

Cost of Constructing a Home

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Introduction

Over the years, NAHB has periodically conducted “construction cost surveys” to collect information from builders on the various components that go into the sales price of a typical single-family home. NAHB’s most recent Construction Cost survey (conducted in the fall of 2019) shows that, on average, 61.1 percent of the sales price goes to construction costs and 18.5 percent to finished lot costs. On average, builder profit is 9.1 percent of the sales price.

Of the major stages of construction, interior finishes, at 25.4 percent, accounts for the largest share of construction costs, followed by framing at 17.4 percent. These percentages cover all costs paid by a builder, including labor, materials, and the cost of hiring subcontractors.

The following sections describe the methodology of the survey and discuss the results in more detail.

Methodology

NAHB’s 2019 Construction Cost survey was conducted by emailing a questionnaire to a representative sample of 6,516 home builders. The sample was stratified by the size of the builder (based on the number of 2018 single-family starts) and by region of the country (the sample being proportional to housing starts in each of the four principal Census regions).

Over the years, NAHB has modified the survey and its methodology. In 2009, the survey methodology changed to provide a better, more representative sample of single-family construction across the country. In 2013, NAHB developed a different construction cost breakdown that more closely resembles the steps that builders take when building a home. Prior to 2013, the breakdown had 29 sections. In 2013, we created eight subcategories for each of the major stages of construction, with a total of 36 sections grouped under the appropriate construction stage. The new format simplified data collection, greatly reducing the number of follow-up calls needed to clarify and verify builder responses.

Respondents were asked to provide information about the typical single-family home built by their firms during 2019. Usable responses were received from 49 builders. Table 1 shows the detailed results of the 2019 Construction Cost survey.

**Table 1. Single Family Price and Cost Breakdowns
2019 National Results**

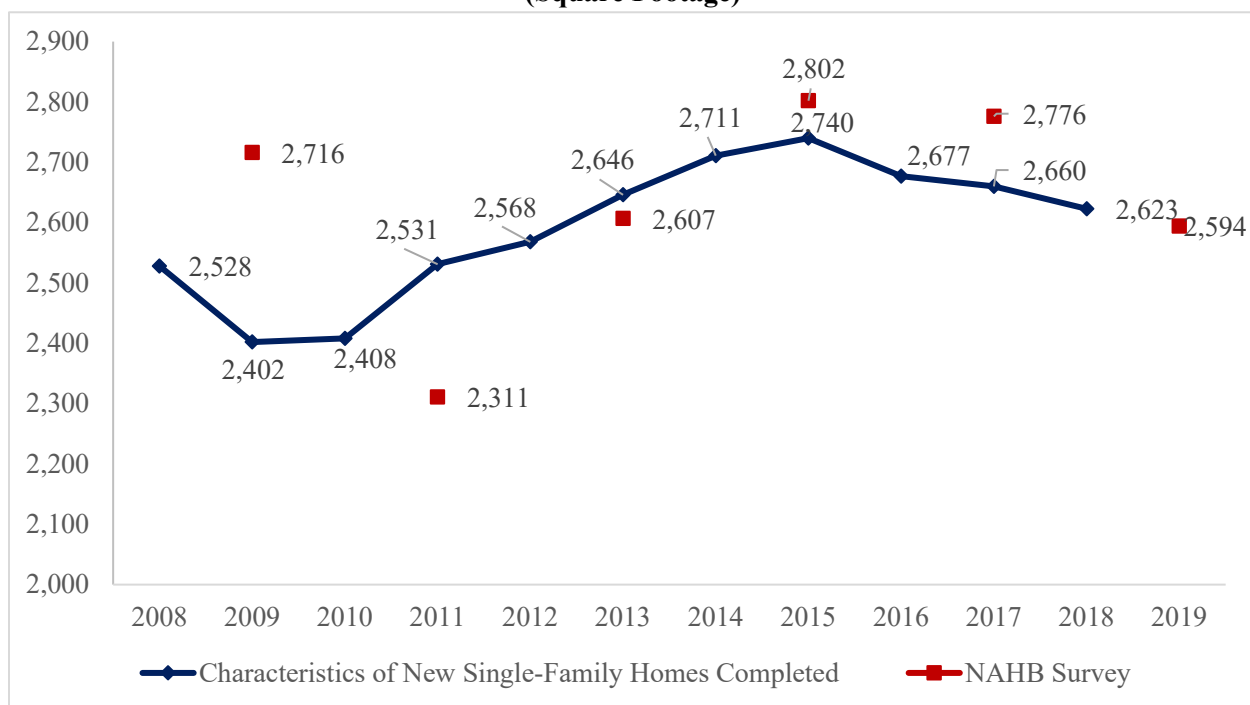
	Average Lot Size:	22,094
	Average Finished Area:	2,594
I. Sale Price Breakdown	Average	Share of Price
A. Finished Lot Cost (including financing cost)	\$89,540	18.5%
B. Total Construction Cost	\$296,652	61.1%
C. Financing Cost	\$8,160	1.7%
D. Overhead and General Expenses	\$23,683	4.9%
E. Marketing Cost	\$4,895	1.0%
F. Sales Commission	\$18,105	3.7%
G. Profit	\$44,092	9.1%
Total Sales Price	\$485,128	100.0%
II. Construction Cost Breakdown	Average	Share of Construction Cost
I. Site Work (sum of A to E)	\$18,323	6.2%
A. Building Permit Fees	\$5,086	1.7%
B. Impact Fee	\$3,865	1.3%
C. Water & Sewer Fees Inspections	\$4,319	1.5%
D. Architecture, Engineering	\$4,335	1.5%
E. Other	\$719	0.2%
II. Foundations (sum of F to G)	\$34,850	11.8%
F. Excavation, Foundation, Concrete, Retaining walls, and Backfill	\$33,511	11.3%
G. Other	\$1,338	0.5%
III. Framing (sum of H to L)	\$51,589	17.4%
H. Framing (including roof)	\$40,612	13.7%
I. Trusses (if not included above)	\$6,276	2.1%
J. Sheathing (if not included above)	\$3,216	1.1%
K. General Metal, Steel	\$954	0.3%
L. Other	\$530	0.2%
IV. Exterior Finishes (sum of M to P)	\$41,690	14.1%
M. Exterior Wall Finish	\$19,319	6.5%
N. Roofing	\$9,954	3.4%
O. Windows and Doors (including garage door)	\$11,747	4.0%
P. Other	\$671	0.2%
V. Major Systems Rough-ins (sum of O to T)	\$43,668	14.7%
Q. Plumbing (except fixtures)	\$14,745	5.0%
R. Electrical (except fixtures)	\$13,798	4.7%
S. HVAC	\$14,111	4.8%
T. Other	\$1,013	0.3%
VI. Interior Finishes (sum of U to AE)	\$75,259	25.4%
U. Insulation	\$5,184	1.7%
V. Drywall	\$10,634	3.6%
W. Interior Trims, Doors, and Mirrors	\$10,605	3.6%
X. Painting	\$8,254	2.8%
Y. Lighting	\$3,437	1.2%
Z. Cabinets, Countertops	\$13,540	4.6%
AA. Appliances	\$4,710	1.6%
AB. Flooring	\$11,998	4.0%
AC. Plumbing Fixtures	\$4,108	1.4%
AD. Fireplace	\$1,867	0.6%
AE. Other	\$923	0.3%
VII. Final Steps (sum of AF to AJ)	\$20,116	6.8%
AF. Landscaping	\$6,506	2.2%
AG. Outdoor Structures (deck, patio, porches)	\$3,547	1.2%
AH. Driveway	\$6,674	2.2%
AI. Clean Up	\$2,988	1.0%
AJ. Other	\$402	0.1%
VIII. Other	\$11,156	3.8%
Total	\$296,652	100.0%

Home and Lot Size

The average single-family home size in the 2019 NAHB Construction Cost Survey is 2,594 square feet of finished floor space, the smallest square footage since 2011. Historically, average square footage in the NAHB survey has tended to move in the same direction as in the Census Bureau's series with a lag, and with wider fluctuations, as you would expect from the smaller sample size.

The average home size dropped from 2,716 square feet in 2009 to 2,311 square feet in 2011, as demand eroded after the Great Recession. As the economy recovered, it rose steadily and peaked at 2,802 square feet in 2015. Since then, the average square footage has trended downward, dropping to 2,776 in 2017 and to 2,594 in 2019 (Graph 1). Data from the Census Bureau corroborates this trend: the average size of all new homes peaked in 2015 at 2,740 square feet, but has declined every year since then. The smaller square footage in recent years is evidence that builders are shifting toward the production of more entry-level homes to meet demand for more affordable homes.

**Graph 1. SIZE OF SINGLE-FAMILY HOMES
(Square Footage)**

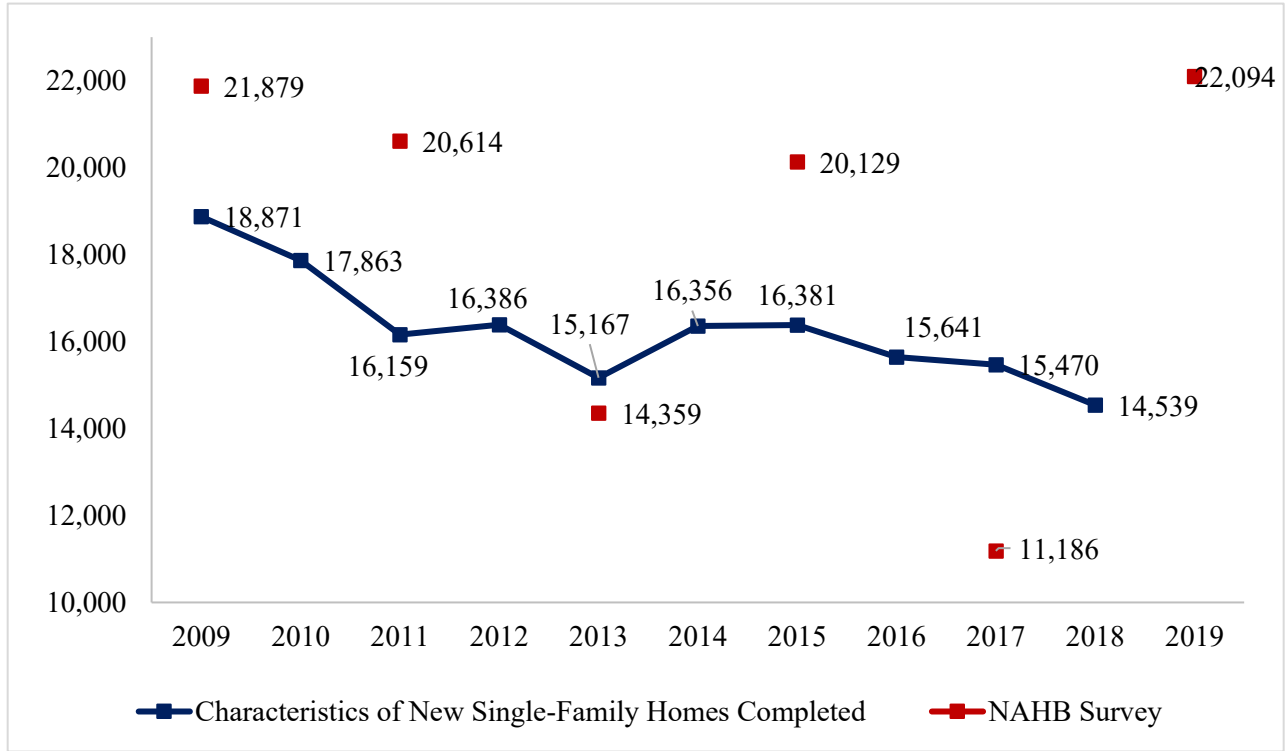


The average lot size in the 2019 NAHB Construction Cost Survey is 22,094 square feet, or about a half-acre (1 acre is equivalent to 43,560 square feet). This is the highest average lot size recorded in the survey's history. The average lot size was in the territory of 20,000 to 22,000 square feet in 2009 and 2011, but dropped to 14,359 sq. ft. in 2013. It rebounded to 20,129 sq. ft. in 2015, but dropped again to 11,186 sq. ft. in 2017, the smallest lot size since the inception of the survey.

In general, lot size in the NAHB survey has tended to move in the same direction as the Census series, but again with more volatility from year to year (Graph 2). The Census data show a downward trend in lot size between 2009 and 2013, dropping from an average of 18,871 sq. ft. to a low of 15,167 sq. ft. in 2013. It rebounds to 16,381 sq. ft. in 2015, but falls again to another low of 14,539 sq. ft. in 2018.

The NAHB survey shows a significant increase in lot size in 2019, which deviates from the downward trend exhibited by the Census data. Again, this may reflect the Construction Cost survey's small sample size.

**Graph 2. LOT SIZE OF SINGLE-FAMILY HOMES
(Square Footage)**

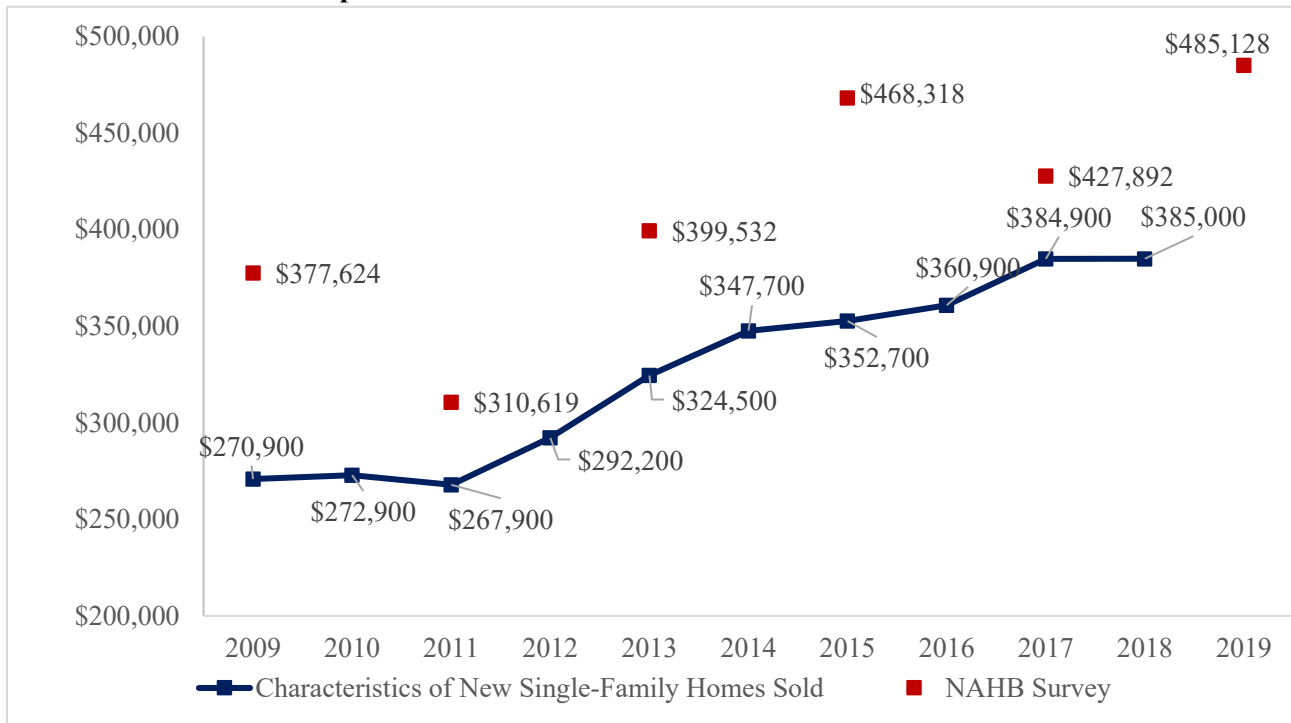


Sales Price

The average single-family home sales price in the 2019 NAHB Construction Cost Survey is \$485,128, the highest average sales price (not adjusted for inflation) in the survey’s history. The Census Bureau’s series shows the average price for new single-family homes sold increasing steadily after the Great Recession, going from \$267,900 in 2011 to \$384,900 in 2017, and leveling off at \$385,000 in 2018 (Graph 3). It is important to note that [home price appreciation](#) slowed in 2018 as higher mortgage interest rates softened demand for housing. [Price growth reaccelerated](#) in 2019, however, as mortgage rates dropped to record lows and the labor market continued to expand.

Compared to the Census series, the NAHB survey data show a similar upward trend, but with bigger jumps in the average price. Again, the larger fluctuations in the NAHB surveys are most likely due to the smaller sample size. The relatively simple geographic stratification (four Census regions) may also be a factor.

Graph 3. SALES PRICE OF SINGLE-FAMILY HOMES



Sales Price Breakdown

A key feature of the NAHB survey is that it asks builders to break down the sales price of their homes into seven categories: finished lot cost; total construction cost; financing cost; overhead and general expenses; marketing costs; sales commission; and profit. Table 2 contains historical information on the sales price breakdown of a single-family home. It is important to remind readers to use caution when comparing data across years in Table 2, as trends may be affected by the survey’s sample size limitations and the fact that a different set of builders responds to the survey each time.

On average in the 2019 NAHB survey, 61.1 percent of the final house price was attributable to construction costs, 18.5 percent to the cost of the finished lot, 4.9 percent to overhead and general expenses, 3.7 percent to sales commissions, 1.7 percent to financing costs, 1.0 percent to marketing costs, leaving 9.1 percent for profit (prior to taxes).

As a share of the average sales price, construction costs rose significantly, going from 55.6 percent in 2017 to 61.1 percent in 2019. At the same time, the finished lot cost share decreased from 21.5 percent to 18.5 percent, and the average profit margin fell from 10.7 percent to 9.1 percent.

Table 2. SINGLE-FAMILY HOMES SALES PRICE BREAKDOWN HISTORY

Sale Price Breakdown	1998	2002	2004	2007	2009	2011	2013	2015	2017	2019
1. Finished Lot Cost	23.6%	23.5%	26.0%	24.5%	20.3%	21.7%	18.6%	18.2%	21.5%	18.5%
2. Total Construction Cost	54.8%	50.8%	51.7%	48.1%	58.9%	59.3%	61.7%	61.8%	55.6%	61.1%
3. Financing Cost	1.9%	2.1%	1.8%	2.4%	1.7%	2.1%	1.4%	1.3%	1.8%	1.7%
4. Overhead and General Expenses	5.7%	5.5%	5.8%	7.0%	5.4%	5.2%	4.3%	5.6%	5.1%	4.9%
5. Marketing Cost	1.4%	2.4%	1.9%	2.5%	1.4%	1.5%	1.1%	0.8%	1.2%	1.0%
6. Sales Commission	3.4%	3.7%	3.0%	4.3%	3.4%	3.3%	3.6%	3.2%	4.1%	3.7%
7. Profit	9.2%	12.0%	9.8%	11.2%	8.9%	6.8%	9.3%	9.0%	10.7%	9.1%
8. Total Sales Price (\$)	\$226,680	\$298,412	\$373,349	\$454,906	\$377,624	\$310,619	\$399,532	\$468,318	\$427,892	\$485,128

Source: NAHB Construction Cost Surveys, 1998-2019

Construction Costs

The average construction cost of a typical single-family home in the 2019 survey is \$296,652 (Table 3), or about \$114 per square foot. The cost of construction per square foot was \$80 in 2011, \$95 in 2013, \$103 in 2015, and \$86 in 2017.

Of the 8 major stages of construction, interior finishes, at 25.4 percent, accounts for the largest share of construction costs, followed by framing (17.4 percent), major system rough-ins (14.7 percent), exterior finishes (14.1 percent), foundations (11.8 percent), final steps (6.8 percent), site work (6.2 percent), and other costs (3.8 percent) (See Table 3 for a full breakdown).

Each category in Table 3 includes all the costs paid by a builder that go into a particular item, including labor costs paid directly by the general contractor, the cost of hiring subcontractors, and the cost of materials, however they are purchased.

Among the major stages, the share of construction costs that go to interior finishes shifted the most between 2017 and 2019, falling from 28.6 percent to 25.4 percent. Meanwhile, foundations and major system rough-ins had the largest percentage point increases from 2017 to 2019, rising 1.0 point to 11.8 percent and 0.9 points to 14.7 percent, respectively. Rising foundation costs may reflect increases in the cost of [ready mix concrete seen throughout 2019](#).

The cost of framing, on the other hand, remained essentially unchanged between 2017 (17.3 percent) and 2019 (17.4 percent). It is important to point out that [softwood lumber costs stabilized in 2019](#), after rising significantly in 2018.

Of the detailed items in the NAHB survey, framing and trusses remain the largest share of construction costs. Together, they account for 15.8 percent of 2019's construction costs, slightly down from the 16.8 percent they represented in 2017. The share of construction costs going to impact fees rose slightly from 0.9 percent in 2017 to 1.3 percent in 2019. An [Eyeonhousing.org](#) post, which highlights the top challenges for builders in 2019, shows that a significant share of builders (61 percent) continued to report impact/hook-up/inspection fees remain one of their top problems.

Table 3. SINGLE-FAMILY CONSTRUCTION COST BREAKDOWN HISTORY

Construction Cost Breakdown	1998	2002	2004	2007	2009	2011	2013	2015	2017	2019
I. Site Work (sum of A to E)							6.8%	5.6%	6.7%	6.2%
A. Building Permit Fees	0.9%	1.3%	0.8%	1.7%	1.9%	1.7%	1.5%	1.2%	1.7%	1.7%
B. Impact Fee	1.0%	1.6%	1.1%	1.4%	1.4%	1.5%	1.3%	0.6%	0.9%	1.3%
C. Water & Sewer Fees Inspections	1.0%	1.4%	1.2%	1.6%	1.7%	1.6%	1.8%	1.4%	2.0%	1.5%
D. Architecture, Engineering							1.5%	1.6%	1.4%	1.5%
E. Other							0.7%	0.7%	0.7%	0.2%
II. Foundations (sum of F to G)							9.5%	11.6%	10.8%	11.7%
F. Excavation, Foundation, Concrete, Retaining walls, and Backfill	9.6%	6.9%	9.9%	7.0%	7.1%	9.3%	9.3%	11.3%	10.7%	11.3%
G. Other							0.2%	0.3%	0.1%	0.5%
III. Framing (sum of H to L)							19.1%	18.0%	17.3%	17.4%
H. Framing (including roof)	20.2%	18.4%	21.3%	15.8%	15.6%	13.5%	14.8%	15.4%	15.0%	13.7%
I. Trusses (if not included above)							2.2%	1.3%	1.6%	2.1%
J. Sheathing (if not included above)	NA	0.9%	1.4%	1.6%	1.7%	1.2%	0.9%	0.4%	0.3%	1.1%
K. General Metal, Steel	1.1%	0.8%	0.3%	0.8%	0.7%	0.5%	0.7%	0.4%	0.3%	0.3%
L. Other							0.5%	0.3%	0.1%	0.2%
IV. Exterior Finishes (sum of M to P)							14.4%	15.0%	13.9%	14.1%
M. Exterior Wall Finish							6.8%	7.2%	6.5%	6.5%
N. Roofing	2.6%	2.6%	2.2%	3.2%	3.8%	2.9%	3.2%	3.5%	3.3%	3.4%
O. Windows and Doors (including garage door)							4.1%	4.2%	3.9%	4.0%
P. Other							0.2%	0.2%	0.3%	0.2%
V. Major Systems Rough-ins (sum of Q to T)							13.4%	13.1%	13.8%	14.7%
Q. Plumbing (except fixtures)	5.9%	5.4%	5.3%	5.4%	5.3%	6.0%	4.8%	4.3%	4.6%	5.0%
R. Electrical (except fixtures)	3.8%	3.3%	3.4%	3.9%	3.7%	4.4%	4.0%	4.2%	4.2%	4.7%
S. HVAC	4.1%	4.2%	3.7%	3.9%	4.0%	4.8%	4.5%	4.4%	4.7%	4.8%
T. Other							0.1%	0.3%	0.2%	0.3%
VI. Interior Finishes (sum of U to AE)							29.3%	29.6%	28.6%	25.4%
U. Insulation	1.4%	1.6%	1.4%	1.6%	1.5%	1.8%	1.9%	2.2%	2.2%	1.7%
V. Drywall	5.5%	5.3%	4.9%	5.1%	5.1%	4.4%	3.8%	4.1%	4.4%	3.6%
W. Interior Trims, Doors, and Mirrors							4.3%	4.3%	4.6%	3.6%
X. Painting	3.8%	3.6%	3.6%	3.4%	3.4%	3.3%	3.4%	3.1%	3.0%	2.8%
Y. Lighting	1.0%	0.8%	0.9%	1.0%	1.1%	1.2%	1.2%	1.2%	1.3%	1.2%
Z. Cabinets, Countertops	5.0%	4.3%	6.6%	5.7%	5.6%	5.6%	5.2%	5.5%	5.0%	4.6%
AA. Appliances	1.3%	1.2%	1.3%	1.7%	1.6%	2.0%	1.7%	1.5%	1.5%	1.6%
AB. Flooring	4.8%	4.3%	4.2%	5.0%	5.1%	4.5%	5.0%	4.6%	4.3%	4.0%
AC. Plumbing Fixtures							1.7%	1.5%	1.3%	1.4%
AD. Fireplace							0.8%	1.0%	0.6%	0.6%
AE. Other							0.2%	0.5%	0.4%	0.3%
VII. Final Steps (sum of AF to AJ)							6.6%	6.8%	7.0%	6.8%
AF. Landscaping	1.8%	2.5%	2.6%	2.8%	3.2%	3.5%	2.3%	2.1%	2.5%	2.2%
AG. Outdoor Structures (deck, patio, porches)	0.7%	0.7%	1.0%	0.7%	0.9%	1.0%	1.2%	1.5%	1.3%	1.2%
AH. Driveway	1.5%	1.6%	1.3%	1.4%	1.4%	1.5%	1.5%	2.2%	1.9%	2.2%
AI. Clean Up							0.9%	0.7%	1.1%	1.0%
AJ. Other							0.7%	0.3%	0.3%	0.1%
VIII. Other							0.9%	0.5%	2.0%	3.8%

Source: NAHB Construction Cost Surveys, 1998-2019

Caveats

These results are national averages; the survey sample is not large enough for a geographic breakdown. Building practices, the cost of labor, the cost of land, and to some extent the cost of materials can vary from place to place and depend on the nature of the particular home being built. Although the survey can provide a broad idea of construction costs for the average new single-family home, it is not a perfect tool for estimating costs for a particular house. Companies that provide more specific cost estimating, usually for a fee, include RSMeans (<http://rsmeans.reedconstructiondata.com/>) and Marshall & Swift (<http://www.marshallswift.com/>).

It is also important to note that because the NAHB Construction Cost Survey has a small sample size and does not control for differences in the types of homes submitted in builders' responses, users should exhibit caution when comparing results across multiple years. For a more accurate time-series, users should refer to the Census Bureau's Survey of Construction, which is based on a much larger sample size and controls for home type.