Maintenance

and Preservation Philosophy

Outlined below are a number of guiding preservation principles that are modeled after the Secretary of the Interior's Standards for Rehabilitation. Reading through these principles will help you begin to think about how you can carry out your upcoming project in a way that both enhances your historic building or site and preserves its character-defining features.

Relationships

When evaluating the appropriateness of a given project, the structure, the site, and their relationship to the rest of the district should be given careful consideration.

Use

Historic structures within a local preservation district should be used for their originally intended purpose or for an alternate purpose that requires minimal alteration to the building and site.

Alterations

Repair is always preferred over replacement. When replacement is necessary, materials should replicate or match the visual appearance of the original.

A high level of craftsmanship distinguishes structures within local preservation districts and individual local landmarks. Distinctive features, finishes, and construction techniques should be preserved whenever possible.

Removal or alteration of historic fabric compromises the original character of a building or site and should be avoided.

Properties, however, do change over time. Those alterations that have become historic in their own right should be maintained as a record of a resource's physical evolution.

New Construction and Additions

Additions should be designed to minimize impact to historic fabric and should be compatible with the main structure in massing, size, and scale.

New, infill construction should be designed so that it is compatible with its neighbors in size, massing, scale, setback, facade organization, and roof form.

New construction and additions should also draw upon established stylistic elements to create a sympathetic design that is clearly of its own era.

False-Historicism

Additions that use new or salvaged material to create a conjectural or falsely historical appearance are inappropriate.

Treatments

Chemical and physical treatments should always be as gentle as possible, since harsh methods like sandblasting can irreversibly damage historic fabric.

Archeology

Historic sites often contain archeological resources, which should be protected and preserved whenever possible. If artifacts are found contact the Landmarks Commission for an assessment.

Siding and Trim

Character-Defining Features

Maintaining the historic character of a local preservation district is a tall order. Districts are made up of dozens of buildings and sites, and each possesses its own distinctive stylistic features. All of these elements combine to create a rich architectural fabric.

Individual district characterizations prepared for the Landmarks Commission broadly describe these unique features and outline steps you can take to learn to "read" your building. Once you have identified these character-defining features, the entries that follow offer advice on how to protect and maintain them.

Terra Cotta

Energy Efficiency

✘ Do not use blown-in insulation in the walls of buildings. The use of blown-in insulation is not recommended in historic structures, because this technique does not install needed vapor barriers. Without a vapor barrier, moisture will condense within the walls, resulting in deterioration and mildew inside.

✓ Install batt insulation in attic and crawl spaces with the vapor barrier facing the heated space to prevent moisture build-up from condensation.

Entrances

✓ Retain entrance features that contribute to a building's architectural character. Such elements include doors, door hardware, transoms, fanlights, sidelights, pilasters, entablatures, columns, balustrades, handrails, and stairs.

✓ Retain and repair as much historic door fabric as possible. Repairs should use in-kind replacement materials and match the size, profile, and configuration of the original.

Entrance Maintenance Tips

✓ Carry out regular maintenance for entrance features. Proper maintenance includes regular cleaning, rust removal, limited paint removal, and the application of protective coatings.

✓ Remove and then reinstall door hardware when repainting.

✓ Apply weather stripping as needed. Installation of weather stripping around door frames can increase energy efficiency significantly.

✓ Leave historically clear-finished doors unpainted.

Masonry

✓ Maintain and preserve all historic masonry features, including walls, steps, cornices, window architraves, and columns. Each of these elements conveys architectural character through texture, bonding patterns, relief, and color.

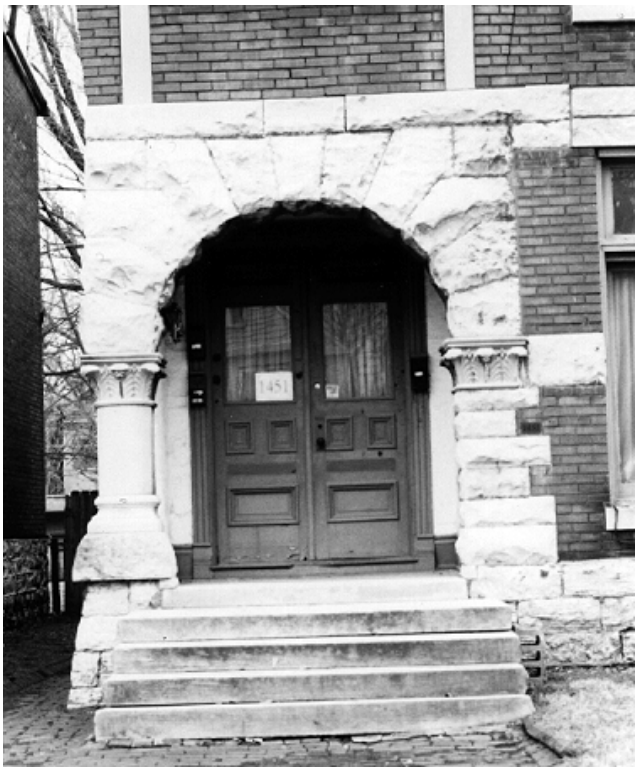
✓ Repair masonry through patching, piecing-in, or consolidation wherever possible. In areas of extensive deterioration or missing features, limited replacement in-kind is acceptable. If such replacement is not possible, a compatible substitute material may be used if it can successfully convey the visual appearance of the remaining elements.

✓ Use physical and documentary evidence to reproduce highly-deteriorated or missing historic architectural elements. Replace missing or deteriorated features with elements that replicate or are at least visually compatible with the historic character of the building or district.

Masonry Maintenance Tips

✓ Regularly inspect buildings for mortar deterioration caused by leaking roofs and gutters, exposure, differential settlement, and capillary action in which moisture is drawn up into the walls. Where mortar joints have deteriorated, repoint with an appropriate mortar mixture that is no harder than the original historic mortar.

Entrances



✓ Identify the cause(s) of localized mortar failure. Such failure can be caused by broken downspouts, damaged flashing, building settlement, or improper site drainage.

✓ Identify the cause(s) of localized masonry deterioration. Drainage problems, rising damp, freeze-thaw cycles, absorption of de-icing salts, building settlement, hard mortar, and vine or moss coverage can all cause brick to crack and crumble.

✘ Do not clean masonry surfaces unless heavy soiling is causing deterioration. Cleaning should use only the gentlest means necessary, such as low-pressure water and natural bristle brushes. Do not use metal brushes, which can damage masonry surfaces.

✘ Do not apply waterproof coatings, paint, or stucco to masonry buildings as a substitute for repointing and general maintenance. In addition to altering their original appearance, such treatments may ultimately trap moisture within the walls. They should be used only as a last resort in instances where maintenance and masonry repairs have not succeeded in limiting water penetration.

Masonry

✓ Remove deteriorated paint only to the next sound layer before applying a compatible paint coating system to previously-painted masonry. Paint that firmly adheres to masonry should be left in place, since it acts as a protective coating.

✓ Install sloping mortar wash surfaces at the tops of chimneys to protect the chimney walls.

✘ Do not place insulation within the cavities of masonry walls. This limits the ability of water vapor to pass through the walls and could lead to condensation-related deterioration within the walls. In addition, installation can significantly damage historic fabric.

Carved Limestone

✘ The use of anti-graffiti masonry sealants is not recommended, because they alter the appearance of historic masonry after frequent applications.

Metals

✘ Do not remove architectural metal features that are important to defining the historic character of the building. Such elements include, but are not limited to, windowhoods, doors, hardware, stairways, railings, cornices, roof cresting and finials, columns, piers, capitals, lanterns, canopy hoods, and fence material.

✓ Replace only the portions of metal features exhibiting significant deterioration, leaving all sound portions intact. Replacements should be patched, spliced or reinforced using an accepted preservation approach and be composed of in-kind materials. If in-kind replacement is not possible, a visually- and physically-compatible substitute may be used.

✓ Base the reconstruction of any missing metal feature on historical, pictorial, and physical evidence. If such evidence is insufficient, features should be of a compatible new design rather than a falsely-historical or conjectured reconstruction. New designs should be compatible in size, scale, material, and color with the historic building and district.

Metal Maintenance Tips

✓ Regularly inspect ornamental metalwork for signs of corrosion, tears, holes, or missing pieces. Rust and surface discoloration are often evidence of internal deterioration. Sanding, priming, and painting can address small patches of deterioration; however, more extensive damage may require limited replacement.

✓ Identify the types of metal on your historic building before undertaking any type of project, since the unique characteristics of each metal require different treatments.

Paint

✓ Retain and renew paint coatings on historically-painted wood features. Such coatings inhibit deterioration caused by ultraviolet light, moisture, and the elements. If chosen and applied with care, paint will help maintain the historic appearance of the building.

✓ Repaint using colors that are appropriate to the historic building and the district.

Paint Maintenance Tips

✓ Remove, handle, and dispose of lead-containing paint in compliance with all local, state, and federal standards.

✓ Remove deteriorated paint only to the next sound layer before applying a compatible paint coating system to previously-painted masonry. Paint firmly adhering to masonry should be left in place, since it acts as a protective coating.

✓ Remove only deteriorated paint layers using the gentlest means possible (handscraping and handsanding in conjunction with chemical strippers). Electric hot-air guns and electric heat plates may be used with extreme caution when total paint removal is required. Care should be taken not to scorch the wood or start a fire.

✘ Do not use propane or butane torches, sandblasting or waterblasting, or belt or disc sanders to remove deteriorated paint from the wood surfaces of historic buildings. These methods are extremely harsh and can significantly damage historic woodwork.

✓ Prepare wood surfaces properly and apply a compatible paint coating system following manufacturers' application instructions. Generally, a primer coat and two finish coats are recommended.

✓ The primary expense in repainting is the cost of the labor required to prepare the surface and apply the paint. The cost of the paint itself is relatively low. Spending additional money for a better quality of paint is cost-effective over the long-term, because it provides a durable coating and requires less-frequent repainting.

Wrought Iron

Cast Iron

✓ Coat all surfaces of wood repairs, including those that will be concealed, with primer. This is called "back-priming" and helps combat deterioration and warping caused by moisture absorption over time.

✓ Paint all wood porch elements. Painting protects porch elements from exposure and undue weathering.

Painted Wood

✓ Reapply an appropriate paint or other coating system to previously painted metal features after cleaning. Failure to do so will result in accelerated corrosion of the metal or alloys.

✓ Remove and then reinstall window and door hardware when repainting.

Porches and Entrances

✘ Do not remove historic porches or other entrance features. In the event that severe, widespread deterioration makes repair impossible, rebuild the porch or entrance using the original as a model.

✘ Do not replace an entire entrance or porch if limited replacement of deteriorated parts is possible.

✓ Surviving prototypes should be used as a basis for constructing replacement elements.

Porch and Entrance Maintenance Tips

✓ Install wood lattice or grillage between porch piers for adequate ventilation.

✓ Use historic, pictorial, and physical evidence to reconstruct severely deteriorated entrance or porch features.

Painted Masonry

✓ Install a stone or concrete plinth upon which the wood post and bottom steps can rest, which will help to control future deterioration by raising wood members above the ground level.

✘ Do not apply waterproof sealants over masonry walls or steps. It will cause moisture to become trapped within the steps or walls.

✘ Do not use rock salt or halite to melt snow and ice on stone or brick steps. Salts dissolved in the meltwater will be absorbed and crystallize, damaging historic masonry.

✓ Paint all wood porch elements. Painting protects porch elements from exposure and undue weathering.

Roofing

✓ Original roof elements should be maintained wherever possible, since they help define a building's historic character. Roof elements include the shape (hipped, gable, gambrel, mansard, etc.); decorative features (finials, crests, chimneys, etc.); and original sheathing materials (slate, wood, tile, metal, composition, etc.)

- ✓ Repair deteriorated sections of historic roofing material whenever possible through selective replacement rather than undertaking complete roof replacement.
- ✓ Replace historic roofing with in-kind materials wherever possible. Owners should strive to match existing or verifiable historic conditions. Substitute materials should be visually, physically, and chemically compatible with the remaining historic roof material and should be installed only when in-kind replacement is technically or economically infeasible.
- ✓ Remove only non-historic elements from roofs.

Roof Maintenance Tips

- ✓ Regularly inspect gutters, flashing, and downspouts to ensure that they are effective in carrying rainwater away from the building. All roof surfaces should be watertight, and flashing should be intact around chimneys, parapets, dormers, and along valleys created by intersecting slopes.
- ✓ Maintain the effectiveness of the roof by regularly cleaning gutters and downspouts, replacing deteriorated flashing as needed, properly venting attics to prevent moisture condensation, and inspecting for insect infestation.
- ✓ Use gutter guards to reduce the collection of organic matter.
- ✓ In the absence of a subsurface system, install splash blocks beneath downspouts to carry water away from the foundation and limit soil erosion.
- ✓ Replace any missing downspouts, because uncontrolled roof drainage will result in severe damage to masonry, foundations, and interiors over time.
- ✓ Install a sufficient number of gutter hangers to attach downspouts securely to the wall.
- ✓ Protect a leaking roof temporarily, until permanent repairs can be made. Without such intervention, deterioration of other building materials, such as adjacent masonry, wood, plaster, and paint, will be accelerated.
- ✓ Make provisions to protect adjacent features (windows, trim, etc.) and landscape elements when undertaking a roof replacement project.

Roof Form and Features

Flashing Replacement

Roof Materials

✓ Reduce wood deterioration by painting, repairing faulty flashing, leaking gutters, and cracks in siding, as well as removing invasive plant material and remedying fungus or insect infestation.

✓ Pay particular attention to the condition of the siding above the foundation. This area is exposed to rain, splashing water, and rising damp, which makes it very susceptible to deterioration.

✓ Treat rot by eliminating the source of excess moisture. Drying and cleaning the wood, and using a sterilizing fungicide and a wood preservative treatment should follow. Use only dry, un-infested wood for replacement.

Siding and Trim

✓ Preserve and retain wood features, such as cladding and decorative trim, that help to convey a building's historic character wherever possible.

✓ Replace only those portions of wood features that are deteriorated, retaining historic fabric to the greatest degree possible. Replacements should use in-kind materials wherever possible. If substitute materials are used, they should convey the visual appearance of the original feature, duplicating size, shape, and texture.

✓ Use recognized preservation methods, such as patching, piecing-in, and consolidation, to repair wood features as needed. Filling and caulking cracks followed by priming and painting can remedy many minor problems. Limited replacement of deteriorated elements with in-kind material or a compatible substitute should be based on physical evidence or historic precedent and convey the visual appearance of the surviving parts.

✓ Use historic, physical, and pictorial evidence to replicate entire missing wooden features, such as doorways and cornices. If a new design is preferred, it should be compatible with the size,

Siding and Trim Maintenance Tips

✓ Regularly inspect ornamental woodwork and siding for cracks or loose joints and recaulk and paint as needed.

✘ Do not strip historically-painted architectural features to bare wood, leaving it in an unfinished state.

✓ Repaint wood surfaces with colors that are appropriate to the historic building and the district.

✓ Use wood sealants only at vertical joints, such as where a clapboard meets a corner board. Applying sealant to horizontal joints will trap moisture and cause deterioration.

✓ Retain and renew paint coatings on historically-painted wood features. Such coatings inhibit deterioration caused by ultraviolet light, moisture, and the elements.

✓ Prepare wood surfaces properly and apply a compatible paint coating system following manufacturers' application instructions. Generally, a primer coat and two finish coats are recommended.

✓ Remove only deteriorated paint layers using the gentlest means possible. Handscraping and handsanding in conjunction with chemical strippers is best for wood structures, and chemical strippers are effective on masonry buildings. Electric hot-air guns and electric heat plates are not recommended, because of their

tendency to dry and scorch the wood and ignite debris behind clapboards.

✘ Do not use propane or butane torches, sandblasting or waterblasting or belt or disc sanders to remove deteriorated paint from historic buildings. These methods are extremely harsh and can significantly damage historic woodwork.

✓ Coat all surfaces of wood repairs, including those that will be concealed, with primer. This is called "back-priming" and helps combat deterioration caused by moisture absorption over time.

SITE AND STREETSCAPE

✓ Retain historic signs and advertising painted on the sides of buildings.

✓ Retain historic circulation patterns, gateways/ entrances, artwork, and street furniture wherever they are character-defining features, especially in pedestrian courts.

✓ Limit the installation of street furniture to avoid overly-cluttered streetscapes. Street furniture should be durable and of a simple traditonal design that is not falsely historical. It should also serve to reinforce existing circulation routes.

✓ Restore and reuse historic paving materials, such as brick and hexagonal pavers and limestone curbing.

✓ Maintain historic curbing elements and road levels when resurfacing. The historic relationship between the road surface and edging should be preserved.

✓ Maintain original front-yard topography, including grades, slopes, elevations, and earthen berms where present. New construction should match the grade of adjacent properties.

✓ Understand the character of historic yards and gardens and conduct research to determine what is appropriate to your buildng and the adjacent streetscape. Manage vegetation so that it is sympathetic to that character.

✓ Retain historic fencing materials including metal, brick, stone, and wood in areas that are visible from the street.

✓ Retain historic lighting fixtures.

✓ Secure vacant buildings against arson and vandalism prior to and during rehabilitation projects.

VEGETATION AND LANDSCAPING

✓ Preserve large trees whenever possible.

✓ Enhance established street tree patterns by planting additional trees along public rights-of-way and on private property.

✓ Consider the mature size of trees and shrubs when adding plant material.

✓ Take the health and shape of trees into account when pruning. Overpruning should be avoided.

✓ Select and place street trees so that the plantings will not obscure historic storefronts once mature.

✓ Select native deciduous species as canopy trees or trees appropriate to the historic period and character of the district. Consult with the city arborist to determine what tree species are suitable for placement near overhead wires.

Site Elements

✓ Replace dead or diseased shrubs or trees with like species.

✓ Select plant materials that accent architectural forms rather than overshadow them.

✓ Select plant material that is suited to the sun, shade, and soil conditions and is appropriate to the local climate and growing conditions.

✓ Ensure that the grade around the perimeter of a building is sufficient to carry water away from the foundation and basement. Improper drainage may cause rising damp where water is drawn into the walls by capillary action, leading to efflorescence, mortar joint deterioration, and flaking stone.

✓ Manage foundation plantings so that they do not obscure the architectural character of the building.

✓ Monitor vegetation adjacent to or on historic structures to ensure that it is not damaging wood or masonry through root penetration, abrasion, or related biological growth.

✓ Leave sufficient room between plantings and buildings so that landscaping does not appear crowded and biological growth does not form on the building's exterior. Exterior walls need adequate ventillation Generally, shrubs and plantings should be kept eighteen to twenty-four inches away from foundation walls.

Storefronts

✓ Repair only deteriorated portions of historic storefronts, leaving sound portions in place. Repairs may include reinforcement of historic materials or limited replacement.

✓ Conduct limited exploratory removal of non-historic fabric from historic storefronts to assess its condition and see if there is historic fabric underlying later accretions.

✓ Seek out documentation in the form of photographs, postcards, drawings, and prints when planning storefront renovations.

✓ Maintain and preserve all historic storefront features, including display windows, signs, doors, transoms, kick plates, corner posts, and entablatures, whenever possible. Regular cleaning, limited paint removal, painting, and inspection for metallic corrosion is necessary.

Windows

✓ Retain window elements that contribute to a building's architectural character. Such elements include frames, sash, muntins, glazing, sills, hardware, heads, hoodmolds, paneled or decorative jambs and moldings, interior and exterior shutters, and blinds. Removal of such features significantly diminishes a building's architectural integrity.

✓ Replace an entire window only if limited replacement of deteriorated parts is not possible. Elements such as sills, which are particularly susceptible to weathering, can be repaired or replaced without replacing the whole window. Replacement elements should be visually, chemically, and physically compatible with the remaining portions of the window.

✘ Do not replace windows unless they are missing or beyond repair. Peeling paint, broken glass,

Storm Windows

Double-Hung Windows

stuck sash, thermal performance, and high air infiltration are all problems that can be remedied and do not constitute valid reasons for replacement.

✘ Do not alter historic window sash and frames to accommodate heating/air conditioning units.

✓ Leave historic shutter hardware in place, even if there are no immediate plans to replace the shutters.

✓ Try to uncover decorative glass windows that have been covered by later accretions. If sagging is evident, an expert can replace weakened cames (the zinc or lead that holds the glass) and install bracing to reinforce the window's structure.

Windows Maintenance Tips

✓ Carry out regular window maintenance, including inspecting caulk and glazing putty, painting, reinforcing wooden members as needed, and monitoring metal sash for signs of corrosion.

✓ Regularly inspect windows to make sure that the joints where the frame and masonry or wood meet are tight. If they are loose or open the joints should be caulked to prevent the infiltration of air and water.

✓ Inspect windows to see that the sills are not collecting water.

Decorative Windows

✓ Regularly inspect awnings to monitor their visual appearance and structural stability. Installation of new awnings requires design review.

✓ Apply weather stripping to windows if needed. Installation of weather stripping between window sash and frames and along the meeting rail can increase energy efficiency significantly.

Decorative Lintel

Window Organization

- ✓ Install interior or exterior storm windows to enhance the thermal performance of windows if necessary. Any storm windows should match the color and lines of the existing historic windows. Installation of storm windows requires design review.
- ✓ Install interior storm windows with air-tight gaskets, ventilating holes, and/or removable clips to avoid condensation damage to historic windows. Metal thermal sash is recommended for metal windows and wood, PVC, or vinyl thermal sash for wood windows.
- ✓ Remove and then reinstall window hardware when repainting.
- ✓ Apply unobtrusive metal caps along the top edge of shutters to increase their longevity.
- ✘ Do not use the "dip-stripping" method to remove paint from shutters. This weakens the glue and can abrade the wood. In-place chemical stripping is the preferred method.