SECTION FIVE
2002 Construction Cost Survey

In January of 2002, the Alaska Department of Labor and Workforce Development's Research and Analysis Section conducted the tenth annual 'market-basket' construction cost survey for Alaska Housing Finance Corporation (AHFC). The survey was sent to building-material, redi-mix concrete, and shipping companies located in Alaska and Washington. This survey simulates contractor pricing for a single home package by tracking a basket of items representing approximately 30 percent of the home's total cost.

In most cases, the total costs reported by building supply companies in both Alaska and Seattle increased. Increases ranged from three percent to 38 percent, while some communities saw modest decreases. Consistent with prior years' findings, urban and rural Alaska continue to show a wide pricing spread in the basket items.

Construction Cost Survey Methodology

Building-material suppliers from the urban survey areas responded for Anchorage, Fairbanks, Juneau, Kenai, Ketchikan, Kodiak, Sitka, and Wasilla. The three rural cities of Barrow, Bethel, and Nome were also represented. In keeping with last year's methodology, the largest Seattle area suppliers were also surveyed. Shipping costs were added to Washington values as a means of comparing local building-material supplier's pricing. This simulates what local contractors would pay if they bought directly from the Pacific Northwest and then had the items transported to Alaska.

Of the 69 suppliers surveyed, 34 local building-material suppliers in Alaska and 10 in Washington responded to the survey, a 64 percent response rate. The 34 Alaskan respondents represent 26 unique firms since some companies have stores in multiple locations. The responding firms represent a majority of the total employment in retail lumber and other building-material and hardware stores in the surveyed areas of Alaska. In several surveyed areas, only one local vendor represented the area. Sometimes this was due to nonresponse on the part of other local businesses, and sometimes it was due to consolidation in the local building supply market.

All companies were 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 shown in Table 6-1. The market basket includes selected construction material, comprising approximately 30 percent of the cost of the model single-family residence. This is the second year that the survey was conducted using T-111 rather than the cedar bevel siding used previously. This allows direct comparison only to last year's numbers.
Figure 6-1 shows the floor plan of the model house used in this survey. Costs for the three rural

arctic areas exclude rebar and concrete, since pilings are used to support the house above permafrost instead of a slab foundation. Barrow did not report prices for asphalt shingles as most new construction uses metal roofing materials. Since construction techniques, building requirements, and styles vary greatly from region to region, this survey may not reflect the price for a home typical to a specific area.

To determine the cost of transportation, the carriers are the given the weight of the materials, around 54,000 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.

Respondents' values were weighted by the size of the firm. For Alaska firms, size was 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 2001. America's Labor Market Information System provided employee counts for the second quarter of 2001 for Seattle area suppliers. This was done in order to reflect the vendors' market share. It is expected that larger businesses get volume discounts that are passed on to the contractor.

Two comparison indices are used: one for the building material basket and the other for transportation costs. These indices allow communities to measure changes in the cost of construction in relation to a fixed benchmark value. In the Construction Cost Survey, the benchmark values are the costs for the largest community, Anchorage. Both indices are produced by dividing the average of a survey area by the Anchorage value. This creates an Anchorage benchmark of 100. In this way, communities can be gauged in relation to Anchorage for a particular year.

Major Findings

In the winter of 2002, the Construction Cost Survey found that:

- The market basket for Anchorage was $16,725 while Fairbanks was $19,789 (not including concrete, rebar, doors, and windows).

- In Anchorage, most market basket items cost more in 2002 than in 2001. Concrete, rebar, R-38x24 insulation, both types of sheetrock, and breakers all decreased in cost over the prior year. The price of NMB electric wire increased 44 percent to $103, the largest increase of any market basket item for Anchorage.

- Fairbanks reported increased prices for all market basket items except shingles, sheetrock, and underlay, each of which decreased by a few percentage points, and concrete by 18 percent. Rebar, copper pipe, and NMB electric wire all increased significantly from last year by 141 percent, 60 percent, and 49 percent respectively.

- The northernmost city in our survey, Barrow, saw increases in nearly all market basket items. Only four items decreased significantly in price from 2001: trusses, sheetrock, fiberglass insulation, and NMB electric wire. Barrow saw a significant decrease in the overall total this year because asphalt shingles were not reported.

- Concrete prices declined in 2002 over 2001 levels in all surveyed areas, except for Juneau and Sitka, which saw a modest increase.

- Building materials cost more in rural than urban areas and more in northern Alaska than in Southeast. The main reason for the increased costs in rural areas is the added cost of transportation — the further a community is from Seattle, the more expensive the price of building materials.

- The weighted average cost of the market basket (excluding concrete and rebar) averaged from a low of $13,909 in Sitka to a high of $29,859 in Barrow (Barrow excludes shingles).

- This year, all of the rural suppliers quoted higher rates than Seattle (Seattle prices include delivery charges). The urban areas of Anchorage, Fairbanks, Kenai, Ketchikan, Kodiak, Sitka, and Wasilla reported lower prices for their building materials than Washington's basket values while Juneau's costs were higher.

- Transportation costs increased for all areas surveyed except Barrow, Ketchikan, and Nome. Price increases ranged from $0.005 per pound for the three largest cities, to $0.02 per pound for Bethel. Barrow, Ketchikan, and Nome had a decrease of $0.02, $0.01, and $0.04 per pound respectively.

Alaska Suppliers

Previous changes in the market basket can make year to year comparisons difficult. The chart "Average Cost of Market Basket 2000-2002" shows the prices for the market basket for the last three years. In 2000, the market basket is considerably higher than the next two years for almost all locations. A major contributor to this difference is a change in the make-up of the market basket from 2000 to 2001. 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. Fluctuations in cost and modifications in the market basket can best be examined in terms of the change each area experiences in relation to another. Each community's market basket was compared against Anchorage where Anchorage was given an index value of 100.

Ketchikan and Sitka are the only areas that show prices significantly less than Anchorage in both 2001 and 2002. Most locations raised their comparative values. Fairbanks, Ketchikan, Kodiak, Wasilla, and Bethel decreased their comparative values. In spite of dropping two points in relation to Anchorage, Fairbanks, at 118, replaced Kodiak as this year's highest urban area. Kodiak reported a decrease or no change in most supplies, while Fairbanks reported an increase in most of the reported numbers. Of the rural areas, only Bethel showed an increase in the index over last year, at 168. Decrease in trusses, shingles, and fiberglass insulation caused Nome, at 158, to show an improvement over last year's pricing. Barrow did not report any exterior roofing materials, which caused them to decrease their comparative value.

Cost of Doors and Windows from Alaska Suppliers

The most expensive areas for doors and windows were again the rural arctic regions of the state. As in 2001, Nome ($5,351) reported the highest rates. Last year, Nome was followed by Barrow. This year, Kodiak follows Nome at $4,494 and then Barrow at $4,354. Anchorage is again third least expensive this year ($3,021). Kenai reported the lowest price for doors and windows at $2,843, with Sitka slightly ahead at $2,986.

Transportation Costs

The cost of transporting the materials from Washington to the survey's building sites is directly related to the distance from Seattle. Being the northernmost area, Barrow reported $14,508 for shipping. This equated to nearly an eight-fold difference over the lowest value found in Ketchikan ($1,770).

Using the transportation index, with Anchorage as the baseline of 100, most communities this year experienced a decrease over last year. Anchorage transportation costs increased by six percent. This causes the index to show a decrease in shipping costs in relation to Anchorage although costs actually rose. The exceptions were Fairbanks, Kenai, Wasilla, and Bethel, all of which increased in relation to Anchorage. Of the urban areas, Kodiak maintained the highest value, closely followed by Fairbanks. Ketchikan, still the lowest with an index value of 39, decreased by 25 percent from last year. The northernmost city of Alaska, Barrow, decreased by 13 percent and Nome decreased by 22 percent.

Comparing Alaska with Seattle Area Suppliers

All of the urban areas, with the exception of Juneau, offered lower local prices than delivered Seattle goods. The largest difference occurred in Sitka, where local prices beat Seattle prices by $4,353. Juneau was $1,527 more expensive than Seattle. Of the rural areas, Nome had the largest savings in ordering from Seattle suppliers, $2,731. The smallest differentials between Alaska and Washington occurred in Fairbanks and Ketchikan.

APPENDIX D
New Alaska Housing Units Charts and Graphs

Average Price for Construction Materials

Alaska Suppliers
2002

					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"		$2,061	$2,202	$1,751	$2,493	$1,604	$2,496	$1,859	$1,863	$1,901	$2,359	$3,110
2-4-1 T&G FF Underlay 4X8	62	pcs	1 1/8"		2,250	2,648	3,037	2,333	2,056	2,510	1,811	2,121	4,715	2,868	3,414
T-111 8" Center Groove 4'X10' Siding	60	pcs	5/8"		2,498	2,829	2,812	2,598	1,990	2,443	1,943	2,367	4,184	3,132	3,061
CDX 4X8 53#	106	pcs	5/8"		1,878	2,280	1,832	1,983	1,698	2,086	1,441	1,870	4,197	2,555	2,961
Studs #2 & btr Kiln-dried	164	pcs	2X4"	92 5/8"	472	555	497	407	361	447	331	472	1,032	664	701
Studs # 2 & btr 14# Kiln-dried	263	pcs	2X6"	92 5/8"	1,079	1,361	997	935	844	1,033	710	1,120	2,696	1,530	1,361
4X12 Plain Sheetrock 84#	95	pcs	1/2"		1,033	1,172	1,417	1,156	1,114	1,161	983	1,046	3,291	2,373	1,846
4X12 Type X Sheetrock 109#	68	pcs	5/8"		852	1,104	1,149	951	958	960	832	880	2,937	2,243	1,900
3 Tab Shingles Brown	102	bundles			1,174	1,488	1,259	1,530	1,259	1,886	952	1,333	0	4,087	3,641
Fiberglass Bat Insulation (2,560 sqft)	27	bags	R-38X24	96 sqft	1,996	2,382	1,995	2,124	1,999	2,191	1,672	1,822	2,758	3,594	2,665
Fiberglass Bat Insulation (2,034 sqft)	35	bags	R-21X15	58 sqft	1,041	1,246	1,163	1,255	1,310	1,294	1,058	1,227	1,407	2,122	1,348
NMB Electric Wire	3	boxes		250'	103	106	88	69	94	78	71	72	240	132	100
Single Breaker	15	pcs	15 Amp		78	123	100	101	92	74	57	108	74	71	95
Copper Pipe Type 'M'	150	ft	3/4"		106	164	111	135	86	189	94	114	202	181	140
ABS Pipe	100	ft	3"		102	128	123	108	106	183	94	105	225	189	142
Total (Without Concrete & Rebar)					**$16,725**	**$19,789**	**$18,331**	**$18,178**	**$15,572**	**$19,031**	**$13,909**	**$16,520**	**$29,859**	**$28,098**	**$26,486**
Concrete	30	yds			2,746	2,898	3,137	2,991	3,645	4,374	3,990	2,715			
# 4 Rebar	93	pcs	1/2"	20'	444	671	353	396	353	529	300	350			* Rural Areas Exclude
Total (With Concrete & Rebar)					**$19,915**	**$23,358**	**$21,820**	**$21,566**	**$19,569**	**$23,934**	**$18,200**	**$19,585**			Concrete & Rebar

Source: Alaska Department of Labor, Research & Analysis Section, "AHFC Market Basket Construction Cost Survey" 2002
Weighted Average Using 2001 Q2 ODB202 Number of Employees Where Applicable
Totals may not sum due to rounding.

Average Price for Doors & Windows

Alaska Suppliers
2002

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'	$313	$414	$473	$328	$323	$374	$439	$363	$630	$310	$540
Low E Argon Windows with R > 2.8 Vinyl Casements	3 pcs	2.6' x 3'	546	694	616	557	$599	810	520	587	837	747	1,013
Low E Argon Windows with R > 2.8 Vinyl Casements, 5.7 E-Gress	6 pcs	2.6' x 4'	1,269	1,604	1,431	1,166	$1,335	1,812	1,141	1,129	1,895	1,643	2,133
Low E Argon Windows with R > 2.8 Vinyl Casements, 5.7 E-Gress	2 pcs	8.0' x 4'	894	1,359	948	792	$1,330	1,498	886	1,179	992	822	1,665
Total Cost of Windows & Doors			**$3,021**	**$4,070**	**$3,468**	**$2,843**	**$3,587**	**$4,494**	**$2,986**	**$3,259**	**$4,354**	**$3,522**	**$5,351**

Source: Alaska Department of Labor, Research & Analysis Section, "AHFC Market Basket Construction Cost Survey 2001"
Weighted Average Using 2000 Q2 ODB202 Number of Employees Where Applicable
Totals may not sum due to rounding.

Average Price for Construction Materials

Seattle Area Suppliers (without Concrete, Doors & Windows)
2002

Market Basket Items	**Quantity**	**Units**	**Size**	**Length**	**Seattle Area**
BCI 60 Series	768	ft	14"		$1,740
2-4-1 T&G FF Underlay 4X8	62	pcs	1 1/8		1,916
T-111 8" Center Groove 4'X10' Siding	60	pcs	5/8"		1,976
CDX 4X8 53#	106	pcs	5/8"		1,629
Studs #2 & btr Kiln-dried	164	pcs	2X4"	92 5/8"	384
Studs # 2 & btr 14# Kiln-dried	263	pcs	2X6"	92 5/8"	910
4X12 Plain Sheetrock 84#	95	pcs	1/2"		778
4X12 Type X Sheetrock 109#	68	pcs	5/8"		687
3 Tab Shingles Brown	102	bundles			871
Fiberglass Bat Insulation (2,560 sqft)	27	bags	R-38X24	96 sqft	1,811
Fiberglass Bat Insulation (2,034 sqft)	35	bags	R-21X15	58 sqft	949
NMB Electric Wire	3	boxes		250'	56
Single Breaker	15	pcs	15 Amp		49
Copper Pipe Type 'M'	150	ft	3/4"		89
ABS Pipe	100	ft	3"		82
Without Rebar					**$13,927**
# 4 Rebar	93	pcs	1/2"	20'	327
With Rebar					**$14,254**

Source: Alaska Department of Labor, Research & Analysis Section, "AHFC Market Basket Construction Cost Survey" 2002 Weighted Average
Totals may not sum due to rounding.

Transportation Cost of Market Basket

Shipping & Handling (Without Concrete & Rebar)

2002

Destination	Seattle
Ketchikan	$1,770
Juneau	2,877
Sitka	4,335
Anchorage	4,583
Wasilla	5,082
Kenai	5,707
Fairbanks	6,150
Kodiak	6,389
Nome	9,828
Bethel	11,591
Barrow	14,508

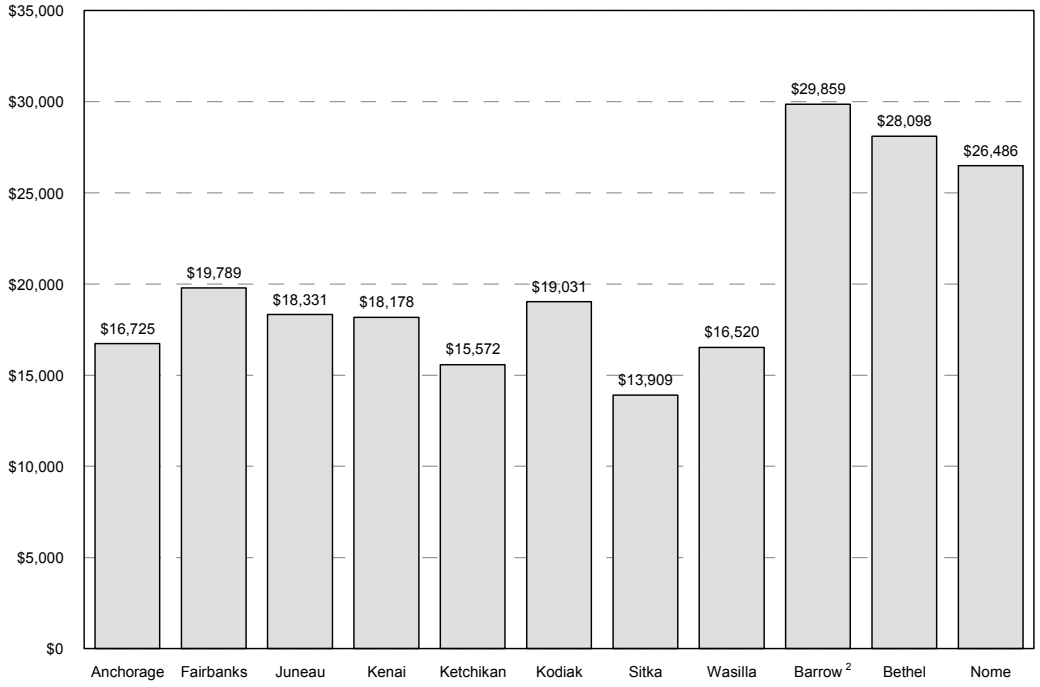
Source: Alaska Department of Labor, Research & Analysis Section, "AHFC Market Basket Construction Cost Survey" 2002

Weighted Average Using Wages Where Applicable

Source: Alaska Department of Labor, Research & Analysis Section, "AHFC Market Basket Construction Cost Survey 2002"

Average* Cost of Market Basket 2002

Alaskan Suppliers (without Concrete, Rebar, Doors, & Windows)



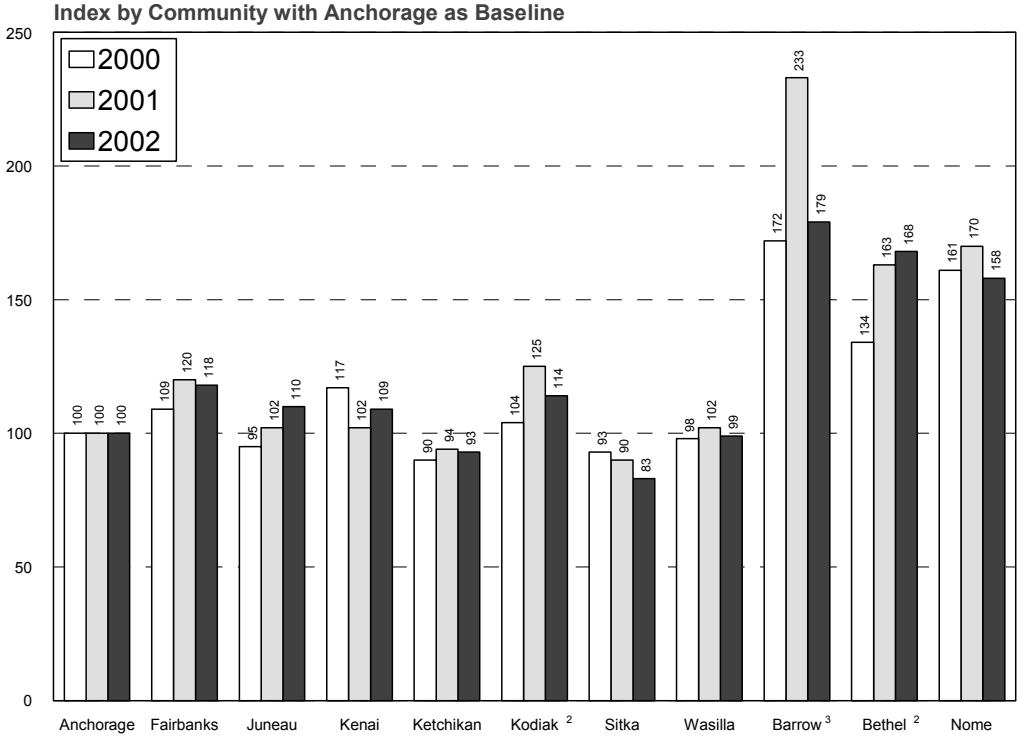
*Starting in 2000, survey results utilize a weighted average methodology. [2]Does not include asphalt shingles.

Source: Alaska Department of Labor, Research & Analysis Section, "AHFC Market Basket Construction Cost Survey 2002"

Alaskan Suppliers Comparison Index*

Urban & Rural Residential Construction (without Concrete, Rebar, Doors, & Windows)

Index by Community with Anchorage as Baseline

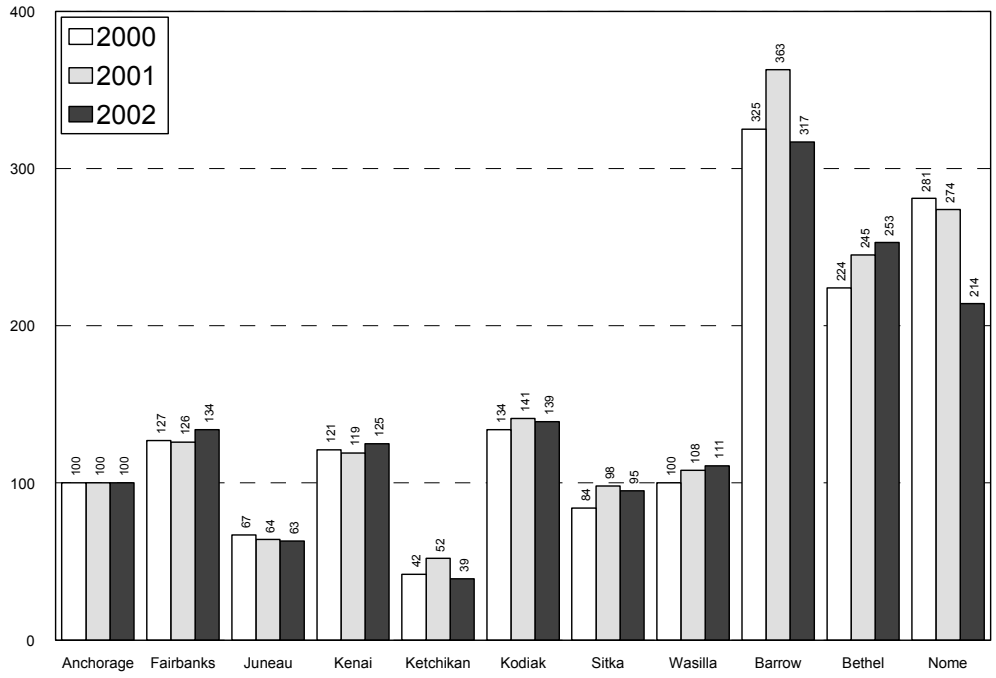


*Starting in 2000, survey results utilize a weighted average methodology. [2]Revised 2000 values. [3]Revised 2000 values, 2002 does not include asphalt shingles.

Source: Alaska Department of Labor, Research & Analysis Section, "AHFC Market Basket Construction Cost Surve 2002"

Transportation Index* for Market Basket from Washington

Index by Community with Anchorage as Baseline (without Concrete & Rebar)



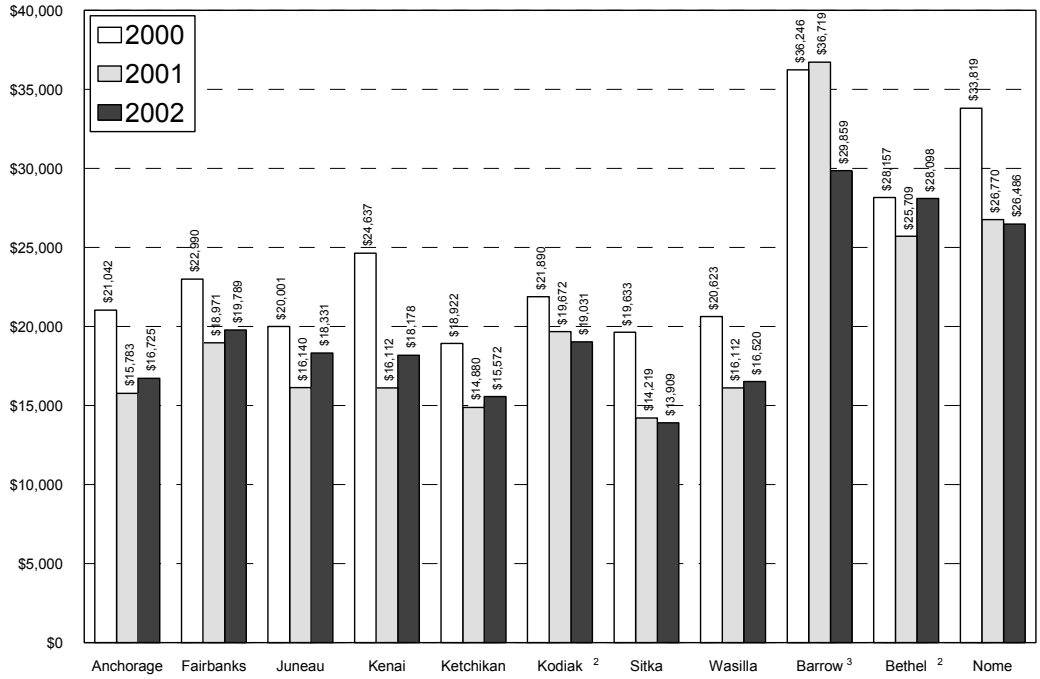
*Starting in 2000, survey results utilize a weighted average methodology.

Source: Alaska Department of Labor, Research & Analysis Section, "AHFC Market Basket Construction Cost Survey 2002"

Average* Cost of Market Basket 2000-2002

Urban & Rural Residential Construction (without Concrete, Rebar, Doors, & Windows)

Alaskan Suppliers

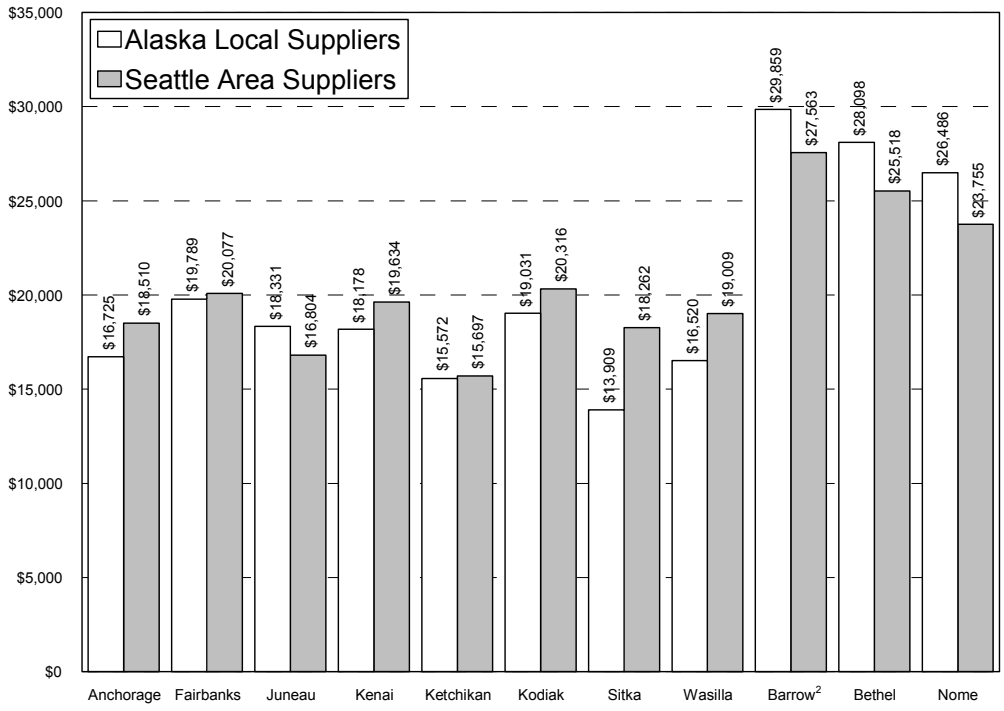


*Starting in 2000, survey results utilize a weighted average methodology. [2]Revised 2000 values. [3]Revised 2000 values, 2002 does not include asphalt shingles.

Source: Alaska Department of Labor, Research & Analysis Section, "AHFC Market Basket Construction Cost Surve 2002"

Average* Cost of Market Basket 2002

Regional Suppliers (without Concrete, Rebar, Doors, & Windows)



*Starting in 2000, survey results for this year utilize a weighted average methodology. [2]Does not include asphalt shingles.