density and Optimum Moisture
T 273-86 (2022)	Soil Suction
T 288-25	Determining Minimum Laboratory Soil Resistivity
T 289-22	Determining pH of Soil for Use in Corrosion Testing
T 290-95 (2024)	Determining Water-Soluble Sulfate Ion Content in Soil

Standard Number	Title
T 291-22	Determining Water-Soluble Chloride Ion Content in Soil
T 296-22	Unconsolidated, Undrained Compressive Strength of Cohesive Soils in Triaxial Compression
T 298-15 (2023)	High-Strain Dynamic Testing of Piles
T 306-11 (2023)	Progressing Auger Borings for Geotechnical Explorations
T 307-99 (2025)	Determining the Resilient Modulus of Soils and Aggregate Materials
T 310-22	In-Place Density and Moisture Content of Soil and Soil–Aggregate by Nuclear Methods (Shallow Depth)
T 311-20 (2024)	Grain-Size Analysis of Granular Soil Materials
T 385-19 (2023)	Deep Foundation Elements under Bidirectional Static Axial Compressive Load
T 386-19 (2023)	Rapid Axial Compressive Load Testing of Deep Foundation Units
T 399-22	Determining In-Place Density and Moisture Content of Soil and Soil–Aggregate Using Complex Impedance Methodology

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 margin. Unballoted editorial changes do not receive the change bar in reconformed standards; however, the subheader line below the designation number will indicate if the standard has been editorially revised.

Release: 2025

Designation Number	Title	TS	Technical Changes
T 11-25	Materials Finer Than 75-µm (No. 200) Sieve in Aggregates by Washing	1c	Revised to add new Note 3 and Annex A; minor revision in Section 9.4. Editorially revised the safety caveat in Section 1.
T 19M/T 19-25	Bulk Density (“Unit Weight”) and Voids in Aggregate	1c	Revised for equivalency with ASTM C29/C29M-23; revised Sections 8.7 and 13. Editorially revised the safety caveat in Section 1.
T 22M/T 22-25	Compressive Strength of Cylindrical Concrete Specimens	3c	Revised Section 11, including editorial revisions to Section 11.1.2.
T 30-25	Mechanical Analysis of Extracted Aggregate	2c	Revised to add reference, description of apparatus, and instructions for using ASTM D8159; revised Sections 3.1, 5.9, 7.1, Note 3, and 8.1.3. Editorially revised Sections 8.7 and 1.3; editorially revised the safety caveat in Section 1.
T 50-25	Float Test for Bituminous Materials	2a	Revised as part of a Task Force on Asphalt Standards Harmonization (TFASH) effort where AASHTO and ASTM members work together to harmonize similar standards; revised Sections 3 through 7 including note 1 and 2 were removed, except for Section 5.4.1 and 5.4.2, which contained references and thermometer language.
T 59-25	Emulsified Asphalts	2a	Revised as part of a Task Force on Asphalt Standards Harmonization (TFASH) effort where AASHTO and ASTM members work together to harmonize similar standards; revised section 6, and images have been revised to only include relevant measurements. Editorially revised the safety caveat in Section 1.
T 71-25	Effect of Organic Impurities in Fine Aggregate on Strength of Mortar	1c	Revised for equivalency with ASTM C87/C87M-23; revised Sections 2.1, 3.2, 5.5.6, 9.3, 12.1, and 12.3. Editorially revised the safety caveat in Section 1.

Designation Number	Title	TS	Technical Changes
T 84-25	Specific Gravity and Absorption of Fine Aggregate	1c	Revised for equivalency with ASTM C128-22 and for clarity; revised Sections 1.1, 3.1.1, 3.1.2, 4.1, 4.2, 7.1.1, Table 1, Sections 9 through 11, and Appendix X2. Editorially revised the safety caveat in Section 1.
T 85-25	Specific Gravity and Absorption of Coarse Aggregate	1c	Revised for equivalency with ASTM C127-15 and for clarity; revised Sections 1.1, 3, 5.1, 5.2, 9.1.1 through 9.1.3, and X.2.1; removed Note 6. Editorially revised the safety caveat in Section 1; editorially revised Sections 5.1 and 11.1.
T 96-22	Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine	1c	Editorially revised to harmonize with ASTM C131/C131M-20.
T 98M/T 98-12 (2025)	Fineness of Portland Cement by the Turbidimeter	3a	Reconfirmed for 2025 publication. Editorially revised the safety caveat in Section 1.
T 99-25	Moisture–Density Relations of Soils Using a 2.5-kg (5.5-lb) Rammer and a 305-mm (12-in.) Drop	1b	Revised to make minor change to Section 3.1 and update oven draying practice in Sections 3.5 and 3.6.
T 100-25	Specific Gravity of Soils	1a	Revised for equivalency with ASTM D854-23. Added Section 4, Summary of Test Method; made minor revisions in Section 12 and moved reporting to its own section; updated the precision and bias requirements; and added a footnote documenting major differences between T 100 and ASTM D854. Editorially revised the safety caveat in Section 1 and added two notes.
T 105-25	Chemical Analysis of Hydraulic Cement	3a	Revised Section 6.2.1.1 to require balance verification. Editorially revised the safety caveat in Section 1.
T 106M/T 106-25	Compressive Strength of Hydraulic Cement Mortar (Using 50-mm or 2-in. Cube Specimens)	3a	Reviewed for equivalency with ASTM C109/C109M-23. Editorially revised the safety caveat in Section 1.
T 107M/T 107-25	Autoclave Expansion of Hydraulic Cement	3a	Revised Section 2.2. Added new terminology section. Editorially revised the safety caveat in Section 1.
T 110-03 (2024)	Moisture or Volatile Distillates in Asphalt Mixtures	2c	Editorially updated for equivalency with ASTM D1461-17 (2022). Editorially revised the safety caveat in Section 1.
T 113-25	Lightweight Particles in Aggregate	1c	Revised for equivalency with ASTM C123/C123M-23; revised Section 2.2 and added new section 3. Editorially revised the safety caveat in Section 1.

Designation Number	Title	TS	Technical Changes
T 121M/T 121-25	Density (Unit Weight), Yield, and Air Content (Gravimetric) of Concrete	3b	Revised Sections 1 through 3.
T 129-25	Amount of Water Required for Normal Consistency of Hydraulic Cement Paste	3a	Revised Sections 1.3 amd 5.3.
T 134-25	Moisture–Density Relations of Soil–Cement Mixtures	1b	Revised to update oven dying practice in Section 3.5.
T 143-13 (2025)	Sampling and Testing Calcium Chloride for Roads and Structural Applications	4c	Reconfirmed for 2025 publication.
T 153-25	Fineness of Hydraulic Cement by Air Permeability Apparatus	3a	Revised Section 4.2. Deleted Table 3. Editorially revised the safety caveat in Section 1.
T 166-25	Bulk Specific Gravity (G_{mb}) of Compacted Asphalt Mixtures Using Saturated Surface-Dry Specimens	2c	Revised to explain that precision estimates also pertain to Method B (volumeter), added commentary about water bath heater/chiller, and clarified that thermometer resolution provided is a minimum value; revised Sections 5.2 and 6.4; added new Note 2. Editorially revised Section 6.3. 1.5; editorially revised the safety caveat in Section 1.
T 177M/T 177-17 (2025)	Flexural Strength of Concrete (Using Simple Beam with Center-Point Loading)	3c	Reconfirmed for 2025 publication. Editorially revised AASHTO and ASTM designation numbers to dual units and updated the Section 1 safety caveat.
T 180-25	Moisture–Density Relations of Soils Using a 4.54-kg (10-lb) Rammer and a 457-mm (18-in.) Drop	1b	Revised to update oven dying practice in Sections 3.5 and 3.6.
T 188-05 (2025)	Evaluation by Freezing and Thawing of Air-Entraining Additions to Hydraulic Cement	3b	Reconfirmed for 2025 publication.
T 190M/T 190-25	Resistance R-Value and Expansion Pressure of Compacted Soils	1a	Changed to dual units. Revised for equivalency with ASTM D2844/D2844M-18e1; replaced Figures 2 and 4 through 6. Revisions throughout, including new Section 1.2, major updates to Section 6, and a new precision and bias statement. Editorially revised to add Section 1 safety caveat and change units in brackets to parentheses.
T 196M/T 196-25	Air Content of Freshly Mixed Concrete by the Volumetric Method	3b	Revised Sections 1 through 3 and 6 through 10.
T 197M/T 197-25	Time of Setting of Concrete Mixtures by Penetration Resistance	3b	Revised Section 1 and Figure 1.
T 206-22 (2025)	Penetration Test and Split-Barrel Sampling of Soils	1b	Reconfirmed for 2025 publication. Editorially revised the safety caveat in Section 1 and added missing dimension lines in Figure 1b.

Designation Number	Title	TS	Technical Changes
T 208M/T 208-25	Unconfined Compressive Strength of Cohesive Soil	1a	Changed to dual units. Revised for equivalency with ASTM D2166/D2166M-16. Added Sections 1.5 and 4; modified endnote. Editorially revised to add Section 1 safety caveat and change units in brackets to parentheses.
T 209-25	Theoretical Maximum Specific Gravity (G_{mm}) and Density of Asphalt Mixtures	2c	Revised to modify requirements for thermometer used to measure water temperature, modified requirements for thermometer used for drying oven, and added commentary about water bath heater/chiller; revised Sections 2.2, 5.7, and 5.9. Editorially revised Section 5 and the safety caveat in Section 1.
T 210-25	Aggregate Durability Index	1c	Revised for equivalency with ASTM D3744/D3744M-18; revised Sections 3.2 through 3.4, 5.1, 5.3, 10.4 through 10.6, 11.2, 11.3, 12.3 through 12.5, 19.3, and 19.4; and Figure 1. Editorially revised the safety caveat in Section 1.
T 211-90 (2025)	Determination of Cement Content in Cement-Treated Aggregate by the Method of Titration	1c	Reconfirmed for 2025 publication. Editorially revised the safety caveat in Section 1.
T 215M/T 215-25	Permeability of Granular Soils (Constant Head)	1a	Revised to add new Sections 1.5 and 1.6 and U.S. unit conversions throughout, and update Sections 5.1.1.4 and 7.2. Editorially revised to add Section 1 safety caveat and remove U.S. units from equation in Section 12.2.1.
T 216M/T 216-25	One-Dimensional Consolidation Properties of Soils	1a	Changed to dual units. Revised for equivalency with ASTM D2435/D2435M-11(2020). Revised extensively throughout. Editorially revised to add new Sections 1.4 and 1.5, update Section 1 safety caveat, and change units in brackets to parentheses.
T 222M/T 222-25	Nonrepetitive Static Plate Load Test of Soils and Flexible Pavement Components for Use in Evaluation and Design of Airport and Highway Pavements	1b	Changed to dual units; revised for equivalency with ASTM D1196/D1196M-21. Editorially revised Sections 3.4, 6.2.1, 8.1.2, 8.2.2, and 8.2.3.
T 223-96 (2025)	Field Vane Shear Test in Cohesive Soil	1b	Reconfirmed for 2025 publication.
T 225-16 (2024)	Diamond Core Drilling for Site Investigation	1b	Reclassified T 225 as standard practice R 125.

Designation Number	Title	TS	Technical Changes
T 226-25	Triaxial Compressive Strength of Undrained Rock Core Specimens without Pore Pressure Measurements	1a	Revised for equivalency with ASTM D7012-23, Method A, replacing equivalence with ASTM D2664, which was withdrawn. Added Section 5.1.1 and an endnote summarizing the equivalency differences; made other minor updates. Editorially revised Section 1 safety caveat and fixed a typo in Section 8.1.3.
T 231-25	Capping Cylindrical Concrete Specimens	3c	Revised for equivalency with ASTM C617/C617M-23: Revised Sections 1.2, 5.4.2, and 6.2.4; added Section 1.2. Editorially revised the Section 1 safety caveat.
T 237-25	Epoxy Resin Adhesives for Bonding Traffic Markers to Hardened Portland Cement and Asphalt Concrete	4c	Title changed. Revised Sections 1, 2, 4 through 11, and 13 through 22. Deleted Section 12 and Part II.
T 241-95 (2025)	Helical Continuously Welded Seam Corrugated Steel Pipe	4b	Reconfirmed for 2025 publication.
T 244-25	Mechanical Testing of Steel Products	4f	Revised for equivalency with ASTM A370-24. Revised Sections 1.2, 2, 16.1, and H1.1.2. Added new note to Annex H, Rounding, noting that Table H.1 follows A1058, not ASTM A370. Editorially revised Section 1 safety caveat.
T 249-03 (2025)	Helical Lock Seam Corrugated Pipe	4b	Reconfirmed for 2025 publication.
T 255-25	Total Evaporable Moisture Content of Aggregate by Drying	1c	Revisions based on WAQTC recommendations; revised Sections 5.2, 5.3, 7.2.1, and 8.3. Editorially revised to update equivalency to ASTM C566-19, with an endnote added to specify that the only ASTM change is the addition of a paragraph referencing notes; editorially revised the safety caveat in Section 1.
T 259-02 (2025)	Resistance of Concrete to Chloride Ion Penetration	3c	Reconfirmed for 2025 publication.
T 260-21 (2025)	Sampling and Testing for Chloride Ion in Concrete and Concrete Raw Materials	3c	Reconfirmed for 2025 publication.
T 269-24	Percent Air Voids in Compacted Dense and Open Asphalt Mixtures	2c	Editorially updated for equivalency with ASTM D3203-22. Editorially revised the safety caveat in Section 1.
T 279-25	Accelerated Polishing of Aggregates Using the British Wheel	5a	Reviewed for equivalency with ASTM D3319-23. Editorially revised the safety caveat in Section 1.

Designation Number	Title	TS	Technical Changes
T 287-25	Asphalt Binder Content of Asphalt Mixtures by the Nuclear Method	2c	Revised to delete gauge count time in Section 8.8, deleted precision requirement for reporting asphalt binder content in Sections 8.8 and 10, modified precision requirement for reporting moisture content in Section 8.9, added moisture content as item reported in Section 10, and changed note in Section 10 addressing precision requirement for reporting asphalt binder content to be consistent with other standards of same nature. Editorially revised the safety caveat in Section 1.
T 288-25	Determining Minimum Laboratory Soil Resistivity	1a	Revised Section 3.8 and added new Note 4.
T 306-11 (2023)	Progressing Auger Borings for Geotechnical Explorations	1b	Reclassified T 306 as standard practice R 126.
T 307-99 (2025)	Determining the Resilient Modulus of Soils and Aggregate Materials	1a	Reconfirmed for 2025 publication.
T 308-25	Determining the Asphalt Binder Content of Asphalt Mixtures by the Ignition Method	2c	Revised to add instructions, formulas, and example calculations for determining correction factor batch weights in Annex A; revised Sections A2.8 and A3. Editorially revised Section A2.8 and added new Section A3; editorially revised the safety caveat in Section 1.
T 313-25	Determining the Flexural Creep Stiffness of Asphalt Binder Using the Bending Beam Rheometer (BBR)	2b	Revised from the TFASH efforts and a separate P&B effort. Editorially revised the safety caveat in Section 1.
T 319-25	Quantitative Extraction and Recovery of Asphalt Binder from Asphalt Mixtures	2c	Revised to add reference, description of apparatus, and instructions for using ASTM D8159; revised Section 2.2, and added new Sections 6.18 and 12.2.1. Editorially revised the safety caveat in Section 1.
T 327-22	Resistance of Coarse Aggregate to Degradation by Abrasion in the Micro-Deval Apparatus	1c	Editorially revised to harmonize with ASTM D6928-17.
T 331-25	Bulk Specific Gravity (G_{mb}) and Density of Compacted Asphalt Mixtures Using Automatic Vacuum Sealing Method	2c	Revised to incorporate updates involving plastic bag size, thickness, and selection to maintain equivalency with ASTM D6752/D6752M-23; modified thermometer requirements in Section 5, and modified water bath temperature range in Sections 5.10 and 6.3 to match values in other asphalt mixture test methods; revised sections 2.2, 5.2, 5.4, 5.7, and 5.10; deleted Note 1 and revise new Note 1 (old Note 2). Editorially revised the safety caveat in Section 1.

Designation Number	Title	TS	Technical Changes
T 345-25	Passing Ability of Self-Consolidating Concrete (SCC) by J-Ring	3b	Revised throughout to change brackets to parentheses; revised Figure 1 and Table 1.
T 347-13 (2025)	Slump Flow of Self-Consolidating Concrete (SCC)	3b	Reconfirmed for 2025 publication. Editorially revised the safety caveat in Section 1.
T 349-13 (2025)	Filling Capacity of Self-Consolidating Concrete Using the Caisson Test	3b	Reconfirmed for 2025 publication. Editorially revised the safety caveat in Section 1.
T 350-25	Multiple Stress Creep Recovery (MSCR) Test of Asphalt Binder Using a Dynamic Shear Rheometer (DSR)	2b	Revised from the ETF Updates. Editorially revised the safety caveat in Section 1.
T 362-17 (2025)	Quantitative Determination of the Percentage of Lime in Asphalt Mixtures	2c	Reconfirmed for 2025 publication.
T 372M/T 372-17 (2025)	Sensitivity of Stainless Steel to Intergranular Attack	4f	Reconfirmed for 2025 publication. Editorially revised Section 1 safety caveat.
T 373M/T 373-17 (2025)	Comparative Qualitative Corrosion Characterization of Steel Bars Used for Concrete Reinforcement (Linear Polarization Resistance and Potentiodynamic Polarization Tests)	4f	Reconfirmed for 2025 publication. Editorially revised Section 1 safety caveat.
T 374M/T 374-17 (2025)	Comparative Qualitative Corrosion Characterization of Uncoated Chromium-Alloyed Steel Bars Used for Concrete Reinforcement (Tombstone Test)	4f	Reconfirmed for 2025 publication. Editorially revised Section 1 safety caveat.
T 375M/T 375-17 (2025)	Identification of Iron-Based Alloy Steel Bars for Concrete Reinforcement or Dowels by Handheld X-Ray Fluorescence (XRF) Spectrometer	4f	Reconfirmed for 2025 publication. Editorially revised Section 1 safety caveat.
T 392-21 (2025)	Determination of Heavy Metal Content of Glass Beads Using X-Ray Fluorescence (XRF)	4c	Reconfirmed for 2025 publication. Editorially revised Section 1 safety caveat.
T 398-25	Measuring Retroreflectivity of Longitudinal Pavement Marking Materials Using a Mobile Retroreflectometer Unit	4c	Title changed. Revised as follows: Changed retroreflectometer description to allow other mounting configurations. Harmonized equipment ranges to MUTCD ranges and represent current MRU technology. Editorial changes throughout the document. Changed “stripe” to “marking.” Added GPS to represent technology available and current ASTM for MRU operations guidance. Editorially revised the terminology section to improve definitions’ clarity.

Designation Number	Title	TS	Technical Changes
T 400-24	Determining the Damage Characteristic Curve and Failure Criterion Using the Asphalt Mixture Performance Tester (AMPT) Cyclic Fatigue Test	2d	Editorially revised the safety caveat in Section 1.
T 413-25	Estimating the Early Opening Strength of Concrete Pavements by Maturity Tests	3c	Revised extensively; editorially revised Sections 3, 7, and 9 through 11.
T 416-25	Determination of Alkali Threshold for Alkali–Silica Reactivity in Aggregates Used in Concrete (ATT)	1c	Revised based on FHWA TFHRC recommendations; revised sections 1.1, 2.3, new 3.1.5 and Note 1, 4.1-4.2, 5.2, 5.3, 5.5, deleted Note 4, Table 1, Note 5, 9.3.1, 9.3.2, 9.3.4, Figure 2, 9.3.8, new 9.3.9 – 9.3.19, new 9.4.2-9.4.3, 9.4.6, Figure 3, 9.4.9, new 9.4.10-9.4.16, 9.5.4, 10.1, 10.2, Figure 4, 11.1, 11.2, Figure 5, new 11.3 and figure 6, 11.4, 11.5, table 2, 11.5.1, 11.5.2, figure 8, new 11.6, new Table 3 and new figure 8; revision to X.1. Editorially revised the safety caveat in Section 1.
T 420-25	Evaluation of Oxidation Level of Asphalt Mixtures by a Portable Infrared Spectrometer	2c	Adopted TP 128 as full standard test T 420. Editorially revised the safety caveat in Section 1.
T 421-25	Determining the Dynamic Modulus of Asphalt Mixtures Using the Indirect Tension Test	2d	Adopted TP 131 as full standard test T 421. Editorially revised the safety caveat in Section 1.
T 422-25	Stress Sweep Rutting (SSR) Test Using Asphalt Mixture Performance Tester (AMPT)	2d	Adopted TP 134 as full standard test method T 422. Editorially revised the safety caveat in Section 1.
T 423-25	Moisture Sensitivity Using Hydrostatic Pore Pressure to Determine Cohesion and Adhesion Strength of Compacted Asphalt Mixture Specimens	2d	Adopted TP 140 as full standard test method T 423. Editorially revised the safety caveat in Section 1.
T 424-25	Determining the Indirect Tensile Nflex Factor to Assess the Cracking Resistance of Asphalt Mixtures	2d	Adopted TP 141 as full standard test method T 424. Editorially revised the safety caveat in Section 1.

PART 3—PROVISIONAL STANDARDS

Numerical Sequence Table of Contents

Standard Number	Title
PP 119-25	Measuring Pavement Surface Image Characteristics and Quality Using Reference Objects
PP 120-25	Measuring Pavement Surface Image Characteristics and Quality Using Field Pavement Spots
PP 121-25	Acceptance of Ground Reference Scanning Equipment for Pavement Imaging System Assessment
PP 122-25	Pavement Scan Registration and Full-Reference Image Quality Assessment
PP 123-25	Crack Annotation and Crack Length and Width Computation on 2D/3D Pavement Images
PP 124-25	Evaluating Pavement Image Crack Identification Performance
PP 125-25	Manufacturing Reference Objects Using 3D Printing for the Assessment of 3D Pavement Imaging Systems
PP 126-25	Terminology Adopted for the Assessment of 3D Pavement Imaging Systems
PP 127-25	Development of Balanced and Durable Asphalt Mixtures with High Recycled Asphalt Materials Contents
TP 127-22 (2024)	*Dropped*—Determining the Fracture Energy Density of Asphalt Binder Using the Binder Fracture Energy (BFE) Test
TP 128-22 (2024)	*Adopted*—Evaluation of Oxidation Level of Asphalt Mixtures by a Portable Infrared Spectrometer
TP 130-20 (2025)	Producing Drawdown Panels and Measuring the Coefficient of Retroreflected Luminance (RL) of Pavement Markings in a Laboratory Panel
TP 131-18 (2024)	*Adopted*—Determining the Dynamic Modulus of Asphalt Mixtures Using the Indirect Tension Test
TP 132-25	Determining the Dynamic Modulus for Asphalt Mixtures Using Small Specimens in the Asphalt Mixture Performance Tester (AMPT)
TP 134-22 (2023)	*Adopted*—Stress Sweep Rutting (SSR) Test Using Asphalt Mixture Performance Tester (AMPT)
TP 135-22 (2025)	Determining the Total Pore Volume in Hardened Concrete Using Vacuum Saturation
TP 136-22 (2025)	Determining the Degree of Saturation of Hydraulic-Cement Concrete
TP 139-22 (2025)	Determining the Relative Density (Specific Gravity) and Absorption of Lightweight Aggregate for Internally Cured Concrete Mixtures
TP 140-22 (2024)	*Adopted*—Moisture Sensitivity Using Hydrostatic Pore Pressure to Determine Cohesion and Adhesion Strength of Compacted Asphalt Mixture Specimens
TP 141-22 (2024)	*Adopted*—Determining the Indirect Tensile Nflex Factor to Assess the Cracking Resistance of Asphalt Mixtures
TP 142M/TP 142-24	Accelerated Determination of Potentially Deleterious Expansion of Concrete Cylinder due to Alkali–Silica Reaction (Accelerated Concrete Cylinder Test, ACCT)
TP 143-21 (2023)	Continuous Measurement of Sideway-Force Friction Number for Highway Pavements
TP 144-25	Determining the Potential Alkali–Silica Reactivity of Aggregates (TFHRC-TFAST)
TP 145-25	Evaluating Rutting and Moisture Resistance of Paving Materials via Loaded Wheel Tracking with a Rubber Tire
TP 146-25	Evaluating Shear Resistance of Asphalt-Treated Recycled Pavements Applications Using a Long-Pin Fixture
TP 147-25	Evaluating Raveling in Asphalt-Treated Recycled Pavement Applications Using a Short-Pin Fixture
TP 148-25	Mechanical Rocker Ice Melting Capacity (IMC)

Standard Number	Title
TP 149M/TP149-25	Dowel Bars for Concrete Street and Highway Pavement
TP 150-25	Poker Chip Test of Asphalt Binder

PART 3—PROVISIONAL STANDARDS

Subject Sequence Table of Contents

Standard Number	Title
	Box Culvert, Culvert Pipe, and Drain Tile
MP 40-19 (2025)	Steel-Reinforced Polyethylene (PE) Ribbed Pipe 1650- to 3000-mm (66- to 120-in.) Diameter
MP 42-22 (2025)	Steel-Reinforced Polyethylene (SRPE) Corrugated Pipe
	Concrete, Curing Materials, and Admixtures
TP 135-22 (2025)	Determining the Total Pore Volume in Hardened Concrete Using Vacuum Saturation
TP 136-22 (2025)	Determining the Degree of Saturation of Hydraulic-Cement Concrete
TP 142M/TP 142-24	Accelerated Determination of Potentially Deleterious Expansion of Concrete Cylinder due to Alkali–Silica Reaction (Accelerated Concrete Cylinder Test, ACCT)
	Miscellaneous
PP 118-24	AASHTO Definitions Standard for Sustainability Terms
	Painting, Traffic Marking, and Signing
PP 117-23	Durable Green Bike Lane Surface Treatments for Asphalt and Concrete Pavements
TP 130-20 (2025)	Producing Drawdown Panels and Measuring the Coefficient of Retroreflected Luminance (RL) of Pavement Markings in a Laboratory Panel
	Pavement Structures
MP 48-23	Equipment for Measuring Macrotexture of Pavements at Highway Speeds
PP 115-23	Certification of High-Speed Macrotexture Measurement Equipment
PP 116-23	Operating Equipment for Measuring Macrotexture at Highway Speeds
TP 146-25	Evaluating Shear Resistance of Asphalt-Treated Recycled Pavements Applications Using a Long-Pin Fixture
TP 147-25	Evaluating Raveling in Asphalt-Treated Recycled Pavement Applications Using a Short-Pin Fixture
	Pavement Surface Characteristics
MP 47-24	File Format of Two-Dimensional and Three-Dimensional (2D/3D) Pavement Image Data
PP 106-25	Assessment of Static Performance in Transverse Pavement Profiling Systems
PP 107-25	Assessment of Body Motion Cancellation in Transverse Pavement Profiling Systems
PP 108-25	Assessment of Navigation Drift Mitigation in Transverse Pavement Profiling Systems
PP 109-25	Assessment of Highway Performance of Transverse Pavement Profiling Systems
PP 110-25	Assessment of Ground Reference Data for Transverse Pavement Profiling System Assessment
PP 111-24	Definition of Terms Related to Transverse Pavement Profiling Systems and Ground Reference Equipment
PP 119-25	Measuring Pavement Surface Image Characteristics and Quality Using Reference Objects
PP 120-25	Measuring Pavement Surface Image Characteristics and Quality Using Field Pavement Spots
PP 121-25	Acceptance of Ground Reference Scanning Equipment for Pavement Imaging System Assessment
PP 122-25	Pavement Scan Registration and Full-Reference Image Quality Assessment
PP 123-25	Crack Annotation and Crack Length and Width Computation on 2D/3D Pavement Images
PP 124-25	Evaluating Pavement Image Crack Identification Performance

Standard Number	Title
PP 125-25	Manufacturing Reference Objects Using 3D Printing for the Assessment of 3D Pavement Imaging Systems
PP 126-25	Terminology Adopted for the Assessment of 3D Pavement Imaging Systems
TP 143-21 (2023)	Continuous Measurement of Sideway-Force Friction Number for Highway Pavements
	Quality Assurance
MP 39-22 (2025)	File Format of Intelligent Compaction Data
PP 97-19 (2025)	Determination of Constant Mass
PP 98-20 (2025)	Asphalt Surface Dielectric Profiling System Using Ground Penetrating Radar
PP 112-21 (2023)	Recognizing Surrogate Test Methods
PP 114-22 (2025)	Data Lot Names for Use with Intelligent Construction Technologies
TP 148-25	Mechanical Rocker Ice Melting Capacity (IMC)
	Reinforcing Steel and Wire Rope
MP 49-25	Dowel Bars for Concrete Street and Highway Pavement
TP 149M/TP149-25	Dowel Bars for Concrete Street and Highway Pavement
	Soils and Stabilization
PP 102-20 (2025)	Digital Interchange of Geotechnical Data

LIST OF TECHNICAL CHANGES—PART 3

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 in reconformed standards; however, the subheader line below the designation number will indicate if the standard has been editorially revised.

Release: 2025

MP 37-18 (2025)	Performance-Graded Asphalt Binder for Surface Treatments	2b	Extended one year for 2025 publication; year 8 of eight-year provisional life cycle.
MP 38-22	Mix Design Used in Cold Recycled Mixtures with Foamed Asphalt	2d	Adopted MP 38 as full standard specification M 357.
MP 39-22 (2025)	File Format of Intelligent Compaction Data	5c	Extended one year for 2025 publication; year 7 of eight-year provisional life cycle.
MP 40-19 (2025)	Steel-Reinforced Polyethylene (PE) Ribbed Pipe 1650- to 3000-mm (66- to 120-in.) Diameter	4b	Extended for 2025 publication; year 7 in eight-year Provisional life cycle. Editorially revised Section 1 safety caveat.
MP 42-22 (2025)	Steel-Reinforced Polyethylene (SRPE) Corrugated Pipe	4b	Reconfirmed for 2025 publication. Editorially revised Section 1 safety caveat.
MP 46-24	Balanced Mix Design	2d	Adopted MP 46 as full standard specification M 358.
MP 49-25	Dowel Bars for Concrete Street and Highway Pavement	4f	New provisional specification; will be incorporated into a future edition of M 254.
PP 94-22 (2024)	Determination of Optimum Asphalt Content of Cold Recycled Mixture with Foamed Asphalt	2d	Adopted PP 94 as full standard practice R 128.
PP 95-22 (2024)	Preparation of Indirect Tension Performance Test Specimens	2d	Adopted PP 95 as full standard practice R 129.
PP 96-18 (2024)	Developing Dynamic Modulus Master Curves for Asphalt Mixtures Using the Indirect Tension Testing Method	2d	Adopted PP 96 as full standard practice R 130.
PP 97-19 (2025)	Determination of Constant Mass	5c	Extended one year for 2025 publication; year 7 of eight-year provisional life cycle.
PP 98-20 (2025)	Asphalt Surface Dielectric Profiling System Using Ground Penetrating Radar	5c	Extended one year for 2025 publication; year 7 of eight-year provisional life cycle.
PP 99-23	Preparation of Small Cylindrical Performance Test Specimens Using the Superpave Gyratory Compactor (SGC) or Field Cores	2d	Adopted PP 99 as full standard practice R 131.
PP 102-20 (2025)	Digital Interchange of Geotechnical Data	1b	Reconfirmed for 2025 publication.
PP 103-25	Sample Preparation and Polishing of Unbound Aggregates for Dynamic Friction Testing	1c	Revised Section 5.1.

PP 104-25	Sample Preparation and Polishing of Asphalt Mixture Specimens for Dynamic Friction Testing	1c	Revised Section 5.9.
PP 105-24	Balanced Design of Asphalt Mixtures	2d	Adopted PP 105 as full standard practice R 132.
PP 106-25	Assessment of Static Performance in Transverse Pavement Profiling Systems	5a	Revised Sections 1, 4, 5, 6, 7, and 8; Tables 1 through 5; Figures 2 and 4 through 6; and Annexes A and B. Replaced Figure 1. Deleted Sections 7.5 and 8.3. Editorially revised the safety caveat in Section 1.
PP 107-25	Assessment of Body Motion Cancellation in Transverse Pavement Profiling Systems	5a	Revised Section 5.1; Tables 1 and 3 through 5; and Annexes A and B. Replaced Figures 5 and 6. Deleted Sections 7.2 and 8.2. Editorially revised Section 10.2. Editorially revised the safety caveat in Section 1.
PP 108-25	Assessment of Navigation Drift Mitigation in Transverse Pavement Profiling Systems	5a	Revised Annexes A and B. Editorially revised the safety caveat in Section 1.
PP 109-25	Assessment of Highway Performance of Transverse Pavement Profiling Systems	5a	Revised Sections 1, 5, 6, 8, and 9; Figures 4 and 5; Tables 2 through 4; and Annexes A and C. Added Section 6.5. Editorially revised the safety caveat in Section 1.
PP 110-25	Assessment of Ground Reference Data for Transverse Pavement Profiling System Assessment	5a	Revised Sections 2, 4, 5, 7, 9, and 10; Tables 1 and 2; and Annexes A and C. Editorially revised the safety caveat in Section 1.
PP 114-22 (2025)	Data Lot Names for Use with Intelligent Construction Technologies	5c	Reconfirmed for 2025 publication.
PP 119-25	Measuring Pavement Surface Image Characteristics and Quality Using Reference Objects	5a	New provisional practice.
PP 120-25	Measuring Pavement Surface Image Characteristics and Quality Using Field Pavement Spots	5a	New provisional practice.
PP 121-25	Acceptance of Ground Reference Scanning Equipment for Pavement Imaging System Assessment	5a	New provisional practice.
PP 122-25	Pavement Scan Registration and Full-Reference Image Quality Assessment	5a	New provisional practice.
PP 123-25	Crack Annotation and Crack Length and Width Computation on 2D/3D Pavement Images	5a	New provisional practice.
PP 124-25	Evaluating Pavement Image Crack Identification Performance	5a	New provisional practice.
PP 125-25	Manufacturing Reference Objects Using 3D Printing for the Assessment of 3D Pavement Imaging Systems	5a	New provisional practice.

PP 126-25	Terminology Adopted for the Assessment of 3D Pavement Imaging Systems	5a	New provisional practice.
PP 127-25	Development of Balanced and Durable Asphalt Mixtures with High Recycled Asphalt Materials Contents	2d	New provisional test method.
TP 127-22 (2024)	Determining the Fracture Energy Density of Asphalt Binder Using the Binder Fracture Energy (BFE) Test	2b	Discontinued due to lack of use.
TP 128-22 (2024)	Evaluation of Oxidation Level of Asphalt Mixtures by a Portable Infrared Spectrometer	2c	Adopted TP 128 as full standard test T 420.
TP 130-20 (2025)	Producing Drawdown Panels and Measuring the Coefficient of Retroreflected Luminance (RL) of Pavement Markings in a Laboratory Panel	4c	Extended for 2025 publication; year 8 in eight-year provisional life cycle. Editorially revised Section 1 safety caveat.
TP 131-18 (2024)	Determining the Dynamic Modulus of Asphalt Mixtures Using the Indirect Tension Test	2d	Adopted TP 131 as full standard test T 421.
TP 132-25	Determining the Dynamic Modulus for Asphalt Mixtures Using Small Specimens in the Asphalt Mixture Performance Tester (AMPT)	2d	Updates to references and tables for formatting and accuracy. Technical update to data quality statistics requirements in Tables 3 and 4. Includes new precision and bias statement in Section 10. Editorially revised the safety caveat in Section 1.
TP 134-22 (2023)	Stress Sweep Rutting (SSR) Test Using Asphalt Mixture Performance Tester (AMPT)	2d	Adopted TP 134 as full standard test method T 422.
TP 135-22 (2025)	Determining the Total Pore Volume in Hardened Concrete Using Vacuum Saturation	3c	Reconfirmed for 2025 publication. Editorially revised the Section 1 safety caveat.
TP 136-22 (2025)	Determining the Degree of Saturation of Hydraulic-Cement Concrete	3c	Reconfirmed for 2025 publication. Editorially revised the Section 1 safety caveat.
TP 139-22 (2025)	Determining the Relative Density (Specific Gravity) and Absorption of Lightweight Aggregate for Internally Cured Concrete Mixtures	1c	Reconfirmed for 2025 publication. Editorially revised the safety caveat in Section 1.
TP 140-22 (2024)	Moisture Sensitivity Using Hydrostatic Pore Pressure to Determine Cohesion and Adhesion Strength of Compacted Asphalt Mixture Specimens	2d	Adopted TP 140 as full standard test method T 423.
TP 141-22 (2024)	Determining the Indirect Tensile Nflex Factor to Assess the Cracking Resistance of Asphalt Mixtures	2d	Adopted TP 141 as full standard test method T 424.
TP 142M/ TP 142-24	Accelerated Determination of Potentially Deleterious Expansion of Concrete Cylinder due to Alkali–Silica Reaction (Accelerated Concrete Cylinder Test, ACCT)	3c	Editorially revised to add the safety caveat in Section 1.

TP 144-25	Determining the Potential Alkali–Silica Reactivity of Aggregates (TFHRC-TFAST)	1c	Revised based on FHWA TFHRC recommendations; revised Sections 1.1, 2, 4.1, 10, 11, and References; added new Sections 3.5, 5.2, Note 1; replaced Section 5.3. Editorially revised the safety caveat in Section 1. Editorially revised to add new Section 10.3 and make revisions to Sections 10.4 and 10.5; also editorially revised the safety caveat in Section 1.
TP 145-25	Evaluating Rutting and Moisture Resistance of Paving Materials via Loaded Wheel Tracking with a Rubber Tire	2d	Revised to address references to other standards, vertical load of wheel, calibration frequency, reporting requirements, test specimen dimensions and test temperature requirements. Editorially revised the safety caveat in Section 1. Minor editorial revisions to Note 14 and Sections 4.1.3, 9.3, and A2.4.
TP 146-25	Evaluating Shear Resistance of Asphalt-Treated Recycled Pavements Applications Using a Long-Pin Fixture	5b	New provisional test.
TP 147-25	Evaluating Raveling in Asphalt-Treated Recycled Pavement Applications Using a Short-Pin Fixture	5b	New provisional test.
TP 148-25	Mechanical Rocker Ice Melting Capacity (IMC)	5c	New provisional test.
TP 149M/TP149-25	Dowel Bars for Concrete Street and Highway Pavement	4f	New provisional test; will be incorporated into a future edition of T 253M/T 253.
TP 150-25	Poker Chip Test of Asphalt Binder	2b	New provisional standard test.

HISTORY OF CURRENT AND FORMER AASHTO PROVISIONAL MATERIALS STANDARDS

JULY 2025

Provisional Standard Number	Title	First Publ. Year	Final Disposition	Disposit. Year	Full Std. No.
	Specifications				
MP 1	Performance Graded Asphalt Binder	1994	Adopted	2002	M 320
MP 1a	Performance Graded Asphalt Binder	1996	Adopted	2005	
MP 2	Superpave Volumetric Mix Design	1996	Adopted	2004	M 323
MP 5	Bridge Deck Cathodic Protection	1996	Deleted	1999	—
MP 6	Corrugated Polyethylene Pipe, 1050 and 1200 mm Diameter	1996	Adopted	1999	M 294
MP 7	Corrugated Polyethylene Pipe, 1350 and 1500 mm Diameter	1998	Adopted	2003	
MP 8	Designing Stone Matrix Asphalt (SMA)	2000	Adopted	2008	M 325
MP 9	Compost for Erosion/Sediment Control (Filter Berms)	2003	Adopted	2010	R 51
MP 10	Compost for Erosion/Sediment Control (Compost Blankets)	2003	Adopted	2010	R 52
MP 11	Inertial Profiler	2003	Adopted	2010	M 328
MP 12	Detectable Warning Surfaces	2004	Adopted	2015	M 333
MP 13	Stainless Clad Deformed and Plain Round Steel Bars for Concrete Reinforcement	2004	Adopted	2011	M 329M/M 329
MP 14	Smoothness of Pavement at the Approaches to Weight-in-Motion (WIM) Scales	2005	Adopted	2013	M 331
MP 15	Use of Reclaimed Asphalt Shingles as an Additive in Hot-Mix Asphalt	2006	Deleted	2014	—
MP 16	Reclaimed Concrete Aggregate for Use as Coarse Aggregate in Hydraulic Cement	2007	Deleted	2016	[1]
MP 17	Pavement Ride Quality When Measured Using Inertial Profiling Systems	2004	Adopted	2010	R 54
MP 18	Uncoated, Corrosion-Resistant, Deformed and Plain Chromium Alloyed, Billet-Steel Bars for Concrete Reinforcement and Dowels	2009	Adopted	2017 (June)	M 334M/M 334 and T 372M/ T 372 through T 376M/T 376
MP 19	Performance-Graded Asphalt Binder Using Multiple Stress Creep Recovery (MSCR) Test	2010	Adopted	2014	M 332
MP 20	Steel-Reinforced Polyethylene (PE) Ribbed Pipe, 300- to 1500-mm (12- to 60-in.) Diameter	2010	Adopted	2018 (June)	M 335
MP 21	Polypropylene Pipe, 300- to 500-mm (12- to 60-in.)	2011	Adopted	2013	M 330

Provisional Standard Number	Title	First Publ. Year	Final Disposition	Disposit. Year	Full Std. No.
MP 22	Fiber-Reinforced Polymer Composite Materials for Highway and Bridge Structures	2013	Adopted	2021	M 337
MP 23	Reclaimed Asphalt Shingles for Use in Asphalt Mixtures	2014	Adopted	2022	M 350
MP 24	Waterborne White and Yellow Traffic Paints	2014	Adopted	2022	M 348
MP 25	Performance-Graded Hot-Poured Asphalt Crack Sealant	2015	Adopted	2021	M 338
MP 26	Cotton Duck Fabric Bridge Bearings	2015	Adopted	2023	M 351
MP 27	Materials for Emulsified Asphalt Chip Seals	2016	Adopted	2022	M 340
MP 28	Materials for Microsurfacing	2016	Adopted	2022	M 341
MP 29	This standard number was inadvertently skipped.				
MP 30	Steel Wire and Welded Wire, Plain and Deformed, for Concrete Reinforcement	2017	Adopted	2018 (June)	M 336M/M 336
MP 31	Materials for Cold Recycled Mixtures with Emulsified Asphalt	2017	Adopted	2023	M 352
MP 32	Materials for Slurry Seal	2017	Adopted	2022	M 342
MP 33	Materials for Emulsified Asphalt Fog Seal	2017	Adopted	2022	M 343
MP 34	Materials for Sand Seals	2018	Adopted	2022	M 344
MP 35	Thin Overlay Treatments Using a Binder Resin System and Aggregate for Concrete Surfaces	2018	Adopted	2024	M 353
MP 36	Materials for Asphalt Tack Coat	2018	Adopted	2022	M 349
MP 37	Performance-Graded Asphalt Binder for Surface Treatments	2018			
MP 38	Mix Design of Cold Recycled Mixture with Foamed Asphalt	2018	Adopted	2025	M 357
MP 39	File Format of Intelligent Construction Data	2019			
MP 40	Steel-Reinforced Polyethylene (PE) Ribbed Pipe 1650- to 3000-mm (66- to 120-in.) Diameter	2019			
MP 41	High Friction Surface Treatment for Asphalt and Concrete Pavements Using Calcined Bauxite	2019	Adopted	2024	M 354
MP 42	Steel-Reinforced Polyethylene (SRPE) Corrugated Pipe	2020			
MP 43	Materials for Emulsified Asphalt Scrub Seal	2020	Adopted	2022	M 345
MP 44	Materials for Ultrathin Bonded Wearing Course	2020	Adopted	2022	M 346
MP 45	Materials for Full-Depth Reclamation Mixtures with Emulsified Asphalt	2020	Adopted	2022	M 347

Provisional Standard Number	Title	First Publ. Year	Final Disposition	Disposit. Year	Full Std. No.
MP 46	Balanced Mix Design	2020	Adopted	2025	M 358
MP 47	File Format of Two-Dimensional and Three-Dimensional (2D/3D) Pavement Image Data	2021			
MP 48	Equipment for Measuring Macrotexture of Pavements at Highway Speeds	2023			
MP 49	Dowel Bars for Concrete Street and Highway Pavement	2025			[2]
Practices					
PP 1	Accelerated Aging of Asphalt Binder Using a Pressurized Aging Vessel (PAV)	1994	Adopted	2002	R 28
PP 2	Mixture Conditioning of Hot-Mix Asphalt (HMA)	1995	Adopted	2002	R 30
PP 3	Preparing Hot Mix Asphalt (HMA) Specimens by Means of the Rolling Wheel Compactor	1995	Deleted	2003	—
PP 5	Laboratory Evaluation of Modified Asphalt Systems	1994	Deleted	1998	—
PP 6	Grading or Verifying the Performance Grade of an Asphalt Binder	1994	Adopted	2002	R 29
PP 7	Calibrating the Load Cell and Deflection Sensors for a Falling Weight Deflectometer	1995	Adopted	2003	R 32
PP 8	Calibrating the Reference Load Cell Used for reference Calibrations for Falling Weight Deflectometer	1995	Adopted	2003	R 33
PP 10	Operational Guidelines on Test Pits for Evaluating Pavement Performance	1994	Deleted	1995	—[3]
PP 19	Volumetric Analysis of Compacted Hot Mix Asphalt (HMA)	1994	Deleted	2002	—
PP 20	Evaluating the Performance of Crack Sealing Treatments on Asphalt Surfaced Pavement	1995	Deleted	2004	—
PP 21	Testing and Evaluating Cold Mix Patching Materials	1995	Deleted	2002	—
PP 22	Selecting and Specifying Crack Sealants for Asphalt Surfaced Pavement	1996	Deleted	2002	—
PP 23	Evaluating the Condition of Portland Cement Concrete Bridge Components	1996	Deleted	2003	—
PP 25	Evaluating the Performance of Joint Seals in Portland Cement Concrete Pavement	1996	Deleted	2002	—
PP 26	Certifying Suppliers of Performance Graded Asphalt Binders	1997	Adopted	2001	R 26
PP 28	Superpave Volumetric Design for Hot-Mix Asphalt (HMA)	1996	Adopted	2004	R 35
PP 29	Evaluating Deicing Chemicals	1996	Adopted	2003	R 34
PP 30	Evaluation of Coating Systems with Zinc Rich Primers	1996	Adopted	2002	R 31
PP 31	Measuring Pavement Profile Using a Rod and Level	1997	Adopted	2005	R 40

Provisional Standard Number	Title	First Publ. Year	Final Disposition	Disposit. Year	Full Std. No.
PP 32	Measuring Pavement Profile Using a Dipstick®	1997	Adopted	2005	R 41[4]
PP 33	Decommissioning Geotechnical Exploratory Boreholes	1997	Adopted	1998	R 22
PP 34	Estimating the Cracking Tendency of Concrete	1998	Adopted	2008	T 334
PP 35	Evaluation of Superpave™ Gyratory Compactors (SGCs)	1998	Deleted	2007	—
PP 36	Assessment of Corrosion of Steel Piling for Non-Marine Applications	1998	Adopted	2002	R 27
PP 37	Determination of International Roughness Index (IRI) to Quantify Roughness of Pavements	1999	Combined and Adopted	2007	R 43
PP 37M	Quantifying Roughness of Pavements	1999			
PP 38	Determining Maximum Rut Depth in Asphalt Pavements	1999	Adopted	2008	R 48[5]
PP 39	Estimating Faulting of Concrete Pavements	1999	Adopted	2004	R 36
PP 40	Application of Ground Penetrating Radar (GPR) to Highways	2000	Adopted	2004	R 37
PP 41	Designing Stone Matrix Asphalt (SMA)	2000	Adopted	2008	R 46
PP 42	Determination of Low-Temperature Performance Grade (PG) of Asphalt Binders	2001	Adopted	2009	R 49
PP 44	Quantifying Cracks in Asphalt Pavement Surface	2001	Adopted	2010	R 55[6]
PP 45	Qualification of Deformed and Plain Steel Bar Producing Mills	2001	Adopted	2010	R 53[7]
PP 46	Geosynthetic Reinforcement of the Aggregate Base Course of Flexible Pavement Structures	2001	Adopted	2009	R 50
PP 47	Evaluation of Different Superpave™ Gyratory Compactors (SGCs) Used in the Design and the Field Management of Superpave™ Mixtures	2002	Deleted	2009	—
PP 48	Evaluation of the Superpave™ Gyratory Compactor (SGC) Internal Angle of Gyration	2003	Deleted	2010	—
PP 49	Certification of Inertial Profiling Systems	2003	Adopted	2010	R 56
PP 50	Operating Inertial Profilers and Evaluating Pavement Profiles	2003	Adopted	2010	R 57
PP 51	Pavement Ride Quality When Measured Using Inertial Profiling Systems	2003	Adopted	2010	R 54[8]
PP 52	Developing a Quality Assurance Plan for Hot-Mix Asphalt (HMA)	2005	Adopted	2006	R 42
PP 53	Design Considerations When Using Reclaimed Asphalt Shingles (RAS) in New Hot Mix Asphalt (HMA)	2006	Deleted	2014	—
PP 54	Match Curing of Concrete Test Specimens	2006	Adopted	2016 (April)	R 72

Provisional Standard Number	Title	First Publ. Year	Final Disposition	Disposit. Year	Full Std. No.
PP 55	Overcoating Field Test Program for Evaluating Protective Coatings on Existing Bridges or Salvaged Beams	2006	Deleted	2012	—
PP 56	Evaluating the Engineering and Environmental Suitability of Recycled Materials	2006	Adopted	2014	R 65
PP 57	Establishing Requirements for and Performing Equipment Calibrations, Standardizations, and Checks	2006	Adopted	2012	R 61
PP 58	Static Segregation of Hardened Self-Consolidating Concrete (SCC) Cylinders	2008	Adopted	2017 (April)	R 81[9]
PP 59	Coal Combustion Fly Ash for Embankments	2009	Deleted	2016 (August)	—
PP 60	Preparation of Cylindrical Performance Test Specimens Using the Superpave Gyratory Compactor (SGC)	2009	Adopted	2017 (August)	R 83
PP 61	Developing Dynamic Modulus Master Curves for Asphalt Mixtures Using the Asphalt Mixture Performance Tester (AMPT)	2009	Adopted	2017 (August)	R 84
PP 62	Developing Dynamic Modulus Master Curves for Hot Mix Asphalt (HMA)	2009	Adopted	2013	R 62
PP 63	Pipe Joint Selection for Highway Culvert and Storm Drains	2009	Adopted	2017 (June)	R 82
PP 64	Determining Aggregate Source Shape Values from Digital Image Analysis Shape Properties	2010	Adopted	2018 (August)	R 91
PP 65	Determining the Reactivity of Concrete Aggregates and Selecting Appropriate Measures for Preventing Deleterious Expansion in New Concrete Construction	2010	Adopted	2016 (April)	R 80
PP 66	Determination of Long-Term Strength for Geosynthetic Reinforcement	2010	Adopted	2015	R 69
PP 67	Quantifying Cracks in Asphalt Pavement Surfaces from Collected Images Utilizing Automated Methods	2010	Adopted	2018 (April)	R 85
PP 68	Collecting Images of Pavement Surfaces for Distress Detection	2010	Adopted	2018 (April)	R 86
PP 69	Determining Pavement Deformation Parameters and Cross Slope from Collected Transverse Profiles	2010	Adopted	2018 (April)	R 87
PP 70	Collecting the Transverse Pavement Profile	2010	Adopted	2018 (April)	R 88
PP 71	Certifying Suppliers of Emulsified Asphalt	2011	Adopted	2016 (August)	R 77

Provisional Standard Number	Title	First Publ. Year	Final Disposition	Disposit. Year	Full Std. No.
PP 72	Recovering Residue from Emulsified Asphalt Using Low-Temperature Evaporative Techniques	2011	Adopted	2016 (August)	R 78
PP 73	Quality Assurance, Job Site Quality Control, and Reapplication of Protective Sealers for Portland Cement Concrete	2011	Adopted	2019 (June)	R 94
PP 74	Determination of Size and Shape of Glass Beads Used in Traffic Markings by Means of Computerized Optical Method	2011	Adopted	2020 (June)	R 98
PP 75	Vacuum Drying Compacted Asphalt Specimens	2013	Adopted	2016 (August)	R 79
PP 76	Troubleshooting Asphalt Specimen Volumetric Differences between Superpave Gyratory Compactors (SGCs) Used in the Design and the Field Management of Superpave Mixtures	2013	Adopted	2021	R 99
PP 77	Materials Selection and Mixture Design of Permeable Friction Courses (PFCs)	2014	Adopted	2022	R 113
PP 78	Design Considerations When Using Reclaimed Asphalt Shingles (RAS) in Asphalt Mixtures	2014	Adopted	2022	R 114
PP 79	High Friction Surface Treatment for Asphalt and Concrete Pavements	2014	Reclassified	2019 (June)	MP 41
PP 80	Continuous Thermal Profile of Asphalt Mixture Construction	2014	Adopted	2022	R 110
PP 81	Intelligent Compaction Technology for Embankment and Asphalt Pavement Applications	2014	Adopted	2022	R 111
PP 82	Emulsified Asphalt Chip Seal Design	2016	Adopted	2022	R 102
PP 83	Microsurfacing Design	2016	Adopted	2022	R 103
PP 84	Performance Engineered Concrete Pavement Mixtures	2017	Adopted	2022	R 101
PP 85	Grading or Verifying the Sealant Grade (SG) of a Hot-Poured Asphalt Crack Sealant	2017	Adopted	2023	R 116
PP 86	Emulsified Asphalt Content of Cold Recycled Mixture Designs	2017	Adopted	2023	R 117
PP 87	Slurry Seal Design	2017	Adopted	2022	R 104
PP 88	Emulsified Asphalt Fog Seal Design	2017	Adopted	2022	R 105
PP 89	Grinding the Ends of Cylindrical Concrete Specimens	2018	Adopted	2024	R 119M/R 119
PP 90	Sand Seal Design	2018	Adopted	2022	R 106
PP 91	Emulsified Asphalt Scrub Seal Design	2018	Adopted	2022	R 107

Provisional Standard Number	Title	First Publ. Year	Final Disposition	Disposit. Year	Full Std. No.
PP 92	Preparation of Test Specimens Using the Plastic Mold Compaction Device	2018	Adopted	2024	R 120
PP 93	Asphalt Tack Coat Design	2018	Adopted	2022	R 112
PP 94	Determining Optimum Asphalt Content of Cold Recycled Mixture with Foamed Asphalt	2018	Adopted	2025	R 128
PP 95	Preparation of Indirect Tension Performance Test Specimens	2018	Adopted	2025	R 129
PP 96	Developing Dynamic Modulus Master Curves for Hot Mix Asphalt (HMA) Using the Indirect Tension Testing Method	2018	Adopted	2025	R 130
PP 97	Determination of Constant Mass	2019			
PP 98	Asphalt Surface Dielectric Profiling System Using Ground Penetrating Radar	2019			
PP 99	Preparation of Small Cylindrical Performance Test Specimens Using the Superpave Gyratory Compactor (SGC) or Field Cores	2019	Adopted	2025	R 131
PP 100	Ultrathin Bonded Wearing Course Design	2020	Adopted	2022	R 108
PP 101	Emulsified Asphalt Content of Full-Depth Reclamation Mixture Design	2020	Adopted	2022	R 109
PP 102	Digital Interchange of Geotechnical Data	2020			
PP 103	Sample Preparation and Polishing of Unbound Aggregates for Dynamic Friction Testing	2020			
PP 104	Sample Preparation and Polishing of Asphalt Mixture Specimens for Dynamic Friction Testing	2020			
PP 105	Balanced Design of Asphalt Mixtures	2020	Adopted	2025	R 132
PP 106	Assessment of Static Performance in Transverse Pavement Profiling Systems	2021			
PP 107	Assessment of Body Motion Cancellation in Transverse Pavement Profiling Systems	2021			
PP 108	Assessment of Navigation Drift Mitigation in Transverse Pavement Profiling Systems	2021			
PP 109	Assessment of Highway Performance in Transverse Pavement Profiling Systems	2021			
PP 110	Assessment of Ground Reference Data for Transverse Pavement Profiling System Assessment	2021			
PP 111	Definition of Terms Related to Transverse Pavement Profiling Systems and Ground Reference Equipment	2021			
PP 112	Recognizing Surrogate Test Methods	2021			

Provisional Standard Number	Title	First Publ. Year	Final Disposition	Disposit. Year	Full Std. No.
PP 113	Characterizing the Relaxation Behavior of Asphalt Binders Using the Delta T_c (ΔT_c) Parameter	2021	Adopted	2023	R 118
PP 114	Data Lot Names for Use with Intelligent Construction Technologies	2022			
PP 115	Certification of High-Speed Macrotexture Measurement Equipment	2023			
PP 116	Operating Equipment for Measuring Macrotexture at Highway Speeds	2023			
PP 117	Durable Green Bike Lane Surface Treatments for Asphalt and Concrete Pavements	2023			
PP 118	AASHTO Definitions Standard for Sustainability Terms	2024			
PP 119	Measuring Pavement Surface Image Characteristics and Quality Using Reference Objects	2025			
PP 120	Measuring Pavement Surface Image Characteristics and Quality Using Field Pavement Spots	2025			
PP 121	Acceptance of Ground Reference Scanning Equipment for Pavement Imaging System Assessment	2025			
PP 122	Pavement Scan Registration and Full-Reference Image Quality Assessment	2025			
PP 123	Crack Annotation and Crack Length and Width Computation on 2D/3D Pavement Images	2025			
PP 124	Evaluating Pavement Image Crack Identification Performance	2025			
PP 125	Manufacturing Reference Objects Using 3D Printing for the Assessment of 3D Pavement Imaging Systems	2025			
PP 126	Terminology Adopted for the Assessment of 3D Pavement Imaging Systems	2025			
PP 127	Development of Balanced and Durable Asphalt Mixtures with High Recycled Asphalt Materials Contents	2025			
Tests					
TP 1	Determining the Flexural Creep Stiffness of Asphalt Binder Using the Bending Beam Rheometer (BBR)	1994	Adopted	2002	T 313
TP 2	Quantitative Extraction and Recovery of Asphalt Binder from Hot Mix Asphalt (HMA)	1995	Adopted	2003	T 319
TP 3	Determining the Fracture Properties of Asphalt Binder in Direct Tension (DT)	1994	Adopted	2002	T 314

Provisional Standard Number	Title	First Publ. Year	Final Disposition	Disposit. Year	Full Std. No.
TP 4	Preparing and Determining the Density of Hot-Mix Asphalt (HMA) Specimens by Means of the Superpave Gyratory Compactor	1994	Adopted	2001	T 312
TP 5	Determining the Rheological Properties of Asphalt Binder Using a Dynamic Shear Rheometer (DSR)	1995	Adopted	2002	T 315
TP 6	Measurement of Initial Asphalt Adsorption and Desorption in the Presence of Moisture	1994	Deleted	1999	—
TP 7	Determining the Permanent Deformation and Fatigue Cracking Characteristics of Hot Mix Asphalt (HMA) Using the Simple Shear Test (SST) Device	1995	Adopted	2003	T 320
TP 8	Determining the Fatigue Life of Compacted Hot Mix Asphalt (HMA) Subjected to Repeated Flexural Bending	1995	Adopted	2003	T 321
TP 9	Determining the Creep Compliance and Strength of Hot Mix Asphalt (HMA) Using the Indirect Tensile Test Device	1995	Adopted	2003	T 322
TP 10	Thermal Stress Restrained Specimen Tensile Strength	1994	Deleted	2002	—
TP 11	Rapid Determination of Corrosion Rate of Uncoated Steel in Reinforced Concrete	1996	Deleted	2004	—
TP 12	Determining the Hydraulic Fracture of Coarse Aggregate	1994	Deleted	2001	—
TP 14	Accelerated Detection of Potentially Deleterious Expansion of Mortar Bars Due to Alkali-Silica Reaction	1994	Adopted	1996	T 303
TP 17	Resistance of Concrete to Rapid Freezing and Thawing	1994	Deleted	2002	—
TP 18	Method for Determining the Fundamental Transverse Frequency and Quality Factor of Concrete Prism Specimens	1995	Deleted	2003	—
TP 19	Flexural Strength of Concrete (Using Simple Beam with Third-Point Loading)	1994	Deleted	2002	—
TP 20	Compressive Strength of Cylindrical Concrete Specimens	1994	Adopted	1997	T 22M/T 22
TP 22	Rapid Determination of the Chloride Penetrability of Concrete Using AC Impedance	1995	Deleted	2003	—
TP 23	Water Content of Freshly Mixed Concrete Using Microwave Oven Drying	1994	Adopted	2002	T 318
TP 24	Determining the Density of Freshly Mixed Concrete in Place Using a Twin-Probe Nuclear Density Gauge	1995	Deleted	2003	—
TP 26	Determining the Relative Permeability of Concrete by Surface Air Flow	1995	Deleted	2003	—
TP 28	Detection of Voids under Rigid Pavement	1995	Deleted	2003	—

Provisional Standard Number	Title	First Publ. Year	Final Disposition	Disposit. Year	Full Std. No.
TP 29	Determining the Shear Strength at the Interface of Bonded Layers of Portland Cement Concrete	1995	Adopted	2003	T 323
TP 31	Determining the Resilient Modulus of Bituminous Mixtures by Indirect Tension	1995	Deleted	2003	—
TP 33	Uncompacted Void Content of Fine Aggregate (As Influenced by Particle Shape, Surface Texture, and Grading)	1994	Adopted	1996	T 304
TP 34	Determining Moisture Sensitivity Characteristics of Compacted Bituminous Mixtures Subjected to Hot and Cold Climate Conditions	1994	Deleted	1999	—
TP 35	Determining the Relative Effectiveness of Penetrating Concrete Sealers by Electrical Resistance	1994	Deleted	2002	—
TP 36	Evaluating Asphalt-Covered Concrete Bridge Decks Using Pulsed Radar	1994	Deleted	2002	—
TP 37	Determining the Condition Rating of Preformed Membranes on Concrete Bridge Decks Using Pulse Velocity	1994	Deleted	2002	—
TP 39	Determining the Maximum Specific Gravity of Bituminous Paving Mixtures	1995	Adopted	1999	T 209
TP 40	Determining the Percent Asphalt Required for Coating Aggregates Used in Cold Mix Patching Materials	1995	Deleted	2002	—
TP 41	Determining the Percent Asphalt Required Based on Stripping of Aggregates Used in Cold Mix Patching Materials	1995	Deleted	2002	—
TP 42	Percent Asphalt Based on Drainability of Aggregates Used in Cold Mix Patching Materials	1995	Deleted	2002	—
TP 43	Workability of Cold Mix Patching Materials	1995	Deleted	2002	—
TP 44	Cohesion of Cold Mix Patching Materials	1995	Deleted	2002	—
TP 46	Determining the Resilient Modulus of Soils and Aggregate Materials	1995	Adopted	1999	T 307
TP 47	Determining the Ecological Effects of Deicing Chemicals	1995	Deleted	2002	—
TP 48	Viscosity Determination of Asphalt Binder Using Rotational Viscometer	1995	Adopted	2002	T 316
TP 50	Determining the Relative Effectiveness of Penetrating Concrete Sealers by Water Absorption	1996	Deleted	2004	—
TP 51	Testing Cathodic Protection Materials and Systems for Bridge Decks	1996	Deleted	2004	—
TP 52	Estimating the Strength of Concrete in Transportation Construction by Maturity Tests	1996	Adopted	2004	T 325

Provisional Standard Number	Title	First Publ. Year	Final Disposition	Disposit. Year	Full Std. No.
TP 53	Determining the Asphalt Content of Hot Mix Asphalt (HMA) by the Ignition Method	1996	Adopted	1999	T 308
TP 54	Determining Early Stiffening Characteristics of Portland Cement Paste (Mini Slump Cone Method)	1997	Deleted	2004	—
TP 55	Determining Chloride Ions in Concrete and Concrete Materials by Specific Ion Probe	1998	Adopted	2007	T 332
TP 56	Uncompacted Void Content of Coarse Aggregate (As Influenced by Particle Shape, Surface Texture, and Grading)	1998	Adopted	2005	T 326
TP 57	Methylene Blue Value of Clays, Mineral Fillers, and Fines	1998	Adopted	2007	T 330
TP 58	Resistance of Coarse Aggregate to Degradation by Abrasion in the Micro-Deval Apparatus	1999	Adopted	2005	T 327
TP 59	Determining Air Content of Hardened Portland Cement Concrete by High-Pressure Air Meter	1999	Adopted	2015	T 356
TP 60	Coefficient of Thermal Expansion of Hydraulic Cement Concrete	2000	Adopted	2009	T 336
TP 61	Determining the Percentage of Fracture in Coarse Aggregate	2002	Adopted	2009	T 335
TP 62	Determining Dynamic Modulus of Hot-Mix Asphalt Concrete Mixtures	2003	Adopted	2011	T 342
TP 63	Determining Rutting Susceptibility of Asphalt Paving Mixtures Using the Asphalt Pavement Analyzer (APA)	2003	Adopted	2010	T 340
TP 64	Predicting Chloride Penetration of Hydraulic Cement Concrete by the Rapid Migration Procedure	2003	Adopted	2015	T 357
TP 65	Non-Instrumental Determination of Metallic Zinc in Zinc-Rich Primers	2003	Adopted	2009	T 337
TP 66	Analysis of Structural Steel Coatings for Hindered Amine Light Stabilizer (HALS)	2003	Adopted	2009	T 338
TP 67	Analysis of Structural Steel Coatings for Isocyanate Content	2003	Adopted	2009	T 339
TP 68	Density of In-Place Hot-Mix Asphalt (HMA) Pavement by Electronic Surface Contact Devices	2004	Adopted	2012	T 343
TP 69	Bulk Specific Gravity and Density of Compacted Asphalt Mixtures Using Automatic Vacuum Sealing Method	2004	Adopted	2007	T 331
TP 70	Multiple Stress Creep Recovery (MSCR) Test of Asphalt Binder Using a Dynamic Shear Rheometer (DSR)	2007	Adopted	2014	T 350

Provisional Standard Number	Title	First Publ. Year	Final Disposition	Disposit. Year	Full Std. No.
TP 71	Evaluation of Superpave Gyratory Compactor (SGC) Internal Angle of Gyration Using Simulated Loading	2007	Adopted	2012	T 344
TP 72	Quantitative Determination of the Percentage of Lime in Hot Mix Asphalt (HMA)	2008	Adopted	2016 (August)	T 362
TP 73	Slump Flow of Self-Consolidating Concrete (SCC)	2008	Adopted	2013	T 347
TP 74	Passing Ability of Self-Consolidating Concrete (SCC) by JRing	2008	Adopted	2012	T 345
TP 75	Air-Void Characteristics of Freshly Mixed Concrete by Buoyancy Change	2008	Adopted	2013	T 348
TP 76	Measurement of Tire/Pavement Noise Using the On-Board Sound Intensity (OBSI) Method	2008	Adopted	2016 (April)	T 360
TP 77	Specific Gravity and Absorption of Aggregate by Volumetric Immersion Method	2009	Adopted	2015	T 354
TP 78	Detecting the Presence of Phosphorous in Asphalt Binder	2009	Adopted	2017 (August)	T 377[c]
TP 79	Determining the Dynamic Modulus and Flow Number for Asphalt Mixtures Using the Asphalt Mixture Performance Tester (AMPT)	2009	Adopted	2017 (August)	T 378
TP 80	Visual Stability Index (VSI) of Self-Consolidating Concrete (SCC)	2009	Adopted	2014	T 351
TP 81	Determining Aggregate Shape Properties by Means of Digital Image Analysis	2010	Adopted	2018 (August)	T 381
TP 82	Bulk Specific Gravity (G_{mb}) of Compacted Bituminous Mixtures Using Water Displacement Measured by Pressure Sensor	2010	Deleted	2018 (August)	—
TP 83	Sampling and Fabrication of 50-mm (2-in.) Cube Specimens Using Grout (Non-Shrink) or Mortar	2010	Adopted	2014	R 64
TP 84	Evaluation of Adhesive Anchors in Concrete Under Sustained Loading Conditions	2010	Deleted	2018 (June)	—
TP 85	Apparent Viscosity of Hot-Poured Bituminous Crack Sealant Using Brookfield Rotational Viscometer RV Series Instrument	2010	Adopted	2017 (June)	T 366
TP 86	Accelerated Aging of Bituminous Sealants and Fillers with a Vacuum Oven	2010	Adopted	2017 (June)	T 367[10]
TP 87	Measure Low Temperature Flexural Creep Stiffness of Bituminous Sealants and Fillers by Bending Beam Rheometer (BBR)	2010	Adopted	2017 (June)	T 368
TP 88	Evaluation of the Low-Temperature Tensile Property of Bituminous Sealants by Direct Tension Test	2010	Adopted	2017 (June)	T 369

Provisional Standard Number	Title	First Publ. Year	Final Disposition	Disposit. Year	Full Std. No.
TP 89	Measuring Adhesion of Hot-Poured Crack Sealant Using Direct Adhesion Tester	2010	Adopted	2017 (June)	T 370
TP 90	Measuring Interfacial Fracture Energy of Hot-Poured Crack Sealant Using a Blister Test	2010	Adopted	2017 (June)	T 371
TP 91	Determining Asphalt Binder Bond Strength by Means of the Asphalt Bond Strength (ABS) Test	2011	Adopted	2016 (August)	T 361
TP 92	Determining the Cracking Temperature of Asphalt Binder Using the Asphalt Binder Cracking Device (ABCD)	2011	Adopted	2019 (July)	T 387
TP 93	Determining Formwork Pressure of Fresh Self-Consolidating Concrete Using Pressure Transducers	2011	Adopted	2014	T 352
TP 94	Filling Capacity of Self-Consolidating Concrete Using the Caisson Test	2011	Adopted	2013	T 349
TP 95	Surface Resistivity Indication of Concrete's Ability to Resist Chloride Ion Penetration	2011	Adopted	2015	T 358
TP 96	Protective Sealers for Portland Cement Concrete	2011	Adopted	2019 (June)	T 384
TP 97	Glass Beads Used in Pavement Markings	2011	Adopted	2012	T 346
TP 98	Determining the Influence of Road Surfaces on Vehicle Noise Using the Statistical Isolated Pass-By (SIP) Method	2011	Adopted	2020 (April)	T 389
TP 99	Determining the Influence of Road Surfaces on Traffic Noise Using the Continuous-Flow Traffic Time-Integrated Method (CTIM)	2011	Adopted	2020 (April)	T 390
TP 100	Deep Foundation Elements under Bidirectional Static Axial Compressive Load	2012	Adopted	2019 (July)	T 385
TP 101	Estimating Fatigue Resistance of Asphalt Binders Using the Linear Amplitude Sweep	2012	Adopted	2020 (July)	T 391
TP 102	Evaluation of Asphalt Release Agents	2012	Adopted	2018 (August)	T 383
TP 103	Detectable Warning Systems	2012	Adopted	2020 (June)	T 388
TP 104	Rapid Axial Compressive Load Testing of Deep Foundation Units	2013	Adopted	2019 (July)	T 386

Provisional Standard Number	Title	First Publ. Year	Final Disposition	Disposit. Year	Full Std. No.
TP 105	Determining the Fracture Energy of Asphalt Mixtures Using the Semicircular Bend Geometry (SCB)	2013	Adopted	2021	T 394
TP 106	Determination of Heavy Metal Content of Glass Beads Using X-Ray Fluorescence (XRF)	2013	Adopted	2021	T 392
TP 107	Determining the Damage Characteristic Curve of Asphalt Mixtures from Direct Tension Cyclic Fatigue Tests	2014	Adopted	2022	T 400
TP 108	Determining the Abrasion Loss of Asphalt Mixture Specimens	2014	Adopted	2022	T 401
TP 109	Nonlinear Impact Resonance Acoustic Spectroscopy (NIRAS) for Concrete Specimens with Damage from the Alkali-Silica Reaction (ASR)	2014	Adopted	2018 (April)	T 379
TP 110	Potential Alkali Reactivity of Aggregates and Effectiveness of ASR Mitigation Measures (Miniature Concrete Prism Test, MCPT)	2014	Adopted	2018 (April)	T 380
TP 111	Measuring Retroreflectivity of Pavement Marking Materials Using a Mobile Retroreflectivity Unit	2014	Adopted	2022	T 398
TP 112	Determining In-Place Density and Moisture Content of Soil and Soil-Aggregate Using Complex Impedance Methodology	2014	Adopted	2022	T 399
TP 113	Determination of Asphalt Binder Resistance to Ductile Failure Using Double-Edge-Notched Tension (DENT) Test	2015	Adopted	2023	T 405
TP 114	Determining the Interlayer Shear Strength (ISS) of Asphalt Pavement Layers	2015	Adopted	2023	T 407
TP 115	Determining the Quality of Tack Coat Adhesion to the Surface of an Asphalt Pavement in the Field or Laboratory	2015	Adopted	2023	T 408
TP 116	Rutting and Fatigue Resistance of Asphalt Mixtures Using Incremental Repeated Load Permanent Deformation (iRLPD)	2015	Adopted	2023	T 410
TP 117	Determination of the Voids of Dry Compacted Filler	2015	Adopted	2023	T 409
TP 118	Characterization of the Air-Void System of Freshly Mixed Concrete by the Sequential Pressure Method	2015	Adopted	2022	T 395
TP 119	Electrical Resistivity of a Concrete Cylinder Tested in a Uniaxial Resistance Test	2015	Adopted	2023	T 402
TP 120	Pore Index for Carbonate Coarse Aggregate	2016	Adopted	2024	T 417
TP 121	Determining the Viscosity of Emulsified Asphalt by a Rotational Paddle Viscometer	2016	Adopted	2018 (August)	T 382
TP 122	Determination of Performance Grade of Physically Aged Asphalt Binder Using Extended Bending Beam Rheometer (BBR) Method	2016	Adopted	2023	T 406

Provisional Standard Number	Title	First Publ. Year	Final Disposition	Disposit. Year	Full Std. No.
TP 123	Measuring Asphalt Binder Yield Energy and Elastic Recovery Using the Dynamic Shear Rheometer	2016	Adopted	2024	T 418
TP 124	Determining the Fracture Potential of Asphalt Mixtures Using the Illinois Flexibility Index Test (I-FIT)	2016	Adopted	2021	T 393
TP 125	Determining the Flexural Creep Stiffness of Asphalt Mixtures Using the Bending Beam Rheometer (BBR)	2016	Adopted	2024	T 419
TP 126	Evaluation of the Tracking Resistance of Hot-Poured Asphalt Crack Sealant by Dynamic Shear Rheometer (DSR)	2017	Adopted	2023	T 404
TP 127	Determining the Fracture Energy Density of Asphalt Binder Using the Binder Fracture Energy (BFE) Test	2017			
TP 128	Evaluation of Oxidation Level of Asphalt Mixtures by a Portable Infrared Spectrometer	2017	Adopted	2025	T 420
TP 129	Vibrating Kelly Ball (VKelly) Penetration in Fresh Portland Cement Concrete	2018	Adopted	2023	T 403
TP 130	Producing Drawdown Panels and Measuring the Coefficient of Retroreflected Luminance (RL) of Pavement Markings in a Laboratory Panel	2018			
TP 131	Determining Dynamic Modulus of Asphalt Concrete Using the Indirect Tension Test	2018	Adopted	2025	T 421
TP 132	Determining the Dynamic Modulus for Asphalt Mixtures Using Small Specimens in the Asphalt Mixture Performance Tester (AMPT)	2019			
TP 133	Determining the Damage Characteristic Curve and Failure Criterion Using Small Specimens in the Asphalt Mixture Performance Tester (AMPT)	2019	Adopted	2023	T 411
TP 134	Stress Sweep Rutting (SSR) Test Using Asphalt Mixture Performance Tester (AMPT)	2019	Adopted	2025	T 422
TP 135	Determining the Total Pore Volume in Hardened Concrete Using Vacuum Saturation	2020			
TP 136	Determining the Degree of Saturation of Hydraulic-Cement Concrete	2020			
TP 137	Box Test in Slip Form Paving of Fresh Portland Cement Concrete	2020	Adopted	2022	T 396
TP 138	Weight and Diameter for Carbon-Steel for Steel Wire and Welded Wire Reinforcement for Concrete	2020			
TP 139	Determining the Specific Gravity and Absorption of Lightweight Aggregate for Internally Cured Concrete Mixtures	2020			

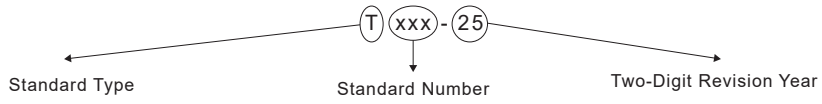
Provisional Standard Number	Title	First Publ. Year	Final Disposition	Disposit. Year	Full Std. No.
TP 140	Moisture Sensitivity Using Hydrostatic Pore Pressure to Determine Cohesion and Adhesion Strength of Compacted Asphalt Mixture Specimens	2020	Adopted	2025	T 423
TP 141	Determining the Indirect Tensile Nflex Factor to Assess the Cracking Resistance of Asphalt Mixtures	2020	Adopted	2025	T 424
TP 142	Accelerated Determination of Potentially Deleterious Expansion of Concrete Cylinder due to Alkali–Silica Reactivity	2021	Converted	2024	TP 142M/ TP 142
TP 142M/TP 142	Accelerated Determination of Potentially Deleterious Expansion of Concrete Cylinder due to Alkali–Silica Reactivity	2024			
TP 143	Continuous Measurement of Sideway-Force Friction Number for Highway Pavements	2021			
TP 144	Determining the Potential Alkali–Silica Reactivity of Aggregates (TFHRC-TFAST)	2021			
TP 145	Evaluating Rutting and Moisture Resistance of Paving Materials via Loaded Wheel Tracking with a Rubber Tire	2024			
TP 146	Evaluating Shear Resistance of Asphalt-Treated Recycled Pavements Applications Using a Long-Pin Fixture	2025			
TP 147	Evaluating Raveling in Asphalt-Treated Recycled Pavement Applications Using a Short-Pin Fixture	2025			
TP 148	Mechanical Rocker Ice Melting Capacity (IMC)	2025			
TP 149M/ TP 149	Dowel Bars for Concrete Street and Highway Pavement	2025			[11]
TP 150	Poker Chip Test of Asphalt Binder	2025			

[1] Discontinued notice omitted.
[2] Will be incorporated into a future edition of M 254.
[3] Adopted in 1995 as R 19. R 19 was discontinued in 2004.
[4] Adopted in 2005 as R 41. R 41 was discontinued in 2019.
[5] Adopted in 2008 as R 48. R 48 was discontinued in 2018.
[6] Adopted in 2010 as R 55. R 55 was discontinued in 2018.
[7] Adopted in 2010 as R 53. R 53 was discontinued in 2015.
[8] Reclassified as a provisional specification MP 17 in 2007 then reclassified again as a practice when adopted as a full standard.
[9] Discontinued in 2016 then adopted in 2017.
[10] Adopted in 2017 (June) as T 367. T 367 was reclassified as R 95 in 2019.
[11] Will be incorporated into a future edition of T 253M/T 253.

ABOUT AASHTO DESIGNATION NUMBERS

Anatomy of a Designation Number

Components



Standard Types

Standard types are represented by a one-letter abbreviation for full standards. The letter "P" is added for provisional standards. The standard type abbreviations are as follows:

- M (Materials, full)
- T (Test, full)
- R (PRactice, full)
- MP (Materials, provisional)
- TP (Test, provisional)
- PP (Practice, provisional)

Standard Numbers

Standard numbers are sequential within standard type. A provisional that is subsequently adopted as a full standard will receive a new number; likewise a standard that changes types (e.g. test to practice).

Revised vs. Reconfirmed and Discontinued vs. Deleted

A full or provisional standard is designated as *revised* if technical changes have been balloted and approved by AASHTO's Committee on Materials and Pavements. A standard is designated as *reconfirmed* if it has undergone technical review to determine that it is up to date and in use and that it does not require revision; such a review is required:

- every four years for a full standard, and
- every one or two years for a provisional standard, depending on its progress through its 8-year provisional life cycle.

If a standard is no longer used, it may be *discontinued* by Committee vote, in which case the standard header will be published that year with a notice saying that the standard has been discontinued and giving a brief explanation as to why. In subsequent years, the standard will be *deleted* from the book, meaning that it is no longer maintained.

Designation Key

A key is provided in the line below the designation number. The information on the left indicates what year the standard was most recently technically revised, or when it was first published, adopted, or reclassified. If the standard has been reconfirmed or extended, the center tab will read "Reviewed but Not Updated:" and the year; otherwise, it will be empty. If unballoted technical corrections or clarifications have been made by the author subcommittee, the right tab will read "Editorially Revised:" and the year; otherwise, it will be empty.