

Volume I Section 7.1

TIMBER QUALITY CONTROL PROGRAM

7.1.1 PURPOSE

To provide the Florida Department of Transportation (Department) with a guide to the standardization of the inspection and acceptance of timber products (Products). To ensure that Products are produced and accepted in compliance with the Standard Plans, Standard Specifications, approved drawings and all other contract documents.

7.1.2 AUTHORITY

Sections 20.23(4)(a) and 334.048 (3)

7.1.3 REFERENCES

Florida Department of Transportation Standard Specification for Road and Bridge Construction

Code of Federal Regulations (CFR), Federal-Aid Policy Guide (FAPG), Subchapter G – Engineering and Traffic Operations, Part 637 – Construction Inspection and Approval, Subpart B – Quality Assurance Procedures for Construction

Construction Project Administration Manual (CPAM)

American Wood Preserver's Association (AWPA)

Southern Pine Inspection Bureau (SPIB)

ASTM International (ASTM)

7.1.4 SCOPE

This procedure establishes the Department's process and requirements for the qualification of timber production facilities. The process and requirements pertain to the manufacturing and inspection necessary to substantiate materials conformance to the contract requirements and FDOT Specifications.

7.1.5 GENERAL INFORMATION

Products include but are not limited to: Guardrail posts and blocks, fence posts, bracing, pilings, and structural timber.

References to AWPA, SPIB, or ASTM are to the latest publication, unless otherwise stated.

7.1.6 RESPONSIBILITIES

7.1.6.1 State Materials Office (SMO)

The SMO personnel perform initial qualification reviews of the Timber Treatment Plant (Plant) upon submission of their Quality Control (QC) plan. The SMO inspects the Plant to ensure that they meet specification requirements. Revise the acceptance status of the Plant in the Department's Materials Acceptance and Certification (MAC) database upon the satisfactory completion of the QC Plan and Plant qualification review. The SMO will perform audits of the facilities on a schedule not to exceed two calendar years.

Personnel from the SMO shall, upon request, inspect any prospective Plant to confirm that facility's potential for supplying Products to the Department is in compliance with ***FDOT Specification Sections 951, 952, 953, 954, and/or 955***. Upon completion of this inspection, the State Materials Office shall identify any corrective actions to the producer regarding their approval status based on the results of the inspection.

7.1.7 GUIDELINES FOR QC PLAN

The SMO reviews the Plant's proposed QC Plan. Ensure that the plan includes information related to the plant location, personnel qualifications, equipment, methods of traceability and hold points. An individual shall be identified as the

quality control manager of the production of Products. The minimum qualification for this individual shall be two years' experience in grading and treating timber products.

The QC Plan shall describe how each individual type of timber product is produced, treated, and inspected. The inspection guidelines as described in **Appendix A** shall be addressed in the QC Plan.

The QC Plan shall also indicate the type of marking to be used on Products used on Department projects. The mark shall be unique and peculiar to that specific facility and QC inspector. (A hammer mark will suffice this requirement).

7.1.8 ACCEPTANCE CRITERIA

Acceptance of timber products shall be based on the Plant's certification that the product meets the requirements of the appropriate **Specifications** and on the placement of the Plant's identification mark on every item delivered to the job site. Each shipment to the job site must be accompanied with a certification signed by a QC manager including the project/order number, charge numbers, and assay retention results. Any Products found to be unacceptable at the job site will be returned to the Plant at no cost to the Department.

7.1.9 TRAINING

None required.

7.1.10 FORMS

None required.

APPENDIX A

PROJECT SPECIFIC COMPLIANCE	YES	NO
Guardrail Posts & Block (Specification 967 & 955)		
[1] Dressed on all four sides (S4S). Shaped and drilled prior to delivery.		
[2A] <u>Treatment: Pedestrian Application / Ground & Freshwater Contact</u> Certification marked with CA-C, CA-B, or ACQ and meeting Section 955		
[2B] <u>Treatment: Non-Pedestrian Application / Ground & Freshwater Contact</u> Certification marked with CA-C, CA-B, ACQ, ACZA, or CCA and meeting Section 955		
[2C] <u>Treatment: Non-Pedestrian Application / Brackish-Saltwater Contact</u>		

Certification marked with CCA and meeting Section 955		
---	--	--

PROJECT SPECIFIC COMPLIANCE	YES	NO
Fence Posts & Bracing (Specification 954 & 955)		
[1] No unsound knots, Sound knots $\leq 1/3$ dia., Free of decayed wood, rot, red heart, ring shake Posts shall be peeled (3" x 1/2" may remain). Straightness shall be ± 2.0 " on center for any 8' length Tolerances on Length and Cross section: Length -1", +2". Cross section -3/8" due to treatment		
[2A] <u>Treatment: Pedestrian Application / Ground & Freshwater Contact</u> Certification marked with CA-C, CA-B, or ACQ and meeting Section 955		
[2B] <u>Treatment: Non-Pedestrian Application / Ground & Freshwater Contact</u> Certification marked with CA-C, CA-B, ACQ, ACZA, or CCA and meeting Section 955		
[2C] <u>Treatment: Non-Pedestrian Application / Brackish-Saltwater Contact</u> Certification marked with CCA and meeting Section 955		

PROJECT SPECIFIC COMPLIANCE	YES	NO
Structural Timber (Specification 952 & 955)		
[1A] Boards: Southern Pine, SPIB Grading of No. 1, Finish is marked as either C&BTR (both faces), C&BTR, or D		
[1B] Certification marked with CCA meeting Section 955 <u>OR</u> Certification marked Untreated, with a min. 85% Heartwood on any girth		
[2A] Dimensional: Southern Pine, SPIB Grading of No. 1 (Knot Sizes all meet SPIB Grading Scale)		
[2B] Certification marked with CCA meeting Section 955 <u>OR</u> Certification marked Untreated, with a min. 85% Heartwood on any girth		
[3A] Timber: Southern Pine (≥ 5 " dia.), SPIB Grading of No. 1 or No. 2 Timber		
[3B] Certification marked with CCA meeting Section 955 <u>OR</u> Certification marked Untreated, with a min. 85% Heartwood on any girth		

PROJECT SPECIFIC COMPLIANCE	YES	NO
Timber Piling (Specification 953 & 955)		
[1] <input type="checkbox"/> Pacific Coast Douglas Fir <input type="checkbox"/> Cypress <input type="checkbox"/> Southern Yellow Pine <input type="checkbox"/> Other:		
[2] Length ± 6.0 ", Straightness $\pm 1\%$, surface kinks < 1 in. / 5 ft., Piles shall be peeled. Sound Knot $\leq 1/3$ dia. Unsound Knot or Decay $\leq 1/6$ dia. and $\leq 1-1/2$ " depth (ASTM D25) Cable slings required for treated timber (No mechanical grabbers). Brand ea. Pile 6.0' above butt end		
[3A] Cypress: Other than foundation piles, must have 12.0" (min) red or black heart, at the butt,		

<u>Treatment Cypress</u> : Treatment is not reliable. May be Specified, but Assay results not repeatable		
[4A] Pacific Coast Douglas Fir : Douglas Fir shall be Pacific Coast Douglas Fir		
[4B] <u>Treatment Pacific Coast Douglas Fir</u> : <u>Non-Pedestrian Application / Ground & Freshwater Contact</u> Certification marked with ACZA meeting Section 955		
[4C] <u>Treatment Pacific Coast Douglas Fir</u> : <u>Non-Pedestrian Application / Brackish-Saltwater Contact</u> Certification marked with ACZA meeting Section 955		
[5] Southern Yellow Pine : At least 30% summer wood <u>Treatment Southern Yellow Pine</u> : <u>Non-Pedestrian Application / Brackish-Saltwater Contact</u> Certification marked with CCA meeting Section 955		