PART TWO

FREQUENCY TABLES

FREQUENCY TABLES
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MINIMUM REQUIRED SAMPLES AND TESTS: PROJECT
JANUARY 2021

MATERIAL OR PRODUCT	TEST NO.*	TEST	SAMPLE FREQUENCY**	LOCATION OR TIME OF SAMPLING	SIZE OF SAMPLE	REMARKS
Borrow / Embankment	115	Resistance "R" value	One per 50,000 yd^3 or 26,500 tons or fraction thereof for qualifying the materials.	Source Requirement Test	Sample one full, large canvas sample sack	Submit to Materials Division for testing
	108	Proctor	108 and 104 (when rock correction is required) to be run every 25 compaction tests, minimum or one per 125,000 yd^3 or one per 66,250 tons.	Material obtained from Nev. T200		108 and 104 to be run concurrently when rock correction is required
	104	Specific Gravity				
	102 or 103	Density	One per 5,000 yd^3 or 2,650 tons of embankment, but not less than one per day, per lift	After final compaction		
Select Borrow	115	Resistance "R" Value	One per 50,000 yd^3 or fraction thereof for qualifying the materials	Source Requirement Test	Sample one full, large canvas sample sack	Submit to Materials Division for testing
	108	Proctor	108 and 104 (when rock correction is required) to be run every 25 compaction tests, minimum or one per 125,000 yd^3 or one per 66,250 tons.	Material obtained from Nev. T200		108 and 104 to be run concurrently when rock correction is required
	104	Specific Gravity				
	102 or 103	Density	One per 1,000 yd^3 of embankment, but not less than one per day, per lift	After final compaction		
	206	Sieve Analysis	One per day		Refer to Nev. T206	
Foundation Material	115	Resistance “R” Value	One per 50,000 yd^3 or 26,500 tons or fraction thereof for qualifying the materials	Source Requirement Test	Sample one full, large canvas sample sack	Submit to Materials Division for testing
	108	Proctor	108 and 104 (when rock correction is required) to be run every 25 compaction tests, minimum or one per 125,000 yd3 or one per 66,250 tons.	Material obtained from Nev. T200		108 and 104 to be run concurrently when rock correction is required
	104	Specific Gravity				

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MATERIAL OR PRODUCT	TEST NO.*	TEST	SAMPLE FREQUENCY**	LOCATION OR TIME OF SAMPLING	SIZE OF SAMPLE	REMARKS
Foundation Material (cont.'d)	102 or 103	Density	One per 1,000 yd^3 or 530 tons of embankment, but not less than one per day, per lift	After final compaction		
	206	Sieve Analysis	One per day			
Original Ground and Base of Cuts	108	Proctor	108 and 104 (when rock correction is required) to be run every 25 compaction tests, minimum or 1 per 100,000 yd^2	Material obtained from Nev. T200		108 and 104 to be run concurrently when rock correction is required
	104	Specific Gravity				
	102 or 103	Density	One per 4,000 yd^2, but not less than one per day; or one per structure for footings, pipes, headwalls etc.	After final compaction		
Backfill	108	Proctor	108 and 104 (when rock correction is required) to be run every 25 compaction tests, minimum or one per 25,000 yd^3	Material obtained from Nev. T200		108 and 104 to be run concurrently when rock correction is required
	104	Specific Gravity				
	102 or 103	Density	One per 1,000 yd^3 or fraction thereof per structure, or one per lift	After final compaction		
	206	Sieve Analysis	One per 1,000 yd^3 or fraction thereof		Refer to Nev. T206	
Granular Backfill	206	Sieve Analysis		Source Requirement Test	Sample one full, large canvas sample sack	Submit to Materials Division for testing
	210/211/212	LL/PL/PI		Source Requirement Test		Submit to Materials Division for testing
	AASHTO T289	pH Value		Source Requirement Test		Submit to Materials Division for testing. Indicate on the transmittal whether concrete, aluminum or steel are being used with a culvert or structure
	AASHTO T288	Resistivity				
	108	Proctor	108 and 104 (when rock correction is required) to be run every 25 compaction tests, minimum or one per 25,000 yd^3	Material obtained from Nev. T200		108 and 104 to be run concurrently when rock correction is required
	104	Specific Gravity				

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MATERIAL OR PRODUCT	TEST NO.*	TEST	SAMPLE FREQUENCY**	LOCATION OR TIME OF SAMPLING	SIZE OF SAMPLE	REMARKS
Granular Backfill (cont'd)	102 or 103	Density	One per 1,000 yd^3 or fraction thereof per structure, or one per lift	After final compaction		
	206	Sieve Analysis	One per 1,000 yd^3 or fraction thereof		Refer to Nev. T206	
	210/211/212	LL/PL/PI	One per 1,000 yd^3 or fraction thereof			
Cement Treated Backfill	108	Proctor	108 and 104 (when rock correction is required) to be run every 25 compaction tests, minimum or one per 25,000 yd^3	Material obtained from Nev. T200		108 and 104 to be run concurrently when rock correction is required
	104	Specific Gravity				
	102 or 103	Density	One per 1,000 yd^3 or fraction thereof per structure, or one per lift	After final compaction		
	206	Sieve Analysis	One per 1,000 yd^3 or fraction thereof		Refer to Nev. T206	
MSE Backfill	AASHTO T289 AASHTO T288 AASHTO T291 AASHTO T290	pH Value Resistivity Chlorides Sulfates	One per 1,000 yd^3, but not less than one per stockpile	Source Requirement Test	Sample one full, large canvas sample sack	Submit to Materials Division for testing. Indicate the type of reinforcement (Metallic or Geogrid) on the transmittal
	108	Proctor	108 and 104 (when rock correction is required) to be run every 25 compaction tests, minimum or one per 25,000 yd^3	Material obtained from Nev. T200		108 and 104 to be run concurrently when rock correction is required
	104	Specific Gravity				
	102 or 103	Density	One per 1,000 yd^3 or fraction thereof per structure, or one per lift	After final compaction		
	206	Sieve Analysis	One per 1,000 yd^3 or fraction thereof		Refer to Nev. T206	
	210/211/212	LL/PL/PI	One per 1,000 yd^3 or fraction thereof			
Slurry Cement Backfill	206	Sieve Analysis	One per 1,000 yd^3 or fraction thereof		Refer to Nev. T206	
	428	Compressive Strength	One per 200 yd^3 or fraction thereof	See Nev. T425, Standard Method of Test for Sampling Fresh Concrete.		Three 6-in x 12-in cylinders (28 day) are required for each sample. More may be made for informational testing.

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MATERIAL OR PRODUCT	TEST NO.*	TEST	SAMPLE FREQUENCY**	LOCATION OR TIME OF SAMPLING	SIZE OF SAMPLE	REMARKS
Slurry Cement Backfill (cont.'d)	431 or 432	Air Content by Volumetric or Pressure	One per 200 yd^3 or fraction thereof	First test to be taken within first two loads		
	ASTM C940	Subsidence	One per 200 yd^3 or fraction thereof			6-in x 12-in cylinders may be used for measurement purposes.
	438	Slump	At the discretion of the Resident Engineer			Slump is run whenever consistency is non-uniform. See Section 207
Sand Bedding	108	Proctor	108 and 104 (when rock correction is required) to be run every 25 compaction tests, minimum or one per 25,000 yd^3	Material obtained from Nev. T200		108 and 104 to be run concurrently when rock correction is required
	102 or 103	Density	One per 1,000 yd^3 or fraction thereof per structure, or one per lift	After final compaction		
	206	Sieve	One per 1,000 yd^3 or fraction thereof		Refer to Nev. T206	
Cellular Concrete	ASTM C796	Compressive Strength	One per 300 yd^3 or fraction thereof	See Nev. T425, Standard Method of Test for Sampling Fresh Concrete.		Six cylinders are required for each sample. Four cylinders will be tested at 28 days.
Drain Backfill	AASHTO T96	% of Wear (500 rev.)		Source Requirement Test	Sample two full, large canvas sample sacks	Submit to Materials Division for testing
	206	Sieve Analysis	One per 1,000 yd^3 or one per project minimum	At time of use, jobsite stockpile	Refer to Nev. T206	
Erosion Control	206	Sieve	One per 1,000 yd^3 or one per project minimum	At time of use, jobsite stockpile		
	230	Fractured Face	One per 1,000 yd^3 or one per project minimum	At time of use, jobsite stockpile		
Landscape and Aesthetics	206	Sieve	One per 1,000 yd^3 or one per project minimum	At time of use, jobsite stockpile		
Types 1, 2 and 3 Base (For Type 3, See Special Provisions)	115	Resistance (R Value)		Source Requirement Test	Sample two full, large canvas sample sacks	Submit to Materials Division for testing
	AASHTO T96	% Wear (500 Rev.)		Source Requirement Test		Submit to Materials Division for testing

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MATERIAL OR PRODUCT	TEST NO.*	TEST	SAMPLE FREQUENCY**	LOCATION OR TIME OF SAMPLING	SIZE OF SAMPLE	REMARKS
Types 1, 2 and 3 Base (For Type 3, See Special Provisions) (cont'd)	206	Sieve Analysis	One per day, one per 2,000 tons or one per 3,740 yd^3 when non-uniform material	Class A: From roadway directly behind spreader Class B: From processed windrow, just prior to final lay down	Refer to Nev. T206	For small quantity, location and frequency of sample are at the discretion of the Resident Engineer
	210/211/212	LL/PL/PI	One per day, one per 2,000 tons or one per 3,740 yd^3 when non-uniform material			For small quantity, location and frequency of sample are at the discretion of the Resident Engineer
	230	Fractured Face	One per day			For small quantity, location and frequency of sample are at the discretion of the Resident Engineer
	112	Moisture	One per day, one per 2,000 tons or one per 3,740 yd^3 when non-uniform material	Moisture tests should be taken from the windrow or stockpile after the material has been weighed, but prior to adding any additional water in the field		Results for payment purposes. Moisture tests need to represent what was weighed
	108	Proctor	108 and 104 (when rock correction is required) to be run every 25 compaction tests, minimum or one per 50,000 tons or one per 93,500 yd^3	Material obtained from Nev. T200		108 and 104 to be run concurrently when rock correction is required; for small quantity, location and frequency of sample are at the discretion of the Resident Engineer. For Type A only: Depth checks taken during density test but for informational testing only. Record depths on DWR
	104	Specific Gravity				
	102 or 103	Density	One per 2,000 tons or fraction thereof, one per 3,740 yd^3 or fraction thereof, or one per lift	On roadway, after trimming and final compaction		
		Straightedge Tolerances Section 302	Two per lane mile	Finished surface		Record results on DWR
Aggregate for Portland Cement Treated Base	AASHTO T96	% of Wear (500 rev.)		Source Requirement Test	Sample four full, large canvas sample sacks	Submit to Materials Division for testing
	206	Sieve Analysis	One per day or one per 1,000 tons or one per 3,740 yd^3 when non-uniform material	Road mixed: From processed material, prior to adding cement. Plant mixed: From conveyors, prior to adding cement	Refer to Nev. T206	Sample aggregate during production

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MATERIAL OR PRODUCT	TEST NO.*	TEST	SAMPLE FREQUENCY**	LOCATION OR TIME OF SAMPLING	SIZE OF SAMPLE	REMARKS
Aggregate for Portland Cement Treated Base (cont.'d)	227	Sand Equivalent	One per day or one per 1,000 tons or one per 3,740 yd^3 when non-uniform material			
Cement Treated Base (Road mixed or Plant mixed Method)	112	Moisture	One per 2,000 tons			Record moistures on DWR
	108	Proctor	108 and 104 (when rock correction is required) to be run every 25 compaction tests, minimum or one per 50,000 tons	Material obtained from Nev. T200		108 and 104 to be run concurrently when rock correction is required; depth checks taken during density test for informational testing only. Record depths on DWR
	104	Specific Gravity				
	102 or 103	Density	One per 2,000 tons or fraction thereof or one per lift	On roadway, after trimming and final compaction		
		Straightedge Tolerances Section 304	Two per lane mile per lift	Finished surface		Record results on DWR
Pulverized Base and Surface (Roadbed Modification)	112	Moisture	One per 7,000 yd^2 or fraction thereof	On roadway, after final compaction		Record moistures on sieve analysis form
	108	Proctor	108 and 104 (when rock correction is required) to be run every 25 compaction tests, minimum or one per 175,000 yd^2	Material obtained from Nev. T200 Obtain proctor sample from loose processed material in roadway prior to compaction: 1st processing without cement 2nd processing with cement		108 and 104 to be run concurrently when rock correction is required, depth checks for informational testing only. Record depths on DWR
	104	Specific Gravity				
	102 or 103	Density	One per 7,000 yd^2 or fraction thereof	On roadway, after final compaction		
	206	Sieve Analysis	One per 7,000 yd^2 or fraction thereof	After final pulverization by removing a composite sample of the pulverized surface at randomly selected sites prior to adding cement	Refer to Nev. T206	
		Cement Distribution	Two per lane mile			Phenolphthalein test for informational testing only Record results on DWR
		Straightedge Tolerances Section 305	Two per lane mile per lift	Finished surface		Record results on DWR

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MATERIAL OR PRODUCT	TEST NO.*	TEST	SAMPLE FREQUENCY**	LOCATION OR TIME OF SAMPLING	SIZE OF SAMPLE	REMARKS
Shouldering Material	112	Moisture	One per day or one per 2,000 tons			Record moistures on DWR
	206	Sieve Analysis	One per day or one per 2,000 tons when non-uniform material; one per day for coldmilled material	At belt or stockpile. Coldmilled material from windrow	Refer to Nev. T206	
	210/211/212	LL/PL/PI	One per day or one per 2,000 tons when non-uniform material			
Blotter Sand, Sand in Stockpile	206	Sieve Analysis	One per project per source	At belt or stockpile	Refer to Nev. T206	
Aggregate for Plantmix Bituminous Base, Surface, Open-Graded, Permeable Base and Premix	AASHTO T96	% of Wear (500 rev.)		Mix Design Submittal and/or Source Requirement Test	Sample two full, large canvas sample sacks from each size for each mix design	Submit to Materials Division for testing
	206	Sieve Analysis		Mix Design Submittal and/or Source Requirement Test		Submit to Materials Division for testing
	210/211/212	LL/PL/PI		Mix Design Submittal and/or Source Requirement Test		Submit to Materials Division for testing
	230	Fractured Face		Mix Design Submittal and/or Source Requirement Test		Submit to Materials Division for testing
	AASHTO T104	Soundness, Sodium	Coarse and fine aggregate	Mix Design Submittal and/or Source Requirement Test		Submit to Materials Division for testing
	111	Absorption Specific Gravity	Coarse aggregate	Mix Design Submittal and/or Source Requirement Test		Submit to Materials Division for testing
	493	Specific Gravity	Fine aggregate	Mix Design Submittal and/or Source Requirement Test		Submit to Materials Division for testing
	206	Sieve Analysis	One per 5,000 tons of each size produced, minimum one test per five crushing days for each size aggregate	From belt or stockpile	Refer to Nev. T206	Tests must be run prior to marination. For informational testing only
	210/211/212	LL/PL/PI	One per 5,000 tons of each size aggregate produced, minimum one test per five crushing days for each size aggregate	From belt or stockpile		Tests must be run prior to marination

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MATERIAL OR PRODUCT	TEST NO.*	TEST	SAMPLE FREQUENCY**	LOCATION OR TIME OF SAMPLING	SIZE OF SAMPLE	REMARKS
Aggregate for Plantmix Bituminous Base, Surface, Open-Graded, Permeable Base and Premix (cont'd)	230	Fractured Face	One per 5,000 tons of each size aggregate produced, minimum one test per five crushing days for each size aggregate	From belt or stockpile		Tests must be run prior to marination
		Lime Distribution	One per size per project. If non-uniform material, more tests may be required at the discretion of the Resident Engineer	From belt or stockpile during marination		Phenolphthalein test during production. Record in Marination DWR
Recycled Asphalt Pavement (RAP) for Plantmix Bituminous Surface	AASHTO T30	Mechanical Analysis of Extracted Aggregate	One per 500 tons required to be performed by the contractor	Mix Design Submittal	Sample two full, large canvas sample sacks from each size for each mix design	Submit to Materials Division for testing
	AASHTO T164	Extraction of Asphalt Binder	One per 500 tons required to be performed by the contractor	Mix Design Submittal		Submit to Materials Division for testing
	206	Sieve Analysis	One per 5,000 tons of each size aggregate produced, minimum one test per five production days for each size aggregate	From belt or stockpile	Refer to Nev. T206	Verify material meets specified sieve requirements
	112	Moisture	One per 5,000 tons of each size aggregate produced, minimum one test per five production days for each size aggregate	From belt of stockpile		
Permeable Base (Asphalt Treated)	206	Sieve Analysis	One per 2,000 tons, or one per day minimum	Section 303	Refer to Nev. T206	Material remaining from Nev. T761
	761 306	Bitumen Ratio Moisture Content	One per 2,000 tons, or one per day minimum			
		Straightedge Tolerances Section 303	Two per lane mile	Finished surface		Record results on DWR
Premix	AASHTO T269	Percent Air Voids of Compacted Mixture	One per project	From jobsite stockpile	Three full 6-in. x 12-in. cylinders; sample will cover AASHTO T269 and Nev. T303	Submit to Materials Division for testing
	303	Stabilometer	One per project	From jobsite stockpile		Submit to Materials Division for testing
	206	Sieve Analysis	One per 2,000 tons or one per day minimum	From coldfeed belt at plant during production	Refer to Nev. T206	

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MATERIAL OR PRODUCT	TEST NO.*	TEST	SAMPLE FREQUENCY**	LOCATION OR TIME OF SAMPLING	SIZE OF SAMPLE	REMARKS
Plantmix Bituminous Base and Surface (Type 2, Type 2C, Type 3 etc.)	206	Sieve Analysis	One per 1,000 tons or one per day minimum	Section 106	Refer to Nev. T206	Material remaining from Nev. T761
	112	Moisture	One per day	From coldfeed belt at plant during production		For informational testing only, record moistures on testers portion of Daily Plant Report
	761	Bitumen Ratio	One per 1,000 tons or one per day minimum.	Composite sample from behind the paver, prior to rolling		
	306 or 112	Moisture Content		Composite sample from behind the paver, prior to rolling		
	325	Theoretical Maximum Specific Gravity (Rice)	One for each one-half day of production (a.m. and p.m.)	Composite sample from behind the paver, prior to rolling		For Method B compaction only
	AASHTO T269	Percent Air Voids of Compacted Mixture	One per 10,000 tons or twice per week, whichever is less; sample first three days of paving		Three full 6-in. x 12-in. cylinders; this sample will cover AASHTO T269 and Nev. T303 and T341	Submit to Materials Division for testing
	303	Stabilometer	One per 10,000 tons or twice per week, whichever is less; sample first three days of paving			Submit to Materials Division for testing
	341	Lottmans	One per 10,000 tons or twice per week, whichever is less; sample first three days of paving			Submit to Materials Division for testing. Materials Division will determine the frequency of performing the test
	335 or 750	Density	Section 402	Random locations per Test Method		See specifications for required test method and density requirements. Nev. T336 will be used to correlate the thin layer density gauge (Nev. T335) Density testing will be conducted within 50 feet of abutment zones and approach slab zones.
		Straightedge Tolerance Section 402	Two per lane mile	Finished surface		Record results on DWR

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MATERIAL OR PRODUCT	TEST NO.*	TEST	SAMPLE FREQUENCY**	LOCATION OR TIME OF SAMPLING	SIZE OF SAMPLE	REMARKS
Plantmix Bituminous Open-Graded Surface, Asphalt Rubber Overlay and UTACS	206	Sieve Analysis	One per 1,000 tons or one per day minimum	From augers at paver or windrow in front of paver	Refer to Nev. T206	Material remaining from Nev. T761
	112	Moisture	One per day	From coldfeed belt at plant during production		
	761	Bitumen Ratio	One per 1,000 tons or one per day minimum			
	306	Moisture Content		From augers at paver or windrow in front of paver		
	325	Theoretical Maximum Specific Gravity (Rice)	Sample first 3 days of paving; then one per 10,000 tons or twice per week, whichever is less	From augers at paver or windrow in front of paver		
		Straightedge Tolerance Section 402	Two per lane mile	Finished surface		Record results on DWR
Cold Recycle	206	Sieve Analysis	Two per lane mile	Windrow	Refer to Nev. T206	Verify material meets specified sieve requirements
	750	Density	Section 404	Random locations per Test Method		
	112	Moisture	Two per day	Windrow		One in a.m. and one in p.m., for informational testing only. Record moistures on DWR
	112	Moisture	See Section 404	Section 404		(Moisture for cores)
	762	Field Viscosity Section 404	One per truck and one per trailer	Approximate midpoint / mid depth of the load		Sampled by contractor and observed by NDOT representative
		Straightedge Tolerance Section 404	Two per lane mile			Record results on DWR
Surface Treatment Screenings (Chips)	AASHTO T96	% Wear (500 Rev.)	One per project, per source, per supplier	Source Requirement Test	Sample two full, large canvas sample sacks per source per supplier	Submit asphalt and aggregate to Materials Division for testing
	209	Stripping	One per project, per source, per supplier	Aggregate source and asphalt supplier specific	1 gallon of asphalt	Submit 1 gallon of asphalt and aggregate sample to Materials Division for testing
	206	Sieve Analysis	One per 2,000 tons	From jobsite stockpiles		

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MATERIAL OR PRODUCT	TEST NO.*	TEST	SAMPLE FREQUENCY**	LOCATION OR TIME OF SAMPLING	SIZE OF SAMPLE	REMARKS
Surface Treatment Screenings (Chips) (cont'd)	228	Cleanness Value	One per 2,000 tons	From jobsite stockpiles		
	230	Fractured Face	One per 2,000 tons	From jobsite stockpiles		
	762	Field Viscosity Section 408	One per truck and one per trailer	Approximate mid depth / midpoint of the load		Sampled by contractor and observed by NDOT representative
Micro-Surfacing	AASHTO T96	% Wear (500 Rev.)	One per project per source	Mix Design Submittal and Source Requirement Test. Minimum of 20 working days before use.	Sample two full, large canvas sample sacks of aggregate.	Submit to Materials Division for testing
	AASHTO T104	Soundness, 5 cycle sodium sulfate	Coarse and fine aggregate	Mix Design Submittal and Source Requirement Test. Minimum of 20 working days before use.	Sample two full, large canvas sample sacks of aggregate.	Submit to Materials Division for testing
	206	Sieve Analysis		Mix Design Submittal and/or Source Requirement Test		Submit to Materials Division for testing
	210/211/212	LL/PL/PI		Mix Design Submittal and/or Source Requirement Test		Submit to Materials Division for testing
	227	Sand Equivalent		Mix Design Submittal and/or Source Requirement Test		Submit to Materials Division for testing
	230	Fractured Face		Mix Design Submittal and/or Source Requirement Test		Submit to Materials Division for testing
	206	Sieve Analysis	One per 2,000 tons or one per day minimum	From Jobsite Stockpile	Refer to Nev. T206	
	210/211/212	LL/PL/PI	One per 2,000 tons or one per day minimum	From Jobsite Stockpile		
	227	Sand Equivalent	One per 2,000 tons or one per day minimum	From Jobsite Stockpile		
	230	Fractured Face	One per 2,000 tons or one per day minimum	From Jobsite Stockpile		
		Straightedge Tolerance Section 418	Two joints per lane mile	Finished Surface		Record results on DWR

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MATERIAL OR PRODUCT	TEST NO.*	TEST	SAMPLE FREQUENCY**	LOCATION OR TIME OF SAMPLING	SIZE OF SAMPLE	REMARKS
Slurry Seal	AASHTO T96	% Wear (500 Rev.)	One per project per source	Mix Design Submittal and Source Requirement Test. Minimum of 14 working days before use.	Sample two full, large canvas sample sacks of aggregate.	Submit to Materials Division for testing
	AASHTO T104	Soundness, 5 cycle sodium sulfate	Coarse and fine aggregate	Mix Design Submittal and Source Requirement Test. Minimum of 20 working days before use.		Submit to Materials Division for testing
	206	Sieve Analysis		Mix Design Submittal and/or Source Requirement Test		Submit to Materials Division for testing
	230	Fractured Face		Mix Design Submittal and/or Source Requirement Test		Submit to Materials Division for testing
	210/211/212	LL/PL/PI		Mix Design Submittal and/or Source Requirement Test		Submit to Materials Division for testing
	227	Sand Equivalent		Mix Design Submittal and/or Source Requirement Test		Submit to Materials Division for testing
	206	Sieve Analysis	One per 2,000 tons or one per day minimum	From jobsite stockpile		
	230	Fractured Face	One per 2,000 tons or one per day minimum	From jobsite stockpile		
	210/211/212	LL/PL/PI	One per 2,000 tons or one per day minimum	From jobsite stockpile		
	227	Sand Equivalent	One per 2,000 tons or one per day minimum	From jobsite stockpile		
Concrete Aggregates	AASHTO T112	Clay Lumps	Once for each size produced.		Sample two full, large canvas sample sacks from each size for each mix design.	Submit to Materials Division for testing
	206	Sieve Analysis	Pavement: One per size per 7,000 yd^2 of pavement or fraction thereof Structures: One per size per 300 yd^3 of concrete or fraction thereof	Belt sample whenever possible. Pavement/Structures: Sample stockpiles prior to beginning concrete production	Refer to Nev. T206	
	227	Sand Equivalent	Pavement: One per size per 7,000 yd^2 of pavement or fraction thereof Structures: One per size per 300 yd^3 of concrete or fraction thereof			Fine Aggregate

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Concrete Aggregates (cont.'d)	228	Cleanness Value	Pavement: One per size per 7,000 yd^2 of pavement or fraction thereof Structures: One per size per 300 yd^3 of concrete or fraction thereof			Commercial sources to be tested two days prior to anticipated use. Coarse Aggregate
	112	Moisture	Minimum of one per day per size	Prior to beginning concrete production		For informational testing only
	111	Specific Gravity	Minimum of one per source per mix design			For informational testing only
	493	Absorption	Minimum of one per source per mix design			For informational testing only
Portland Cement Concrete for Structures	428/ASTM C39	Compressive Strength	One set per 100 yd^3. Minimum one set per pour	See Nev. T425, Standard Method of Test for Sampling Fresh Concrete.		Three cylinders (28 day) are required for each sample. Two additional cylinders (7 day) will be required for MSE panels. More may be made for informational testing. Submit to designated lab for testing For precast boxes and MSE panels, testing frequency can be doubled if cast from a certified facility
	441	Temperature	One per 100 yd^3 or fraction thereof			
	431 or 432	Air Content by Volumetric or Pressure	One per 100 yd^3 or fraction thereof	First test to be taken within first two loads		
	438	Slump	One per 100 yd^3 or fraction thereof	First test to be taken within first two loads		Slump is run concurrently with fabrication of cylinders; also, whenever required or consistency is non-uniform. If failing results, vehicle should stop unloading, test results verified, and corrective action taken
	435	Unit Weight	One per 100 yd^3 or fraction thereof		1 ft^3	Unit weight is run concurrently with fabrication of cylinders
		Field Measurements of concrete cover on deck reinforcement Section 502	Minimum of 12 measurements for each section of deck pour	Six measurements are to be taken before placing concrete and six measurements at the same locations shall be taken after concrete has been placed		Record measurements on DWR

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MATERIAL OR PRODUCT	TEST NO.*	TEST	SAMPLE FREQUENCY**	LOCATION OR TIME OF SAMPLING	SIZE OF SAMPLE	REMARKS
Pneumatically Placed Concrete Aggregates (Shotcrete Aggregate)	AASHTO T112	Clay Lumps	One for each sized produced		Sample two full, large canvas sample sacks from each size for each mix design.	Submit to Materials Division for testing
	206	Sieve Analysis	One per 500 yd^2 or fraction thereof	Sample during production		
	227	Sand Equivalent	One per 500 yd^2 or fraction thereof	Sample during production		
	228	Cleanness Value	One per 500 yd^2 or fraction thereof	Sample during production		
Pneumatically Placed Concrete (Shotcrete)	ASTM C42	Compressive Strength for Cores	Special Provisions, Section 660	Special Provisions, Section 660		Submit cores to Materials Division for testing
Self-Consolidating Concrete (SCC)	416	Compressive Strength	One set per 100 yd^3 or fraction thereof. Minimum one set per pour	See Nev. T416, Standard Method of Test for Sampling Fresh Concrete. At discretion of the Resident Engineer		Three cylinders (28 day) are required for each sample. More may be made for informational testing. Submit to designated lab for testing
	416	Air Content	One per 100 yd^3 or fraction thereof	First test to be taken within first three loads		When possible, fabrication of cylinders, air content, unit weight, slump flow and j-ring to be run concurrently
	416	Unit Weight	One per 100 yd^3 or fraction thereof			
	417	Slump Flow / VSI (Visual Stability Index)	One per 100 yd^3 or fraction thereof	Test first three loads then one per 100 yd^3	1 ft^3	
	418	J-Ring / Slump cone	One per 100 yd^3 or fraction thereof	First test to be taken within first three loads		
Portland Cement Concrete for Pavement	442	Flexural Strength	One per day	Platform at the plant or on roadway when using transit trucks		Three strength specimens are made from each sample and are broken in the field. Break one beam at age of 10 days and one beam at age of 28 days. The spare beam should be used in case of faulty break or if it is desired to vary the breaking schedule. Refer to Section 409
	441	Temperature	One per 200 yd^3 but not less than one per day	Platform at the plant or on roadway when using transit trucks		

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MATERIAL OR PRODUCT	TEST NO.*	TEST	SAMPLE FREQUENCY**	LOCATION OR TIME OF SAMPLING	SIZE OF SAMPLE	REMARKS
Portland Cement Concrete for Pavement (cont.'d)	438	Slump	One per 200 yd^3 but not less than one per day	Platform at the plant or on roadway when using transit trucks		Slump is run concurrently with fabrication of cylinders; also, when consistency is non-uniform
	435	Unit Weight	One per 200 yd^3 but not less than one per day	Platform at the plant or on roadway when using transit trucks	1 ft^3	Unit weight and air content to be run concurrently on different portions of the same sample
	431 or 432	Air Content by Volumetric or Pressure	One per 200 yd^3 but not less than one per day	Platform at the plant or on roadway when using transit trucks	1 ft^3	
	428/ASTM C39	Compressive Strength	One per 200 yd^3 but not less than one per day	Platform at the plant or on roadway when using transit trucks		Concurrent with other tests. Three cylinders (28 day); more may be made for informational testing.
		Straightedge Tolerance Section 409	Two per lane mile	At the discretion of the Resident Engineer		Record results on DWR
	ASTM C174	Length of Drilled Cores	One per 1,000 ft., or fraction thereof, traffic lane, auxiliary lane, or shoulder	At random locations		Cores taken by Materials Division after profile grinding
		Dowel Bar Placement Section 409				Contact Materials Division for testing
Concrete Panel Wall	428/ASTM C39	Compressive Strength	One set per 100 yd^3. Minimum one set per pour	See Nev. T425, Standard Method of Test for Sampling Fresh Concrete.		Three cylinders (28 day) are required for each sample.
	441	Temperature	One per 100 yd^3 or fraction thereof			
	431 or 432	Air Content by Volumetric or Pressure	One per 100 yd^3 or fraction thereof	First test to be taken within first two loads		
	438	Slump	One per 100 yd^3 or fraction thereof			Slump is run concurrently with fabrication of cylinders; also, whenever required or consistency is non-uniform. If failing results, vehicle should stop unloading, test results verified, and corrective action taken
	435	Unit Weight	One per 100 yd^3 or fraction thereof		1 ft^3	

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MATERIAL OR PRODUCT	TEST NO.*	TEST	SAMPLE FREQUENCY**	LOCATION OR TIME OF SAMPLING	SIZE OF SAMPLE	REMARKS
Grout and Mortar Aggregate	206	Sieve Analysis	One per 300 yd^3 or fraction thereof			
Grout for Post Tensioning Ducts, Soilnails, Shear Keys, Dowel Holes and Ground Anchors	427/ASTM C39	Compressive Strength	Special Provisions, Section 503, 643 or 644	Special Provisions, Section 503, 643 or 644	Three 4-in. x 8-in. cylinders	Submit to Materials Division for testing
Polymer Concrete Aggregate	206 493	Sieve Absorption	One per 7,000yd^2 or fraction thereof One per 7,000 yd^2 or fraction thereof			
Polymer Concrete	ASTM D4263 ASTM C1583	Moisture by Plastic Sheet Method Surface Soundness and Adhesion Straightedge Tolerance Section 496	One per 1,000 yd^2 or portion thereof One per 60 yd^2 or portion thereof At the discretion of the Resident Engineer			 Pull Off test Record results on DWR

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MATERIAL OR PRODUCT	TEST NO.*	TEST	SAMPLE FREQUENCY**	LOCATION OR TIME OF SAMPLING	SIZE OF SAMPLE	REMARKS
Multilayer Overlay Aggregate and Concrete	AASHTO T96	% Wear (500 Rev.)		Source Requirement Test	Sample two full, large canvas sample sacks	Submit to Materials Division for testing
	206	Sieve Analysis	One per 2500 yd^2			
	493	Absorption	One per 2500 yd^2			
	ASTM D4263	Moisture by Plastic Sheet Method	One per 1000 yd^2			
	ASTM C1583	Surface Soundness and Adhesion	One per 60 yd^2			
		Straightedge Tolerance Section 497	At the discretion of the Resident Engineer			
Stone for Riprap, Aggregate for Riprap Bedding and Stone for Grouted Riprap	AASHTO T96	% Wear (500 Rev.)		Source Requirement Test	Sample two full, large canvas sample sacks	Submit to Materials Division for testing. For riprap larger than Class 150, contact Materials Division
	104	Specific Gravity		Source Requirement Test		Submit to Materials Division for testing
		Gradation		Visual Inspection, Section 719		
		Gradation and Grout Penetration	Section 719			
Rock Mulch	206	Sieve Analysis	One per project per source	Stockpile		
	230	Fractured Face	One per project per source	Stockpile		
Decorative Rock	206	Sieve Analysis	One per project per source	Stockpile		If required by Special Provisions – Complete visual inspection, record results on DWR
Asphaltic Products (Cutback Asphalts and Emulsions)			One sample for each delivery (this sample represents truck and trailer).	From shipping vehicle after arrival on job and before or at time of unloading, approximately midpoint/mid depth of load.	1 qt	Submit to Materials Division for testing. To be sampled by contractor and observed by NDOT representative.

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MATERIAL OR PRODUCT	TEST NO.*	TEST	SAMPLE FREQUENCY**	LOCATION OR TIME OF SAMPLING	SIZE OF SAMPLE	REMARKS
Asphaltic Products (Cutback Asphalts and Emulsions) (cont.'d)	762	Field Viscosity	For field viscosity testing, take one sample from each truck and one from each trailer.	Approximately midpoint/mid depth of load.	1 qt	Test is only required on materials with high temperature testing requirements (122 degrees Fahrenheit) per the specifications.
Asphalt Cements		Section 106	25 tons	Samples of asphalt cement from a hotplant shall be taken from bituminous feed line at a suitable location between storage tank and bituminous metering device	1 qt	Submit to Materials Division for testing. To be sampled by contractor and observed by NDOT representative. To properly calculate the days actual tonnage, refer to the "Documentation Manual" or "Field Testing Guide – Part 3".
Mineral Filler			One per source per year			
Quicklime (Cold Recycle)	ASTM C977		One sample per contract per supplier	During unloading at jobsite	5 lbs.	Submit to Materials Division for testing. A certificate of compliance for each load is required, per the specifications. Samples are taken by the contractor's representative and witnessed by an NDOT representative.
Portland Cement/Pozzolan			Pavement: One sample per 120,000 yd^2 of pavement Structures: One sample per type of cement per project per supplier	During unloading at jobsite	4 lbs., one 4-in. x 8-in. cylinder may be used	Submit to Materials Division for testing. A certificate of compliance for each load is required, per the specifications. Cement is accepted for immediate use based on Certificate of Compliance. Manufacturer's test report is required. Samples are taken by the contractor's representative and witnessed by an NDOT representative. Small quantities, at discretion of Resident Engineer.
Water (Cold Recycle, Concrete, Micro-Surfacing, etc.)		Section 722	One sample per source	Submit according to specifications	Refer to specifications	Submit to Materials Division in clean glass or plastic container.

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MATERIAL OR PRODUCT	TEST NO.*	TEST	SAMPLE FREQUENCY**	LOCATION OR TIME OF SAMPLING	SIZE OF SAMPLE	REMARKS
Reinforcing Steel		Section 713	Two 30 in. bars of each size per heat and two samples of each bar size for every 100 tons thereafter.	Supplier shall furnish two samples of each bar size for testing. Random samples may be taken as provided in Section 505.	30 in.	Submit to Materials Division for testing. Show heat numbers on transmittal and state test procedure needed ASTM A706 or AASHTO M31. Certified mill tests used for acceptance at jobsites.
Prestressing Bars, Steel Strand, Wire, Anchorage Assemblies and Bar Couplers		Section 713	Sample per size and heat for prestressing bar; sample per manufactured reel for prestressing steel strand; sample per coil for prestressing wire; and sample per lot for anchorage assemblies and bar couplers	Section 713	Refer to specifications	Submit with each sample, a certification stating the manufacturer's minimum guaranteed ultimate tensile strength of the sample furnished
Corrugated Metal Pipe (CMP) and Structural Plate Pipe	AASHTO T65	Spelter Coating	One – pair of triangles per 500 ft. or fraction thereof	Random samples throughout shipment after delivery to job	2-in. triangle	Submit to Materials Division for testing. Tests on base metal performed periodically in addition to coating test. Show mill analysis and heat number
Reinforced Concrete Pipe (RCP)		Fabricator Certificate				Fabricator must have yearly certification by Materials Division
Permanent Sign Posts		Section 716	One sample per project per supplier	After delivery to jobsite	1 ft. - 3 ft.	Submit to Materials Division for testing
Metal Fence Posts		Section 724	One sample per project per supplier	After delivery to jobsite	1 ft. - 3 ft. Submit one full T-Post.	Submit to Materials Division for testing. Include grade and class on transmittal
Guideposts		Section 721	One sample per project per supplier	After delivery to jobsite	One full post	Submit to Materials Division for testing
Object Markers		Section 721	One sample per project per supplier	After delivery to jobsite	One full post	Submit to Materials Division for testing

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MATERIAL OR PRODUCT	TEST NO.*	TEST	SAMPLE FREQUENCY**	LOCATION OR TIME OF SAMPLING	SIZE OF SAMPLE	REMARKS
Chain Link Fence		Section 724	Two pieces for each lot shipped to jobsite	Random samples from random spools after delivery to jobsite	1 ft. wide full height	Submit to Materials Division for testing
Woven Wire and Barbed Wire		Section 724	Woven Wire: Two pieces per 50 rolls or fraction thereof. Barbed Wire: Four pieces per 50 rolls or fraction thereof	Random samples from random spools after delivery to jobsite	Woven: Two sections wide full height. Barbed: 3 ft. long	Submit to Materials Division for testing
Traffic Paint		Section 729	One per contract per manufacturer's lot	Upon delivery to jobsite	1 qt wide-mouth metal can	Submit to Materials Division for testing. Sample each color. Plural component paints (epoxy and polyuria). Sample each component. Include the manufacturer product code and batch on the transmittal. For waterborne paint, specify Type I or Type II
	511	Retroreflectivity Section 632	Two per lane mile of stripe. Average five readings per location, minimum	1-2 weeks after application		
	510	Thickness Section 632	Two per day per color			Measured without beads
Concrete Paint, Concrete Stain, Structural Steel Paint and Fine Surface Finish		Section 502 Section 714	One per contract per manufacturer's lot	Upon delivery to jobsite	1 qt wide-mouth metal can	Submit to Materials Division for testing. Sample each color. Plural component paints (epoxy and polyuria). Sample each component. Include the manufacturer product code and batch on the transmittal.
Pavement Marking Film (Tape)	512	Adhesion Section 634	Two per lane mile; miscellaneous items - arrows, only' s, crosswalks, stop bars, etc. will be at the discretion of the Resident Engineer	Test within 48 hours of placement		
Traffic Beads		Section 730	One per project per manufacturer's lot	Upon delivery to jobsite	1 qt wide-mouth metal can	Submit to Materials Division for testing. Include manufacturer's lot number and type on the transmittal

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MINIMUM REQUIRED SAMPLES AND TESTS: PROJECT
JANUARY 2018

MATERIAL OR PRODUCT	TEST NO.*	TEST	SAMPLE FREQUENCY**	LOCATION OR TIME OF SAMPLING	SIZE OF SAMPLE	REMARKS
Borrow / Embankment	115	Resistance "R" value	One per 50,000 yd^3 or fraction thereof for qualifying the materials	Source Requirement Test	Sample one full, large canvas sample sack	Submit to Materials Division for testing
	108	Proctor	108 and 104 (when rock correction is required) to be run every 25 compaction tests, minimum	Material obtained from Nev. T200		108 and 104 to be run concurrently when rock correction is required
	104	Specific Gravity				
	102 or 103	Density	One per 5,000 yd^3 of embankment, but not less than one per day, per lift	After final compaction		
Select Borrow	115	Resistance "R" value	One per 50,000 yd^3 or fraction thereof for qualifying the materials	Source Requirement Test	Sample one full, large canvas sample sack	Submit to Materials Division for testing
	108	Proctor	108 and 104 (when rock correction is required) to be run every 25 compaction tests, minimum	Material obtained from Nev. T200		108 and 104 to be run concurrently when rock correction is required
	104	Specific Gravity				
	102 or 103	Density	One per 5,000 yd^3 of embankment, but not less than one per day, per lift	After final compaction		
	206	Sieve Analysis	One per day		Refer to Nev. T206	
Original Ground and Base of Cuts	108	Proctor	108 and 104 (when rock correction is required) to be run every 25 compaction tests, minimum	Material obtained from Nev. T200		108 and 104 to be run concurrently when rock correction is required
	104	Specific Gravity				
	102 or 103	Density	One per 4,000 yd^2, but not less than one per day; or one per structure for footings, pipes, headwalls etc.	After final compaction		

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MATERIAL OR PRODUCT	TEST NO.*	TEST	SAMPLE FREQUENCY**	LOCATION OR TIME OF SAMPLING	SIZE OF SAMPLE	REMARKS
Backfill	108	Proctor	108 and 104 (when rock correction is required) to be run every 25 compaction tests, minimum	Material obtained from Nev. T200		108 and 104 to be run concurrently when rock correction is required
	104	Specific Gravity				
	102 or 103	Density	One per 1,000 yd^3 or fraction thereof per structure, or one per lift	At the discretion of the Resident Engineer		
	206	Sieve Analysis	One per 1,000 yd^3 or fraction thereof		Refer to Nev. T206	
Granular Backfill	206	Sieve Analysis		Source Requirement Test	Sample one full, large canvas sample sack	Submit to Materials Division for testing
	210/211/212	LL/PL/PI		Source Requirement Test		Submit to Materials Division for testing
	AASHTO T289	pH Value		Source Requirement Test		Submit to Materials Division for testing. Indicate on the transmittal whether concrete, aluminum or steel are being used with a culvert or structure
	AASHTO T288	Resistivity				
	108	Proctor	108 and 104 (when rock correction is required) to be run every 25 compaction tests, minimum	Material obtained from Nev. T200		108 and 104 to be run concurrently when rock correction is required
	104	Specific Gravity				
	102 or 103	Density	One per 1,000 yd^3 or fraction thereof per structure, or one per lift	At the discretion of the Resident Engineer		
	206	Sieve Analysis	One per 1,000 yd^3 or fraction thereof		Refer to Nev. T206	
	210/211/212	LL/PL/PI	One per 1,000 yd^3 or fraction thereof			
MSE Backfill	206	Sieve Analysis	One per 10,000 yd^3, one per stockpile minimum	Source Requirement Test	Sample on full, large canvas sample sack	Submit to Materials Division for testing
	210/211/212	LL/PL/PI	One per 10,000 yd^3, one per stockpile minimum	Source Requirement Test		Submit to Materials Division for testing
	AASHTO T289 AASHTO T288 AASHTO T291 AASHTO T290	pH Value Resistivity Chlorides Sulfates	One per 10,000 yd^3, one per stockpile minimum	Source Requirement Test		Submit to Materials Division for testing. Indicate the type of reinforcement (Metallic or Geogrid) on the transmittal

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MATERIAL OR PRODUCT	TEST NO.*	TEST	SAMPLE FREQUENCY**	LOCATION OR TIME OF SAMPLING	SIZE OF SAMPLE	REMARKS
MSE Backfill (cont'd)	108	Proctor	108 and 104 (when rock correction is required) to be run every 25 compaction tests, minimum	Material obtained from Nev. T200		108 and 104 to be run concurrently when rock correction is required
	104	Specific Gravity				
	102 or 103	Density	One per 1,000 yd^3 or fraction thereof per structure, or one per lift	At the discretion of the Resident Engineer		
	206	Sieve Analysis	One per 1,000 yd^3 or fraction thereof		Refer to Nev. T206	
	210/211/212	LL/PL/PI	One per 1,000 yd^3 or fraction thereof			
	AASHTO T289 AASHTO T288 AASHTO T291 AASHTO T290	pH Value Resistivity Chlorides Sulfates	One per 1,000 yd^3 or fraction thereof			Submit to Materials Division for testing. Indicate the type of reinforcement (Metallic or Geogrid) on the Transmittal
Slurry Backfill	206	Sieve Analysis	One per 1,000 yd^3 or fraction thereof		Refer to Nev. T206	
	428	Compressive Strength	One per 200 yd^3 or fraction thereof	See Nev. T425, Standard Method of Test for Sampling Fresh Concrete.		Three 6-in x 12-in cylinders (28 day) are required for each sample. More may be made for informational testing.
	431 or 432	Air Content by Volumetric or Pressure	One per 200 yd^3 or fraction thereof	First test to be taken within first two loads		
	438	Slump	At the discretion of the Resident Engineer			Slump is run whenever consistency is non-uniform. See Section 207
Drain Backfill	AASHTO T96	% of Wear (500 rev.)		Source Requirement Test	Sample two full, large canvas sample sacks	Submit to Materials Division for testing
	206	Sieve Analysis	One per 1,000 yd^3 or one per project minimum	At time of use, jobsite stockpile	Refer to Nev. T206	
Types 1, 2 and 3 Base (For Type 3, See Special Provisions)	115	Resistance (R Value)		Source Requirement Test	Sample two full, large canvas sample sacks	Submit to Materials Division for testing
	AASHTO T96	% Wear (500 Rev.)		Source Requirement Test		Submit to Materials Division for testing
	206	Sieve Analysis	One per day or one per 2,000 tons when non-uniform material	Class A: From roadway directly behind spreader Class B: From processed windrow, just prior to final lay down	Refer to Nev. T206	For small quantity, location and frequency of sample are at the discretion of the Resident Engineer

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MATERIAL OR PRODUCT	TEST NO.*	TEST	SAMPLE FREQUENCY**	LOCATION OR TIME OF SAMPLING	SIZE OF SAMPLE	REMARKS
Types 1, 2 and 3 Base (cont'd)	210/211/212	LL/PL/PI	One per day or one per 2,000 tons when non-uniform material			For small quantity, location and frequency of sample are at the discretion of the Resident Engineer
	230	Fractured Face	One per day			For small quantity, location and frequency of sample are at the discretion of the Resident Engineer
	112	Moisture	One per day or one per 2,000 tons when non-uniform material	Moisture tests should be taken from the windrow or stockpile after the material has been weighed, but prior to adding any additional water in the field		Results for payment purposes. Moisture tests need to represent what was weighed
	108	Proctor	108 and 104 (when rock correction is required) to be run every 25 compaction tests, minimum	Material obtained from Nev. T200		108 and 104 to be run concurrently when rock correction is required; for small quantity, location and frequency of sample are at the discretion of the Resident Engineer. For Type A only: Depth checks taken during density test but for informational testing only. Record depths on IDR
	104	Specific Gravity				
	102 or 103	Density	One per 2,000 tons or fraction thereof, or one per lift	On roadway, after trimming and final compaction		
		Straightedge Tolerances Section 302	Two per lane mile	Finished surface		Record results on IDR
Aggregate for Portland Cement Treated Base	AASHTO T96	% of Wear (500 rev.)		Source Requirement Test	Sample four full, large canvas sample sacks	Submit to Materials Division for testing
	206	Sieve Analysis	One per 1,000 tons	Road mixed: From processed material, prior to adding cement Plant mixed: From conveyors, prior to adding cement	Refer to Nev. T206	Sample aggregate during production
	227	Sand Equivalent	One per day, or one per 1,000 tons when non-uniform material			

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MATERIAL OR PRODUCT	TEST NO.*	TEST	SAMPLE FREQUENCY**	LOCATION OR TIME OF SAMPLING	SIZE OF SAMPLE	REMARKS
Cement Treated Base (Road mixed or Plant mixed Method)	237	Compressive Strength	Three on the first day of production, one per day thereafter. If non-uniform material, more tests may be required at the discretion of the Resident Engineer			Compressive strength for informational testing only
	112	Moisture	One per 2,000 tons			Record moistures on IDR
	108	Proctor	108 and 104 (when rock correction is required) to be run every 25 compaction tests, minimum	Material obtained from Nev. T200		108 and 104 to be run concurrently when rock correction is required; depth checks taken during density test for informational testing only. Record depths on IDR
	104	Specific Gravity				
	102 or 103	Density	One per 2,000 tons or fraction thereof or one per lift	On roadway, after trimming and final compaction		
		Straightedge Tolerances Section 304	Two per lane mile per lift	Finished surface		Record results on IDR
Pulverized Base and Surface (Roadbed Modification)	112	Moisture	One per 7,000 yd^2 or fraction thereof	On roadway, after final compaction		Record moistures on sieve analysis form
	108	Proctor	108 and 104 (when rock correction is required) to be run every 25 compaction tests, minimum	Material obtained from Nev. T200 Obtain proctor sample from loose processed material in roadway prior to compaction: 1st processing without cement 2nd processing with cement		108 and 104 to be run concurrently when rock correction is required; depth checks for informational testing only. Record depths on IDR
	104	Specific Gravity				
	102 or 103	Density	One per 7,000 yd^2 or fraction thereof	On roadway, after final compaction		
	206	Sieve Analysis	One per 7,000 yd^2 or fraction thereof	After final pulverization by removing a composite sample of the pulverized surface at randomly selected sites prior to adding cement	Refer to Nev. T206	
		Cement Distribution	Two per lane mile			Phenolphthalein test for informational testing only Record results on IDR
		Straightedge Tolerances Section 305	Two per lane mile per lift	Finished surface		Record results on IDR

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MATERIAL OR PRODUCT	TEST NO.*	TEST	SAMPLE FREQUENCY**	LOCATION OR TIME OF SAMPLING	SIZE OF SAMPLE	REMARKS
Shouldering Material	112	Moisture	One per day or one per 2,000 tons			Record moistures on IDR
	206	Sieve Analysis	One per day or one per 2,000 tons when non-uniform material; one per day for coldmilled material	At belt or stockpile. Coldmilled material from windrow	Refer to Nev. T206	
	210/211/212	LL/PL/PI	One per day or one per 2,000 tons when non-uniform material			
Blotter Sand, Sand in Stockpile	206	Sieve Analysis	One per project per source	At belt or stockpile	Refer to Nev. T206	
Aggregate for Plantmix Bituminous Base, Surface, Open-Graded, Permeable Base and Premix	AASHTO T96	% of Wear (500 rev.)		Mix Design Submittal and/or Source Requirement Test	Sample two full, large canvas sample sacks from each size for each mix design	Submit to Materials Division for testing
	206	Sieve Analysis		Mix Design Submittal and/or Source Requirement Test		Submit to Materials Division for testing
	210/211/212	LL/PL/PI		Mix Design Submittal and/or Source Requirement Test		Submit to Materials Division for testing
	230	Fractured Face		Mix Design Submittal and/or Source Requirement Test		Submit to Materials Division for testing
	AASHTO T104	Soundness, Sodium	Coarse and fine aggregate	Mix Design Submittal and/or Source Requirement Test		Submit to Materials Division for testing
	111	Absorption Specific Gravity	Coarse aggregate	Mix Design Submittal and/or Source Requirement Test		Submit to Materials Division for testing
	493	Specific Gravity	Fine aggregate	Mix Design Submittal and/or Source Requirement Test		Submit to Materials Division for testing
	206	Sieve Analysis	One per 5,000 tons of each size produced, minimum one test per five crushing days for each size aggregate	From belt or stockpile	Refer to Nev. T206	Tests must be run prior to marination. For informational testing only

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MATERIAL OR PRODUCT	TEST NO.*	TEST	SAMPLE FREQUENCY**	LOCATION OR TIME OF SAMPLING	SIZE OF SAMPLE	REMARKS
Aggregate for Plantmix Bituminous Base, Surface, Open-Graded, Permeable Base and Premix (cont'd)	210/211/212	LL/PL/PI	One per 5,000 tons of each size aggregate produced, minimum one test per five crushing days for each size aggregate	From belt or stockpile		Tests must be run prior to marination
	230	Fractured Face	One per 5,000 tons of each size produced, minimum one test per five crushing days for each size aggregate	From belt or stockpile		Tests must be run prior to marination
	111	Absorption of Coarse Aggregate	One per five crushing days per size	From belt or stockpile		Tests must be run prior to marination
	112	Moisture	Minimum one size per week	From belt of stockpile during marination		Record moistures in Marination IDR. For informational testing only.
		Lime Distribution	One per size per project. If non-uniform material, more tests may be required at the discretion of the Resident Engineer	From belt or stockpile during marination		Phenolphthalein test during production. Record in Marination IDR
Recycled Asphalt Pavement (RAP) for Plantmix Bituminous Surface	AASHTO T30	Mechanical Analysis of Extracted Aggregate		Mix Design Submittal	Sample two full, large canvas sample sacks from each size for each mix design	Submit to Materials Division for testing
	AASHTO T164	Extraction of Asphalt Binder		Mix Design Submittal		Submit to Materials Division for testing
	206	Sieve Analysis	One per 5,000 tons of each size aggregate produced, minimum one test per five production days for each size aggregate	From belt or stockpile	Refer to Nev. T206	Verify material meets specified sieve requirements
Permeable Base (Asphalt Treated)	206	Sieve Analysis	One per 2,000 tons, or one per day minimum	Section 303	Refer to Nev. T206	Material remaining from Nev. T761
	761 306	Bitumen Ratio Moisture Content	One per 2,000 tons, or one per day minimum			
		Straightedge Tolerances Section 303	Two per lane mile	Finished surface		Record results on IDR

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MATERIAL OR PRODUCT	TEST NO.*	TEST	SAMPLE FREQUENCY**	LOCATION OR TIME OF SAMPLING	SIZE OF SAMPLE	REMARKS
Premix	AASHTO T269	Percent Air Voids of Compacted Mixture	One per project	From jobsite stockpile	Three full 6-in. x 12-in. cylinders; sample will cover AASHTO T269 and Nev. T303	Submit to Materials Division for testing
	303	Stabilometer	One per project	From jobsite stockpile		Submit to Materials Division for testing
	206	Sieve Analysis	One per 2,000 tons or one per day minimum	From coldfeed belt at plant during production	Refer to Nev. T206	
Plantmix Bituminous Base and Surface	206	Sieve Analysis	One per 1,000 tons or one per day minimum	Section 106	Refer to Nev. T206	Material remaining from Nev. T761
	112	Moisture	One per day	From coldfeed belt at plant during production		For informational testing only, record moistures on testers portion of Daily Plant Report
	761	Bitumen Ratio	One per 1,000 tons or one per day minimum. NOTE: Immediately test another sample to verify the results before making plant adjustment	Composite sample from behind the paver, prior to rolling		
	306	Moisture Content		Composite sample from behind the paver, prior to rolling		
	325	Theoretical Maximum Specific Gravity (Rice)	One for each one-half day of production (a.m. and p.m.)	Composite sample from behind the paver, prior to rolling		For Method B compaction only
	AASHTO T269	Percent Air Voids of Compacted Mixture	Sample first three days of paving; then one per 10,000 tons or twice per week, whichever is less		Three full 6-in. x 12-in. cylinders; this sample will cover AASHTO T269 and Nev. T303 and T341	Submit to Materials Division for testing
	303	Stabilometer	One per 10,000 tons or twice per week, whichever is less; sample first three days of paving			Submit to Materials Division for testing
	341	Indirect Tensile Strength and Retained Strength	One per 10,000 tons or twice per week, whichever is less; sample first three days of paving			Submit to Materials Division for testing. Materials Division will determine the frequency of performing the test

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MATERIAL OR PRODUCT	TEST NO.*	TEST	SAMPLE FREQUENCY**	LOCATION OR TIME OF SAMPLING	SIZE OF SAMPLE	REMARKS
Plantmix Bituminous Base and Surface (cont'd)	335 or 750	Density	Section 402	Random locations per Test Method		See specifications for required test method and density requirements. Nev. T336 will be used to correlate the thin layer density gauge (Nev. T335)
		Straightedge Tolerance Section 402	Two per lane mile	Finished surface		Record results on IDR
	448	Evaluation of Ride	Section 402	Section 402		Complete within 48 hours after placement
Plantmix Bituminous Open-Graded Surface	206	Sieve Analysis	One per 1,000 tons or one per day minimum	From augers at paver or windrow in front of paver	Refer to Nev. T206	Material remaining from Nev. T761
	112	Moisture	One per day	From coldfeed belt at plant during production		For information only, record moistures on testers portion of IDR
	761	Bitumen Ratio	One per 1,000 tons or one per day minimum			
	306	Moisture Content		From augers at paver or windrow in front of paver		
	325	Theoretical Maximum Specific Gravity (Rice)	Sample first 3 days of paving; then one per 10,000 tons or twice per week, whichever is less	From augers at paver or windrow in front of paver		
		Straightedge Tolerance Section 402	Two per lane mile	Finished surface		Record results on IDR
	446	Evaluation of Profiles	Section 402 and 403	Section 402 and 403		Complete within 48 hours after placement
Cold Recycle	206	Sieve Analysis	Two per lane mile	Windrow	Refer to Nev. T206	Verify material meets specified sieve requirements
	750	Density	Section 404	Random locations per Test Method		
	112	Moisture	Two per day	Windrow		One in a.m. and one in p.m., for informational testing only. Record moistures on IDR
	112	Moisture	See Section 404	Section 404		(Moisture for cores)
	759	Field Viscosity Section 404	One per truck and one per trailer	Approximate midpoint / mid depth of the load		Sampled by contractor and observed by NDOT representative
		Straightedge Tolerance Section 404	Two per lane mile	Finished surface		Record results on IDR

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MATERIAL OR PRODUCT	TEST NO.*	TEST	SAMPLE FREQUENCY**	LOCATION OR TIME OF SAMPLING	SIZE OF SAMPLE	REMARKS
Surface Treatment Screenings (Chips)	AASHTO T96	% Wear (500 Rev.)	One per project, per source, per supplier	Source Requirement Test	Sample two full, large canvas sample sacks per source per supplier	Submit asphalt and aggregate to Materials Division for testing
	209	Stripping	One per project, per source, per supplier	Aggregate source and asphalt supplier specific	1 gallon of asphalt	Submit 1 gallon of asphalt and aggregate sample to Materials Division for testing
	206	Sieve Analysis	One per 2,000 tons	From jobsite stockpiles	Refer to Nev. T206	
	228	Cleanness Value	One per 2,000 tons	From jobsite stockpiles		
	230	Fractured Face	One per 2,000 tons	From jobsite stockpiles		
	759	Field Viscosity Section 408	One per truck and one per trailer	Approximate mid depth / midpoint of the load		Sampled by contractor and observed by NDOT representative
Micro-Surfacing	AASHTO T96	% Wear (500 Rev.)	One per project per source	Mix Design Submittal and Source Requirement Test. Minimum of 20 working days before use.	Sample two full, large canvas sample sacks of aggregate.	Submit to Materials Division for testing
	AASHTO T104	Soundness, 5 cycle sodium sulfate	Coarse and fine aggregate	Mix Design Submittal and Source Requirement Test. Minimum of 20 working days before use.	Sample two full, large canvas sample sacks of aggregate.	Submit to Materials Division for testing
	206	Sieve Analysis		Mix Design Submittal and/or Source Requirement Test		Submit to Materials Division for testing
	210/211/212	LL/PL/PI		Mix Design Submittal and/or Source Requirement Test		Submit to Materials Division for testing
	227	Sand Equivalent		Mix Design Submittal and/or Source Requirement Test		Submit to Materials Division for testing
	230	Fractured Face		Mix Design Submittal and/or Source Requirement Test		Submit to Materials Division for testing
	206	Sieve Analysis	One per 2,000 tons or one per day minimum	From Jobsite Stockpile	Refer to Nev. T206	

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MATERIAL OR PRODUCT	TEST NO.*	TEST	SAMPLE FREQUENCY**	LOCATION OR TIME OF SAMPLING	SIZE OF SAMPLE	REMARKS
Micro-Surfacing (cont'd)	210/211/212	LL/PL/PI	One per 2,000 tons or one per day minimum	From Jobsite Stockpile		
	227	Sand Equivalent	One per 2,000 tons or one per day minimum	From Jobsite Stockpile		
	230	Fractured Face	One per 2,000 tons or one per day minimum	From Jobsite Stockpile		
		Straightedge Tolerance Section 418	Two joints per lane mile	Finished Surface		Record results on IDR
Concrete Aggregates	206	Sieve Analysis	Pavement: One per size per 7,000 yd^2 of pavement or fraction thereof Structures: One per size per 300 yd^3 of concrete or fraction thereof	Belt sample whenever possible. Pavement/Structures: Sample stockpiles prior to beginning concrete production	Refer to Nev. T206	
	227	Sand Equivalent	Pavement: One per size per 7,000 yd^2 of pavement or fraction thereof Structures: One per size per 300 yd^3 of concrete or fraction thereof			Fine Aggregate
	228	Cleanness Value	Pavement: One per size per 7,000 yd^2 of pavement or fraction thereof Structures: One per size per 300 yd^3 of concrete or fraction thereof			Commercial sources to be tested two days prior to anticipated use. Coarse Aggregate
	112	Moisture	Minimum of one per day per size	Prior to beginning concrete production		For informational testing only
	492	Specific Gravity	Minimum of one per source per mix design			For informational testing only
	493	Absorption	Minimum of one per source per mix design			For informational testing only

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MATERIAL OR PRODUCT	TEST NO.*	TEST	SAMPLE FREQUENCY**	LOCATION OR TIME OF SAMPLING	SIZE OF SAMPLE	REMARKS
Portland Cement Concrete for Structures	428	Compressive Strength	One set per 100 yd^3. Minimum one set per pour	See Nev. T425, Standard Method of Test for Sampling Fresh Concrete.		Three cylinders (28 day) are required for each sample. Two additional cylinders (7 day) will be required for MSE panels. More may be made for informational testing. Submit to designated lab for testing For precast boxes and MSE panels, testing frequency can be doubled if cast from a certified facility
	431 or 432	Air Content by Volumetric or Pressure	One per 100 yd^3 or fraction thereof	First test to be taken within first two loads		
	438	Slump	One per 100 yd^3 or fraction thereof	First test to be taken within first two loads		Slump is run concurrently with fabrication of cylinders; also, whenever required or consistency is non-uniform. If failing results, vehicle should stop unloading, test results verified, and corrective action taken
	435	Unit Weight	One per 100 yd^3 or fraction thereof		1 ft^3	Unit weight is run concurrently with fabrication of cylinders
		Field Measurements of concrete cover on deck reinforcement Section 502	Minimum of 12 measurements for each section of deck pour	Six measurements are to be taken before placing concrete and six measurements at the same locations shall be taken after concrete has been placed		Record measurements on IDR
Pneumatically Placed Concrete Aggregates (Shotcrete Aggregate)	206	Sieve Analysis	Minimum one per day	Sample during production		
Pneumatically Placed Concrete (Shotcrete)	ASTM C42	Compressive Strength for Cores	Special Provisions, Section 660	Special Provisions, Section 660		Submit cores to Materials Division for testing

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MATERIAL OR PRODUCT	TEST NO.*	TEST	SAMPLE FREQUENCY**	LOCATION OR TIME OF SAMPLING	SIZE OF SAMPLE	REMARKS
Self-Consolidating Concrete (SCC)	416	Compressive Strength	One set per 100 yd^3 or fraction thereof. Minimum one set per pour	See Nev. T416, Standard Method of Test for Sampling Fresh Concrete. At discretion of the Resident Engineer		Three cylinders (28 day) are required for each sample. More may be made for informational testing. Submit to designated lab for testing
	416	Air Content	One per 100 yd^3 or fraction thereof	First test to be taken within first three loads		When possible, fabrication of cylinders, air content, unit weight, slump flow and j-ring to be run concurrently
	416	Unit Weight	One per 100 yd^3 or fraction thereof			
	417	Slump Flow / VSI (Visual Stability Index)	One per 100 yd^3 or fraction thereof	Test first three loads then one per 100 yd^3	1 ft^3	
	418	J-Ring / Slump cone	One per 100 yd^3 or fraction thereof	First test to be taken within first three loads		
Portland Cement Concrete for Pavement	442	Flexural Strength	One per day	Platform at the plant or on roadway when using transit trucks		Three strength specimens are made from each sample and are broken in the field. Break one beam at age of 10 days and one beam at age of 28 days. The spare beam should be used in case of faulty break or if it is desired to vary the breaking schedule. For informational testing, only – Refer to Section 409
	438	Slump	One per 200 yd^3 but not less than one per day	Platform at the plant or on roadway when using transit trucks		Slump is run concurrently with fabrication of cylinders; also, when consistency is non-uniform
	435	Unit Weight	One per 200 yd^3 but not less than one per day	Platform at the plant or on roadway when using transit trucks	1 ft^3	Unit weight and air content to be run concurrently on different portions of the same sample
	431 or 432	Air Content by Volumetric or Pressure	One per 200 yd^3 but not less than one per day	Platform at the plant or on roadway when using transit trucks	1 ft^3	
	428	Compressive Strength	One per 200 yd^3 but not less than one per day	Platform at the plant or on roadway when using transit trucks		Concurrent with other tests. Three cylinders (28 day); more may be made for informational testing.
	446	Evaluation of Profiles	Section 409	Section 409		
		Straightedge Tolerance Section 409	Two per lane mile	At the discretion of the Resident Engineer		Record results on IDR
	ASTM C174	Length of Drilled Cores	One per 1,000 ft., or fraction thereof, traffic lane, auxiliary lane or shoulder	At random locations		Cores taken by Materials Division after profile grinding

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MATERIAL OR PRODUCT	TEST NO.*	TEST	SAMPLE FREQUENCY**	LOCATION OR TIME OF SAMPLING	SIZE OF SAMPLE	REMARKS
Portland Cement Concrete for Pavement (cont'd)		Dowel Bar Placement Section 409				Contact Materials Division for testing
Grout for Post Tensioning Ducts, Soilnails, Shear Keys, Dowel Holes and Ground Anchors	427	Compressive Strength	Special Provisions, Section 503, 643 or 644	Special Provisions, Section 503, 643 or 644	Three 4-in. x 8-in. cylinders	Submit to Materials Division for testing
Polymer Concrete	ASTM D4263 ACI 503R 446	Moisture by Plastic Sheet Method Surface Soundness and Adhesion Evaluation of Profiles Straightedge Tolerance Section 496	One per 1,000 ft^2 or portion thereof One per 60 yd^2 or portion thereof Section 496 At the discretion of the Resident Engineer	At the discretion of the Resident Engineer At the discretion of the Resident Engineer Section 496 At the discretion of the Resident Engineer		 Pull Off test Record results on IDR
Stone for Riprap, Aggregate for Riprap Bedding and Stone for Grouted Riprap	AASHTO T96 104	% Wear (500 Rev.) Specific Gravity Gradation Gradation and Grout Penetration	 Section 719	Source Requirement Test Source Requirement Test Visual Inspection, Section 719	Sample two full, large canvas sample sacks	Submit to Materials Division for testing. For riprap larger than Class 150, contact Materials Division Submit to Materials Division for testing
Rock Mulch	206 230	Sieve Analysis Fractured Face	One per project per source One per project per source	Stockpile Stockpile		
Decorative Rock	206	Sieve Analysis	One per project per source	Stockpile		If required by Special Provisions – Complete visual inspection, record results on IDR

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MATERIAL OR PRODUCT	TEST NO.*	TEST	SAMPLE FREQUENCY**	LOCATION OR TIME OF SAMPLING	SIZE OF SAMPLE	REMARKS
Asphaltic Products (Cutback Asphalts and Emulsions)			One sample for each delivery (this sample represents truck and trailer).	From shipping vehicle after arrival on job and before or at time of unloading, approximately midpoint/mid depth of load.	1 qt	Submit to Materials Division for testing. To be sampled by contractor and observed by NDOT representative.
	759	Field Viscosity	For field viscosity testing, take one sample from each truck and one from each trailer.	Approximately midpoint/mid depth of load.	1 qt	
Asphalt Cements			Section 106 for applicable frequencies	Samples of asphalt cement from a hotplant shall be taken from bituminous feed line at a suitable location between storage tank and bituminous metering device	1 qt	Submit to Materials Division for testing. To be sampled by contractor and observed by NDOT representative
Quicklime (Cold Recycle)	ASTM C977		One sample per contract per supplier	During unloading at jobsite	5 lbs.	Submit to Materials Division for testing. A certificate of compliance for each load is required, per the specifications. Samples are taken by the contractor's representative and witnessed by an NDOT representative.
Portland Cement	ASTM C150		Pavement: One sample per 120,000 yd^2 of pavement Structures: One sample per type of cement per project per supplier	During unloading at jobsite	4 lbs., one 4-in. x 8-in. cylinder may be used	Submit to Materials Division for testing. A certificate of compliance for each load is required, per the specifications. Cement is accepted for immediate use based on Certificate of Compliance. Manufacturer's test report is required. Samples are taken by the contractor's representative and witnessed by an NDOT representative. Small quantities, at discretion of Resident Engineer.
Water (Cold Recycle, Concrete, Micro-Surfacing, etc.)		Section 722	One sample per source	Submit according to specifications	Refer to specifications	Submit to Materials Division in clean glass or plastic container.
Reinforcing Steel		Section 713	Two samples of each bar size per manufacturer, per project, per year and two samples of each bar size for every 100 tons thereafter.	Supplier shall furnish two samples of each bar size for testing. Random samples may be taken as provided in Section 505	30 in.	Submit to Materials Division for testing. Show heat numbers on transmittal and state test procedure needed ASTM A706 or AASHTO M31. Certified mill tests used for acceptance at jobsites

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MATERIAL OR PRODUCT	TEST NO.*	TEST	SAMPLE FREQUENCY**	LOCATION OR TIME OF SAMPLING	SIZE OF SAMPLE	REMARKS
Prestressing Bars, Steel Strand, Wire, Anchorage Assemblies and Bar Couplers		Section 713	Sample per size and heat for prestressing bar; sample per manufactured reel for prestressing steel strand; sample per coil for prestressing wire; and sample per lot for anchorage assemblies and bar couplers	Section 713	Refer to specifications	Submit with each sample, a certification stating the manufacturer's minimum guaranteed ultimate tensile strength of the sample furnished
Corrugated Metal Pipe (CMP) and Structural Plate Pipe	AASHTO T65	Spelter Coating	Two per 500 ft. or fraction thereof	Random samples throughout shipment after delivery to job	2-in. triangle	Submit to Materials Division for testing. Tests on base metal performed periodically in addition to coating test. Show mill analysis and heat number
Reinforced Concrete Pipe (RCP)		Fabricator Certificate				Fabricator must have yearly certification by Materials Division
Permanent Sign Posts		Section 716	One sample per project per supplier	After delivery to jobsite	1 ft. - 3 ft.	Submit to Materials Division for testing
Metal Fence Posts		Section 724	One sample per project per supplier	After delivery to jobsite	1 ft. - 3 ft. Submit one full T-Post.	Submit to Materials Division for testing. Include grade and class on transmittal
Guide Posts		Section 721	One sample per project per supplier	After delivery to jobsite	One full post	Submit to Materials Division for testing
Object Markers		Section 721	One sample per project per supplier	After delivery to jobsite	One full post	Submit to Materials Division for testing
Chain Link Fence		Section 724	Two pieces for each lot shipped to jobsite	Random samples from random spools after delivery to jobsite	1 ft. wide full height	Submit to Materials Division for testing
Woven Wire and Barbed Wire		Section 724	Woven Wire: Two pieces per 50 rolls or fraction thereof. Barbed Wire: Four pieces per 50 rolls or fraction thereof	Random samples from random spools after delivery to jobsite	Woven: Two sections wide full height. Barbed: 3 ft. long	Submit to Materials Division for testing

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MATERIAL OR PRODUCT	TEST NO.*	TEST	SAMPLE FREQUENCY**	LOCATION OR TIME OF SAMPLING	SIZE OF SAMPLE	REMARKS
Traffic Paint		Section 729	One per contract per manufacturer's lot	Upon delivery to jobsite	1 qt wide-mouth metal can	Submit to Materials Division for testing. Sample each color. Plural component paints (epoxy and polyuria). Sample each component. Include the manufacturer product code and batch on the transmittal. For waterborne paint, specify Type I or Type II
Traffic Paint (cont'd)	511 510	Retroreflectivity Section 632 Thickness Section 632	Two per lane mile of stripe. Average five readings per location, minimum Two per day per color	1-2 weeks after application		 Measured without beads
Concrete Paint, Concrete Stain, Structural Steel Paint and Fine Surface Finish		Section 502 Section 714	One per contract per manufacturer's lot	Upon delivery to jobsite	1 qt wide-mouth metal can	Submit to Materials Division for testing. Sample each color. Plural component paints (epoxy and polyuria). Sample each component. Include the manufacturer product code and batch on the transmittal.
Pavement Marking Film (Tape)	512	Adhesion Section 634	Two per lane mile; miscellaneous items - arrows, only' s, crosswalks, stop bars, etc. will be at the discretion of the Resident Engineer	Test within 48 hours of placement		
Traffic Beads		Section 730	One per project per manufacturer's lot	Upon delivery to jobsite	1 qt wide-mouth metal can	Submit to Materials Division for testing. Include manufacturer's lot number and type on the transmittal

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MINIMUM REQUIRED SAMPLES AND TESTS: PROJECT
APRIL 2017

MATERIAL OR PRODUCT	TEST NO.*	TEST	SAMPLE FREQUENCY	LOCATION OR TIME OF SAMPLING	SIZE OF SAMPLE	REMARKS
Borrow / Embankment	115	Resistance "R" value	One per 50,000 yd^3 or fraction thereof for qualifying the materials	Source Requirement Test	Sample one full, large canvas sample sack	Submit to Materials Division for testing
	108	Proctor	108 and 104 (when rock correction is required) to be run every 25 compaction tests, minimum	Material obtained from Nev. T200		108 and 104 to be run concurrently when rock correction is required
	104	Specific Gravity				
	102 or 103	Density	One per 5,000yd^3 of embankment, but not less than one per day, per lift	After final compaction		
Select Borrow	115	Resistance "R" value	One per 50,000 yd^3 or fraction thereof for qualifying the materials	Source Requirement Test	Sample one full, large canvas sample sack	Submit to Materials Division for testing
	108	Proctor	108 and 104 (when rock correction is required) to be run every 25 compaction tests, minimum	Material obtained from Nev. T200		108 and 104 to be run concurrently when rock correction is required
	104	Specific Gravity				
	102 or 103	Density	One per 5,000 yd^3 of embankment, but not less than one per day, per lift	After final compaction		
	206	Sieve Analysis	One per day		Refer to Nev. T206	
Original Ground and Base of Cuts	108	Proctor	108 and 104 (when rock correction is required) to be run every 25 compaction tests, minimum	Material obtained from Nev. T200		108 and 104 to be run concurrently when rock correction is required
	104	Specific Gravity				
	102 or 103	Density	One per 4,000 yd^2, but not less than one per day; or one per structure for footings, pipes, headwalls,etc.	After final compaction		

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MATERIAL OR PRODUCT	TEST NO.*	TEST	SAMPLE FREQUENCY	LOCATION OR TIME OF SAMPLING	SIZE OF SAMPLE	REMARKS
Backfill	108	Proctor	108 and 104 (when rock correction is required) to be run every 25 compaction tests, minimum	Material obtained from Nev. T200		108 and 104 to be run concurrently when rock correction is required.
	104	Specific Gravity				
	102 or 103	Density	One per 1,000 yd^3 or fraction thereof per structure, or one per lift	At the discretion of the Resident Engineer		
	206	Sieve Analysis	One per 1,000 yd^3 or fraction thereof		Refer to Nev. T206	
Granular Backfill	206	Sieve Analysis		Source Requirement Test	Sample one full, large canvas sample sack	Submit to Materials Division for testing
	210/211/212	Atterberg Limits		Source Requirement Test		Submit to Materials Division for testing
	AASHTO T289	pH Value		Source Requirement Test		Submit to Materials Division for testing. Indicate on
	AASHTO T288	Resistivity				the transmittal whether concrete, aluminum or steel are being used with a culvert or structure
	108	Proctor	108 and 104 (when rock correction is required) to be run every 25 compaction tests, minimum	Material obtained from Nev. T200		108 and 104 to be run concurrently when rock correction is required.
	104	Specific Gravity				
	102 or 103	Density	One per 1,000 yd^3 or fraction thereof per structure, or one per lift	At the discretion of the Resident Engineer		
	206	Sieve Analysis	One per 1,000 yd^3 or fraction thereof		Refer to Nev. T206	
	210/211/212	Atterberg Limits	One per 1,000 yd^3 or fraction thereof			
MSE Backfill	206	Sieve Analysis	One per 10,000 yd^3, one per stockpile minimum	Source Requirement Test	Sample on full, large canvas sample sack	Submit to Materials Division for Testing
	210/211/212	Atterberg Limits	One per 10,000 yd^3, one per stockpile minimum	Source Requirement Test		Submit to Materials Division for testing
	AASHTO T289 AASHTO T288 AASHTO T291 AASHTO T290	pH Value Resistivity Chlorides Sulfates	One per 10,000 yd^3, one per stockpile minimum	Source Requirement Test		Submit to Materials Division for testing. Indicate the type of reinforcement (Metallic or Geogrid) on the transmittal.

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MATERIAL OR PRODUCT	TEST NO.*	TEST	SAMPLE FREQUENCY	LOCATION OR TIME OF SAMPLING	SIZE OF SAMPLE	REMARKS
MSE Backfill (cont'd)	108	Proctor	108 and 104 (when rock correction is required) to be run every 25 compaction tests, minimum	Material obtained from Nev. T200		108 and 104 to be run concurrently when rock correction is required.
	104	Specific Gravity				
	102 or 103	Density	One per 1,000 yd^3 or fraction thereof per structure, or one per lift	At the discretion of the Resident Engineer		
	206	Sieve Analysis	One per 1,000 yd^3 or fraction thereof		Refer to Nev. T206	
	210/211/212	Atterberg Limits	One per 1,000 yd^3 or fraction thereof			
	AASHTO T289 AASHTO T288 AASHTO T291 AASHTO T290	pH Value Resistivity Chlorides Sulfates	One per 1,000 yd^3 or fraction thereof			Submit to Materials Division for testing. Indicate the type of reinforcement (Metallic or Geogrid) on the Transmittal.
Slurry Backfill	206	Sieve Analysis	One per 1,000 yd^3 or fraction thereof		Refer to Nev. T206	
	428	Compressive Strength	One per 200 yd^3 or fraction thereof	See Nev. T425, Standard Method of Test for Sampling Fresh Concrete.		Three 6-in x 12-in cylinders (28 day) are required for each sample. More may be made for informational testing. Submit to designated lab for testing
	431 or 432	Air Content by Volumetric or Pressure	One per 200 yd^3 or fraction thereof	First test to be taken within first two loads		
	438	Slump	At the discretion of the Resident Engineer			Slump is run whenever consistency is questionable. See Section 207
Drain Backfill	AASHTO T96	% of Wear (500 rev.)		Source Requirement Test	Sample two full, large canvas sample sacks	Submit to Materials Division for testing
	206	Sieve Analysis	One per 1,000 yd^3 or one per project minimum	At time of use, jobsite stockpile	Refer to Nev. T206	
Types 1, 2 and 3 Base (For Type 3, See Special Provisions)	115	Resistance (R Value)		Source Requirement Test	Sample two full, large canvas sample sacks	Submit to Materials Division for testing
	AASHTO T96	% Wear (500 Rev.)		Source Requirement Test		Submit to Materials Division for testing
	206	Sieve Analysis	One per day or one per 2,000 tons when non-uniform material	Class A: From roadway directly behind spreader Class B: From processed windrow, just prior to final lay down	Refer to Nev. T206	For small quantity, location and frequency of sample are at the discretion of the Resident Engineer

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MATERIAL OR PRODUCT	TEST NO.*	TEST	SAMPLE FREQUENCY	LOCATION OR TIME OF SAMPLING	SIZE OF SAMPLE	REMARKS
Types 1, 2 and 3 Base (cont'd)	210/211/212	Atterberg Limits	One per day or one per 2,000 tons when non-uniform material			For small quantity, location and frequency of sample are at the discretion of the Resident Engineer
	230	Fractured Face	One per day			For small quantity, location and frequency of sample are at the discretion of the Resident Engineer
	112	Moisture	One per day or one per 2,000 tons when non-uniform material	Moisture tests should be taken from the windrow or stockpile after the material has been weighed, but prior to adding any additional water in the field		Results for payment purposes. Moisture tests need to represent what was weighed
	108	Proctor	108 and 104 (when rock correction is required) to be run every 25 compaction tests, minimum	Material obtained from Nev. T200		108 and 104 to be run concurrently when rock correction is required. For small quantity, location and frequency of sample are at the discretion of the Resident Engineer. For Type A only: Depth checks taken during density test but for informational testing only. Record depths on Daily Construction Report.
	104	Specific Gravity				
	102 or 103	Density	One per 2,000 tons or fraction thereof, or one per lift	On roadway, after trimming and final compaction		
		Straightedge Tolerances Section 302	Two per lane mile	Finished surface		Record results on Daily Construction Report
Aggregate for Portland Cement Treated Base	AASHTO T96	% of Wear (500 rev.)		Source Requirement Test	Sample four full, large canvas sample sacks	Submit to Materials Division for testing
	206	Sieve Analysis	One per 1,000 tons	Road mixed: From processed material, prior to adding cement Plant mixed: From conveyors, prior to adding cement	Refer to Nev. T206	Sample aggregate during production
	227	Sand Equivalent	One per day, or one per 1,000 tons when questionable material			

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MATERIAL OR PRODUCT	TEST NO.*	TEST	SAMPLE FREQUENCY	LOCATION OR TIME OF SAMPLING	SIZE OF SAMPLE	REMARKS
Cement Treated Base (Road mixed or Plant mixed Method)	237	Compressive Strength	Three on the first day of production, one per day thereafter. If questionable material, more tests may be required at the discretion of the Resident Engineer			Compressive strength for informational testing only.
	112	Moisture	One per 2,000 tons			Record moistures on Daily Construction Report
	108	Proctor	108 and 104 (when rock correction is required) to be run every 25 compaction tests, minimum	Material obtained from Nev. T200		108 and 104 to be run concurrently when rock correction is required. Depth checks taken during density test for informational testing only. Record depths on Daily Construction Report
	104	Specific Gravity				
	102 or 103	Density	One per 2,000 tons or fraction thereof or one per lift	On roadway, after trimming and final compaction		
		Straightedge Tolerances Section 304	Two per lane mile per lift	Finished surface		Record results on Daily Construction Report
Pulverized Base and Surface (Roadbed Modification)						
	112	Moisture	One per 7,000 yd^2 or fraction thereof	On roadway, after final compaction		Record moistures on sieve analysis form
	108	Proctor	108 and 104 (when rock correction is required) to be run every 25 compaction tests, minimum	Material obtained from Nev. T200		108 and 104 to be run concurrently when rock correction is required. Depth checks for informational testing only. Record depths on Daily Construction Report
	104	Specific Gravity				
	102 or 103	Density	One per 7,000 yd^2 or fraction thereof	On roadway, after final compaction		
	206	Sieve Analysis	One per 7,000 yd^2 or fraction thereof	After final pulverization by removing a composite sample of the pulverized surface at randomly selected sites prior to adding cement	Refer to Nev. T206	
		Cement Distribution	Two per lane mile			Phenolphthalein test for informational testing only. Record results on Daily Construction Report
		Straightedge Tolerances Section 305	Two per lane mile per lift	Finished surface		Record results on Daily Construction Report

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MATERIAL OR PRODUCT	TEST NO.*	TEST	SAMPLE FREQUENCY	LOCATION OR TIME OF SAMPLING	SIZE OF SAMPLE	REMARKS
Shouldering Material	112	Moisture	One per day or one per 2,000 tons			Record moistures on Daily Construction Report
	206		One per day or one per 2,000 tons when non-uniform material; one per day for coldmilled material	At belt or stockpile. Coldmilled material from windrow.	Refer to Nev. T206	
	210/211/212	Atterberg Limits	One per day or one per 2,000 tons when questionable material			
Blotter Sand, Sand in Stockpile	206	Sieve Analysis	One per project per source	At belt or stockpile	Refer to Nev. T206	
Aggregate for Plantmix Bituminous Base, Surface, Open-Graded, Permeable Base and Premix	AASHTO T96	% of Wear (500 rev.)		Mix Design Submittal and/or Source Requirement Test	Sample two full, large canvas sample sacks from each size for each mix design	Submit to Materials Division for testing
	206	Sieve Analysis		Mix Design Submittal and/or Source Requirement Test		Submit to Materials Division for testing
	210/211/212	Atterberg Limits		Mix Design Submittal and/or Source Requirement Test		Submit to Materials Division for testing
	230	Fractured Face		Mix Design Submittal and/or Source Requirement Test		Submit to Materials Division for testing
	AASHTO T104	Soundness, Sodium	Coarse and fine aggregate	Mix Design Submittal and/or Source Requirement Test		Submit to Materials Division for testing
	T111	Absorption	Coarse aggregate	Mix Design Submittal and/or Source Requirement Test		Submit to Materials Division for testing
	T493	Specific Gravity	Fine aggregate	Mix Design Submittal and/or Source Requirement Test		Submit to Materials Division for testing
	T111	Specific Gravity	Coarse aggregate	Mix Design Submittal and/or Source Requirement Test		Submit to Materials Division for testing
	206	Sieve Analysis	One per 5,000 tons of each size produced, minimum one test per five crushing days for each size aggregate	From belt or stockpile	Refer to Nev. T206	Tests must be run prior to marination. For informational testing only

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MATERIAL OR PRODUCT	TEST NO.*	TEST	SAMPLE FREQUENCY	LOCATION OR TIME OF SAMPLING	SIZE OF SAMPLE	REMARKS
Aggregate for Plantmix Bituminous Base, Surface, Open-Graded, Permeable Base and Premix (cont'd)	210/211/212	Atterberg Limits	One per 5,000 tons of each size produced, minimum one test per five crushing days for each size aggregate	From belt or stockpile		Tests must be run prior to marination
	230	Fractured Face	One per 5,000 tons of each size produced, minimum one test per five crushing days for each size aggregate	From belt or stockpile		Tests must be run prior to marination
	111	Absorption of Coarse Aggregate	One per five crushing days per size	From belt or stockpile		Tests must be run prior to marination
Aggregate for Plantmix Bituminous Base, Surface, Open-Graded, Permeable Base and Premix (cont'd)	112	Moisture	Minimum one per size per week	From belt of stockpile during marination		Record moistures in Marination Diary. For informational testing only.
		Lime Distribution	One per size per project. If questionable material, more tests may be required at the discretion of the Resident Engineer	From belt or stockpile during marination		Phenolphthalein test during production. Record in Marination Diary
Recycled Asphalt Pavement (RAP) for Plantmix Bituminous Surface	AASHTO T30	Mechanical Analysis of Extracted Aggregate		Mix Design Submittal	Sample two full, large canvas sample sacks from each size for each mix design	Submit to Materials Division for testing
	AASHTO T164	Extraction of Asphalt Binder		Mix Design Submittal		Submit to Materials Division for testing
	206	Sieve Analysis	One per 5,000 tons of each size produced, minimum one test per five production days for each size aggregate	From belt or stockpile	Refer to Nev. T206	Verify material meets specified sieve requirements
Permeable Base (Asphalt Treated)	206	Sieve Analysis	One per 2,000 tons, or one per day minimum	Section 303	Refer to Nev. T206	Material remaining from Nev. T761
	761 306	Bitumen Ratio Moisture Content	One per 2,000 tons, or one per day minimum			
		Straightedge Tolerances Section 303	Two per lane mile	Finished surface		Record results on Daily Construction Report

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MATERIAL OR PRODUCT	TEST NO.*	TEST	SAMPLE FREQUENCY	LOCATION OR TIME OF SAMPLING	SIZE OF SAMPLE	REMARKS
Premix	AASHTO T269	Percent Air Voids of Compacted Mixture	One per project	From jobsite stockpile	Three full 6-in. x 12-in. cylinders; sample will cover AASHTO T269 and Nev. T303	Submit to Materials Division for testing
	303	Stabilometer	One per project	From jobsite stockpile		Submit to Materials Division for testing
	206	Sieve Analysis	One per 2,000 tons or one per day minimum	From coldfeed belt at plant during production	Refer to Nev. T206	
Plantmix Bituminous Base and Surface	206	Sieve Analysis	One per 1,000 tons or one per day minimum.	Section 106	Refer to Nev. T206	Material remaining from Nev. T761
	112	Moisture	One per day	From coldfeed belt at plant during production		For informational testing only, record moistures on testers portion of Daily Plant Report
	761	Bitumen Ratio	One per 1,000 tons or one per day minimum. NOTE: Immediately test another sample to verify the results before making plant adjustment	Composite sample from behind the paver, prior to rolling		
	306	Moisture Content		Composite sample from behind the paver, prior to rolling		
	325	Theoretical Maximum Specific Gravity (Rice)	One for each one-half day of production (a.m. and p.m.)	Composite sample from behind the paver, prior to rolling		For Method B compaction only
	AASHTO T269	Percent Air Voids of Compacted Mixture	Sample first three days of paving; then one per 10,000 tons or twice per week, whichever is less		Three full 6-in. x 12-in. cylinders; this sample will cover AASHTO T269 and Nev. T303 and T341	Submit to Materials Division for testing
Plantmix Bituminous Base and Surface (cont'd)	303	Stabilometer	One per 10,000 tons or twice per week, whichever is less; sample first three days of paving			Submit to Materials Division for testing
	341	Indirect Tensile Strength and Retained Strength	One per 10,000 tons or twice per week, whichever is less; sample first three days of paving			Submit to Materials Division for testing. Materials Division will determine the frequency of performing the test

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MATERIAL OR PRODUCT	TEST NO.*	TEST	SAMPLE FREQUENCY	LOCATION OR TIME OF SAMPLING	SIZE OF SAMPLE	REMARKS
Plantmix Bituminous Base and Surface (cont'd)	335 or 750	Density	Section 402	Random locations per Test Method		See specifications for required test method and density requirements. Nev. T336 will be used to correlate the thin layer density gauge (Nev. T335)
		Straightedge Tolerance Section 402	Two per lane mile	Finished surface		Record results on Daily Construction Report
	446	Evaluation of Profiles	Section 402	Section 402		Complete within 48 hours after placement
Plantmix Bituminous Open-Graded Surface	206	Sieve Analysis	One per 1,000 tons or one per day minimum	From augers at paver or windrow in front of paver	Refer to Nev. T206	Material remaining from Nev. T761
	112	Moisture	One per day	From coldfeed belt at plant during production		For information only, record moistures on testers portion of Daily Plant Report
	761	Bitumen Ratio	One per 1,000 tons or one per day minimum			
	306	Moisture Content		From augers at paver or windrow in front of paver		
	325	Theoretical Maximum Specific Gravity (Rice)	Sample first 3 days of paving; then one per 10,000 tons or twice per week, whichever is less	From augers at paver or windrow in front of paver		
		Straightedge Tolerance Section 402	Two per lane mile	Finished surface		Record results on Daily Construction Report
	446	Evaluation of Profiles	Section 402 and 403	Section 402 and 403		Complete within 48 hours after placement
Cold Recycle	206	Sieve Analysis	Two per lane mile	Windrow	Refer to Nev. T206	Verify material meets specified sieve requirements
	750	Density	Section 404	Random locations per Test Method		
	112	Moisture	Two per day	Windrow		One in a.m. and one in p.m., for informational testing only. Record moistures on Daily Construction Report
	112	Moisture	See Section 404	Section 404		(Moisture for cores)
	759	Field Viscosity Section 404	One per truck and one per trailer	Approximate midpoint / mid depth of the load		Sampled by contractor and observed by NDOT representative

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MATERIAL OR PRODUCT	TEST NO.*	TEST	SAMPLE FREQUENCY	LOCATION OR TIME OF SAMPLING	SIZE OF SAMPLE	REMARKS
Cold Recycle (cont'd)		Straightedge Tolerance Section 404	Two per lane mile	Finished surface		Record results on Daily Construction Report
Surface Treatment Screenings (Chips)	AASHTO T96	% Wear (500 Rev.)	One per project, per source, per supplier	Source Requirement Test	Sample two full, large canvas sample sacks per source per supplier	Submit asphalt and aggregate to Materials Division for testing
	209	Stripping	One per project, per source, per supplier	Aggregate source and asphalt supplier specific	1 gallon of asphalt	Submit 1 gallon of asphalt and aggregate sample to Materials Division for testing
	206	Sieve Analysis	One per 2,000 tons	From jobsite stockpiles	Refer to Nev. T206	
	228 (CA T227)	Cleanness Value	One per 2,000 tons	From jobsite stockpiles		
	230	Fractured Face	One per 2,000 tons	From jobsite stockpiles		
	759	Field Viscosity Section 408	One per truck and one per trailer	Approximate mid depth / midpoint of the load		Sampled by contractor and observed by NDOT representative
Micro-Surfacing	AASHTO T96	% Wear (500 Rev.)	One per project per source	Mix Design Submittal and Source Requirement Test. Minimum of 20 working days before use.	Sample two full, large canvas sample sacks of aggregate.	Submit to Materials Division for testing
	AASHTO T104	Soundness, 5 cycle sodium sulfate	Coarse and fine aggregate	Mix Design Submittal and Source Requirement Test. Minimum of 20 working days before use.	Sample two full, large canvas sample sacks of aggregate.	Submit to Materials Division for testing
	206	Sieve Analysis		Mix Design Submittal and/or Source Requirement Test		Submit to Materials Division for testing
	210/211/212	Atterberg Limits		Mix Design Submittal and/or Source Requirement Test		Submit to Materials Division for testing
	227	Sand Equivalent		Mix Design Submittal and/or Source Requirement Test		Submit to Materials Division for testing
	230	Fractured Face		Mix Design Submittal and/or Source Requirement Test		Submit to Materials Division for testing
	206	Sieve Analysis	One per 2,000 tons or one per day minimum	From Jobsite Stockpiles	Refer to Nev. T206	

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MATERIAL OR PRODUCT	TEST NO.*	TEST	SAMPLE FREQUENCY	LOCATION OR TIME OF SAMPLING	SIZE OF SAMPLE	REMARKS
Micro-Surfacing (cont'd)	210/211/212	Atterberg Limits	One per 2,000 tons or one per day minimum	From Jobsite Stockpiles		
	227	Sand Equivalent	One per 2,000 tons or one per day minimum	From Jobsite Stockpiles		
	230	Fractured Face	One per 2,000 tons or one per day minimum	From Jobsite Stockpiles		
		Straightedge Tolerance Section 418	Two joints per lane mile	Finished Surface		Record results on Daily Construction Report
Concrete Aggregates	AASHTO T112	Clay Lumps	Pavement: One per size per 7,000 yd^2 of pavement or fraction thereof Structures: One per size per 1,200 yd^3 of concrete or fraction thereof	Sample shall be taken concurrently, from the same stockpiles as required for T206, T227 and T228	Sample two full, large canvas sample sack for each size	Submit to Materials Division for testing, with corresponding and completed test results for T206, T227 and T228
	206	Sieve Analysis	Pavement: One per size per 7,000 yd^2 of pavement or fraction thereof Structures: One per size per 300 yd^3 of concrete or fraction thereof	Belt sample whenever possible. Structures: Sample stockpiles before beginning concrete production	Refer to Nev. T206	
	227	Sand Equivalent	Pavement: One per size per 7,000 yd^2 of pavement or fraction thereof Structures: One per size per 300 yd^3 of concrete or fraction thereof			Fine Aggregate
	228 (CA T227)	Cleanness Value	Pavement: One per size per 7,000 yd^2 of pavement or fraction thereof Structures: One per size per 300 yd^3 of concrete or fraction thereof			Commercial sources to be tested two days prior to anticipated use. Coarse Aggregate
	112	Moisture	Minimum of one per day per size	Prior to beginning concrete production		For informational testing only
	492	Specific Gravity	Minimum of one per source per mix design			For informational testing only
	493	Absorption	Minimum of one per source per mix design			For informational testing only

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MATERIAL OR PRODUCT	TEST NO.*	TEST	SAMPLE FREQUENCY	LOCATION OR TIME OF SAMPLING	SIZE OF SAMPLE	REMARKS
Portland Cement Concrete for Structures	428	Compressive Strength	One set per 100 yd^3. Minimum one set per pour	See Nev. T425, Standard Method of Test for Sampling Fresh Concrete. At the discretion of the Resident Engineer		Three cylinders (28 day) are required for each sample. Two additional cylinders (7 day) will be required for MSE panels. More may be made for informational testing. Submit to designated lab for testing For precast boxes and MSE panels, testing frequency can be doubled if cast from a certified facility
	431 or 432	Air Content by Volumetric or Pressure	One per 100 yd^3 or fraction thereof	First test to be taken within first two loads		
	438	Slump	One per 100 yd^3 or fraction thereof	First test to be taken within first two loads		Slump is run concurrently with fabrication of cylinders; also whenever required or consistency is questionable. If failing results, vehicle should stop unloading, test results verified and corrective action taken
	435	Unit Weight	One per 100 yd^3 or fraction thereof		1 ft^3	Unit weight is run concurrently with fabrication of cylinders
		Field Measurements of concrete cover on deck reinforcement Section 502	Minimum of 12 measurements for each section of deck pour	Six measurements are to be taken before placing concrete and six measurements at the same locations shall be taken after concrete has been placed		Record measurements on Daily Construction Report
Pneumatically Placed Concrete Aggregates (Shotcrete Aggregate)	206	Sieve Analysis	Minimum one per day	Sample during production	Refer to Nev. T206	
Pneumatically Placed Concrete (Shotcrete)	ASTM C42	Compressive Strength for Cores	Special Provisions, Section 660	Special Provisions, Section 660		Submit cores to Materials Division for testing

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MATERIAL OR PRODUCT	TEST NO.*	TEST	SAMPLE FREQUENCY	LOCATION OR TIME OF SAMPLING	SIZE OF SAMPLE	REMARKS
Self Consolidating Concrete (SCC)	416	Compressive Strength	One set per 100 yd^3 or fraction thereof. Minimum one set per pour	See Nev. T416, Standard Method of Test for Sampling Fresh Concrete. At discretion of the Resident Engineer		Three cylinders (28 day) are required for each sample. More may be made for informational testing. Submit to designated lab for testing
	416	Air Content	One per 100 yd^3 or fraction thereof	First test to be taken within first three loads		When possible, fabrication of cylinders, air content, unit weight, slump flow and j-ring to be run concurrently
	416	Unit Weight	One per 100 yd^3 or fraction thereof			
	417	Slump Flow / VSI (Visual Stability Index)	One per 100 yd^3 or fraction thereof	Test first three loads then one per 100 yd^3	1 ft^3	
	418	J-Ring / Slump cone	One per 100 yd^3 or fraction thereof	First test to be taken within first three loads		
Portland Cement Concrete for Pavement	442	Flexural Strength	One per day	Platform at the plant or on roadway when using transit trucks		Three strength specimens are made from each sample and are broken in the field. Break one beam at age of 10 days and one beam at age of 28 days. The spare beam should be used in case of faulty break or if it is desired to vary the breaking schedule. For informational testing, only – Refer to Section 409
	438	Slump	One per 200 yd^3 but not less than one per day	Platform at the plant or on roadway when using transit trucks		Slump is run concurrently with fabrication of cylinders; also when consistency is questionable
	435	Unit Weight	One per 200 yd^3 but not less than one per day	Platform at the plant or on roadway when using transit trucks	1 ft^3	Unit weight and air content to be run concurrently on different portions of the same sample
	431 or 432	Air Content by Volumetric or Pressure	One per 200 yd^3 but not less than one per day	Platform at the plant or on roadway when using transit trucks	1 ft^3	
	428	Compressive Strength	One per 200 yd^3 but not less than one per day	Platform at the plant or on roadway when using transit trucks		Concurrent with other tests. Three cylinders (28 day); more may be made for informational testing.
	446	Evaluation of Profiles	Section 409	Section 409		
		Straightedge Tolerance Section 409	Two per lane mile	At the discretion of the Resident Engineer		Record results on Daily Construction Report
	ASTM C174	Length of Drilled Cores	One per 1,000 ft, or fraction thereof, traffic lane, auxiliary lane or shoulder	At random locations		Cores taken by Materials Division after profile grinding

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MATERIAL OR PRODUCT	TEST NO.*	TEST	SAMPLE FREQUENCY	LOCATION OR TIME OF SAMPLING	SIZE OF SAMPLE	REMARKS
Portland Cement Concrete for Pavement (cont'd)		Dowel Bar Placement Section 409				Contact Materials Division for testing.
Grout for Post Tensioning Ducts, Soilnails, Shear Keys, Dowel Holes and Ground Anchors	427	Compressive Strength	Special Provisions, Section 503, 643 or 644	Special Provisions, Section 503, 643 or 644	Three 4-in. x 8-in. cylinders	Submit to Materials Division for Testing
Polymer Concrete	ASTM D4263	Moisture by Plastic Sheet Method	One per 1,000 ft^2 or portion thereof	At the discretion of the Resident Engineer		
	ACI 503R	Surface Soundness and Adhesion	One per 60 yd^2 or portion thereof	At the discretion of the Resident Engineer		Pull Off test
	446	Evaluation of Profiles	Section 496	Section 496		
		Straightedge Tolerance Section 496	At the discretion of the Resident Engineer	At the discretion of the Resident Engineer		Record results on Daily Construction Report
Stone for Riprap, Aggregate for Riprap Bedding and Stone for Grouted Riprap	AASHTO T96	% Wear (500 Rev.)		Source Requirement Test	Sample two full, large canvas sample sacks	Submit to Materials Division for testing. For riprap larger than Class 150, contact Materials Division
	104	Specific Gravity		Source Requirement Test		Submit to Materials Division for Testing
		Gradation		Visual Inspection, Section 719		
		*Gradation and Grout Penetration	Section 719			
Asphaltic Products (Cutback Asphalts and Emulsions)			One sample for each delivery (this sample represents truck and trailer).	From shipping vehicle after arrival on job and before or at time of unloading, approximately midpoint/mid depth of load.	1 qt	Submit to Materials Division for testing. To be sampled by contractor and observed by NDOT representative.
	759	Field Viscosity	For field viscosity testing, take one sample from each truck and one from each trailer.	Approximately midpoint/mid depth of load.	1 qt	

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MATERIAL OR PRODUCT	TEST NO.*	TEST	SAMPLE FREQUENCY	LOCATION OR TIME OF SAMPLING	SIZE OF SAMPLE	REMARKS
Asphalt Cements			Section 106 for applicable frequencies	Samples of asphalt cement from a hotplant shall be taken from bituminous feed line at a suitable location between storage tank and bituminous metering device	1 qt	Submit to Materials Division for testing. To be sampled by contractor and observed by NDOT representative
Quicklime (Cold Recycle)	ASTM C977		One sample per contract per supplier	During unloading at jobsite	5 lbs	Submit to Materials Division for testing. A certificate of compliance for each load is required, per the specifications. Samples are taken by the contractor's representative and witnessed by an NDOT representative.
Portland Cement	ASTM C150		Pavement: One sample per 120,000 yd^2 of pavement Structures: One sample per type of cement per project per supplier	During unloading at jobsite	4 lbs, one 4-in. x 8-in. cylinder may be used	Submit to Materials Division for testing. A certificate of compliance for each load is required, per the specifications. Cement is accepted for immediate use on the basis of Certificate of Compliance. Manufacturer's test report is required. Samples are taken by the contractor's representative and witnessed by an NDOT representative. Small quantities, at discretion of Resident Engineer.
Water (Cold Recycle, Concrete, Micro-Surfacing, etc.)		Section 722	One sample per source	Submit according to specifications	Refer to specifications	Submit to Materials Division in clean glass or plastic container.
Reinforcing Steel		Section 713	Two samples of each bar size per manufacturer, per project, per year and two samples of each bar size for every 100 tons thereafter.	Supplier shall furnish two samples of each bar size for testing. Random samples may be taken as provided for in Section 505	30 in.	Submit to Materials Division for testing. Show heat numbers on transmittal and state test procedure needed ASTM A706 or AASHTO M31. Certified mill tests used for acceptance at jobsites
Prestressing Bars, Steel Strand, Wire, Anchorage Assemblies and Bar Couplers		Section 713	Sample per size and heat for prestressing bar; sample per manufactured reel for prestressing steel strand; sample per coil for prestressing wire; and sample per lot for anchorage assemblies and bar couplers	Section 713	Refer to specifications	Submit with each sample, a certification stating the manufacturer's minimum guaranteed ultimate tensile strength of the sample furnished

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MATERIAL OR PRODUCT	TEST NO.*	TEST	SAMPLE FREQUENCY	LOCATION OR TIME OF SAMPLING	SIZE OF SAMPLE	REMARKS
Corrugated Metal Pipe (CMP) and Structural Plate Pipe	AASHTO T65	Spelter Coating	Two per 500 ft or fraction thereof	Random samples throughout shipment after delivery to job	2-in. triangle	Submit to Materials Division for testing. Tests on base metal performed periodically in addition to coating test. Show mill analysis and heat number
Reinforced Concrete Pipe (RCP)		Fabricator Certificate				Fabricator must have yearly certification by Materials Division
Permanent Sign Posts		Section 716	One sample per project per supplier	After delivery to jobsite	1 ft - 3 ft	Submit to Materials Division for testing
Metal Fence Posts		Section 724	One sample per project per supplier	After delivery to jobsite	1 ft - 3 ft Submit one full T-Post.	Submit to Materials Division for testing. Include grade and class on transmittal
Guide Posts		Section 721	One sample per project per supplier	After delivery to jobsite	One full post	Submit to Materials Division for testing
Object Markers		Section 721	One sample per project per supplier	After delivery to jobsite	One full post	Submit to Materials Division for testing
Chain Link Fence		Section 724	Two pieces for each lot shipped to jobsite	Random samples from random spools after delivery to jobsite	1 ft wide full height	Submit to Materials Division for testing
Woven Wire and Barbed Wire		Section 724	Woven Wire: Two pieces per 50 rolls or fraction thereof. Barbed Wire: Four pieces per 50 rolls or fraction thereof	Random samples from random spools after delivery to jobsite	Woven: Two sections wide full height. Barbed: 3 ft long	Submit to Materials Division for testing
Traffic Paint		Section 729	One per contract per manufacturer's lot	Upon delivery to jobsite	1 qt wide-mouth metal can	Submit to Materials Division for testing. Sample each color. Plural component paints (epoxy and polyuria). Sample each component. Include the manufacturer product code and batch on the transmittal. For waterborne paint, specify Type I or Type II

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MATERIAL OR PRODUCT	TEST NO.*	TEST	SAMPLE FREQUENCY	LOCATION OR TIME OF SAMPLING	SIZE OF SAMPLE	REMARKS
Traffic Paint (cont'd)	511	Retroreflectivity Section 632	Two per lane mile of stripe. Average five readings per location, minimum	1-2 weeks after application		
	510	Thickness Section 632	Two per day per color			Measured without beads
Concrete Paint, Concrete Stain, Structural Steel Paint and Fine Surface Finish		Section 502 Section 714	One per contract per manufacturer's lot	Upon delivery to jobsite	1 qt wide-mouth metal can	Submit to Materials Division for testing. Sample each color. Plural component paints (epoxy and polyuria). Sample each component. Include the manufacturer product code and batch on the transmittal.
Pavement Marking Film (Tape)	512	Adhesion Section 634	Two per lane mile; miscellaneous items - arrows, only's, crosswalks, stop bars, etc. will be at the discretion of the Resident Engineer	Test within 48 hours of placement		
Traffic Beads		Section 730	One per project per manufacturer's lot	Upon delivery to jobsite	1 qt wide-mouth metal can	Submit to Materials Division for testing. Include manufacturer's lot number and type on the transmittal

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MININMUM REQUIRED SAMPLES AND TESTS: INDEPENDENT ASSURANCE (IA) JANUARY 2021

TEST NO*	TEST DESCRIPTION	SAMPLE FREQUENCY	LOCATION OR TIME OF SAMPLING	REMARKS
102	Density	1 per Construction Crew per Calander Year	Visual Observation	Visual Audit of Testing Procedures
103	Density	1 per Construction Crew per Calander Year	Visual Observation	Visual Audit of Testing Procedures
104	Specific Gravity	1 per Construction Crew per Calander Year	Split Sample	2-Way Split Sample Required
108	Proctor	1 per Construction Crew per Calander Year	Split Sample	2-Way Split Sample Required
111	Absorption Specific Gravity	1 per Construction Crew per Calander Year	Split Sample	2-Way Split Sample Required
206	Sieve Analysis	1 per Construction Crew per Calander Year	Split Sample	2-Way Split Sample Required
210	Liquid Limit	1 per Construction Crew per Calander Year	Split Sample	2-Way Split Sample Required
211/212	Plastic Limit/ Plasticity Index	1 per Construction Crew per Calander Year	Split Sample	2-Way Split Sample Required
227	Sand Equivalent	1 per Construction Crew per Calander Year	Split Sample	2-Way Split Sample Required
228	Cleanness Value	1 per Construction Crew per Calander Year	Split Sample	2-Way Split Sample Required

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*** - Visual Audits (040-079) may be done in lieu of 2-Way Split or Side-by-Side at a frequency not to exceed 50% of min. required IA frequencies. (Example: Min. of 5 audits required x 50% = 2.5 = 2 Visual Audits.

MININMUM REQUIRED SAMPLES AND TESTS: INDEPENDENT ASSURANCE (IA) JANUARY 2021

TEST NO*	TEST DESCRIPTION	SAMPLE FREQUENCY	LOCATION OR TIME OF SAMPLING	REMARKS
230	Fractured Face	1 per Construction Crew per Calander Year	Split Sample	2-Way Split Sample Required
325	Theoretical Maximum Specific Gravity (RICE)	1 per Construction Crew per Calander Year	Split Sample	2-Way Split Sample Required
335	Density	1 per Construction Crew per Calander Year	Visual Observation	Visual Audit of Testing Procedures
416	Compressive Strength Air Content Unit Weight	1 per Construction Crew per Calander Year	Visual Observation	Visual Audit of Testing Procedures
417	Slump Flow VSI (Visual Stability Index)	1 per Construction Crew per Calander Year	Visual Observation	Visual Audit of Testing Procedures
418	J-Ring / Slump Cone	1 per Construction Crew per Calander Year	Visual Observation	Visual Audit of Testing Procedures
431	Air Content by Volumetric	1 per Construction Crew per Calander Year	Side - By - Side	Side - By- Side
432	Air Content by Pressure	1 per Construction Crew per Calander Year	Side - By - Side	Side - By- Side
435	Unit Weight	1 per Construction Crew per Calander Year	Side - By - Side	Side - By- Side
438	Slump	1 per Construction Crew per Calander Year	Side - By - Side	Side - By- Side

* -- Assumes a Nevada test method (Nev. T) unless otherwise noted.

** -- Discuss any changes from the frequencies shown with the Quality Assurance Engineer.

*** - Visual Audits (040-079) may be done in lieu of 2-Way Split or Side-by-Side at a frequency not to exceed 50% of min. required IA frequencies. (Example: Min. of 5 audits required x 50% = 2.5 = 2 Visual Audits.

MININMUM REQUIRED SAMPLES AND TESTS: INDEPENDENT ASSURANCE (IA) JANUARY 2021

TEST NO*	TEST DESCRIPTION	SAMPLE FREQUENCY	LOCATION OR TIME OF SAMPLING	REMARKS
750	Density	1 per Construction Crew per Calander Year	Visual Observation	Visual Audit of Testing Procedures
761	Bitumen Ratio	1 per Construction Crew per Year	Split Sample	2-Way Split Sample Required
762	Field Viscosity	1 per Construction Crew per Year	Visual Observation	Visual Audit of Testing Procedures

* -- Assumes a Nevada test method (Nev. T) unless otherwise noted.

** -- Discuss any changes from the frequencies shown with the Quality Assurance Engineer.

*** - Visual Audits (040-079) may be done in lieu of 2-Way Split or Side-by-Side at a frequency not to exceed 50% of min. required IA frequencies. (Example: Min. of 5 audits required x 50% = 2.5 = 2 Visual Audits.

MINIMUM REQUIRED SAMPLES AND TESTS: INDEPENDENT ASSURANCE (IA) JANUARY 2018

Note: When utilizing coldmillings, follow the frequency for which the material is being used for, and refer to the Contract Special Provisions for additional specifications.

MATERIAL OR PRODUCT	TEST NO. *	TEST	SAMPLE FREQUENCY**	LOCATION OR TIME OF SAMPLING	REMARKS ***
Borrow / Embankment	108	Proctor	One per 1,250,000 yd^3	Split samples with project	Compaction audits required
	104	Specific Gravity	One per 1,250,000 yd^3	Split samples with project	
	102 or 103	Density	One per 50,000 yd^3		Visual audit of testing procedures
Select Borrow	108	Proctor	One per 1,250,000 yd^3	Split samples with project	Compaction audits required
	104	Specific Gravity	One per 1,250,000 yd^3	Split samples with project	
	102 or 103	Density	One per 50,000 yd^3		Visual audit of testing procedures
	206	Sieve Analysis	One per 50,000 yd^3	Split samples with project	2-way splits required
Backfill	108	Proctor	One per 250,000 yd^3	Split samples with project	Compaction audits required
	104	Specific Gravity	One per 250,000 yd^3	Split Samples with project	
	102 or 103	Density	One per 10,000 yd^3		Visual audit of testing procedures
	206	Sieve Analysis	One per 10,000 yd^3	Split samples with project	2-way splits required
Granular Backfill and MSE Backfill	108	Proctor	One per 250,000 yd^3	Split samples with project	Compaction audits required
	104	Specific Gravity	One per 250,000 yd^3	Split samples with project	
	102 or 103	Density	One per 10,000 yd^3		Visual audit of testing procedures
	206	Sieve Analysis	One per 10,000 yd^3	Split samples with project	2-way splits required
	210/211/212	LL/PL/PI	One per 10,000 yd^3	Split samples with project	2-way splits required

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** -- Discuss any changes from the frequencies shown with the Quality Assurance Engineer.
*** -- Visual audits (040-079) may be done in lieu of 2-way splits or side by side audits at a frequency not to exceed 50% of minimum required IA frequencies. (Example: minimum of 5 audits required per contract x 50% = 2.5 = 2 visual audits can be completed for this material on this contract.)

MATERIAL OR PRODUCT	TEST NO. *	TEST	SAMPLE FREQUENCY**	LOCATION OR TIME OF SAMPLING	REMARKS ***
Slurry Backfill	206	Sieve Analysis	One per 10,000 yd^3	Split samples with project	2-way splits required
	431 or 432	Air Content by Volumetric or Pressure	One per 2,000 yd^3	Same location as project control samples	Side by side audit
Types 1, 2 & 3 Base (For Type 3 See Special Provisions)	108	Proctor	One per 500,000 tons	Split samples with project	Compaction audits required
	104	Specific Gravity	One per 500,000 tons	Split samples with project	
	102 or 103	Density	One per 20,000 tons		Visual audit of testing procedures
	206	Sieve Analysis	One per 20,000 tons		2-way splits required
	210/211/212	LL/PL/PI	One per 20,000 tons	Split samples with project	2-way splits required
	230	Fractured Face	One per 20,000 tons		2-way splits required
Aggregate for Portland Cement Treated Base	206	Sieve Analysis	One per 10,000 tons	Road mixed: From processed material, prior to adding cement Plantmixed: From conveyors, prior to adding cement	2 -way splits required
	227	Sand Equivalent	One per 10,000 tons		2-way splits required
Cement Treated Base (Roadmix or Plantmix Method)	108	Proctor	One per 500,000 tons	Split samples with project	Compaction audits required
	104	Specific Gravity	One per 500,000 tons	Split samples with project	
	102 or 103	Density	One per 20,000 tons		Visual audit of testing procedures
Pulverized Base and Surface (Roadbed Modification)	108	Proctor	One per 1,750,000 yd^2	Split samples with project	Compaction audits required
	104	Specific Gravity	One per 1,750,000 yd^2	Split samples with project	
	102 or 103	Density	One per 70,000 yd^2		Visual audit of testing procedures
	206	Sieve Analysis	One per 70,000 yd^2	Split samples with project	2-way splits required

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** -- Discuss any changes from the frequencies shown with the Quality Assurance Engineer.
*** -- Visual audits (040-079) may be done in lieu of 2-way splits or side by side audits at a frequency not to exceed 50% of minimum required IA frequencies. (Example: minimum of 5 audits required per contract x 50% = 2.5 = 2 visual audits can be completed for this material on this contract.)

MATERIAL OR PRODUCT	TEST NO. *	TEST	SAMPLE FREQUENCY**	LOCATION OR TIME OF SAMPLING	REMARKS ***
Shouldering Material	206	Sieve Analysis	One per 20,000 tons	Split samples with project	2-way splits required
	210/211/212	LL/PL/PI	One per 20,000 tons	Split samples with project	2-way splits required
Aggregate for Plantmix Bituminous Base, Surface, Open-Graded and Permeable Base	210/211/212	LL/PL/PI	One per project per stockpile		2-way splits required P.I. tests to be performed prior to marination
	230	Fractured Face	One per project per stockpile		2-way splits required
	111	Absorption of Coarse Aggregate	One per project per stockpile		2-way splits required
Permeable Base (Asphalt Treated)	206	Sieve Analysis	One per 20,000 tons	Split samples with project	2-way split required
	761	Bitumen Ratio	One per 20,000 tons	Split samples with project	
Plantmix Bituminous Base and Surface	206	Sieve Analysis	One per 10,000 tons	Split samples with project	2-way split required. First audit and split to be conducted on the first day of operations
	325	Theoretical Maximum Specific Gravity (Rice)	One per 10,000 tons		
	761	Bitumen Ratio	One per 10,000 tons		2-way splits required. First audit and split to be conducted on the first day of operations
	335 or 750	Density	One per 100,000 yd^2		Visual audit of testing procedure. First audit to be conducted on the first day of paving operations.
Plantmix Bituminous Open-Graded Surface	206	Sieve Analysis	One per 10,000 tons	Split samples with project	2-way split required. First audit and split to be conducted on the first day of operations
	761	Bitumen Ratio	One per 10,000 tons	Split samples with project	2-way split required. First audit and split to be conducted on the first day of operations
Cold Recycle	750	Density	One per 70,000 yd^2		Visual audit of testing procedures
	759	Field Viscosity	One per 20,000 tons		Visual audit of Saybolt Furol testing procedures

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** -- Discuss any changes from the frequencies shown with the Quality Assurance Engineer.
*** -- Visual audits (040-079) may be done in lieu of 2-way splits or side by side audits at a frequency not to exceed 50% of minimum required IA frequencies. (Example: minimum of 5 audits required per contract x 50% = 2.5 = 2 visual audits can be completed for this material on this contract.)

MATERIAL OR PRODUCT	TEST NO. *	TEST	SAMPLE FREQUENCY**	LOCATION OR TIME OF SAMPLING	REMARKS ***
Surface Treatment Screenings (Chips)	206	Sieve Analysis	One per 20,000 tons	Split samples with project	2-way splits required
	228	Cleanness Value	One per 20,000 tons	Split samples with project	2-way splits required
	230	Fractured Face	One per 20,000 tons	Split samples with project	2-way splits required
	759	Field Viscosity	One per 20,000 tons		Visual audit of Saybolt Furol testing procedures
Micro-Surfacing	206	Sieve Analysis	One per 20,000 tons	Split sample with project	2-way splits required
	210/211/212	LL/PL/PI	One per 20,000 tons	Split sample with project	2-way splits required
	227	Sand Equivalent	One per 20,000 tons	Split sample with project	2-way splits required
	230	Fractured Face	One per 20,000 tons	Split sample with project	2-way splits required
Concrete Aggregates	206	Sieve Analysis	Pavement: One per 70,000 yd^2 Structure: One per 3,000 yd^3	Split samples with project	2-way split required
	227	Sand Equivalent	Pavement: One per 70,000 yd^2 Structure: One per 3,000 yd^3	Split samples with project	2-way split required
	228	Cleanness Value	Pavement: One per 70,000 yd^2 Structure: One per 3,000 yd^3	Split samples with project	2-way split required
Portland Cement Concrete for Structures	431 or 432	Air Content by Volumetric or Pressure	One per 1,000 yd^3	Same location as project control samples	Side by side audit
	438	Slump	One per 1,000 yd^3	Same location as project control samples	Side by side audit
	435	Unit Weight	One per 1,000 yd^3	Same location as project control samples	Side by side audit

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*** -- Visual audits (040-079) may be done in lieu of 2-way splits or side by side audits at a frequency not to exceed 50% of minimum required IA frequencies. (Example: minimum of 5 audits required per contract x 50% = 2.5 = 2 visual audits can be completed for this material on this contract.)

MATERIAL OR PRODUCT	TEST NO. *	TEST	SAMPLE FREQUENCY**	LOCATION OR TIME OF SAMPLING	REMARKS ***
Portland Cement Concrete for Pavement	431 or 432	Air Content by Volumetric or Pressure	One per 7,500 yd^3	Same location as project control samples	Side by side audit First audit on first day of operations
	438	Slump	One per 7,500 yd^3	Same location as project control samples	Side by side audit First audit on first day of operations
	435	Unit Weight	One per 7,500 yd^3	Same location as project control samples	Side by side audit First audit on first day of operations
Self-Consolidating Concrete (SCC)	416	Air Content and Unit Weight	One per 1,000 yd^3	Same location as project control samples	Side by side audit First audit on first day of operations
	417	Slump Flow / VSI (Visual Stability Index)	One per 1,000 yd^3		Visual audit of testing procedures First audit on first day of operations
	418	J-Ring / Slump Cone	One per 1,000 yd^3		Visual Audit of testing procedures First audit on first day of operations

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** -- Discuss any changes from the frequencies shown with the Quality Assurance Engineer.
*** -- Visual audits (040-079) may be done in lieu of 2-way splits or side by side audits at a frequency not to exceed 50% of minimum required IA frequencies. (Example: minimum of 5 audits required per contract x 50% = 2.5 = 2 visual audits can be completed for this material on this contract.)

MINIMUM REQUIRED SAMPLES AND TESTS: INDEPENDENT ASSURANCE (IA)
APRIL 2017

Note: When utilizing coldmillings, follow the frequency for which the material is being used for, and refer to the Contract Special Provisions for additional specifications.

MATERIAL OR PRODUCT	TEST NO. *	TEST	SAMPLE FREQUENCY**	LOCATION OR TIME OF SAMPLING	REMARKS ***
Borrow / Embankment	108	Proctor	One per 1,250,000 yd^3	Split samples with project	Compaction audits required
	104	Specific Gravity	One per 1,250,000 yd^3	Split samples with project	
	102 or 103	Density	One per 50,000 yd^3		Visual audit of testing procedures
Select Borrow	108	Proctor	One per 1,250,000 yd^3	Split samples with project	Compaction audits required
	104	Specific Gravity	One per 1,250,000 yd^3	Split samples with project	
	102 or 103	Density	One per 50,000 yd^3		Visual audit of testing procedures
	206	Sieve Analysis	One per 50,000 yd^3	Split samples with project	2-way splits required
Backfill	108	Proctor	One per 250,000 yd^3	Split samples with project	Compaction audits required
	104	Specific Gravity	One per 250,000 yd^3	Split Samples with project	
	102 or 103	Density	One per 10,000 yd^3		Visual audit of testing procedures
	206	Sieve Analysis	One per 10,000 yd^3	Split samples with project	2-way splits required
Granular Backfill and MSE Backfill	108	Proctor	One per 250,000 yd^3	Split samples with project	Compaction audits required
	104	Specific Gravity	One per 250,000 yd^3	Split samples with project	
	102 or 103	Density	One per 10,000 yd^3		Visual audit of testing procedures
	206	Sieve Analysis	One per 10,000 yd^3	Split samples with project	2-way splits required
	210/211/212	Atterberg Limits	One per 10,000 yd^3	Split samples with project	2-way splits required

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*** -- Visual audits (040-079) may be done in lieu of 2-way splits or side by side audits at a frequency not to exceed 10% of minimum required IA frequencies. (Example: minimum of 5 audits required per contract x 10% = .5 = 1 visual audit can be completed for this material on this contract.)

MATERIAL OR PRODUCT	TEST NO. *	TEST	SAMPLE FREQUENCY**	LOCATION OR TIME OF SAMPLING	REMARKS ***
Slurry Backfill	206	Sieve Analysis	One per 10,000 yd^3	Split samples with project	2-way splits required
	431 or 432	Air Content by Volumetric or Pressure	One per 2,000 yd^3	Same location as project control samples	Side by side audit
Types 1, 2 & 3 Base (For Type 3 See Special Provisions)	108	Proctor	One per 500,000 tons	Split samples with project	Compaction audits required
	104	Specific Gravity	One per 500,000 tons	Split samples with project	
	102 or 103	Density	One per 20,000 tons		Visual audit of testing procedures
	206	Sieve Analysis	One per 20,000 tons		2-way splits required
	210/211/212	Atterberg Limits	One per 20,000 tons	Split samples with project	2-way splits required
	230	Fractured Face	One per 20,000 tons		2-way splits required
Aggregate for Portland Cement Treated Base	206	Sieve Analysis	One per 10,000 tons	Road mixed: From processed material, prior to adding cement Plantmixed: From conveyors, prior to adding cement	2 -way splits required
	227	Sand Equivalent	One per 10,000 tons		2-way splits required
Cement Treated Base (Roadmix or Plantmix Method)	108	Proctor	One per 500,000 tons	Split samples with project	Compaction audits required
	104	Specific Gravity	One per 500,000 tons	Split samples with project	
	102 or 103	Density	One per 20,000 tons		Visual audit of testing procedures
Pulverized Base and Surface (Roadbed Modification)	108	Proctor	One per 1,750,000 yd^2	Split samples with project	Compaction audits required
	104	Specific Gravity	One per 1,750,000 yd^2	Split samples with project	
	102 or 103	Density	One per 70,000 yd^2		Visual audit of testing procedures
	206	Sieve Analysis	One per 70,000 yd^2	Split samples with project	2-way splits required

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** -- Discuss any changes from the frequencies shown with the Quality Assurance Engineer.
*** -- Visual audits (040-079) may be done in lieu of 2-way splits or side by side audits at a frequency not to exceed 10% of minimum required IA frequencies. (Example: minimum of 5 audits required per contract x 10% = .5 = 1 visual audit can be completed for this material on this contract.)

MATERIAL OR PRODUCT	TEST NO. *	TEST	SAMPLE FREQUENCY**	LOCATION OR TIME OF SAMPLING	REMARKS ***
Shouldering Material	206	Sieve Analysis	One per 20,000 tons	Split samples with project	2-way splits required
	210/211/212	Atterberg Limits	One per 20,000 tons	Split samples with project	2-way splits required
Aggregate for Plantmix Bituminous Base, Surface, Open-Graded and Permeable Base	210/211/212	Atterberg Limits	One per project per stockpile		2-way splits required P.I. tests to be performed prior to marination
	230	Fractured Face	One per project per stockpile		2-way splits required
	111	Absorption of Coarse Aggregate	One per project per stockpile		2-way splits required
Permeable Base (Asphalt Treated)	206	Sieve Analysis	One per 20,000 tons	Split samples with project	2-way split required
	761	Bitumen Ratio	One per 20,000 tons	Split samples with project	
Plantmix Bituminous Base and Surface	206	Sieve Analysis	One per 10,000 tons	Split samples with project	2-way split required. First audit and split to be conducted on the first day of operations
	325	Theoretical Maximum Specific Gravity (Rice)	One per 10,000 tons		
	761	Bitumen Ratio	One per 10,000 tons		2-way splits required. First audit and split to be conducted on the first day of operations
	335 or 750	Density	One per 100,000 yd^2		Visual audit of testing procedure. First audit to be conducted on the first day of paving operations.
Plantmix Bituminous Open-Graded Surface	206	Sieve Analysis	One per 10,000 tons	Split samples with project	2-way split required. First audit and split to be conducted on the first day of operations
	761	Bitumen Ratio	One per 10,000 tons	Split samples with project	2-way split required. First audit and split to be conducted on the first day of operations

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MATERIAL OR PRODUCT	TEST NO. *	TEST	SAMPLE FREQUENCY**	LOCATION OR TIME OF SAMPLING	REMARKS ***
Cold Recycle	750	Density	One per 70,000 yd^2		Visual audit of testing procedures
	759	Field Viscosity	One per 20,000 tons		Visual audit of Saybolt Furol testing procedures
Surface Treatment Screenings (Chips)	206	Sieve Analysis	One per 20,000 tons	Split samples with project	2-way splits required
	228 (CA T227)	Cleanness Value	One per 20,000 tons	Split samples with project	2-way splits required
	230	Fractured Face	One per 20,000 tons	Split samples with project	2-way splits required
	759	Field Viscosity	One per 20,000 tons		Visual audit of Saybolt Furol testing procedures
Micro-Surfacing	206	Sieve Analysis	One per 20,000 tons	Split sample with project	2-way splits required
	210/211/212	Atterberg Limits	One per 20,000 tons	Split sample with project	2-way splits required
	227	Sand Equivalent	One per 20,000 tons	Split sample with project	2-way splits required
	230	Fractured Face	One per 20,000 tons	Split sample with project	2-way splits required
Concrete Aggregates	206	Sieve Analysis	Pavement: One per 70,000 yd^2 Structure: One per 3,000 yd^3	Split samples with project	2-way split required
	227	Sand Equivalent	Pavement: One per 70,000 yd^2 Structure: One per 3,000 yd^3	Split samples with project	2-way split required
	228 (CA T227)	Cleanness Value	Pavement: One per 70,000 yd^2 Structure: One per 3,000 yd^3	Split samples with project	2-way split required
Portland Cement Concrete for Structures	431 or 432	Air Content by Volumetric or Pressure	One per 1,000 yd^3	Same location as project control samples	Side by side audit
	438	Slump	One per 1,000 yd^3	Same location as project control samples	Side by side audit
	435	Unit Weight	One per 1,000 yd^3	Same location as project control samples	Side by side audit

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*** -- Visual audits (040-079) may be done in lieu of 2-way splits or side by side audits at a frequency not to exceed 10% of minimum required IA frequencies. (Example: minimum of 5 audits required per contract x 10% = .5 = 1 visual audit can be completed for this material on this contract.)

MATERIAL OR PRODUCT	TEST NO. *	TEST	SAMPLE FREQUENCY**	LOCATION OR TIME OF SAMPLING	REMARKS ***
Portland Cement Concrete for Pavement	431 or 432	Air Content by Volumetric or Pressure	One per 7,500 yd^3	Same location as project control samples	Side by side audit First audit on first day of operations
	438	Slump	One per 7,500 yd^3	Same location as project control samples	Side by side audit First audit on first day of operations
	435	Unit Weight	One per 7,500 yd^3	Same location as project control samples	Side by side audit First audit on first day of operations
Self Consolidating Concrete (SCC)	416	Air Content and Unit Weight	One per 1,000 yd^3	Same location as project control samples	Side by side audit First audit on first day of operations
	417	Slump Flow / VSI (Visual Stability Index)	One per 1,000 yd^3		Visual audit of testing procedures First audit on first day of operations
	418	J-Ring / Slump Cone	One per 1,000 yd^3		Visual Audit of testing procedures First audit on first day of operations

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** -- Discuss any changes from the frequencies shown with the Quality Assurance Engineer.
*** -- Visual audits (040-079) may be done in lieu of 2-way splits or side by side audits at a frequency not to exceed 10% of minimum required IA frequencies. (Example: minimum of 5 audits required per contract x 10% = .5 = 1 visual audit can be completed for this material on this contract.)