Miscellany

Dumping Fees Skyrocket for N.E. Builders

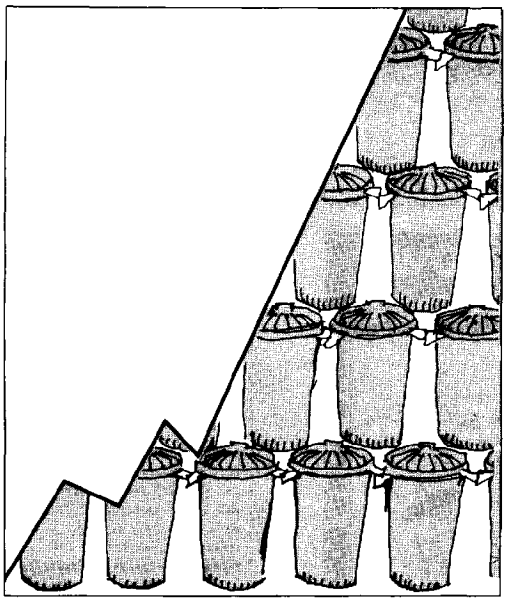
There's been a staggering price increase for building materials in recent years — not the price of buying the materials, but the price of dumping what isn't used. Landfill costs have soared in New England — sometimes doubling, tripling, or quadrupling in a period of six months. The "tipping fees" for dumping construction waste, formerly an incidental expense for most builders and remodelers, have become a significant budget item. And the end is not yet in sight.

According to Bruce Coldham, an architect and former builder in Amherst, tipping fees in western Massachusetts have risen from $10 to $20 per ton a couple of years ago to an average of $72 today. Coldham notes that the State's Department of Environmental Quality Engineering (DEQE) "is closing landfills, and those that are still open are in great demand."

What's more, some of the landfills that are still open now accept household trash only. Paul Bourke, a builder in Leverett, Mass., says his local landfill will no longer take construction materials, so debris must he hauled to Amherst, Ludlow, Granby, or out-of-state.

When the costs of trucking and container rental are added to the tipping fees, Bourke says he must now budget approximately $1,000 to remove debris from each new house he builds. The cost can be much higher than that for projects that involve substantial waste. Bourke says one recent 3,000-square-foot house he built resulted in a large amount of wasted drywall, because there were many angular cuts. The fee for dumping the drywall waste alone was $280, he says.

Not surprisingly, the impact is even greater for remodeling projects. B.J. Dupre, a builder and remodeler in Rhode Island, says



"We're now going over budget on any project that requires debris removal."

Up until a year ago, he notes, Rhode Island landfill fees for a 30-yard dumpster totaled $210, regardless of weight. That same dumpster-load now costs a minimum of $450, and more if it exceeds five tons. "If you've got a load of plaster or other heavy materials, it's about $800," Dupre says.

A typical renovation project in Providence may be restoration of a large Victorian house for use as a three-family residence. Such a project is likely to fill eight dumpsters, and cost up to $5,000 in tipping fees!

Vermont is the New England state that probably provides the clearest illustration of why landfill costs are skyrocketing. It started later than the more populous states — with a new law that went into effect last year, setting an accelerated schedule for changing the ways in which waste is dumped.

In Vermont, all existing landfills must he closed by 1991, and many have been or will be closed far in advance of that date. A rigorous planning process is under way to develop 12 to 80 regional landfills that will serve the entire state.

The purpose, of course, is to protect health and the environment. The old ways of dumping pose potential dangers to groundwater supplies and other vital environmental assets.

Before the changes were set in motion, typical tipping fees in Vermont were $5 to $10 per ton. They suddenly rose to levels of $30 to $55 per ton, and are expected to continue rising sharply as new requirements are enforced.

The man overseeing Vermont's conversion, Solid Waste Management Director Edward Leonard, lists three related reasons for the higher fees:

1. The new landfills will all have to be lined, with at least one and probably two synthetic liners, backed up by a composite earth (clay) liner. That will be expensive, and landfill operators are building their cash reserves in anticipation of the costs.

2. In the old days, when a landfill was filled to capacity, you could just chain it off and leave it, or cover it with topsoil and sell it to a developer. Now there are strict, and expensive, closure requirements for landfills. Since every landfill in Vermont will close within three years, closure costs are now built into the fee schedules.

3. The state is spending a lot of money assessing existing landfills and helping with the planning process. It's raising that money through a new landfill tax, which is passed along to consumers.

Similar factors are at play in states throughout the region, although the timetables are different. Massachusetts, for example, toughened its regulations in 1971, implementing stricter standards gradually with no firm deadline for closure of existing landfills. However, according to Mark Haley, environmental engineer for the Massachusetts DEQE, no new landfills are approved unless they have liners.

The rising fees are already having an impact on the business decisions and practices of builders and remodelers, and more widespread changes are expected in the future.

Paul Bourke says his firm now routinely obtains permission to burn on site "whatever can be safely burned," mostly scrap lumber and cardboard packaging. He says scrap lumber is offered to friends for use as kindling, but not to the general public because nails in the wood could cause liability problems.

B.J. Dupre says a number of his firm's business decisions have been affected by the higher fees. A common example, he says, is that in a renovation job, walls are now generally repaired when feasible, rather than replaced. If his firm purchases an older home for renovation, it now insists that old water heaters, refrigerators, and other debris be removed from the basement before the sale. In one instance, his firm decided against purchasing a lot that included a burned-out house, because the cost of removing the debris was prohibitive.

Coldham, who is actively involved in a recycling organization, believes the economics of dumping will make recycling of waste materials more attractive. That would mean separating materials into three or four piles: scrap lumber and cardboard; plaster and drywall; metal; and clearly toxic materials such as solvent cans and pressure-treated lumber.

Others may be less enthusiastic, but see increased recycling efforts as an inevitable result of the current waste disposal trends.

That view is summed up by Leonard in blunt terms: "We have no approved demo debris sites in our state. The cost of building a demo debris site under our present standards will make recycling much more cost-effective in the future." ■

— Steve Carlson

Contractor's Invention To Help Prevent Building Rot

Rick Jewell, a contractor with 12 years experience, has come up with a "deck hanging" device which he claims will eliminate a major cause of rotting in outdoor decks and the buildings they are attached to. According to the Maine contractor, "Most decks are so closely attached to the main structure that there's virtually no space between the deck and the building. When this is the case, the wood gets moist and never really dries out. Sooner or later serious rotting problems will develop, usually in the unions."

Made from 1/4-inch steel welded into an I-shaped unit, the deck bracket bolts onto the timbers of the main structure. Sheathing is then laid flush with the bracket and the siding is laid over the bracket flange. The whole installation is then caulked and the deck is bolted to the bracket.

The expense of installing deck brackets adds between $90 and $120 to the cost of the average house, and according to Jewell will greatly extend the life of the deck and the timbers it is attached to. Jewell has received a patent for his invention and has used the devices on two houses in the Lewiston-Auburn area with "satisfactory results."

The brackets are currently being produced in a machine shop in Minot, Maine, and are being sold at a lumber company in Lewiston. For more information, contact the inventor at RFD 2, Box 4985, Mechanics Falls, ME 04256; 207/345-8501. ■

General contractor Rick Jewell shows how the deck bracket he used on a deck in Auburn, Maine, can provide a breathing space between the deck and the main structure, preventing deterioration from trapped moisture. The bracket can be seen more clearly in the demonstration model shown at right.

Tyvek Feeling the Heat

When a Wisconsin remodeler tore some vinyl siding off a four-year-old house recently, the Tyvek he found underneath was severely degraded, according to a report in the February 1988 issue of *Energy Design Update*. According to Christa Kaiser, the Marketing Communications Manager for Tyvek, the problem is a result of the combined effects of ultraviolet (UV) light and heat (thermal degradation). The sample from Wisconsin was installed over rigid insulation under vinyl siding. Though the siding was installed relatively quickly after the Tyvek was installed, the vinyl siding apparently transmitted some UV radiation through it. Weakened by the UV, high temperatures were then able to thermally degrade the air barrier. "I guess UV reacts with whatever retards thermal degradation," said Kaiser. "What we've found is thermal degradation — weakening due to excessive oxidation."

At any rate, the company responded to the problem quickly. In April of this year, it stopped shipping the old Tyvek and began shipping a new version with a UV inhibitor applied to its outer face. The company would not describe the protective coating other than to call it a "UV screen." Though this Tyvek looks just like the old stuff, DuPont is at work redesigning the look of the product as well. Along with the UV barrier, the "new and improved" Tyvek will apparently have stud marks and a reworked logo. By the time of its launch in early July, full accelerated aging tests will have been completed on the new product.

Meanwhile, the UV-protected product currently being shipped, has undergone shorter-term, 60-day accelerated testing. Based on this testing, the company is confident that it can withstand 30-day sunlight exposure without any damage, according to Kaiser. DuPont expects that its longer-term testing will show that the product can handle much longer exposure. Instructions being shipped with the interim product still instruct covering within 30 days.

While all this is going on, DuPont is feeling the heat from another direction — competition. Since I reviewed five new air barriers in my "Focus on Energy" column last August, Reemay, Inc., in Old Hickory, Tenn., introduced a new product, Typar, which is quickly gaining a significant market share in the Northeast. Unlike Tyvek which is a spun-bonded polyethylene, Typar is a spun polypropylene. Typar National Sales Manager John Vendlinski claims that Typar is much less prone to UV degradation. The polypropylene fibers themselves are less prone to damage, and a special UV inhibitor has been applied to the film for further protection. The company does not specify that Typar be covered up within 30 days as does DuPont for Tyvek.

As for performance, Typar has greater tensile strength than Tyvek and other available air barriers — Air-Tight Wrap (Parsec), Rufco-Wrap (Raven Industries), Tu-Tuf Air Seal (Sto-Cote Products) and Barricade Building Wrap (Simplex). It has a higher perm rating than Tyvek — much higher than the others. And it has comparable air porosity (ability to block air infiltration) to the other products. A measure of water resistance is not included in the literature. (For a more complete discussion of air barrier properties, see my article in the August 1987 issue of NEB.) Further, Typar includes stud marks and its gray color is less likely to "blind" builders (one of the more common complaints about Tyvek).

DuPont has responded quickly and responsibly to correct Tyvek's degradation problem, and deserves to be commended. Nonetheless, DuPont's long domination of the air barrier market may be coming to an end. According to industry insiders, additional products will soon be introduced by a Japanese company and by Exxon to add to the already crowded market.

Oh, by the way, if you have any of the old-style Tyvek around, make sure it is covered quickly after installation, particularly if it is to be applied over rigid insulation where it will experience high temperatures. Explicit installation instructions are now being included with old-style Tyvek being sold. ■

— *Alex Wilson*

Foolproof System Faces Growing Pains

Unijoint International (recently the subject of an exchange of letters in NEB) is a relative newcomer among stress-skin/post-and-beam housing manufacturers. Using nomimal 6x8-inch pine stock, the Unijoint factory produces a precut, panelized post-and-beam system (see illustration) that is assembled on 51-inch centers by local contractors. Stress-skin panels — composed of a medium-density overlay (MDO) inner face, a beadboard core, and an oriented strand board (OSB) outer face — fill the spaces between vertical posts and roof beams — providing enclosure, insulation, and structural rigidity. (Most other companies, by comparison, apply panels outside the frame.) The combination of 6x8s and stress-skins on the roof is rated by the company for a load of 100 pounds per square foot.

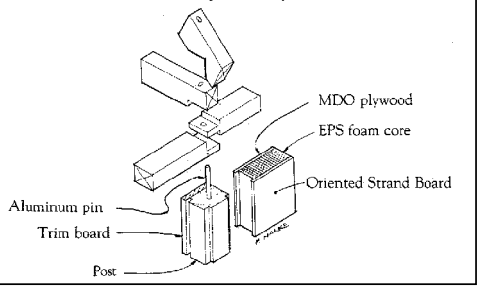
Construction begins with setting factory-supplied plates on a conventionally framed floor. Then the first cross-shaped post is positioned into a pre-made notch in the plate and plumbed. A factory-applied trim board on the inside creates a groove to accept the inner MDO skin of the foam panel and also covers the joint. Rabbets on the outer face of the post accept the OSB outer skin. Posts and panels are assembled around the building until the exterior walls are completed. They are then connected at the top by factory-cut plates that overlap at each post.

Roof and second-floor beams intersect over posts (see illustration), secured by a 1/2-inch diameter aluminum peg. The roof panels are routed by the supplier (Branch River Foam Products) to create an air channel for venting.

Window and door openings are cut on site. The foam core is exposed and no blocking is installed — a potential difficulty in the system.

The company estimates it would take a crew of three people two to three days to erect a shell, at a cost of $12-$15 per-square foot, not including windows and doors. Lead time, according to company spokesman Robert Rydeen, is currently about eight days for a standard design, with factory capacity at 8 houses per week. (Future plans call for 25 units per week.)

The Unijoint System



A typical design is a traditional cape in nominal 18- and 26-foot modules with a 5/12 or 12/12 pitch, although Rydeen says the company can do ranches, saltboxes, capes, and "custom" houses at extra cost. Floorplans can be varied by adding ells or wings.

Builder Jamie Hutchins of Norwich, Vt., built a 26x26-foot cape model last winter, and has another one on order. Completing the shell in eight days, he says, saved about one month in labor. Delivery took 3 to 4 weeks after he placed his order. The shell cost was approximately $15,000.

Hutchins found the shell relatively easy to erect, but recommends that the builder hire a consultant from the company on a per-day basis for the first house. He says Unijoint provided good back-up assistance, and replaced one-third of the panels for the house in two days when the tractor-trailer delivering them flipped in a snow storm.

John Dugger, an architect in Andover, Mass., built his first fully custom Unijoint house in the Fall of 1987 in Rochester, Vt. He encountered difficulties that he attributes primarily to "growing pains" at Unijoint, saying that he thought they might have tried to enter the custom market too soon. Dugger's shell cost was probably "slightly higher" than for a stick-built custom house, but would likely be competitive with other post-and-beam structures, he says.

Problems Dugger faced included delivery of components in standard sizes that didn't match the architect's dimensions, and a lot of wane in the posts and beams (which Dugger feels could have been eliminated through better quality control).

Dugger also found that the OSB outer face of the panels would not adequately hold nails. After several tries Dugger finally screwed his windows in place. He now wonders how siding nails will hold in the OSB. Solid blocking around rough openings would have solved the nailing problem and would also provide a fire barrier for the foam core — a potential problem that has been raised regarding EPS panels.

Overall Dugger says Unijoint has "a pretty foolproof system," adding that he feels the company is still in the developmental stage. However, he has found himself in a dispute with the company over several added costs, which he feels should be absorbed by Unijoint, and says that he wants to "see how they finally handle the business end of their projects" before building another one.

For now the system looks interesting, although perhaps not yet geared toward unconventional designs or mass production. ■

— *Paul Hanke*

Construction Definitions Not Found in Webster's

We recently ran across a list of construction terms in a copy of *Builder's Blueprint*, a newsletter put out by Trus Joist Corporation (Boise, Idaho):

Contractor: A gambler who never gets to shuffle, cut, or deal.

Bid Opening: A poker game in which the losing hand wins.

Low Bidder: A contractor who is wondering what he left out.

Project Manager: The conductor of an orchestra in which every musician is in a different union.

Critical path: A technique for losing your shirt under perfect control.

OSHA: A protective coating made by half-baking a mixture of fine print, red tape, split hairs, and baloney — usually applied at random.

Delayed Payment: A tourniquet applied at the pockets.

Completed Date: The point at which liquidated damages begin.

Liquidated Damages: A penalty for failing to achieve the impossible.

Auditor: People who go in after the war is lost and bayonet the wounded.

Lawyer: People who go in after the auditor and strip the bodies. ■

N.E. Training Programs To Provide Future Tradeswomen

At a recent conference of the Northern New England Tradeswomen, Molly Martin, keynote speaker, and a journeywoman electrician, spoke of a concern she had for future tradeswomen in general: Will they have to go through the difficulties she did to get started? Will they even make it? She spoke of harassment, poor training, and unsupportive fellow workers.

But at least in New England, for women wishing to enter the building field, this is becoming less of a problem. With the construction industry seeking out new sources of labor, and women branching out into non-traditional work in higher numbers, more and more building schools and programs in the region are offering training specific to women.

Cornerstones Owner-Builder School in Springvale, Maine, has offered courses for women since before 1980. Heartwood, a house-building school in Washington, Mass., has included "Carpentry for Women" in its curriculum for three years now. The Women's Trade Center in Rockland, Maine, began training women in carpentry in 1986, when the general labor shortage and the inability of Federal and State contractors to fill their five percent quota, provided the impetus needed. Step-Up, sponsors for the Northern New England Tradeswomen Conference mentioned above, is in its 3rd year, and runs a program geared to low-income women in the Burlington and St. Johnsbury, Vt. areas. Women Unlimited, Inc., a new school being started by Dale McCormick (author of *Against the Grain*, and *Housemending, Home Repair for the Rest of Us*), will also target low-income women, although all women are welcome in the program. All of these programs employ hands-on training, from 13 weeks to six months.

For the most part, these schools use women from the field, such as Nancy Hazard (a self-taught carpenter with 15 years experience) at Cornerstones, and Karla Kavanaugh (co-owner of Octagon Builders in Chatham, N.Y.) at Heartwood, to train women who wish to enter it. Besides passing on the nuts-and-bolts of building, they can share what it's like for women entering the trade, and how they dealt with problems specific to them.

Of these programs, Step-Up, the Womens Trade Center, and Women Unlimited, Inc. are more geared towards career training. They hope to help women take advantage of the industry's need for more trained labor. Both Step-Up and the Women's Trade Center help "graduates" go through the job application process. The Women's Trade Center claims a near-perfect hiring rate for their graduates.

Women Unlimited Inc.'s approach is somewhat novel: Rather than guide women into established construction businesses, McCormick plans to encourage self-employment or jobs on crews working under the auspices of Women Unlimited, and her school will provide entrepreneurial skills and ongoing technical assistance to make that happen. Pre-vocational training will be available in a separate program for those needing physical conditioning, and work on self-esteem issues, as well as training in specific trades (McCormick hopes to begin with electronics, surveying, and carpentry). ■

— Becky Klouda

For more information: Heartwood School, Johnson Road, Washington, MA 01235; Cornerstones, Nasson Institute, Springvale/Sanford, ME 04083; Women's Trades Center, P.O. Box 1116, Rockland ME 04841; Step-Up for Women, 1 Prospect Ave., St. Johnsbury, VT 05819; and Women Unlimited, Inc., RFD 1 Box 697, Monmouth, ME 04259.

A 12x16-inch multi-purpose building (right) was constructed last Fall by a class at The Women's Trade Center (WTC). It took one month to complete. The building was sold to be used as a summer camp in Warren, Maine, and has no heating, wiring, or plumbing. WTC's director Cathy Stiles is shown finishing up (left).

From What We Gather

The Saudis may control most of the world's oil, but they look to New England when they need a good builder. Ask Northern Homes, of Glens Falls, N.Y., which is panelizing several houses and buildings for Saudi Prince Fahad Bin Sulman Bin Abdula. The buildings will use a lot of cedar and redwood, which can take the heat and low humidity of Dhahran, Saudi Arabia.

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Today it seems like only the Saudis can afford houses in New England, where the average price for a new home is $236,975 and existing house is $173,546, both the highest in the nation, according to a survey conducted by Better Homes and Gardens Real Estate Services. By contrast, the national average was $118,171 for a new home, and $94,689 for an existing home.

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Despite high prices, houses are getting bigger again. In 1987 the median-size single-home was 1760 square feet, up 100 square feet from 1986. Other changes in 1987 included more two-car garages, bathrooms, bedrooms, vinyl siding, and gas heat. Multi-family units increased from 876 to 918 square feet in the same period, according to preliminary data from the Census Bureau, as reported in NAHB *Housing Economics*.

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Dining rooms are making a comeback, too. Move-up buyers want formal dining rooms at least 13.5 X 15 feet in size, while first-time buyers and empty nesters are satisfied with an 11 X 13-foot space, according to a marketing study reported in *Metropolitan Title Company Forecasts*.

Energy has not been forgotten in this quest for luxury however. Almost two-thirds of all builders questioned in a nationwide survey by *Builder* use 2 x 6 studs for exterior walls and three-quarters said they now use foam sheathing on exterior walls.

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Because of tool rip-offs, some contractors report they are buying cheap tools and billing them to the jobs as a direct cost, according to the Power Tool Institute.

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Fiberglass shingles dominate the residential roofing market with a 60 percent share, followed by organic shingles at 15 percent. Tile (9 percent), wood shakes and shingles (7 percent), and slate (3 percent), all have strong regional niches, according to a report in *Roofer Magazine*.

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As a landfills fill up, and tipping fees soar, more communities will have to look into recycling. Japan recycles 50 percent of its paper and 95 percent of bottles. The numbers for the U.S. are 25 and 7 percent. Japan's dumps are impermeably lined and leakage is collected and treated.
Source: *Helio*

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The senior citizen market is growing at the rare of 360,000 households per year and will maintain this growth through the next decade, writes housing consultant Edward Birkner in *Professional Builders*. By 2020, demographers tell us, the rest of the country will look like Florida, where the median age is 36, and 18 percent of the population is over 65.

Tax Talk:

Deducting Mortgage Refinancing Points

Wow. Good deal! Your customer just arranged to refinance his or her home mortgage at a much lower interest rate. And they plan to use some of the money for some work you're going to do on the home. Here are the facts: The balance on the existing mortgage is $80,000, but the homeowner decides to borrow $100,000 and use the extra $20,000 to remodel the house. The new lender charges 3.6 "points" ($3,600), which is paid from separate funds at closing.

Can your customer deduct the entire $3,600 in the year paid? Not quite, says the IRS in a new ruling (Rev. Rul. 87-22). Only $720 (20 percent) can be deducted, while the balance must be written off over the 20-year mortgage period.

Is the IRS right? They cite mighty little law to back up their opinion, and there are no court decisions on the issue. The law (Tax Code Sec. 461[g] [2]) refers to "indebtedness incurred in connection with the purchase or improvement" of the home. It doesn't say anything about "existing indebtedness." Let's take a closer look comparing our facts to the law. Since $20,000 was borrowed for "improvements," the IRS claims the $80,000 was incurred in connection with "continued ownership" and not for the "purchase" of the home. Therefore, the IRS reason, no current deduction. My comment… Nonsense!

As to the $80,000 that paid the existing mortgage, three things have happened: (1) there is a new lender, (2) there is a lower interest rate, and (3) points have been paid. Nothing has really changed. The new underlying indebtedness simply replaces the original loan "incurred in connection with the purchase" of the home. Clearly, the new points should be deductible. Note: Don't confuse refinancing with the increasingly popular home equity loan, which is considered additional financing, and not merely a refinancing.

It is very possible that Congress may pass a new law to kick over this terrible IRS ruling. Or maybe the courts will do the deed. In the meantime, your customer may want to take their chances and claim a deduction for the points. If they do, they may soon be locking horns with the IRS. So they should play it safe, by including a disclosure statement on line 13 of Schedule A of their Form 1040 saying, "Points on refinancing of home mortgage." This would protect them from a possible penalty for understatement of tax in the event the IRS ultimately wins support for its interpretation.

One more point: The points, to be currently deductible, must be paid from separate funds. If the points are deducted from the proceeds of the loan, the filer does not get a current deduction even if the proceeds are used to purchase or improve the residence. ■

Irving L. Blackman, CPA, J.D., is with Blackman, Kallick, Bartelstein, in Chicago, Ill. He specializes in closely-held businesses. For more tax planning pointers, send $21 to Blackman, Kallick, Bartelstein, 300 South Riverside Plaza, Chicago, IL 60606 for Year-Round Personal Tax Planning… 191 Ways to Win After Tax Reform.

Remodelers Say Windows and Doors are Top Income Producers

Replacing windows and doors produced more income for remodelers in 1987 than any other job category, according to a survey recently released by the National Association of Home Builders.

For 1988, the survey says, remodelers expect the strongest increases in business will be in the area of kitchen renovation.

The NAHB Fourth Quarter 1987 Economic Survey brought responses from 310 remodeling firms throughout the country, from a random list of 3,500 who were sent the questionnaire.

According to the survey results, the average price for a window and door replacement job was $10,566, and such jobs accounted for 33 percent of the dollar volume for the average remodeling firm.

Other leading income producers, in order of dollar volume, were: complete remodeling or rehabilitation of residential units (13 percent); room additions (8 percent); commercial remodeling (8 percent); added porches and garages (6 percent); added second stories (6 percent); and kitchen remodeling (6 percent).

When asked what areas of business activity are expected to improve during 1988, the largest number — 50 percent — listed kitchen remodeling. This was followed by window and door replacement (45 percent), bathroom additions (39 percent), and general carpentry (37 percent).

Copies of the survey may be obtained ($2 prepaid) from the NAHB Remodelors Council, 15th and M Streets N.W., Washington, DC, 20005. ■