

## REVISIONS TO MATERIALS SAMPLING GUIDE January 1, 2016 Edition

Section 3, Asphaltic Concrete	
Page 3-2, Material 8) Recycled Asphalt Shingles	
Material	<b>Added</b> – Recycled Asphalt Shingles
Type of Test	<b>Added</b> – Quality
Q.C. Sampling and Testing by Contractor	
	<b>Added</b> -- Recycled Asphalt Shingles are accepted by contractor Certificate of Test, and reviewed by the central laboratory.
Verification Sampling and Testing by NDOR – Field Personnel	
	<b>Added</b> – One 5lb sample representing the lot shall be submitted to the Central Laboratory for review.
Verification Sampling and Testing by NDOR – Branch Lab	
	<b>Added</b> – -----
Verification Sampling and Testing by NDOR – Central Lab	
	<b>Added</b> – One 5lb sample representing the lot shall be submitted to the Central Laboratory for review.
Location of Additional Information	
	<b>Added</b> – -----
Section 9, Grading	
Page 9-1, Material 1) Embankment (Cohesive and Granular), Moisture Deflection/Moisture Density	
Field Personnel	<b>Removed</b> – 500
	<b>Added</b> – 1,500
Section 13, Granular Base, Granular Fill, Granular Backfill, Sand Blanket and MSE Walls	
Page 13-4, Material 6) Granular Base, Granular Fill, Granular Backfill and Sand Blanket, Moisture Deflection/Moisture Density	
Verification Sampling and Testing by NDOR – Field Personnel	
	<b>Removed</b> – 500
	<b>Added</b> – 1,500
Page 13-6, Material 8) Granular Backfill for Structures, Moisture Deflection/Moisture Density	
Verification Sampling and Testing by NDOR – Field Personnel	
	<b>Removed</b> – 500
	<b>Added</b> – 1,500
Section 15, Portland Cement Concrete for Pavement, Base Course, Pavement Patching	
Page 15-1, Material 2) Class A, B, and C Aggregates	

	Type of Test	
		<b>Removed</b> – Colorimetric, Percent Clay
Page 15-1, Material 3) Class R Aggregate		
	Q.C. Sampling and Testing by Contractor	
		<b>Removed</b> – 1,000
		<b>Added</b> – 2,000
	Verification Sampling and Testing by NDOR – Field Personnel	
		<b>Removed</b> – 3,000
		<b>Added</b> – 6,000
	Verification Sampling and Testing by NDOR – Central Lab	
		<b>Removed</b> – 3,000
		<b>Added</b> – 6,000
Page 15-5, Material 25) Concrete Pavement Repair Flexible Polymer		
	Item or Group	
		<b>Added</b> – 25) Concrete Pavement Repair Flexible Polymer
	Sample Required	
		<b>Added</b> – -----
	Approved Products List	
		<b>Added</b> – Yes
	Manufacturer Certified Tests Required	
		<b>Added</b> – No
	Manufacturer Certification of Compliance Required	
		<b>Added</b> – No
	Location of Additional Information	
		<b>Added</b> – -----
Page 15-5, Material 26) Pigmented Concrete Coating		
	Item or Group	
		<b>Added</b> – 26) Pigmented Concrete Coating
	Sample Required	
		<b>Added</b> – -----
	Approved Products List	
		<b>Added</b> – Yes
	Manufacturer Certified Tests Required	
		<b>Added</b> – No
	Manufacturer Certification of Compliance Required	
		<b>Added</b> – No
	Location of Additional Information	
		<b>Added</b> – -----

Page 15-5, Material 27) Epoxy Penetrating Sealers	
Item or Group	<b>Added</b> – 27) Epoxy Penetrating Sealers
Sample Required	<b>Added</b> -----
Approved Products List	<b>Added</b> – Yes
Manufacturer Certified Tests Required	<b>Added</b> – No
Manufacturer Certification of Compliance Required	<b>Added</b> – No
Location of Additional Information	<b>Added</b> -----
Page 15-5, Material 28) Powdered Epoxy Resin Coating Material	
Item or Group	<b>Added</b> – 28) Powdered Epoxy Resin Coating Material
Sample Required	<b>Added</b> -----
Approved Products List	<b>Added</b> – Yes
Manufacturer Certified Tests Required	<b>Added</b> – No
Manufacturer Certification of Compliance Required	<b>Added</b> – No
Location of Additional Information	<b>Added</b> -----
Page 15-5, Material 29) Sealing Compounds – Type I (Flow, Self-Leveling) and Type II (Non-Sag)	
Item or Group	<b>Added</b> – 29) Sealing Compounds – Type I (Flow, Self-Leveling) and Type II (Non-Sag)
Sample Required	<b>Added</b> -----
Approved Products List	<b>Added</b> – Yes
Manufacturer Certified Tests Required	<b>Added</b> – No
Manufacturer Certification of Compliance Required	<b>Added</b> – No
Location of Additional Information	

		<b>Added</b> -----
	Page 15-5, Material 30) Bond Breakers for Dowel Bars	
	Item or Group	
	<b>Added</b> – 30) Bond Breakers for Dowel Bars	
	Sample Required	
	<b>Added</b> -----	
	Approved Products List	
	<b>Added</b> – Yes	
	Manufacturer Certified Tests Required	
	<b>Added</b> – No	
	Manufacturer Certification of Compliance Required	
	<b>Added</b> – No	
	Location of Additional Information	
	<b>Added</b> -----	
Section 16, Portland Cement Concrete for Structures, Culverts and Miscellaneous Construction		
	Page 16-1, Material 2) Class A, B, and C Aggregates	
	Type of Test	
	<b>Removed</b> – Colorimetric, Percent Clay	
	Page 16-1, Material 2) Class R Aggregate	
	Q.C. Sampling and Testing by Contractor	
	<b>Removed</b> – 1,000	
	<b>Added</b> – 2,000	
	Verification Sampling and Testing by NDOR – Field Personnel	
	<b>Removed</b> – 3,000	
	<b>Added</b> – 6,000	
	Verification Sampling and Testing by NDOR – Branch Lab	
	<b>Added</b> -----	
	Verification Sampling and Testing by NDOR – Central Lab	
	<b>Removed</b> – 3,000	
	<b>Added</b> – 6,000	
	Location of Additional Information	
	<b>Added</b> -----	
	Page 16-4, Material 11) Shotcrete	
	Material	
	<b>Added</b> – Material 11) Shotcrete	
	Type of Test	
	<b>Added</b> -----	

	Q.C. Sampling and Testing by Contractor	
		<b>Added</b> -----
	Verification Sampling and Testing by NDOR – Field Personnel	
		<b>Added</b> -----
	Verification Sampling and Testing by NDOR – Branch Lab	
		<b>Added</b> -----
	Verification Sampling and Testing by NDOR – Central Lab	
		<b>Added</b> -----
	Location of Additional Information	
		<b>Added</b> -----
	Page 16-4, Material 11) Shotcrete, A) Mortar Cubes	
	Material	
		<b>Added</b> – Material 11) Shotcrete, A) Mortar Cubes
	Type of Test	
		<b>Added</b> – Compressive Strength
	Q.C. Sampling and Testing by Contractor	
		<b>Added</b> -----
	Verification Sampling and Testing by NDOR – Field Personnel	
		<b>Removed</b> – Two sets of three 2-inch cubes shall be made for every day’s production. Cubes will be tested in the branch or central laboratory.
		<b>Added</b> – Two sets of three 2-inch cubes shall be made for every day’s production.
	Verification Sampling and Testing by NDOR – Branch Lab	
		<b>Added</b> – Cubes will be tested in the branch or central laboratory.
	Verification Sampling and Testing by NDOR – Central Lab	
		<b>Added</b> – Cubes will be tested in the branch or central laboratory.
	Location of Additional Information	
		<b>Added</b> – Section 27, Note 6
	Page 16-4, Material 11) Shotcrete, B) Concrete Cores	
	Material	
		<b>Added</b> – Material 11) Shotcrete, B) Concrete Cores
	Type of Test	
		<b>Added</b> – Compressive Strength
	Q.C. Sampling and Testing by Contractor	
		<b>Added</b> -----
	Verification Sampling and Testing by NDOR – Field Personnel	
		<b>Added</b> – One set of nine 3-inch diameter cores for every 50 CY, but not less than one set each day.
	Verification Sampling and Testing by NDOR – Branch Lab	
		<b>Added</b> – Cores will be tested in the branch or central laboratory.
	Verification Sampling and Testing by NDOR – Central Lab	

		<b>Added</b> – Cores will be tested in the branch or central laboratory.
	Location of Additional Information	
		<b>Added</b> – Section 27, Note 6
	Page 16-5, Material 12) Shotcrete Mix Design	
	Item or Group	
		<b>Added</b> – Material 12) Shotcrete Mix Design
	Sample Required	
		<b>Added</b> – New mixes shall be tested and approved by the PCC Engineer prior to production
	Approved Products List	
		<b>Added</b> – Yes
	Manufacturer Certified Tests Required	
		<b>Added</b> – Yes
	Manufacturer Certification of Compliance Required	
		<b>Added</b> – No
	Location of Additional Information	
		<b>Added</b> -----
	Page 16-5, Material 18) Concrete Pavement Repair Flexible Polymer	
	Item or Group	
		<b>Added</b> – 18) Concrete Pavement Repair Flexible Polymer
	Sample Required	
		<b>Added</b> -----
	Approved Products List	
		<b>Added</b> – Yes
	Manufacturer Certified Tests Required	
		Added – No
	Manufacturer Certification of Compliance Required	
		<b>Added</b> – No
	Location of Additional Information	
		<b>Added</b> -----
	Page 16-5, Material 19) Pigmented Concrete Coating	
	Item or Group	
		<b>Added</b> – Material 19) Pigmented Concrete Coating
	Sample Required	
		<b>Added</b> -----
	Approved Products List	
		<b>Added</b> – Yes
	Manufacturer Certified Tests Required	
		<b>Added</b> – No

	Manufacturer Certification of Compliance Required
	<b>Added</b> – No
	Location of Additional Information
	<b>Added</b> –-----
Page 16-5, Material 20) Sewer Joint Compound	
	Item or Group
	<b>Added</b> – Material 20) Sewer Joint Compound
	Sample Required
	<b>Added</b> –-----
	Approved Products List
	<b>Added</b> – Yes
	Manufacturer Certified Tests Required
	<b>Added</b> – No
	Manufacturer Certification of Compliance Required
	<b>Added</b> – No
	Location of Additional Information
	<b>Added</b> –-----
Page 16-5, Material 21) Epoxy Penetrating Sealers	
	Item or Group
	<b>Added</b> – Material 21) Epoxy Penetrating Sealers
	Sample Required
	<b>Added</b> –-----
	Approved Products List
	<b>Added</b> – Yes
	Manufacturer Certified Tests Required
	<b>Added</b> – No
	Manufacturer Certification of Compliance Required
	<b>Added</b> – No
	Location of Additional Information
	<b>Added</b> –-----
Page 16-5, Material 22) Powdered Epoxy Resin Coating Material	
	Item or Group
	<b>Added</b> – Material 22) Powdered Epoxy Resin Coating Material
	Sample Required
	<b>Added</b> –-----
	Approved Products List
	<b>Added</b> – Yes
	Manufacturer Certified Tests Required

			<b>Added</b> – No
		Manufacturer Certification of Compliance Required	
			<b>Added</b> – No
		Location of Additional Information	
			<b>Added</b> – -----
		Page 16-5, Material 23) Sealing Compounds – Type I (Flow, Self-Leveling) and Type II (Non-Sag)	
		Item or Group	
			<b>Added</b> – Material 23) Sealing Compounds – Type I (Flow, Self-Leveling) and Type II (Non-Sag)
		Sample Required	
			<b>Added</b> – -----
		Approved Products List	
			<b>Added</b> – Yes
		Manufacturer Certified Tests Required	
			<b>Added</b> – No
		Manufacturer Certification of Compliance Required	
			<b>Added</b> – No
		Location of Additional Information	
			<b>Added</b> – -----
		Page 16-5, Material 24) Bond Breakers for Dowel Bars	
		Item or Group	
			<b>Added</b> – Material 24) Bond Breakers for Dowel Bars
		Sample Required	
			<b>Added</b> – -----
		Approved Products List	
			<b>Added</b> – Yes
		Manufacturer Certified Tests Required	
			<b>Added</b> – No
		Manufacturer Certification of Compliance Required	
			<b>Added</b> – No
		Location of Additional Information	
			<b>Added</b> – -----
		Section 18, Fence, Handrail, and Barrier Rail Materials	
		Page 18-1, Material 1) Fence (Barbed Wire, Chain Link Fabric, Right of Way, Woven Wire)	
		Item or Group	
			<b>Added</b> – Chain Link Fabric, Right of Way, Woven Wire
		Sample Required	
			<b>Removed</b> – sample



			<b>Removed</b> – long
			<b>Added</b> – sample, from each type
			<b>Removed</b> – spools
			<b>Added</b> – units
	Page 18-1, Material 2) Chain Link		
		Item or Group	
			<b>Removed</b> – Chain Link
	Page 18-1, Material 3) Right of Way		
		Item or Group	
			<b>Removed</b> – Right of Way
	Page 18-1, Material 4) Woven Wire		
		Item or Group	
			<b>Removed</b> – Woven Wire
	Page 18-1, Material 5) Welded Wire Fabric		
		Item or Group	
			<b>Removed</b> – Welded Wire Fabric
Section 19, Culvert Pipe, Drain Tile, Sewer Pipe, Slope Drains, etc.			
	Page 19-1, Material 1Ab) Culvert, Zinc Coated Galvanized Steel, Aluminum Coated Steel, Polymer Coated Steel, Plastic, Culverts (Plastic)		
		Manufacturer Certified Tests Required	
			<b>Removed</b> – No
			<b>Added</b> – Yes
Section 20, Bridge Materials			
	Page 20-5, Material 29A) Epoxy Polymer Overlay, Type III Epoxy		
		Sample Required	
			<b>Removed</b> – Yes – One 16-oz. sample for each component
			<b>Added</b> – No
Section 21, Lighting and Signal Materials			
	Page 21-2, Material 2G) Electrical Items, Electrical Wire and Cable		
		Sample Required	
			<b>Removed</b> – If requested by the Materials and Research Division, a manufacturer's certified test report may also be required.
		Manufacturer Certified Tests Required	
			<b>Removed</b> – Yes
			<b>Added</b> – No

<b>Section 21, Signing Materials</b>		
Page 22-1, Material 3) Detachable Letters, Numerals, Symbols, and Border		
	Item or Group	
		<b>Removed</b> – Material 3) Detachable Letters, Numerals, Symbols, and Border
	Sample Required	
		<b>Removed</b> – No
	Approved Products List	
		<b>Removed</b> – No
	Manufacturer Certified Tests Required	
		<b>Removed</b> – No
	Manufacturer Certification of Compliance Required	
		<b>Removed</b> – Yes
	Location of Additional Information	
		<b>Removed</b> – Section 27, Note 21
Page 22-1, Material 4) Reflective Sheeting		
	Approved Products List	
		<b>Removed</b> – No
		<b>Added</b> – Yes
	Manufacturer Certification of Compliance Required	
		<b>Removed</b> – Yes
		<b>Added</b> – No
<b>Section 23, Traffic Control</b>		
Page 23-1, Material 1A) Barricade Warning Sign, Drum, and Tubular Post Reflective Material, Barricades/Plastic Drums		
	Item or Group	
		<b>Added</b> – A) Barricades/Plastic Drums
	Sample Required	
		<b>Added</b> – Yes – When fewer than 50 devices are furnished, test the retroreflectivity of one of every five, or a minimum of two each, whichever is greater. When 50 or more of any one device are furnished, test the retroreflectivity of one of every ten.
	Approved Products List	
		<b>Added</b> – No
	Manufacturer Certified Tests Required	
		<b>Added</b> – No
	Manufacturer Certification of Compliance Required	
		<b>Added</b> – No
	Location of Additional Information	
		<b>Added</b> – -----

Section 24, Roadside Development and Erosion Control			
Page 24-1, Material 8) Turbidity Barrier			
		Item or Group	
			<b>Added</b> – 8) Turbidity Barrier
		Sample Required	
			<b>Added</b> – No
		Approved Products List	
			<b>Added</b> – Yes
		Manufacturer Certified Tests Required	
			<b>Added</b> – No
		Manufacturer Certification of Compliance Required	
			<b>Added</b> – No
		Location of Additional Information	
			<b>Added</b> – -----
Section 20, Bridge Materials			
Page 25-2, Material 19B) High Friction Surface Treatment, Polymer Binder Resin			
		Sample Required	
			<b>Removed</b> – Yes – One 16-oz. sample for each component
			<b>Added</b> – No
Section 27, Notes			
Page 27-3, Note 6, Portland Cement Concrete			
			<b>Added</b> – /Concrete Cores
			<b>Removed</b> – Two inch cube molds must be used on all projects. Two sets of three 2-inch cubes must be made daily in the field.
			<b>Added</b> – or cores
Section 28, Quality Assurance Program for Construction Materials, Table A1, Test Methods for Qualification of Sampling and Testing Personnel			
Page 28-A-4, Concrete Field Technician, Shotcrete Technician			
		Concrete Field Technician	
			<b>Added</b> – Shotcrete Technician (5 Year)
Page 28-A-8, Concrete Field Technician, Shotcrete Technician			
		Concrete Field Technician	
			<b>Added</b> – Shotcrete Technician
			<b>Added</b> – A Shotcrete Technician is an individual who has the knowledge and ability to properly perform the installation of Shotcrete material. The certified individual will share credentials, project experience, and complete a test panel. Training Coordinated By: NDOR Materials & Research or Designee

			Certification Duration: 5 years Certification Records Retained: SiteManager Authority: NDOR Materials & Research or Designee Prerequisite: NA
	Page 28-A-12, Laboratory and Field Technician Certifications - Provisional		
			<b>Removed</b> – NDOR QA Managers (or approved designee) must complete DR Form 248 and submit it to SiteManager Materials Management staff once they issue a provisional certification.
			<b>Added</b> – NDOR QA Managers (or the approved designee) are responsible to maintain provisional certifications in SiteManager.
Policy 4, Acceptance Policy for Portland Cement and Interground/Blended Cements			
	Page 29-12, Quality Assurance of Interground/Blended Cements on the Approved Products List		
			<b>Removed</b> – flowchart
			<b>Added</b> -- flowchart