



Rehab It Right! Advice
for Property Owners

 U T A H
 HERITAGE
 FOUNDATION



Established in 1966, Utah Heritage Foundation was the first statewide preservation organization in the western

United States. Our mission is to preserve, protect and promote Utah's historic built environment through public awareness, advocacy, and active preservation. As a private non-profit, membership-based organization, Utah Heritage Foundation is supported mainly by private resources including memberships, gifts, grants, and special events. The foundation fulfills its mission through a variety of programs and activities which reach communities throughout Utah.

SPECIAL THANKS TO:

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F O U N D A T I O N

UHF's Historic Properties Committee

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ADVICE FOR PROPERTY OWNERS

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Organizing an Old House Project: Where do I Start?

If you live in an old home, you probably have an old house project waiting to get started, in fact you probably have several old house projects waiting to get started, but you might not know where to begin.

The first question to ask yourself is: ***Why am I doing this?*** We all have different reasons for renovating. It may be for no other reason than we need a change, it may be that water is leaking through the roof, it may be that the brick was painted and it is time to do something about its poor condition. Whatever the reason is, it is important to understand your reasons before starting. It is also good to be aware of the difference between “wants” and “needs” and being able to prioritize accordingly, because what good is a new pretty kitchen if your foundation is sinking?

Projects can be organized into a couple different categories: maintenance and repair, upgrades to outdated systems, or lifestyle needs. With all old house projects, there are some steps to follow that will help the project along.

YOUR OLD HOUSE PROJECT STEP BY STEP

STEP 1: Prioritize

Although we are tempted to update our outdated kitchen first, maintenance projects should always be the first priority. As part of this step it is always good to identify which projects are “wants” versus “needs.” Bottom line, you definitely want to address a water or moisture issue before you finish off your attic for that master suite.

STEP 2: What is Possible?

Sometimes repairing or changing one part of your house will cause unexpected results. So looking at the big picture and understanding what is possible



beforehand can save you any surprises down the road. For example, installing insulation or making your windows airtight might be great for your energy bill, but might cause your furnace to not operate correctly, or adding the extra room on the back will expand your kitchen, but can your mechanical systems service it? Taking all factors into account will help identify what is possible.

STEP 3: How Much Is This Project Going to Cost?

Not only should you ask yourself, *How much is the project going to cost?* But you should also ask yourself, *How much can you afford?* Getting cost estimates for the work is one part of the answer; however it doesn't end there. Taking a good look at your overall budget and how the project budget fits into it is only good practice. The last thing you want is to start a project and run out of money. Building in a contingency of 10% to 15% will ensure there are funds to help cover parts of the project that don't surface until you have begun. Also, being conscious of change orders and how quickly they can add up is a must. And finally, get more than one cost estimate so you have something to compare.

STEP 4: Who Is Doing What?

Many property owners want to do the work themselves to save on costs. Let's be honest: some of them can, but some of them can't and probably shouldn't. Either way, there are some things to consider:

1. How much time do you have to complete the project? Consider work, family, and other commitments.
2. Are you prepared to draw up your own plans, secure the appropriate permits, and schedule the inspections?
3. How efficient are you at the task at hand? Is it more efficient (and safe) to hire someone?
4. Do you own the appropriate tools? Can you skillfully operate those tools?
5. Who will you call when you run into a problem you can't fix?

Doing the work yourself can save you money, but considering the additional costs is important. You may be comfortable painting the walls, but specialized tasks such as electrical or plumbing may be best left to an expert.

More on this step can be found in the *Working with Professionals: When Should I Hire an Architect or Contractor?* section (page 4).

STEP 5: Get a Written Contract

Always get a written contract describing the work that is to be done, what it will cost and when the payments are due. It is also nice to include what work the contract does not include so that there are no questions. Before you sign anything, understand what you are signing.



EVERY CONTRACT SHOULD INCLUDE:

- Your name, address, and contact info
- The correct and complete address of the property where work will be done
- The contractor's name, address and telephone number, including the name of the on-site representative
- A detailed description of the project, including a list of materials to be used and sketches if appropriate
- The type of work that will be subcontracted (if applicable)
- The homeowner's rights under the Lien Recovery Act
- A clause stating that work will conform to the requirements of all applicable codes
- Start and completion dates
- Agreement about who is responsible for obtaining all necessary permits, licenses and certificates — the homeowner or the contractor
- Responsibility of the contractor for removing all debris as soon as construction is completed
- A statement of all warranties, explaining exactly what is covered and for how long
- A statement of the contractor's public liability and property damage insurance, and worker's compensation policy
- A process for alterations
- Price and terms of payment

STEP 6: Learn to Love the Mess

Most rehab projects (if not all) are messy, dirty, dusty, loud. Being aware of this and knowing it will not last forever will help you manage. There are many things to consider before starting your project: Will you be living in your home during construction? Will you have access to plumbing and electricity? What will the hours of the workers be? Does it matter what time of year you start?

Sealing off doors and ventilation and heating ducts to non-work areas, and removing or covering personal items can help minimize (although not eliminate) the dust and dirt.



STEP 7: Inspect as You Go

Things don't always go according to plan, especially with older structures. Staying informed during your project allows you to make any necessary decisions as things arise.

STEP 8: The Final Sign off on the Finished Work

Once the work is done, inspections completed, and your daily routine starts up again, enjoy what all your hard work got you—whether it is that your roof is no longer leaking, or that you can run your microwave and toaster at the same time, or that your windows are now operable.



Working with Professionals: When Should I Hire an Architect or Contractor?

What Can I Do Myself?

Many projects may appear simple on paper or in theory, but if something unanticipated happens (and it often does in older buildings), it is time to call in an experienced contractor to complete the work. We often underestimate the value of our time, and sometimes calling the professional even when you think you can do it yourself is the better idea.

It will vary from person to person, obviously based on skill and knowledge, but likely do-it-yourself projects include:

- Replacing filters in heating and air conditioning systems
- Installing weather stripping
- Replacing a screen
- Painting on the interior and maybe the exterior
- Caulking around tub or sink

And some projects better left to professionals include:

- Cleaning and repairing historic masonry
- Re-pointing mortar
- Repairing or replacing the roof
- Repairing structural elements
- Installing exhaust fans through the wall or roof
- Refinishing the floor
- Completing electrical work
- Completing plumbing work



Helpful Hints for Working with Professionals

- Know what you want, express your wishes clearly, and ask for clarification when you do not understand.
- Interview at least two architects or contractors before committing to working with them. Check references and if possible visit completed projects.
- Sign a contract that clearly defines the scope of work for the professional payment schedule. See the list of *What Every Contract Should Include* on page 2.
- Have a realistic budget that includes a 10%-15% contingency fund. The unknown inevitably appears when renovating old buildings. If you don't have to use it consider yourself lucky.
- Protect areas of your building not affected by construction—construction work can be dusty and dirty. For bigger jobs, consider moving out during the “messy” phases of work.

Things to Avoid When Working with Professionals

- Do not begin work without a signed written contract.
- Avoid being your own general contractor, even though you are trying to save money.
- Do not micro-manage—you hired a professional for a reason. Do not substitute your judgment for a professional's.
- Avoid working with relatives or friends—business disagreements often become personal.
- Do not pay more than a 20% deposit before work starts.
- Do not make final payment before the work is completed to your satisfaction.



What Does An Architect Do? 1) Designs your wishes and wants into a place you call home. 2) Evaluates your requirements, budget, and building site. 3) Complies with applicable codes, regulations, laws, and zoning. 4) Prepares drawings and specifications. 5) Coordinates with other design professionals; and 6) Participates in the selection of the contractor.



Maintaining Your Property

Maintaining your property is not only important to keeping it safe and working as it should, but it is also important to keeping its value as a historic structure. The easiest way to keep up with maintenance is to have a checklist or chart showing dates for various services and tasks that need to be performed. Organization is the key—keep all manuals, repair bills and important phone numbers with the checklist in one place.

Here are some general maintenance tasks for your historic property. Keep in mind, all historic buildings are different and to adapt tasks as appropriate.

See page 15 for a link to an example of an Inspection Checklist for Historic Buildings.

Exterior

- Check for sagging or buckling walls.
- Watch for water staining and moisture penetration on walls.
- Check all wood surfaces for weathering, paint failure, dry-rot, and insect infestation.
- Check masonry and joints for signs of cracking, peeling, and spalling.
- Check stucco and paint for signs of cracking, peeling, and spalling.
- Clear the small weep holes near the base of a brick wall to allow moisture to drain properly.
- Inspect around the property for signs of pests—birds, rodents or insects.
- Clean gutters and downspouts regularly to ensure proper drainage. Plug leaks along gutter seams and joints if necessary.
- Inspect roof for missing or damaged shingles, and blistering or cracking at flashing and chimney caps.
- Inspect chimneys annually. Look for damaged or loose bricks or if the chimney appears out of alignment.
- Repair porch steps and railings.
- Remove all plants and vines that are attaching themselves to the building, resting on the building, or entering windows and cracks in the building.



- Call the electrical company (Rocky Mountain Power) to notify them of trees that are touching electrical wires.
- Check sidewalks, retaining walls, and driveways for cracks.
- Inspect windows and doors. Look for water damage or deterioration, particularly at the window sill or door threshold.
- Check that the site is sufficiently graded and drained to move water away from the structure.

Interior

- Inspect plaster and exposed masonry for cracks and spalling.
- Inspect wood, including millwork for rot, drying, and splitting.
- Check ceilings for cracks, water stains, and sagging.
- Maintain all appliances and household equipment including furnaces, water heaters, humidifiers, air conditioners, etc. as described in owner's manuals.
- Vacuum refrigerator coils and replace gaskets that are not sealing properly.
- Watch for water stains and moisture penetration on all surfaces.
- Look for signs of mildew in wet areas.
- Check floors for damage.
- Check stair railing for sturdiness and repair if loose.

- Check for adequate ventilation in all rooms to keep air circulating.
- Test smoke and carbon monoxide detectors on a regular schedule and replace batteries as needed.

Plumbing

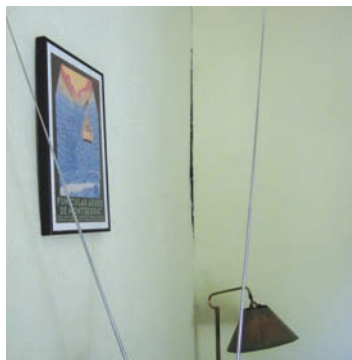
- Always know where the shut-off valves are.
- Check that drains (including floor drains) are working properly.
- Check for evidence of leaks. Turn valves off and listen for any running water sounds.
- Check for mildew.
- Clear debris out from faucets and shower heads.
- Caulk missing grout and replace damaged tiles in kitchens and bathrooms to prevent water penetration.
- Check that all vents are in good working condition without tears, blockages and are dust-free.
- Check and replace cracked, leaking, or brittle washer hoses.
- Inspect water heater annually. Drain tank to clean out sediment. Test temperature pressure relief valve. On a gas water heater, clean burner and ports.

Electrical

- Check the inside of the electrical panel for scorch marks.
- Turn power off, and secure any loose receptacles or outlet covers.
- Test GFCI outlets regularly by pushing the “test” and “reset” buttons.
- Clean light fixtures and switch plates.

Heating & Cooling Systems

- Complete regular furnace and air conditioner maintenance.
- Replace filters regularly.
- Check all hose connections for leaks.
- Brush or vacuum radiators, baseboard heating units or forced-air heating vents as needed.
- Do not block registers with furniture or other objects.
- Check radiators and boiler tank for signs of leaking.
- Maintain clearance around condensing units for maximum efficiency.



Energy Saving Measures

- Turn off lights when you leave a room. Or better yet, use natural light when available.
- Check that your thermostat is working properly. If you are not already, use a thermostat that allows you to program different temperatures for different parts of the day and night.
- Replace incandescent bulbs with compact fluorescent bulbs. They not only cost less to run but they also last longer.
- Use blinds or drapes to shade south- and west-facing windows during hot weather.
- Install or replace weather stripping around windows and doors where you can feel drafts—this will keep cool air out in the winter and cool air in during the summer. Tape over pulley holes on old double-hung windows to reduce drafts.
- Close fireplace dampers or glass doors when not in use.

Common Building Maintenance Problems and Solutions



Rain and Sprinkling Systems

Rain and sprinkling systems often contribute to decay by repeatedly wetting portions of a structure such as the lower walls or areas of greatest exposure to prevailing rain.

Solution: Entire wall surfaces where continual paint film failures and moisture damage occur may have to be treated with a suitable water repellent preservative solution prior to repainting. Check guttering and flashing for effectiveness. Water sprinklers should never be allowed to spray against the structure, and if permanently installed, should spray away from the structure. A water repellent preservative is a liquid solution designed to penetrate into wood and impart water repellency and moderate preservative protection. It is usually toxic and is best applied by dipping.

Gutters and Downspouts

Gutters and downspouts can clog up with debris, leak from freezing or other damage, and can allow water to overflow, wetting trim and other areas they were designed to protect. Many downspouts allow water to collect adjacent to structures, creating damp conditions in basements and crawl spaces, as well as allowing moisture to soak up through stone foundations. Hardware and fasteners which hold guttering to the roof edge often allow moisture to penetrate the roof and cause decay.

Solution: All downspouts should have protective screens installed at their mouths to catch debris and prevent clogging. Inspect gutters and downspouts during heavy rains to determine design flaws and leaks. Water should exit downspouts at least three feet away from the building or be carried away via splash blocks or underground drain pipe.





Wood in Contact with the Soil

Wood in contact with soil such as foundation sills or planter boxes which hold soil against the wood siding.

Solution: Untreated structural lumber should be a minimum of 8 inches above the soil. Wood siding should be a minimum of 6 inches above the soil. Wood can be treated with a wood preservative or water repellent coating either by dipping the lumber or painting the preservative. Ideally, wood which must be in contact continuously with soil should be pressure treated.



Seepage

Edges of boards or trim as well as joints and seams where boards are joined are subject to expansion and contraction resulting in cracks which allow water to be trapped and absorbed into the wood, leading to paint failure and decay.

Solution: Treat all open cracks, seams and ends of lumber with water repellent preservative solution prior to application or reapplication or primer and caulking and two top coats of paint.



Moisture Runoff

Improper design of roofs and guttering often results in moisture not being carried off of and away from buildings. Wood wetted by rains, especially in the roof structure, dries out slowly and can decay quickly. Missing or improper flashing around chimneys, dormers, adjoining walls, roofs, or porches often promotes decay by allowing moisture to seep into the structure at those locations.

Solution: Direct rain water away from areas which allow moisture to collect and stand. Suitable drainage is important. Ideally, flashing should be made of copper or galvanized metal and installed as per the Architectural Sheet Metal Manual for the Sheet Metal and Air Conditioning Constructors National Association, Inc. Flashing is required wherever a horizontal projection from a wall occurs, where roofs meet siding (such as dormers, porches, and canopies), roof valleys, and over windows and door trim. Wood adequately treated with preservative, if exposed, is often better than simply relying on flashing for protection.



Splashing Rain

Water which runs off of roofs and is allowed to splash against a structure repeatedly can cause decay. A typical problem area is where concrete walks or aprons have been placed around the outside of a building in an attempt to keep the ground dry from runoff roof water. Often these hard surfaces cause water runoff to splash up onto the walls of a building causing deterioration. Often porches or porticos cause water to run down walls of the main structure, inevitably resulting in moisture damage.

Solution: Install appropriate gutters and flashing to properly handle roof runoff moisture. Slope soil and paving away from structure to promote good drainage. Treat all problem areas with a water repellent preservative solution prior to painting or repainting. Roof design, flashing and guttering should keep runoff from splashing on walls or roofs below.

Water Accumulation Against Wood

Often rain or roof runoff water will collect on surfaces that are not properly designed to shed water, such as window sills, door jambs, wood porch floors, and around or under porch columns and railings, resulting in rapid paint failure and decay.

Solution: In severe cases of continual deterioration, pressure treated wood or natural decay resistive lumber (redwood, western red cedar) should be substituted for the lumber in question. All flat surfaces such as porch decks and step treads should be sloped slightly to promote drainage. Avoid flat sawn lumber for flooring or treads due to its tendency to shrink, swell up, and soak up moisture. Quarter sawn lumber is less likely to suffer these problems. Treat all lumber exposed to heavy moisture or harsh exposure with water repellent preservation or water repellent solution. Prior to painting, treating edges and seams is especially critical. Maintain a good paint film on all lumber exposed to harsh weathering.



Plumbing Leaks

Leaking or spillage from plumbing systems, plumbing fixtures or appliances, if left unchecked, can decay wood very rapidly. The most common leaks occur around drain pipes and faucets and do the most damage to floors, floor joists, sills and walls exposed to harsh weathering. Crawl space and basement moisture—damp spaces under buildings result most often from water being allowed to collect around the outside perimeter of the structure as well as from condensation. These moist, humid conditions can cause decay in sills, joists and subflooring. Covering foundation vents in winter often creates damp conditions.

Solution: Properly vent basement or crawl space year round, providing good cross ventilation to keep soil foundations and structural members dry. A vapor resistant soil covering can be installed covering all basement or crawl space soil to prevent condensation. Using this method, often it is possible to close the foundation vents in winter without condensation problems.

Water Conducting Fungus

This fungus, unlike others that develop only in wet wood, is capable of transporting the water it requires, usually from the soil, damp basements, and crawl spaces up into dry wood where decay usually will not occur. Fortunately, this fungus is relatively rare, as it can destroy substantial portions of a structure very quickly before being detected. Water conducting fungus usually begins from infected lumber such as debris left in a crawl space that creates a bridge from the source of moisture to dry wood. The fungus is usually light in color, with white and tan coloration looking furry in spots with small tubes visible, which are used to carry the water. The fungus most often is found in unvented damp crawl spaces.



Solution: (1) Adequately and permanently vent area where fungus develops. (2) Dry out soil in affected areas or install ground sheets or vapor barriers such as heavy roll roofing or polyethylene sheets over the exposed soil. (3) Remove all wood and other debris from area. (4) Scrape all fungus visible from surfaces. (5) Replace affected lumber with pressure treated lumber. (6) Paint all wood exposed to fungus with a fungicide such as pentachlorophenol.

Termites

Common problem areas include cracks in foundations that allow access to termites from soil to sill.

Solution: Repair or repaint all foundation cracks on both interior and exterior foundation wall surfaces. Treat soil and foundation with proper pesticide solutions.

Who Does What?

Utah Heritage Foundation (UHF)

Utah Heritage Foundation is a private non-profit organization that reaches communities throughout the state through a wide range of programs and activities. It is the mission of Utah Heritage Foundation to preserve, protect and promote Utah's historic built environment through advocacy, active preservation, and public awareness.

www.utahheritagefoundation.org

State Historic Preservation Office (SHPO)

The State Historic Preservation Office is located within the Division of State History. SHPO administers the National Register of Historic Places as well as the federal and state rehabilitation tax credits.

<http://history.utah.gov>

Local Historic Landmark Commission

Within a community, the local Historic Landmark Commission and/or the Planning Division Staff administer the design standards for the treatment of historic resources—either residential or commercial properties located within a locally designated historic district or a locally designated historic landmark. They can also be responsible for designating historic properties in your community to your local register and the National Register of Historic Places, securing grants for projects, and providing additional technical assistance for rehabilitation.

For Salt Lake City's Historic Landmark Commission.

www.slcgov.com/ced/hlc

National Trust for Historic Preservation

The National Trust for Historic Preservation is a private, nonprofit membership organization dedicated to saving historic places and revitalizing America's communities by providing leadership, education, advocacy, and resources to help people protect, enhance, and enjoy the places that matter to them.

www.preservationnation.org



Historic Properties: Altering historically designated properties requires pre-authorization and a Certificate of Appropriateness from your Local Landmark Commission. Check if your property is located within a local historic district before beginning work.

What Does Historic Designation Mean to Me?

Having a property listed on the **National Register of Historic Places** gives the property recognition for its historic significance; qualifies the owner for federal and/or state rehabilitation tax credits; and helps educate the public and community about historic and cultural resources.

Listing in the National Register does not interfere with a private property owner's right to alter, manage or dispose of the property. The owner does not have to restore or maintain the property or open it to the public.

If your property is located within a **Local Historic District** or is a **Local Landmark Site**, typically, the district was designated by the City Council, and there is some type of regulatory review of alterations, additions, new construction, and demolition.

Local preservation ordinances, where present, may have some implications for a building owner. But local ordinances are entirely separate from the National Register of Historic Places.

For Salt Lake City's historic districts, visit:
www.slcgov.com/CED/HLC

For the National Register of Historic Places, visit:
www.cr.nps.gov/nr



Financial Resources / Funding Options

Low-Interest Loans

Utah Heritage Foundation's Revolving Fund Loan Program provides property owners low-interest loans to restore and rehabilitate significant historical or architectural properties throughout the state.

Visit: www.utahheritagefoundation.org/preservation-resources/low-interest-loans

Utah Historic Preservation Tax Credit

The Utah State Historic Preservation Office (SHPO) administers the Utah Historic Preservation Tax Credit program. Qualifying projects must be listed on the National Register of Historic Places or located within a Historic District within three years of starting the project, must plan for work to be done that will meet the Secretary of the Interior's Standards for Rehabilitation, and must spend a minimum of \$10,000. If all criteria are met, the owner qualifies for a state tax credit in the amount of 20% of the total rehabilitation costs on that project.

Visit: http://history.utah.gov/historic_buildings/financial_assistance/state_tax_credit.html

You should also consult your local city and county for any "local incentive programs" that might be available in your area. UHF has a list of some of these incentives on its website. Visit:

www.utahheritagefoundation.org/preservation-resources/financial-resources



Additional Resources

Utah Preservation Contractor Directory

The Utah State Historic Preservation Office maintains the Utah Preservation Contractor Directory; however, they are in no way endorsing any of the consultants on the list.

<http://history.utah.gov/apps/contractors.html>

Inspection Checklist for Historic Buildings

This is just one example of a maintenance checklist for your historic building.

http://history.utah.gov/historic_buildings/information_and_research/documents/inspectionchecklist2.pdf

