

SECTION 301 CLASS I BASE COURSE

MATERIAL	PURP.	SAMPLED BY	TESTED BY	MIN. FREQ.	MIN. QUANT.	CERT.	SMALL QUANTITY	TYPICAL HANDLING TIME	REMARKS	
		METHOD								CONTAINER
AGGREGATE BASES (DEDICATED STOCKPILE)	Blended Calcium Sulfate (BCS)	Prelim. Source Approval	Dist. Lab S 101	Mat. Lab	1/source/blend	6 full sample sacks	----	----	12 weeks	
		Quality Control	Contractor S 101	Contractor	*	----	----	----	----	*Must be controlled so that materials placed in stockpile will conform to specifications when tested by the Department.
		Design*	Proj. Engr. S 101	Dist. Lab	1/source	6 full sample sacks	----	----	4 days	Material must be source-approved from an approved source. *For moisture-density relationships.
		Accept.	Proj. Engr. S 101	Dist. Lab	1/1000 yd ³	1 full sample sack	----	----	4 days	Material must be source-approved from an approved source.
		IA	Dist. Lab S 101 or S 401	Dist. Lab	SEE INDEPENDENT ASSURANCE PROGRAM S 701.					
	Recycled PC Concrete	Prelim. Source Approval	Dist. Lab S 101 & S 801	Mat. Lab	1/Stockpile*	12 full sample sacks	----	----	5 weeks	*See S 801 for maximum stockpile quantities. Raw material stockpiles shall be approved by Dist. Lab Engr. prior to crushing.
		Quality Control	Contractor S 101 & S 801	Contractor	*	----	----	----	----	*Must be controlled so that materials placed in stockpile will conform to specifications when tested by the Department.
		Design*	Proj. Engr. S 101	Dist. Lab	1/source	6 full sample sacks	----	----	4 days	Material must be source-approved from an approved source. (AML) *For moisture-density relationships.
		Accept.	Proj. Engr. S 101	Dist. Lab	1/1000 yd ³	1 full sample sack	----	----	4 days	Material must be from an approved source approved--(AML)

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		IA	Dist. Lab S 101 or S 401	Dist. Lab	SEE INDEPENDENT ASSURANCE PROGRAM S 701.					
AGGREGATE BASES (DEDICATED STOCKPILE) (Cont'd)	Stone	Quality Control	Contractor S 101	Contractor	*	----	----	----	----	*Must be controlled so that materials placed in stockpile will conform to specifications when tested by the Department.
		Design*	Proj. Engr. S 101	Dist. Lab	1/source	6 full sample sacks	----	----	4 days	(QPL-2AML) *For moisture-density relationships.
		Accept.	Proj. Engr. S 101 <u>S401</u>	Dist. Lab	1/1000yd ³	1 full sample sack	----	----	4 days	<u>AML</u> —
		IA	Dist. Lab S 101 or S 401	Dist. Lab	SEE INDEPENDENT ASSURANCE PROGRAM S 701.					
ASPHALTIC CONCRETE BASES	FOR ALL RELATED MATERIALS, SEE SECTION 502 OF THIS MANUAL. SEE INDEPENDENT ASSURANCE PROGRAMS S 701.									

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SECTION 301 CLASS I BASE COURSE (Cont'd)

MATERIAL	PURP.	SAMPLED BY	TESTED BY	MIN. FREQ.	MIN. QUANT.	CERT.	SMALL QUANTITY	TYPICAL HANDLING TIME	REMARKS
		METHOD			CONTAINER	DISTR.			
ASPHALTIC MATERIAL	Curing Membrane	SEE SECTION 506 OF THIS MANUAL.							
	Prime Coat	SEE SECTION 505 OF THIS MANUAL.							

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CEMENT (HYDRAULIC)	Types I, II & IP	Prelim. Source Approval	Mfr. S 102	Mat. Lab	1/month/type	1 gal friction top can or acceptable moisture proof container	----	----	----	(QPL-ZAML) Composited and blended from daily plant samples and submitted for quality control verification.	
		Accept.	----	Proj. Engr.	1/shipment	----	CC & 7	1	----	----	(QPL-ZAML)
		Verif.	Proj. Engr. S 102	Mat. Lab	1/project/ source	1 gal friction top can	----	----	21 days	(QPL-ZAML)	
PORTLAND CEMENT CONCRETE BASES		Design/ Quality Control/ Accept.	SEE SECTION 706 & 901 OF THIS MANUAL.								
MIXTURE WITH CEMENT AT CENTRAL MIX PLANT <small>sampling frequency</small>	Percent Cement	Quality Control	Contractor TR 436 S 401	Contractor TR 436	1/2 half day*	----	----	----	----	*In addition to start-up of plant each day and after each shut down.	
		Accept.	Proj. Engr. TR 436 S 401	Proj. Engr. TR 436	1/ half day	----	----	----	1 hr	----	
	Gradation	Quality Control	Contractor S 101	Contractor	1/ half day*	1 full sample sack	----	----	----	*When gradation is a requirement of specifications.	
		Accept.	Proj. Engr. S 101	Proj. Engr.	1/ day*	1 full sample sack	----	----	4 hr.	*Gradation will be run when questionable or individual components of Sand-Clay-Gravel are mixed in a pugmill.	
	Moisture Content	Quality Control	Contractor S 101 S 401	Contractor TR 403	1/ half day*	----	----	----	----	*In addition to start-up of plant each day and after each shut down.	
		Accept.	Proj. Engr. S 101	Proj. Engr.	1 / half day	----	----	----	----	----	

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	Proportions	Quality Control	Contractor TR-436 S 401	Contractor TR-436	*	----	----	----	----	*Shall be monitored continuously.
		Accept.	Contractor TR-436 S 401	Proj. Engr. TR-436	1/half day	----	----	----	1 hr.	----
	Pulverization	Quality Control	Contractor S 401	Contractor TR-434	1/half day	----	----	----	----	----
		Accept.	Proj. Engr. S 401	Proj. Engr. TR-434	1/half day	----	----	----	1/2 hr.	----

SECTION 301 CLASS I BASE COURSE (Cont'd)

MATERIAL	PURP.	SAMPLED BY	TESTED BY	MIN. FREQ.	MIN. QUANT.	CERT.	SMALL QUANTITY	TYPICAL HANDLING TIME	REMARKS	
							CONTAINER			DISTR.
BASE MATERIAL ON ROADWAY	Density	Quality Control	Contractor TR-401 S 101 or S 401	Contractor TR-401	*	----	----	----	*Shall test sufficient to ensure specifications will be met.	
		Accept.	Proj. Engr. TR-401 S 101 or S 401	Proj. Engr. TR-401	1/1000 lin ft/ 2-lane rdwy or 1/2000 lin ft/shoulder	----	----	----	1/2 hr.	* Asphalt concrete base course will be accepted in accordance with Section 502.
		IA	Dist. Lab TR-401 S 101 or S 401	Dist. Lab TR-401	SEE INDEPENDENT ASSURANCE PROGRAM S 701.					
	Cross Slope & Grade	Quality Control	Contractor	Contractor	*	----	----	----	----	*Shall take measurements sufficient to ensure specifications are met.

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		Accept.	Proj. Engr.	Proj. Engr.	1/half day	----	----	----	1/4 hr.	Use an approved 10-ft metal static straightedge or other approved device.
Moisture Content (For Soil Cement or Cement Stabilized Mixtures)	Quality Control	Contractor	Contractor	Contractor	*	----	----	----	----	*Shall test sufficient to ensure specifications are met.
	Accept.	Proj. Engr. S 101 S 401	Proj. Engr. TR-403	Proj. Engr. TR-403	1/half day	----	----	----	1 hr.	(TR-403)
Thickness & Width	Quality Control	Contractor	Contractor	Contractor	*	----	----	----	----	*Shall take measurements sufficient to ensure specifications are met.
	Verif.	Proj. Engr. TR-602	Proj. Engr. TR-602	Proj. Engr. TR-602	1/half day	----	----	----	1/4 hr.	Proj. Engr. shall notify the Dist. Lab when section is complete.
	Accept.	Dist. Lab TR-602	Dist. Lab TR-602	Dist. Lab TR-602	1/1000 lin ft/ 2-lane rdwy or 1/2000 lin ft/shoulder	----	----	300 lin ft per location	3 days	*See DOTD TR 602. For small quantity, Proj. Engr. Documents in field book.
SOIL (RAW)	Dedicated Stockpile	Quality Control	Contractor S 401	Contractor	----	----	----	----	----	Control uniformity of moisture and soil type while stockpile is being built.
		Design*/ Accept.	Proj. Engr. S 401	Dist. Lab	1/1000 yd ³	6 full sample sacks**	----	----	21 days max	*For cement content & moisture-density relationships. **When soils are to be blended, each component must meet specifications before blending. Design and final acceptance will be conducted on the blend.
		IA	Dist. Lab S 401	Dist. Lab	SEE INDEPENDENT ASSURANCE PROGRAM S 701.					
WATER		Accept.	Proj. Engr. S 303	Mat. Lab	1/source*	1 qt plastic bottle	----	----	21 days	*Drinkable water need not be sampled.

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SECTION 302 CLASS II BASE COURSE

MATERIAL	PURP.	SAMPLED BY	TESTED BY	MIN. FREQ.	MIN. QUANT.	CERT.	SMALL QUANTITY	TYPICAL HANDLING TIME	REMARKS	
		METHOD			CONTAINER	DISTR.				
NOTE: WHEN A CLASS II BASE COURSE IS PRODUCED BY CENTRAL PLANT MIXING, USE THE SAMPLING SCHEDULES IN SECTION 301 OF THIS MANUAL.										
AGGREGATE BASES	Blended Calcium Sufate (BCS)	Prelim. Source Approval	Dist. Lab S 101	Mat. Lab	1/source/blend	6 full sample sacks	----	----	12 weeks	
		Quality Control	Contractor S 101	Contractor	*	----	----	----	----	*Must be controlled so that materials placed in stockpile will conform to specifications when tested by the Department.
		Design*	Proj. Engr. S 101	Dist. Lab	1/source	6 full sample sacks	----	----	4 days	Material must be source-approved from an approved source. *For moisture-density relationships.
		Accept.	Proj. Engr. S 101	Dist. Lab TR 122 TR 113	1/1000 yd ³	1 full sample sack	----	----	4 days	Material must be source-approved from an approved source.
		IA	Dist. Lab S 101 or S 401	Dist. Lab TR 122 TR 113	SEE INDEPENDENT ASSURANCE PROGRAM S 701.					
	Recycled PC Concrete	Prelim. Source Approval	Dist. Lab S 801	Mat. Lab	1/stockpile*	6 full sample sacks	----	----	5 weeks	*See S 801 for maximum stockpile quantities. Raw material stockpiles shall be approved by Dist. Lab Engineer prior to crushing.
		Quality Control	Contractor S 101	Contractor	*	----	----	----	----	*Must test sufficient to ensure materials being delivered meet specification requirements.
		Design*	Proj. Engr. S 101	Dist. Lab	1/source	6 full sample sacks	----	----	4 days	Material must be source-approved from an approved source. *For moisture-density relationships.
		Accept.	Dist. Lab S 101	Dist. Lab	1/1000 yd ³	1 full sample sack	----	100 yd ³	4 days	Material must be source-approved from an approved source.

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	Stone	Quality Control	Contractor S 101	Contractor	*	----	----	----	----	*Must be controlled so that materials placed in stockpile will conform to specifications when tested by the Department test sufficient to ensure materials being delivered meet specification requirements.
		Design*	Proj. Engr. S 101	Dist. Lab	1/source	6 full sample sacks	----	----	4 days	(QPL-2AML) *For moisture-density relationships.
		Accept.	Dist. Lab S 101	Dist. Lab	1/1000 yd ³	1 full sample sack	----	100 yd ³	4 days	(QPL-2AML) Materials must be source approved from an approved source.
		IA	Dist. Lab S 101	Dist. Lab	SEE INDEPENDENT ASSURANCE PROGRAM S 701.					
ASPHALTIC CONCRETE BASES	FOR ALL MATERIALS, SEE 502 OF THIS MANUAL. SEE INDEPENDENT ASSURANCE PROGRAM S 701.									

SECTION 302 CLASS II BASE COURSE (cont'd)

MATERIAL	PURP.	SAMPLED BY	TESTED BY	MIN. FREQ.	MIN. QUANT.	CERT.	SMALL QUANTITY	TYPICAL HANDLING TIME	REMARKS
		METHOD			CONTAINER	DISTR.			
ASPHALTIC MATERIALS	Curing Membrane	SEE SECTION 506 OF THIS MANUAL.							
	Prime Coat	SEE SECTION 505 OF THIS MANUAL.							

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CEMENT (Hydraulic)	Types I, II & IP	Prelim. Source Approval	Mfr. AASHTO T-127	Mat. Lab AASHTO T-127	1/month/type	1 gal friction top can or acceptable moisture proof container	----	----	----	(QPL-7AML) Composited and blended from daily plant samples and submitted for quality control verification.
		Accept.	----	Proj. Engr.	1/shipment	----	CB CC 1 & 7	----	----	(QPL-7AML)
		Verif.	Proj. Engr. S 101	Mat. Lab	1/project/ source	1 gal friction top can	----	----	21 days	(QPL-7AML)
CONCRETE, PORTLAND CEMENT, BASE		Design/ Quality Control/ Accept.	SEE SECTION 901 OF THIS MANUAL.							

SECTION 302 CLASS II BASE COURSE (cont'd)

MATERIAL	PURP.	SAMPLED BY METHOD	TESTED BY	MIN. FREQ.	MIN. QUANT.	CERT.	SMALL QUANTITY	TYPICAL HANDLING TIME	REMARKS	
							CONTAINER			DISTR.
MIXTURE WITH CEMENT AT CENTRAL MIX PLANT									SEE SECTION 301 OF THIS MANUAL.	
BASE MATERIAL ON ROADWAY	Cement Spread Rate (For soil cement or cement treated bases only)	Quality Control	Contractor TR-436	Contractor TR-436	each transport*	----	----	----	----	*The contractor shall determine the length of spread prior to mixing. Use an approved sampling device.
		Accept.	Proj. Engr. TR-436	Proj. Engr. TR-436	1/day*	----	----	----	1/2 hr.	*The Proj. Engr. will verify the length of spread on first transport prior to mixing and total spread for the day. At the discretion of the Proj. Engr. Additional testing shall be performed when cement content changes. Use an approved sampling device.

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Cross Slope & Grade	Quality Control	Contractor	Contractor	*	----	----	----	----	*Shall check sufficient to ensure specifications are met.
	Accept.	Proj. Engr.	Proj. Engr.	1/half day	----	----	----	1/4 hr.	Use an approved 10 ft metal static straightedge or other approved device.
Density	Quality Control	Contractor TR-401	Contractor TR-401	*	----	----	----	----	*Shall test sufficient to ensure specifications are met.
	Accept.	Proj. Engr. TR-401	Proj. Engr. TR-401	1/1000 lin ft/ 2-lane rdwy or 1/2000 lin ft/shoulder	----	----	----	1/2 hr.	----
	IA	Dist. Lab TR-401	Dist. Lab TR-401	SEE INDEPENDENT ASSURANCE PROGRAM S 701.					
Moisture Content (For Soil Cement or treated Sand-Clay-Gravel only)	Quality Control	Contractor S 101 or S 401	Contractor	*	----	----	----	----	*Shall test sufficient to ensure specifications are met.
	Accept.	Proj. Engr. S 101 or S 401	Proj. Engr.	1/1000 lin ft/ 2-lane rdwy or 1/2000 lin ft/shoulder	1 gal friction top can*	----	----	1 hr.	*May be obtained by M.C. % determined during application of TR 415 B, if available on in-place moisture at the time of compaction (TR 403).
Pulverization (For soil-cement only)	Quality Control	Contractor S 401	Contractor	*	----	----	----	----	*Soil cement shall be tested sufficiently to ensure specifications are met.
	Accept.	Proj. Engr. S 401	Proj. Engr.	1/1000 lin ft/ 2-lane rdwy or 1/2000 lin ft/shoulder	1 gal friction top can	----	----	1/2 hr.	DOTD-TR-431
Thickness & Width	Quality Control	Contractor	Contractor	*	----	----	----	----	*Shall be measured sufficiently to ensure specifications are met.

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		Verif.	Proj. Engr. TR-602	Proj. Engr. TR-602	1/half day	----	----	----	1/4 hr.	Proj. Engr. To notify Dist. Lab when section is completed.
		Accept.	Dist. Lab TR-602	Dist. Lab TR-602	1/1000 lin ft/ 2-lane rdwy or 1/2000 lin ft/shoulder	----	----	300 lin ft per location	3 days	See DOTD TR 602. For small quantity, Proj. Engr. documents in field book.

SECTION 302 CLASS II BASE COURSE (cont'd)

MATERIAL	PURP.	SAMPLED BY	TESTED BY	MIN. FREQ.	MIN. QUANT.	CERT.	SMALL QUANTITY	TYPICAL HANDLING TIME	REMARKS
		METHOD			CONTAINER	DISTR.			
GEOTEXTILE SEPARATOR FABRIC	Class D	Accept.	SEE SECTION 203 OF THIS MANUAL.	Mat. Lab					Only required when aggregate base course placed on un-treated or lime-treated soils.
SOILS (RAW) ON ROADWAY FOR SOIL CEMENT	Density (93%)	Quality Control	Contractor TR-401 S-401	Contractor TR-401	*	----	----	----	*Shall test sufficient to ensure specifications are met. Minimum density is required on roadway prior to spreading cement. Check M.C. % before mixing with cement (TR 403).
		Accept.	Proj. Engr. TR-S-401	Proj. Engr. TR-401	1/half day	----	----	----	1/2 hr.
	Soils/Soil-Aggregate	Design*	Proj. Engr. S 101 or S 401	Dist. Lab	1/1000 lin ft/2-lane rdwy or 1/ 2000 lin ft/shoulder	6 full sample sacks of blend	----	----	21 days

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		Accept.	Proj. Engr. S 101 or S 401	Dist. Lab	1/1000 lin ft/2-lane rdwy or 1/ 2000 lin ft/shoulder	1 full sample sack of blend & 1 sample sack of each component	-----	200 lin ft	5 days	Blending of soils prior to mixing with cement will not be allowed for adjustment of LL or PI.
		IA	Dist. Lab S 101 or S 401	Dist. Lab	SEE INDEPENDENT ASSURANCE PROGRAM S 701.					
SOILS (RAW) IN STOCKPILE FOR SOIL CEMENT	Soils/Soil- Aggregate	Quality Control	Contractor S 101 or S 401	Contractor	*	-----	-----	-----	-----	*Shall test sufficient to ensure specifications will be met when placed on roadway. Check M.C. % before spreading cement.
		Design*	Proj. Engr. S 101 or S 401	Dist. Lab	1/1000 yd ³	6 full sample sacks of blend & 1 full sample sack of each component	-----	-----	21 days	*For cement content and moisture-density relationships. Design will be conducted on blend. For contractor design material sample must be accompanied by independent lab result in accordance with specification.
		Accept.	Proj. Engr. S 101 or S 401	Dist. Lab	1/1000yd ³	1 full sample sack of blend & 1 full sample sack of each component	-----	100 yd ³	5 days	Blending of soils prior to mixing with cement will not be allowed for adjustment of LL or PI.
		IA	Dist. Lab S 101 or S 401	Dist. Lab	SEE INDEPENDENT ASSURANCE PROGRAM S 701.					
Water		Accept.	Proj. Engr. S 303	Mat. Lab	1/source*	1 qt plastic bottle	-----	-----	21 days	*Drinkable water need not be sampled.

SECTION 303 IN-PLACE CEMENT STABILIZED BASE COURSE & IN-PLACE CEMENT TREATED BASE COURSE

MATERIAL	PURP.	SAMPLED BY	TESTED BY	MIN. FREQ.	MIN. QUANT.	CERT.	SMALL QUANTITY	TYPICAL HANDLING TIME	REMARKS	
		METHOD				CONTAINER				DISTR.
FOR DETAILS ON HYDRAULIC CEMENT AND WATER, REFER TO SECTION 301 OF THIS MANUAL. FOR DETAILS ON ASPHALTIC CURING MEMBRANE, REFER TO SECTION 506 OF THIS MANUAL. FOR DETAILS ON ASPHALTIC CONCRETE OR PORTLAND CEMENT CONCRETE, REFER TO SECTIONS 502 AND 901 OF THIS MANUAL, AS APPLICABLE.										
MATERIAL FOR BASE PRIOR TO SPREADING CEMENT (Existing or Furnished Soils/Soil-Aggregate)	Contractor Furnished Soil	Quality Control	Contractor S 101 or S 401	Contractor	----	----	----	----	Must test sufficient to ensure material will meet specification requirements before placing on roadway. Check M.C.% on all materials before spreading cement.	
		Accept.	Proj. Engr. S 101 or S 401	Dist. Lab	1/1000 yd ³	1 full sample sack	----	----	4 days	Contractor furnished material will be approved before incorporation into existing material. Furnished material not meeting the requirement of specification Subsection 302.02(a)_1 will not be incorporated in the base.
	Density (93%)	Quality Control	Contractor TR-401 S 401	Contractor TR-401	*	----	----	----	----	*Shall be tested frequently enough to ensure specifications are met. Minimum density is required on roadway prior to mixture with cement. All blending of soils materials will be accomplished before testing.
		Accept.	Proj. Engr. TR-S 401	Proj. Engr. TR-401	1/half day	----	----	----	1/2 hr.	----
	In-Place Material on Roadway	Design*/ Accept.	Contractor S101 or S401	Dist. Lab	1/1000 lin ft/2-lane rdwy or 1/2000 lin ft/ shoulder	6 full sample sacks	----	----	14 days	*For cement content and moisture-density relationships (if needed). Design will be conducted on the final blend.
	Pulverization	Quality Control	Contractor TR-401	Contractor TR-401	*	----	----	----	----	*Shall be tested frequently enough to ensure specifications are met.
		Accept.	Proj. Engr. TR-401	Proj. Engr. TR-401	1/1000 lin ft/2-lane rdwy or 1/2000 lin ft/ shoulder	----	----	----	1/2 hr.	Shall be obtained after blending of any contractor furnished material. Pulverization shall be approved prior to spreading cement.

SECTION 303 IN-PLACE CEMENT STABILIZED BASE COURSE & IN-PLACE CEMENT TREATED BASE COURSE (Cont'd)

MATERIAL	PURP.	SAMPLED BY	TESTED BY	MIN. FREQ.	MIN. QUANT.	CERT.	SMALL QUANTITY	TYPICAL HANDLING TIME	REMARKS	
		METHOD			CONTAINER	DISTR.				
FOR DETAILS ON HYDRAULIC CEMENT AND WATER, REFER TO SECTION 301 OF THIS MANUAL. FOR DETAILS ON ASPHALTIC CURING MEMBRANE, REFER TO SECTION 506 OF THIS MANUAL. FOR DETAILS ON ASPHALTIC CONCRETE OR PORTLAND CEMENT CONCRETE, REFER TO SECTIONS 501,501 AND 901 OF THIS MANUAL, AS APPLICABLE.										
MIXTURE WITH CEMENT ON ROADWAY	Cement Spread Rate	Quality Control	Contractor* TR-436	303.07 Contractor TR-436	each transport	**	----	----	----	*The contractor shall determine the length of spread prior to mixing. **Use an approved sampling device.
		Accept.	Proj. Engr.* TR-436	Proj. Engr. TR-436	1/day	**	----	----	1/2 hr.	*The Proj. Engr. will verify the length of spread on first transport prior to mixing and total spread for the day. **Use an approved sampling device.
	Cross Slope & Grade	Quality Control	Contractor	303.07 Contractor	*	----	----	----	----	*Shall test sufficient to ensure specifications are met. Use an approved 10 ft metal static straightedge.
		Verif.	Proj. Engr.	Proj. Engr.	1/2 day	----	----	----	-	Use an approved 10 ft. metal static straightedge or other approved device.
	Density	Quality Control	Contractor TR-401	303.07 Contractor TR-401	*	----	----	----	----	*Shall test sufficient to ensure specifications are met.
		Accept.	Proj. Engr. TR-401	Proj. Engr. TR-401	1/1000 lin ft/2-lane rdwy or 1/2000 lin ft/ shoulder	----	----	----	1/2 hr.	----
		IA	Dist. Lab TR-401	303.11 Dist. Lab TR-401	SEE INDEPENDENT ASSURANCE PROGRAM S 701.					

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Moisture Content	Quality Control	Contractor S 101 or S 401	303.05 303.07 Contractor	*	----	----	----	----	*Shall test sufficient to ensure specifications are met. (DOTD TR 403)
	Accept.	Proj. Engr. S 101 or S 401	Proj. Engr.	1/1000 lin ft/2-lane rdwy or 1/2000 lin ft/ shoulder	1 gal friction top can*	----	----	1 hr.	*May be obtained by M.C.% determined during application of TR 415 B, if available on in-place moisture at the time of compaction (TR 403).
Pulverization	Accept.	Proj. Engr. S 101 or S 401	Proj. Engr.	1/1000 lin ft/2-lane rdwy or 1/2000 lin ft/ shoulder	----	----	----	1/2 hr.	
Thickness & Width	Quality Control	Contractor	303.07 Contractor	*	----	----	----	----	*Shall be measured sufficiently to ensure specifications are met.
	Verif.	Proj. Engr. TR-602	Proj. Engr. TR-602	1/half day	----	----	----	1/4 day	Proj. Engr. shall notify Dist. Lab when section is complete.
	Accept.	Dist. Lab TR-602	Dist. Lab TR-602	1/1000 lin ft/2-lane rdwy or 1/2000 lin ft/ shoulder	----	----	300 lin ft per location	3 days	*See DOTD TR 602. For small quantity, Proj. Engr. documents in field book.

SECTION 304 LIME TREATMENT

MATERIAL	PURP.	SAMPLED BY	TESTED BY	MIN. FREQ.	MIN. QUANT.	CERT.	SMALL QUANTITY	TYPICAL HANDLING TIME	REMARKS
		METHOD			CONTAINER	DISTR.			
FOR DETAILS ON HYDRAULIC CEMENT REFER TO SECTION 301 OF THIS MANUAL. FOR DETAILS ON ASPHALTIC CURING MEMBRANE, REFER TO SECTION 506 OF THIS MANUAL. FOR DETAILS ON ASPHALTIC CONCRETE OR PORTLAND CEMENT CONCRETE, REFER TO SECTIONS 502 AND 901 OF THIS MANUAL, AS APPLICABLE.									

CURING MEMBRANE	Type B (only)	----	----	Mat. Lab/ Proj. Engr.	SEE SECTION 506 OF THIS MANUAL.						
LIME (Hydrated and Quicklime)		Prelim. Source Approval	Mfr. S 102	Mat. Lab	1/quarter	----	----	----	----	----	
		Accept.	----	Mat. Lab	1/shipment	----	CD 1 & 7	----	----	(QPL-34AML)	
		Verif.	Proj. Engr. S 102	Mat. Lab	1/project/ source	1 gal friction top can	----	----	21 days	(QPL-34AML) *Not required if sampled under another item.	
MIXTURE ON ROADWAY	Density- (Type B & C)	Quality Control	Contractor TR-404	Contractor TR-404	*	----	----	----	----	*Shall check sufficient to ensure specifications are met.	
		Accept.	Proj. Engr. TR-404	Proj. Engr. TR-404	1/1000 lin ft/2-lane rdwy or 1/2000 lin ft/ shoulder	----	----	----	1/2 hr.	----	
	IA (Type B only)	Dist. Lab TR-404	Dist. Lab TR-404	SEE INDEPENDENT ASSURANCE PROGRAM S 701.							
	Density-(Type D)	Accept.	Proj. Engr.	Proj. Engr.	----	----	----	----	----	Compact to the satisfaction of the Engineer.	
	Density- (Type E)	Accept.	Proj. Engr.	Proj. Engr.	SEE SECTION 203 OF THIS MANUAL.						
	Lime Spread Rate	Quality Control	Contractor* TR 436	Contractor	Each transport	**	----	----	1/2 hr.	*The contractor shall determine the length of spread. **Use an approved sampling device	

		Accept.	Proj. Engr.* TR-436	Proj. Engr. TR-436	1/1000 lin ft/2-lane rdwy or 1/2000 lin ft/ shoulder 1 / day	**	----	----	1/2 hr.	* The Proj. Engr. shall verify the length of spread. **Use an approved sampling device.
--	--	---------	------------------------	-----------------------	--	----	------	------	---------	--

Commented [A15]: Per Les Fletcher, amount of material a transport carries and the field dimensions vary. Verifying total spread for the day makes more sense.

SECTION 304 LIME TREATMENT (Cont'd)

MATERIAL	PURP.	SAMPLED BY	TESTED BY	MIN. FREQ.	MIN. QUANT.	CERT.	SMALL QUANTITY	TYPICAL HANDLING TIME	REMARKS
		METHOD							
MIXTURE ON ROADWAY (Cont'd)	Maximum Dry Density	Quality Control	Contractor S 101	Contractor	*	----	----	----	*Shall Check sufficient to ensure specifications are met.
		Accept.	Proj. Engr. S 101	Proj. Engr.	*	----	----	----	* For Type B, determine optimum moisture in accordance with TR 403.
Pulverization (Type B & C)	Quality Control	Contractor S 101	Contractor	*	----	----	----	----	*Shall Check sufficient to ensure specifications are met.
	Accept.	Proj. Engr. S 101	Proj. Engr.	1/1000 lin ft/2-lane rdwy or 1/2000 lin ft/ shoulder	1 gal friction top can	----	----	1/2 hr.	----
Pulverization (Type D & E)	Accept.	Proj. Engr	Proj. Engr.	----	*	----	----	----	*Satisfaction of Engineer.
Thickness & Width (Type B)	Quality Control	Contractor	Contractor	*	----	----	----	----	*Shall Check sufficient to ensure specifications are met.
	Verif.	Proj. Engr. TR-602	Proj. Engr. TR-602	1/half day	----	----	----	1/4 hr.	Proj. Engr. to notify Dist. Lab when section is complete.

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		Accept.	Dist. Lab TR-602	Dist. Lab TR-602	1/1000 lin ft/2-lane rdwy or 1/2000 lin ft/ shoulder	----	----	300 lin ft per location	3 days	See DOTD TR 602. For small quantity, Proj. Engr. Documents in field book.
	Thickness & Width (Type C & D)	Accept.	Proj. Engr. TR-602	Proj. Engr. TR-602	*	----	----	----	----	*Satisfaction of the Project Engr. Documents in field book.
	Thickness & Width (Type E)	Accept.	Proj. Engr.	Proj. Engr.	FOR LIFT THICKNESS REQUIREMENTS SEE SECTION 203 OF THIS MANUAL					
SOIL OR SOIL-AGGREGATE	% Lime*	Design	Proj. Engr. S 101 or S 401	Dist. Lab	1/1000 lin ft/2-lane rdwy or 1/2000 lin ft/ shoulder	6 full sample sacks	----	----	10 days	*Not required when percent lime is specified in plans or project specifications.
Water		Accept.	Proj. Engr. S 303	Mat Lab	1/source*	1 qt plastic bottle	----	----	21 days	*Drinkable water need not be sampled.

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SECTION 305 SUBGRADE LAYER

MATERIAL	PURP.	SAMPLED BY	TESTED BY	MIN. FREQ.	MIN. QUANT.	CERT.	SMALL QUANTITY	TYPICAL HANDLING TIME	REMARKS
		METHOD			CONTAINER	DISTR.			
NOTE: WHEN A SUBGRADE LAYER IS PRODUCED BY CENTRAL PLANT MIXING, USE THE SAMPLING SCHEDULES IN SECTION 301 OF THIS MANUAL. FOR PLACEMENT AND CONSTRUCTION REFER TO APPLICABLE SECTIONS OF THIS MANUAL.									
AGGREGATES	Stone, Recycled PC Concrete	SEE SECTION 302 OF THIS MANUAL		Dist. Lab					
	Asphaltic Concrete	Prelim. Source Approval	Dist. Lab S 101	Mat Lab	1/source/blend	6 full sample sacks	----	----	4 weeks Source shall be approved by Materials Lab prior to use.

Blended Calcium Sulfate	<u>SEE SECTION 302 OF THIS MANUAL.</u>									
	Quality Control	Contractor S-101	Contractor	z	---	---	---	---	---	*Must test sufficient to ensure materials being delivered meet specification requirements.
	Design*	Proj. Engr. S-101	Dist. Lab.	1/source	6 full sample sacks	---	---	4 days	---	*For moisture density relationships.
	Accept.*	Proj. Engr. S-101	-	1/1000 yd ³	4 full sample sack	---	100 yd ³	4 days	---	*Shall not be placed within 10 ft of metal pipe. Shall be from an approved source.
CEMENT	SEE SECTION 302 OF THIS MANUAL.									
ASPHALTIC MATERIALS	Curing Membrane	SEE SECTION 506 OF THIS MANUAL.								
	Prime Coat	SEE SECTION 505 OF THIS MANUAL.								
GEOTEXTILE FABRIC	SEE SECTION 203 OF THIS MANUAL									
LIME (Hydrated or Quicklime)	SEE SECTION 304 OF THIS MANUAL.									
MIXTURE WITH LIME AND/OR CEMENT ON ROADWAY	Pulverization*	Accept.	Proj. Engr. S 401	Proj. Engr.	1/1000 lin ft/2-lane rdwy or 1/2000 lin ft/shoulder	----	----	----	1/2 hr.	*For soil after mixing with cement and/or lime.
SOIL		Design*	Proj. Engr. S 401	Dist. Lab.	1/1000 lin ft/2-lane rdwy or 1/2000 lin ft/shoulder	6 full sample sacks	----	----	10 days	*For Moisture Density relationships.

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		Accept.*	Proj. Engr. TR-602	Dist. Lab TR-602	1/1000 lin ft/2-lane rdwy or 1/2000 lin ft/shoulder	1 full sample sack	----	----	4 days	*When soils are to be blended, each component must meet specifications before blending. Design and final acceptance will be conducted on the blend.
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SECTION 305 SUBGRADE LAYER (Cont'd)

MATERIAL	PURP.	SAMPLED BY	TESTED BY	MIN. FREQ.	MIN. QUANT.	CERT.	SMALL QUANTITY	TYPICAL HANDLING TIME	REMARKS	
		METHOD								CONTAINER
SUBGRADE LAYER	Density (Stone Recycled PCC, Soil Cement)	SEE SECTIONS 302 AND 308 OF THIS MANUAL								
	Density (Blended Calcium Sulfate)	Quality Control	Contractor S 401	Contractor	*	----	----	----	----	*Shall check sufficiently to ensure specifications requirements.
		Accept.	Proj. Engr. S 401	Dist. Lab	1/1000 lin ft/ 2-lane rdwy or 1/2000 lin ft/ shoulder	----	----	----	1/2 hr.	Shall not be placed within 10 ft of metal pipe. Shall be from an approved source.
	Thickness & Width	Verif.	Proj. Engr. TR-602	See Section 302, 303 or 304 of this Manual as applicable. District Lab not required to perform DOTD TR 602 Measurements.						
WATER		Accept.	Proj. Engr. S 303	Mat. Lab	1/source	1 qt plastic bottle	----	----	21 days	Drinkable water need not be sampled.

SECTION 306 SCARIFYING & COMPACTING ROADBED

MATERIAL	PURP.	SAMPLED BY	TESTED BY	MIN. FREQ.	MIN. QUANT.	CERT.	SMALL QUANTITY		REMARKS
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		METHOD			CONTAINER	DISTR.		TYPICAL HANDLING TIME	
EXISTING MATERIAL	Density	Accept.	Proj. Engr. TR 401, TR 415 or TR 418	Proj. Engr TR 401, TR 415 or TR 418	1/1000 lin ft/ 2-lane rdwy or 1/2000 lin ft/ shoulder	-----	-----	-----	1/2 hr.
ASPHALTIC MATERIAL	Prime Coat	SEE SECTION 506-505 TO THIS MANUAL.							

Commented [LC17]: To get a density, you will first need a Proctor

SECTION 307 PERMEABLE BASES

MATERIAL		PURP.	SAMPLED BY	TESTED BY	MIN. FREQ.	MIN. QUANT.	CERT.	SMALL QUANTITY	TYPICAL HANDLING TIME	REMARKS
			METHOD			CONTAINER	DISTR.			
AGGREGATE	Stone	Accept.	Proj. Engr. S 101	Dist. Lab	1/1000yd3	1 full sample sack	-----	-----	4 days	(QPL-2AML)
ASPHALTIC MATERIALS	Asphalt Cement	Prelim. Source Approval, Accept., Verif.	SEE SECTION 502 OF THIS MANUAL							(QPL-44AML)
ANTI-STRIP		Prelim. Source Approval, Accept. Verif.	SEE SECTION 502 OF THIS MANUAL							(QPL-57AML)
ADMIXTURE		Prelim. Source Approval, Accept., Verif.	SEE SECTION 901 OF THIS MANUAL							(QPL-58AML)
CEMENT (HYDRAULIC)		Prelim. Source Approval, Accept., Verif.	SEE SECTION 901 OF THIS MANUAL							(QPL-7AML)

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CURING COMPOUND		Prelim. Source Approval, Accept.	SEE SECTION 601 OF THIS MANUAL						(QPL-65AML)	
PERMEABLE ASPHALT BASE (PLANT)	SEE SECTION 502 OF THIS MANUAL.									
	JMF	Design	---	Contractor	1/mix/plant	---	---	---	---	*Contractor shall submit to the Dist. Lab Engr. the proposed job mix formula with supporting design data. Approval is required prior to starting work.
		Verif.†	Proj. Engr. S-101, S-201, S-604	Dist. Lab	1/JMF	---	---	---	---	†Dist. Lab verifies %-retained coating in accordance with TR-317.
	Anti-Strip Additive %	Accept.	Proj. Engr. S-605	Proj. Engr.	1/2500 tons		---	---	---	% AS from meter
	Asphalt Cement	Accept.	Proj. Engr. S-605	Proj. Engr.	1/2500 tons		---	---	---	% AC from meter
	Loose Mixture (Gradation, % AC, & % Crushed)	Quality Control	Contractor S-203 & S-605	Contractor	1/1000 tons	suitable sampling bucket	---	---	---	---
Verif.		Proj. Engr. S-203	Dist. Lab	1/5000 tons	1-gal friction top pan	---	---	3 days	---	---

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SECTION 307 PERMEABLE BASES

MATERIAL	PURP.	SAMPLED BY	TESTED BY	MIN. FREQ.	MIN. QUANT.	CERT.	SMALL QUANTITY	TYPICAL HANDLING TIME	REMARKS
		METHOD			CONTAINER	DISTR.			
PERMEABLE CONCRETE BASE (PLANT)	Mix Design	Design/ Accept.	*	Contractor/ Dist. Lab	1/mix/plant	---	---	3 days	*Contractor shall submit to the Dist. Lab Engr. the proposed job mix formula with supporting data. Approval is required prior to starting work.

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		<u>SEE SECTION 901 OF THIS MANUAL.</u>								
		Verif.	By	Proj. Engr.	1/truck	---	---	---	---	*Obtain "batch tickets" to verify quantities from mix design.
PERMEABLE BASES	Cross Slope & Grade	Quality Control	Contractor	Contractor	*	----	----	----	----	* Shall measure sufficiently to ensure specifications are met. Under thickness shall not exceed 1/2" (12 mm).
		Accept.	Proj. Engr.*	Proj. Engr.	1/day	----	----	----	----	*Use 10 ft metal static straight edge or approved device.
	Thickness & Width	Quality Control	Contractor	Contractor	*	----	----	----	----	*Shall measure sufficiently to ensure specifications are met.
		Accept.	Contractor/ Proj. Engr. IR602	Proj. Engr. IR602	1/2000 lin ft	----	----	----	----	Under thickness shall not exceed 1/2" (12 mm).
	Temperature	Accept.*	Proj. Engr. S 605	Proj. Engr.	1/5000 tons	----	----	----	----	*Required for Asphaltic Concrete only.
WATER		Accept.	Proj. Engr. S 303		1/source*	1 qt plastic bottle	----	----	21 days	*Drinkable water need not be sampled.

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MATERIAL	PURP.	SAMPLED BY	TESTED BY	MIN. FREQ.	MIN. QUANT.	CERT.	SMALL QUANTITY	TYPICAL HANDLING TIME	REMARKS
		METHOD			CONTAINER	DISTR.			
NOTE: WHEN A SUBGRADE LAYER IS PRODUCED BY CENTRAL PLANT MIXING, USE THE SAMPLING SCHEDULES IN SECTION 301 OF THIS MANUAL. FOR PLACEMENT AND CONSTRUCTION REFER TO APPLICABLE SECTIONS OF THIS MANUAL.									

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SECTION 309 IN-PLACE CEMENT TREATED SUBGRADE

MATERIAL	PURP.	SAMPLED BY	TESTED BY	MIN. FREQ.	MIN. QUANT.	CERT.	SMALL QUANTITY	TYPICAL HANDLING TIME	REMARKS		
		METHOD								CONTAINER	DISTR.
CEMENT	SEE SECTION 302 OF THIS MANUAL.										
CEMENT RATE	% Cement*	Design	Proj. Engr. S 101 or S 401	Dist. Lab	-	-	----	----	21 days	*Not required when percent cement is specified in plans or project specifications.	
SOIL		Design*	Proj. Engr. S 401	Dist. Lab.	1/1000 lin ft/2-lane rdwy or 1/2000 lin ft/shoulder	6 full sample sacks	----	----	10 days	*For Moisture Density relationships.	
MIXTURE ON ROADWAY	Cement Spread Rate	Quality Control	Contractor*	.303.07 Contractor	each transport	**	----	----	----	*The contractor shall determine the length of spread prior to mixing. **Use an approved sampling device.	
		Accept.	Proj. Engr.*	Proj. Engr.	1/day	**	----	----	1/2 hr.	*The Proj. Engr. will verify the length of spread on first transport prior to mixing and total spread for the day. **Use an approved sampling device.	
	Pulverization	Quality Control	Contractor S 101	Contractor	-	----	----	----	----	*Shall Check sufficient to ensure specifications are met.	
		Accept.	Proj. Engr. S 101	Proj. Engr.	1/1000 lin ft/2-lane rdwy or 1/2000 lin ft/ shoulder	1 gal friction top can	----	----	1/2 hr.	----	
	Density	Quality Control	Contractor	Contractor	-	----	----	----	----	----	*Shall check sufficient to ensure specifications are met.
		Accept.	Proj. Engr.	Proj. Engr.	----	----	----	----	----	----	Compact to the satisfaction of the Engineer.

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	Thickness & Width	Verif.	Proj. Engr.	Proj. Engr.	?	----	----	----	----	Satisfaction of the Project Engr. Documents in field book.
WATER		Accept.	Proj. Engr. S 303	Mat. Lab	1/source	1 qt plastic bottle	----	----	21 days	Drinkable water need not be sampled.

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