

PART TWO

2-3 GENERAL MAINTANANCE AND HOME IMPROVEMENT CONSIDERATIONS FOR MAINTAINING THE CHARACTER OF LAKWOOD HOMES

2-3 General Maintenance and Home Improvement Considerations

Exterior Walls and Foundations

Original Materials on Exterior Walls

Original materials used for exterior walls, including wood clapboards, wood shingles, masonry, and stucco, lend character and a sense of history to Lakewood houses. The treatment of exterior walls gives clues about the age and architectural style of a house, as well as adding visually pleasing texture, detail, and depth. Steps should be taken to maintain and preserve original materials whenever possible.

Follow these guidelines when maintaining or repairing exterior walls:

♣ Repair rather than replace.

Repair original siding materials whenever possible. If sections of siding are deteriorated or damaged, limit repairs to those sections rather than undertaking wholesale replacement.

♣ Match the original.

When making repairs or replacing siding, match the original in material and design. Match the exposure and detail of wood siding and the texture and color of stucco. Masonry repairs can require a bit more attention. Tuckpoint joints with mortar that matches the color, texture, composition, tooling, and size of the original mortar joint. Reuse original bricks and stone, or match replacement pieces as close as possible in color and texture.

♣ Save the details.

Decorative shingles, brackets, exposed rafter tails, hood moldings over windows, cornerboards, and door and window trim are just a few of the architectural details that give Lakewood houses their character. Save the details by repairing these elements or replacing them to match the original. Just remember, don't add or create exterior decorative elements that were never there - simplicity has its own appeal.

♣ Take it off.

Choose wood over synthetics. Remove non-original siding, but do it carefully. Cheap or improperly installed non-original siding may have caused some deterioration of the original siding beneath. Still, many homeowners find they only have to do a little repair work to restore the original siding.

♣ Walls and Foundations - Another Word on Bricks and Stones

Bricks and stones connote strength and stability in a building, whether used for the foundation, sills and lintels, or for the walls. These materials enjoy a reputation for longevity with low maintenance, however, brick and stone are subject to the forces of nature. When it's time for repairs to brick and stone, keep the following in mind:

♣ Document all details.

Before beginning any work, note colors, textures, and distinctive design features of the masonry. Photograph any interesting details. Place a ruler in the photo to document size.

♣ Preserve that patina.

Stone and brick colors mellow with age. This is a natural beautification process that softens their colors, harmonizing them with nature. If too much soot and dirt have accumulated, scrub with mild detergents, soft-bristled brushes, and a garden hose. Test cleaning agents and procedures first on an inconspicuous part of the structure. Work only when temperatures will not fall below 50°F for three days after wetting the brick.

General Maintenance and Home Improvement Considerations

Exterior Walls and Foundations, continued

♠ **Never paint.**

Painted stone, brick, or concrete is not as attractive or as durable as the natural patina and require more frequent maintenance than their unpainted counterparts. Once masonry is painted, it is very difficult to restore it to its original appearance. Most masonry absorbs the first layer of paint in its pores, and hence, it is very difficult to remove all traces of it. The result is an original, extremely low maintenance material being converted into a high maintenance material with the addition of one coat of paint. If, however, the masonry is already painted, thick paint build-up or peeling paint can be removed by using chemical strippers formulated for masonry, before repainting. Do not blast or wire brush the paint away. Always test the strippers on an inconspicuous part of the structure.

♠ **Never blast.**

Abrasive cleaning removes the hardened surface of older bricks, erodes and pits stone and concrete, and removes the patina that took so long to develop. There *are no safe blasting abrasives*: not sand, not baking soda, not dolomite, not walnut shells, not glass beads - not even high-pressure water! Abrasively blasted brick and stone will spall (crumble) as moisture attacks the outside surface. In addition, the roughened surface will accumulate dirt and pollutants much faster than the original surface.

♠ **Never grind out sound mortar.**

Repoint the mortar only where it is cracked or missing. This will keep moisture from penetrating the joints and making the cracks spread.

♠ **Match that mortar.**

Much of the masonry in Lakewood has joints with colored mortar. When making mortar repairs, match the original color. Color matching can be a tedious experimental process, but the results are worth it. Take a sample of the original mortar to the masonry supply yard and match it with a color chart.

Then test small batches until the exact proportions that yield the original color when completely dry are reached. When soliciting contractors, have them prepare mortar samples for approval *before* beginning the project.

♠ **Flex your joints.**

Mortar is a cushion not a glue. Bricks and stone are held in place by their weight, not by adhesion to the mortar. The mortar absorbs expansion and contraction of the masonry structure during freezing and thawing. If the mortar is harder than the stone or brick, the masonry will crack as it, rather than the mortar, yields to seasonal adjustments. Over time the bricks and stones will disintegrate, leaving only the mortar. The type of mortar originally used varies with the age of a building. Pre-mixed cement with its high Portland cement content is too hard for Lakewood's 19th century and early 20th century masonry. Use lime and sand mixtures. If needed, old mortar samples can be analyzed to determine their ingredients.

♠ **Vanquish the vines.**

Climbing vines are picturesque. Unfortunately, they trap moisture against the building and harbor insects and birds. Also, by attaching themselves to surfaces, they can damage the wood siding and mortar of a structure. It is best not to encourage foliage to climb on masonry. To remove vines, cut them at the base and allow them to wither for at least one growing season. Once the vines have deteriorated, carefully pull them from the structure. If the mortar and masonry start to pull off, wait another season.

♠ **A Word About Sealants.**

Clear, penetrating sealers may change the masonry's color. They may also block the masonry's ability to breathe, meaning, to pass moisture from inside the house to the outdoors. Moisture trapped within the walls may cause paint failures on inside walls, mildew, and wood rot.

GARAGES

In Lakewood, most garages are detached from their houses and are readily visible from the street. Accordingly, a garage has great potential either to add to or detract from a property's beauty.

Many of Lakewood's garages share an architectural partnership with their houses. Garage roofs, siding materials, cornice details, and windows are often identical to those used on the house. For example, dormers frequently echo the houses' dormers and garage interiors are sometimes paneled with beaded wainscot. These garages are local treasures. Demolishing these structures or removing their ornamentation is an irreversible loss.

When building a new garage, it should harmonize with its house. It should incorporate roof shapes, siding, windows, and other decorative features that complement - not dominate or ignore the house.

Consider these guidelines when maintaining your garage or building a new one:

◆ **Choose appropriate siding.**

Use the same style of siding as your house. A garage is an accessory for the house. Using the same siding, such as clapboard width and corner trim, gives the same visual quality. It signifies that this building is part of the property's overall design and not just an afterthought.

◆ **Add windows.**

Blank walls are monotonous and unappealing. Windows end a wall's monotony, admit light, and symbolize life and vitality within a structure.

◆ **Raise the roof.**

The roof shape, like the siding, unifies the appearance of the garage and house. A common approach is to copy the house's roof. For example, gable roofed houses should have gabled garages and hipped roofed houses, hipped garages. For more interest, add a dormer with a window that mimics the one on your house. Match the roofing material too. For slate or tile roofed houses, the hooded flat roof (shed roof) is an economic alternative.

The hood can be covered with slate or tile to match the house and the large, almost flat surface can be covered with less expensive materials. Check with the Lakewood Building Department about the height of a new garage being built.

◆ **Save the details.**

When making repairs, preserve the trim boards, exposed rafter tails, divide light windows, and decorative ornamentation. These elements add unique character to your property and enhance its value.

◆ **Add color.**

For wood sided or shingled houses, repeat the lower body color on the garage siding. Use the house's primary trim, window sash, and ornament accent colors on the corresponding garage elements. Even the simplest box-shaped garage can harmonize with its house when both structures' trim elements are accentuated the same way. If the house is brick and the garage is sided, paint the siding a color that matches the brick. Do not choose the house's trim colors or accent colors for the body of the garage. This will make the garage dominate the property's appearance.

GARAGES, continued

For hinged ornamental doors, paint raised features (cross braces, framework, and window casings) the house major trim color. If you are using a two-color paint scheme, fill in the door's paneling with the house body color. For a three-color paint scheme, use the house minor trim color on the window sash, and try it on the paneling, too.

For overhead doors, paint the casing the house's major trim color. Paint the door this color too if you are using a two-color scheme. If you are using three colors, experiment with painting the door the house's minor trim color.

◆ **Don't draw a blank.**

Don't use a plain door. Use doors with windows and panel detail that complement the age and style of the house.

Doors Are Most Important

Garage doors express the structure's function more than any other element. Because of their size, they define the age and style of the building. For this reason, garage doors should be historically appropriate for their adjacent houses. The modern, two-car overhead door without trim or windows is inappropriate for most of Lakewood's garages. This is because such a large, blank door, when viewed from the street, attracts more attention than the house. Use historically appropriate trim and ornamentation to break up the monotony of an overhead door.

The historic Lakewood garage door was paneled. The top panels often had divided light windows, while the lower door panels were solid. Raised panels were often found on Colonial style garages; long, narrow panels were often found on Craftsman and English style garages; and recessed panels were always in style. The recessed portion of the panels was usually decorated with tongue-and-groove beaded wainscot laid vertically and occasionally laid diagonally. Cross bracing sometimes further decorated the recessed panels.

If you are fortunate enough to have an original ornamental garage door, preserve it. If you need the convenience of an overhead door, install one having Lakewood's traditional design details. These ornamented overhead doors can be obtained from several manufacturers, or have your carpenter add windows and appropriate ornamentation to a plain door.

Tool Sheds

Don't just throw up a shed! Integrate it into the landscape.

Create a *zone* around its walls:

Make places to sit or lean.
Soften the foundation line with flowerbeds and plantings.

Don't make it too big:

Pay attention to its volume and shape compared with house and garage.

Incorporate some of the house's features such as building materials, angles, ornamental shapes, and colors.

Measure and sketch your site plan - house, garage, shed, flowerbeds, shrubs, paths, and all.

Test your idea:

- ♣ Use a garden hose to outline curved paths or flowerbed edges.
- ♣ Use blankets, ropes, and poles to mock-up walls and rooflines.

Remember that the Building Department will need a site plan to issue a building permit for a shed.

EXTERIOR PAINTING

Not just a visual enhancement, paint provides a protective coating against moisture, sun, and dirt. Check seasonally for areas of deterioration, including cracking, chipping, and water infiltration. It is relatively easy to touch-up paint or stain between larger paint jobs.

The selection of high quality primers, paints, and stains, as well as thorough preparation and proper application, are essential to getting the maximum life out of coatings. Follow these guidelines when maintaining and applying exterior paints and stains:

Prep, prep, prep.

The key to extending the life of any coating is thorough, proper preparation. Correctly preparing and cleaning surfaces prior to paint or stain application will visually enhance the finished job, and will save money by requiring less frequent applications.

■ **Thick won't stick.**

Preparation includes removing excess layers of paint. If paint build-up is too thick, the addition of several new layers of paint may cause the bottom layer to fail and peel. This can also happen when latex paint is applied over multiple layers of oil-based paint. Latex paint expands and contracts at a different rate than oil-based paint, which can cause the bottom layer to give way. Excess paint should be removed by scraping, chemical strippers, or removal with a heat gun (on the lowest setting). Under no circumstances should an open flame be used to remove paint.

■ **Clean and dry.**

All surfaces should be clean and dry before any application of primer, paint or stain. Be sure to sand new wood siding to remove the mill glaze. Old surfaces should be hand-scrubbed using a mild detergent and rinsed thoroughly.

Allow several days of dry weather for the moisture to evaporate before continuing the preparation. Damaged paint should be removed by scraping, chemical strippers, or removal with a heat gun (on the lowest setting).

■ **Prime time.**

Primer should be applied over a clean, sound, dry surface. Bare wood and new wood should always be primed. The primer coat will enhance flaws (holes, cracks, rough spots) that can be caulked, filled, or sanded prior to painting. Consult a local paint store for recommendations on the use and application of oil-based versus latex primers.

■ **Bridging and gaps.**

Caulk and fill all cracks and holes after priming and before painting. Don't overlook areas where moisture can easily penetrate: around doors and windows, where architectural details meet the siding, and where porches are joined to the house.

■ **Leave all stones unpainted.**

Stone and brick should not be painted. Paint traps moisture in stone and brick, causing deterioration and peeling paint.

■ **Let it breathe.**

The best paint job can quickly peel off a wall by too much moisture moving through the walls from inside to outdoors. Major sources of indoor moisture include bathing, cooking, and laundry. Be sure that kitchen and bathroom moisture is vented directly outside year-round with exhaust fans and that the dryer vent is properly installed.

EXTERIOR PAINTING, contined

Color Schemes and Placement

When choosing a color scheme and placement of colors, make sure that the selections enhance the home and complement the other houses on the street. Consider the existing colors of the roof and foundation, as well as the different building materials incorporated into the design and style of the house. If the roof is slate and the foundation is sandstone or brick, select colors that complement and enrich those natural materials. If part of the house is covered in wood shingles, consider painting the shingles a different color than the other wood siding and trim on the house.

Three paint colors - for body, trim, and window sash - are often enough to bring out the architectural character of a house. A fourth color can also be selected as a secondary trim color. Try to avoid the look of a "painted lady" where every piece of ornamentation is highlighted in a different color. The result is too busy, and often inappropriate for Lakewood homes.

Several paint manufacturers offer color charts that reflect a "preservation palette," and incorporate colors that are historically correct for late 19th and early 20th century Lakewood houses. There are also a number of books that show placement of colors for houses built in different time periods.

Lead Paint

Lead is a health hazard. Paint manufactured before 1978 contains lead. When maintaining the paint, monitor areas of peeling paint and common friction points (windows and doors) for chipping. Prepare and repaint these areas as needed. Use drop cloths to protect the ground and collect paint chips. Be sure to limit creation of paint dust and properly dispose of paint chips and dust.

For assistance in determining proper disposal techniques, contact the Lakewood Division of Health in the Department of Human Services at (216) 529-7690.

SIDING AND INSULATION

Wood Siding and Shingle Care

Wood clapboard and shingled siding creates distinctive texture and patterns, which are important to a home's overall appearance and historic charm. When planning maintenance and rehabilitation projects, it is important to take care of your home's "skin," inspecting your wood shingles or siding (often called lap siding or clapboard) for damage, rot, or the need for a new coat of paint.

Prematurely peeling paint is often caused by excessive moisture. Be sure to run a dehumidifier, and ventilate kitchens and bathrooms with exhaust fans ducted to the exterior. Exterior painter's vents (2" diameter screen vents) at an inconspicuous location at the top and bottom of an uninsulated stud cavity may also help in problem areas by allowing moisture to escape from inside the wall. Leaky roofs, downspouts and gutters may cause rot, which is indicated by wood discoloration and a spongy texture. After correcting any water problems, rotted siding should be replaced to match the original.

Considering Vinyl, Aluminum or Other Synthetic Siding. Vinyl and aluminum siding, from an historic preservation standpoint, is never recommended. Imitation materials diminish the historic character and significance of a home and neighborhood. If a house has vinyl, aluminum, or other synthetic siding, removing it will help restore the house to its original look. On many homes, the original siding underneath is still in good condition, but was covered when the homeowner was sold the latest siding technology or fashion of the day.

Remember that no material is maintenance free! Vinyl and aluminum siding can warp, crack and dent, colors will fade making it difficult to repair and match colors, and these sidings may eventually need to be painted just like their wood counterparts. Despite some claims, artificial sidings add very little to your home's energy efficiency. Also, siding conceals problems such as excessive moisture, allowing the building's structure to deteriorate undetected.

If you choose vinyl or aluminum siding, careful installation will lessen its impact on the historic character and style of a home. It is important to prevent the loss of historic features and minimize the damage to the historic siding beneath. "Jumping" or siding over the wood trim, also called casings and fascia boards should not be done as it will reduce shadow lines, details, and give a "flat" appearance.

The placement, profile, size, proportion, finish and general appearance of the artificial siding should closely match the original wood siding. Real wood siding has a smooth finish, not wood grained, as is popular in some artificial sidings. Dutch lap or shiplap vinyl siding should be used only if the home's original siding is of that type – clapboard vinyl siding is often more appropriate. Trim and corner boards in contrasting colors will also add to the home's overall appearance.

As some aluminum sidings are reaching the end of their life spans, it is becoming more common to see homeowners removing them. Before assuming that you will install new siding once the old is removed, why not consider restoring your original wood siding? It may just need a good scraping, priming and painting to be just like new ...historic character and all!

Insulation. In Lakewood, many houses were built with little or no insulation in the walls, ceilings, and roof spaces. While the lack of insulation causes some draftiness, the open space between wall studs and roof rafters allows air to circulate throughout the internal structure of the house. Good air circulation is especially important in keeping a building dry, because moisture is created both inside and outside the house. Sources include bathing, cooking, laundry, damp basement floors, and weather conditions such as snow, rain, and humidity. As moisture moves through the walls, condensation can form. This typically occurs on the inside of the exterior siding. Air circulating through the house framing will dry out the condensation. If air cannot circulate, the moisture build-up can cause peeling paint and mildew growth on the exterior, as well as rotting wood on the interior of the structure.

Houses lose most of their heat through the roof. Before investing in wall insulation, consider insulating roof and attic spaces, as well as caulking cracks such as those found around door and window framing and at the top of foundation walls. Access to attic and roof spaces is typically easier, and provides an opportunity to install baffles for proper air circulation and a vapor barrier to eliminate the movement of moisture into the insulation. It is often difficult to adequately ventilate and install a vapor barrier with wall insulation without damaging interior or exterior materials and finishes. If wall insulation is installed, be sure to understand the importance of ventilation.

Keep in mind aesthetic considerations, too. If wall insulation is installed from the outside, remove a piece of siding for access and then reattach it. Don't have the holes plugged with plastic caps. If wall insulation is installed from the inside, don't damage interior woodwork.

ROOFS

Roofs create the skyline of Lakewood. The variety of roof shapes and materials, chimneys, and features such as dormers and towers add to the distinctive character of the city. The seasons can be rough on a roof, with downpours of rain, falling leaves and branches, ice build-up, and high winds.

- **Shed the Water.**

Water is a house's worst enemy. Even a small steady leak can eventually result in major damage. Make sure that water on the roof is traveling into the gutters and downspouts, and then into the storm sewer connections. If the water is drained onto the ground, make sure the splash blocks and soil slope away from the foundation. A major cause of water leaking into basements is misdirected rainwater.

- **Roofing Materials.**

Originally, the roofs of Lakewood were wooden shingles, slates, clay tiles, or concrete tiles. More modern materials, such as asphalt and fiberglass shingles have often replaced these original materials. If a house has an original slate or tile roof, maintain it. A roofer skilled in using these materials can make minor repairs. For major repairs, a skilled roofer can carefully remove the original roofing materials, make repairs, and reinstall the roofing. Both old and new tile and slate are still available through salvage yards or suppliers and manufacturers. Some of the newer materials that imitate slate and tile can create a satisfactory appearance for a lower cost. Remember that, although slate and tile are more expensive, they last much longer than asphalt or fiberglass shingles. Finally, new skylights should be installed on the rear side of roofs, where they are not visible from the street.

- **Chimneys.**

In addition to making a cozy fire possible and venting the gases from heating systems and hot water tanks, chimneys are important exterior features. Even if a chimney is no longer being used, it should be kept intact.

Whether a chimney needs minor repairs or needs to be completely rebuilt, make sure a mason understands that the work should match the original. Take photographs of the chimney before work starts. Mortar joints should match the original in color, size, shape, and material. Existing bricks and stones should be reused whenever possible. Decorative brick or stone patterns should be duplicated. New chimneys should be built of masonry. Today's popular construction method of wrapping a chimney in vinyl siding is not appropriate for Lakewood homes.

- **Decorative Features.**

Keep decorative roof features, such as brackets under the eaves, molding along roof edges, and exposed rafter ends. Retain the original dormer details, such as siding, window trim, and windows, which often have unusual windowpane patterns. Missing or deteriorated items should be replaced with parts that match the original in shape, size, and color.

- **Gutters and Downspouts.**

Keep gutters and downspouts in good working order. Inspect and clean gutters and downspouts in spring and fall. Clogged gutters cause damage by forcing water under roofing and behind siding. Clogs also cause gutters to overflow, saturating the foundation and increasing the potential for basement water leakage. When it's time for replacement, old-fashioned style gutters in a half-round shape and round downspouts are available. Gutter straps should be installed under the roof material, or the gutter should be attached to the fascia board with gutter spikes. Some Lakewood houses still have "box gutters," which are gutters built into the moldings at the top of the walls. Other houses still have their original copper gutters and downspouts. Keep these two special types of gutters in good condition. Regular maintenance will be less expensive than new replacements. In addition, don't paint copper gutters and downspouts. The green patina is part of the charm of an old house.

WINDOWS AND DOORS

Original windows and doors are significant, character defining features of any house. They help define the architectural style, history, and age of a house. Their design, materials, and craftsmanship often reflect an era where windows and doors were built for one particular house. In today's system, a limited number of standard designs are used in a wide variety of housing styles.

Think of windows and doors as the face of a house. They contribute to how a house looks to people passing by on the street. They also add richness and style to a home's interior. Removing or permanently altering original windows and doors changes the character of a house, and usually not for the better. Replacement windows and doors look out of place and are very generic when compared to the traditional materials and designs found in Lakewood homes.

Lakewood has a large variety of window types and styles, which reflect the various architectural influences found throughout the city. Wooden sash windows, built of hard old-growth woods, with single glass panes, smaller divided glass panes, leaded glass, or stained glass, were the most popular as Lakewood was being developed, but metal casement windows were also used.

Doors also reflect the architectural styles found in Lakewood. Original doors were constructed of wood, most often oak, with a variety of decorative panels, glass panes, and applied ornamentation. Many doors feature beveled, leaded, or stained glass windows, with their design often repeated in the sidelights. Doors were typically stained and varnished, rather than painted. Today, the maintenance and preservation of original windows and doors are essential to retaining the character of Lakewood homes.

Consider the following when evaluating whether to repair or replace windows and doors:

Repair is cheaper than replacement.

Repairing original windows and doors is almost always cheaper than buying something new and paying to have it installed. Often, homeowners can undertake needed repairs, which include repairing broken window ropes, reglazing windows, caulking gaps, and installing weather-stripping. The repair of original windows and doors requires little skill and a small commitment of time. In addition, most windows and doors are made of old-growth wood, which is harder and of better quality than wood available today.

New does not always mean better

When considering the purchase of new windows or doors, taking a little extra time to find a product that matches as closely as possible the existing window and doors will help keep the architectural charm of the house.

Most new windows are made out of vinyl, aluminum-clad wood, or soft woods, with reflective, thermopane glass, which is layered and sealed to create the thermal quality. Many have snap-in muntins, or muntins sandwiched between two panes of glass, replacing the true divided pane window. The seal that holds the layers of glass in replacement windows can sometimes fail, resulting in condensation and fogging of the space between the two panes of glass. This condition cannot be corrected and requires replacement of the window. Most new doors are constructed of a metal or wood veneer over a foam interior instead of being solid wood.

WINDOWS AND DOORS, contined

Remember that:

- "new" may not match the dimensions, materials, and detailing of the original;
- "new" may be made out of inferior materials that currently have a shorter, or unknown, service life;
- "new" may not match the interior trim and moldings characteristic of Lakewood houses; and
- "new" may not mean maintenance-free.

- **Consider storm windows and doors.**

Installing storm windows and storm doors, along with making repairs to existing windows and doors, will usually solve the problems of draftiness and condensation on windows.

The result is a more comfortable interior and some reduction of energy costs. Installing storms enables a homeowner to retain and preserve the character created by the original windows and doors.

- **Don't forget the basement.**

Basement windows should be repaired and retained whenever possible. They provide adequate and necessary basement ventilation. If security is an issue, wood frames can be fitted with security bars or grills that can be painted to match the color scheme of the house. Glass block windows are not an appropriate design. Even with vents, they do not provide adequate ventilation for the basement, increasing the potential for mildew growth and musty odors.

Replacement Windows Figuring the Cost

In a recent notice issued by the Ohio Department of Development, Office of Energy Efficiency (OEE), the myth that, "replacing windows and doors is a great way to reduce energy bills," was addressed. The OEE states "as a general rule, it is not cost-effective to replace working windows and doors. There are other improvements, including adding insulation, sealing air leakages, sealing duct leakages and replacing inefficient mechanical systems that may be more effective at reducing energy use. Ultimately it comes down to the cost to install the measures versus the resulting energy savings. Windows and doors are expensive and have paybacks usually measured in decades. Other efficiency measures can have paybacks of less than five years." When considering replacement windows and doors, homeowners should complete their own easy calculations on the real cost of the project.

By using the budget plan amount for the heating bill, the percentage of the heating bill the manufacturer states will be saved, and the cost of the new windows, it is simple to figure out how many years it will take before the savings on heating bills will equal the cost of the windows. For example, if a gas bill on the budget plan is \$110 per month, the annual heating cost is \$1,320. A savings of 25% (the savings claimed by most new window and door manufacturers) is \$330 per year. Now weigh that \$330 annual saving against the cost to purchase and install replacement windows. Replacing 20 windows at \$350 per window (low-end, standard size vinyl replacement) would cost \$7,000. With savings of \$330 per year, it would take over 21 years to pay for the cost of the new windows. Completing this simple calculation will help determine if the advantages of fuel cost savings outweigh other considerations, such as potentially altering the character of the house.

Repair conserves energy and is environmentally friendly.

Repairing original windows and doors saves energy and is good for the environment. When original windows and doors are removed from a house, the energy and natural resources expended to make them are lost, and more waste is sent to landfills. In addition, more energy, natural resources, and waste management are needed to manufacture, transport, and install new windows and doors.

PORCHES

Porches are the most important features on the front of Lakewood houses. The porch is often the first part of a home that visitors see. The thousands of architectural details of Lakewood porches, such as columns, railings, and lattice, are put together in almost endless variations.

In addition, porches serve an important role in the community. By encouraging people to be in their front yards, more neighbors talk to each other, and the presence of more people outdoors makes a neighborhood safer. The porch is a reflection of the people who live there. Lakewood porches should continue to be friendly and inviting, invoking a sense of fun and be a place for all types of activities.

- **Don't Enclose.**

Permanent porch enclosures destroy the original architectural character of a house. A porch permanently closed up with siding and windows becomes a room of the house, not a link to the outdoors. To enjoy a porch without insects or extend the season of use, install removable screen or glass panels. There are many examples in Lakewood. To help preserve the character of a porch, make the removable glass or screen panels the same size as the porch openings; set the panels behind the porch railing; and set the panels behind the columns or against the sides of the columns. For the best appearance, the removable glass or screen panels should be recessed - not flush with - the front edge of the columns or walls.

- **Woodwork.**

Original porch railings, columns, and lattice help define the character of a porch and the style of a house. Retain and repair the originals whenever possible. In many projects, repair is often less expensive than replacement. In addition, many new products available in stores today are too generic for Lakewood porches. These products rarely have enough detail or come in the right proportions and dimensions to look visually correct when installed. When making repairs, match the shape and size of original pieces. When repairing or replacing the balusters in the railings, match the original spacing between them. Depending on the size and style of the balusters, the space between two balusters is usually equal to the width of one baluster. Flat boards with cutouts typically touch each other.

- **Masonry.**

Maintenance of masonry, such as columns, railings, and steps, involves inspecting surfaces for open joints, which can cause deterioration and shifting of the bricks or stones. Open joints should be tuckpointed with a lime mortar. The size and depth of the mortar joints should match the original joints. In addition, mortar repairs should match the color of the original mortar. The use of caulking or pure Portland cement mortar can cause further deterioration.

- **Metal.**

Original apartment balcony metal railings, often curving, are more ornate than railings available today and should be retained.

PORCHES, continued

◆ **Ceilings.**

The traditional ceiling on Lakewood porches is known as beadboard, which are narrow boards with a rounded molding detail along one edge. Originally, the beadboard would have been stained and coated in a clear finish. Over the years, some ceilings have been painted. If you have a porch ceiling with a clear finish - keep it. It adds to the charm of a Lakewood porch.

◆ **Floors.**

The wooden board flooring on most porches is tongue and groove style, but occasionally thick straight-edge boards, called five-quarter, were used. When replacing deteriorated sections, it is important to get boards that are the same width and thickness. If replacement of the entire floor is required, consider using a tongue and groove board that is completely pre-primed. The primer on the bottom of the boards protects against moisture and will extend the life of the porch floor. The primer will get dirty and scratched on the porch deck during installation, so another coat of quality primer should be applied prior to painting. A fresh coat of deck enamel will help preserve and protect a porch floor for years.

◆ **Step Rails.**

When constructing a hand rail on the steps, look at the shape, size, and spacing of the balusters, top rail, and bottom rail of the porch railing. Try to match the porch railing or find similar pieces. Local carpenters and architectural metalwork companies ("Ironwork" in the Yellow Pages) can make railings that will complement the architecture of a house. Plumbing pipes, and wood two-by-fours are not appropriate for old house porches.

◆ **Paint Colors.**

Generally, porches should be painted to compliment the colors used on the house. Slight variations can be appropriate, given the style of the house or the construction materials, but using the body, trim, and sash colors of the house in some combination on the porch are usually good bets. Try to avoid painting every molding detail or every turn on a baluster a different color. In most cases, less is more. Remember, brick and stone are not meant to be painted. Once painted, it will be an ongoing maintenance chore.

◆ **Landscaping.**

Landscaping around a porch should be selected to complement and enhance the experience of the porch. For example, trellises and small trees can create shade. Mixed borders - meaning combinations of shrubs, evergreens, perennials, annuals, and bulbs - create year-round beauty. Planting large trees and bushes too close to the structure could cause damage. Plants should be selected and maintained to allow the porch and front of the house to be seen from the street, both for beauty and safety.

◆ **Building a New Porch.**

If a home never had a front porch - don't add one. It will change the architectural design of the front of the house. If a porch has been removed and is now being replaced, research sources of old photos to discover its details. Keep the design of new work compatible with the porches of similar Lakewood houses. A qualified contractor or architect can help get the details right.

Decks, Fences, and Sandstone Sidewalks

DECKS

A deck should serve not only as an outdoor living space, but also as a compliment to the design of the rear side of the house. The deck should appear as a natural extension of the house, rather than an unrelated appendage. Painting or staining the deck in a color which coordinates with the house's color scheme will visually unify the deck and house, as well as protect the wood from weathering.

When designing the details of a deck, think about using the features of Lakewood's porches. The railing for the deck and the deck stairs can look like a porch railing, with a top rail, bottom rail, closely spaced balusters, and hefty newel posts. If the deck is close enough to the ground that it does not require a railing, consider planters and benches to provide safety, comfort, and interest. The space between the deck and the ground can be filled with decorative panels of lattice. Landscaping around a deck of flower beds and low shrubs will help it blend into the landscape.

Traditional outdoor features that are alternatives to decks include stone or brick terraces, arbors, and pergolas.

SANDSTONE SIDEWALKS AND WALKWAYS

Sandstone was the original paving material used in Lakewood for sidewalks and walkways. They contribute to the charm and historic character of Lakewood neighborhoods. Most sidewalks and walkways are still in good condition today, and should be kept whenever possible. Sandstone slabs that are uneven can be leveled instead of being replaced. Slabs that must be removed can be reused for terraces and garden paths. New sandstone is still available for repairs and replacement.

FENCES

Fences are used for privacy, security, and ornamentation. A fence should be aesthetically pleasing and enhance the outdoor environment - remember that neighbors will also be looking at it.

In addition, the design and material of the fence should look appropriate for the house and landscaping. In a historic community such as Lakewood, wooden fencing and ornamental iron fencing provide the most appealing outdoor screening. Types of wooden fencing include picket, board-on-board, and open lattice. Deteriorated chain link fence mesh can be made less obvious by replacing it with black or dark green vinyl coated mesh. The fence will then blend better with its surroundings. There are also many flowering annual and perennial vines that will climb on a chain link fence and soften its appearance.



PRESSURE TREATED LUMBER

In the 1930's, scientists developed a process to treat wood under pressure with copper (toxic to the fungi that cause rot) and arsenic (an insecticide). Chromium was added, which triggered a chemical reaction that locked the treatment into the wood. This is the standard pressure treated wood, chromated copper arsenate (known as CCA), which has been so popular since the 1970's.

The product works well, but safety concerns are now being raised. For example, an 8 foot by 10 foot deck has about four pounds of toxic material in its 1½-inch-thick platform.

Studies are underway to determine if the chemicals can leach from the wood, particularly if exposed to acids such as the oxalic acid or citric acid in chemical deck brighteners. The natural acids in compost may also increase leaching from a compost bin into compost.

In 2002, the U.S. Environmental Protection Agency (EPA) announced a voluntary decision by industry to move away from using CCA to treat wood used in residential settings. As of the end of 2003, CCA products cannot be used to treat lumber intended for most residential settings, including play structures, decks, picnic tables, landscaping timbers, residential fencing, patios and walkways/boardwalks. The intent of the phase out was to reduce the potential exposure risk to arsenic, a known human carcinogen, thereby protecting human health, especially children's health and the environment.

An alternative treatment for lumber, alkaline copper quaternary (ACQ) is now being sold. The active ingredients in ACQ are copper oxide and a quaternary ammonium compound. ACQ is registered for use on lumber, timbers, landscape ties, fence posts, building and utility poles, pilings for use on land, decking, wood shingles, and other wood structures.

Although the formulation has changed, the U.S. EPA still publishes the following handling and disposal recommendations.

For more information: *Arsenic and Old Wood*, This Old House Magazine, March/April, 1998.

For more information on the discontinuance of CCA: <http://www.epa.gov/oppad001/reregistration/cca/cpsc.htm>

For more information on ACQ: <http://www.epa.gov/oppad001/reregistration/cca/acq.htm> and <http://www.epa.gov/oppad001/safetyprecautions.htm>

- Do not use pressure treated wood where it may come into direct or indirect contact with drinking water.
- Do not use pressure treated wood where the preservative may become a component of food, such as a compost bin or vegetable bed, or animal feed.
- Do not use pressure treated wood for mulch.
- Use pressure-treated wood with caution:
 - √ Wear a dust mask, gloves, and goggles when cutting or handling pressure treated wood.
 - √ Do all sawing and machining outdoors over a tarp that can be emptied into the trash or thrown away with the sawdust.
 - √ After handling, wash exposed skin thoroughly.
 - √ Wash work clothes separately.
 - √ Never burn it - the resulting ash concentrates the toxic substances. The only current disposal solution is burial in a landfill.

When working on projects, consider the following options:

- √ For existing decks and structures, seal the wood regularly with a moisture repellent. It will help lock in the toxic chemicals and prolong the life of the wood.
- √ For new work, use pressure-treated wood only on structural parts near the ground, such as posts and framing under decks.
- √ Off the ground, use poplar for vertical features such as balusters. Apply paint or stain.
- √ For decking, cedar and red wood look better than pressure-treated wood, but cost more.

DECORATIVE RADIATORS

⊕ **Don't paint it out! Highlight it.**

Radiators and their pipes are often painted the same color as the wall so that they "disappear" into it. Many radiators, however, have ornamental detail - clawed feet, scroll work, scallops, and filigree - that have been lost under decades of paint. Consider highlighting the detail and making the radiator a decorative statement.

⊕ **Bronze is beautiful.**

Radiator covers did not become popular until the 1920's. From the late 1800's through about 1920, radiators were almost always out in the open, and the most popular radiator finish was metallic paint, applied as a decorative painting technique called "bronzing". The most popular color was gold, ranging from a pale color to a deep, rich tone. Other colors included copper and silver. Some bronzing color schemes used one color on the body of the radiator, with a second color for the ornament. Refinishing a decorative radiator in metallic tones makes a beautiful accent against natural woodwork.

⊕ **Polychrome paints perhaps?**

Two- and three-color paint schemes for radiators were also popular in the early 1900's. Often the background color on the radiator matched the background color on the wallpaper behind the radiator, and the ornamental detail on the radiator was highlighted in one or two colors from the wallpaper. Another option was to paint the radiator in colors that contrasted with the paint color of the wall.

⊕ **Purge the paint.**

Removing old paint is worth the effort. One method is to disconnect the radiators and send them to be sandblasted by a company specializing in abrasive cleaning.

⊕ **Finish it off.**

- √ Long-handled and offset-handled brushes are available for reaching all parts of a radiator with paint.
- √ For bronzing, there are suppliers of bronzing powders and liquids, as well as camel's-hair brushes for applying it. Be sure to follow the instructions for priming and mixing the powder and liquid.
- √ For painting, do not use water-based paints (latex) over the base cast iron. The resulting rust will bleed through the paint.
- √ Polychrome by painting the ornament color first. Once this is dry, paint the entire radiator the background color. Before the background color dries, use a sponge to gently wipe the paint from the raised ornament. Touch-ups and additional accents can be added with an artist's brush.

⊕ **Radiator covers.**

Radiator covers became popular in the 1920's, ranging from plain metal designs to covers that had decorative accents or resembled pieces of furniture. Radiator covers are worth maintaining. New covers are available in a variety of designs to complement the architectural details of interior rooms.

⊕ **Replacing radiators.**

If a radiator must be replaced, old radiators are available through salvage dealers, and new models are available. Both of these choices are better than converting to baseboard units, which ruin the look of the baseboards.

For more information, see *Old House Journal*, September/October, 1988 and February, 2003. The 2003 article is also available at http://www.oldhousejournal.com/magazine/2003/february/bronze_beauties.shtml

FIREPLACE AND CHIMNEY MAINTENANCE

- * Have a qualified person, known as a “chimney sweep,” clean the chimney regularly of creosote buildup. Creosote is the residue from burning wood, which can be a fire hazard.
 - * Chunks of bricks or mortar in the fireplace are a signal that the chimney needs immediate attention.
 - * If the copper flashing around the chimney has changed from green to a dull brass color, it is becoming thin and many have pin holes.
 - * Install a chimney cap to keep out rain and deter birds and other animals from coming down the chimney.
 - * Burn only seasoned wood. Unseasoned wood will burn less hot, resulting in more creosote buildup.
 - * While enjoying a fire, use a decorative screen to keep burning embers and sparks from landing in the room. The style and shape of permanent glass doors should blend with the design of the fire place.
 - * Make sure the flue damper opens and closes properly.
 - * Do not use flammable liquids as lighter fluid to ignite a fire.
 - * Do not use the fireplace to burn telephone books, cardboard, wrapping paper, catalogs, newspaper, or Christmas trees. Use Lakewood’s recycling programs.
 - * Never leave a fire unattended.
- For more information, contact the Chimney Safety Institute of America at 1-800-536-0118 or <http://www.csia.org>

ASBESTOS

Asbestos is a general term for a group of six fibrous minerals that occur naturally in rocks and soil. Asbestos has been in use in the United States since the early 1900's, due to the fact that it is non-combustible, high in tensile strength, and a good insulator. The problem however, is that breathing asbestos fibers is known to cause several diseases, which may not appear until years later. In addition, the risk of asbestos-related lung cancer is many times higher among smokers than non-smokers.

It has been estimated that over the decades asbestos has been incorporated into several thousand building products. A series of EPA rules banning most asbestos-containing materials went into effect in the late 1980's. Older houses, such as those in Lakewood, are more likely to contain asbestos. Not every asbestos-containing material poses the same health risk however, and not everything that looks like asbestos is asbestos. If there is asbestos present, the important point is to properly manage it.

Asbestos-containing materials are known as friable or non-friable. In friable form, the asbestos materials can be easily crumbled, broken or crushed, releasing asbestos fibers into the air. Examples of this type of asbestos are some wrapping on a boiler or boiler pipes, wrapping on the inside or outside of forced-air furnace ductwork, or acoustical ceiling tiles. Friable products can easily release fibers into the air and are most harmful when the fibers are inhaled into the lungs. There are several methods to prevent fiber release. If possible, asbestos-containing materials can be encapsulated (applying a sealant to bind the fibers together) or enclosed (installing a rigid structure around the asbestos-containing material). The third method is complete removal.

In non-friable form, asbestos fibers are bound up in another hard material. Examples of this type of asbestos are some vinyl floor tiles and vinyl sheet flooring, asbestos-cement siding and roof shingles, or roofing tar. These products seal the asbestos fibers in the material. Unless these materials are damaged by methods such as sanding, cutting, tearing, or breaking, non-friable products pose little threat.

A properly licensed contractor should perform all of these methods. Be sure to check the experience of the contractor in handling asbestos-containing materials, and discuss the preventative measures that will be used. Before undertaking major renovations, consider having a properly licensed asbestos hazard evaluation specialist examine the house. The work will include a visual inspection and collection of small samples for lab analysis. Laboratory analysis is the **only** sure way to identify asbestos fibers. Contractors are listed in the Yellow Pages under "Asbestos".

If you accidentally come into contact with asbestos-containing materials, remember the following:

- ⇒ Never use power tools.
- ⇒ Never dry sweep or use a vacuum cleaner. Always use wet clean-up methods. Dampen materials and seal in plastic bags for disposal.
- ⇒ Launder clothes separately.

For more information, contact the EPA Asbestos Hotline at 1-800-368-5888 or <http://www.epa.gov/asbestos/ashome.html>