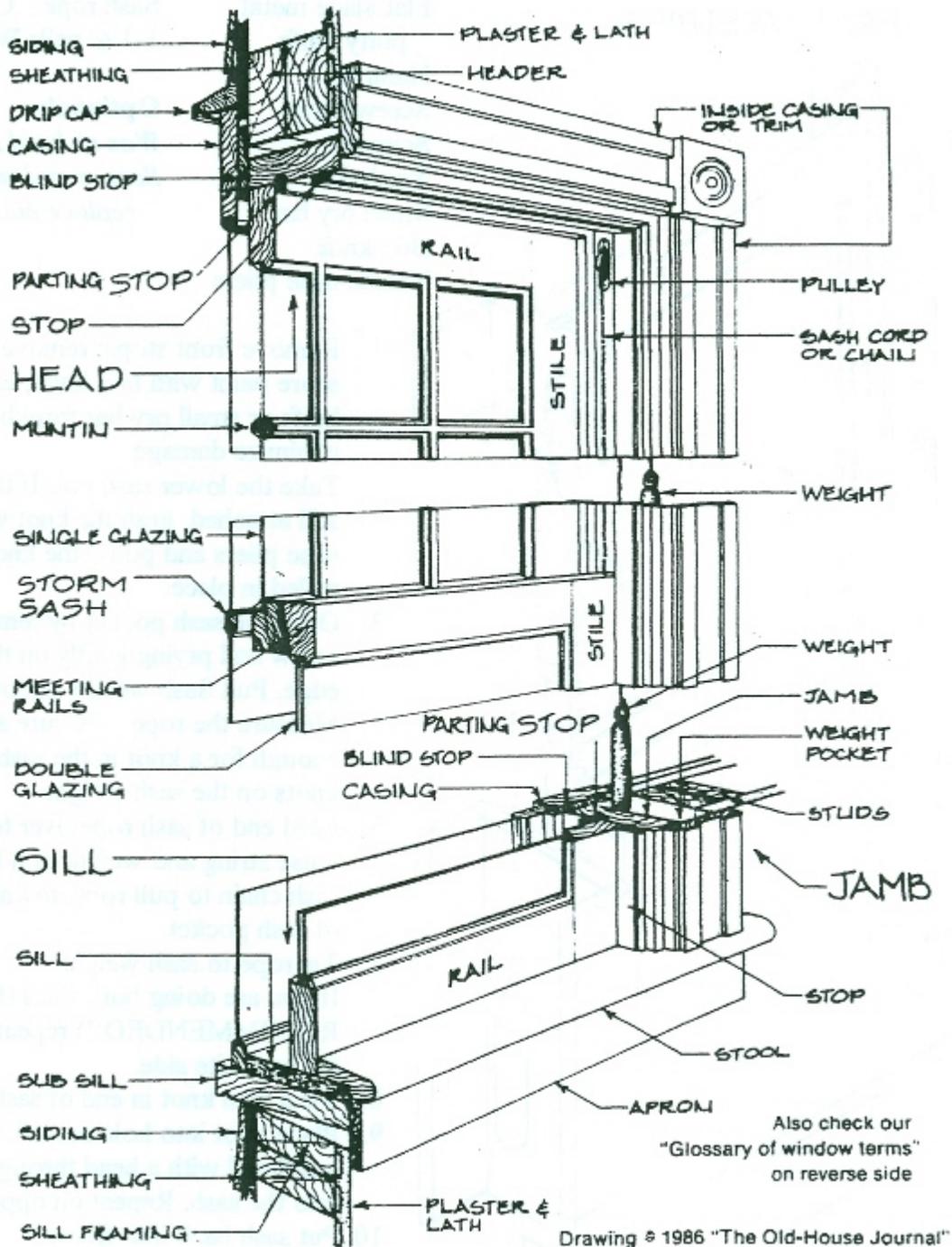


Repair or Replace?



Most new products are marketed as superior to the old sash in convenience, maintenance and energy efficiency. This stance is grounded in the argument that the investment will be returned "over time" in

energy savings. There are usually "guarantees" associated with the new products.

Here are some facts that a window salesman might not tell you - after all he has no interest in repairing your windows.

Most old sashes (pre-1930) have already survived many more decades than the windows that may replace them and they have done so for two reasons:

1. Older wood, used in the manufacture of historic windows, is denser and less susceptible to rot than new wood windows.
2. Unlike new vinyl units, older windows were designed to be repaired, so that replacement parts can be made and the units reassembled.

New wood replacement products can fill and repair seriously damaged wood with as much strength as the original. This [National Park Service technical brief](#) can help you with your historic windows.

Although a local contractor can easily install new windows, these retrofitted new windows do not fit exactly into the openings that were originally custom cut. This leaves gaps and openings for energy loss.

New manufacture designs, although they include insulated glass, no longer include a time tested design element called a "stop" that prevents drafts from blowing through the window. It is possible, with virtually any new window, to slide a credit card through the frame and the sash. "U" Value measures only the heat loss through the center of the glass not through the assembly, so the actual performance of an insulated window can be reduced by the amount of loss through the sash itself.

The gas (argon or krypton) in between the panes of insulated glass that is touted as 21st century technology dissipates almost immediately, meaning that the advertised R-Value (resistance to heat loss) may be considerably reduced soon after installation.

Sustainability

REPAIR them: preservation work is always labor intensive compared with replacement. **It will benefit the local economy directly by keeping dollars in the regional area.**

The manufacture of new vinyl, wood or aluminum sash, or any combination thereof, not only places more man-made and petroleum products in the environment, it is also more energy consumptive than repair. The new window market model involves big-box retailers, cross country shipping and frequently manufacturing facilities located in other countries. Polyvinyl chloride (PVC) is one of the most toxic production processes known and a by-product of its manufacture is dioxin. This is particularly dangerous if there is a fire and hazardous gases are released.

Many of the materials and coatings used in new windows degrade and cannot be maintained. Some examples are vinyl parts in the sash, sealants, desiccants, and coatings. None of these survive the warranty and can therefore cause greater failings, like breakage and visibility. Although many manufactures include a warranty, (now frequently 2-10 years) this certainly pales in comparison with historic windows that have already survived 60-100 years and are made of replaceable parts.

The repair of old windows requires skilled craftsman who are usually from the nearby area. It allows more money to stay local. In the end, when old wood windows are finally retired, the materials are degradable and recyclable. The materials come from natural sources that will not stay in the environment for hundreds of years.

Do you want to see through your windows? It is a fact that the transparency of thermal pane windows is the first element to fail.

Energy efficiency

What are the real savings when replacement is compared with repair?

U value is the measurement of heat loss (low is better)

R value is the resistance to heat loss (higher is better).

They function as reciprocals R value=1/ U value and U value is 1/R value.

A common 2 x4 wall with standard insulation would be R 13 and have a U value of .077! The difference between R 2 for simple storm windows and R 2.86 for the \$15,000 window replacement job is fairly insignificant in energy savings.

Tax Benefits

What about the tax benefits of replacement?

Storm windows are eligible expenses for the federal tax credit for Consumer Energy Efficiency. The credit is 30% of the cost -up to \$1500. The credit is for materials only, not installation. The windows must be used in your principal residence. Application for the credit requires a Manufacturer's Certification Statement. Windows (and doors and skylights) with a purchase date between June 1, 2009 and December 31, 2010 must have a U-factor and Solar Heat Gain Coefficient (SHGC) less than or equal to 0.30.

U-Factor measures the rate of heat transfer and tells you how well the window insulates. U-factor values generally range from 0.25 to 1.25 and are measured in Btu/h \cdot ft² \cdot °F. The lower the U-factor, the better the window insulates.

Solar Heat Gain Coefficient (SHGC) measures the fraction of solar energy transmitted and tells you how well the product blocks heat caused by sunlight. SHGC is measured on a scale of 0 to 1; values typically range from 0.25 to 0.80. The lower the SHGC, the less solar heat the window transmits.

[Click here for resources on weatherization, wood windows, and sustainability](#)

It's not just about aesthetics:

Historic architecture, over the years, has proven itself a good investment. The craft, finishing and uniqueness of historic windows add to the value of a home. Historic homes are resilient in all kinds of markets, because there is a large and growing customer base. Generations continue to rediscover the value of living in an older home. People pay for integrity in historic neighborhoods. Preserving and protecting the distinctive characteristics of your home is a way of insuring a continuing market for the property.