JOPLIN HISTORIC PRESERVATION COMMISSION

Guide to HISTORIC PRESERVATION

SUPPLEMENT

For all inquiries related to Historic Preservation for the City of Joplin, please contact the Planning Department:

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GENERAL STANDARDS

Masonry features (such as brick cornices and door pediments, stone window architraves, terra cotta brackets and railings) as well as masonry surfaces (modelling, tooling, bonding patterns, joint size, and color) may be important in defining the historic character of the building. It should be noted that while masonry is among the most durable of historic building materials, it is also the most susceptible to damage by improper maintenance or repair techniques and by harsh or abrasive cleaning methods. Most preservation guidance on masonry thus focuses on such concerns as cleaning and process of repointing.

The following is a list of general standards that shall be followed:

PERMITTED:

- Identifying, retaining, and preserving masonry features that are important in defining the overall historic character of the building such as walls, brackets, railings, cornices, window architraves, door pediments, steps, and columns; and joint and unit size, tooling and bonding patterns, coatings, and color.
- Protecting and maintaining masonry by providing proper drainage so that water does not stand on flat, horizontal surfaces or accumulate in cured decorative features.
- Cleaning masonry only when necessary to halt deterioration or remove heavy soiling.
- Carrying out masonry surface cleaning tests after it has been determined that such cleaning is necessary. Tests should be observed over a sufficient period of time so that both the immediate effects and the long range effects are known to enable selection of the gentlest method possible.
- Cleaning masonry surfaces with the gentlest method possible such as low pressure water and detergents, using natural bristle brushes.
- Inspecting painted masonry surfaces to determine whether repainting is necessary.
- Removing damaged or deteriorated paint only to the next sound layer using the gentlest method possible (e.g. hand scraping) prior to repainting.
- Applying compatible paint coating systems following proper surface preparation.
- Repainting with colors that are historically appropriate to the building and district. Refer to color section for permitted colors.
- Evaluating the overall condition of the masonry to determine whether more protection than maintenance are required, that is, if repairs to the masonry features will be necessary.
- Repairing masonry walls and other masonry features by repointing the mortar joints where there is evidence of deterioration such as disintegrating mortar, cracks in mortar joints, loose bricks, damp walls, or damaging the masonry.

- Duplicating old mortar joints in strength, composition, color, and texture.
- Duplicating old mortar joints in width and in joint profile.
- Repairing stucco by removing the damaged material and patching the new stucco that duplicates the old in strength, composition, color, and texture.
- Using mud plaster as a surface coating over unfired, unstabilized adobe because the mud plaster will bond to the adobe.
- Repairing masonry features by patching, piecing-in, or consolidating the masonry using recognized preservation methods. Repair may also include the limited replacement in kind, or with compatible substitute materials, of those extensively deteriorated or missing parts of masonry features when there are surviving prototypes such as terracotta brackets or stone balusters.
- Applying new or non-historic surface treatments such as water repellent coating to masonry only after repointing and only if masonry repairs have failed to arrest water penetration problems.
- Replacing in kind an entire masonry 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 can include large sections of a wall, a cornice, balustrade, column, or stairway. If using the same kind of materials is not technically or economically feasible, then a compatible substitute material may be considered.

NOT PERMITTED:

- Removing or radically changing masonry features which are important in defining the overall historic character of the building so that, as a result, the character is diminished.
- Replacing or rebuilding a major portion of exterior masonry walls that could be repair so that, as a result, the building is no longer historic and is essentially new construction.
- Applying paint or other coatings such as stucco to masonry that has been historically unpainted or uncoated to create a new appearance.
- Removing paint from historically painted masonry.
- Radically changing the type of paint or coating or its color.
- Failing to evaluate and treat the various causes of mortar joint deterioration such as leaking roofs or gutters, differential settlements of the building, capillary action, or extreme weather exposure.
- Cleaning masonry surfaces when they are not heavily soiled to create a new appearance, thus needlessly introducing chemicals or moisture into historic materials.
- Cleaning masonry surfaces without testing or without sufficient time for the testing results to be of value.
- Sandblasting brick or stone surfaces using dry or wet grit or other abrasives. These methods of cleaning permanently erode the surface of the material and accelerate deterioration.
- Using a cleaning method that involves water or liquid chemical solution when there is any possibility of freezing temperatures.
- Cleaning with chemical products that will damage masonry, such as using acid on limestone or marble, or leaving chemicals on masonry surfaces.
- Applying high pressure water cleaning methods that will damage historic masonry and the mortar joints.
- Removing paint that is firmly adhering to, and thus protecting, masonry surfaces.

- Using methods of removing paint which are destructive to masonry, such as sandblasting, application of caustic solutions, or high pressure water blasting.
- Failing to follow manufacturers' products and application instructions when repainting masonry.
- Using new paint colors that are inappropriate to the historic building and district. Refer to color section for permitted colors.
- Failing to undertake adequate measures to assume the preservation of masonry features.
- Using electric saws and hammers rather than hand tools to remove deteriorated mortar from joints prior to repointing.
- Repointing with mortar of high Portland cement content (unless it is the content of the historic mortar). This can often create a bond that is stronger than the historic material and cause damage as a result of the differing coefficient of expansion and the differing porosity of the material and the mortar.
- Repointing with a synthetic caulking compound.
- Using a "scrub" coating technique to repoint instead of traditional repointing methods.
- Changing the width or joint profile when repointing.
- Removing sound stucco; or repairing with new stucco that is stronger than the historic material or does not convey the same visual appearance.
- Applying cement stucco to unfired, unstabilized adobe. Because the cement stucco will not bond properly, moisture can become entrapped between materials, resulting in accelerated deterioration of the adobe.
- Replacing an entire masonry feature such as a cornice or balustrade when repair of the masonry and limited replacement of deteriorated or missing parts are appropriate.
- Using a substitute material for the replacement part that does not convey the visual appearance of the surviving part of the masonry feature or that is physically or chemically incompatible.
- Applying waterproof, water-repellent, or non-historic coating such as stucco to masonry as a substitute for repointing and masonry repairs. Coatings are frequently unnecessary, expensive, and may change the appearance of historic masonry as well as accelerate its deterioration.
- Removing a masonry feature that is not repairable and not replacing it; or replacing it with a new feature that does not convey the same visual appearance.

ARCHITECTURAL METALS: CAST IRON, STEEL, PRESSED TIN, COPPER, ALUMINUM, AND ZINC

Architectural metal features—such as cast iron facades, porches, and steps; sheet metal cornices, roofs, roof cresting and storefronts; and cast or rolled metal doors, window sash, entablatures, and hardware—are often highly decorative and may be important in defining the overall historic character of the building. Their retention, protection, and repair should be a prime consideration in rehabilitation projects.

PERMITTED:

- Identifying, retaining, and preserving architectural and metal features such as columns, capitals, window hoods, or stairways that are important in defining the overall historic character of the building; and their finishes and colors. Refer to color section for permitted colors.
- Protecting and maintaining architectural metals from corrosion by providing proper drainage so that water does not stand on flat, horizontal surfaces or accumulate in curved, decorative features.

- Cleaning architectural metals, when necessary, to remove corrosion prior to repainting or applying other appropriate protective coatings.
- Identifying the particular type of metal prior to any cleaning procedure and then testing to assure that the gentlest cleaning method possible is selected or determining that cleaning is inappropriate for the particular metal.
- Cleaning soft metals such as lead, tin, copper, tern plate, and zinc with appropriate chemical methods because their finishes can be easily abraded by blasting methods.
- Using the gentlest cleaning methods for cast iron, wrought iron, and steel-hard-metals in order to remove paint buildup and corrosion. If hand scraping and wire brushing have proven ineffective, low pressure dry grit blasting may be used as long as it does not abrade or damage the surface.
- Applying appropriate paint or other coating systems after cleaning in order to decrease the corrosion rate of metals or alloys.
- Repainting with new colors that are appropriate to the historic building or district. Refer to color section for permitted colors.
- Applying an appropriate protective coating such as lacquer to an architectural metal feature such as a bronze door which is subject to heavy pedestrian use.
- Evaluating the overall conditions of the architectural metals to determine whether more than protection and maintenance are required, that is, if repairs to features will be necessary.
- Repairing architectural metal features by patching, splicing, or otherwise reinforcing the metal following recognized preservation methods. Repairs may also include the limited replacement in kind—or with a compatible substitute materials—of those extensively deteriorated or missing parts of features when there are surviving prototypes such as porch balusters, column capitals or bases; or porch cresting.

NOT PERMITTED:

- Removing or radically changing architectural metal 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 architectural metal from a façade instead of repairing or replacing only the deteriorated metal, then reconstructing the façade with new material in order to create a uniform or "improved" appearance.
- Radically changing the type of finish or its historical color or accent scheme.
- Failing to identify, evaluate, and treat the causes of corrosion, such as moisture from leaking roofs or gutters.
- Placing incompatible metals together without providing a reliable separation material. Such incompatibility can result in galvanic corrosion of the less noble metal, e.g. copper will corrode cast iron, steel, tin and aluminum.
- Exposing metals which were intended to be protected from the environment.
- Applying paint to other coatings to metals such as copper, bronze, or stainless steel that was meant to be exposed.
- Using cleaning methods which alter or damage the historic color, texture, and finished of the metal; or cleaning when it is inappropriate for the metal.
- Removing the patina of historic metal. The patina may be a protective coating on some metals, such as bronze or copper, as well as significant historic finish.
- Cleaning soft metals such as lead, tin, copper, tern plate, and zinc with grit blasting which will abrade the surface of the metal.

- Failing to employ gentler methods prior to abrasively cleaning cast iron, wrought iron or steel; or using high pressure grit blasting.
- Failing to re-apply protective coating systems to metals or alloys that require them after cleaning so that accelerated corrosion occurs.
- Using new colors that are inappropriate to the historic building or district. Refer to color section for permitted colors.
- Failing to access pedestrian use or new access patterns so that architectural metal features are subject to damage by use or inappropriate maintenance such as salting adjacent sidewalks.
- Failing to undertake adequate measures to assure the preservation of architectural metal features.
- Replacing an entire architectural metal feature such as a column or a balustrade when repair of the metal and limited replacement of deteriorated or missing parts are appropriate.
- Using a substitute material for the replacement part that does not convey the visual appearance of the surviving parts of the architectural metal feature or that is physically or chemically incompatible.

WALLS AND FOUNDATIONS

- Preserve (maintain or restore, not enclose or alter) original stone or brick foundation materials and design.
- For masonry repointing, maintain original tooling configuration, joint width and depth, and mortar color.
- Sandblasting or the use of any abrasive method of cleaning masonry shall not be permitted. These methods remove the outer patina or "crust" of the brick and expose the soft inner core which can lead to deterioration. High water cleaning methods which exceed 600 pounds per square inch (PSI) shall not be permitted.
- Masonry cleaning shall be with detergent cleansers or with appropriate chemical agents. Lowe pressure water cleaning is acceptable if the pressure is kept between 200 and 600 pounds per square inch (PSI). Steam cleaning of brick is also a good method, but requires a professional. The use of chemicals for removal of exterior paint is appropriate if the work is performed by a qualified professional.
- Water sealant on brick is not generally recommended. Despite these sealants, water vapor can still enter the brick and can cause spalling.
- Mortar shall never be removed with electric power saws. Mortar shall be hand raked and repointed with mortar to match the original or have composition such as one part lime to two parts sand.
- Brick shall not be painted unless it is extremely mismatched or so deteriorated that it cannot withstand weather.
- If painting of brick is necessary, the paint shall match the original, natural color of the brick.
- Cast or natural stone shall not be painted.

Further publications can be found at:

NATIONAL PARK SERVICE:

Technical Preservation Services Publications

PRESERVATION RESOURCE GROUP:

Products & Tools for Architectural Preservation

Window Repair

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