



**TREATED & UNTREATED
TIMBER & LUMBER**

GENERAL

Wood products consist of untreated and treated timber, lumber, piles, sawed wood posts, round wood posts and signposts. Treated and untreated wood products shall conform to the requirements of the Iowa Department of Transportation (DOT) Specifications, and as described herein. For general treated wood products requirements refer to [Section 4160](#), [4161](#) and [4163](#). For untreated lumber requirements refer to [Section 4162](#). Wood Sign Posts refer to [Section 4164](#). Timber piling refer to [Section 4165](#).

Treated wood material shall be subject to acceptance and/or monitor testing samples secured at the project site or from stockpiles as outlined herein. Approved Treatment Plants are listed in [Appendix A](#) of this IM. Approved Treated Wood Suppliers are listed in [Appendix B](#). **Any wood material furnished from an unapproved supplier or treatment plant shall not be accepted.**

TYPES OF TIMBER AND LUMBER

Treated and untreated timber and lumber will be classified as follows:

1. Structural Timber and Lumber
 - a. Guardrail posts
 - b. Timber piles
 - c. Timber poles
 - d. Timber structures (bridges, noise and retaining walls)
2. Non-Structural Timber and Lumber
 - a. Sign posts
 - b. Fence posts
 - c. Treated timber edging for slope protection

ACCEPTANCE OF TREATED STRUCTURAL TIMBER AND LUMBER

The contractor shall ensure the following requirements are met for all shipments of treated wood products **prior** to incorporation into Iowa DOT projects. **ALL** of the following conditions apply:

1. Treated wood products shall be furnished from **Approved Suppliers** as listed in [Appendix B](#), and treated by an **Approved Treatment Plant** as listed in [Appendix A](#).
2. **Invoice or Bill of Materials:** For each shipment to a project, the invoice or bill of materials shall include:
 - a. Project Number
 - b. Treatment plant(s)
 - c. Types of wood products
 - d. Charge number and quantity of products separated by length and size
 - e. Copies of Treatment Test reports for each charge number listed
 - f. Copies of any certificates of grade, if required.

Proof of Inspection by Iowa DOT Materials Inspector prior to incorporation to a project and shall be as follows:

- g. Signature and date of inspection by an Iowa DOT Materials inspector on each Treating Test report for each charge number listed in the bill of lading. The report may bear a note whether a sample was collected for monitor testing and any test results.
 - h. Multiple inspection signatures and dates of inspection may be on the plant report when material is shipped between different supplier/contractor warehouse locations before arriving to the project site.
 - i. Any monitor test results shall be in compliance.
3. **Each** piece of wood product over 3 ft in length in the shipment must bear an Identification Stamp or Logo. Logos are for use in round wood products only. Approved ID stamps and logos are shown in [Appendix A](#) and include the following:
 - a. Name of the treatment plant
 - b. Year of treatment. May also include month of treatment.
 - c. Species of wood
 - d. Preservative treatment type
 - e. Retention level
4. Grade stamp or certification: Wood products over 3 ft in length shall bear a grade stamp as shown in [Appendix C](#). The following wood products do not require a grade stamp and require a certificate of grade from the lumber mill or producer.
 - a. round wood products
 - b. 45 inch terminal posts are stamped MFG. No. 1
 - c. Material less than 3 ft in length
5. Additional Markings: Any additional markings as required per contract documents
6. Each bundle of wood shall be identifiable by a tag with the charge number.
7. Treatment type and treatment levels meet the requirement of [Section 4161](#).

Should there be any discrepancies between the Iowa DOT monitor test results and the treater's test results or treater quality control; the Iowa DOT results shall be conclusive and binding. Before rescinding approval of a shipment based on test result discrepancies, the Iowa DOT shall collect one additional penetration and retention sample on the same shipment for re-testing. A noncompliant result from any additional re-tests shall be considered sufficient cause for rejection.

ACCEPTANCE OF TREATED NON-STRUCTURAL TIMBER AND LUMBER

Acceptance of non-structural timber and lumber shall be on the basis of visual inspection of required stamps and logos on the material. The contractor shall ensure the following requirements are met for all shipments of treated wood products **prior** to incorporation into Iowa DOT projects. ALL of the following conditions apply:

1. Treated wood products shall be furnished from **Approved Suppliers** as listed in [Appendix B](#), and treated by an **Approved Treatment Plant** as listed in [Appendix A](#). The approved supplier(s) and treatment plant(s) should be recorded in project records.
2. Each piece shall have a an Identification stamp or logo. Logos are for use in round wood products only. Approved ID stamps and logos are shown in [Appendix A](#) and include the following:
 - a. Name of the treatment plant
 - b. Year of treatment. May also include month of treatment.
 - c. Species of wood
 - d. Preservative treatment type
 - e. Retention level
3. **Grade Identification (product stamp only)**: Wood products over 3 ft in length shall bear a grade stamp as shown in [Appendix C](#).

The following non-structural wood products do not require a grade stamp and require a certificate of grade from the lumber mill or producer.

 - a. round wood products
 - b. Material less than 3 ft in length
4. Items without the required stamp or logo and grade shall **not** be incorporated into the project.
5. Treatment type and treatment levels meet the requirement of [Section 4161](#).

ACCEPTANCE OF UNTREATED WOOD PRODUCTS

1. Unless otherwise stated, untreated timber and lumber shall conform to the requirements of Section 4162 of the Standard Specifications.
2. **Grade stamp**: Wood products over 3 ft in length shall bear a grade stamp as shown in [Appendix C](#). The following wood products do not require a grade and require a certificate of grade from the lumber mill or producer.
 - a. round wood products
 - b. Material less than 3 ft in length

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3. Additional Markings: Any additional markings as required per contract documents
 4. All sawn material shall be of the grade specified under the Iowa DOT Specifications.

MONITORING, ACCEPTANCE, & INSPECTION BY IOWA DOT

1. Treated wood products shall be inspected at the supplier's yard, contractors stock, or through shipments to project sites. The District Materials personnel will be responsible for performing inspections of treated wood products and collecting any monitoring samples, if required. Refer to [Appendix E](#) for Wood Sampling Instructions.
 2. Suppliers' Warehouse Stock:
 - a. The inspection rate for acceptance of material at an approved supplier's warehouse stock shall be once per new shipment of treated material per source arriving at the supplier's yard.
 - b. The supplier is responsible for contacting the appropriate District Materials Inspector for each new shipment of material.
 - c. The inspector will inspect the shipments to ensure all required marks and stamps are on the material, as well as ensure all proper documentation is in order. Upon satisfactory inspection, the District Materials Inspector shall sign and date the inspection reports.
 - d. If a monitoring sample is collected, the Materials Inspector will note the sample number on the appropriate Treatment Test Report. The Materials Inspector shall then contact the supplier and provide copies of the test results for their records. A note showing the test result and lab number shall then be added to the appropriate Treatment Test Report either by the Materials Inspector or by the Supplier.
 - e. The supplier shall maintain a detailed inventory of each shipment and provide traceability of material when requested.
 3. Contractors' Stock:
 - a. Contractors who purchase material for use on multiple projects and store the material at their yard, shall schedule an inspection of the shipment(s) of wood with the appropriate District Materials Engineer as soon as material is scheduled to arrive at their yard.
 - b. The District Materials Inspector will inspect the shipments to ensure all required marks and stamps are on the material, as well as ensure all proper documentation is in order. Upon satisfactory inspection, the District Materials Inspector shall sign and date the inspection reports.
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- c. If a monitoring sample is collected, the Materials Inspector will note the sample number on the appropriate Treatment Test Report. The Materials Inspector shall then contact the contractor (and supplier if appropriate) and provide copies of the test results for their records. A note showing the test result and lab number shall then be added to the appropriate Treatment Test Report either by the Materials Inspector or by the Supplier.
 - d. The contractor shall maintain a detailed inventory of each shipment and provide traceability of material when requested.
4. Material Shipped Directly to Project Site:
- a. For Suppliers that do not maintain warehouse stock and ship directly from the treatment plant to a contractor's yard or to the project site, the material cannot be incorporated into the project without prior inspection by the appropriate District Materials Inspector.
 - b. It is the contractor's and supplier's responsibility to schedule an inspection of the shipment(s) of wood with the appropriate District Materials Engineer at the final destination of the material as soon as a shipping date is available.
 - c. The District Materials Inspector will inspect the shipments to ensure all required marks and stamps are on the material, as well as ensure all proper documentation is in order. Upon satisfactory inspection, the District Materials Inspector shall sign and date the inspection reports.
 - d. If a monitoring sample is collected, the Materials Inspector will note the sample number on the appropriate Treatment Test Report. The Materials Inspector shall then contact the supplier and provide copies of the test results for their records. A note showing the test result and lab number shall then be added to the appropriate Treatment Test Report either by the Materials Inspector or by the Supplier.
 - e. The supplier without warehouse stock shall maintain detailed files of each shipment and provide traceability of material when requested.
5. In addition, random examinations and inspections of treated and untreated wood shall be conducted at any time by an Iowa DOT Inspector to ensure conformity to the specification requirements, and lack of damage or defects.
6. The minimum monitor-sampling rate shall be four samples per treatment plant per year. Refer to Appendix E for Wood Sampling Instructions.
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WOOD PRODUCT MARKINGS

1. Identification Stamp, Mark or Brand

- a. Approved treatment plants shall mark all treated material with a permanent, legible identification stamp, brand, mark or logo as shown in [Appendix A](#).
- b. The identification information may be heat branded, hammer stamped, or metal tagged. If metal tags are used, they shall be 19-gauge or thicker, Grade 40, G60 galvanized steel. The information on the metal tag shall be stamped or engraved with a minimum character size of 1/8 inch.
- c. The identification brand/stamp/tag shall be placed permanently on each piece of treated material of 3 feet in length or larger per charge.
- d. This brand/stamp/tag may be placed on the material before or after treatment depending on the applicable industry practice. For material treated with waterborne preservatives, the identification brand may be ink stamped, provided the information is clearly visible and legible.
- e. For round material, the treater shall stamp both ends with an identifying company logo for the treatment plant. The logo shall represent the treater, treatment type, species of wood, and retention level. Treaters of round material shall submit an identifying logo for their material. Refer to [Appendix A](#) for logos.

2. Grade Mark

- a. All untreated and treated wood sawn material requires a grade mark, with the exception of 45-inch terminal posts, shall contain a quality grade mark of an accredited grade monitoring and inspection agency approved under the American Lumber Standards Committee (ALSC). A list of typical quality grade marks of grade inspection agencies approved by the ALSC is included in [Appendix C](#) of this IM.

NOTE: ONLY 45 inch Terminal Posts to be used for guardrails that cannot be stamped with a quality grade mark due to sizing of material shall then be stamped **MFG No. 1** to indicate that the terminal posts were cut from an original piece graded as a No. 1. Wane requirements shall be waived.

- b. Material less than three (3) feet in length does not require a grade mark; however, a certification statement from the mill/processor certifying the grade of the material shall be provided. See Documentation Section of this IM.
- c. Round wood posts, round woodpiles, and round wood poles do not require a grade, since the grading rules apply only to sawn material.

3. Additional Stamps or Marks

In addition to the required product markings, the contractor shall be responsible to ensure that any additional marks required per contract documents are placed on the material prior to incorporation into the project.

4. Each bundle of treated wood material shall be identifiable by a tag with the charge number. Partial bundles shall be re-bundled and tagged with the charge number to maintain identity of the product.

DOCUMENTATION

1. Certification of Grade

Material less than three (3) feet in length shall not require a grade mark; however, a certification statement shall be required from the lumber mill that re-sized the material. The certification statement shall be as follows:

“This material of size ___ has been processed from _____ (Fill in Species of Wood) originally graded as (Fill in Grade No.), and it meets the applicable Iowa DOT Specifications and IM requirements.”

2. Treatment Test Report

The treatment plant shall furnish an inspection/treatment test report for each charge of material.

The treatment inspection report shall contain the minimum information required under the Inspection Report Guidelines as outlined in [Appendix D](#) of this IM.

3. Invoice or Bill of Materials

- a. Each shipment to a project site shall be accompanied by a detailed identification list, invoice or bill of materials. It shall show the:

- a. Project Number
- b. Treatment plant(s)
- c. Types of wood products
- d. Charge number and quantity of products separated by length and size
- e. Copies of Treatment Test reports for each charge number listed
- f. Copies of any certificates of grade, if required.

4. The treatment plant shall send with each shipment a copy of all treatment test reports, any grade certification statements, and an invoice/bill of materials for all shipments to the state of Iowa. A copy of these documents shall be sent to the Materials Office, 800 Lincon Way, Ames, IA 50010.

5. Treatment Plants, Contractors with warehouse stock, and Suppliers shall retain copies of documentation for each shipment for a period of three years.
6. The contractor, either directly or through their supplier, shall be responsible to furnish a copy of the bill of lading for each shipment to a project, all treatment test reports and any grade certification statements to the appropriate District Materials Engineer prior to the incorporation into the project. It shall be the contractor's responsibility to ensure the project number is provided on all required documents.

STORAGE OF TREATED WOOD PRODUCTS

Treated wood products shall be stored off the ground and stacked on treated wood or other non-decaying cribbing. Sufficient support shall be used under treated wood products and shall not produce any noticeable distortion, sagging, or bowing on any of the stored material. Storage area shall be free of debris, vegetation, and have sufficient drainage to prevent treated wood products from contact with standing water.