SECTION 601 PORTLAND CEMENT CONCRETE PAVEMENT

MATERIAL		REF. / TESTED BY	PURP.	SAMPLED BY / METHOD	MIN. FREQ.	MIN. QUANT. / CONTAINER	CERT. / DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	REMARKS
FOR DETAILS ON CONCRETE MIX DESIGNS, TESTS AND MATERIALS, SEE SECTION 901 OF THIS MANUAL.										
ADHESIVE-LUBRICANT	For Preformed Elastomeric Compression Joint Seal	1005.03(b) Mat. Lab	Accept.	Proj. Engr. S 601	1/lot or shipment	1 qt friction top can	-----	2,000 yd^2	10 days	(QPL 8) Mix well before sampling. Seal can tightly.
BOLSTER BLOCKS	Concrete	601.09(h)	**SEE SECTION 901 OF THIS MANUAL. (CLASS A STRUCTURAL OR PAVEMENT TYPE)**							
CONCRETE-CURED	Cores - Thickness & Compressive Strength	601.18 Mat. Lab/ Dist. Lab.	Accept.	Contractor/ Dist. Lab Rep. TR 225	5/lot	5 cores*	-----	less than 2,000yd^2 make cylinders an record depth measurements	dependent upon completion of lot & curing min. 3 days	*Contractor shall notify the Dist. Lab Engr. at least five (5) days prior to the start of coring operations. See "Application of Quality Assurance Specifications for Portland Cement Concrete Pavement and Structures" for details. For pavement plan thickness 10.0 inches (250 mm) or less, 4" diameter (nominal) cores may be used.
	Surface Tolerance	601.11 Contractor	Quality Control	Contractor TR 641	Each lot/each wheel path	entire lot	-----	-----	-----	Contractor must furnish an approved 25 ft profilograph and an approved 10 ft metal static straightedge. To be tested as soon as concrete has hardened.
		601.11 Proj. Engr.	Accept.	Proj. Engr.*	1/location/ 300 ft **	-----	-----	-----	-----	*See QA manual for details. **Shoulders, turnouts and crossovers shall be checked with an approved 10 ft metal static straightedge.
		601.11 Dist. Lab	Accept.	Dist. Lab TR 641	Each lot/each wheel path	entire lot	-----	-----	2 days	Travel lane and associated pavement will be tested after quality control testing and corrective work completed by contractor.

SECTION 601 PORTLAND CEMENT CONCRETE PAVEMENT (Cont'd)

MATERIAL		REF. / TESTED BY	PURP.	SAMPLED BY / METHOD	MIN. FREQ.	MIN. QUANT. / CONTAINER	CERT. / DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	REMARKS
CONCRETE-CURED (Cont'd)	Tine Texturing	601.08(h) Proj. Engr.	Accept.	Proj. Engr. TR 229	2/lot*	-----	-----	-----	1 day	*See DOTD TR 229.
CONCRETE-PLASTIC	Compressive Strength	601.18(b)(3) 901.12 Dist. Lab	Accept.*	Proj. Engr. S 301 TR 226	3 cyl/pour/ 100yd^3 max.	6 in. x 12 in. cylinder mold	-----	-----	30 days	*For small quantity pavements and projects with less than 2000 yd^2.
		601.07 601.17 Dist. Lab	*	Proj. Engr. S 301 TR 226	1 set of 3 cyl/location/ day	6 in. x 12 in. cylinder mold	-----	-----	1 day	*Used to determine early opening date for traffic or construction equipment.
	Rate of Application for Curing Compound	601.10 Proj. Engr.	Accept.	Proj. Engr.	1/day	*	-----	200 yd ^{2} visual inspection	1 day	*The curing compound must be applied uniformly to cover the surface of the plastic concrete.
	Surface Finish	601.08(f) Contractor	Quality Control	Contractor	entire surface area - each lot*	-----	-----	-----	-----	*Tested for trueness with an approved 10 ft metal static straightedge.
	Thickness	601.19 Contractor	Quality Control	Contractor	*	-----	-----	-----	-----	*Shall test sufficient to ensure specifications are met.
		601.18(b)(3) Proj. Engr.	Accept.	Proj. Engr.	*	-----	-----	-----	1 day	*Shall test sufficient to ensure plan thickness is met.
	Tine Texturing	601.08(h) Contractor	Quality Control	Contractor TR 229	*	-----	-----	-----	-----	*Sufficient number of random checks to ensure the required texture depth is achieved.
CURING MATERIALS	Burlap Cloth	601.02 1011.01(b) Mat. Lab	Accept.	Proj. Engr. S 601	1/shipment*	36 in. x 36 in.	-----	-----	10 days	*Visual inspection by Proj. Engr. Sample only if questionable. For cold weather protection.
	Burlap & White Polyethylene Sheeting	601.02 1011.01(e) Mat. Lab	Accept.	Proj. Engr. S 601	1/shipment*	36 in. x 36 in.	-----	-----	10 days	*Visual inspection by Proj. Engr. Sample only if questionable. For cold weather protection.

MATERIAL		REF. TESTED BY	PURP.	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	REMARKS
CURING MATERIALS (Cond't)	Liquid Membrane Forming Compound	601.02 1011.01(a) Mat. Lab	Prelim. Source Approval	Mfr. S 601	1/6 months	1 qt friction top can	-----	-----	21 days	(QPL 65)
		601.02 1011.01(a) Mat. Lab	Accept.	Proj. Engr. S 601	1/shipment*	1 qt friction top can	CC 1	-----	10 days	(QPL 65) *Visual inspection by Project Engr. Sample only if questionable.
	Waterproof Paper	601.02 1011.01(c) Mat. Lab	Accept.	Proj. Engr. S 601	1/shipment*	36 in. x 36 in.	-----	-----	10 days	*Visual inspection by Proj. Engr. Sample only if questionable. For cold weather protection.
	White Polyethylene Sheeting	601.02 1011.01(d) Mat. Lab	Accept.	Proj. Engr. S 601	1/shipment*	36 in. x 36 in.	-----	-----	10 days	*Visual inspection by Proj. Engr. Sample only if questionable. For rain protection.
EPOXY RESIN SYSTEMS	Type I, Grade C	601.02 1017.02 Mat. Lab	Accept.	Proj. Engr. S 601	1/lot or shipment	1 qt each component friction top can	CC 1	50 lin ft of joint	11 days	(QPL 32) Visual inspection by Proj. Engr. Sample only if questionable.
			Verif.	Proj. Engr. S 601	1/lot or shipment	1 qt each component friction top can	-----	50 lin ft of joint	11 days	(QPL 32)
GEOTEXTILE FABRIC		601.02 1019 Mat. Lab	Accept.	Proj. Engr. S 601	1/type/ source/ shipment	3 lin ft/roll width of fabric*	CC 1	150 yd^2 of fabric	10 days	(QPL 61) *Sample a minimum of 18 ft^2.

MATERIAL		REF. TESTED BY	PURP.	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	REMARKS
JOINT FILLERS (Cond't)	Preformed Polyurethane Foam	601.02 1005.07 Mat. Lab	Accept.	Proj. Engr. S 601	1/5000 lin ft/ type	36 in. length	-----	2,000 yd^2	10 days	-----
	Wood	601.02 1005.01(b) Mat. Lab	Accept.	Proj. Engr. S 601	1/5000 lin ft	36 in. length	-----	2,000 yd^2	10 days	-----
JOINT FORMER/ SEALER (Combination)	Preformed Joint Former/ Sealer	1005.04 Mat. Lab	Accept.	Proj. Engr. S 601	1/5000 lin ft	6 ft length	-----	2,000 yd^2	11 days	-----
JOINT SEALANT (Extruded)	Silicone Polymer (single or two-component rapid cure)	1005.02(c),(d) Mat. Lab	Prelim. Source Approval	Dist. Lab S 611	1/batch or shipment	1 gal friction top can	CA 7	-----	30 days	(QPL 42)
		1005.02(c),(d) Mat. Lab	Accept.	Proj. Engr. S 611	1/shipment*	-----	CD 1 & 7	-----	30 days	(QPL 42) *Sample only if questionable.
		1005.02(c),(d) Mat. Lab	Accept.*	Proj. Engr. S 611	1/batch or shipment	1 gal friction top can	CA 7	2,000 yd^2	30 days	(QPL 42) *When material is not accompanied by a CD.
JOINT SEALANT (Hot Poured)	Rubberized Asphaltic Type	1005.02(a) Mat. Lab	Prelim. Source Approval	Dist. Lab S 611	1/batch or shipment	one container	CA 7	-----	11 days	(QPL 67)
		1005.02(a) Mat. Lab	Accept.	Proj. Engr. S 611	1/shipment*	-----	CD 1 & 7	-----	11 days	(QPL 67) *Sample only if questionable.
		1005.02(a) Mat. Lab	Accept.*	Proj. Engr. S 611	1/batch or shipment	one container	CA 7	2,000 yd^2	11 days	(QPL 67) *When material is not accompanied by a CD.

MATERIAL		REF. TESTED BY	PURP.	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	REMARKS
JOINT SEALANT (Backing Material)	Rods	1005.02(c),(d) Mat. Lab	Accept.	-----	-----	-----	-----	-----	-----	(QPL 42) For use with polyurethane silicone polymer joint seals. Visual inspection by Proj. Engr.
	Rods (Heat Resistant)	1005.02(a) Mat. Lab	Accept.	-----	-----	-----	-----	-----	-----	(QPL 67) For use with Hot poured joint sealants. Visual inspection by Proj. Engr.
JOINT SEALANTS (Primer)		1005.02(b),(c),(d) Proj. Engr.	Accept.	-----	-----	-----	-----	-----	-----	For use with polyurethane and silicone polymers (QPL 42) joint sealants. Visual inspection by Proj. Engr.
JOINT SEAL (Preformed)	Elastomeric Compression	1005.03(a) Mat. Lab	Accept.	Proj. Engr. S 601	1/lot or shipment	8 ft length	CA 7	2,000 yd^2	14 days	(QPL 6) Proj. Engr. forwards CA with sample to Mat. Lab.
LIME	Hydrated	1018.03 Mat. Lab	Accept.	-----	1/shipment	-----	CD 1	-----	-----	(QPL 34) Visual inspection by Proj. Engr.

SECTION 602 PORTLAND CEMENT CONCRETE PAVEMENT REHABILITATION

MATERIAL		REF. / TESTED BY	PURP.	SAMPLED BY / METHOD	MIN. FREQ.	MIN. QUANT. / CONTAINER	CERT. / DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	REMARKS
FOR DETAILS ON CONCRETE MIX DESIGNS, TESTS AND MATERIALS, FLY ASH. SEE SECTION 901 OF THIS MANUAL. EACH REHABILITATION ITEM WILL SPECIFY THE SPECIFIC TYPE OF MATERIALS TO BE USED.										
LUBRICANT-ADHESIVE		1005.03(b) 1005.07 Proj. Engr.	Accept.	-----	-----	-----	-----	-----	-----	(QPL 8 & 18) For use with preformed polyurethane foam joint seal. Visual inspection by Proj. Engr.
NON-SHRINK PATCHING SYSTEM	Non-Shrink Grout	601.13(a) 1018.27 Mat. Lab	Accept.	Proj. Engr. S 601	1/source	1 sack	-----	20 sacks	16 days	(QPL 47) Sample shall be submitted in an unbroken moisture proof sack.
REINFORCEMENT	Adhesive Anchor System	601.09 Mat. Lab	Accept.	Proj. Engr. S 501	1/type	-----	-----	2,000 yd^2	12 days	(QPL 32 or 52)
	Dowel Bars	1009.04 Mat. Lab	Accept.	Proj. Engr. S 501	1/shipment	2 bars *	-----	2,000 yd^2	9 days	*For mechanical placement, only one dowel bar required. Basket assemblies checked for dimensional conformance by Proj. Engr.
	Mechanical Butt Splicing Devices	806.07 Mat. Lab	Accept.	Proj. Engr. S 501	1/size/ shipment	-----	-----	2,000 yd^2	9 days	(QPL 44)
	Tie Bars	1009.03 Mat. Lab	Accept.	Proj. Engr. S 501	1/size/grade/ 150,000lb/ source*	2 bars	CA 1	2,000 yd^2	9 days	*If listed on QPL 71, material with a CA (Distr. 1) need not be sampled. Sample for verification if questionable.
TAR PAPER		601.09 (b),(h) Mat. Lab	Accept.	Proj. Engr. S 601	1/source*	2 ft x 2 ft	-----	-----	9 days	For Bolster Blocks. *Visual inspection by Proj. Engr. Sample only if questionable.

SECTION 602 PORTLAND CEMENT CONCRETE PAVEMENT REHABILITATION (Cont.'d)

MATERIAL		REF. / TESTED BY	PURP.	SAMPLED BY / METHOD	MIN. FREQ.	MIN. QUANT. / CONTAINER	CERT. / DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	REMARKS
CONCRETE-CURED	Surface Tolerance (Grinding)	602.11 Contractor	Quality Control	Contractor TR 641	Each lane/each wheel path	-----	-----	-----	-----	Contractor must furnish an approved 25 ft profilograph or approved alternate. Tested prior to as well as after grinding.
		602.11 Dist. Lab	Accept.	Contractor/ Dist. Lab TR 641	Each lane/each wheel path	-----	-----	-----	2 days	Travel lane will be evaluated after corrective work completed by contractor.
		601.11 Proj. Engr.	Accept.	Proj. Engr.	*	-----	-----	-----	1 day	*For Cross Slope & Trans. Joints, PE shall test as needed. Contractor must furnish approved metal static straightedges.
	Surface Finish (Patching)	601.11 Contractor	Quality Control	Contractor	each patched area	-----	-----	-----	-----	Contractor must furnish an approved 10 ft metal static straightedge. To be tested as soon as concrete has hardened.
		601.11 Proj. Engr.	Accept.	Proj. Engr.	each patched area	-----	-----	-----	1day	Tested with approved 10 ft metal static straightedge.
	Tine Texturing (Patching)	602.07,08,09 & 10 Proj. Engr.	Accept.	Proj. Engr. TR 229	each patched area*	-----	-----	-----	1 day	*Match texture of adjoining pavement.
		602.07,08,08 & 10 Contractor	Quality Control	Contractor TR 229	*	-----	-----	-----	-----	*Sufficient number of random checks to ensure the required texture depth is achieved.
CONCRETE-PLASTIC	Compressive Strength	602.18(d) 901.12 Dist. Lab	Accept.	Proj.Engr. S 301/ TR226	6 cyl/lot	6 in. x 12 in. cylinder mold	-----	-----	30 days	-----
		602.07,08,09 & 10 Dist. Lab	*	Proj. Engr. S 301/ TR226	3 cyl/lot	6 in. x 12 in. cylinder mold	-----	-----	1 day	*Used to determine early opening date for traffic or construction equipment.
	Rate of Application for Curing Compound	601.10 Proj. Engr.	Accept.	Proj. Engr.	1/day	*	-----	-----	1 day	*The curing compound must be applied uniformly to cover the surface of the plastic concrete.
	Thickness	602 Contractor	Quality Control	Contractor	*	-----	-----	-----	-----	*Shall test sufficient to ensure specifications are met.
		602 Proj. Engr.	Accept.	Proj. Engr.	*	-----	-----	-----	1 day	*Shall test sufficient to ensure plan thickness is met.
CURING MATERIALS	Burlap Cloth	601.02 1011.01 (e) Mat. Lab	Accept.	Proj. Engr. S 601	1/shipment*	36 in. x 36 in.	-----	-----	10 days	*Visual inspection by Proj. Engr. Sample only if questionable. For cold weather protection.
	Burlap & White Polyethylene Sheeting	601.02 1011.01(e) Mat. Lab	Accept.	Proj. Engr. S 601	1/shipment*	36 in. x 36 in.	-----	-----	10 days	*Visual inspection by Proj. Engr. Sample only if questionable. For cold weather protection.

SECTION 602 PORTLAND CEMENT CONCRETE PAVEMENT REHABILITATION (Cont.'d)

MATERIAL		REF. / TESTED BY	PURP.	SAMPLED BY / METHOD	MIN. FREQ.	MIN. QUANT. / CONTAINER	CERT. / DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	REMARKS
CURING MATERIALS (Cont.'d)	Burlap & White Polyethylene Sheeting	601.02 1011.01(e) Mat. Lab	Accept.	Proj. Engr. S 601	1/shipment*	36 in. x 36 in.	-----	-----	10 days	*Visual inspection by Proj. Engr. Sample only if questionable. For cold weather protection.
	Liquid Membrane Forming Compound	601.02 1011.01(a) Mat. Lab	Prelim. Source Approval	Mfr. S 601	1/6 months	1 qt friction top can	-----	-----	21 days	(QPL 65)
		601.02 1011.01(a) Mat. Lab	Accept.	Proj. Engr. S 601	1/shipment*	1 qt friction top can	CC 1	-----	10 days	(QPL 65) *Visual inspection by Proj. Engr. Sample only if questionable.
	Waterproof Paper	601.02 1011.01(c) Mat. Lab	Accept.	Proj. Engr. S 601	1/shipment*	36 in. x 36 in.	-----	-----	10 days	*Visual inspection by Proj. Engr. Sample only if questionable. For cold weather protection.
EPOXY RESIN SYSTEMS	Type I Grade as specified	602.04 602.09 602.15 1017.02 Mat. Lab.	Accept.	Proj. Engr. S 601	1/lot or shipment	1 qt each component friction top can	CC 1	-----	11 days	(QPL 32) Visual Inspection by Proj. Engr. Sample only if questionable.
			Verif.	Proj. Engr. S 601	1/lot or shipment	1 qt each component friction top	-----	1 gallon	11 days	(QPL 32)
JOINT SEALANT (Extruded)	Silicone Sealant (Single Component)	1005.02(c) Mat. Lab	Prelim Source Approval	Dist. Lab S 611	1/batch or shipment	1 gal friction top can	CA 7	-----	30 days	(QPL 42)
		1005.02(c) Mat. Lab	Accept.	Proj. Engr. S 611	1/shipment*	-----	CD 1 & 7	-----	30 days	(QPL 42) *Sample only if questionable.
		1005.02(c) Mat. Lab	Accept.*	Proj. Engr. S 611	1/batch or shipment	1 gal friction top can	CA 7	2000 yd^2	30 days	(QPL 42) *When material is not accompanied by a CD.
JOINT SEALANT (Hot Poured)	Rubberized Asphaltic Type	1005.02(a) Mat. Lab	Prelim. Source Approval	Dist. Lab S 611	1/batch or shipment	one container	CA 7	-----	11 days	(QPL 67)
		1005.02(a) Mat. Lab	Accept.	Proj. Engr. S 611	1/shipment*	-----	CD 1 & 7	-----	11 days	(QPL 67) *Sample only if questionable.
		1005.02(a) Mat. Lab	Accept.*	Proj. Engr. S 611	1/batch or shipment	one container	CA 7	2000 yd2	11 days	(QPL 67) *When material is not accompanied by a CD.
JOINT SEALANT (Backing Material)	Rods	1005.02(b) 1005.02(c) Mat. Lab	Accept.	-----	-----	-----	-----	-----	-----	For use with polyurethane polymer (QPL 5) and silicone polymer (QPL 42) joint seals. Visual inspection by Proj. Engr.
	Rods (Heat Resistant)	1005.02(a) Proj. Engr.	Accept.	-----	-----	-----	-----	-----	-----	(QPL 67) For use with hot poured joint sealants. Visual inspection y Proj. Engr.
JOINT SEALANTS (Primer)		1005.02(c) Proj. Engr.	Accept.	-----	-----	-----	-----	-----	-----	(QPL 42) For use with silicone polymers joint sealants. Visual inspection by Proj. Engr.

SECTION 602 PORTLAND CEMENT CONCRETE PAVEMENT REHABILITATION (Cont.'d)

MATERIAL		REF. TESTED BY	PURP.	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	REMARKS
LOW-SHRINK PATCHING MATERIAL	Rapid Set	602.15 Mat. Lab	Accept.	Proj. Engr. S 601	1/source	1 bag	CC 1	-----	-----	(QPL 24) For Dowel Bar retrofit 602.15(b).
	Compressive Strength	602.15 Dist. Lab	Accept.	Proj. Engr.	1/1st day production	6 cubes	-----	-----	-----	Tested at 3 and 25 hours.
	Compressive Strength	602.15 Dist. Lab	Design	Proj Engr.	1/source	6 cubes	-----	-----	-----	For preapproval of design. Tested at 3 and 24 hours.
	Compressive Strength	602.15 Dist. Lab	Verif.	Proj. Engr.	1/4 days production	6 cubes	-----	-----	-----	Tested at 3 and 24 hours.
POWDERED AMMONIUM LIGNIN SULPHONATE		602.14 Proj. Engr.	Accept.	Proj. Engr.	1/lot or batch	-----	CC 1	-----	-----	For undersealing and slabjacking.
REINFORCEMENT	Adhesive Anchor Systems	602.08 Mat. Lab	Accept.	Proj. Engr. S 501	1/type	-----	-----	-----	12 days	(QPL 32 or 52)
	Dowel Bars	1009.04 Mat. Lab	Accept.	Proj. Engr. S 501	1/shipment	2 bars*	-----	-----	9 days	*For mechanical placement, only one dowel bar required. Basket assemblies checked for dimensional conformance by Proj. Engr.
	Tie Bars	1009.03 Mat. Lab	Accept.	Proj. Engr. S 501	1/size/grade/ 150,000 lb/ source*	2 bars	CA 1	-----	9 days	*If listed on QPL 71, material with a CA (Distr. 1) need not be sampled. Sample for verification if questionable.
	Steel Fibers	602.09 Mat. Lab*	Accept.	-----	1/shipment	1 qt can	CC* 1	-----	10 days	*Visual inspected by Proj. Engr. Sample if questionable.
SLURRY	Time of Efflux	602.14 Proj. Engr.	Accept.	Proj. Engr. TR 633	1/half day	3 gal suitable container	-----	-----	-----	For undersealing and slabjacking.