Construction Cost Survey 2011

Prepared for

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Table of Contents

Construction Cost Survey Spring 2011

Introduction

In January 2011, the nineteenth annual survey of building supply, concrete, and shipping companies was conducted to determine the cost of a market basket of construction materials in communities throughout Alaska. The survey simulates contractor pricing for a market basket of materials used in the construction of a model home. The market basket represents approximately 30 percent of the materials used in the construction of the model home; however, it does not represent 30 percent of the total cost to build the model home. A floor plan of the model house used in this survey can be found in Appendix A.

The market basket provides a benchmark for comparing costs between the urban communities of Anchorage, Fairbanks, Juneau, Kenai, Ketchikan, Kodiak, Sitka, and Wasilla, as well as the rural communities of Barrow, Bethel, and Nome. In addition to the materials included in the market basket, suppliers also report the cost of doors and windows for the model home, while shipping companies provide 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 Appendix A.

Construction techniques, building requirements, and styles vary greatly from region to region. For this reason, not all of the materials surveyed are necessarily used in all areas. Beginning in 2003, Barrow, Bethel, and Nome included metal roofing, which is more common in rural areas, in their respective market baskets instead of the asphalt shingles used in urban areas. Costs for the three rural areas surveyed, Barrow, Bethel, and Nome, exclude concrete and rebar since pilings support houses above permafrost in these locations instead of slab foundations. Unless otherwise specified, the market basket prices quoted exclude concrete, rebar, doors, and windows.

Comparing 2011 to 2010

Alaska Market Baskets

Seven of the 11 communities experienced increases in the overall cost of market basket materials. Increases ranged from 2 percent in Kenai and Ketchikan to 8 percent in Anchorage. The remaining four communities experienced decreases in the overall cost of the market basket materials. The percentage decreases ranged from 1 percent (Fairbanks and Sitka) to 6 percent (Nome).

Seattle Market Basket

- Fourteen out of 15 individual core items increased in cost this year, resulting in a 6 percent increase in the cost of the Seattle market basket. That is $1,101 over last year's total cost of $16,991. The one individual item that decreased in cost from last year was T1-11 siding, which dropped by 10 percent.

- With a 19 percent increase in rebar this year, Seattle's overall total reached $18,860, a 7 percent increase ($1,247) over last year.

Concrete

- In 2011, the price of concrete rose in three areas, fell in three areas and stayed the same in two areas. Wasilla, Juneau, and Ketchikan experienced price increases of 2, 8, and 13 percent, respectively. Percentage decreases in concrete ranged from less than 1 percent (Anchorage) to 9 percent (Kenai).

- With an 8 percent decrease in Fairbanks ($3,198) and a 2 percent increase in Wasilla ($3,434), Fairbanks now ranks the least expensive location for concrete. Kodiak continues to top the charts at $6,600, but Sitka and Ketchikan are not far behind with $5,580 and $5,250, respectively.

Rebar

- In 2011, the price of rebar increased in five urban locations, including Seattle. Price increases ranged from 5 percent in Anchorage to 22 percent in Ketchikan. Kenai, with the most significant decrease (14 percent), had the lowest cost of rebar in 2011 ($626). Anchorage and Juneau were barely more expensive than Kenai, with the price of rebar in these two communities at $629.

- Rebar was most expensive in Fairbanks in 2011. Despite a 4 percent decrease in price over the year, rebar was still 59 percent more in Fairbanks than the least expensive area, Wasilla.

- The price of rebar in Seattle rose by 19 percent ($146) in 2011, to $783. Only Ketchikan and Fairbanks had higher costs for rebar than Seattle.

Doors and Windows

- Six Alaska locations had increases in the total cost of doors and windows in 2011. The percentage increases ranged from 2 percent in Barrow to 23 percent in Bethel.

- Anchorage remained at the higher end of the price spectrum among the urban locations in 2011, at $4,636. The cost of doors and windows in Anchorage rank higher than seven locations, including Seattle. Only Kodiak has a higher market basket price for these items, at $4,825.

- Percentage decreases in the costs of doors and windows ranged from less than one percent in Sitka to 28 percent in Fairbanks.

- Seattle's cost of doors and windows dropped 29 percent in 2011 to $3,235. In 2011, Seattle was the second least expensive location, following Kenai ($3,036.)

Shipping Costs from Seattle

- The cost of transporting the building materials from Seattle increased in all areas except Bethel and Sitka, where the cost fell less than 1 percent for each destination. The percentage increases ranged from less than 1 percent in Ketchikan to 12 percent in Fairbanks.

- In Barrow, shipping costs rose 5 percent, or $1,358. For the second year in a row, Barrow has had the largest nominal change of any surveyed area. The cost of shipping to Barrow has continued to rise steadily since 2003.

- The net affect of shipping costs to all locations combined in 2011 was an increase of $3,356, much lower than to last years' increase of $9,574 to shipping costs.

Construction Costs Around the State

Building materials cost more in rural areas than urban areas, and more in northern Alaska than in Southcentral and Southeast Alaska. The main reason for this cost differential is the added expense of transportation – generally speaking, the further a community is from Seattle, the more expensive the price of building materials. The lack of infrastructure in rural areas requires materials to be barged or flown to the different areas and contributes to higher prices.

- Statewide, the weighted-average cost of the market basket ranged from a low of $20,629 in Sitka to a high of $53,124 in Barrow.

- The most expensive urban location for the sixth consecutive year was Kodiak, with a total market basket cost of $24,210. Bethel was the least expensive rural location with a cost of $32,079.

- Nome experienced the largest decrease in market basket price in 2011. A 6 percent decrease in 2011's market basket price translated to savings of $2,466.

- With Kodiak's market basket increase of 4 percent in 2011, the disparity between the most expensive urban location and the least expensive rural location decreased from $10,174 to $7,869.

- The largest dollar value increase for a single item among all locations was a spike of $1,344 for truss in Barrow. The most significant decrease in cost was a

drop of $1,415 for R-38 insulation in Bethel.

- The Anchorage market basket price has increased for four consecutive years. With the highest percentage increase in core materials in 2011 (8 percent), the main items driving up the cost in Anchorage were copper pipe, ABS pipe, and truss. This is the second year in a row that Anchorage recorded the highest increase in market basket cost.

- Juneau experienced the second largest percentage increase in core materials due to spikes in T1-11 siding ($394) and R-21 insulation ($204). The core market basket increase was the third largest, at $1,116. Factoring in concrete and rebar, with a combined increase of $432 from last year, the result was a 6 percent increase in the overall Juneau cost.

- Twelve out of fifteen market basket items increased in Kenai, however, the overall price change was one of the lowest at $473, or 2 percent. Kenai experienced one of the lowest price increases in 2010 as well, with a bump of $228.

- While just 7 out of 15 items fell in price in the Fairbanks market basket, they had the largest decrease in dollars among the urban locations ($238). Last year, they saw declines in 11 of the 15 market basket items for a total decrease of ($792).

- In 2011, Ketchikan had the highest increase in price for concrete and rebar. Not including those materials, Ketchikan's market basket is the second least expensive urban location. But after factoring in concrete and rebar, it becomes the third most expensive.

- Sitka market basket prices were varied this year. With eight item increases and seven item decreases, the end result ranks it as the least expensive location (a ranking it hasn't held since 2005) – before concrete and rebar are factored in. Sitka is the second most expensive location for concrete and the third most expensive for rebar; these costs make three other locations less expensive than Sitka overall.

Alaska Suppliers Comparison Index

Fluctuations in cost can best be examined in terms of the yearly change each area ex-

periences in relation to a point of reference. One way to do this is to establish an index comparing each community's market basket cost to a benchmark. The Alaska 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 cost for a survey area by the Anchorage value ($22,543) produces the index value for that community.

- The Anchorage market basket cost increased $1,749, or 8 percent in 2011. Since Anchorage had the largest percentage increase in market basket price, all other areas saw declines in index values.

- The most significant change occurred in Nome. With the largest percentage decrease among all market baskets (6 percent), Nome's index value dropped from 196 in 2010 to 170 in 2011, bringing it closer in line to the Anchorage market basket cost.

- In 2010, both Sitka and Wasilla were equal to Anchorage, each having index values of 100. In 2011, five locations have index values equal to or lower than Anchorage. Only two urban locations are higher; Kenai (103) and Kodiak (107).

- In 2011, the index value spread, (the difference between the highest and lowest index values), among urban locations rose to 15, up from 11 in 2010. The main difference in 2011 is that four index values are lower than Anchorage, with Sitka being the lowest (92).

Construction Costs in Alaska vs. Seattle

Suppliers from Seattle, Washington and the surrounding metropolitan area are included in the Alaska Construction Cost Survey as 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 total to estimate what local contractors would pay if they bought directly from Seattle suppliers and shipped their materials north to Alaska. Seattle prices cannot accurately be compared to prices in the three rural areas because the Seattle market basket and the total calculated shipping costs include asphalt shingles rather than metal roofing. For this reason, the following points pertain to the eight urban communities only.

- The Seattle market basket increased 6 percent to $18,077. For the third consecutive year, builders in all urban Alaska locations, except Ketchikan, would save by purchasing the market basket items locally instead of buying in Seattle and having them shipped north.
- The added cost for Ketchikan builders purchasing locally shrunk to $886 in 2011, from $1,518 one year ago. The savings for all other locations purchasing

locally ranged from $253 (Juneau) to $4,648 (Sitka). The disparity between local and Seattle prices grew to $1,012 in 2011.

Transportation Index for Market Basket from Seattle

One of the primary factors determining differences in building costs in Alaska is transportation. The cost of transporting materials from Seattle is directly related to the distance from Seattle to the surveyed communities. The Transportation Index uses basic market basket items rather than substituted items to compare the different communities. Metal roofing is lighter than asphalt shingles and, unlike shingles, can be shipped inside or outside a container. In the rural 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 Alaska Suppliers Comparison Index, the Transportation Index assigns Anchorage an index value of 100. Dividing the average value for a survey area by the Anchorage shipping cost ($7,116) produces the index value for that community.

- Shipping costs to Anchorage increased $541, or 8 percent, in 2011. Areas with cost increases of greater than 8 percent had increases in their index values. Areas with cost decreases, or increases of less than 8 percent, experienced declines in their index values. Only two communities saw index value increases in 2011; Fairbanks (five points) and Wasilla (one point).

- Ketchikan and Juneau continue to be the only two locations to have values below 100 (37 and 63, respectively), while Sitka is very close to Anchorage at 101.

- The index value of Fairbanks grew by 5 points to 123, where the overall cost is $8,777. Fairbanks had shipping prices in 2011 with the highest increase, unlike 2010, when it was the only community to experience a decrease in shipping costs.

- Ketchikan is the closest city in proximity to Seattle of the 11 communities surveyed. Therefore, shipping costs to Alaska's "First City" remain the lowest. Ketchikan's shipping costs of $2,601, and corresponding index value of 37, are less than half that of Anchorage's. On the opposite end of the scale, shipping costs to Barrow, the furthest city from Seattle, are $28,194. This figure is nearly four times the cost of shipping to Anchorage and over ten times the cost of shipping to Ketchikan.

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Alaska Construction Cost Survey Methodology

The Alaska Department of Labor and Workforce Development's Research and Analysis Section conducts the Alaska Construction Cost Survey annually on behalf of the Alaska Housing Finance Corporation.

Twenty-seven local suppliers in Alaska and eight in Washington participated in this year's survey. Alaska participants represent twelve unique firms, as some companies have stores in multiple locations. Similarly, Washington participants represent five unique firms. In addition, 15 concrete suppliers and seven shipping companies participated in this year's survey.

When surveyed, building suppliers are asked what discounts, if any, they provide to contractors when purchasing a "package" of building materials sufficient to build a single family home. If a discount is given, it is then factored into the market basket prices that the supplier reported. The same is true for concrete suppliers.

To determine the cost of transportation, carriers are given the weight (approximately 49,000 pounds) and the volume (about 2,000 cubic feet) of the materials. These measurements generally require a 20-foot platform and a 20-foot container for all of the materials. Another assumption is that all of the 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 then passed on to the contractor. To reflect the vendors' respective market shares, respondents' values are weighted by the size of the respective firms. For Alaska businesses, 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 2010. America's Labor Market Information System provided 2011 employee counts for Seattle suppliers.

Changes in the makeup of the market basket make year-to-year comparisons difficult. In 2001, cedar bevel siding was replaced with T1-11 siding. This lowered not only the cost of the market basket, but also the transportation costs. In 2002, Barrow did not report prices for asphalt shingles because most new construction on the North Slope incorporates metal roofing materials instead. This affected both the transportation costs and the market basket total. As noted previously, in 2003, metal roofing was substituted for asphalt shingles in the three rural areas

Appendix A: Construction Cost Survey Tables and Charts

Average Price for Construction Materials
Alaska Suppliers
2011

					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"		3,524	$2,488	$2,978	$3,514	$2,450	$2,849	$2,264	$2,666	$4,224	$2,511	$4,038
2-4-1 T&G FF Underlay 4' x 8'	62	pcs	1 1/8"		2,239	2,499	2,302	2,357	2,296	2,337	2,361	2,289	7,253	3,702	4,166
T-111 8" Center Groove 4' x 10' Siding	60	pcs	5/8"		2,547	3,350	3,528	3,120	3,142	3,422	3,348	3,192	5,999	4,181	4,372
CDX 4' x 8' #53	106	pcs	5/8"		1,915	2,143	1,942	2,078	2,081	2,279	1,862	2,122	6,359	2,616	3,688
Studs #2 & btr Kiln-dried	164	pcs	2" x 4"	92 5/8"	335	367	421	405	393	455	325	544	1,442	810	765
Studs #2 & btr #14 Kiln-dried	263	pcs	2" x 6"	92 5/8"	802	906	1,019	975	893	978	748	1,381	3,153	2,107	1,808
4' x 12' Plain Sheetrock #84	95	pcs	1/2"		1,613	1,631	1,653	1,707	1,165	1,753	1,408	1,533	5,699	2,421	3,152
4' x 12' Type X Sheetrock #109	68	pcs	5/8"		1,350	1,365	1,353	1,447	1,134	1,512	1,188	1,291	4,759	3,350	2,752
Fiberglass Bat Insulation (2,560 sq ft)	40	bags	R-38" x 24"	64 sq ft	2,354	2,748	2,337	2,544	2,212	2,232	1,975	2,021	3,920	3,370	4,216
Fiberglass Bat Insulation (2,034 sq ft)	30	bags	R-21" x 15"	68 sq ft	1,337	1,538	1,337	1,429	1,153	1,470	1,233	1,269	2,610	1,764	2,302
NMB Electric Wire	3	boxes		250'	233	222	282	280	292	288	259	252	420	408	289
Single Breaker	15	pcs	15 Amp		97	93	68	94	104	80	76	76	202	175	109
Copper Pipe Type 'M'	150	ft	3/4"		856	269	308	286	529	286	307	288	345	438	560
ABS Pipe	100	ft	3"		504	167	165	183	239	231	231	187	440	391	345
3 Tab Shingles Brown	102	bundles			2,837	2,698	2,642	2,863	3,481	4,038	3,044	2,665	N/A	N/A	N/A
Metal Roofing	3,215	sq ft	3' x 20'		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	6,299	3,835	5,832
Total (Without Concrete & Rebar)					$22,543	$22,484	$22,335	$23,282	$21,564	$24,210	$20,629	$21,776	$53,124	$32,079	$38,394
Concrete	30	yds			3,405	3,198	4,950	3,623	5,250	6,600	5,580	3,434			
#4 Rebar	93	pcs	1/2"	20'	632	931	632	626	887	698	754	587	* Rural areas exclude		
Total (With Concrete & Rebar)					$26,580	$26,613	$27,917	$27,531	$27,701	$31,508	$27,001	$25,797	concrete & rebar		

Average Price for Doors and Windows
Alaska Suppliers
2011

				Urban								Rural		
Market Basket Items	Quantity	Units	Size	Anchorage	Fairbanks	Juneau	Kenai	Ketchikan	Kodiak	Sitka	Wasilla	Barrow	Bethel	Nome
R7 Metal Insulated Doors with 6" Jamb	2	pcs	3'	$410	$452	$411	$424	$417	$525	$519	$503	$800	$699	$614
Low E Argon Windows with R > 2.8 Vinyl Casements	3	pcs	2.6' x 3'	$822	$656	$821	$502	$609	$750	$572	$588	$960	$1,089	$797
Low E Argon Windows with R > 2.8 Vinyl Casements, 5.7 E-Gress	6	pcs	2.6' x 4'	$1,886	$1,501	$1,813	$1,298	$1,408	$1,650	$1,256	$1,344	$2,400	$2,491	$1,696
Low E Argon Windows with R > 2.8 Vinyl Casements, 5.7 E-Gress	2	pcs	8.0' x 4'	$1,518	$1,071	$1,389	$812	$1,057	$1,900	$1,101	$924	$1,140	$2,329	$719
Total Cost of Doors & Windows				$4,636	$3,680	$4,434	$3,036	$3,491	$4,825	$3,448	$3,359	$5,300	$6,608	$3,826

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section, Construction Cost Survey 2011
Weighted average using 2010 Q2 ODB202 number of employees where applicable
Totals may not sum due to rounding
N/A = Not Applicable

Average Price for Construction Materials
Seattle Suppliers
2011

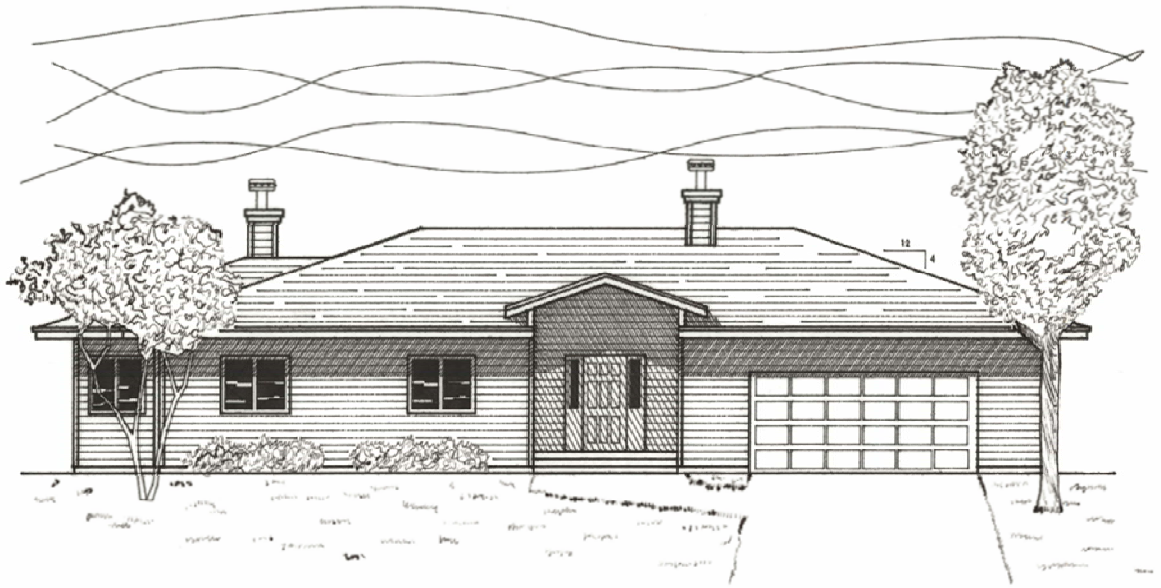
Market Basket Items	Quantity	Units	Size	Length	Seattle Area
BCI 60 Series	768	ft	14"		$1,966
2-4-1 T&G FF Underlay 4' x 8'	62	pcs	1 1/8"		2,068
T-111 8" Center Groove 4' x 10' Siding	60	pcs	5/8"		2,560
CDX 4' x 8' #53	106	pcs	5/8"		1,625
Studs #2 & btr Kiln-dried	164	pcs	2" x 4"	92 5/8"	329
Studs #2 & btr #14 Kiln-dried	263	pcs	2" x 6"	92 5/8"	817
4' x 12' Plain Sheetrock #84	95	pcs	1/2"		994
4' x 12' Type X Sheetrock #109	68	pcs	5/8"		927
3 Tab Shingles Brown	102	bundles			2,035
Fiberglass Bat Insulation (2,560 sq ft)	40	bags	R-38" x 24"	64 sq ft	2,550
Fiberglass Bat Insulation (2,034 sq ft)	30	bags	R-21" x 15"	68 sq ft	1,496
NMB Electric Wire	3	boxes		250'	235
Single Breaker	15	pcs	15 Amp		86
Copper Pipe Type 'M'	150	ft	3/4"		268
ABS Pipe	100	ft	3"		121
Total (Without Rebar)					$18,077
#4 Rebar	93	pcs	1/2"	20'	783
Total (With Rebar)					$18,860

Transportation Cost of Market Basket
Shipping & Handling (Without Concrete, Rebar, Doors, & Windows)
2011

Destination	Seattle
Ketchikan	$2,601
Juneau	4,511
Sitka	7,200
Anchorage	7,116
Wasilla	8,006
Kenai	8,903
Fairbanks	8,777
Kodiak	10,615
Bethel	12,636
Nome	15,618
Barrow	28,194

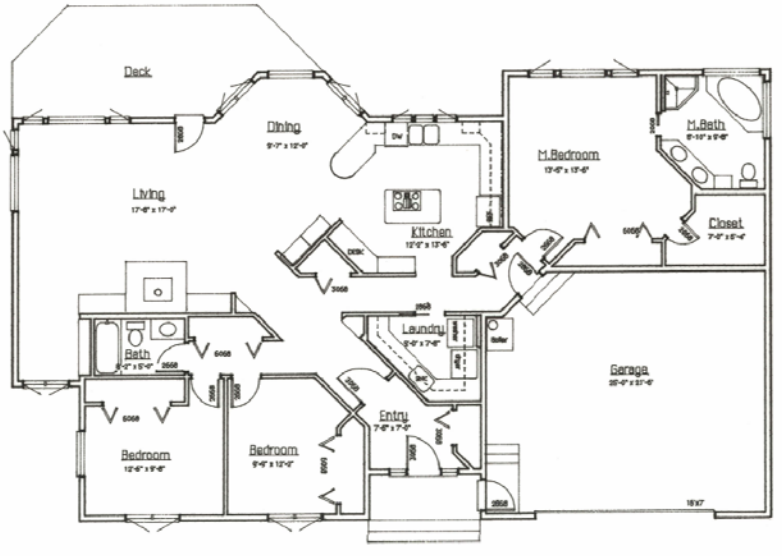
Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section, Construction Cost Survey 2011
Weighted average using 2010 Q2 ODB202 number of employees where applicable
Totals may not sum due to rounding
N/A = Not Applicable

Artist Rendering of Model Home



FRONT ELEVATION

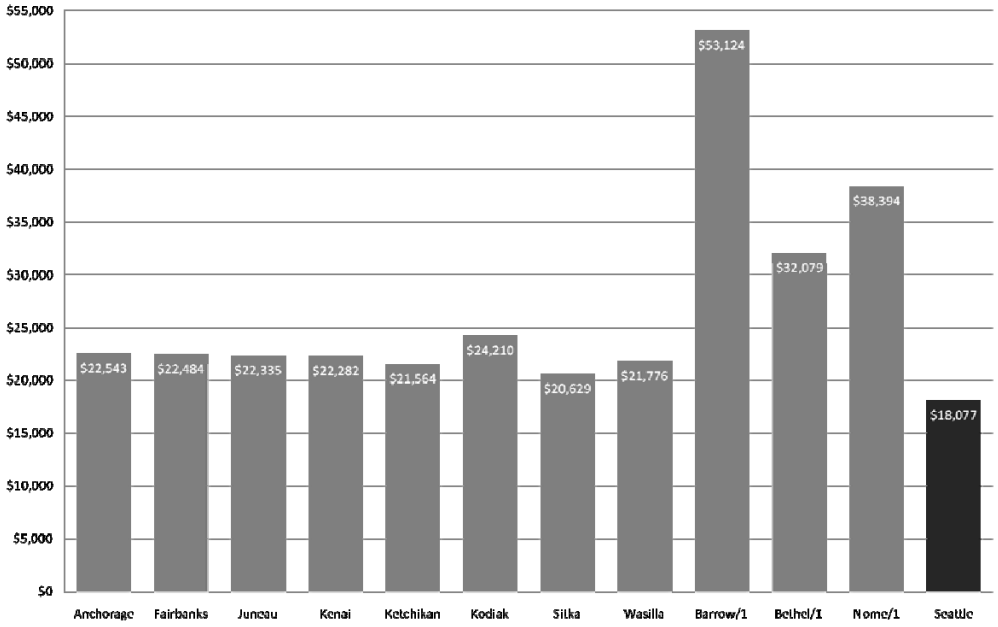
Floor Plan of Model Home



Floor Plan
1923 SQ. FT.

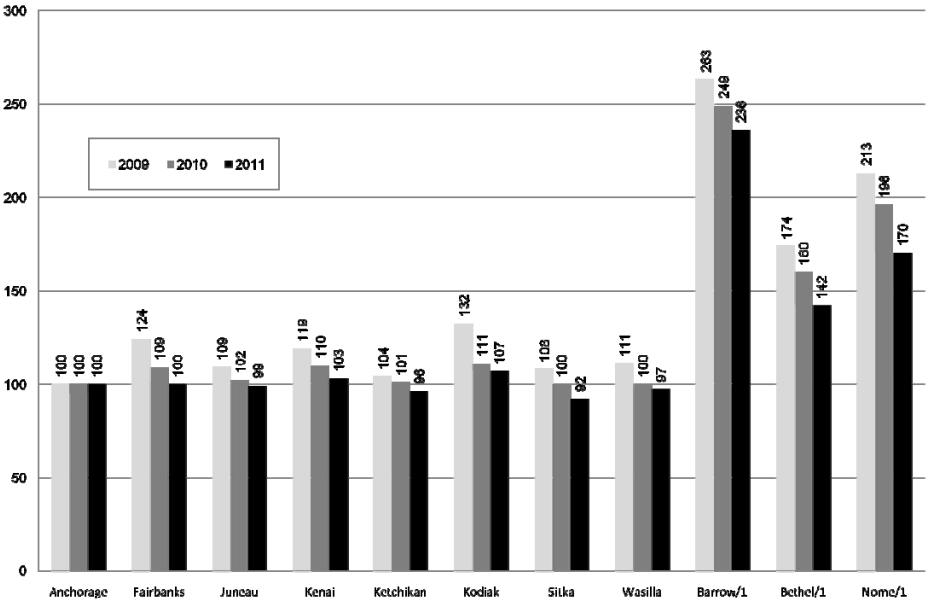
Average Cost of Market Basket 2011

Urban & Rural Residential Construction (Without Concrete, Rebar, Doors, & Windows)
Alaska and Seattle Suppliers



Alaska Suppliers Comparison Index

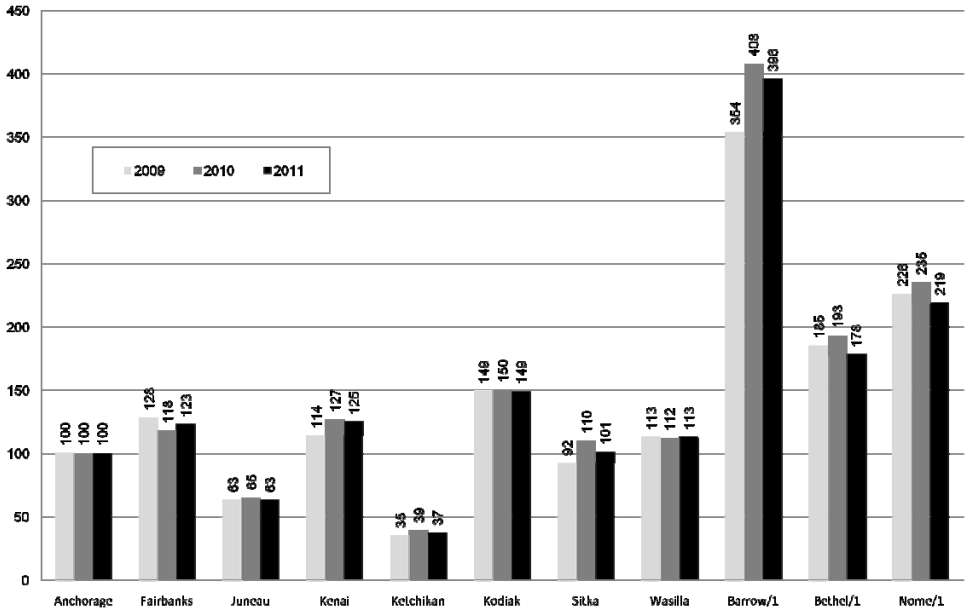
Urban & Rural Residential Construction (Without Concrete, Rebar, Doors, & Windows)
Index by Community with Anchorage as Baseline



Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section, Construction Cost Survey 2011
Note: 1/ Rural areas include metal roofing instead of asphalt shingles.

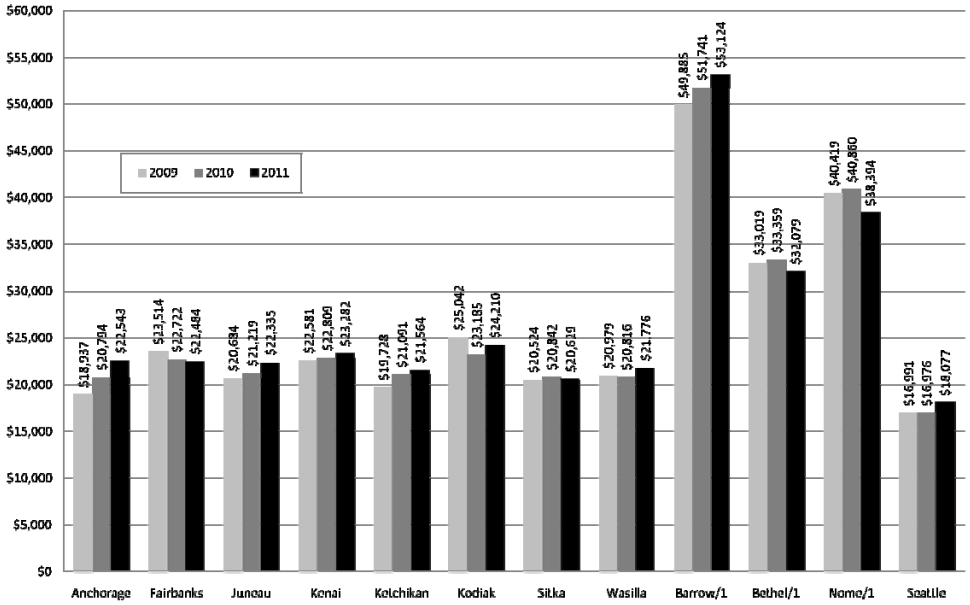
Transportation Index for Market Basket from Seattle

Urban & Rural Residential Construction (Without Concrete, Rebar, Doors, & Windows)
Index by Community with Anchorage as Baseline

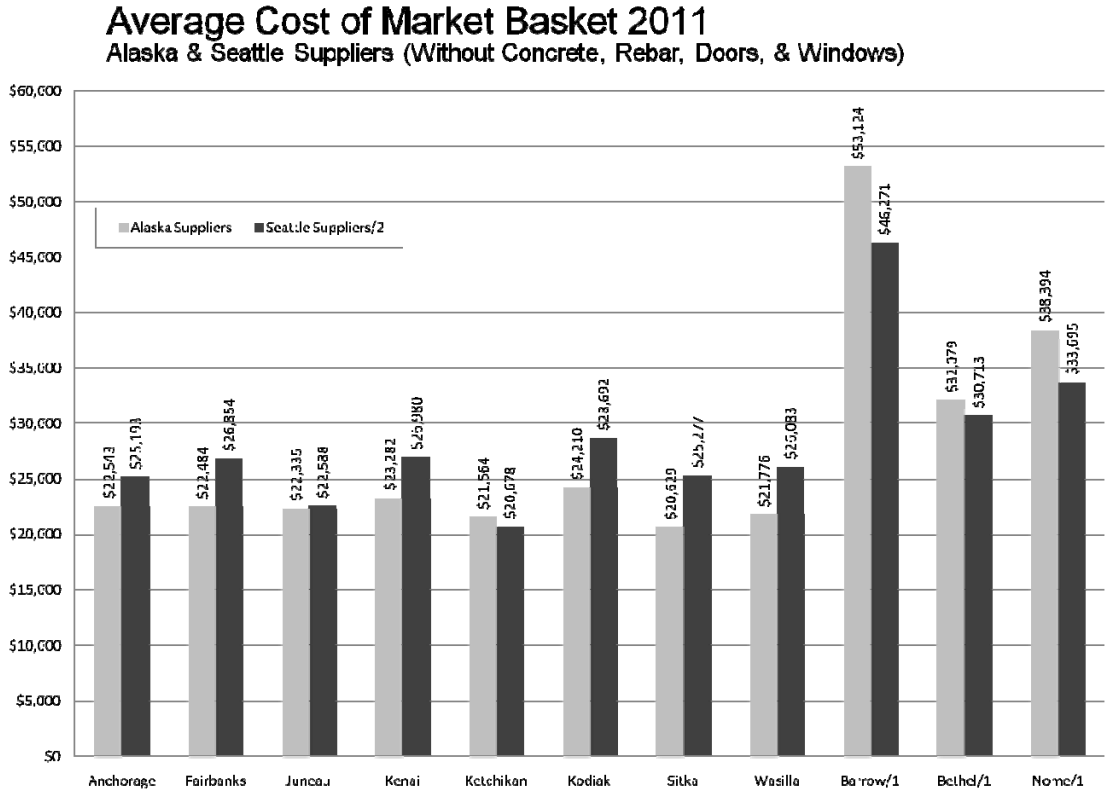


Average Cost of Market Basket 2009-2011

Urban & Rural Residential Construction (Without Concrete, Rebar, Doors, & Windows)
Alaska and Seattle Suppliers



Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section, Construction Cost Survey 2011
Note: 1/ Rural areas include metal roofing instead of asphalt shingles.



Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section, Construction Cost Survey 2011
Note: 1/ Rural areas include metal roofing instead of asphalt shingles.