

SECTION 901 PORTLAND CEMENT CONCRETE

MATERIAL	PURP.	SAMPLED BY		TESTED BY	MIN. FREQ.	MIN. QUANT.		CERT.	SMALL QUANTITY	TYPICAL HANDLING TIME	REMARKS
		METHOD				CONTAINER					
THIS SECTION IS TO BE USED AS A GUIDE FOR OTHER ITEM NUMBERS WHEN REFERENCE IS MADE TO SECTION 901 OF THIS MANUAL. THERE ARE NO PAY ITEMS UNDER SECTION 901.											
ADMIXTURES		Accept.	PE S 601	Mat. Lab	1/type/ project	1 pt friction top can	CC	----	----	(AML) Visual inspection. Sample only if questionable.	
AGGREGATES (Pavement)	Fine & Coarse	Quality Control	Contractor S 101	Contractor	1/day/plant for moisture 2/day/plant for gradation	1 full sample sack	----	----	----	(AML) Gradation results are plotted on control charts which are required for documentation. See "Application of Quality Assurance Specifications for Portland Cement Concrete Pavement and structures" for details.	
		Accept.	PE S 101	Dist. Lab	1/pavement lot* 1 / 5 days production or 400 CY of aggregate **	1 full sample sack	----	50 CY	3 days	(AML) Check gradation and foreign matter. * For paving concrete produced from non-dedicated stockpiles. ** For pavement patching when each patch is designated as a pavement lot	
		Verif.	PE S 101	Dist. Lab	1/1,000 CY/ dedicated stockpile	1 full sample sack	----	----	3 days	(AML) Sample as stockpile is being built.	
	Blended Aggregate Type B & D	Quality Control	Contractor S 101	Contractor	1/stockpile/ day	1 full sample sack	----	50 CY	3 days	(AML) Gradations for each component used to calculate blended gradation based on mix proportions. Report combined gradation of adjacent sieves as required by specifications.	
		Verif.	PE S 101	Dist. Lab	1 / aggregate size / every 5 days of	1 full sample sack	----	50 CY	3 days	(AML) Verification testing performed by Dist Lab in accordance with 901.6.4	
AGGREGATES (Structural)	Fine & Coarse	Quality Control	Contractor S 101	Contractor	1/lot	1 full sample sack	----	----	----	(AML) Gradation and moisture content to be run. Lot to be identifiable pour up to 200 CY max of concrete. Gradation results shall be plotted on control charts which are required for documentation. See "Application of Quality Assurance Specifications for Portland Cement Concrete Pavement and Structures" for details.	
		Accept. (non- dedicated stockpiles)	PE S 101	Dist. Lab	1/every 5 day of production or 400 CY of aggregate	1 full sample sack	----	50 CY	3 days	(AML) Check gradation and foreign matter.	
		Accept. (dedicated stockpiles)	PE S 101	Dist. Lab	1/1,000 CY/ dedicated stockpile	1 full sample sack	----	50 CY	3 days	(AML) Sample as stockpile is being built.	
	Blended Aggregate Type B & D	Quality Control	Contractor S 101	Contractor	1/stockpile/ day	1 full sample sack	----	50 CY	3 days	(AML) Gradations for each component used to calculate blended gradation based on mix proportions. Report combined gradation of adjacent sieves as required by specifications.	
		Verif.	PE S 101	Dist. Lab	1 / aggregate size / every 5 days of production	1 full sample sack	----	50 CY	3 days	(AML) Verification testing performed by Dist Lab in accordance with 901.6.4	
CEMENT (Hydraulic)	Cement & Blended Cement	Accept.	PE	Mat. Lab	1/shipment	1 gal friction top can	CC	50 CY	19 days	(AML) Visual inspection by PE. Sample only if questionable.	
		Verif.	PE or Const. Fab. S 102	Mat. Lab	1 / 400 tons / source	1 gal friction top can	CC	50 CY	19 days	(AML)	

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		METHOD				CONTAINER						
CEMENT REPLACEMENT	FLY ASH & METAKAOLIN	Accept.	PE	Mat. Lab	1/shipment	-----		CC	50 CY	-----	(AML) Visual inspection by PE. Sample only if questionable.	
		Verif.	Proj. Engr. or Const. Fab. S 102	Mat. Lab	1 / 200 tons / source	1 gal friction top can		CC	50 CY	19 days	(AML) *Copy of CC shall be submitted with sample.	
	GROUND GRANULATED BLAST-FURNACE SLAG	Accept.	PE	PE	PE	1/shipment	-----		CC	50 CY	32 days	(AML) Visual inspection by PE. Sample only if questionable.
		Verif.	PE S 102	Mat. Lab	Mat. Lab	1 / 200 tons / source	1 gal friction top can		CC	50 CY	32 days	(AML) *Copy of CC shall be submitted with sample.
	MICROSILICA	Accept.	PE	PE	Mat. Lab	1/shipment	-----		CC	50 CY	-----	(AML) Visual inspection by PE. Sample only if questionable.
		Verif.	Proj. Engr. or Const. Fab. S 102	Mat. Lab	Mat. Lab	1 / 200 tons / source	1 gal friction top can		CC	50 CY	19 days	(AML) *Copy of CC shall be submitted with sample.
CONCRETE (Minor Structure)	Compressive Strength	Accept.	PE S 301	Dist. Lab	3cyl/50CY	6 in. x 12 in. or 4 in. x 8 in. cylinder mold		-----		30 days	-----	
	Mix Design	Design/ Accept.	*	Contractor/ Dist. Lab	1 / type or class / plant	-----		-----	-----	3 days	(AML - Admixtures, AML- Aggregates, AML - Cement, AML Fly Ash and AML Microsilica (Silica Fumes)) *The contractor shall submit to the Dist. Lab Engr. the standard Mix Design form indicating the intended source of all materials and the mix design. Acceptance by the Dist. Lab Engineer is required prior to starting work.	
	Slump and Air	Accept.	PE S 301	PE	1/50 CY	0.5 CF		-----		1 day	When required in Table 901-3 or individual section. Not required for High Early Concrete.	
CONCRETE (Pavement)	Entrained Air	Quality Control	Contractor S 301	Contractor	2/half day	0.25 CF		-----	-----	-----	Air test results shall be plotted on control charts which are required for documentation.	
		Accept.	PE S 301	PE	1/half day	0.25 CF		-----	-----	1 day	Not required for High Early Strength Concrete.	
	Mix Design	Design/ Accept.	*	Contractor/Dist. Lab	1 / type or class / plant	-----		-----	-----	3 days	*Contractor shall submit to the Dist. Lab Engr. the standard Mix Design form indicating material sources, proportions, and composite gradation calculations. Acceptance by the Dist. Lab Engr. is required prior to starting work.	
	Mix Temperature	Quality Control	Contractor S 301	Contractor	*	-----		-----	-----	-----	*When temperature control is needed, testing must be sufficient to prevent exceeding appropriate limits.	
	Slump	Quality Control	Contractor S 301	Contractor	Contractor	2/half day	0.5 CF		-----	-----	-----	Slump test results shall be plotted on control charts which are required for documentation.
		Accept.	PE S 301	PE	PE	1/half day	0.5 CF		-----	-----	1 day	Not required for High Early Strength Concrete
	Unit Weight	Quality Control	Contractor S 301	Contractor	*	1.5CF 0.5 or 1 CF yield bucket		-----	-----	-----	*Unit weight will be run as necessary.	

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Fibers		Accept.	PE	Mat. Lab	1 / project *	1 qt. friction top can	CC	-----	-----	*Visual inspection by PE. Sample only if questionable.	
GROUT		Accept.	PE S 601	Mat. Lab	1/lot	1 full sack *	-----	-----	16 days	(AML) *Sample shall be submitted in an unbroken moisture proof sack.	
CONCRETE (Structural)	Entrained Air	Quality Control	Contractor S 301	Contractor	2/lot	0.25 CF	-----	-----	-----	Air test results shall be plotted on control charts which are required for documentation.	
		Accept.	PE S 301	PE	1/lot	0.25 CF	-----	-----	1 day	When pump placement is used, see "Application of Quality Assurance Specifications for Portland Cement Concrete Pavement and Structures" for details. Not required for High Early Strength Concrete.	
	Compressive Strength & Surface Resistivity	Accept.	PE S 301	Dist. Lab	3 cyl/batch 2 batches/lot *	cylinder molds	-----	-----	30 days	A lot is an identifiable pour not to exceed 200 CY. For specific details see Specification Subsection 805.10. * If used for curbs only, frequency is 3 cyl / 50 CY.	
	Mix Design	Design/ Accept.	*	Contractor/ Dist. Lab	1/mix class/material source/plant	-----	-----	-----	3 days	*Contractor shall submit to the Dist. Lab Engr. the standard Mix Design form indicating the intended source of all materials and the mix design. Acceptance by the Dist. Lab Engineer is required prior to starting work.	
	Mix Temperature	Quality Control	Contractor S 301	Contractor	*	-----	-----	-----	-----	*When temperature control is required, testing must be sufficient to prevent exceeding appropriate limits.	
	Slump	Quality Control	Contractor S 301	Contractor	2/lot	0.5 CF	-----	-----	-----	-----	Slump test results shall be plotted on control charts which are required for documentation.
		Accept.	PE S 301	PE	1/lot	0.5 CF	-----	-----	1 day	When pump placement is used, see "Application of Quality Assurance Specifications for Portland Cement Concrete Pavement and Structures" for details. Not required for High Early Strength Concrete.	
	Unit Weight	Quality Control	Contractor S 301	Contractor	*	1.5 CF 0.5 or 1 CF yield bucket	-----	-----	-----	-----	*Unit weight will be run as necessary.
WATER		Accept.	PE S 301	Mat. Lab	1/source	1 qt plastic bottle	-----	50 CY	11 days	Visual, sample if questionable, if not potable	

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