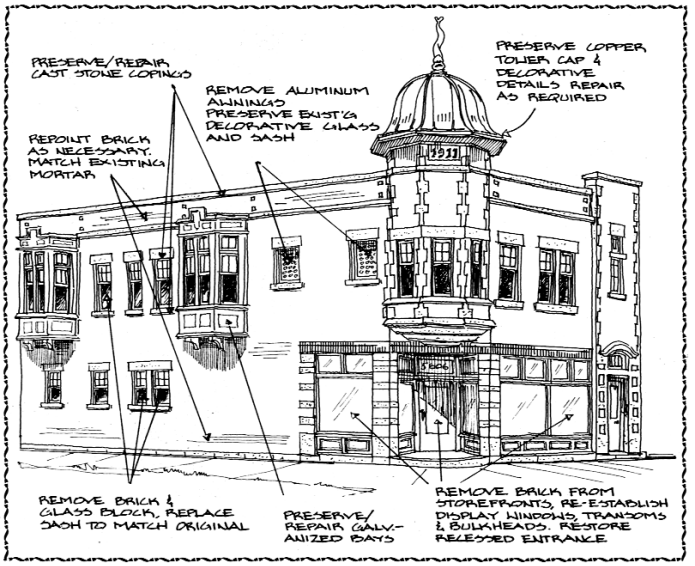
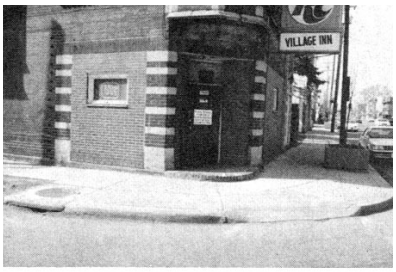
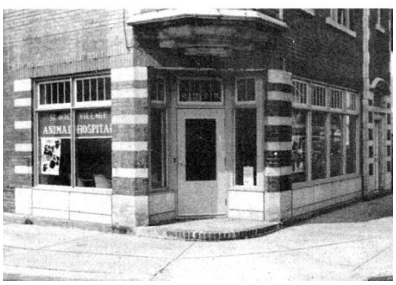
A Facelift For M·A·I·N S·T·R·E·E·T



Franklin Piccirillo





A craftsman's touch in the right spots brought this rundown Cleveland building back to life. The unbricked windows and matching door (before and after, shown at right) make a more inviting streetscape.

Commercial rehabbers use creativity and craft to renew downtown storefronts

by Robert Inwood

Downtown restoration programs are bringing new life to rundown commercial districts and new business to commercial remodelers. In the 1970s, preservation organizations began to promote downtown restoration through programs offering help with design, public relations, and funding (see "Mainstreet to the Rescue,"). These "Mainstreet programs" help businesses develop a coordinated "image" to compete with shopping malls. The downtown image is based on its biggest asset -- its old buildings -- and the public's nostalgia for a slice of history and community pride.

Most downtowns suffer from piecemeal modernization. False "Swiss chalet" fronts, "Wild West" boardwalks, or aluminum cladding mask the original architecture. The mish-mash of new materials, bricked-in windows, and plywood-covered transoms is frequently topped by a plastic sign as large as local ordinances permit. When a historic building has been changed this much, "restoration" becomes a process of compromise and invention.

When working on old buildings, the Mainstreet approach is to keep the original material when feasible because it lends a sense of history to the community. You can repair damage with traditional craft techniques and use ``low-tech'' fixes. If you've only worked on new construction and you want to shift to this type of commercial remodeling, you may have to find an old timer to show you how to mix a lime repointing mortar or how to build wood sash; but even small towns have retired tradespeople with these skills. When the building is missing some of its original detailing, try to duplicate the size and pattern exactly. If that isn't possible, fabricate new materials to blend with the old. The creation of these "detail" elements becomes crucial to the visual success of the project. To deal with the missing pieces and repair the gems that remain, you'll need a basic understanding of architectural history, and a sizable dash of ingenuity.

Sheet-Metal Ornament

Sheet-metal detailing on buildings is an art which is practiced less and less these days. But Victorian designers used the lightweight and malleable properties of metal to create dramatic cornices and surface details. In its heyday, the stamped metal industry provided the designer with a wealth of catalogue items for cornices, dentils, and finials. When a contractor finds these elements are missing or damaged, he's often stumped about how to reproduce them.

Metal cornice. In the city of Revelstoke, British Columbia, where I'm the Mainstreet coordinator, many late Victorian buildings sported sheet-metal cornices and ornament. In this small community of 9,000, I went to the only metal worker in town, Sab Yamamoto, the sheet-metal specialist with a local plumbing and heating company. This talented tradesman duplicated an elaborate metal cornice with a series of simple horizontal "breaks" in 30-gauge galvanized flashing. He even reproduced the inverted tooth-like dentils. This detail turned out to be a simple ribbon of metal, bent at regular intervals, and soldered on to the back (see Figure 1).

Finials. When a more tricky metal problem came up, in the form of several delicate crownlike finials in bad need of repair, he dissected an original finial into four symmetrical silhouettes. Using the disassembled pieces as a template, he produced two new finials to replace missing ones and repaired the existing finials using his standard sheet-metal tools and techniques (see Figure 2). His common sense approach opened my eyes to the possibilities of using architectural metals to recreate

Robert Inwood

Figure 1. *To duplicate a missing piece of ornament, a sheet-metal contractor formed galvanized metal on a brake. Inverted dentils are soldered to the back of the body.*

Figure 2. *This elaborate finial began life as four flat pieces of metal. Bent on a brake, they're soldered at the corners.*

period detailing authentically and affordably.

Structural Metal

Very few downtown businesses have a lot of excess cash to invest in their building; so, it's important to keep structural work to a minimum. Usually little heavy structural work is needed because modernizations were just cosmetic. When it does arise, you must handle it economically.

Steel beams. On one project, the Mainstreet contractor ran into an embedded steel beam that had been added to span an arched facade he was restoring. The columns beneath the arches had been removed, but the tops of the arches remained. Instead of pulling the I-beam, the contractor reintroduced the piers that had been carrying the arch and blow-torched the beam to remove the sections beneath the arches. The building had originally been covered with stucco and scored to look like stone, so the repaired stucco finish covered up the remaining chunks of steel left in the piers (see Figure 3).

Masonry Work

Masonry work is another area of restoration that can tax the imagination and the budget. Cleaning and repointing are pretty standard, but they can turn an ugly duckling into a swan.

Removing paint. Most general contractors are going to need to bring in a specialty paint-stripping company for this work. Many of these companies travel from town to town and are familiar with the quality of work expected by Mainstreet staff. On projects in Texas, the Mainstreet architect asks potential paint-removal contractors who want to bid on the job to do a "free" test patch. The coordinator tells the building owner how to evaluate the paint removal -- make sure the brick is completely clean and the mortar joints are not abraded. The test patch protects the contractor because he knows how many coats of stripper to use and how much labor is involved when he does the full job.

Because typical budgets for all work range from $2,000 to $10,000 per building, keeping costs down is critical. Careful chemical paint stripping, costing $1.25 to $2.50 a square foot (compared to $2 to $5 a square foot for repointing badly abraded joints) saves money. Two colors of brick, cast stone, and a copper awning were hiding beneath flaking paint on one handsome building. A low-tech chemical paint stripping and some repointing gave the owner a new looking, low-maintenance exterior.

Mainstreet programs have not been recommending stripping as much as in the past because of problems with containing and neutralizing chemicals. Sandblasting, though it might be more economical than stripping, isn't an option because it will damage the building and make repointing a necessity.

Repointing. Mainstreet masons must be able to match the existing mortar joints and mortar color. While most generals will sub out this work, contractors who specialize in storefront renovation find they can keep a repointing mason on their crew. The difference between repointing on a Mainstreet project and a standard job is that the mason on a Mainstreet job rarely gets to repoint the whole building. A complete repointing would eat up money that has to be spent on other parts of the project. Also, there's often a building owner and Mainstreet coordinator scrutinizing the quality of the work. To be accepted, the repointing has to match the original mortar joints; only those areas that show damage should be repaired.

Generally, the top of the wall near the parapet shows the most damage. The parapet is exposed on three sides, and the parapet cap often leaks. If joints are dark, water is leaching out the lime and turning the mortar to sand. Masons dig out 3/4 inch of mortar and make up a mortar that is no harder than the original. They use a soft lime mortar -- lime with white masonry cement and local aggregate. It may take some hunting to figure out which kind of sand was used. And the mason may have to add color to match the tint of an old mortar. The important thing is to stay away from portland cement. That makes the mortar too hard and too grey, and it's harder to get a good color match.

Another important technique is to strike the joint properly. Joints shouldn't be any wider on the repointed area than they are on the rest of the wall. Again, building owners are going to judge the work on the quality of the test patch.

Simulated marble facing. Masonry repair is often coupled with stone repair. While each stone repair has to be treated individually, sometimes the contractor can come up with a solution no one had thought of. On the Huston Block in Nelson, British Columbia, we had a handsome old red brick-and-marble bank building that had been encased in turquoise blue enameled steel tiles. When installing strapping for the tile, the contractors in this earlier ``remodeling'' had used a jackhammer to knock off the marble blocks surrounding the windows. After installing new windows, they had filled in the gaps around the windows with concrete, then covered the concrete with tile.

At the outset, the expense of any possible solution threatened to cancel the project, but the ingenuity of 70-year-old Gerhard Rink, who had worked on the reconstruction of Berlin, opened up a new avenue of thought. Noting from a historic photograph that the original window openings had been bordered with marble blocks, he came up with an

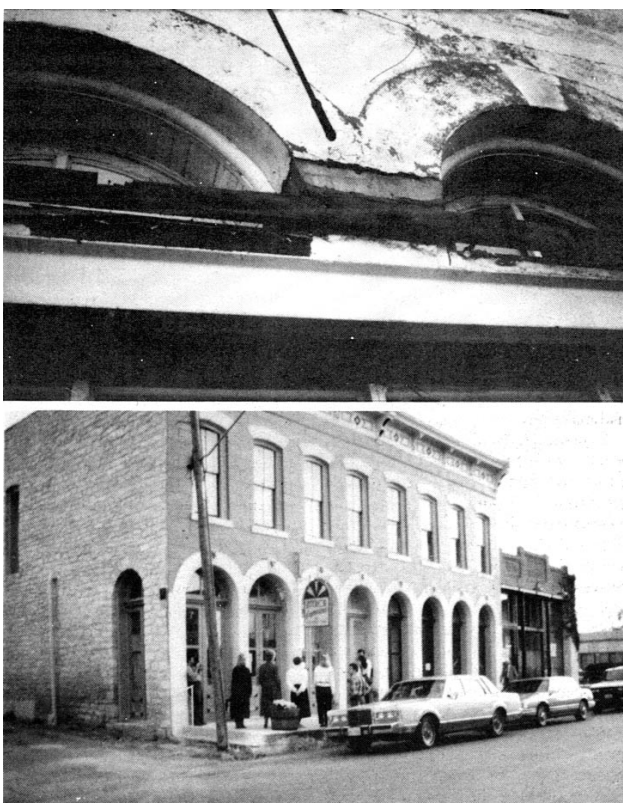


Figure 3. *After rebuilding the piers below the white steel I-beam, (top), the contractor used a blow torch to remove the sections between the arches. The new stuccoed facade (bottom) hides the leftover chunks of steel.*

"Mainstreet" to the Rescue

To help preserve historic commercial architecture, preservation groups in the United States and Canada decided to link building preservation to economic development and downtown boosterism. Sponsored by the National Trust for Historic Preservation (U.S.) and Heritage Canada, the Mainstreet program for downtown revitalization boils down to four key points: organization, promotion, design, and economic restructuring.

To participate, downtown merchants agree to hire a Mainstreet coordinator trained by the National Trust or Heritage Canada. The coordinators are part architect, part public relations expert, and part downtown booster. They manage Mainstreet as if it were a shopping mall. The coordinator may run promotions such as sidewalk sales, sweet corn festivals, bathtub races, "rottenest" sneaker contests, or farmers' markets to entice shoppers.

The coordinator also primes the renovation pump by providing building owners with free design sketches for building façade improvements. These sketches show where work is needed, and they give owners a vision of what their buildings will look like. By making the buildings an integral part of the formula for commercial success, they become important to their owners, and their preservation and maintenance is assured voluntarily.

The coordinator can also help repackage loans, develop new marketing strategies or business plans, and help the retailers apply for grants and low-interest loans to finance the construction. Many local, state, and provincial governments pick up 20% to 70% of the cost. But contractors must carry out the restoration design in accordance with the Mainstreet plan.

Hundreds of communities across the United States and Canada are participating in Mainstreet programs. Contractors with a feel for Mainstreet renovations can easily find a niche for themselves. For further information about Mainstreet communities in your area, contact the National Main Street Center, National Trust for Historic Preservation, 1785 Massachusetts Ave., NW, Washington, DC 20036 (202/673-4219); Heritage Canada, Box 1358, Station B, Ottowa, ONT K1P 5R4 (613/237-1867); or your state historic preservation office. – *R.I.*

Anatomy·of·a·Storefront

To save commercial storefront buildings, you'll need to know something about the parts of the building that are architecturally significant. Generally, a restoration-minded designer or architect can give you some help. These are the kinds of features to look for when you do storefront renovation.

Bulkheads. Support the display windows; may have had operable windows to let light into the basement (see A).

Piers and columns. Natural vertical divisions in the building's design.

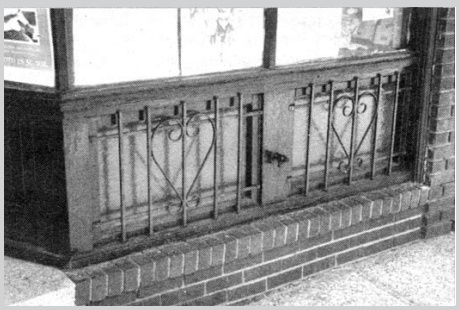
Display windows. Large, plate-glass windows to display merchandise (see B).

Transom windows. Small windows above the large display windows and entry door.

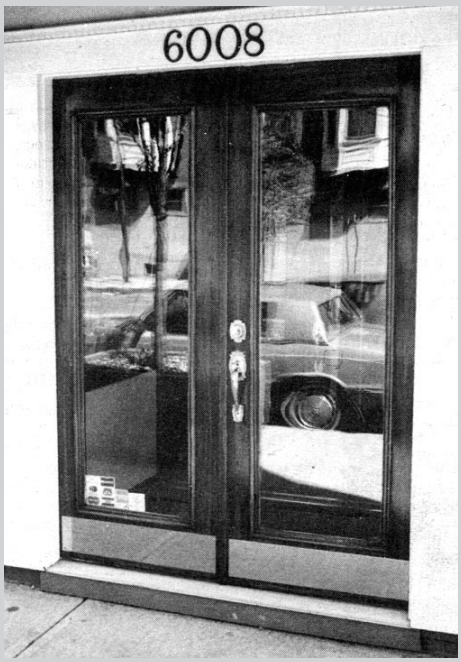
Cornice/Frieze. The ornamental, horizontal band above the display window or transom.

Recessed entrances. Identifies the store entrance; paved with tile or marble (see C).

A ►



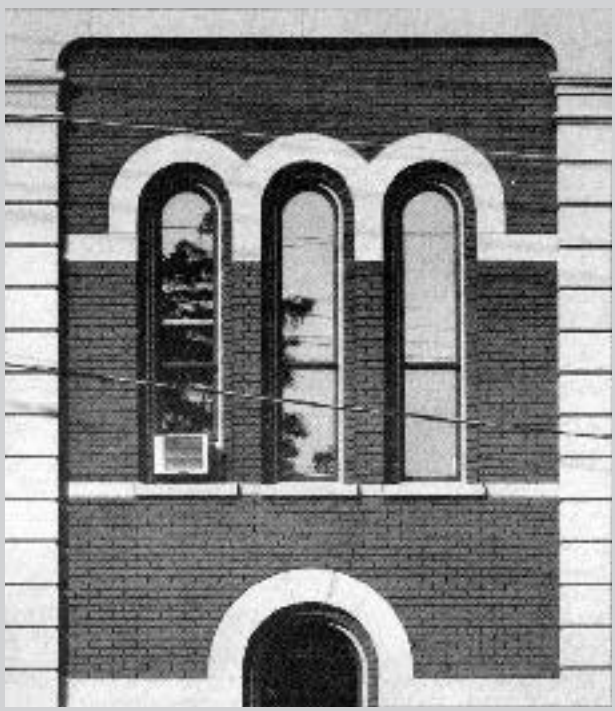
Donn R. Nottage



◄ D

Donn R. Nottage

E ▼

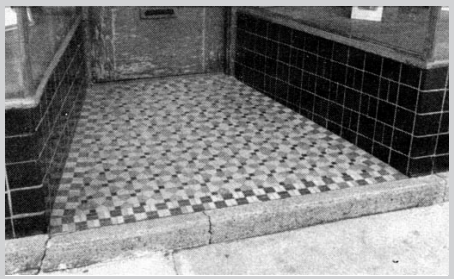


John Goldy

Tim Barrett

▲ B

C ►



Donn R. Nottage

Entry doors. Solid wood with large glass panels (see D).

Towers, bay windows, and balconies. Upper-level projections and decorative detail.

Upper windows. Window sash, window hoods, projecting brick or stone (see E).

Cornice/Parapet. A projecting horizontal band made of wood, brick, terra cotta, or sheet metal.

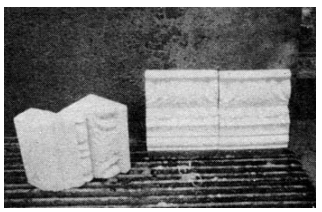
Roof. Decorative tile, metal, or slate roofs; roof cresting; flagpoles.

Adapted from The Cleveland Neighborhood Commercial Rehabilitation Manual, *by Franklin Piccirillo and Timothy Barrett. You can order a copy for $11 from the Treasurer, City of Cleveland, City Hall, Cleveland, OH 44114.*

approach to mask the raw concrete scars around the new windows with simulated rock facing. He suggested creating the appearance of stone by sculpting masonry cement. He made a "stone mixture" using masonry cement, a concrete admixture (to give it sticking power), and pure white silica sand. Two elements of detail contributed to the illusion. He matched the lines of the artificial stone to the course lines on surrounding masonry, and he gave the sculpted rocks a dusting of marble powder from the original quarry to give a convincing sparkle (see Figure 4). At the quarry, he scooped up dust from the tailings, but if you don't have a nearby quarry you could get powder from a local stone yard.

Figure 4. *Simulated "marble" blocks around windows were made by covering existing concrete with a patching compound, scoring the compound to look like mortar joints, and sprinkling with marble dust.*

Ornamental pressed brick. To duplicate ornamental brick missing from the string course of the same building, we went to a local artist/sculptor for help. He made a silica rubber mold from an intact brick. Then he used white casting cement to recreate the missing brick. You can't tell them from the originals (see Figure 5).



Robert Inwood

Figure 5. *Simulated ornamental bricks, made from white casting cement, fit perfectly with the originals.*

Concrete cornice. Another interesting casting solution surfaced on a building with a badly damaged concrete cornice. The original ledge had a fat radius poured into it, and I wracked my brain trying to conceive of a way to form up a duplicate. Again, a local contractor, Dan Davis, solved the problem with an ingenious use of a plastic drain pipe to create the required curve (see Figure 6).

Storefront Windows

Figuring out what to do about windows can be tough. Merchants who own department stores may want uninterrupted wall space on their upper floors, but Texas Mainstreet coordinators have found that they can persuade owners to place mannequins in second floor windows and light them at night.

Ground-floor windows and storefronts present problems to non-retail tenants. A ground-floor insurance office doesn't need a display window; the office needs building security. Nevertheless, to maintain the character of the buildings along a Mainstreet strip, you have to do something to keep the look and feel of the original windows (see "Anatomy of a Storefront").

Storefront windows. The best approach is to put back storefront windows in their original size and configuration and to repair original windows on upper floors. In the Texas program, many owners have been persuaded to remove at least the front 15 feet of dropped ceilings behind the display windows. This restores the feeling of spaciousness to the room; it provides a rationale for restoring the transom glass; and owners like the idea of installing a ceiling fan to keep air moving. Most mechanicals in commercial buildings are located toward the back of the building, but if there are hvac ducts, the heating contractor can put vertical diffusers in the vertical wall where the dropped ceiling resumes.

Another design solution that helps justify restoring storefront windows is to make the space just behind the window into a stairwell. Turn the corner and bring the stairway down into a well-lit foyer. Put a fire wall behind the stairway, and you'll solve the fire-egress problem that plagues mixed-use downtown buildings.

Simulated storefronts. The commercial rehab program in Cleveland takes another approach. The program coordinators say that if you're going to block storefront windows, you can make a simulated storefront by placing a painted wall behind the glass (see Figure 7). For doors you can use a piece of Masonite, or mount a sheet of glass over the solid panel of a metal door.

Painted windows. When owners are not willing to open up bricked-in windows, Texas Mainstreet architect

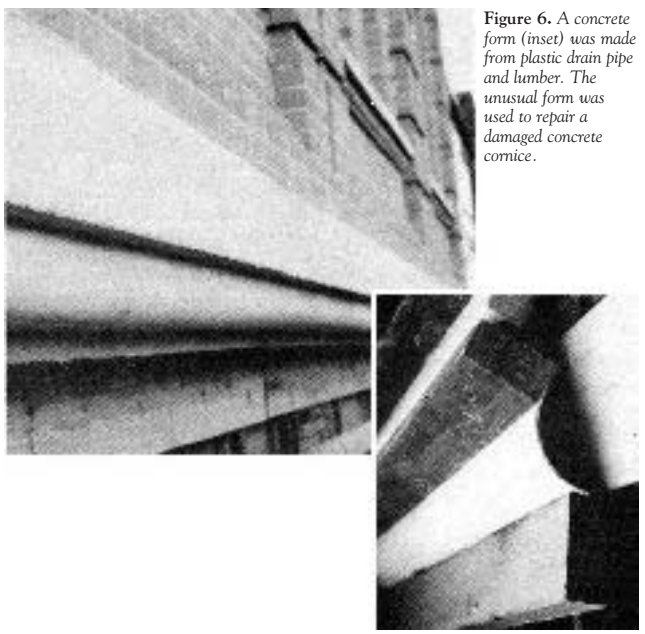
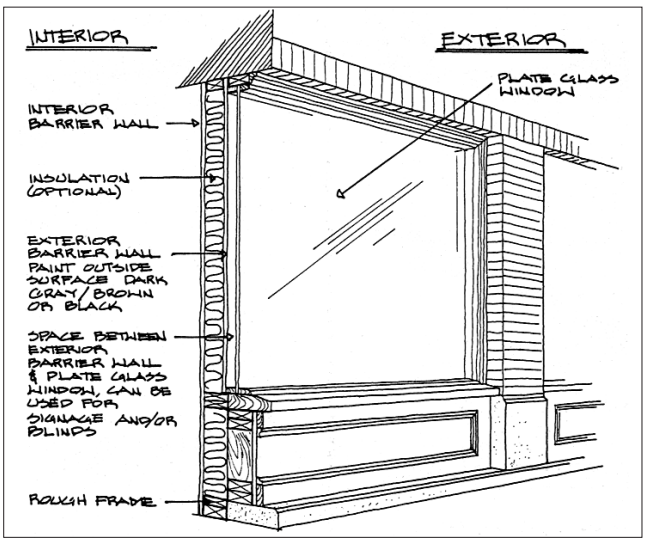


Figure 6. *A concrete form (inset) was made from plastic drain pipe and lumber. The unusual form was used to repair a damaged concrete cornice.*



Tim Barrett

Robert Inwood

Figure 7. *A "simulated storefront," (top), has a dark painted wall sitting behind the glass. It maintains the spacing of windows and entrances along the street (bottom), but makes the tenants feel more secure.*

Franklin Piccirillo

Figure 8. *Bricked-in windows on the second floor were painted black. From across the street, they look almost like the real thing.*

Dick Ryan recommends painting the windows black to simulate punched window openings. From across the street, these look almost like the real thing (see Figure 8).

Painted transoms. Commercial buildings sometimes put air-conditioning units in the transoms of storefronts. The units project out over the sidewalk. The Texas approach is to box the air conditioners on the inside. The box can sit on top of the display windows or be hung from the wall that is usually about 2 feet inside the facade. Gable louvers in the transom area, painted black, simulate the appearance of transom windows.

Carrarra glass. From 1900 to the 1940s, Carrarra glass was used for bulkheads and transoms. Carrarra glass is unique because it has color clear through.

On a Texas project, Midlothian, Texas contractor Thomas L. Clark found a 1930s facade with damaged Carrarra glass. After a long search, he discovered that a factory in Czechoslovakia still produced the glass, and he eventually located an importer (Floral Glass and Mirror, Hauppage, N.Y.).

Clark then had to figure out how to fasten it to the building. He talked to some old timers who told him what mastic to use and how to apply it. Remarkably, the adhesive used, Redkan Mastic, is still made by C.R. Lawrence Co. (Dallas, Texas). It also still makes the applicator, an electrified "ice cream scoop" that heats the mastic slightly when you scoop it out of the container. Globs of mastic go on the back of the glass and compensate for any unevenness in the wall surface.

Quality Work

Low-tech doesn't mean low quality. Contractors who do good work get more work. If you participate in the Mainstreet network, and if you like to travel, you can end up in some out-of-the-way places working on some very interesting buildings. A typical Mainstreet contractor like Tom Clark travels all over Texas and Oklahoma. Most of his projects come in under $25,000; he can typically rebuild a lower storefront and repair upper-story windows and cornice for about $8,000 to $12,000. He plans carefully, fabricates doors and windows in advance, and can complete demolition and rebuild a storefront in about three weeks. He knows how to do the special things you have to do on old buildings: make wood sash, use epoxy repair on windows, put on the Carrarra glass, and strip paint. Doing enough of these buildings has given him confidence in his bids, and he's happy to teach local contractors who want to come and watch.

Tom Clark isn't unique. In many towns, creative contractors are finding ways to renovate Mainstreet buildings. The purpose of the Mainstreet Program is to preserve some fine old buildings for future generations to appreciate. Ultimately, it is the tradespeople who are the first line of defense for heritage preservation. Mainstreet has a lot of capable allies in the building trades. ■

Robert Inwood is a professional designer specializing in historic restoration work, living in Winlaw, British Columbia, Canada. *Thanks to Dick Ryan, Architect for the Texas Mainstreet Program.*