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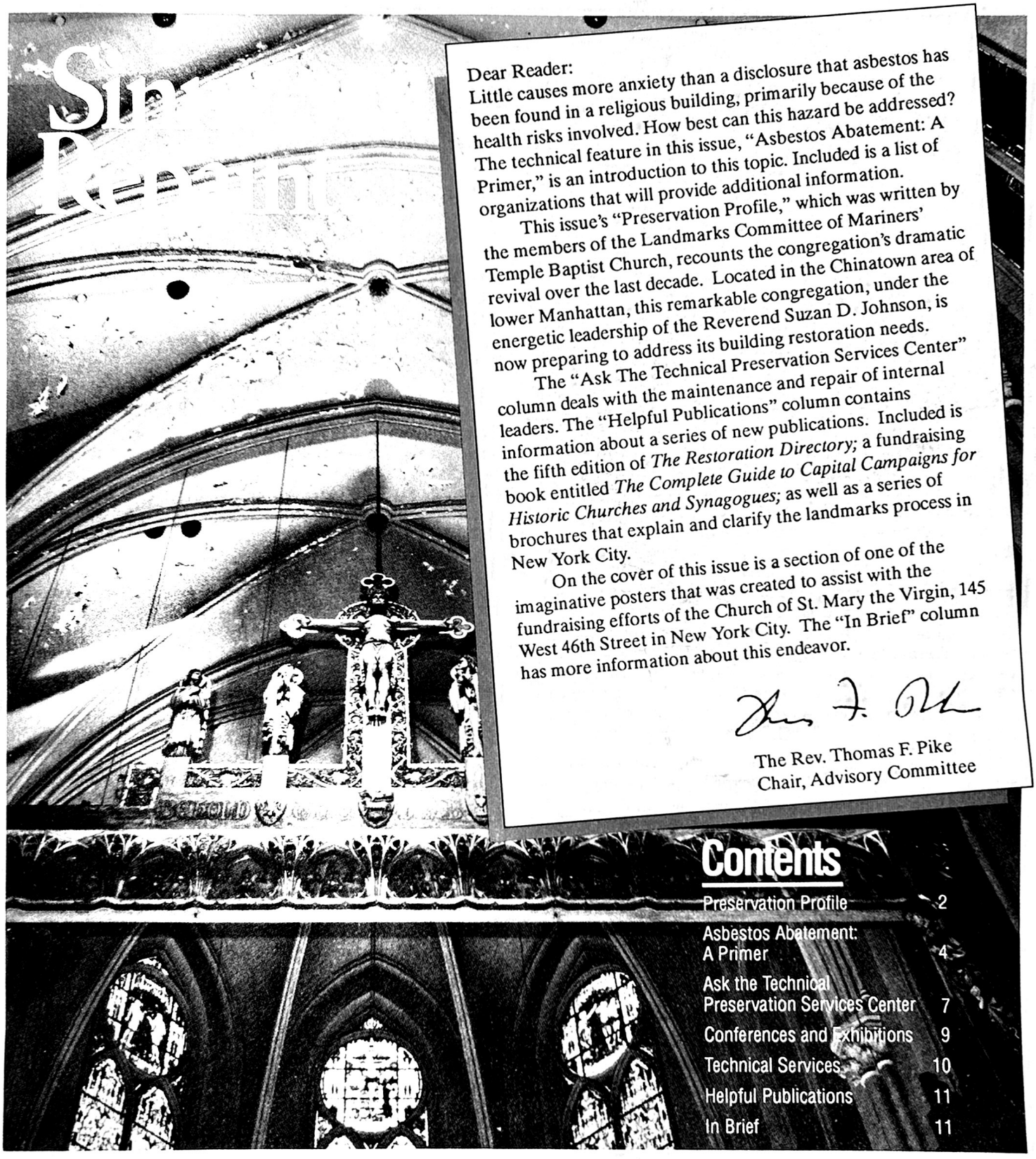
Common Bond

A newsletter on maintenance and preservation for owners of architecturally significant religious buildings



Dear Reader:

Little causes more anxiety than a disclosure that asbestos has been found in a religious building, primarily because of the health risks involved. How best can this hazard be addressed? The technical feature in this issue, "Asbestos Abatement: A Primer," is an introduction to this topic. Included is a list of organizations that will provide additional information.

This issue's "Preservation Profile," which was written by the members of the Landmarks Committee of Mariners' Temple Baptist Church, recounts the congregation's dramatic revival over the last decade. Located in the Chinatown area of lower Manhattan, this remarkable congregation, under the energetic leadership of the Reverend Suzan D. Johnson, is now preparing to address its building restoration needs.

The "Ask The Technical Preservation Services Center" column deals with the maintenance and repair of internal leaders. The "Helpful Publications" column contains information about a series of new publications. Included is the fifth edition of *The Restoration Directory;* a fundraising book entitled *The Complete Guide to Capital Campaigns for Historic Churches and Synagogues;* as well as a series of brochures that explain and clarify the landmarks process in New York City.

On the cover of this issue is a section of one of the imaginative posters that was created to assist with the fundraising efforts of the Church of St. Mary the Virgin, 145 West 46th Street in New York City. The "In Brief" column has more information about this endeavor.

The Rev. Thomas F. Pike
Chair, Advisory Committee

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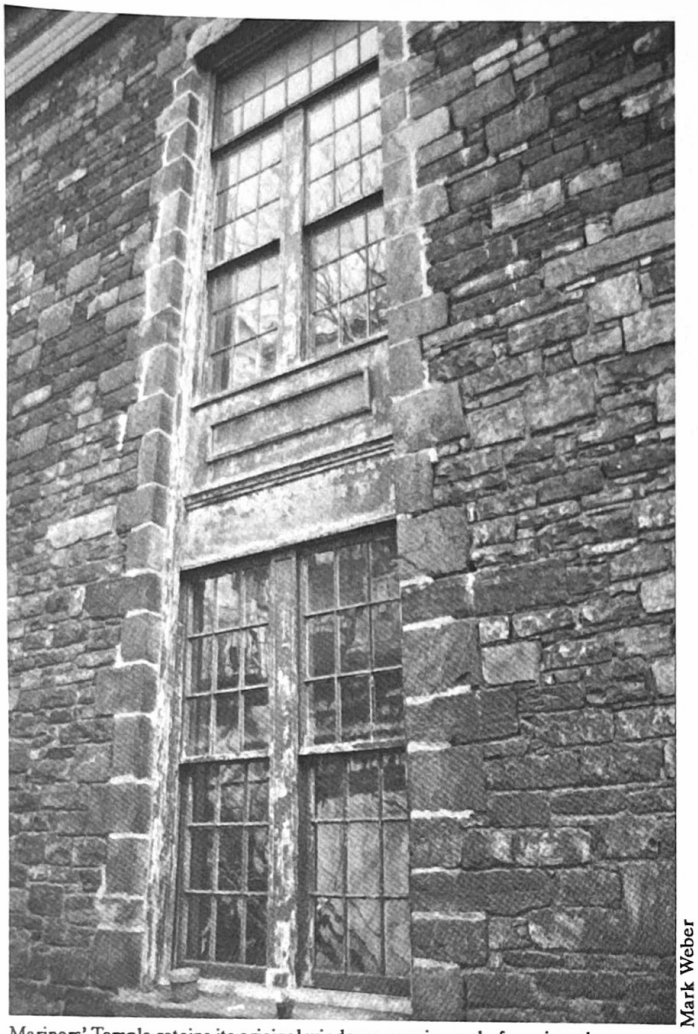


Mark Weber

Mariners' Temple retains its original windows, now in need of repair and rehabilitation.

In 1987 we launched an eight-year fundraising drive with a goal of raising the $2.5 million necessary to restore and renovate our facilities. We established a building fund to which our parishioners would pledge a specified amount over the period of the campaign. (This pledge is in addition to the tithe to the church's operating budget that all of our members are expected to give.) We are holding special events to help with the campaign. Several of our church Auxiliaries have been raising money through dinners, theater parties, shopping trips, flea markets, etc. Three years ago we held our first outside fundraiser, a formal dance and dinner party called "An Evening of Elegance." Because of its success, this dinner-dance has become a yearly fundraising event.

The dedication of our members and the support of the community-at-large have been extraordinary. Although we are just at the beginning of the process of restoring our building, we believe that the same perseverance, patience and hard work that renewed our congregation will ultimately also renew our historic landmark. We realize that this restoration could not even have been a possibility without a larger membership. Now that our membership has swelled and our programs are firmly in place providing services to the community, it is clear that Mariners' Temple occupies an important niche in the neighborhood. We look forward to worshipping in a building, which when restored, will proudly and accurately reflect the renewed vitality of our church. ■

Asbestos Abatement: A Primer

This article was developed as an introduction to asbestos abatement and as a general frame of reference. It is by no means comprehensive, and should not be used as the only source of information for asbestos abatement projects. Further research must be undertaken before asbestos abatement is initiated. A bibliography listing all the sources consulted in researching this article is available by writing: *Common Bond,* 141 Fifth Avenue, New York, NY 10010.

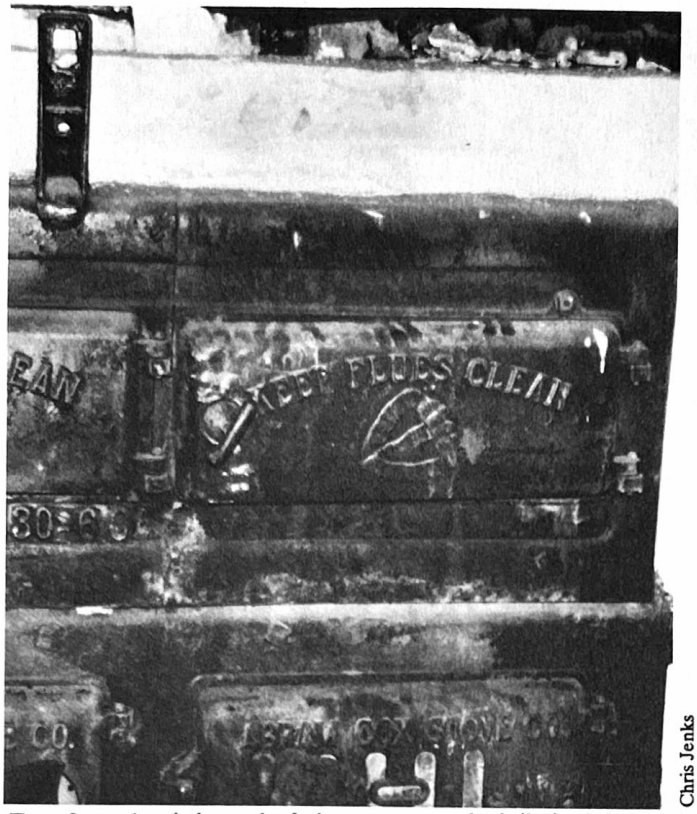
Asbestos was extensively used in building construction from the 1930s to the 1970s. In the mid-1970s, after exposure to asbestos was linked to certain types of cancer, the use of asbestos was discontinued in almost all building-related applications. The findings regarding the health hazards of asbestos have generated a great deal of hysteria. Although such a reaction may be understandable, much of the panic over asbestos exposure is extreme. Asbestos is a material that should be treated cautiously; improper or hasty removal of asbestos can often cause more problems than leaving it alone.

DANGERS OF ASBESTOS

Asbestos is a generic name for a variety of strong and flexible mineral materials that are chemically inert, highly resistant to heat and virtually indestructible. Asbestos presents a health hazard when it is **friable**, that is, when it is crumbled or crushed into a powder. Microscopic fibers of asbestos have about the same density as cigarette smoke. When these fibers are released into the air, they can be

Chris Jenks

Figure 1: Asbestos that is in friable condition, such as the pipe insulation illustrated here, is a danger to building occupants and should be removed or stabilized.



Chris Jenks

Figure 2: A typical example of asbestos cement used as boiler insulation.

easily inhaled and either swallowed or trapped in the lower part of the lungs.

Exposure to asbestos is associated with several serious health problems. Lung cancer is the most common and takes 15 to 20 years to develop after exposure. Asbestosis, or scarring of the lung tissue, also takes 15 to 20 years to appear. Asbestosis is rarely fatal; however, it is debilitating and can lead to fatal cases of pneumonia, flu or lung cancer. Asbestos is also linked with a rare cancer, mesothelioma, which attacks the lining of the lungs and the abdomen. The latency period of this disease varies. In some cases, mesothelioma develops as soon as three years after exposure to asbestos, while in others it may take 30 to 40 years to appear. This disease is always fatal. Unlike other asbestos-related diseases, mesothelioma can be contracted from limited, low-level asbestos exposure.

The first step in dealing with asbestos is to have a certified inspector determine where it is located in your building and then to assess its condition. Asbestos is present, in one form or another, in most buildings built between 1930 and 1975. It also shows up in many older buildings that had been repaired or altered during this period. It most commonly was used to insulate pipes and boilers (Figures 1 & 2). However, asbestos was also often mixed in with stucco, plaster, cement (Figure 3), wallboard, ceiling and floor tiles, acoustical tile, asphalt roofing shingles and tile, vinyl tiles, fireproof textiles, wallpapers, grouts and caulking compounds as a binder and fireproofing material. Some materials are marked as containing asbestos, but if there is no obvious indication of asbestos, and the material is of an age and type that is likely to contain asbestos, assume that it does. If necessary, the material can be lab-tested for the presence of asbestos. Contact the closest office of the U. S. Environmental Protection Agency (EPA) for more information on asbestos testing.

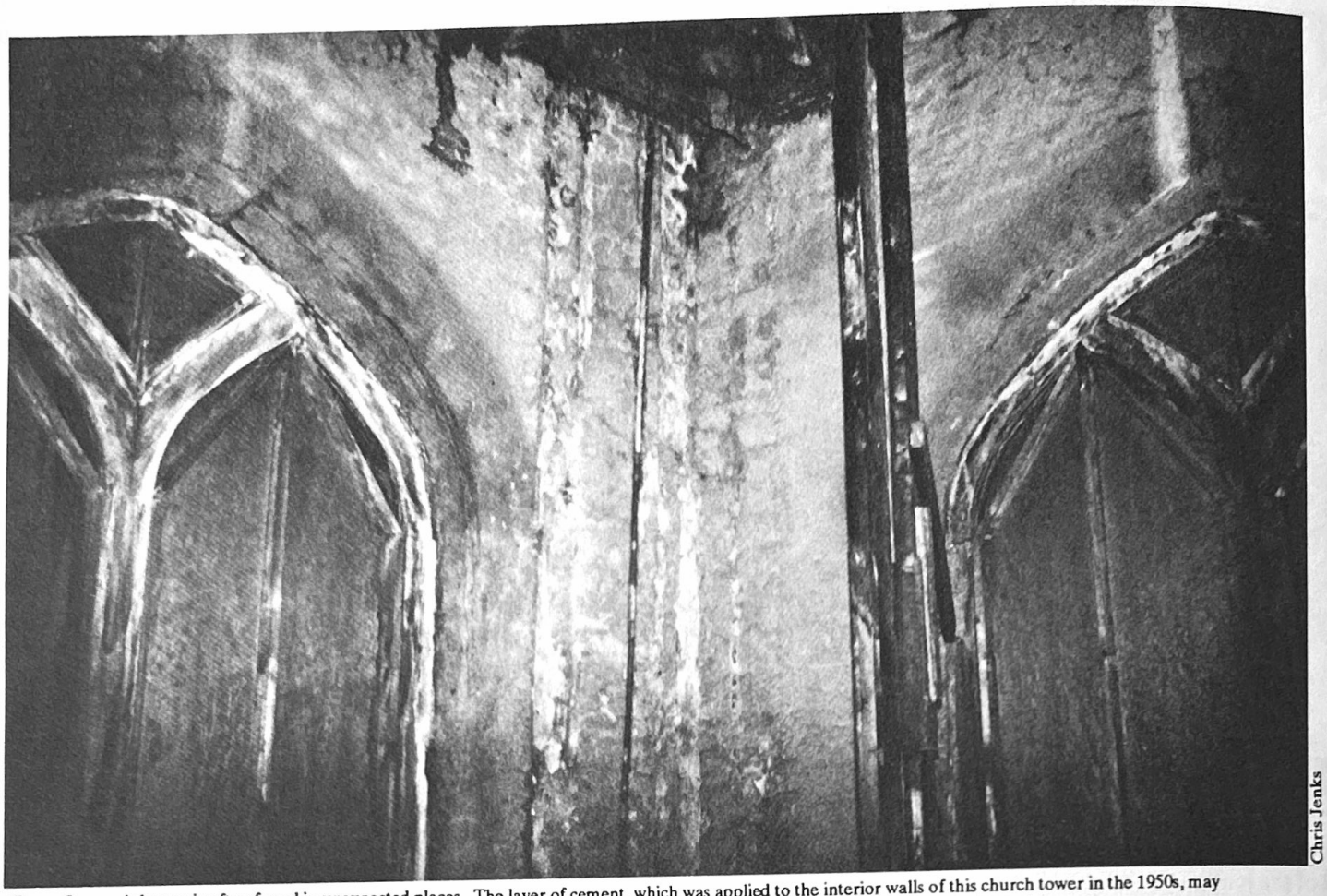
Once the inspector has identified the location of the asbestos in your building, the second step is to develop an abatement plan. **Asbestos abatement refers to the process of removing or minimizing the health hazards of asbestos in a building through a number of prescribed actions including removal, enclosure, encapsulation or an operations and maintenance plan.** Until recently, many experts recommended that all asbestos-containing materials be removed from buildings as a matter of course. Now the EPA and others suggest that the material can remain in place if it is in good condition, provided there are no compelling reasons to remove it, such as a renovation project or plumbing alterations.

REMOVAL

Asbestos abatement by removal means that asbestos-containing materials are totally removed from the building. A common example of this would be the removal of asbestos pipe wrapping and insulation from heating pipes. The most obvious advantage of this type of asbestos abatement is that once it is gone, the need for further monitoring or maintenance of the asbestos-containing materials is eliminated. However, the initial cost of complete abatement is usually high and the replacement of the asbestos with substitute materials performing the same function will be necessary, further adding to the cost. In addition, the asbestos must be carefully and properly removed so that the risk of asbestos exposure is minimized.

If you elect to remove the asbestos, be sure that the removal is done properly. Before hiring an asbestos contractor, verify that the firm is licensed by your state or municipality to perform asbestos abatement projects. As with all building projects, you should also carefully examine the contractor's references and previous record for safety or code violations. Be sure that the contract clearly states that the work will be done in accordance with all federal, state and local laws, and that the contractors are performing the work with equipment that complies with U. S. Occupational Safety and Health Administration (OSHA) standards. A conventional renovator's mask, for example, will not screen out asbestos particles. The filters in common household or industrial vacuum cleaners are inadequate for the same reason, and they will throw asbestos fibers into the air. (For further guidance on proper equipment, contact the EPA.) The contractor should isolate the portion of your building where the asbestos removal is taking place with sheets of plastic, and provide self-contained showers and throwaway protective suits to prevent contamination of the workers. All asbestos-containing materials need to be bagged in plastic, and proper disposal must be arranged. It is against the law to dump asbestos-containing materials in general dumps or land-fills.

An important aspect of asbestos-removal is air-monitoring by an inspector who is at the site throughout the project. The firm monitoring the project should **always** be completely independent of the contractor performing the work. This independent firm should set up an air monitoring station to ensure that the concentrations of



Chris Jenks

Figure 3: Asbestos is often found in unexpected places. The layer of cement, which was applied to the interior walls of this church tower in the 1950s, may contain asbestos. Materials such as this should be tested and evaluated before they are disturbed by construction or other building activity.

asbestos fibers outside the work area do not increase appreciably during the project. Use the same standards for hiring the monitoring firm that you use for hiring the contractor.

Do not, under any circumstances, remove asbestos yourself. Asbestos is highly dangerous when it is airborne. It is far more dangerous to remove asbestos improperly than to leave it alone, no matter what its condition.

ENCLOSURE

Given the high initial cost of asbestos removal, many building owners elect to deal with asbestos in a less aggressive manner. One alternative to removal is to enclose the asbestos-containing material in airtight new construction. A common example of this is to enclose asbestos-insulated pipes with sheet-rock or plaster construction, forming, in effect, a pipe chase. The main advantage of this treatment is that it does not require the replacement of the asbestos with a substitute material. The initial cost for enclosure is usually far less than for complete removal, although the long-term costs may be higher. The disadvantage of enclosure is that the asbestos remains and will eventually need to be removed. Because asbestos fibers will continue to be released behind the enclosure, access to the area for maintenance and renovation will need to be controlled. Periodic re-inspection to check for damage will also be required. Lastly, care must be taken during construction of the enclosure to prevent the release of asbestos fibers. As with removal, an air-monitoring firm should be hired to check for any fiber release during construction.

ENCAPSULATION

A second alternative to removal is encapsulation. This treatment requires that the surface of the asbestos-containing material be laminated or covered over with new materials or painted coatings. The most common example of this treatment is the covering of asbestos floor tile with new, sheet vinyl tile. Like enclosure, this treatment minimizes the release of asbestos fibers without the necessity of removing the material. Encapsulated asbestos must be closely monitored to ensure that no significant fiber release is taking place. Any damaged or deteriorated encapsulated surface should be repaired immediately. A disadvantage to encapsulation is the increased difficulty of total removal of the asbestos when this becomes necessary. Lastly, the long-term costs may be higher than for immediate removal.

SPECIAL OPERATIONS (MONITORING AND MAINTENANCE)

The last option is to leave the asbestos-containing material in place, provided there is no evidence that asbestos fibers are being released. For example, if you have a roof composed of asbestos shingles, it may be reasonable to leave the shingles in place and set up regular inspections to check for evidence of deterioration. The main advantage of this treatment is that it has the lowest initial cost of any abatement alternative. However, the asbestos source remains and periodic inspection will be required to assess the condition of the material and its potential for erosion or disturbance.