

2.5 Wood Structure Exteriors

Siding, Trim and Architectural Elements

Many of the City's dwellings are wood frame structures. Historically, it was common to combine several types of wood siding, such as clapboard with shingles. Wood was used for trim, brackets, columns, balustrades, window units, and shutters. Collectively, these wooden materials, both functional and decorative, are important in defining the architectural and historical character of a building, and their retention, protection, and repair are of particular importance.

Common wood siding types

- Vertical Board and Batten
- Weatherboard: beveled clapboard, ship-lap, tongue-in-groove
- Shingles: beveled square end, beveled pattern end, split shake



Proper installation of siding and trim allows the structure to shed and deflect storm water and allows for the outward escape of water vapor from the framed wall cavities. Modifications to an exterior wall which inhibit the ventilation of moisture from the wall cavity will promote fungal growth through the excessive buildup of moisture. Excessive fungal growth will eventually invade the wood and lead to structural deterioration. Exterior peeling of properly applied paint is early evidence of excessive moisture within the wall.

Synthetic Siding and Trim

As a general rule, the concealment of original wood siding, trim and architectural elements with aluminum, vinyl, or synthetic material is not appropriate. With some exceptions, synthetic materials do not accurately imitate the original wood in dimension or texture.

Applying a synthetic veneer, typically with a foam underlayment, over the wood exterior will inhibit the escape of moisture from the wall cavity. Any water that regularly penetrates the exterior synthetic shell because of failed flashing or caulk will further promote the moisture buildup within the wall. In such an environment, fungal wood decay can persist for years, and is not easy to detect because no visual damage occurs to the outside surface of the synthetic siding. Insects may invade decayed wood hidden beneath synthetic material and further promote damage to the original structure.

In situations where the majority of the original wood exterior is damaged and deteriorated beyond repair and salvage, the original should be replaced by new material which accurately duplicates the original in appearance, shape, dimension and texture. New wood, properly installed and protected, is the accepted standard. High tech wood substitutes will be considered acceptable materials on a case by case basis, and their installation may be limited to only specific applications as determined appropriate in the design review process.

Wood Building Exteriors

Recommended

- ✓ Identify, evaluate, and treat the causes of wood deterioration, including faulty flashing, leaking gutters, cracks and holes in siding, deteriorated caulking in joints and seams, plant material growing too close to wood surfaces, or insect or fungus infestation.
- ✓ Identify and retain wood features that are important in defining the overall historic character of the building such as siding, cornices, brackets, window architraves, and doorway pediments
- ✓ Protect and maintain wood features by providing proper drainage so that water is not allowed to stand on flat, horizontal surfaces or accumulate in decorative features.
- ✓ Inspect painted wood surfaces to determine whether repainting is necessary or if cleaning is all that is required.
- ✓ Evaluate the overall condition of the wood to determine whether more than protection and maintenance are required, that is, if repairs to wood features will be necessary.
- ✓ Designing and installing a new wood feature such as a cornice or doorway when the historic feature is completely missing. It may be an accurate restoration using historical, pictorial, and physical documentation, or be a new design that is compatible with the size, scale, and material of the historic building.
- ✓ Wood original to a dwelling should be repaired rather than replaced. If replacement is necessary, wood siding and shingles should be replaced with new siding or shingles to match the original in size, placement, and design. (Reference- preservation brief on the Use of Substitute Siding Materials, and "The Hazards of Syn. Siding" article by Brian Conway, Historic Illinois, 12/1979.)

Not Recommended

- ❑ Removing or radically changing wood features which are important in defining the overall historic character of the building so that as a result, the character is diminished.
- ❑ Removing a major portion of the historic wood from a façade instead of repairing or replacing only the deteriorated wood, then reconstructing the facade with new material in order to achieve a uniform or "improved" appearance.
- ❑ Using substitute materials for the replacement part that does not convey the visual appearance of the surviving parts of the wood feature or that is physically or chemically incompatible.
- ❑ Removing an entire feature that is not repairable and not replacing it; or replacing it with a new feature that does not convey the same visual appearance.
- ❑ Concealing original wood components beneath synthetic materials such as vinyl, masonite, or aluminum.
- ❑ Concealing original siding beneath wood-based materials such as particle board, gyp board, or press board. These materials generally do not possess textures or designs which closely match wood siding.

Wood Materials on Historic Buildings

Wood materials in an array shapes, textures and designs are used in historic buildings for both functional and decorative purposes. The unique designs and patterns found in wood exteriors greatly contribute to the historic or architectural character of a building.



Cleaning Wood Exteriors

Recommended

- ✓ Removing damaged or deteriorated paint to the next sound layer using the gentlest method possible (hand-scraping and hand-sanding), then repainting.

Not Recommended

- ❑ Using chemical preservatives such as creosote which can change the appearance of wood features, unless they were used historically.
- ❑ Using heating devices improperly so that historic woodwork is scorched.

Painting and Sealing Wood Exteriors

Recommended

- ✓ Applying chemical preservatives to wood features such as beam ends or outriggers that are exposed to decay hazards and are traditionally unpainted.
- ✓ Using care with hot-air guns on decorative wood features and electric heat plates on flat wood surfaces when paint is so deteriorated that total removal is necessary prior to repainting.
- ✓ Using chemical strippers primarily to supplement other methods such as hand-scraping, hand-sanding and the above-recommended thermal devices. Detachable wooden elements such as shutters, doors, and columns may - with proper safeguards- be chemically dip-stripped.
- ✓ Applying compatible paint coating systems following proper surface preparation.

Not Recommended

- ❑ Stripping historically painted surfaces to bare wood, then applying clear finishes or stains in order to create a "natural look".
- ❑ Stripping paint or varnish to bare wood rather than repairing or reapplying a special finish. i.e., a grained finish to an exterior wood feature such as a front door.
- ❑ Stripping paint or other coating to reveal bare wood, thus exposing historically coated surfaces to the effects of accelerated weathering.
- ❑ Removing paint that is firmly adhering to, and thus, protecting wood surfaces.
- ❑ Using destructive paint removal methods such as propane or butane torches, sandblasting or water blasting. These methods can irreversibly damage historic woodwork.
- ❑ Failing to neutralize the wood thoroughly after using chemicals so that new paint does not adhere.
- ❑ Allowing detachable wood features to soak too long in a caustic solution so that wood grain is raised and the surface roughened.

Repair and Maintenance of Wood Exteriors

Recommended

- ✓ Retaining coatings such as paint that help protect the wood from moisture and ultraviolet light. Paint removal should be considered only where there is a paint surface deterioration and as part of an overall maintenance program which involves repainting or applying other appropriate protective coatings.
- ✓ Repairing wood features by patching, piecing-in, consolidating, or otherwise reinforcing the wood using recognized preservation methods. Repair may also include the limited replacement in kind- or with compatible substitute material - of those extensively deteriorated or missing parts of features where there are surviving prototypes such as brackets, moldings, or sections of siding.
- ✓ Replacing in kind an entire wood feature that is too deteriorated to repair - if the overall form and detailing are still evident- using the physical evidence to guide the new work. Examples of wood features include a cornice, entablature or balustrade. If using the same kind of material is not technically or economically feasible, then a compatible substitute material may be considered.

Not Recommended

- ❑ Failing to undertake adequate measures to assure the preservation of wood features.
- ❑ Replacing an entire wood feature such as a cornice or wall when repair of the wood and limited replacement of deteriorated or missing parts are appropriate.
- ❑ Creating a false historic appearance because the replaced wood feature is based on insufficient historical, pictorial, and physical documentation.
- ❑ Introducing a new wood feature that is incompatible in size, scale, and material.