2003 Annual Construction Cost Survey

Prepared for

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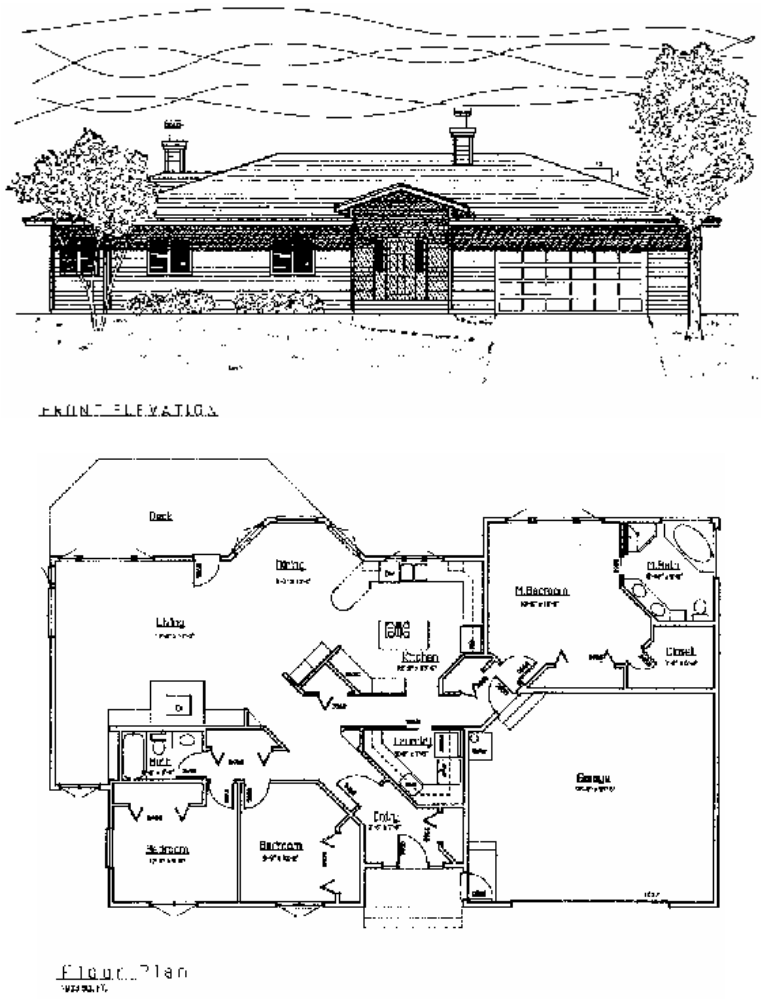
Introduction

In January 2003, the eleventh survey of building supply and shipping companies was conducted to determine the cost of a market basket of construction materials for Alaska. This survey simulates contractor pricing for a model single-family home by tracking a basket of items representing approximately 30 percent of the home's total cost. Figure 6-1 shows the floor plan of the model house used in this survey:

Figure 6-1 Floor Plan of Model Home



The market basket provides a benchmark for comparing costs between the communities of Anchorage, Barrow, Bethel, Fairbanks, Juneau, Kenai, Ketchikan, Kodiak, Nome, Sitka and Wasilla. In addition to the materials included in the market basket, suppliers also report the cost of doors and windows for the model home and the cost of transporting the market basket materials from Seattle to each community. A complete list of the market basket items and their specifications is included in Table 6-1.

Table 6-1: Average Cost of Construction Materials, Alaska Suppliers, 2003

					Urban								Rural*		
Market Basket Items	**Quantity**	**Units**	**Size**	**Length**	**Anchorage**	**Fairbanks**	**Juneau**	**Kenai**	**Ketchikan**	**Kodiak**	**Sitka**	**Wasilla**	**Barrow**	**Bethel**	**Nome**
BCI 60 Series	768	ft	14"		$2,204	$2,477	$1,958	$2,523	$1,645	$2,496	$1,678	$1,870	$2,112	$2,112	$3,110
2-4-1 T&G FF Underlay 4X8	62	pcs	1 1/8"		2,256	2,461	2,058	2,309	1,997	2,316	1,789	2,194	4,715	2,928	3,794
T-111 8" Center Groove 4'X10' Siding	60	pcs	5/8"		2,450	2,579	2,286	2,340	1,450	2,443	1,835	2,309	4,184	2,614	3,401
CDX 4X8 53#	106	pcs	5/8"		1,862	2,038	1,762	2,043	1,505	1,959	816	1,884	4,155	2,609	3,386
Studs #2 & btr Kiln-dried	164	pcs	2X4"	92 5/8"	409	515	396	554	378	407	279	440	1,000	636	646
Studs # 2 & btr 14# Kiln-dried	263	pcs	2X6"	92 5/8"	956	1,240	961	939	899	959	653	1,093	2,464	1,589	1,536
4X12 Plain Sheetrock 84#	95	pcs	1/2"		1,009	1,166	1,198	1,220	1,055	1,130	912	1,040	3,838	2,499	2,051
4X12 Type X Sheetrock 109#	68	pcs	5/8"		828	1,266	938	1,023	908	948	775	907	3,671	2,387	2,203
Fiberglass Bat Insulation (2,560 sqft)	27	bags	R-38X24	96 sqft	1,915	1,958	1,974	2,329	1,991	2,160	1,591	1,697	3,323	3,780	2,961
Fiberglass Bat Insulation (2,034 sqft)	35	bags	R-21X15	58 sqft	1,030	1,299	1,261	1,250	1,175	1,176	974	918	2,288	2,232	1,924
NMB Electric Wire	3	boxes		250'	83	68	93	72	81	26	73	73	243	135	122
Single Breaker	15	pcs	15 Amp		128	54	106	127	108	67	76	134	116	72	95
Copper Pipe Type 'M'	150	ft	3/4"		95	102	112	109	124	132	120	106	127	146	155
ABS Pipe	100	ft	3"		93	110	121	117	179	191	152	556	216	205	135
3 Tab Shingles Brown	102	bundles			1,083	1,624	1,409	1,429	1,358	1,886	953	1,341	N/A	N/A	N/A
Metal Roofing	3,215	sq ft	3x20'		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2,339	3,929	3,751
Total (Without Concrete & Rebar)					**$16,401**	**$18,957**	**$16,633**	**$18,384**	**$14,853**	**$18,296**	**$12,676**	**$16,562**	**$34,791**	**$27,873**	**$29,270**
Concrete	30	yds			2,649	3,600	3,058	2,831	4,350	4,950	3,990	2,667			
# 4 Rebar	93	pcs	1/2"	20'	425	442	335	396	367	371	426	347			
Total (With Concrete & Rebar)					**$19,475**	**$22,999**	**$20,026**	**$21,611**	**$19,570**	**$23,617**	**$17,092**	**$19,576**			

* Rural Areas Exclude Concrete & Rebar

Construction techniques, building requirements, and styles vary greatly from region to region, so not all material surveyed may be used in every area. In 2003, Barrow, Bethel, and Nome included metal roofing, which is more common in rural areas, instead of the asphalt shingles used in urban areas. Costs for the three rural areas surveyed, Barrow, Bethel, and Nome, exclude rebar and concrete, since pilings support houses above permafrost in these locations instead of slab foundations. Unless specified, the market basket prices quoted exclude rebar and concrete.

Comparing 2003 to 2002

- Barrow, Bethel, Kenai, Nome, and Seattle experienced an increase in the cost of building supplies. Wasilla's prices remained similar to last year's prices. The remaining communities surveyed saw no change or a decrease in building supply prices.

- Concrete prices increased in 2003 over 2002 levels in half of the surveyed areas. In areas where prices decreased, Anchorage experienced the largest decrease, a four percent drop to $2,649. Fairbanks experienced a 25 percent increase, to $3,600.

- As in prior years, this year all of the rural suppliers quoted higher prices than Seattle. In comparison, Kodiak was the only urban area where the cost of building materials was higher than items shipped from Seattle. All other urban areas reported lower prices than Seattle's.

- The cost of transporting the building materials from Seattle decreased by three percent for all areas surveyed. The biggest decrease occurred in shipping to Kodiak, which went down by $.07 per pound to a total of $3,034.

- The urban areas saw a decrease in the price of many wood products. Research by International WOOD Markets Research Inc. indicates that the tariff imposed on Canadian lumber imports in May 2002 caused wood prices to slump and that a global glut of timber continues to maintain the low levels of wood prices.

Table 6-2: Average Price for Doors and Windows, Alaska Suppliers, 2003

Market Basket Items	Quantity	Size	Anchorage	Fairbanks	Juneau	Kenai	Ketchikan	Kodiak	Sitka	Wasilla	Barrow	Bethel	Nome
R7 Metal Insulated Doors with 6" Jamb	2 pcs	3'	$324	$503	$346	$350	$536	$340	$510	$331	$630	$650	$520
Low E Argon Windows with R > 2.8 Vinyl Casements	3 pcs	2.6' x 3'	537	662	480	610	$649	825	609	449	975	762	918
Low E Argon Windows with R > 2.8 Vinyl Casements, 5.7 E-Gress	6 pcs	2.6' x 4'	1,426	1,481	1,113	1,370	$1,428	1,794	1,361	1,147	2,250	1,678	2,133
Low E Argon Windows with R > 2.8 Vinyl Casements, 5.7 E-Gress	2 pcs	8.0' x 4'	1,095	1,205	1,009	730	$1,423	1,750	1,365	589	1,398	1,098	1,305
Total Cost of Windows & Doors			**$3,382**	**$3,851**	**$2,948**	**$3,060**	**$4,036**	**$4,709**	**$3,845**	**$2,516**	**$5,253**	**$4,188**	**$4,876**

Table 6-3: Average Price for Construction Materials, Seattle-Area Suppliers, 2003 (Without Concrete, Doors, and Windows)

Market Basket Items	Quantity	Units	Size	Length	Seattle Area
BCI 60 Series	768	ft	14"		$1,597
2-4-1 T&G FF Underlay 4X8	62	pcs	1 1/8		1,958
T-111 8" Center Groove 4'X10' Siding	60	pcs	5/8"		2,480
CDX 4X8 53#	106	pcs	5/8"		1,813
Studs #2 & btr Kiln-dried	164	pcs	2X4"	92 5/8"	344
Studs # 2 & btr 14# Kiln-dried	263	pcs	2X6"	92 5/8"	845
4X12 Plain Sheetrock 84#	95	pcs	1/2"		643
4X12 Type X Sheetrock 109#	68	pcs	5/8"		642
3 Tab Shingles Brown	102	bundles			808
Fiberglass Bat Insulation (2,560 sqft)	27	bags	R-38X24	96 sqft	2,234
Fiberglass Bat Insulation (2,034 sqft)	35	bags	R-21X15	58 sqft	1,078
NMB Electric Wire	3	boxes		250'	77
Single Breaker	15	pcs	15 Amp		96
Copper Pipe Type 'M'	150	ft	3/4"		201
ABS Pipe	100	ft	3"		211
Without Rebar					**$15,027**
# 4 Rebar	93	pcs	1/2"	20'	387
With Rebar					**$15,414**

Table 6-4: Transportation Costs of Market Basket, Shipping and Handling, 2003 (Without Concrete and Rebar)

Destination	Seattle
Ketchikan	$1,627
Juneau	2,753
Sitka	2,809
Kodiak	3,034
Anchorage	3,528
Kenai	3,875
Wasilla	4,843
Fairbanks	5,118
Bethel	10,800
Nome	11,000
Barrow	14,107

Construction Costs Around the State

- Consistent with prior years' findings, urban and rural Alaska continue to show a wide pricing spread in the market basket items. The weighted-average cost of the market basket (excluding concrete and rebar) ranged from a low of $12,675 in Sitka to a high of $34,791 in Barrow (Barrow prices include metal roofing materials rather than asphalt shingles).

- Building materials cost more in rural than urban areas and more in northern Alaska than in Southeast. The main reason for the cost differential is the added cost of transportation -- the further a community is from Seattle, the more expensive the price of building materials. Also, lack of infrastructure in rural areas requires materials to be barged or flown to the different areas.

- The most expensive areas for doors and windows were again the rural regions of the state. Last year, Nome had the most expensive windows and doors. This year, Barrow ($5,253) reported the highest costs. With costs nine percent lower than last year, Nome follows at $4,876. Anchorage ranked fourth this year at $3,382. Wasilla reported the lowest price for doors and windows at $2,516, with Juneau slightly higher at $2,948.

- The Anchorage market basket cost $16,401 in 2003. Most market basket items cost less in 2003 than in 2002. The only items that increased in price are trusses and single breakers. The price of single breakers increased 64 percent to $128, the largest increase of any market basket item for Anchorage. Electric wire decreased the most from last year to $83, a 20 percent drop.

- Fairbanks reported a market basket cost of $18,957. Prices were lower for all market basket items except trusses, fire sheetrock, shingles, and R-21 insulation. The most significant decreases in the market basket were single breakers, copper pipe, and electric wire. They decreased by 56 percent, 38 percent, and 36 percent respectively. Concrete increased by 25 percent from last year while rebar decreased by 34 percent.

- The market basket in Barrow cost $34,791. Barrow saw increases in half of the market basket items and decreases or no change in the other half. Only copper pipe decreased significantly in price from 2002, down 37 percent to $127. Single breakers had the greatest increase, up 56 percent to $116. This year Barrow substituted metal roofing for asphalt shingles, which are unavailable in Barrow. Compared to 2002, when asphalt shingles were in Barrow's market basket, prices in 2003 were five percent lower. This is not surprising since metal roofing is a less expensive product there.

Figure 6.2 – Average Cost of Market Basket, Alaska Suppliers (Without Concrete, Rebar, Doors, and Windows)

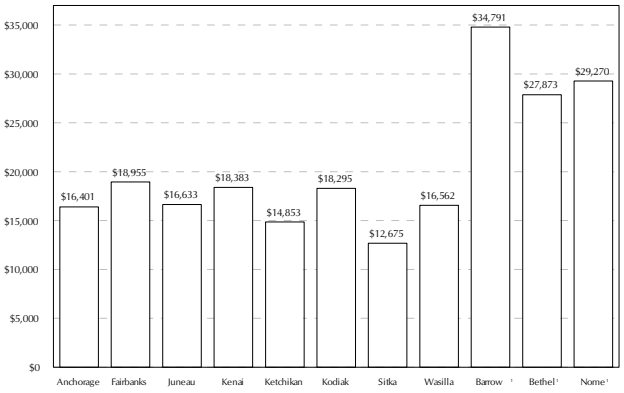


Figure 6.3 – Alaska Suppliers Comparison Index, Urban & Rural Residential Construction (without Concrete, Rebar, Doors, & Windows), Index by Community with Anchorage as Baseline

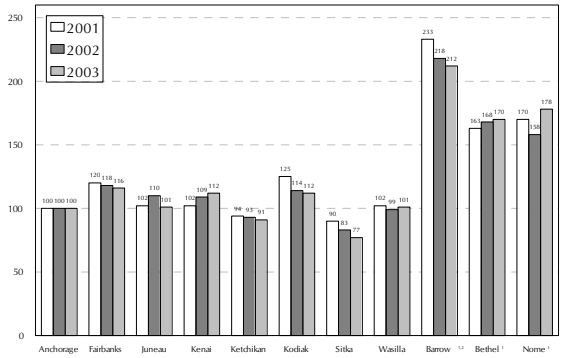
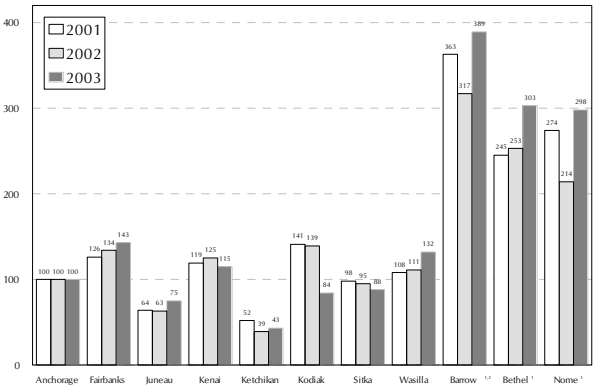


Figure 6.4 – Transportation Index for Market Basket from Washington, Index by community with Anchorage as Baseline (without Concrete & Rebar)



Footnotes:

1. *2003 includes metal roofing*
2. *2002 includes an estimate for asphalt shingle roofing materials.*

Alaskan Suppliers Comparison Index

Fluctuations in cost can best be examined in terms of the change each area experiences in relation to another. One way to do this is to establish an index comparing each community's market basket cost to a benchmark. The Alaskan Suppliers Comparison Index uses the largest city in Alaska, Anchorage, as its benchmark. To create this index, Anchorage's market basket cost is given an index value of 100. Dividing the average value for a survey area by the Anchorage value produces the index value for that area.

- The Anchorage total market basket decreased by $316, or 1.9 percent, from last year, so as a baseline, the effect on the index is minimal.

- Most prices declined in the urban areas relative to Anchorage, except Kenai and Wasilla. All of the rural areas raised their comparative values.

- Ketchikan and Sitka reported market basket prices less than Anchorage in 2003.

- Fairbanks had the highest index value of the urban areas at 116; Kenai and Kodiak followed it closely at 112. At 101, Juneau and Wasilla are the other urban areas that have a higher index value than Anchorage.

Construction Costs in Alaska vs. Seattle

Suppliers from Seattle, Washington are included since some contractors acquire their materials from outside Alaska. For Alaska suppliers, the market basket price already includes the cost of shipping the goods to the worksite in their community. Transportation costs are added to Seattle's market basket to estimate what local contractors would pay if they bought directly from Seattle and shipped their materials to Alaska. Seattle prices cannot be compared directly to prices in the three rural areas because Seattle prices include asphalt, not metal roofing.

- Except Kodiak, all of the urban areas offered lower local prices than delivered Seattle goods. Kodiak was $236 more expensive than Seattle.

- The greatest difference in prices occurred in Sitka, where local prices beat Seattle prices by $5,159.

- All reported shipping prices were lower than last year's prices.

- Seattle prices still beat the local prices in the rural areas, even though the local market basket includes metal roofing. Metal roofing is generally a less expensive product than asphalt roofing. Although Seattle and the rural areas cannot be compared directly, the difference in costs still indicates that rural homebuilders can save money buying construction materials in Seattle.

Figure 6.5 – Average Cost of Market Basket, 2001-2003, Urban & Rural Residential Construction (without Concrete, Rebar, Doors, & Windows), Alaska Suppliers

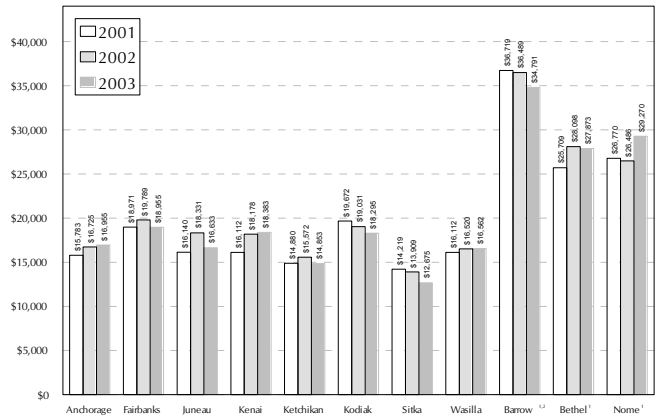
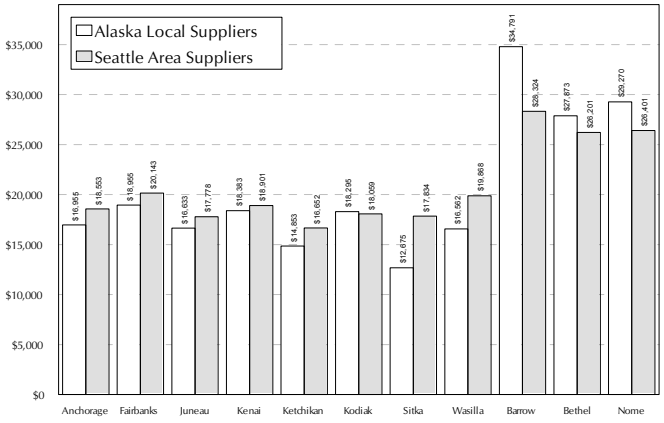


Figure 6.5 – Average Cost of Market Basket, 2003, Regional and Seattle Suppliers, (without Concrete, Rebar, Doors, & Windows)



Footnotes:

1. *2003 includes metal roofing*
2. *2002 includes an estimate for asphalt shingle roofing materials.*

Transportation Index

One of the primary factors determining differences in building costs in Alaska is transportation. The cost of transporting the materials from Seattle to the survey's building sites is directly related to the distance from Seattle. Shipping costs are primarily based on weight. The Transportation Index uses basic market basket items to compare the different communities rather than substituted items. Metal roofing is a lighter product than asphalt shingles and, unlike shingles, can be shipped inside or outside a container. In areas where metal roofing is substituted, the cost of shipping the roofing materials could be as much as two-thirds less than asphalt shingles.

Like the Suppliers Index, the Transportation Index assigns Anchorage an index value of 100. Dividing the average value for a survey area by the Anchorage value produces the index value for that area.

- It is important to note that Anchorage transportation costs decreased by 26 percent from last year. This caused the index to show an increase in shipping costs in relation to Anchorage although costs actually fell for most areas.

- Three communities this year experienced a decrease over last year's index value. Kenai, Kodiak, and Sitka all decreased their prices at a higher rate than Anchorage and, therefore, showed a decrease on the index.

- Barrow experienced the greatest increase in index value, climbing 83 points to 400. As the farthest Alaska city from Seattle, Barrow reported the highest cost for shipping ($14,107). This equated to nearly a nine-fold difference over the lowest value found in Ketchikan ($1,627). This was true even though Barrow's market basket includes lighter weight metal roofing.

- Of the urban areas, Kodiak fell the most to 86 points, dropping 53 points. Ketchikan, still the lowest area with an index value of 46, was up seven points from last year.

Construction Cost Survey Methodology

The Alaska Department of Labor and Workforce Development's Research and Analysis Section conducts this survey annually on behalf of Alaska Housing Finance Corporation. This survey simulates contractor pricing for a model single-family home by tracking a basket of items representing approximately 30 percent of the home's total cost.

- Eleven communities in Alaska are surveyed. These include the urban areas of Anchorage, Fairbanks, Juneau, Kenai, Ketchikan, Kodiak, Sitka, and Wasilla. The three rural cities of Barrow, Bethel, and Nome are also represented. In addition, the largest Seattle area suppliers are also surveyed.

- Of the 53 suppliers surveyed, 26 local building-material suppliers in Alaska and 10 in Washington responded to the survey, a 66 percent response rate. The 26 Alaskan respondents represent 23 unique firms since some companies have stores in multiple locations. The responding Alaska firms represents approximately 72 percent of wage and salary employment in retail lumber and other building-material and hardware stores in the surveyed areas of Alaska.

- All companies are given an itemized list of building materials with specific quantities to price. The complete list of materials in the market basket and the quantities used to calculate costs are in Table 6-1. The market basket includes selected construction materials, comprising approximately 30 percent of the materials used for the model house. It does not represent the total construction cost. Prices of doors and windows are also collected but are not included in the market basket total.

- Transportation costs are added to Seattle's market basket to simulate what local contractors would pay if they bought directly from Seattle and shipped their materials to Alaska. To determine the cost of transportation, carriers are given the weight of the materials, (approximately 49,000 pounds), and the volume of the materials, (about 2,000 cubic feet). This generally requires a 20-foot platform and a 20-foot container for all materials. Other assumptions are that all fees for required services are included in the reported cost of the shipment. These services include loading/unloading, protection and fastening of goods, and delivery to the building site. The Shippers' market basket includes asphalt shingles rather than metal roofing.

- It is expected that larger building supply firms get volume discounts that are passed on to the contractor. To reflect the vendors' market share, respondents' values are weighted by the size of the firm. For Alaska firms, size is based on the reported number of employees from the Alaska Department of Labor and Workforce Development's employment security tax wage database for the second quarter of 2002. America's Labor Market Information System provides employee counts for the second quarter of 2002 for Seattle area suppliers.

- Two comparison indices are used: one for the building material market basket and the other for transportation costs from Seattle. These indices allow communities to measure changes in the cost of construction in relation to a fixed value. The benchmark values are the costs for the largest community, Anchorage. Dividing the average of a survey area by the Anchorage value produces both indices. This creates an Anchorage benchmark of 100. In this way, communities can be gauged in relation to Anchorage for a particular year.

- Changes in the makeup of the market basket make year-to-year comparisons difficult. In 2001, cedar bevel siding was replaced with T-111 siding. This lowered not only the cost of the market basket, but also transportation costs. In 2002, Barrow did not report prices for asphalt shingles because most new construction uses metal roofing materials. This affected both the transportation costs and the market basket total. In 2003, metal roofing was substituted for asphalt shingles in the three rural areas.