

**SECTION 802 STRUCTURAL EXCAVATION, BACKFILL, AND EARTH RETAINING SYSTEMS**

MATERIAL	PURP.	SAMPLED BY	TESTED BY	MIN. FREQ.	MIN. QUANT.	CERT.	SMALL QUANTITY	TYPICAL HANDLING TIME	REMARKS	
		METHOD			CONTAINER					
BACKFILL	Reinforced Box Culverts	Accept.	SEE SECTION 702 OF THIS MANUAL.							
		Accept.	----	PE	----	----	----	----	----	Material shall be of acceptable quality and uniformly compacted by approved methods to the satisfaction of the PE
CONCRETE	Compressive Strength	*	PE S 301	Dist. Lab	3 cyl / location	6 in. x 12 in. or 4 in. x 8 in. cylinder	----	----	10 days	*Used to determine earliest date for placement of backfill next to structures.
SHEET PILES	Concrete	SEE SECTION 805 OF THIS MANUAL								
	Steel	SEE SECTION 807 OF THIS MANUAL								
	Timber	SEE SECTION 812 OF THIS MANUAL								
MECHANICALLY STABILIZED EARTH WALLS (MSEWs)	Facing Elements	Quality Control	Contractor	Contractor	*	----	----	----	----	* Provide compressive strength results to PE to indicate conformance to specifications.
		Accept.	PE S 601 or S 301	Const. Fab. Insp.	1 / 10,000 blocks or 1 / 50 cy	1 block or 6 cylinders	CD	----	----	
	Admixtures	Accept.	Const. Fab. Insp. S 601	Mat. Lab	1/type/mfr. batch	1 pt friction top can	CC	----	10 days	(AML) Visual inspection by Construction Fabrication Inspection. Sample only if questionable. If sample is taken, leave 2" air space in can.
	Surface Finish	SEE SECTION 805 OF THIS MANUAL								
	Epoxy Resin Systems	Accept.	PE	Mat. Lab	1/lot	1 qt. each component friction top can	CC	1 gal	11 days	(AML) Specify type and grade
	Concrete (For Coping or Half Connectors)	SEE SECTION 901 OF THIS MANUAL								
	Reinforcing Strips	Accept.	Const. Fab. Insp. S 501	Mat. Lab	1/size/grade/source	----	CA	----	10 days	
	Reinforcing Welded Wire Mesh	Accept.	Const. Fab. Insp. S 501	Mat. Lab	1/shipment	48" x 48"	CA	----	11 days	
Extensible Soil Reinforcement (Woven Geosynthetic or Geogrid)	Accept.	PE S 601	*	----	----	CA	----	----	* Department may submit samples to an approved independent laboratory for verification.	

I-800 - 1 10/21

**SECTION 802 STRUCTURAL EXCAVATION, BACKFILL, AND EARTH RETAINING SYSTEMS**

MATERIAL	PURP.	SAMPLED BY	TESTED BY	MIN. FREQ.	MIN. QUANT.	CERT.	SMALL QUANTITY	TYPICAL HANDLING TIME	REMARKS	
		METHOD			CONTAINER					
MECHANICALLY STABILIZED EARTH WALLS (MSEWs) (Cont'd)	Backfill (granular reinforced or stone)	Quality Control	Contractor	Contractor	1 / 1000 cy 1 / 5000 cy*	----	CA	----	----	(AML) * Sampled and tested during initial source approval or with change in source. gradation & pH - 1 / 1000 cy internal friction angle, organic content, resistivity, chloride content, sulfate content - 1 / 5000 cy
	Reinforcement Attachment Devices	Accept.	Const. Fab. Insp. S 501	Mat. Lab	1/type/shipment	----	CA	----	11 days	
	Geotextile Fabric	Accept.	PE S 601	Mat. Lab	1/type/ source/shipment	3 lin ft/roll width of fabric*	CC	150 yd <sup>2</sup>	10 days	(AML) *Sample a minimum of 18 ft <sup>2</sup> . Visual inspection, sample only if questionable.
	Geomembrane	Accept.	PE S 601	Mat. Lab	1/type/ source/shipment	3 lin ft/roll width of membrane*	CC	----	10 days	*Sample a minimum of 18 ft <sup>2</sup> . Visual inspection, sample only if questionable.

**SECTION 803 DRILLED SHAFTS**

MATERIAL	PURP.	SAMPLED BY	TESTED BY	MIN. FREQ.	MIN. QUANT.	CERT.	SMALL QUANTITY	TYPICAL HANDLING TIME	REMARKS	
		METHOD			CONTAINER					
PAINT AND PROTECTIVE COATING	Coal Tar Epoxy Polyamide Paint or Galvanizing	SEE SECTION 811 OF THIS MANUAL.								
CONCRETE (Structural)	Mix Designs, Materials & Test	SEE SECTION 901 OF THIS MANUAL.								
GRANULAR MATERIAL		Accept.	----	----	----	----	----	----	Visual inspection by PE	
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.
HARDWARE		Accept.	PE S 501	Mat. Lab	1/size/type/heat	2 of each item*	----	----	10 days	*Two (2) pieces of each size and type of hardware used are to be submitted.
REINFORCEMENT		Accept.	PE S 501	Mat. Lab	1/size/grade/ 150,000 lbs. /source*	48 in. length	CA	----	10 days	(AML) *material with a CA need not be sampled for acceptance. Sample only if questionable.
SLURRY		Quality Control	Contractor API 13B	Contractor	*	----	----	----	----	*Contractor tests to be observed by the PE & documented.
		Accept.	PE*	PE	----	----	----	----	----	*Contractor tests to be observed by the PE & documented.
STEEL CASING		Accept.	SEE SECTION 807 OF THIS MANUAL.							
WELDING	SEE SECTION 809 OF THIS MANUAL.									

I-800 - 2 10/21

I-800 - 3 10/21

SECTION 804 PILES

MATERIAL	PURP.	SAMPLED BY	TESTED BY	MIN. FREQ.	MIN. QUANT.	CERT.	SMALL QUANTITY	TYPICAL HANDLING TIME	REMARKS	
		METHOD			CONTAINER					
BACKFILL	Granular Type Material	Accept.	PE S 101	Dist. Lab	1/1,000 yd <sup>3</sup>	1 full sample sack	----	----	----	Visual inspection by PE. Sample only if questionable.
CONCRETE PILES (Cast-in-Place)	Concrete (Mix Designs, Materials & Tests)	SEE SECTION 901 OF THIS MANUAL.								
	Reinforcing Steel	Accept.	PE S 501	Mat. Lab	1/size/grade/150,000 lb/ source	48 in. length	CA	----	10 days	(AML) *If listed on AML, material with a CA (Distr. 1) need not be sampled. Sample only if questionable.
	Steel Pipe Pile	Accept.	----	PE	----	----	CA	----	----	Visual inspection by PE
	Steel Shell	Accept.	----	PE	----	----	----	----	----	Visual inspection by PE
CONCRETE PILES (Precast)	Pile	Accept.	<b>Inspected and stamped by Const. Fab. Insp. Unit prior to use. See Section 805 of this Manual.</b>	PE	----	----	CC	----	----	Visual inspection by PE. See Section 805 of this manual.
EPOXY RESIN SYSTEMS		Accept.	PE	Mat. Lab	1/lot	1 qt. each component friction top can	CC	1 gal	11 days	(AML) Specify type and grade
HYDRAULIC JACKS		Accept.	----	Mat. Lab	----	----	CA	----	12 days	* Calibrated by an approved, independent calibration service and a certified lab report furnished to the Mat. Lab for approval and distribution to the PE.  The system must be calibrated at the beginning of each project and as required.
HARDWARE		Accept.	PE S 501	Mat. Lab	1/size/type/heat	2 of each item*	----	----	10 days	*Two (2) pieces of each size and type of hardware used are to be submitted.
PAINT AND PROTECTIVE COATINGS	Coal Tar Epoxy	SEE SECTION 811 OF THIS MANUAL.								
PERMANENT SHEET PILES	Aluminum or Steel	Accept.	----	Const. Fab. Insp.	----	----	CD OR CC*	----	----	*CC if inspected by DOTD
	Aluminum or Steel	Accept.	<b>Inspected and stamped by Const. Fab. Insp. prior to use. See Section 805 of this manual.</b>	Const. Fab. Insp.	----	----	CD	----	----	Visual inspection by PE

1-800-4-1021

SECTION 804 PILES (Cont'd)

MATERIAL		PURP.	SAMPLED BY	TESTED BY	MIN. FREQ.	MIN. QUANT.	CERT.	SMALL QUANTITY	TYPICAL HANDLING TIME	REMARKS
			METHOD			CONTAINER				
PERMANENT SHEET PILES (Cont'd)	Timber Treated & Untreated	Accept.	Inspected and stamped by Const. Fab. Insp. prior to use. See Section 812 of this manual.	Const. Fab. Insp.	----	----	CD	----	----	Visual inspection by PE
STEEL PILES, STEEL PIPE PILES		Accept.	----	Const. Fab. Insp.	----	----	CA	----	----	Visual inspection by PE
TIMBER PILES	Treated and Untreated	Accept.	Inspected and stamped by Const. Fab. Insp. prior to use. See Section 812 of this manual.	Const. Fab. Insp.	----	----	CD	----	----	Visual inspection by PE
TREATMENT OF TIMBER PILE HEADS	SEE SECTION 812 OF THIS MANUAL.									
WELDING	SEE SECTION 809 OF THIS MANUAL.									

I-800 - 5 10/21

SECTION 805 STRUCTURAL CONCRETE

MATERIAL	PURP.	SAMPLED BY	TESTED BY	MIN. FREQ.	MIN. QUANT.	CERT.	SMALL QUANTITY	TYPICAL HANDLING TIME	REMARKS	
		METHOD			CONTAINER					
FOR DETAILS ON CONCRETE TESTS, MIX DESIGNS AND MATERIALS (ADMIXTURES, AGGREGATES, CEMENT AND WATER) SEE SECTION 901 OF THIS MANUAL.										
BACKFILL		Accept.	SEE SECTION 802 OF THIS MANUAL.							
BEARING PADS	Elastomeric	Accept.	Const. Fab. Insp.* S 601	Mat. Lab	1/100 pads/type** /lot	1 pad	CA	----	14 days	(AML) *PE sample at destination only if not sampled at site of source supplier. **Plain or Laminated.
	Masonry	Accept.	PE S 601	Mat. Lab	1/type	1 pad	CA	----	10 days	----
BOX CULVERT UNITS (Precast)	Gasket Material	Accept.	SEE SECTION 701 OF THIS MANUAL.	Mat. Lab	----	----	CC	----	----	(AML) Gasket test report lab no. listed on precast unit CC.
	Precast Concrete Unit	Accept.	Inspected and stamped by Mfr. prior to use.	PE	----	----	CD	----	----	(AML) Visual Inspection by PE CD to include lot number for Gasket Materials.
		Verif	Const. Fab. Insp. S 601	Const. Fab. Insp. / Mfr.	1/180 day production/ plant	4 cyl/set 6 in. x 12 in. or 4 in. x 8 in. cylinder mold	----	----	----	
BRIDGE MEMBERS	Concrete Precast	Accept.	Inspected and stamped by Const. Fab. Insp. prior to use.	Const. Fab. Insp.	----	----	CD	----		Visual inspection by PE For specific details see EDSM III.2.5.7.
CONCRETE ANCHOR SYSTEMS	Anchor Bolts	Accept.	PE S 601	Mat. Lab	1/size/type/heat	2 bolts*	----	----	11 days	*Two bolts of each size used are to be submitted.
	Cartridge Systems	Accept.	PE S 601	Mat. Lab	1/size/type/lot **	2 of each item*	----	----	14 days	(AML) Includes bolts & nuts intended to be used with the system. *Two pieces of each size and type of item used are to be submitted. **Visual inspection by PE Sample only if questionable.
	Grout Systems (Resin or Cementitious)	Accept.	PE S 601	Mat. Lab	1/lot	1 qt friction top can of each component	----	----	14 days	(AML) Includes bolts & nuts intended to be used with the system. Visual inspection by PE Sample only if questionable.
	Injection System	Accept.	PE S 601	Mat. Lab	1 / type / lot	1 of each component	----	----	14 days	(AML) Includes bolts & nuts intended to be used with the system. Visual inspection by PE Sample only if questionable.
	Mechanical Systems	Accept.	PE S 601	Mat. Lab	1/size/type/lot **	2 of each item*	----	----	10 days	(AML) *Two of each size and type of item used are to be submitted. Includes bolts & nuts intended to be used with the system. **Visual inspection by PE Sample only if questionable.

**SECTION 805 STRUCTURAL CONCRETE (Cont'd)**

MATERIAL	PURP.	SAMPLED BY	TESTED BY	MIN. FREQ.	MIN. QUANT.	CERT.	SMALL QUANTITY	TYPICAL HANDLING TIME	REMARKS	
		METHOD			CONTAINER					
CONCRETE (In-Place)	Compressive Strength	*	PE S 301	Dist. Lab	3 cyl/ structural member	6 in. x 12 in. or 4 in. x 8 in. cylinder mold			10 days	*To determine strength for form removal or exposure to construction traffic.
		Accept.	SEE SECTION 901 OF THIS MANUAL.							
	Deck Surface Finish	Quality Control	Contractor*	Contractor	each deck	----	----	----	----	Plastic Concrete *Surface must be checked on bridge decks using an approved 10 ft metal static straightedge supplied by the contractor.
		Verif.	PE	PE	each deck	----	----	----	----	PE to observe contractor check bridge deck surface.
	Tine Texturing	Quality Control	Contractor	Contractor	*	----	----	----	----	Plastic Concrete *Sufficient number of random checks to assure the required texture depth is achieved.
Accept.		PE	PE	2/lot	----	----	----	----	Performed on hardened concrete.	
CONCRETE PATCHING MATERIAL	SEE SECTION 830 OF THIS MANUAL.									
CURING MATERIALS	Burlap Cloth	Accept.	PE S 601	Mat. Lab	1/shipment*	36 in. x 36 in.	----	----	10 days	*Visual inspection by the PE Sample only if questionable.
	Burlap & White Polyethylene Sheeting	Accept.	PE S 601	Mat. Lab	1/shipment*	36 in. x 36 in.	----	----	10 days	*Visual inspection by PE Sample only if questionable.
	Liquid Membrane-Forming Compounds	Accept.	PE S 601	Mat. Lab	1/shipment*	1 qt friction top can	CC	----	10 days	(AML) *Visual inspection by PE Sample only if questionable.
	Waterproof Paper	Accept.	PE S 601	Mat. Lab	1/shipment*	36 in. x 36 in.	----	----	10 days	*Visual inspection by the PE Sample only if questionable.
	White Polyethylene Sheeting	Accept.	PE S 601	Mat. Lab	1/shipment*	36 in. x 36 in.	----	----	10 days	*Visual inspection by the PE Sample only if questionable.
EPOXY RESIN SYSTEMS	Epoxy	Accept.	PE S 601	Mat. Lab	1/lot	----	CC	1 gal	----	(AML) Specify type and grade
		Verif.	PE S 601	Mat. Lab	1/lot	1 qt each component friction top can	CC	1 gal	11 days	(AML) Specify type and grade Copy of CC shall be submitted with sample.
FORM RELEASE AGENTS		Accept.	PE S 601	Mat. Lab	1/lot	1 qt friction top can	CC	----	10 days	(AML) Visual inspection by the PE Sample only if questionable.
GEOTEXTILE FABRIC		Accept.	PE S 601	Mat. Lab	1/type/ source/ shipment	3 lin ft/roll width of fabric*	CC	150 yd <sup>2</sup>	10 days	(AML) *Sample a minimum of 18ft <sup>2</sup> . Visual inspection, sample only if questionable.

1-800 - 7 10/21

SECTION 805 STRUCTURAL CONCRETE (Cont'd)

MATERIAL	PURP.	SAMPLED BY	TESTED BY	MIN. FREQ.	MIN. QUANT.	CERT.	SMALL QUANTITY	TYPICAL HANDLING TIME	REMARKS	
		METHOD			CONTAINER					
JOINT MATERIALS	SEE SECTION 815 OF THIS MANUAL.									
NON-SHRINK 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.	
PRECAST CONCRETE (Non-Prestressed other than Bridge Members)	Precast Unit	Accept.	<b>Inspected and stamped by Const. Fab. Insp. Unit prior to use.</b>	PE	----	----	CD	----	CD must include Lot No. for gasket material if applicable.	
	Admixtures	Accept.	Const. Fab. Insp. S 601	Mat. Lab	1/type/mfr. batch	1 pt friction top can	CC	----	10 days (AML) Visual inspection by Construction Fabrication Inspection. Sample only if questionable. If sample is taken, leave 2" air space in can.	
	Aggregate (Coarse & Fine)	Accept.	Const. Fab. Insp. S 101	Dist. Lab	*	1 full sample sack	----	----	4 days (AML) *Visual inspection by Const. Fab. Insp. Sample only if questionable.	
	Cement	SEE SECTION 901 OF THIS MANUAL.					CC	----	11 days	----
	Compressive Strength	Accept.	Const. Fab. Insp or Proj. Engr	Dist. Lab	1/pour*	Three cylinder molds	----	----	30 days	*A pour is an identifiable pour not to exceed 50 yd.
	Gasket Material	SEE SECTION 701 OF THIS MANUAL.					CD	----	----	----
	Mix Design	Design	----	Const. Fab. Insp.	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 mix design. Approval by Const. Fab. Unit. Engineer required prior to work.
	Reinforcing Steel Bars	Accept.	Const. Fab. Insp. S 501	Mat. Lab	1/size/ grade/ 150,000 lb/ source	48 in. length	CA	----	10 days	(AML) Sample only if questionable.
Welded Wire Fabric	Accept.	Const. Fab. Insp. S 501	Const. Fab. Insp.	1/shipment	48 in. x 48 in.	CA	----	11 days	Sample only if questionable.	

1-800 - 8 10/21

SECTION 805 STRUCTURAL CONCRETE (Cont'd)

MATERIAL	PURP.	SAMPLED BY	TESTED BY	MIN. FREQ.	MIN. QUANT.		CERT.	SMALL QUANTITY	TYPICAL HANDLING TIME	REMARKS
		METHOD			CONTAINER					
PRECAST CONCRETE (Prestressed & Non-Prestressed Bridge Members)	Precast Unit	Accept.	Inspected and stamped by Const. Fab. Insp. prior to use.	Const. Fab. Insp.	----	----	CD	----	----	CD must include lot no. for elastomeric bearing pads if applicable.
	Admixtures	Accept.	Const. Fab. Insp. S 601	Mat. Lab	1/type/mfr. batch	1 pt friction top can	CC	----	10 days	(AML) - Visual inspection - sample only if questionable. Sample only if questionable. If sample is taken, leave 2" air space in can.
	Aggregate (Coarse & Fine)	Quality Control	Mfr. S 101	Mfr.	1/lot*	1 full sample sack	----	----	----	(AML) Gradation and Moisture. *Lot to be identifiable pour up to 200 yd3 of concrete.
		Accept.	Const. Fab. Insp. S 101	Dist. Lab or Const. Fab. Insp.	2/month*	1 full sample sack	----	----	3 days	(AML) *Const. Fab. Insp. to witness manufacturer's QC testing.
	Cement	SEE SECTION 901 OF THIS MANUAL.					CC	----	----	----
	Compressive Strength & Surface Resistivity	Accept.	Const. Fab. Insp. S 301	Const. Fab. Insp.	7 cyl/pour*	Cylinder mold	----	----	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 C789.
	Elastomeric Bearing Pads	Accept.	Const. Fab. Insp. S 601	Mat. Lab	1/100 pads/type/lot	1 pad	CA	----	14 days	(AML)
	Epoxy Resin Systems	Accept.	Const. Fab. Insp. S 601	Mat. Lab	1/lot	1 qt/ component friction top can	----	----	10 days	(AML) Specify type and grade
	Mix Design	Design	----	Const. Fab. Insp.	1/class/ material source/plant	----	----	----	----	Contractor shall submit to Const. Fab. Insp. the standard mix design for indicating the intended source of all materials and the mix design. Approval by Const. Fab. Insp. required prior to work.
	Steel Bars & Spiral Reinforcement	Accept.	Const. Fab. Insp. S 501	Mat. Lab	1/size/grade/ 150,000 lb/ source	48 in. length	CA	----	10 days	(AML) Sample only if questionable.
Tie Bars or Transverse Rods	Accept.	Const. Fab. Insp. S 501	Mat. Lab	1/lot	48 in. length	CA / CC *	----	10 days	(AML) *CA - Mill report, CC to indicate specification for steel and coating Sample only if questionable.	

1-800-9 1021

SECTION 805 STRUCTURAL CONCRETE (Cont'd)

MATERIAL	PURP.	SAMPLED BY		TESTED BY	MIN. FREQ.	MIN. QUANT.		CERT.	SMALL QUANTITY	TYPICAL HANDLING TIME	REMARKS
		METHOD				CONTAINER					
PRECAST CONCRETE (Prestressed & Non-Prestressed Bridge Members) (Cont'd)	Strands for Prestressing	Accept.	Const. Fab. Insp. S 501	Mat. Lab	1/size/grade/source/proj./per heat no. *	3 strands 5 ft length		----	----	11 days	*Not to exceed 200 tons. Manufacturer's Load/Elongation curves shall accompany sample.
	Welded Wire Fabric	Accept.	Const. Fab. Insp. S 501	Mat. Lab	1/shipment	48 in. x 48 in.		CA	----	11 days	Visual inspection by Const. Fab. Sample only if questionable.
PRECAST PRE-STRESSED FORMS	Bearing Strips and Adhesive	Accept.	----		----	----		----	----	----	Visual inspection by PE
	Concrete Deck Forms (Stay In Place Panels)	Accept.	<b>Inspected and stamped by Const. Fab. Insp. Prior to use. See precast concrete (Prestressed &amp; Non-Prestressed Bridge Members) in this section.</b>	Const. Fab. Insp.	----	----		CD	----	----	Visual inspection by PE For specific details see EDSM III.2.5.7.
REINFORCEMENT	Bars	SEE SECTION 806 OF THIS MANUAL.									
SPECIAL SURFACE FINISH	Concrete	Accept.	PE S 601	Mat. Lab	1/lot or shipment*	1 qt. component friction top can		CC	----	10 days	(AML) *Visual inspection by PE Sample only if questionable.
WATER STOPS	Copper	Accept.	PE S 601	Mat. Lab	1/lot or shipment*	24 in. length		CA	----	----	*Visual inspection by PE Sample only if questionable.
	Polyvinyl Chloride	Accept.	PE S 601	Mat. Lab	1/shipment*	36 in. length		CC	----	----	*Visual inspection by PE Sample only if questionable.
	Rubber	Accept.	PE S 601	Mat. Lab	1/lot or shipment*	36 in. length		CA	----	----	*Visual inspection by PE Sample only if questionable.

**SECTION 806 DEFORMED REINFORCING STEEL**

MATERIAL		PURP.	SAMPLED BY	TESTED BY	MIN. FREQ.	MIN. QUANT.	CERT.	SMALL QUANTITY	TYPICAL HANDLING TIME	REMARKS
			METHOD			CONTAINER				
REINFORCEMENT	Bars (Epoxy Coated)	Accept.	PE S 501	Mat. Lab	1/size/grade/150,000 lb /source	2 bars approx. 48 in. in length	CC	----	10 days	(AML) Cert. of Compliance provided by the applicator.
	Bars & Spirals	Accept.	PE S 501	Mat. Lab	1/size/grade/150,000 lb /source*	48 in. length	CA	----	10 days	(AML) *Material with a CA need not be sampled for acceptance. Sample only if questionable.
	Chairs or Metal Bar Supports	Accept.	PE S 501	Mat. Lab	1/type*	1 chair	----	----	----	*Visual inspection by the PE Sample only if questionable.
	Patching Material (Epoxy Coated Bars)	Accept.	PE S 601	Mat. Lab	1/source	1 qt friction top can of each component *	CC	----	10 days	(AML) * If listed on AML, material with a CC need not be sampled. Sample only if questionable.
	Stirrups, Tie Bars	Accept.	PE S 501	Mat. Lab	1/size/grade 150,000 lb/ source*	2 of each item	CA	----	10 days	(AML) *If listed on AML, material with a CA need not be sampled. Sample only if questionable.
SPLICING	Mechanical Butt Splicing Devices	Contractor Qualification	PE S 501	Mat. Lab	1/size*	2 assembled splices/each size (rebar ribs aligned)	----	----	10 days	(AML) *Separate field spliced samples per horizontal and vertical positions. Test prior to use.
		Accept.	PE S 501	Mat. Lab	1/size/25 splices*	1 assembled splice 3 ft length (rebar ribs aligned)	----	----	10 days	* Frequency may be reduced to 1 per size / 100 splices after the first 100 splices.
	Welded Butt Splice	SEE SECTION 815 OF THIS MANUAL.								

I-800 - 11 10/21

**SECTION 807 STRUCTURAL METALS**

MATERIAL	PURP.	SAMPLED BY		TESTED BY	MIN. FREQ.	MIN. QUANT.		CERT.	SMALL QUANTITY	TYPICAL HANDLING TIME	REMARKS
		METHOD				CONTAINER					
BEARINGS & BEARING PADS		SEE SECTION 814 OF THIS MANUAL.									
CASTINGS	Metal for Castings	Accept.	Const. Fab. Insp. S 601	Const. Fab. Insp.	1/heat	1 test bar*		CA	----	----	*Const. Fab. Insp. may submit samples to Mat. Lab for testing if questionable.
	Unit	Accept.	----	Const. Fab. Insp.	----	----		CA	----	----	PE to receive form 4148 (Certificate of Cast Iron Covers, Grates, etc.) from Contractor.
ANCHOR BOLTS		Accept.	PE S 501	Const. Fab. Insp.	1/diameter/shipment	2 of each item*		CA	----	----	Sample if not accompanied by report from Construction Fab. * For sizes over 1-1/8", sample only 1 of each item.
FASTENERS (Field Installation)	Bolts, Nuts & Washers	Accept.	PE S 501	Mat. Lab	1/diameter/shipment	2 of each item*		CC	----	10 days	*Two bolts, two nuts and two washers are to be submitted. Copy of CC to accompany sample and ID.
	High Strength Bolts, Nuts & Washers and Direct Tension Indicators	Accept.	PE S 501	Mat. Lab	1/type/size/ heat	2 of each item*		CA	----	10 days	* For sizes over 1-1/8", sample only 1 of each item. Copy of CA to accompany sample and ID. Similar size, type and heat of nut and washer need not be submitted.
FASTENERS (Shop Installation)	Bolts, Nuts & Washers	Accept.	Const. Fab. Insp. S 501	Mat. Lab	1/diameter/shipment	3 of each item*		CC	----	10 days	Proj. Engr . to receive inspection report from Const. Fab. Insp. * Three bolts, 3 nuts and 3 washers are to be submitted. Copy of CC to accompany sample ID.
	High Strength Bolts, Nuts & Washers and Direct Tension Indicators	Accept.	Const. Fab. Insp. S 501	Mat. Lab	1/type/ diameter/ heat	3 of each item*		CA	----	10 days	Proj. Engr . to receive inspection report from Const. Fab. Insp. * Three bolts, 3 nuts,3 washers, 3 DTI are to be submitted. For sizes over 1-1/8", sample only 1 of each item. Copy of CA to accompany sample of ID.
NON-SHRINK GROUT		Accept.	PE S 601	Mat. Lab	1/shipment	1 full sack		----	----	16 days	(AML) Sample shall be submitted in a unbroken, moisture proof sack.
PAINT AND PROTECTIVE COATINGS		SEE SECTION 811 OF THIS MANUAL.									
SHEAR CONNECTORS		Accept.	----	Const. Fab. Insp.	----	----		CA	----	----	Shop and field inspection requirements per Specification Section 807

I-800 - 12 10/21

**SECTION 807 STRUCTURAL METALS (Cont'd)**

MATERIAL		PURP.	SAMPLED BY	TESTED BY	MIN. FREQ.	MIN. QUANT.	CERT.	SMALL QUANTITY	TYPICAL HANDLING TIME	REMARKS
			METHOD			CONTAINER				
STEEL FORGINGS & SHAFTING	Steel for Forging & Shafts	Accept.	Inspected and stamped by the Const. Fab. Insp. Unit prior to use.	Const. Fab. Insp.	----	----	----	----	----	PE to receive inspection report from Const. Fab. Insp.
STRUCTURAL STEEL & ALUMINUM	Metal for Fabrication	Accept.	Inspected and stamped by the Const. Fab. Insp. Unit prior to use.	Const. Fab. Insp.	----	----	----	----	----	PE to receive inspection report from Const. Fab. Insp.
WELDING		SEE SECTION 809 OF THIS MANUAL.								
WRENCH	Calibrated Wrench	Accept.	----	PE	*	3 assemblies/size	----	----	----	Contractor's calibration procedure to be witnessed by PE *See Specification Subsection 807.05.2 for frequency of calibration.
	Job Inspection Torque Wrench	Accept.	----	PE	*	5 assemblies/size	----	----	----	*See Specification Subsection 807.05.2 for frequency of calibration.

**SECTION 808 STEEL GRID FLOORING**

MATERIAL		PURP.	SAMPLED BY	TESTED BY	MIN. FREQ.	MIN. QUANT.	CERT.	SMALL QUANTITY	TYPICAL HANDLING TIME	REMARKS
			METHOD			CONTAINER				
CONCRETE (Structural)	Mix Designs, Materials & Tests	SEE SECTION 901 OF THIS MANUAL.								
PAINT AND PROTECTIVE COATINGS		SEE SECTION 811 OF THIS MANUAL.								
STRUCTURAL STEEL	Flooring	Accept	Inspected and stamped by the Const. Fab. Insp. Unit prior to use. See Section 807 of this manual.	Const. Fab. Insp.	----	----	CA	----	----	PE to receive inspection report from Const. Fab. Insp.
WELDING		SEE SECTION 809 OF THIS MANUAL.								

I-800 - 13 10/21

I-800 - 14 10/21

SECTION 809 WELDING

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 815. THERE ARE NO PAY ITEMS UNDER SECTION 815.									
WELDING QUALIFICATION AND TESTING	Field	Accept.	Welders and procedure qualified by licensed, bonded testing laboratory. Procedure and welder qualification are received and reviewed by construction fabrication.	PE	----	----	----	----	----
	Shop	Accept.		Const. Fab. Ins.	----	----	----	----	----

I-800 - 15 10/21

**SECTION 810 BRIDGE RAILINGS, HAND RAILINGS, PERMANENT ROADWAY BARRIERS, AND PIER PROTECTION SYSTEMS**

MATERIAL	PURP.	SAMPLED BY		TESTED BY	MIN. FREQ.	MIN. QUANT.		CERT.	SMALL QUANTITY	TYPICAL HANDLING TIME	REMARKS
		METHOD				CONTAINER					
FOR DETAILS ON CONCRETE AND ASSOCIATED MATERIALS, SEE SECTIONS 805 AND 901 OF THIS MANUAL AND SECTION 1012 OF THE STANDARD SPECIFICATIONS.											
BARRIER (Precast)	Permanent Barriers	Accept.	Inspected and stamped by Const. Fab. Insp. prior to use.	PE	----	----		CC	----	----	Visual inspection by PE
FOR BARRIERS FABRICATION INSPECTION BY PROJECT ENGINEER, SEE BELOW											
CONCRETE	Mix Designs, Materials & Tests	SEE SECTION 901 OF THIS MANUAL.								Air entrainment is required for slip forming.	
CURING MATERIALS		SEE SECTION 805 OF THIS MANUAL.									
HARDWARE	Galvanized Steel	Accept.	PE S 501	Mat. Lab	1/size/type/shipment	2 of each item*		----	----	10 days	*Two pieces of each size and type of hardware used are to be submitted.
METAL CASTINGS, FITTINGS, POSTS & RAILINGS	Steel	----	Inspected and stamped by the Const. Fab. Unit prior to use. See Section 807 of this manual.	Const. Fab. Insp.	----	----		CA	----	----	PE to receive inspection report from Const. Fab. Insp.
	Pipe (Galvanized)	Accept.	Inspected and stamped by the Const. Fab. Unit prior to use. See Section 807 of this manual.	Const. Fab. Insp.	----	----		CA	----	----	PE to receive inspection report from Const. Fab. Insp.
JOINT MATERIALS		Accept.	----	SEE SECTION 815 OF THIS MANUAL.						17 days	----
PAINT AND PROTECTIVE COATINGS		SEE SECTION 811 OF THIS MANUAL.									
REINFORCING STEEL	Deformed Steel Bars	Accept.	PE S 501	Mat. Lab	1/size/ source*	48 in. length		CA	----	10 days	*If listed on AML, materials with a CA (Dist. 1) need not be sampled. Sample for verification if questionable.
WELDING		SEE SECTION 809 OF THIS MANUAL.									
SPECIAL SURFACE FINISH	Concrete	Accept.	PE S 601	Mat. Lab	1 lot or shipment*	1 each friction top can		CC	----	10 days	(AML) *Visual inspection by PE Sample only if questionable.
	Masonry Finish	Accept.	PE S 601	Mat. Lab	1/lot or shipment	1 qt friction top can		CC	----	11 days	(AML) Sample if not accompanied by CC or if questionable.

**SECTION 811 PAINTING AND PROTECTIVE COATINGS**

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 811. THERE ARE NO PAY ITEMS UNDER SECTION 811.										
PAINT AND PROTECTIVE COATINGS	Paint for Field Painting	Accept.	PE S 604	----	1/batch	1 pt each component friction top can	CD*	10 Gal.Total Quantity / coat	14 days	*Sample when not accompanied by CD. Multiple component paints must be submitted in separate containers with the mixing proportions indicated on the sample identification and cans. Sampling technique is sensitive, contact Dist. Lab prior to sampling.
	Galvanizing Repair Compound	Accept.	PE S 601	Mat. Lab	1/type*	1 bar, can or rod	----	----	----	(AML) *Visual inspection by PE Sample only if questionable.
	Paint for Shop Painting	Accept.	Const. Fab Insp. S 604	----	1/batch	1 pt each component friction top can	CD*/CC**	----	14 days	(AML) *Sample when not accompanied by CD. Multiple component paints must be submitted in separate containers with the mixing proportions indicated on the sample identification and cans. Contractor to notify Bridge Design Engineer and Consultant Engineer of the paint system to be used prior to submitting shop drawings. **For inorganic zinc primers, stating Class B slip coefficient is met.

1-800 - 17 10/21

SECTION 812 TREATED TIMBER

MATERIAL	PURP.	SAMPLED BY	TESTED BY	MIN. FREQ.	MIN. QUANT.	CERT.	SMALL QUANTITY	TYPICAL HANDLING TIME	REMARKS	
		METHOD			CONTAINER					
CONNECTORS	Accept.	PE S 501	Mat. Lab	1/type/shipment*	1 of each item**	----	----	10 days	*Visual inspection by PE Sample only if questionable. **One of each type of connector used is to be submitted.	
CASTINGS	Accept.	PE S 501	Mat. Lab	1/type/shipment	1 of each item*	----	----	10 days	*One of each type of casting used is to be submitted.	
HARDWARE & STRUCTURAL SHAPES	Accept.	PE S 501	Mat. Lab	1/type/shipment	1 of each item*	CA 3	----	10 days	*One piece of each type and size of item used is to be submitted.	
PAINT AND PROTECTIVE COATINGS	SEE SECTION 811 OF THIS MANUAL.									
ROOFING PITCH	Accept.	----	PE	----	----	----	----	----	Visual inspection by PE	
TIMBER & LUMBER (Treated)	Accept.	<b>Inspected and stamped (Hammered) by Const. Fab. Insp. Unit prior to use.</b>	Const. Fab. Ins./ Mat. Lab	----	----	CD	----	----	Visual inspection by PE	
	Preservatives	Accept.	Const. Fab. Insp. S 601	Mat. Lab	1/tank*	1 qt friction top can	CA	----	14 days	*Visual inspection by Const. Fab. Insp. Sample only if questionable.
TREATMENT OF PILE HEADS	Canvas	Accept.	PE S 601	Mat. Lab	1/shipment*	18 in x 18 in.	----	----	10 days	*Visual inspection by PE Sample only if questionable.
	Coal Tar Pitch, Creosote Oil, Asphalt & Copper Napthanate	Accept.	PE S 201	Mat. Lab	1/shipment*	1 qt friction top can	----	----	10 days	*Visual inspection by PE Sample only if questionable.
	Fabric Covering	Accept.	PE S 601	Mat. Lab	1/shipment*	18 in. x 18 in.	----	----	10 days	*Visual inspection by PE Sample only if questionable.
	Galvanized Metal Covering	Accept.	PE S 501	Mat. Lab	1/shipment*	6 in. x 6 in.	----	----	10 days	*Visual inspection by PE Sample only if questionable.
	Galvanized Nails, Staples & Wire	Accept.	PE S 501	Mat. Lab	1/size/type/shipment*	12 of each item** Wire - 24 in. length	----	----	10 days	*Visual inspection by PE Sample only if questionable. **Twelve nails and 12 staples are to be submitted.

I-800 - 18 10/21

SECTION 813 CONCRETE APPROACH SLABS

MATERIAL	PURP.	SAMPLED BY	TESTED BY	MIN. FREQ.	MIN. QUANT.	CERT.	SMALL QUANTITY	TYPICAL HANDLING TIME	REMARKS
		METHOD			CONTAINER				
FOR DETAILS ON CONCRETE TESTS, MIX DESIGNS AND MATERIALS (ADMIXTURES, AGGREGATES, CEMENT AND WATER) SEE SECTION 901 OF THIS MANUAL.									
AGGREGATES	Bedding Material	Accept.	PE S 101	Dist. Lab	1/1,000 yd <sup>3</sup>	1 full sample sack	----	4 days	----
BEARING PILES	Timber	Accept.	Inspected and stamped by the const. fab. Insp. Unit prior to use. See section 812 of this manual.			CD	----	----	Visual inspection by PE
CONCRETE (In-Place)	Compressive Strength	*	PE S 301	Dist. Lab	1/pour	Three cylinder mold	----	----	*To determine strength for form removal or exposure to construction traffic.
CURING MATERIALS		SEE SECTION 601 OF THIS MANUAL.							
GEOCOMPOSITE DRAINAGE SYSTEM	Wall Drain	Accept.	PE S 601	Mat. Lab	1/lot or shipment	4ft <sup>2</sup>	CA	----	10 days (AML)
GEOTEXTILE FABRIC		Accept.	PE S 601	Mat. Lab	1/type	3 lin ft/roll width of fabric*	CC	150 yd <sup>2</sup>	10 days (AML) *Sample a minimum of 18 ft2.
HARDWARE CLOTH		Accept.	PE S 601	Mat. Lab	1/shipment*	18 in x 18 in.	----	----	10 days *Visual inspection by PE Sample only if questionable.
JOINT MATERIAL	Preformed Closed Cell Polyethylene	Accept.	PE S 601	Mat. Lab	1/5,000 lin ft/ Width	36 in. length	----	----	(AML)
	Silicone Polymer (single or two-component rapid cure)	Accept.	PE S 611	Mat. Lab	1/shipment*	1 gal friction top can	CD	2,000 yd <sup>2</sup> PCCP	30 days (AML) *Sample only if questionable.
		Accept.*	PE S 611	Mat. Lab	1/batch or shipment	1 gal friction top can	CA	2,000 yd <sup>2</sup> PCCP	30 days (AML) *When material is not accompanied by a CD.
JOINT SEAL (Preformed)	Elastomeric Compression	Accept.	PE S 601	Mat. Lab	1/lot or shipment	8 ft length*	CA **	----	14 days (AML) *When width is over 2 in., 4 ft length is sufficient. **PE forwards CA with sample to Mat. Lab.
ADHESIVE LUBRICANT-	For Preformed Closed Cell polyethylene Joint Filler	Accept.	----	----	----	----	----	----	10 days (AML) Visual inspection by Proj. Engr.
	For Preformed Elastomeric Compression Joint Seal	Accept.	PE S 601	Mat. Lab	1 Project/lot	1qt friction top can	----	----	10 days (AML) Mix well before sampling. Seal can tightly.
POLY-ETHYLENE FILM		Accept.	PE S 601	Mat. Lab	1/lot or shipment*	36 in. length	----	----	10 days *Visual inspection by Proj. Engr. Sample only if questionable.
REINFORCING STEEL		Accept.	PE S 601	Mat. Lab*	1/size/ source*	48 in. length	CA	----	10 days (AML) *Material with a CA need not be sampled for acceptance. Sample only if questionable.
UNDERDRAIN PIPE		SEE SECTION 703 OF THIS MANUAL.							

I-800 - 19 10/21

**SECTION 814 BEARINGS**

MATERIAL	PURP.	SAMPLED BY	TESTED BY	MIN. FREQ.	MIN. QUANT.	CERT.	SMALL QUANTITY	TYPICAL HANDLING TIME	REMARKS
		METHOD			CONTAINER				
BEARING ASSEMBLY & EXPANSION	Contractor Designed	Design	Const. Fab. Insp.*	Const. Fab. Insp.*	----	----	CA	----	* Disc, pot, or other bearing types as shown on plans. Provide designs to Construction Fabrication in accordance to the contract requirements.
		Accept.	PE S 601	----	1 / lot	1 assembly	CA	----	Tested by AASHTO LFRD Bridge Construction Specifications.
	Bronze	Accept.	----	PE	----	----	CA	----	Visual inspection by PE Contact Const. Fab. If questionable.
	Copper-Alloy (Rolled)	Accept.	----	PE	----	----	CA	----	Visual inspection by PE Contact Const. Fab. If questionable.
	PTFE Bearing Assembly	Accept.	----	PE	----	----	CA	----	Visual inspection by PE Contact Const. Fab. If questionable.
BEARING PADS	Elastomeric	Accept.	Const. Fab. Insp.* S 601	Mat. Lab	1/100 pads/type** /lot	1 pad	CA	14 days	(AML) *PE samples at destination only if not sampled at site of source or supplier. **Plain or Laminated.
	Masonry	Accept.	PE S 601	Mat. Lab	1/type/size	1 pad	CA	10 days	----
CAST IRON, STEEL, ROLLED STEEL	<b>SEE SECTION 807 OF THIS MANUAL.</b>								
WELDING	<b>SEE SECTION 809 OF THIS MANUAL.</b>								

I-800 - 20 10/21

SECTION 815 JOINTS

MATERIAL	PURP.	SAMPLED BY	TESTED BY	MIN. FREQ.	MIN. QUANT.	CERT.	SMALL QUANTITY	TYPICAL HANDLING TIME	REMARKS	
		METHOD			CONTAINER					
ADHESIVE LUBRICANT		Accept.	PE S 601	Mat. Lab	1 Project/lot	1qt friction top can	-----	-----	10 days	(AML) Mix well before sampling. Seal can tightly.
CONCRETE	Mix Designs, Materials & Tests	SEE SECTION 901 OF THIS MANUAL.								
CONCRETE (Structural)		SEE SECTION 805 OF THIS MANUAL.								
HARDWARE	High Strength Bolts, Nuts & Washers and Direct Tension Indicators	Accept.	PE S 501	Mat. Lab	1/type/size/ heat	2 of each item*	CA	-----	10 days	* For sizes over 1-1/8", sample only 1 of each item. Copy of CA to accompany sample and ID. Similar size, type and heat of nut and washer need not be submitted.
JOINT DESIGN		Design	Bridge Engineer	Bridge Engineer*	-----	-----	-----	-----	-----	* Provide Joint Design, Fabrication Plan, and Installation Plan to Bridge Engineer for review.
JOINT FILLER		Accept.	PE S 601	Mat. Lab	1/5000 lin ft/ type *	36 in. length	-----	-----	10 days	*Visual inspection by PE Sample only if questionable.
JOINT MATERIALS	Adhesive-Lubricant	Accept.	PE S 601	Mat. Lab	1/lot *	1 qt friction top can	-----	-----	10 days	(AML) For use with preformed elastomeric compression joint seal. * Visual inspection, sample only if questionable. Mix well before sampling. Seal can tightly.
	Backer Rod	Accept.	-----	Mat. Lab	-----	-----	CC	-----	-----	(AML) Visual inspection by PE Sample only if questionable.
	Rubberized Asphaltic Type	Accept.	Dist. Lab S 611	Mat. Lab	1/shipment	one container	CD *	-----	11 days	(AML) * Sample if not accompanied by CD
	Silicone Polymer (single or two-component rapid cure)	Accept.	Dist. Lab S 611	Mat. Lab	1/shipment*	1 gal friction top can	CD	-----	30 days	(AML) *Sample only if questionable.
		Accept.	Dist. Lab S 611	Mat. Lab	1/batch or shipment *	1 gal friction top can	CA	-----	30 days	(AML) *When material is not accompanied by a CD.
	Polyurethane Polymer	Accept.	Dist. Lab S 611	Mat. Lab	1 / shipment*	one unit of each component	CD	-----	14 days	(AML) *When material is accompanied by a CD, sample only if questionable.
Accept.		Dist. Lab S 611	Mat. Lab	1 / batch *	one unit of each component **	CA	-----	14 days	(AML) *When material is not accompanied by a CD. **One unit of each component selected at random and submitted as sample.	

I-800 - 21 10/21

SECTION 815 JOINTS (Cont'd)

MATERIAL	PURP.	SAMPLED BY	TESTED BY	MIN. FREQ.	MIN. QUANT.	CERT.	SMALL QUANTITY	TYPICAL HANDLING TIME	REMARKS	
		METHOD			CONTAINER					
JOINT MATERIALS (Cont'd)	Reinforced Elastomeric Joint Seal	Accept.	----	Mat. Lab	----	----	CC & CA	----	----	Elastomer - CA; Steel - CC. Visual inspection by PE
	Preformed Neoprene	Accept.	Dist. Lab S 611	Mat. Lab	1/shipment*	48 in. length	CC	----	----	*Visual inspection by PE Sample only if questionable.
	Preformed Silicone	Accept.	Dist. Lab S 611	Mat. Lab	1/shipment*	48 in. length	CC **	----	----	*Visual inspection by PE Sample only if questionable. ** CC to include both silicone seal and adhesive.
	Fabricated Trough / Membrane	Accept.	Dist. Lab S 611	Mat. Lab	1/shipment*	----	CC	----	----	*Visual inspection by PE Sample only if questionable.
	Metal End Dams for Preformed Neoprene and Silicone Joint Seals	Accept.	<b>See Section 807 of this Manual.</b>	Mfr.	----	----	CA	----	----	Visual inspection by PE Contact CONST. FAB. INSP. If questionable.
METAL JOINT COMPONENTS	Finger plates, sliding plates, armor assemblies, shapes, studs, anchors, and other required components.	Accept.	<b>Inspected and stamped by Const. Fab. Insp. Unit prior to use. See Section 807 of this Manual.</b>	Const. Fab. Insp.	----	----	CA	----	----	PE to receive inspection report from Const. Fab. Insp.
WELDING		<b>SEE SECTION 809 OF THIS MANUAL.</b>								

1-800 - 22 10/21

**SECTION 816 BRIDGE DRAINAGE SYSTEMS**

MATERIAL		PURP.	SAMPLED BY	TESTED BY	MIN. FREQ.	MIN. QUANT.	CERT.	SMALL QUANTITY	TYPICAL HANDLING TIME	REMARKS
			METHOD			CONTAINER				
JOINT DESIGN		Design	Bridge Engineer	Bridge Engineer*	----	----	----	----	----	* Provide fabrication details to Bridge Engineer for review.
BEDDING MATERIAL		SEE SECTION 726 OF THIS MANUAL.								
CONCRETE	Mix Designs, Materials & Tests	SEE SECTION 901 OF THIS MANUAL.								
CONCRETE (Structural)		SEE SECTION 805 OF THIS MANUAL.								
CULVERTS & STORM DRAINS		SEE SECTION 701 OF THIS MANUAL.								
HARDWARE	Bolts, Nuts & Washers	Accept.	PE S 501	Mat. Lab	1/diameter/shipment	2 of each item*	CA **	----	10 days	*Two bolts, two nuts and two washers are to be submitted. ** Copy of CA or report from Const. Fab. Insp. / Bridge Engineer to accompany sample and ID.
MANHOLES, JUNCTION BOXES, CATCH BASINS, & END TREATMENTS		SEE SECTION 702 OF THIS MANUAL.								
METAL PIPE		SEE SECTION 701 OF THIS MANUAL.								
PAINT AND PROTECTIVE COATINGS		SEE SECTION 811 OF THIS MANUAL.								
REINFORCING STEEL		Accept.	PE S 501	Mat. Lab	1/size/grade/150,000 lb/source	48 in. length	CA	----	10 days	(AML) *If listed on AML, material with a CA (Distr. 1) need not be sampled. Sample only if questionable.
STRUCTURAL METALS		SEE SECTION 807 OF THIS MANUAL.								

I-800 - 23 10/21

SECTION 817 TEMPORARY WORKS

MATERIAL		PURP.	SAMPLED BY	TESTED BY	MIN. FREQ.	MIN. QUANT.	CERT.	SMALL QUANTITY	TYPICAL HANDLING TIME	REMARKS
			METHOD			CONTAINER				
CONCRETE	Mix Designs, Materials & Tests									SEE SECTION 901 OF THIS MANUAL.
CONCRETE (Structural)										SEE SECTION 805 OF THIS MANUAL.
DRILLED SHAFTS										SEE SECTION 803 OF THIS MANUAL.
FENCE										SEE SECTION 705 OF THIS MANUAL.
GRANULAR MATERIAL										SEE SECTION 203 OF THIS MANUAL.
GUARD RAIL										SEE SECTION 704 OF THIS MANUAL.
PAINT AND PROTECTIVE COATINGS										SEE SECTION 811 OF THIS MANUAL.
PILES										SEE SECTION 804 OF THIS MANUAL.
REINFORCING STEEL		Accept.	PE S 501	Mat. Lab	1/size/grade/150,000 lb/source	48 in. length	CA	----	10 days	(AML) *If listed on AML, material with a CA (Distr. 1) need not be sampled. Sample only if questionable.
SHEETING										SEE SECTION 802 OF THIS MANUAL.
STRUCTURAL METALS										SEE SECTION 807 OF THIS MANUAL.
TEMPORARY DETOUR ROAD										SEE SECTION 725 OF THIS MANUAL.
TIMBER										SEE SECTION 812 OF THIS MANUAL.

1-800 - 24 10/21

**SECTION 818 MARINE PIER PROTECTION**

MATERIAL	PURP.	SAMPLED BY	TESTED BY	MIN. FREQ.	MIN. QUANT.	CERT.	SMALL QUANTITY	TYPICAL HANDLING TIME	REMARKS	
		METHOD			CONTAINER					
CONCRETE	Mix Designs, Materials & Tests	SEE SECTION 901 OF THIS MANUAL.								
CONCRETE (Structural)		SEE SECTION 805 OF THIS MANUAL.								
PIER PROTECTION SYSTEMS	Ultra-High Molecular Weight Polyethylene (UHMW-PE)	Accept.	PE	Mfg.	----	----	CA *	----	----	* Visual inspection by PE
	Plastic Composite Marine Timber (PCMT)	Accept.	PE	Mfg.	----	----	CA *	----	----	* Visual inspection by PE
	Rubber Fender Elements (Extruded & Molded)	Accept.	PE	Mfg.	----	----	CA *	----	----	* Visual inspection by PE
REINFORCING STEEL		Accept.	PE S 501	Mat. Lab	1/size/grade/150,000 lb/source *	48 in. length	CA	----	10 days	(AML) *If listed on AML, material with a CA (Distr. 1) need not be sampled. Sample only if questionable.
STRUCTURAL CONCRETE		SEE SECTION 805 OF THIS MANUAL.								
STRUCTURAL METALS & FASTENERS		SEE SECTION 807 OF THIS MANUAL.								
TIMBER		SEE SECTION 812 OF THIS MANUAL.								
WELDING		SEE SECTION 809 OF THIS MANUAL.								

1-800 - 25 10/21

**SECTION 820 MOVABLE BRIDGES**

MATERIAL	PURP.	SAMPLED BY	TESTED BY	MIN. FREQ.	MIN. QUANT.	CERT.	SMALL QUANTITY	TYPICAL HANDLING TIME	REMARKS
		METHOD			CONTAINER				
BEARINGS		SEE SECTION 814 OF THIS MANUAL.							
BRIDGE RAILINGS, HAND RAILINGS, AND PERMANENT ROADWAY BARRIERS		SEE SECTION 810 OF THIS MANUAL.							
CONCRETE	Mix Designs, Materials & Tests	SEE SECTION 901 OF THIS MANUAL.							
CONCRETE (Structural)		SEE SECTION 805 OF THIS MANUAL.							PE to witness test for unit weight. Bridge Design must approve calculations for determining unit weight.

1-800 - 26 10/21

SECTION 820 MOVABLE BRIDGES (Cont'd)

MATERIAL	PURP.	SAMPLED BY	TESTED BY	MIN. FREQ.	MIN. QUANT.	CERT.	SMALL QUANTITY	TYPICAL HANDLING TIME	REMARKS	
		METHOD			CONTAINER					
CONCRETE APPROACH SLABS		SEE SECTION 813 OF THIS MANUAL.								
DRAINAGE SYSTEMS		SEE SECTION 816 OF THIS MANUAL.								
ELECTRICAL SYSTEMS		SEE SECTION 822 OF THIS MANUAL.								
EPOXY RESIN SYSTEMS		Accept.	PE	Mat. Lab	1/lot	1 qt. each component friction top can	CC	1 gal	11 days	(AML) Specify type and grade
HARDWARE	Bolts, Fasteners, Fittings, Nuts, Washers & Misc. Hardware	Accept.	PE* S 501	Mat. Lab	1/size/type/shipment	2 of each item**	----	----	10 days	*When sampled by Const. Fab. Insp. and listed on report to PE, project samples are not required. **Two pieces of each size and type of hardware used are to be submitted. For bolt sizes over 1-1/8", only one of each item for the assembly required.
JOINTS		SEE SECTION 815 OF THIS MANUAL.								
MECHANICAL SYSTEMS		SEE SECTION 821 OF THIS MANUAL.								
FACILITIES		SEE SECTION 823 OF THIS MANUAL.								
NON-SHRINK GROUT		Accept.	PE S 601	Mat. Lab	1 / lot	1 full sack *	CC	----	16 days	*Sample shall be submitted in an unbroken moisture proof sack.
PAINT AND PROTECTIVE COATINGS		SEE SECTION 811 OF THIS MANUAL.								
POWER PLANT		SEE SECTION 822 OF THIS MANUAL.								
STEEL GRID FLOORING		SEE SECTION 808 OF THIS MANUAL.								
STRUCTURAL METALS		SEE SECTION 807 OF THIS MANUAL.								
TIMBER		SEE SECTION 812 OF THIS MANUAL.								
TRAFFIC BARRIERS	Drawings & Brochures	Accept.	Bridge Design approves and distributes to PE	Bridge Design				----	----	Structural Fabrication Inspect in accordance with Sections 729 & 807 of this manual.
WELDING		SEE SECTION 815 OF THIS MANUAL.								

WIRE ROPE &  
ATTACHMENTS

SEE SECTION 821 OF THIS MANUAL.

SECTION 821 MECHANICAL SYSTEMS

MATERIAL	PURP.	SAMPLED BY		TESTED BY	MIN. FREQ.	MIN. QUANT.		CERT.	SMALL QUANTITY	TYPICAL HANDLING TIME	REMARKS
		METHOD				CONTAINER					
CONCRETE	Mix Designs, Materials & Tests	SEE SECTION 901 OF THIS MANUAL.									
CONCRETE (Structural)		SEE SECTION 805 OF THIS MANUAL.									
ELECTRICAL SYSTEMS		SEE SECTION 822 OF THIS MANUAL.									
EPOXY RESIN SYSTEMS	Epoxy	Accept.	PE S 601	Mat. Lab	1/lot	----	CC	1 gal	----	(AML) Specify type and grade	
		Verif.	PE S 601	Mat. Lab	1/lot	1 qt each component friction top can	CC	1 gal	11 days	(AML) Specify type and grade Copy of CC shall be submitted with sample.	
FACILITIES		SEE SECTION 823 OF THIS MANUAL.									
FENCES		SEE SECTION 705 OF THIS MANUAL.									
JACKED OR BORED PIPE		SEE SECTION 728 OF THIS MANUAL.									
MECHANICAL SYSTEMS (each system)	Brochures, Drawings, Cut Sheets, Field Measurements, Calculations & other required documentation	Accept.	<b>Bridge design approves and distributes to PE for all items listed in Mechanical System Submittals requirements.</b>	Bridge Design	----	----	----	----	----	PE inspects materials and components to ensure conformance.	
PAINT AND PROTECTIVE COATINGS		SEE SECTION 811 OF THIS MANUAL.									
STRUCTURAL METALS & FASTENERS	Bolts, Nuts & Washers (Non-High Strength)	Accept.	PE S 501	Mat. Lab	1/diameter/shipment	2 of each item*	CC	----	10 days	*Sample only if questionable. If sampled, two bolts, two nuts and two washers are to be submitted. Copy of CC to accompany sample and ID.	
	High Strength Bolts, Nuts & Washers, Direct Tension Indicators, Miscellaneous Hardware, and Structural Parts	SEE SECTION 807 OF THIS MANUAL.									

1-800 - 28 10/21

**SECTION 821 MECHANICAL SYSTEMS (Cont'd)**

MATERIAL	PURP.	SAMPLED BY	TESTED BY	MIN. FREQ.	MIN. QUANT.	CERT.	SMALL QUANTITY	TYPICAL HANDLING TIME	REMARKS
		METHOD			CONTAINER				
WELDING		SEE SECTION 815 OF THIS MANUAL.							
WIRE ROPE & ATTACHMENTS	Counterweight Rope Assemblies	Accept.	Inspected and stamped by Const. Fab. Insp. Unit prior to use.	Const. Fab. Insp.		CA	----	----	PE to receive inspection report on counterweight ropes and sockets from Const. Fab. Insp.
	Wire Rope	Accept.	PE S 501	Mat. Lab	1/type or class/shipment	6 ft length	CA	----	11 days Does not include counterweight ropes. Visual inspection by PE contact construction Fab. If questionable

**SECTION 822 ELECTRICAL SYSTEMS**

MATERIAL	PURP.	SAMPLED BY	TESTED BY	MIN. FREQ.	MIN. QUANT.	CERT.	SMALL QUANTITY	TYPICAL HANDLING TIME	REMARKS
		METHOD			CONTAINER	DISTR.			
<b>ALL ELECTRICAL COMPONENTS &amp; MATERIALS NOT SPECIFICALLY MENTIONED IN THIS SECTION SHALL BE HANDLED IN ACCORDANCE WITH THE REQUIREMENTS FOR ELECTRICAL EQUIPMENT BELOW.</b>									
CONCRETE	Mix Designs, Materials & Tests	SEE SECTION 901 OF THIS MANUAL.							
CONCRETE (Structural)		SEE SECTION 805 OF THIS MANUAL.							
CONDUIT		Accept.	Bridge Design approves and distributes to PE	Bridge Design					
DRILLED SHAFTS		SEE SECTION 803 OF THIS MANUAL.							
ELECTRICAL CONDUCTORS		Accept.	----	PE	----	CA	----	----	Visual Inspection by PE
ELECTRICAL EQUIPMENT	Brochures, Certified Dimension Sheets & Description Data	Accept.	Bridge Design approves and distributes to PE	Bridge Design	----	----	----	----	
EMBANKMENT		SEE SECTION 203 OF THIS MANUAL.							

I-800 - 29 10/21

I-800 - 30 10/21

SECTION 822 ELECTRICAL SYSTEMS (Cont'd)

MATERIAL		PURP.	SAMPLED BY	TESTED BY	MIN. FREQ.	MIN. QUANT.	CERT.	SMALL QUANTITY	TYPICAL HANDLING TIME	REMARKS
			METHOD			CONTAINER				
EPOXY RESIN SYSTEMS	Epoxy	Accept.	PE S 601	Mat. Lab	1/lot	----	CC	1 gal	----	(AML) Specify type and grade
		Verif.	PE S 601	Mat. Lab	1/lot	1 qt each component friction top can	CC	1 gal	11 days	(AML) Specify type and grade Copy of CC shall be submitted with sample.
FASTENERS	Anchor Bolts, Nuts, and Washers	Accept.	PE S 501	Mat. Lab	1/size/type	1 of each item*	CA	----	11 days	*One of each size and type of bolt, nut and washer is to be submitted.
	Bolts, Nuts & Washers (Except for Anchor Bolt Assemblies)	Accept.	PE S 501	Mat. Lab	1/diameter/shipment	2 of each item*	CC	----	10 days	*Sample only if questionable. If sampled, two bolts, two nuts and two washers are to be submitted. Copy of CC to accompany sample and ID.
GROUND ROD ASSEMBLY	Ground Rod, Wire & Clamp	Accept.	PE S 501	Mat. Lab	1/item	1 of each item Wire - 18 in. length	----	----	9 days	Visual inspection by PE Sample only if questionable. Coated steel hardware is not permitted.
GUARANTY	Contractor's Guaranty	Accept.	<b>PE and Bridge Design approves and files.</b>	PE	----	----	----	----	----	
	Manufacturer's Standard Warranty	Accept.	<b>PE and Bridge Design approves and files.</b>	PE	----	----	----	----	----	
HIGH MAST POLES		Accept.	<b>Inspected and stamped by Const. Fab. Insp. Prior to use. See section 807 of this Manual.</b>	Const. Fab. Insp.	----	----	CA	----	----	Inspection report from Const. Fab. Insp. shall be sent to the PE
LIGHT POLES	Brochures, Certified Dimension Sheets & Description Data	Accept.	<b>Bridge Design approves and distributes to PE</b>	Bridge Design	----	----	----	----	----	----
MECHANICAL SYSTEMS		SEE SECTION 821 OF THIS MANUAL.								
MORTAR		Accept.	PE	Mat. Lab	1/shipment	1 gal friction top can	CC	50 yd <sup>3</sup>	19 days	Visual inspection by PE. Sample only if questionable.
PAINT AND PROTECTIVE COATINGS		SEE SECTION 811 OF THIS MANUAL.								
PILES		SEE SECTION 804 OF THIS MANUAL.								

**SECTION 822 ELECTRICAL SYSTEMS (Cont'd)**

MATERIAL		PURP.	SAMPLED BY	TESTED BY	MIN. FREQ.	MIN. QUANT.	CERT.	SMALL QUANTITY	TYPICAL HANDLING TIME	REMARKS
			METHOD			CONTAINER				
REINFORCING STEEL	Bars	Accept.	PE S 501	Mat. Lab	1/size/ source*	48 in. length	CA	----	11 days	*If listed on AML, material with a CA (Distr. 1) need not be sampled. Sample for verification if questionable.
STEEL GRID FLOORING		SEE SECTION 808 OF THIS MANUAL.								
SYSTEM TESTS		Accept.	----	Contractor	----	----	----	----	----	PE to observe tests and receive report of test results
TIMBER		Accept.	Inspected stamped by Const. Fab. Insp. Prior to use. See section 812 of this Manual.	Mat. Lab/ Const. Fab. Insp.	----	----	CD	----	11 days	Visual inspection by PE
WELDING		SEE SECTION 809 OF THIS MANUAL.								

**SECTION 823 FACILITIES**

MATERIAL		PURP.	SAMPLED BY	TESTED BY	MIN. FREQ.	MIN. QUANT.	CERT.	SMALL QUANTITY	TYPICAL HANDLING TIME	REMARKS
			METHOD			CONTAINER				
CONCRETE	Mix Designs, Materials & Tests	SEE SECTION 901 OF THIS MANUAL.								
CONCRETE (Structural)		SEE SECTION 805 OF THIS MANUAL.								
DECK DRAINAGE SYSTEMS		SEE SECTION 816 OF THIS MANUAL.								
DRILLED SHAFTS		SEE SECTION 803 OF THIS MANUAL.								
ELECTRICAL SYSTEMS		SEE SECTION 822 OF THIS MANUAL.								
EMBANKMENT		SEE SECTION 203 OF THIS MANUAL.								
EPOXY RESIN SYSTEMS	Epoxy	Accept.	PE S 601	Mat. Lab	1/lot	----	CC	1 gal	----	(AML) Specify type and grade
		Verif.	PE S 601	Mat. Lab	1/lot	1 qt each component friction top can	CC	1 gal	11 days	(AML) Specify type and grade Copy of CC shall be submitted with sample.

1-800 - 32 10/21

1-800 - 33 10/21

SECTION 823 FACILITIES (Cont'd)

MATERIAL	PURP.	SAMPLED BY	TESTED BY	MIN. FREQ.	MIN. QUANT.	CERT.	SMALL QUANTITY	TYPICAL HANDLING TIME	REMARKS	
		METHOD			CONTAINER					
FASTENERS	Anchor Bolts, Nuts, and Washers	Accept.	PE S 501	Mat. Lab	1/size/type	1 of each item*	CA	----	11 days	*One of each size and type of bolt, nut and washer is to be submitted.
	Bolts, Nuts & Washers (Except for Anchor Bolt Assemblies)	Accept.	PE S 501	Mat. Lab	1/diameter/shipment	2 of each item*	CC	----	10 days	*Sample only if questionable. If sampled, two bolts, two nuts and two washers are to be submitted. Copy of CC to accompany sample and ID.
FENCES		SEE SECTION 705 OF THIS MANUAL.								
JACKED OR BORED PIPE		SEE SECTION 728 OF THIS MANUAL.								
MECHANICAL SYSTEMS		SEE SECTION 821 OF THIS MANUAL.								
MORTAR		Accept.	PE S 601	Mat. Lab	1/shipment	1 gal friction top can	CC	50 yd <sup>3</sup>	19 days	Visual inspection by PE. Sample only if questionable.
PAINT AND PROTECTIVE COATINGS		SEE SECTION 811 OF THIS MANUAL.								
PILES		SEE SECTION 804 OF THIS MANUAL.								
REINFORCEMENT		SEE SECTION 806 OF THIS MANUAL.								
REINFORCING STEEL	Steel, Strand, and Wire Rope	Accept.	PE S 501	Mat. Lab	1/size/ source*	48 in. length	CA	----	11 days	*If listed on AML, material with a CA (Distr. 1) need not be sampled. Sample for verification if questionable.
STEEL GRID FLOORING		SEE SECTION 808 OF THIS MANUAL.								
STRUCTURAL METALS		SEE SECTION 807 OF THIS MANUAL.								
TIMBER		Accept.	<b>Inspected stamped by Const. Fab. Insp. Prior to use. See section 812 of this Manual.</b>	Mat. Lab/ Const. Fab. Insp.	----	----	CD	----	11 days	Visual inspection by PE
WELDING		SEE SECTION 809 OF THIS MANUAL.								

**SECTION 829 INSTRUMENTATION AND EVALUATION**

MATERIAL	PURP.	SAMPLED BY		TESTED BY	MIN. FREQ.	MIN. QUANT.		CERT.	SMALL QUANTITY	TYPICAL HANDLING TIME	REMARKS
		METHOD				CONTAINER					
ELECTRICAL SYSTEMS		SEE SECTION 822 OF THIS MANUAL.									
FASTENERS	Bolts, Nuts & Washers (Non-High Strength)	Accept.	PE S 501	Mat. Lab	1/diameter/shipment	2 of each item*	CC	----	10 days	*Sample only if questionable. If sampled, two bolts, two nuts and two washers are to be submitted. Copy of CC to accompany sample and ID.	
	High Strength Bolts, Nuts & Washers and Tension Indicators	Accept.	PE S 501	Mat. Lab	1/type/size/heat	2 of each item*	CA	----	10 days	* For sizes over 1-1/8", sample only 1 of each item. Copy of CA to accompany sample and ID. Similar size, type and heat of nut and washer need not be submitted.	
	Steel Lockpins and Collars	Accept.	PE S 501	Mat. Lab	1/lot or shipment	1 pin and collar	CC	----	10 days	Copy of CC to accompany sample ID.	

**SECTION 830 REPAIR AND REHABILITATION**

MATERIAL	PURP.	SAMPLED BY		TESTED BY	MIN. FREQ.	MIN. QUANT.		CERT.	SMALL QUANTITY	TYPICAL HANDLING TIME	REMARKS
		METHOD				CONTAINER					
BEARINGS		SEE SECTION 814 OF THIS MANUAL.									
BRIDGE RAILINGS, HAND RAILINGS, AND PERMANENT ROADWAY BARRIERS		SEE SECTION 810 OF THIS MANUAL.									
CONCRETE	Mix Designs, Materials & Tests	SEE SECTION 901 OF THIS MANUAL.									
CONCRETE (Structural)		SEE SECTION 805 OF THIS MANUAL.									
CONCRETE APPROACH SLABS		SEE SECTION 813 OF THIS MANUAL.									
DRAINAGE SYSTEMS		SEE SECTION 816 OF THIS MANUAL.									
EPOXY RESIN SYSTEMS	Epoxy	Accept.	PE S 601	Mat. Lab	1/lot	----	CC	1 gal	----	(AML) Specify type and grade	
		Verif.	PE S 601	Mat. Lab	1/lot	1 qt each component friction top can	CC	1 gal	11 days	(AML) Specify type and grade Copy of CC shall be submitted with sample.	
ELECTRICAL SYSTEMS		SEE SECTION 822 OF THIS MANUAL.									
FACILITIES		SEE SECTION 823 OF THIS MANUAL.									

1-800 - 35 10/21

1-800 - 36 10/21

SECTION 830 REPAIR AND REHABILITATION (Cont'd)

MATERIAL	PURP.	SAMPLED BY	TESTED BY	MIN. FREQ.	MIN. QUANT.	CERT.	SMALL QUANTITY	TYPICAL HANDLING TIME	REMARKS	
		METHOD			CONTAINER					
JOINTS		SEE SECTION 815 OF THIS MANUAL.								
MECHANICAL SYSTEMS		SEE SECTION 821 OF THIS MANUAL.								
MOVABLE BRIDGES		SEE SECTION 820 OF THIS MANUAL.								
PAINT AND PROTECTIVE COATINGS		SEE SECTION 811 OF THIS MANUAL.								
REINFORCEMENT		SEE SECTION 806 OF THIS MANUAL.								
STEEL GRID FLOORING		SEE SECTION 808 OF THIS MANUAL.								
STRUCTURAL CONCRETE PATCHING	Structural Concrete Patching Material	Accept.	PE S 601	Mat. Lab	1/lot*	1 container of each component	CA **	----	16 days	* Provide components and appropriate mixing information ** Provide CA if required by PE
	Rapid-Setting Concrete Patching	Accept.	PE S 601	Mat. Lab	1/lot*	1 sack	CC	----	16 days	(AML) - for patching tops of decks only *Visual inspection by PE Sample only if questionable.
STRUCTURAL METALS		SEE SECTION 807 OF THIS MANUAL.								
TIMBER		SEE SECTION 812 OF THIS MANUAL.								
WELDING		SEE SECTION 809 OF THIS MANUAL.								

1-800 - 37 10/21