

SECTION 805 STRUCTURAL CONCRETE

MATERIAL	REFERENCE	PURP.	SAMPLED BY	MIN. FREQ.	MIN. QUANT.	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	REMARKS	
	TESTED BY		METHOD		CONTAINER					
FOR DETAILS ON CONCRETE TESTS, MIX DESIGNS AND MATERIALS (ADMIXTURES, AGGREGATES, CEMENT AND WATER) SEE SECTION 901 OF THIS MANUAL.										
BACKFILL		802.09 805.01 Proj. Engr.	Accept.	See Section 802 of this manual.						
BEARING PADS	Elastomeric	805.02 1018.14 Mat. Lab	Accept.	Const. Fab. Insp.* S 601	1/100 pads/ type**/lot	1 pad	CA 5	-----	14 days	(QPL 3) *Proj. Engr. samples at destination only if not sampled at site of source or supplier. **Plain or Laminated
	Masonry	805.02 1018.06 Mat. Lab	Accept.	Proj. Engr. S 601	1/type	1 pad	CA 5	-----	10 days	-----
BOX CULVERT UNITS (Precast)	Gasket Material	805.02 1006.06(b) Mat. Lab	Accept.	Inspected and approved by Const. Fab. Insp. Unit prior to use. See Section 701 of this manual.			CD 1 & 6	-----	-----	(QPL 4) Gasket test report lab no. listed on precast unit CD.
	Precast Concrete Unit	805.02 805.03(b) 1016.02 Const. Fab. Insp.	Accept.	Inspected, approved and stamped by Const. Fab. Insp. Unit prior to use. See Precast Concrete (Prestressed & Non-Prestressed Bridge Members) in this Section.			CD 1 & 6	-----	-----	CD includes lab no. for gasket material.
BRIDGE MEMBERS	Concrete Precast	805.14 Const. Fab. Insp.	Accept.	Inspected, approved and stamped by Const. Fab. Insp. Unit prior to use. See Precast Concrete (Prestressed & Non-Prestressed Bridge Members) in this Section.			CD 1	-----	-----	Visual inspection by Proj. Engr. For specific details see EDSM III.2.5.7.
CONCRETE ANCHOR SYSTEMS	Anchor Bolts	805.15 1018.23 Plans Mat. Lab	Accept.	Proj. Engr. S 601	1/size/ shipment	2 bolts*	-----	-----	11 days	*Two bolts of each size used are to be submitted.

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		TESTED BY		METHOD		CONTAINER	DISTR.			
CONCRETE ANCHOR SYSTEMS (Cont'd)	Cartridge Systems	805.15 1018.23 Mat. Lab	Accept.	Proj. Engr. S 601	1/size/type/ lot or shipment	2 of each item*	-----	-----	14 days	(QPL 40) Includes bolts & nuts intended to be used with the system. *Two pieces of each size and type of item used are to be submitted.
	Grout Systems (Resin or Cementitious)	805.15 1018.23 Mat. Lab	Accept.	Proj. Engr. S 601	1/lot or shipment	1 qt Friction top can	-----	-----	14 days	(QPL 40) Includes bolts & nuts intended to be used with the system.
	Mechanical Systems	805.15 1018.23 Mat. Lab	Accept.	Proj. Engr. S 601	1/size/type/ lot or shipment	3 of each item*	-----	-----	10 days	(QPL 40) *Three of each size and type of item used are to be submitted.
CONCRETE (In-Place)	Compressive Strength	805.03(a)-(c) 805.11 Dist. Lab	*	Proj. Engr. S 301	3 cyl/ structural member	2 ft <sup>3</sup> 6 in. x 12 in. cylinder mold	-----	-----	10 days	*To determine strength for form removal or exposure to construction traffic.
	Deck Surface Finish	805.13(e)(2) Contractor	Quality Control	Contractor*	Each deck	-----	-----	-----	-----	Plastic Concrete *Surface must be checked on bridge decks using an approved 10-ft metal static straightedge supplied by the contractor.
		805.13(e)(2) Proj. Engr.	Verif.	Proj. Engr.	Each deck	-----	-----	-----	-----	Proj. Engr. to observe contractor check bridge deck surface.
	Tine Texturing	805.13(e)(3) Contractor	Quality Control	Contractor TR 229	*	-----	-----	-----	-----	Plastic Concrete *Sufficient number of random checks to assure the required texture depth is achieved.
		805.13(e)(3) Proj. Engr.	Accept.	Proj. Engr. TR 229	2/lot	-----	-----	-----	-----	Performed on hardened concrete.

## SECTION 805 STRUCTURAL CONCRETE (Cont'd)

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		TESTED BY		METHOD		CONTAINER	DISTR.			
CURING MATERIALS	Burlap Cloth	805.02 1011.01(b) Mat. Lab	Accept.	Proj. Engr. S 601	1/shipment*	36 in. x 36 in.	-----	-----	10 days	*Visual inspection by the Proj. Engr. Sample only if questionable.
	Burlap & White Polyethylene Sheeting	805.02 1011.01(e) Mat. Lab	Accept.	Proj. Engr. S 601	1/shipment*	36 in. x 36 in.	-----	-----	10 days	*Visual inspection by the Proj. Engr. Sample only if questionable.
	Liquid Membrane-Forming Compounds	805.02 1011.01(a) Mat. Lab	Prelim. Source Approval	Mfr. S 601	1/source	1 qt Friction top can	-----	-----	21 days	(QPL 65)
		805.02 1011.01(a) Mat. Lab	Accept.	Proj. Engr. S 601	*	1 qt Friction top can	CC 1	-----	10 days	(QPL 65) *Visual inspection by the Proj. Engr. Sample only if questionable.
	Waterproof Paper	805.02 1011.01(c) Mat. Lab	Accept.	Proj. Engr. S 601	1/shipment*	36 in. x 36 in.	-----	-----	10 days	*Visual inspection by the Proj. Engr. Sample only if questionable.
	White Polyethylene Sheeting	805.02 1011.01(d) Mat. Lab	Accept.	Proj. Engr. S 601	1/shipment*	36 in. x 36 in.	-----	-----	10 days	*Visual inspection by the Proj. Engr. Sample only if questionable.
EPOXY RESIN SYSTEMS	Epoxy	805.02 1017.02 Mat. Lab	Accept.	Proj. Engr. S 601	1/lot or shipment	1 qt each component Friction top can	-----	1 gal	11 days	(QPL 32)
FORM RELEASE AGENTS		805.02 1018.25	Accept.	-----	-----	-----	-----	-----	-----	(QPL 29) Product verification by Proj. Engr.
GEOTEXTILE FABRIC		805.02 1019 Mat. Lab	Prelim. Source Approval	Dist. Lab S 614	1/type/lot/source/shipment	3 lin ft/roll width of fabric*	-----	-----	10 days	*Sample a minimum of 18 ft <sup>2</sup> .
		805.02 1019 Mat. Lab	Accept.	Proj. Engr. S 601	1/type/source/shipment	3 lin ft/roll width of fabric*	CD** 1 & 7	150 yd <sup>2</sup>	10 days	(QPL 61) *Sample a minimum of 18 ft <sup>2</sup> . **Sample when not accompanied by CD or questionable.

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MATERIAL	REFERENCE	PURP.	SAMPLED BY	MIN. FREQ.	MIN. QUANT.	CERT.	SMALL QUANTITY	TYPICAL HANDLING TIME	REMARKS	
	TESTED BY		METHOD		CONTAINER	DISTR.				
JOINT MATERIALS	Adhesive-Lubricant	805.12(c)(2) 1005.03(b) Mat. Lab	Accept.	Proj. Engr. S 601	1/lot	1 qt Friction top can	-----	-----	10 days	(QPL 8) For use with preformed elastomeric compression joint seal. Mix well before sampling. Seal can tightly.
	Joint Filler	FOR DETAILS ON JOINT FILLERS (PREFORMED BITUMINOUS TYPE, PREFORMED POLYURETHANE EXPANSION AND PREFORMED RESILIENT BITUMINOUS), SEE SECTION 601 OF THIS MANUAL. (SMALL QUANTITY 400 SQ. FT OF JOINT FILLER).								
	Joint Sealant (Liquid Poured)	FOR DETAILS ON JOINT SEALANT (POLYURETHANE AND SILICONE) AND ASSOCIATED MATERIALS (PRIMER, BACKING MATERIALS), SEE SECTION 601 OF THIS MANUAL. (NO SMALL QUANTITY MUST BE SAMPLED UNLESS ACCOMPANIED BY CD).								
	Reinforced Elastomeric Joint Seal	805.02 1005.06 Mat. Lab	Accept.	-----	-----	-----	CC & CA 3	-----	-----	Elastomer - CA; Steel - CC. Visual inspection by Proj. Engr.
	Sealant for Reinforced Elastomeric Joints	805.02 1005.06 Mat. Lab	Accept.	Proj. Engr. S 601	1/batch or shipment	*	CA**	-----	14 days	*One unit of each component selected at random and submitted as sample. **Proj. Engr. forwards CA to Mat. Lab; Mat. Lab reviews, approves and files for documentation.
	Steel Joint	805.02 805.12(f) Const. Fab. Insp.	Accept.	Inspected, approved and stamped by Const. Fab. Insp. Unit prior to use. See Section 807 of this manual.			CA 6	-----	-----	Proj. Engr. to receive inspection report from Const. Fab. Insp.
	Strip Seal Joint	805.02 805.12(d) 1005.05 Const. Fab. Insp.	Accept.	Inspected, approved and stamped by Const. Fab. Insp. Unit prior to use. See Section 807 of this manual.			CA 6	-----	-----	Proj. Engr. to receive inspection report from Const. Fab. Insp.
NON-SHRINK GROUT	805.15 1018.23 Plans Mat. Lab	Accept.	Proj. Engr. S 601	1/shipment/ lot	1 full sack, 15 lb min.*	-----	-----	16 days	(QPL 47) *Sample shall be submitted in an unbroken moisture proof sack.	
PRECAST CONCRETE (Non-Prestressed Other Than Bridge Members)	805.03 Const. Fab. Insp.	Accept.	Inspected, approved and stamped by Const. Fab. Insp. prior to use.			CD 1 & 6	-----	-----	CD must include Lab No. for gasket material if applicable.	

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MATERIAL		REFERENCE	PURP.	SAMPLED BY	MIN. FREQ.	MIN. QUANT.	CERT.	SMALL QUANTITY	TYPICAL HANDLING TIME	REMARKS	
		TESTED BY		METHOD		CONTAINER	DISTR.				
PRECAST CONCRETE (Non-Prestressed Other Than Bridge Members) (Cont'd)	Admixtures	805.02 1011.02 Mat. Lab	Accept.	Const. Fab. Insp. S 601	1/type/mfr. batch	1 pt Friction top can	-----	-----	10 days	(QPL 58)	
	Aggregate (Coarse & Fine)	805.02 1003.02 Dist. Lab	Accept.	Const. Fab. Insp. S 101	*	1 full sample sack	-----	-----	4 days	(QPL 2) *Visual inspection by Const. Fab. Insp. Sample only if questionable.	
	Cement	SEE SECTION 901 OF THIS MANUAL.						CD 6 & 7	-----	11 days	-----
	Compressive Strength	805.03 Mfr. or Dist. Lab	Prelim. Source Approval	Const. Fab. Insp. S 301	3 cyl/pour*	1 ft <sup>3</sup> 6 in. x 12 in. cylinder molds		-----	-----	30 days	*A pour is an identifiable pour not to exceed 50 yd <sup>3</sup> .
	Gasket Material	805.02	SEE SECTION 701 OF THIS MANUAL.					CD 1 & 6	-----	-----	-----
	Mix Design	805.02 901.06(a) Const. Fab. Insp.	Design	-----	1/class/ material source/plant		-----	-----	-----	-----	Contractor shall submit to Const. Fab. Insp. the standard mix design form indicating the intended source of all materials and the mix design. Approval by Structural/Marine Fabrication Engineer required prior to work.
	Reinforcing Steel Bars	805.02 1009 Mat. Lab	Accept.	Const. Fab. Insp. S 501	1/size/grade/ 150,000 lb/ source*	48 in. length	-----	-----	10 days	*If listed on QPL 71, material with a CA (Distr. 1) need not be sampled. Sample for verification if questionable.	
	Welded Wire Fabric	805.02 1009.01 Mat. Lab	Accept.	Const. Fab. Insp. S 501	1/shipment	48 in. x 48 in.		-----	-----	11 days	-----
	PRECAST CONCRETE (Prestressed & Non-Prestressed Bridge Members)		805.03 Const. Fab. Insp.	Accept.	Inspected, approved and stamped by Const. Fab. Insp. prior to use.			CD 1 & 6	-----	-----	CD must include lab no. for elastomeric bearing pads if applicable.
	Admixtures	1011.02 Mat. Lab	Accept.	Const. Fab. Insp. S 601	1/type/mfr. batch	1 pt Friction top can	-----	-----	10 days	(QPL 58)	

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MATERIAL		REF.	PURP.	SAMPLED BY	MIN. FREQ.	MIN. QUANT.	CERT.	SMALL QUANTITY	TYPICAL HANDLING TIME	REMARKS	
		TESTED BY		METHOD		CONTAINER	DISTR.				
PRECAST CONCRETE (Prestressed & Non-Prestressed Bridge Members) (Cont'd)	Aggregate (Coarse & Fine)	1003.02 Mfr.	Quality Control	Mfr. S 101	1/lot*	1 full sample sack	-----	-----	-----	(QPL 2) Gradation and Moisture *Lot to be identifiable pour up to 200 yd <sup>3</sup> of concrete.	
		1003.02 Dist. Lab	Accept.	Const. Fab. Insp. S 101	1/week	1 full sample sack	-----	-----	3 days	(QPL 2)	
	Cement	SEE SECTION 901 OF THIS MANUAL.						CD 6 & 7	-----	-----	-----
	Compressive Strength	805.14(e) Const. Fab. Insp.	Accept.	Const. Fab. Insp. S 301	7 cyl/pour*	-----	-----	-----	30 days	*Cylinder cured under same conditions as members. Two cylinders are tested for 28 day strength. For precast box culverts, cylinders shall be in accordance with ASTM C 789.	
	Elastomeric Bearing Pads	805.02 1018.14 Mat. Lab	Accept.	Const. Fab. Insp. S 601	1/100 pads/type/lot	1 pad	CA 5	-----	14 days	(QPL 3)	
	Epoxy Resin Systems	805.02 1017.02 Mat. Lab	Accept.	Const. Fab. Insp. S 601	1/lot or shipment	1 qt/ component Friction top can	-----	-----	10 days	(QPL 32)	
	Mix Design	805.02 901.06(a) Const. Fab. Insp.	Design	-----	1/class/ material source/ plant	-----	-----	-----	-----	Contractor shall submit to Const. Fab. Insp. the standard mix design form indicating the intended source of all materials and the mix design. Approval by Const. Fab. Insp. required prior to work.	
Steel Bars & Spiral Reinforcement	805.02 1009 Mat. Lab	Accept.	Const. Fab. Insp. S 501	1/size/grade/ 150,000 lb/ source	48 in. length	-----	-----	10 days	(QPL 71)		

SECTION 805 STRUCTURAL CONCRETE (Cont'd)

MATERIAL		REFERENCE	PURP.	SAMPLED BY	MIN. FREQ.	MIN. QUANTITY	CERT.	SMALL QUANTITY	TYPICAL HANDLING TIME	REMARKS
		TESTED BY		METHOD		CONTAINER	DISTR.			
PRECAST CONCRETE (Prestressed & Non-Prestressed Bridge Members) (Cont'd)	Strands for Prestressing	805.02 1009.05 Mat. Lab	Accept.	Const. Fab. Insp. S 501	1/size/grade/ source/proj. *	3 strands 5 ft length	-----	-----	11 days	*Not to exceed 200 tons. Manufacturer's Load/Elongation curve to accompany sample.
	Welded Wire Fabric	805.02 1009.01 Mat. Lab	Accept.	Const. Fab. Insp. S 501	1/shipment	48 in. x 48 in.	-----	-----	11 days	-----
PRECAST PRESTRESSED FORMS	Bearing Strips and Adhesive	805.14(k)(1)h	Accept.	-----	-----	-----	-----	-----	-----	Visual inspection by Proj. Engr.
	Concrete Deck Forms (Stay In Place Panels)	805.14(k) Const. Fab. Insp.	Accept.	Inspected, approved and stamped by Const. Fab. Insp. Unit prior to use. See Precast Concrete (Prestressed & Non-Prestressed Bridge Members) in this Section.			CD 1	-----	-----	Visual inspection by Proj. Engr. For specific details see EDMS III.2.5.7.
REINFORCEMENT	Bars	805.02 1009	See Section 806 of this manual.							
SPECIAL SURFACE FINISH	Concrete	805.02 1011.03 Mat. Lab	Accept.	Proj. Engr. S 601	1/lot or shipment	1 qt/ component Friction top can	-----	5 gal	10 days	(QPL 14)
WATER STOPS	Copper	805.02 1005.08(a) Mat. Lab	Accept.	Proj. Engr. S 601	1/lot or shipment	24 in. length	-----	-----	10 days	-----
	Polyvinyl Chloride	805.02 1005.08(b) Mat. Lab	Accept.	Proj. Engr. S 601	1/shipment	36 in. length	CC 3	-----	-----	Visual inspection by Proj. Engr. Sample if questionable.
	Rubber	805.02 1005.08(c) Mat. Lab	Accept.	Proj. Engr. S 601	1/lot or shipment	36 in. length	-----	-----	14 days	-----