

CHAPTER 5

MATERIAL RESOURCE CONSERVATION AND EFFICIENCY

SECTION 501 GENERAL

501.1 Scope. See Appendix A.

SECTION 502 MATERIAL AND WASTE MANAGEMENT

502.1 Construction material and waste management plan. See Appendix A.

502.2 Post-construction waste recycling. Post-occupancy recycling areas shall be provided in accordance with ORS 455.422.

502.3 Storage of lamps, batteries and electronics. Storage space shall be provided for fluorescent lamps, HID lamps, batteries, electronics and other discarded items requiring special disposal by the *jurisdiction*.

SECTION 503 MATERIAL SELECTION

503.1 Material selection and properties. Building materials shall conform to Sections 503.2 and 503.3 where the materials selection project elective is chosen by the building owner.

Exception: Electrical and mechanical equipment and controls, plumbing fixtures, fire detection and alarm systems, elevators and conveying systems shall not be required to comply with Section 503 for the purpose of this elective.

503.2 Material selection. Not less than 55 percent of the total *building* materials used in the project, based on mass or materials cost, shall comply with Section 503.2.1, 503.2.2, 503.2.4 or 503.2.5. Compliance shall be demonstrated in accordance with those sections singularly or in combination. Each individual material item shall be applied to not more than one section from Sections 503.2.1 through 503.2.5.

503.2.1 Used materials. Used materials shall comply with the provisions for such materials in accordance with the applicable codes referenced in Sections 102.4.2 through 102.4.9 and the applicable requirements of this code.

503.2.2 Recycled content building materials. *Recycled content building* materials shall contain not less than 50-percent combined post-consumer and pre-consumer recovered material. The pre-consumer recycled content shall be counted as one-half of its actual content in the material.

503.2.3 Recyclable building materials. RESERVED.

503.2.4 Bio-based materials. Where *bio-based* materials are used, they shall comply with one or more of the following:

1. The *bio-based* content is not less than 50 percent as determined by testing in accordance with ASTM D 6866.

2. Wood and wood products used to comply with this section, other than salvaged or reused wood products, shall be *labeled* in accordance with the SFI Standard, FSC Indicators of Sustainable Forestry, PEFC Council Technical Document or equivalent fiber procurement system. As an alternative to an on-product *label*, a Certificate of Compliance indicating conformance with the fiber procurement system shall be permitted. Manufacturer's fiber procurement systems shall be audited by an accredited third party.

3. The requirements of USDA 7CFR Part 2902.

503.2.5 Indigenous materials. Indigenous materials or components shall be composed of resources that are recovered, harvested, extracted and manufactured within a 500 mile (800 km) radius of the *building site*. Where only a portion of a material or product is recovered, harvested, extracted and manufactured within 500 miles (800 km), only that portion shall be included. Where resources are transported by water or rail, the distance to the *building site* shall be determined by multiplying the distance that the resources are transported by water or rail by 0.25, and adding that number to the distance transported by means other than water or rail.

SECTION 504 LAMPS

504.1 Low mercury lamps. RESERVED.

504.2 Straight fluorescent lamps. RESERVED.

504.3 Compact fluorescent lamps. RESERVED.

SECTION 505 SERVICE LIFE

505.1 Building service life plan. RESERVED.

505.1.1 Core, shell and site hardscape components. RESERVED.

SECTION 506 CONSTRUCTION PHASE MATERIAL STORAGE, HANDLING AND MOISTURE CONTROL

506.1 Storage and handling of materials. RESERVED.

506.2 Construction phase moisture control. RESERVED.

506.3 Moisture control preventative measures. RESERVED.

SECTION 507 STRAWBALE CONSTRUCTION

507.1 Scope. RESERVED.

507.2 Bales. RESERVED.

- 507.2.1 Shape. RESERVED.
- 507.2.2 Size. RESERVED.
- 507.2.3 Ties. RESERVED.
- 507.2.4 Moisture content. RESERVED.
- 507.2.5 Density. RESERVED.
- 507.2.6 Partial bales. RESERVED.
- 507.2.7 Types of straw. RESERVED.
- 507.2.8 Protection of bales prior to installation. RESERVED.
- 507.2.9 Unacceptable bales. RESERVED.
- 507.3 Moisture control. RESERVED.
 - 507.3.1 Moisture content of bales. RESERVED.
 - 507.3.2 Moisture barriers and vapor retarders. RESERVED.
 - 507.3.3 Horizontal surfaces. RESERVED.
 - 507.3.4 Bale and concrete separation. RESERVED.
 - 507.3.5 Separation of plaster and earth. RESERVED.
 - 507.3.6 Shower walls, steam rooms. RESERVED.
- 507.4 Structure. RESERVED.
 - 507.4.1 Foundations. RESERVED.
 - 507.4.2 Wall height. RESERVED.
 - 507.4.3 Configuration of bales. RESERVED.
 - 507.4.4 Pre-compression of strawbale walls. RESERVED.
 - 507.4.5 Voids and stuffing. RESERVED.
 - 507.4.6 Plaster skins. RESERVED.
 - 507.4.6.1 Straightness. RESERVED.
 - 507.4.6.2 Plaster and membranes. RESERVED.
 - 507.4.7 Transfer of loads to plaster skins. RESERVED.
 - 507.4.8 Support of plaster skins. RESERVED.
 - 507.4.8.1 Support of plaster skins for structural walls. RESERVED.
 - 507.4.8.2 Support of plaster skins for nonstructural walls. RESERVED.
 - 507.4.9 Loadbearing strawbale walls. RESERVED.
 - 507.4.10 Lateral load resisting strawbale walls. RESERVED.
 - 507.4.11 Design coefficients and factors for seismic design. RESERVED.
 - 507.4.12 Resistance to out-of-plane lateral loads. RESERVED.
 - 507.4.13 Prescriptive design for plastered structural strawbale walls. RESERVED.
 - 507.4.13.1 Loads and other limitations. RESERVED.
 - 507.4.13.2 Gravity load bearing walls. RESERVED.
 - 507.4.13.3 Braced panels. RESERVED.
 - 507.4.14 Connection of framed walls to strawbale walls. RESERVED.
 - 507.4.15 Alternate performance design criteria. RESERVED.
- 507.5 Finishes. RESERVED.
 - 507.5.1 Vapor retarders. RESERVED.
 - 507.5.2 Plaster. RESERVED.
 - 507.5.3 Plaster and membranes. RESERVED.
 - 507.5.4 Lath and mesh for plaster. RESERVED.
 - 507.5.5 Plaster on nonstructural walls. RESERVED.
 - 507.5.6 Plaster on structural walls. RESERVED.
 - 507.5.7 Clay, earth and earthen plaster. RESERVED.
 - 507.5.7.1 Mesh. RESERVED.
 - 507.5.7.2 Thickness. RESERVED.
 - 507.5.7.3 Rain-exposed. RESERVED.
 - 507.5.7.4 Prohibited finish coat. RESERVED.
 - 507.5.7.5 Additives. RESERVED.
 - 507.5.7.6 Separation of wood and clay plaster. RESERVED.
 - 507.5.8 Soil-cement plaster, earth-cement, stabilized earth or pise. RESERVED.
 - 507.5.8.1 General. RESERVED.
 - 507.5.8.2 Mesh. RESERVED.
 - 507.5.8.3 Thickness. RESERVED.
 - 507.5.9 Gypsum plaster. RESERVED.
 - 507.5.10 Lime plaster. RESERVED.
 - 507.5.11 Cement-lime plaster. RESERVED.
 - 507.5.12 Cement plaster. RESERVED.
 - 507.5.13 Finishes over plaster. RESERVED.
 - 507.5.14 Prohibited plasters and finishes. RESERVED.
 - 507.5.15 Separation of wood and plaster. RESERVED.
- 507.6 Fire resistance. RESERVED.
 - 507.6.1 Clay plaster. RESERVED.
 - 507.6.2 Cement plaster. RESERVED.
 - 507.6.3 Rating with other finishes. RESERVED.
- 507.7 Permitted types of construction. RESERVED.
- 507.8 Openings in rated walls. RESERVED.
- 507.9 Clearance to fireplaces and chimneys. RESERVED.
- 507.10 Electrical. RESERVED.
 - 507.10.1 Wiring. RESERVED.
 - 507.10.2 Wiring attachment. RESERVED.
 - 507.10.3 Attachment of electrical boxes. RESERVED.
 - 507.10.4 Attachment of service and subpanels. RESERVED.

507.11 Thermal insulation. RESERVED.

507.11.1 Wall assembly *R*-value. RESERVED.

507.11.2 Unit *R*-value. RESERVED.

**SECTION 508
PROJECT ELECTIVES
RESERVED**

