

# 2008

# BUILDER PRACTICES REPORT

Annual Builder and  
Consumer Practices Surveys



# **BUILDER PRACTICES REPORT**

**UNITED STATES  
NEW RESIDENTIAL CONSTRUCTION DATA**

**2008**

**PREPARED BY:  
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**ANNUAL BUILDER PRACTICES AND  
CONSUMER PRACTICES SURVEY PROGRAM**

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## INTRODUCTION

The NAHB Research Center's *Builder Practices Reports* provide a picture of market demand for products and materials purchased by homebuilders nationwide. Market demand data is obtained through the *Annual Builder Practices Survey*, a nationally disseminated paper survey of homebuilders. The resulting data are tabulated using a robust methodology to ensure accurate estimates of product demand, quantities purchased, types, styles, sizes, and other characteristics of materials used in new homes built each calendar year.

The *Builder Practices Reports* present data on materials purchased for Single-Family Detached homes and Multifamily dwelling units. Data are shown as "coefficients," or per-house averages, and "product usage," the total volume of products or materials.

Coefficients for single-family detached homes are calculated for 32 separate U.S. geographic areas, referred to as "State-Market-Areas", which are states with similar topography. States with relatively low housing starts have been grouped with another state or states to create a single State-Market-Area, while three states with a high level of new home construction activity (California, Florida, and Texas) are divided between two State-Market-Areas. Where a state is split, the dividing line typically occurs along changes in climate or topography, and always along county lines.

The 32 State-Market-Area data for Single-Family Detached dwellings include tabulations by the individual states or combinations of states that comprise each of the State-Market-Areas. Totals are weighted by housing starts for increased accuracy. The total for each of the nine U.S. Census Divisions is a weighted average based on the proportion of housing starts within each State-Market-Area in that Census Division. U.S. Totals are weighted by the proportion of housing starts within each Census Division.

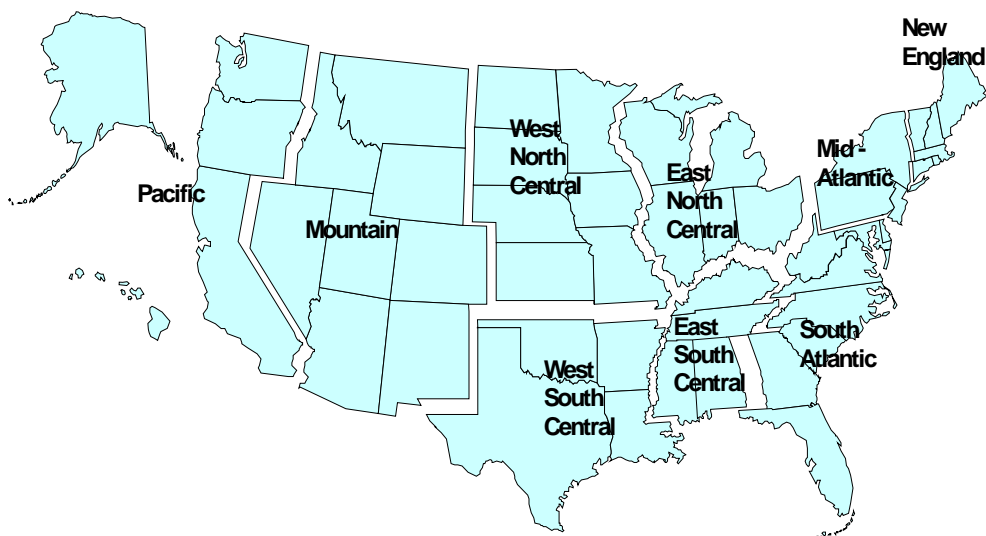
The Multifamily data, which include Single-Family Attached dwellings (Apartments, Duplexes, Townhouses and Row Houses) is tabulated by the nine U.S. Census Divisions. U.S. Totals are weighted by the proportion of housing starts within each Census Division.

The Research Center has an agreement with McGraw Hill Construction Analytics (formerly FW Dodge) to provide new housing starts data that previously had been extrapolated from U. S. Census Bureau data by NAHB economists. Since previous housing starts collection efforts were complex and time-consuming, this arrangement insures that the Builder Practices Reports will reach industry users in a timelier manner. In addition, since McGraw Hill Construction Analytics enjoys broad recognition as a leading authority on housing starts data, the Builder Practices Reports will benefit by including housing starts data generated using enhanced methodology.

Product Usage is the total estimated volume or amount of material used for both single-family and multifamily dwellings tabulated by State, Census Division, and the U.S. as a whole. These data are estimated using the coefficients described previously, along with the housing start data for each state. Product usage data are calculated for each individual state and summed to produce totals for each Census Division and for the U.S. as a whole. In addition to product usage tabulations for the current year, a five-year market demand projection is made using current year coefficients and state-level housing start forecasts.

## GEOGRAPHIC SAMPLING

The data are separated by geographic areas established by the U.S. Census Bureau in 1910, called Census Divisions. The Census Divisions include all 50 states, and the District of Columbia. The nine U.S. Census Divisions are shown in Figure 1 below.



**Figure 1: United States Census Division Map**

The nine U.S. Census Divisions and the 32 State-Market-Areas utilized by the NAHB Research Center are listed below:

### **New England**

- Connecticut, Massachusetts, Rhode Island
- Maine, New Hampshire, Vermont

### **Mid-Atlantic**

- New Jersey
- New York
- Pennsylvania

### **South Atlantic**

- Delaware, Maryland, the District of Columbia
- Georgia
- Northern Florida (Pinellas, Hillsborough, Polk, Osceola, Indian River counties and north)
- Southern Florida (Manatee, Hardee, Highlands, Okeechobee, St. Lucie counties and south)
- North Carolina, South Carolina
- Virginia, West Virginia

### **East North Central**

- Illinois
- Indiana
- Michigan
- Ohio
- Wisconsin

### **East South Central**

- Alabama, Mississippi
- Kentucky, Tennessee

### **West North Central**

- Iowa, Nebraska
- Kansas, Missouri
- Minnesota
- North Dakota, South Dakota

### **West South Central**

- Arkansas, Oklahoma
- Louisiana, East Texas (Houston to Corpus Christi, and west to the semi-arid plains)
- West Texas (Dallas to San Antonio and west)

### **Mountain**

- Arizona, Nevada, New Mexico
- Colorado, Utah
- Idaho, Montana, Wyoming

### **Pacific**

- Northern California (Monterey, Kings, Tulare, Inyo counties and north)
- Southern California (San Luis Obispo, Kern, San Bernardino counties and south), Hawaii
- Oregon
- Alaska, Washington

## METHODOLOGY

In order to gather data for the material usage coefficients, the NAHB Research Center mailed the *Annual Builder Practices Survey* to nearly 20,000 active home building companies nationwide. The sample frame was generated randomly from a pool of NAHB members who indicated that new home construction was their primary occupation. About 600 questionnaires were sent to companies in each of the 32 State-Market-Areas. Nearly 1,500 usable responses were received for the 2008 survey—1,377 respondents reported building single-family detached homes and 168 reported building multifamily dwellings (single-family attached-Apartments, Duplexes, Townhouses and Row Houses). The survey design enabled individual builders to respond to questions about Single Family Detached as well as multifamily dwellings. The number of responses is illustrated in Figure 2.

Number of Responses Received by Census Division and 32 State-Market-Area					
<b>New England</b>	<b>117</b>	<b>West North Central</b>	<b>164</b>	<b>West South Central</b>	<b>141</b>
CT, MA, RI	72	IA, NE	40	AR, OK	46
ME, NH, VT	45	KS, MO	41	LA & East TX	45
		MN	46	West TX	50
		ND, SD	37		
<b>Mid-Atlantic</b>	<b>161</b>	<b>South Atlantic</b>	<b>274</b>	<b>Mountain</b>	<b>96</b>
NJ	47	DE, MD, DC	35	AZ, NV, NM	34
NY	54	North FL	53	CO, UT	32
PA	60	South FL	34	ID, MT, WY	30
		GA	45		
<b>East North Central</b>	<b>241</b>	NC, SC	73		
IL	50	VA, WV	34	<b>Pacific</b>	<b>166</b>
IN	52			North CA	35
MI	49	<b>East South Central</b>	<b>107</b>	HI, South CA	39
OH	42	AL, MS	55	OR	42
WI	48	KY, TN	52	WA, AK	50

**Figure 2: Builder Practices Survey Responses by Region**

Data for three states—California, Florida, and Texas—are divided because these states have high levels of new home construction activity. The division is made by grouping adjacent counties having similar climate or topography.

Since numerous U.S. home building companies have multiple offices throughout the country, each local building establishment of multi-regional and national firms is recognized as a separate entity. Hence, questionnaires were sent to local home building establishments, not to regional offices or national headquarters. To assure that local offices are reporting only on homes built by their own operations and not the homes constructed by operations in other areas, the programming methodology allows a maximum of 200 single-family detached homes per Census Division built by a respondent's local operation. The number of single-family attached homes and multifamily dwellings are limited to 500 per Census Division.

To encourage participation, respondents were offered a selection of high-quality gift choices valued at about \$20 and a summary report limited to market share data for their Census Division and the U.S. totals. Discounting a percentage of surveys that were undeliverable, that reached non-builders, or multiple persons within a single company, the overall response rate was nearly eight percent.



## STATISTICAL ESTIMATES

The uncertainty in the estimates presented in this report generally decreases as the sample size increases. The underlying distribution of survey responses is either binomial or multinomial in nature, so the standard deviation of any proportion  $p$  estimated from the survey is:

$$\sigma_p = \sqrt{\frac{P \times (1-P)}{n}}$$

where:  $\sigma_p$  = the standard deviation of the estimated proportion,  
 $P$  = the true proportion, and  
 $n$  = the sample size (number of responses).

Based on a normal approximation to the binomial distribution, a symmetrical 95 percent confidence interval estimate of the true proportion  $P$  would be:

$$P = p \pm (1.96 \times \sigma_p)$$

While  $p$  for the sample is known, the true proportion  $P$  is unknown, so  $\sigma_p$  cannot be computed exactly. Still, a reasonable approximation can be made by using the observed proportion  $p$  to estimate  $\sigma_p$ . For example, a 95 percent confidence interval for  $P$ , for the inclusion of two car garages in single family detached houses built in the United States, based on a sample size of  $n = 1,467$  builders and an observed usage rate of  $p = 0.581$  (or 58.1 percent), would be computed as follows:

$$\sigma_p = \sqrt{\frac{(0.581)(0.419)}{1,467}} = 0.01160$$

As a result, the 95 percent confidence interval is:

$$P = 0.581 \pm (1.96 \times 0.01160), \text{ or } 0.5582 \leq P \leq 0.6037$$

This calculation indicates that the true value of  $P$  is highly likely to be between 55.82 percent and 60.37 percent. If the true  $P$  had been outside this range, the probability of observing a value  $p$  as extreme as the value that was actually observed would be five percent or less (based on a 95 percent confidence interval). This approximation is satisfactory where  $n \geq 25$  and  $p$  is not too close to 0 or 100 percent. Other methods can be used to compute confidence intervals where these conditions are not met.

Usage rates can be interpreted as proportions of a total, and confidence limits for the proportion multiplied by the total may be used to derive a confidence limit for the coefficient.

## CHARACTERISTICS OF NEW SINGLE-FAMILY DETACHED HOMES

### STARTER, MOVE-UP, AND LUXURY HOMES

One goal of the *Annual Builder Practices Survey* is to gather information on starter, move-up, and luxury homes built in the survey year. Figure 3 shows the current year percentage breakdown of all homes built compared to the same data for two previous years.

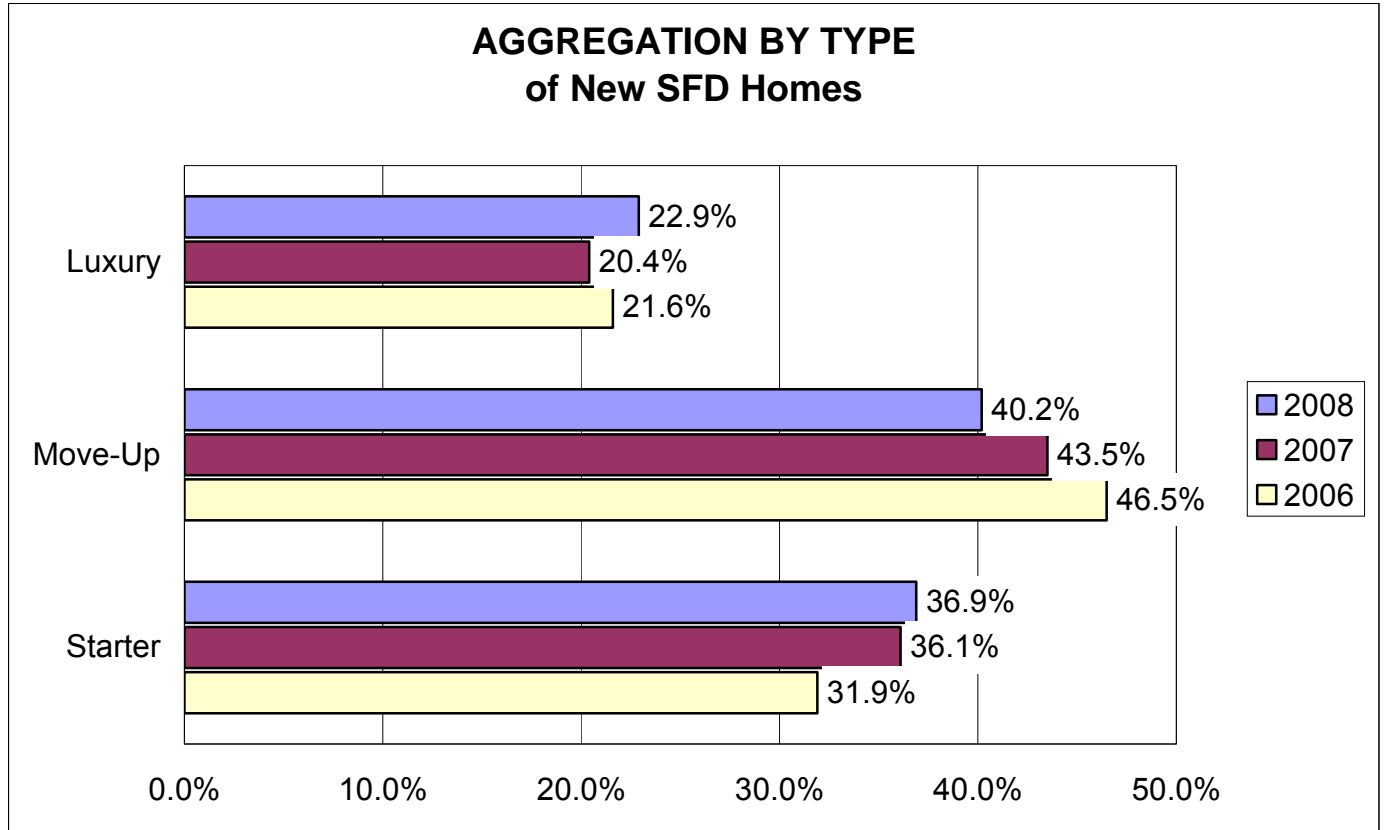
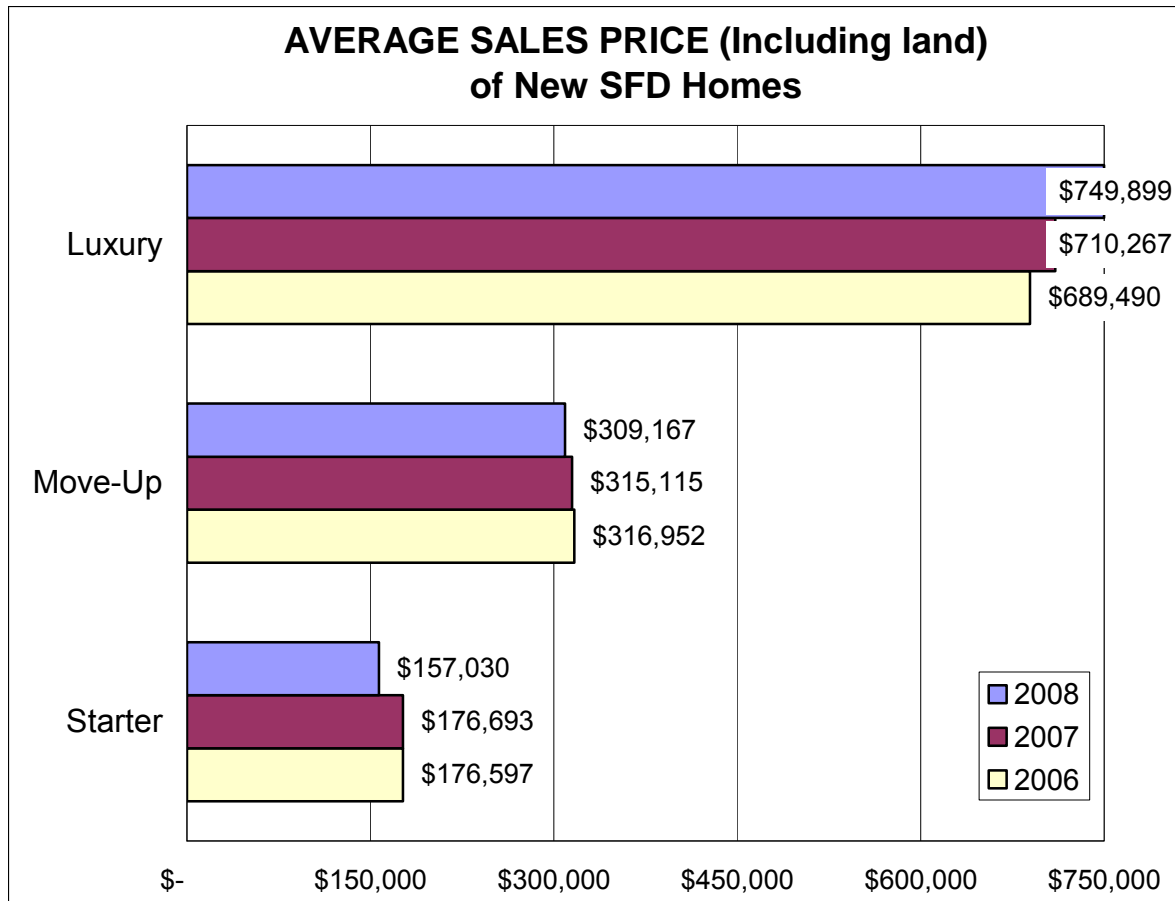


Figure 3: Aggregation By Type of New SFD Homes

**PRICES OF STARTER, MOVE-UP, AND LUXURY HOMES**

In 2008, a new Single Family Detached home (including land) averaged \$405,365.

For the past five years, the average price of a new Single Family Detached home (including land) has been \$400,692 in 2007, \$394,346 in 2006, \$375,461 in 2005, \$328,980 in 2004, and \$310,178 in 2003.



**Figure 4: Average Sales Price of New SFD Homes**

### SIZES OF STARTER, MOVE-UP, AND LUXURY HOMES

Tabulation of the 2008 survey results show that the average square feet of finished floor of all new single-family detached homes in the sample was 2,655 square feet. Figure 5 separates the results by starter, move-up, and luxury homes and shows a comparison of 2008 data to the previous two years.

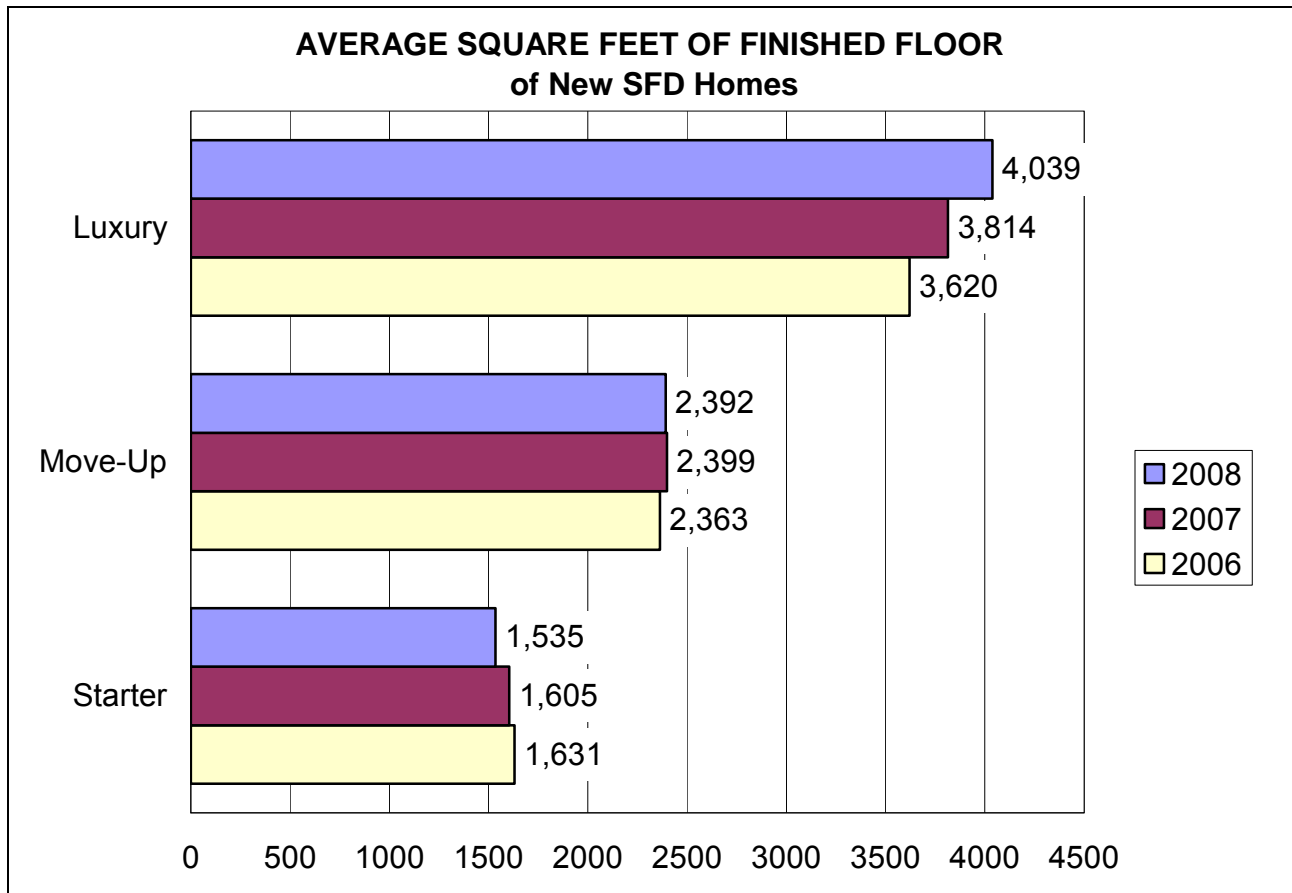


Figure 5: Average Square Feet of Finished Floor of New SFD Homes

## APPENDICES: THE BUILDER PRACTICES REPORTS

Data for the *Builder Practices Reports* are presented in the following appendices:

### APPENDIX A – PRODUCT USAGE

This section contains product usage data, an estimate of the total volume or amount of material used in a geographic area. To calculate this data, the coefficients from Appendices B and C are multiplied by the estimated housing starts data provided by McGraw Hill Construction Analytics.

### APPENDIX B – SINGLE FAMILY DETACHED COEFFICIENTS

This section contains per-house averages of materials usage (coefficients) for single-family detached homes.

### APPENDIX C – MULTIFAMILY COEFFICIENTS

This section contains per-dwelling-unit averages of materials usage (coefficients) for multifamily dwellings (Apartments, Duplexes, Townhouses and Row Houses).

### APPENDIX D – GENERAL CHARACTERISTICS

This section contains data on the general characteristics of new homes within the sample built by builders nationwide, separately for single-family detached and multifamily dwellings. The general characteristics tables for single-family detached homes also provide data for starter, move-up, and luxury homes. These terms are understood by builders who market their homes at price points coinciding with these three terms. Moreover, since houses can vary widely in price and size across the United States, the NAHB Research Center does not establish price, size, or price-per-square-foot criteria for homes in these categories, but allows individual builders to categorize their homes based on individual housing market criteria.

Distinctions are made when referring to structures generally categorized as “multifamily dwellings”. One set of general characteristics is included for single-family attached homes (townhouses and duplexes), while another set describes units in apartment or condominium buildings. Single-family attached dwellings are generally defined as sharing one or more common walls, with each unit resting on a separate foundation. On the other hand, units located in apartment or condominium buildings are defined as sharing a common foundation with another unit. Typically, both types require fire-rated walls between units.

### APPENDIX E – ANNUAL BUILDER PRACTICES QUESTIONNAIRE

This section contains a copy of the *2008 Annual Builder Practices Questionnaire*.

# **APPENDIX A**

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## **PRODUCT USAGE TABLES**

	2008	2009 <i>(forecast)</i>	2010 <i>(forecast)</i>	2011 <i>(forecast)</i>	2012 <i>(forecast)</i>	2013 <i>(forecast)</i>
<b>UNITED STATES</b>						
All Data in Thousands						
<b>HOUSING STARTS</b>						
Single-Family Detached	548.9	375.0	525.0	800.0	1,090.0	1,065.0
Multifamily (SFA & MF)	194.4	133.3	152.4	215.3	313.6	325.7
<b>TOTAL</b>	<b>743.3</b>	<b>508.3</b>	<b>677.4</b>	<b>1,015.3</b>	<b>1,403.6</b>	<b>1,390.7</b>
<b>SOLAR</b>						
<b>SOLAR ENERGY SYSTEMS</b>						
Homes with Solar Systems						
Solar electric (photovoltaic, or PV) system	12.2	8.2	11.0	16.6	23.6	23.4
Solar domestic hot water	14.6	9.6	13.2	20.5	28.8	28.6
Solar pool heater	7.9	5.4	7.2	11.0	15.5	15.5
<b>TYPE OF SOLAR ELECTRIC (PV) SYSTEMS</b>						
Homes with Solar Electric Systems						
Flat panel collectors installed on the roof	8.4	5.4	7.5	11.8	16.9	16.8
Flat panel collectors installed on supports attached to the ground	1.0	0.7	0.9	1.3	1.8	1.8
Integrated (BIPV) into the roofing or other element of the home	2.2	1.6	2.0	2.8	3.8	3.8
Another type of PV system	0.6	0.5	0.6	0.7	1.0	1.0
<b>TOTAL</b>	<b>12.2</b>	<b>8.2</b>	<b>11.0</b>	<b>16.6</b>	<b>23.6</b>	<b>23.4</b>
<b>HOW SOLAR ELECTRIC (PV) SYSTEMS WERE OFFERED</b>						
Homes Offered						
Standard on some or all homes	1.0	0.7	0.9	1.3	2.0	2.0
An option we actively promoted	23.1	16.3	22.9	34.1	46.7	45.1
Installed only at home buyer's request	19.3	12.3	17.4	27.6	38.1	37.8
<b>HOW SOLAR DOMESTIC HOT WATER SYSTEMS WERE OFFERED</b>						
Homes Offered						
Standard on some or all homes	2.9	1.9	2.6	3.8	5.2	5.0
An option we actively promoted	31.6	21.4	30.5	47.6	65.8	65.0
Installed only at home buyer's request	17.5	11.2	15.6	24.7	34.2	33.9
<b>PRIMARY INSTALLER OF SOLAR ELECTRIC (PV) SYSTEMS</b>						
Homes with Solar Electric Systems						
Solar contractor	3.6	2.4	3.5	5.5	7.6	7.5
Builder	1.7	1.4	1.6	2.1	2.8	2.9
Electrician	5.6	3.5	4.7	7.5	11.1	11.1
Utility company	1.2	0.8	1.1	1.5	1.9	1.9
Other	0.1	0.1	0.1	0.1	0.2	0.2
<b>TOTAL</b>	<b>12.2</b>	<b>8.2</b>	<b>11.0</b>	<b>16.6</b>	<b>23.6</b>	<b>23.4</b>
<b>PRIMARY INSTALLER OF SOLAR DOMESTIC HOT WATER</b>						
Homes with Solar Domestic Hot Water Systems						
Solar contractor	4.8	3.2	4.6	7.4	10.2	10.1
Builder	2.6	1.8	2.4	3.2	4.3	4.3
Plumber	7.1	4.4	6.1	9.6	14.0	14.0
Utility company	0.0	0.0	0.0	0.0	0.0	0.0
Other	0.1	0.1	0.1	0.2	0.3	0.2
<b>TOTAL</b>	<b>14.6</b>	<b>9.6</b>	<b>13.2</b>	<b>20.5</b>	<b>28.8</b>	<b>28.6</b>

	2008	2009 <i>(forecast)</i>	2010 <i>(forecast)</i>	2011 <i>(forecast)</i>	2012 <i>(forecast)</i>	2013 <i>(forecast)</i>
UNITED STATES						
	All Data in Thousands					
FEATURES OF SOLAR ELECTRIC (PV) SYSTEMS						
Homes with Solar Electric Systems						
Connected to a utility grid	7.7	5.1	6.8	10.5	15.4	15.5
Had battery storage	3.0	2.3	3.1	4.2	5.6	5.6
Home was completely Off-The-Grid	2.3	1.6	2.1	2.9	3.8	3.7
Had easy-to-read energy monitor	0.1	0.1	0.1	0.2	0.3	0.3
Net Metering enabled	0.9	0.6	0.9	1.4	2.0	2.0
Unspecified	0.6	0.4	0.5	0.8	1.1	1.1
CAPACITIES OF SOLAR ELECTRIC (PV) SYSTEMS						
Homes with Solar Electric Systems						
Less than 3 KW	6.5	4.1	5.6	8.9	13.1	13.0
3 KW to 5 KW	3.6	2.6	3.5	5.0	6.7	6.6
More than 5 KW	2.1	1.5	2.0	2.8	3.8	3.8
TOTAL	12.2	8.2	11.0	16.6	23.6	23.4
INCENTIVE SOURCES FOR SOLAR SYSTEMS						
Homes with Solar Systems						
No incentives	4.3	3.0	4.2	6.5	8.7	8.5
Federal government	13.3	8.8	11.7	18.1	26.5	26.6
State government	16.5	11.0	14.5	22.1	32.1	32.1
Local government	11.7	7.5	10.0	15.8	23.4	23.3
Public utility	14.7	9.3	12.9	20.7	30.0	29.9
Another source offered incentives	0.4	0.3	0.4	0.6	0.8	0.8
Unspecified	0.9	0.5	0.7	1.0	1.3	1.3



	2008	2009 <i>(forecast)</i>	2010 <i>(forecast)</i>	2011 <i>(forecast)</i>	2012 <i>(forecast)</i>	2013 <i>(forecast)</i>
<b>NEW ENGLAND</b>						
All Data in Thousands						
<b>HOUSING STARTS</b>						
Single-Family Detached	13.4	8.9	12.9	18.8	24.7	23.8
Multifamily (SFA & MF)	6.4	5.0	6.0	7.9	11.0	11.6
<b>TOTAL</b>	<b>19.8</b>	<b>13.9</b>	<b>18.9</b>	<b>26.8</b>	<b>35.6</b>	<b>35.4</b>
<b>SOLAR</b>						
<b>SOLAR ENERGY SYSTEMS</b>						
Homes with Solar Systems						
Solar electric (photovoltaic, or PV) system	0.0	0.0	0.0	0.0	0.1	0.1
Solar domestic hot water	0.3	0.2	0.3	0.4	0.6	0.5
Solar pool heater	0.0	0.0	0.0	0.0	0.1	0.1
<b>TYPE OF SOLAR ELECTRIC (PV) SYSTEMS</b>						
Homes with Solar Electric Systems						
Flat panel collectors installed on the roof	0.0	0.0	0.0	0.0	0.0	0.0
Flat panel collectors installed on supports attached to the ground	0.0	0.0	0.0	0.0	0.0	0.0
Integrated (BIPV) into the roofing or other element of the home	0.0	0.0	0.0	0.0	0.1	0.1
Another type of PV system	0.0	0.0	0.0	0.0	0.0	0.0
<b>TOTAL</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.1</b>	<b>0.1</b>
<b>HOW SOLAR ELECTRIC (PV) SYSTEMS WERE OFFERED</b>						
Homes Offered						
Standard on some or all homes	0.0	0.0	0.0	0.0	0.1	0.1
An option we actively promoted	0.2	0.1	0.2	0.2	0.3	0.3
Installed only at home buyer's request	0.2	0.1	0.2	0.2	0.3	0.3
<b>HOW SOLAR DOMESTIC HOT WATER SYSTEMS WERE OFFERED</b>						
Homes Offered						
Standard on some or all homes	0.0	0.0	0.0	0.1	0.1	0.1
An option we actively promoted	0.3	0.2	0.3	0.4	0.5	0.5
Installed only at home buyer's request	0.2	0.1	0.2	0.3	0.4	0.4
<b>PRIMARY INSTALLER OF SOLAR ELECTRIC (PV) SYSTEMS</b>						
Homes with Solar Electric Systems						
Solar contractor	0.0	0.0	0.0	0.0	0.0	0.0
Builder	0.0	0.0	0.0	0.0	0.0	0.0
Electrician	0.0	0.0	0.0	0.0	0.0	0.0
Utility company	0.0	0.0	0.0	0.0	0.0	0.0
Other	0.0	0.0	0.0	0.0	0.0	0.0
<b>TOTAL</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.1</b>	<b>0.1</b>
<b>PRIMARY INSTALLER OF SOLAR DOMESTIC HOT WATER</b>						
Homes with Solar Domestic Hot Water Systems						
Solar contractor	0.1	0.1	0.1	0.2	0.2	0.2
Builder	0.0	0.0	0.0	0.0	0.0	0.0
Plumber	0.1	0.1	0.1	0.1	0.2	0.2
Utility company	0.0	0.0	0.0	0.0	0.0	0.0
Other	0.1	0.0	0.1	0.1	0.1	0.1
<b>TOTAL</b>	<b>0.3</b>	<b>0.2</b>	<b>0.3</b>	<b>0.4</b>	<b>0.6</b>	<b>0.5</b>

	2008	2009 <i>(forecast)</i>	2010 <i>(forecast)</i>	2011 <i>(forecast)</i>	2012 <i>(forecast)</i>	2013 <i>(forecast)</i>
NEW ENGLAND						
	All Data in Thousands					
FEATURES OF SOLAR ELECTRIC (PV) SYSTEMS						
Homes with Solar Electric Systems						
Connected to a utility grid	0.0	0.0	0.0	0.0	0.1	0.1
Had battery storage	0.0	0.0	0.0	0.0	0.0	0.0
Home was completely Off-The-Grid	0.0	0.0	0.0	0.0	0.0	0.0
Had easy-to-read energy monitor	0.0	0.0	0.0	0.0	0.1	0.1
Net Metering enabled	0.0	0.0	0.0	0.0	0.1	0.1
Unspecified	0.0	0.0	0.0	0.0	0.0	0.0
CAPACITIES OF SOLAR ELECTRIC (PV) SYSTEMS						
Homes with Solar Electric Systems						
Less than 3 KW	0.0	0.0	0.0	0.0	0.0	0.0
3 KW to 5 KW	0.0	0.0	0.0	0.0	0.0	0.0
More than 5 KW	0.0	0.0	0.0	0.0	0.1	0.1
TOTAL	0.0	0.0	0.0	0.0	0.1	0.1
INCENTIVE SOURCES FOR SOLAR SYSTEMS						
Homes with Solar Systems						
No incentives	0.1	0.0	0.1	0.1	0.1	0.1
Federal government	0.2	0.1	0.2	0.2	0.3	0.3
State government	0.2	0.1	0.2	0.2	0.3	0.3
Local government	0.0	0.0	0.0	0.0	0.0	0.0
Public utility	0.1	0.1	0.1	0.2	0.2	0.2
Another source offered incentives	0.0	0.0	0.0	0.0	0.0	0.0
Unspecified	0.1	0.1	0.1	0.2	0.2	0.2

	2008	2009 <i>(forecast)</i>	2010 <i>(forecast)</i>	2011 <i>(forecast)</i>	2012 <i>(forecast)</i>	2013 <i>(forecast)</i>
<b>MID-ATLANTIC</b>						
All Data in Thousands						
<b>HOUSING STARTS</b>						
Single-Family Detached	33.6	21.7	30.4	43.2	56.3	53.8
Multifamily (SFA & MF)	12.4	11.1	12.4	14.6	19.7	20.7
<b>TOTAL</b>	<b>46.0</b>	<b>32.9</b>	<b>42.9</b>	<b>57.7</b>	<b>76.0</b>	<b>74.5</b>
<b>SOLAR</b>						
<b>SOLAR ENERGY SYSTEMS</b>						
Homes with Solar Systems						
Solar electric (photovoltaic, or PV) system	3.8	2.9	3.6	4.6	6.2	6.1
Solar domestic hot water	3.0	2.2	2.8	3.6	4.9	4.8
Solar pool heater	1.4	1.1	1.3	1.6	2.2	2.2
<b>TYPE OF SOLAR ELECTRIC (PV) SYSTEMS</b>						
Homes with Solar Electric Systems						
Flat panel collectors installed on the roof	1.3	1.0	1.2	1.6	2.1	2.1
Flat panel collectors installed on supports attached to the ground	0.6	0.5	0.6	0.7	1.0	1.0
Integrated (BIPV) into the roofing or other element of the home	1.3	0.9	1.2	1.5	2.1	2.0
Another type of PV system	0.6	0.5	0.6	0.7	1.0	1.0
<b>TOTAL</b>	<b>3.8</b>	<b>2.9</b>	<b>3.6</b>	<b>4.6</b>	<b>6.2</b>	<b>6.1</b>
<b>HOW SOLAR ELECTRIC (PV) SYSTEMS WERE OFFERED</b>						
Homes Offered						
Standard on some or all homes	0.0	0.0	0.0	0.0	0.0	0.0
An option we actively promoted	4.5	3.2	4.1	5.4	7.2	7.1
Installed only at home buyer's request	2.5	1.7	2.3	3.2	4.2	4.0
<b>HOW SOLAR DOMESTIC HOT WATER SYSTEMS WERE OFFERED</b>						
Homes Offered						
Standard on some or all homes	2.0	1.3	1.8	2.5	3.3	3.2
An option we actively promoted	1.8	1.3	1.7	2.2	2.9	2.9
Installed only at home buyer's request	2.5	1.7	2.3	3.1	4.1	4.0
<b>PRIMARY INSTALLER OF SOLAR ELECTRIC (PV) SYSTEMS</b>						
Homes with Solar Electric Systems						
Solar contractor	0.0	0.0	0.0	0.0	0.1	0.1
Builder	1.5	1.3	1.5	1.8	2.5	2.5
Electrician	1.1	0.8	1.0	1.4	1.8	1.8
Utility company	1.1	0.7	1.0	1.4	1.8	1.7
Other	0.0	0.0	0.0	0.0	0.0	0.0
<b>TOTAL</b>	<b>3.8</b>	<b>2.9</b>	<b>3.6</b>	<b>4.6</b>	<b>6.2</b>	<b>6.1</b>
<b>PRIMARY INSTALLER OF SOLAR DOMESTIC HOT WATER</b>						
Homes with Solar Domestic Hot Water Systems						
Solar contractor	0.0	0.0	0.0	0.0	0.0	0.0
Builder	1.9	1.4	1.7	2.3	3.0	3.0
Plumber	1.1	0.8	1.0	1.4	1.8	1.8
Utility company	0.0	0.0	0.0	0.0	0.0	0.0
Other	0.0	0.0	0.0	0.0	0.0	0.0
<b>TOTAL</b>	<b>3.0</b>	<b>2.2</b>	<b>2.8</b>	<b>3.6</b>	<b>4.9</b>	<b>4.8</b>

	2008	2009 <i>(forecast)</i>	2010 <i>(forecast)</i>	2011 <i>(forecast)</i>	2012 <i>(forecast)</i>	2013 <i>(forecast)</i>
MID-ATLANTIC						
	All Data in Thousands					
FEATURES OF SOLAR ELECTRIC (PV) SYSTEMS						
Homes with Solar Electric Systems						
Connected to a utility grid	1.6	1.3	1.5	1.9	2.5	2.6
Had battery storage	1.6	1.3	1.5	1.9	2.5	2.6
Home was completely Off-The-Grid	2.2	1.5	2.0	2.7	3.6	3.5
Had easy-to-read energy monitor	0.0	0.0	0.0	0.0	0.0	0.0
Net Metering enabled	0.0	0.0	0.0	0.0	0.0	0.0
Unspecified	0.0	0.0	0.0	0.0	0.0	0.0
CAPACITIES OF SOLAR ELECTRIC (PV) SYSTEMS						
Homes with Solar Electric Systems						
Less than 3 KW	0.9	0.6	0.8	1.1	1.5	1.4
3 KW to 5 KW	1.7	1.3	1.6	2.0	2.7	2.7
More than 5 KW	1.2	1.0	1.2	1.5	2.0	2.0
TOTAL	3.8	2.9	3.6	4.6	6.2	6.1
INCENTIVE SOURCES FOR SOLAR SYSTEMS						
Homes with Solar Systems						
No incentives	0.0	0.0	0.0	0.0	0.0	0.0
Federal government	2.9	2.5	2.8	3.5	4.7	4.8
State government	5.1	3.9	4.8	6.1	8.2	8.2
Local government	2.4	1.8	2.3	3.0	4.0	3.9
Public utility	2.4	1.8	2.3	3.0	4.0	3.9
Another source offered incentives	0.0	0.0	0.0	0.0	0.0	0.0
Unspecified	0.0	0.0	0.0	0.0	0.0	0.0

	2008	2009 <i>(forecast)</i>	2010 <i>(forecast)</i>	2011 <i>(forecast)</i>	2012 <i>(forecast)</i>	2013 <i>(forecast)</i>
<b>EAST NORTH CENTRAL</b>						
All Data in Thousands						
<b>HOUSING STARTS</b>						
Single-Family Detached	50.2	35.9	49.6	74.5	104.0	101.5
Multifamily (SFA & MF)	17.8	12.4	15.3	22.2	33.1	34.4
<b>TOTAL</b>	<b>68.0</b>	<b>48.3</b>	<b>64.9</b>	<b>96.7</b>	<b>137.1</b>	<b>135.8</b>
<b>SOLAR</b>						
<b>SOLAR ENERGY SYSTEMS</b>						
Homes with Solar Systems						
Solar electric (photovoltaic, or PV) system	0.1	0.0	0.1	0.1	0.1	0.1
Solar domestic hot water	0.0	0.0	0.0	0.0	0.0	0.0
Solar pool heater	0.0	0.0	0.0	0.0	0.0	0.0
<b>TYPE OF SOLAR ELECTRIC (PV) SYSTEMS</b>						
Homes with Solar Electric Systems						
Flat panel collectors installed on the roof	0.0	0.0	0.0	0.1	0.1	0.1
Flat panel collectors installed on supports attached to the ground	0.0	0.0	0.0	0.0	0.0	0.0
Integrated (BIPV) into the roofing or other element of the home	0.0	0.0	0.0	0.0	0.0	0.0
Another type of PV system	0.0	0.0	0.0	0.0	0.0	0.0
<b>TOTAL</b>	<b>0.1</b>	<b>0.0</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>
<b>HOW SOLAR ELECTRIC (PV) SYSTEMS WERE OFFERED</b>						
Homes Offered						
Standard on some or all homes	0.0	0.0	0.0	0.0	0.0	0.0
An option we actively promoted	0.0	0.0	0.0	0.0	0.0	0.0
Installed only at home buyer's request	0.6	0.4	0.5	0.8	1.2	1.2
<b>HOW SOLAR DOMESTIC HOT WATER SYSTEMS WERE OFFERED</b>						
Homes Offered						
Standard on some or all homes	0.0	0.0	0.0	0.0	0.0	0.0
An option we actively promoted	0.0	0.0	0.0	0.0	0.0	0.0
Installed only at home buyer's request	0.5	0.4	0.5	0.8	1.1	1.0
<b>PRIMARY INSTALLER OF SOLAR ELECTRIC (PV) SYSTEMS</b>						
Homes with Solar Electric Systems						
Solar contractor	0.0	0.0	0.0	0.0	0.0	0.0
Builder	0.0	0.0	0.0	0.0	0.0	0.0
Electrician	0.0	0.0	0.0	0.0	0.1	0.1
Utility company	0.0	0.0	0.0	0.0	0.0	0.0
Other	0.0	0.0	0.0	0.0	0.0	0.0
<b>TOTAL</b>	<b>0.1</b>	<b>0.0</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>
<b>PRIMARY INSTALLER OF SOLAR DOMESTIC HOT WATER</b>						
Homes with Solar Domestic Hot Water Systems						
Solar contractor	0.0	0.0	0.0	0.0	0.0	0.0
Builder	0.0	0.0	0.0	0.0	0.0	0.0
Plumber	0.0	0.0	0.0	0.0	0.0	0.0
Utility company	0.0	0.0	0.0	0.0	0.0	0.0
Other	0.0	0.0	0.0	0.0	0.0	0.0
<b>TOTAL</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>

	2008	2009 <i>(forecast)</i>	2010 <i>(forecast)</i>	2011 <i>(forecast)</i>	2012 <i>(forecast)</i>	2013 <i>(forecast)</i>
EAST NORTH CENTRAL						
All Data in Thousands						
FEATURES OF SOLAR ELECTRIC (PV) SYSTEMS						
Homes with Solar Electric Systems						
Connected to a utility grid	0.0	0.0	0.0	0.0	0.0	0.0
Had battery storage	0.0	0.0	0.0	0.0	0.0	0.0
Home was completely Off-The-Grid	0.0	0.0	0.0	0.0	0.0	0.0
Had easy-to-read energy monitor	0.0	0.0	0.0	0.0	0.0	0.0
Net Metering enabled	0.0	0.0	0.0	0.0	0.0	0.0
Unspecified	0.1	0.0	0.1	0.1	0.1	0.1
CAPACITIES OF SOLAR ELECTRIC (PV) SYSTEMS						
Homes with Solar Electric Systems						
Less than 3 KW	0.0	0.0	0.0	0.1	0.1	0.1
3 KW to 5 KW	0.0	0.0	0.0	0.0	0.0	0.0
More than 5 KW	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.1	0.0	0.1	0.1	0.1	0.1
INCENTIVE SOURCES FOR SOLAR SYSTEMS						
Homes with Solar Systems						
No incentives	0.0	0.0	0.0	0.0	0.0	0.0
Federal government	0.0	0.0	0.0	0.0	0.0	0.0
State government	0.0	0.0	0.0	0.0	0.0	0.0
Local government	0.0	0.0	0.0	0.0	0.0	0.0
Public utility	0.0	0.0	0.0	0.0	0.0	0.0
Another source offered incentives	0.0	0.0	0.0	0.0	0.0	0.0
Unspecified	0.1	0.0	0.1	0.1	0.1	0.1

	2008	2009 <i>(forecast)</i>	2010 <i>(forecast)</i>	2011 <i>(forecast)</i>	2012 <i>(forecast)</i>	2013 <i>(forecast)</i>
<b>WEST NORTH CENTRAL</b>						
All Data in Thousands						
<b>HOUSING STARTS</b>						
Single-Family Detached	35.9	24.9	32.4	45.5	63.1	60.5
Multifamily (SFA & MF)	8.7	6.6	7.2	10.6	15.7	16.5
<b>TOTAL</b>	<b>44.6</b>	<b>31.5</b>	<b>39.6</b>	<b>56.1</b>	<b>78.8</b>	<b>77.0</b>
<b>SOLAR</b>						
<b>SOLAR ENERGY SYSTEMS</b>						
Homes with Solar Systems						
Solar electric (photovoltaic, or PV) system	0.3	0.2	0.2	0.3	0.4	0.4
Solar domestic hot water	0.4	0.3	0.4	0.5	0.7	0.7
Solar pool heater	0.3	0.1	0.2	0.3	0.4	0.4
<b>TYPE OF SOLAR ELECTRIC (PV) SYSTEMS</b>						
Homes with Solar Electric Systems						
Flat panel collectors installed on the roof	0.2	0.1	0.2	0.3	0.3	0.3
Flat panel collectors installed on supports attached to the ground	0.0	0.0	0.0	0.0	0.0	0.0
Integrated (BIPV) into the roofing or other element of the home	0.0	0.0	0.0	0.0	0.0	0.0
Another type of PV system	0.0	0.0	0.0	0.0	0.0	0.0
<b>TOTAL</b>	<b>0.3</b>	<b>0.2</b>	<b>0.2</b>	<b>0.3</b>	<b>0.4</b>	<b>0.4</b>
<b>HOW SOLAR ELECTRIC (PV) SYSTEMS WERE OFFERED</b>						
Homes Offered						
Standard on some or all homes	0.0	0.0	0.0	0.0	0.0	0.0
An option we actively promoted	0.0	0.0	0.0	0.0	0.0	0.0
Installed only at home buyer's request	0.1	0.0	0.1	0.1	0.1	0.1
<b>HOW SOLAR DOMESTIC HOT WATER SYSTEMS WERE OFFERED</b>						
Homes Offered						
Standard on some or all homes	0.0	0.0	0.0	0.0	0.0	0.0
An option we actively promoted	0.0	0.0	0.0	0.0	0.0	0.0
Installed only at home buyer's request	0.5	0.4	0.4	0.6	0.9	0.8
<b>PRIMARY INSTALLER OF SOLAR ELECTRIC (PV) SYSTEMS</b>						
Homes with Solar Electric Systems						
Solar contractor	0.1	0.1	0.1	0.1	0.2	0.2
Builder	0.0	0.0	0.0	0.0	0.0	0.0
Electrician	0.1	0.1	0.1	0.1	0.2	0.2
Utility company	0.0	0.0	0.0	0.0	0.0	0.0
Other	0.0	0.0	0.0	0.0	0.0	0.0
<b>TOTAL</b>	<b>0.3</b>	<b>0.2</b>	<b>0.2</b>	<b>0.3</b>	<b>0.4</b>	<b>0.4</b>
<b>PRIMARY INSTALLER OF SOLAR DOMESTIC HOT WATER</b>						
Homes with Solar Domestic Hot Water Systems						
Solar contractor	0.1	0.1	0.1	0.2	0.2	0.2
Builder	0.1	0.0	0.0	0.1	0.1	0.1
Plumber	0.2	0.2	0.2	0.3	0.4	0.4
Utility company	0.0	0.0	0.0	0.0	0.0	0.0
Other	0.0	0.0	0.0	0.0	0.0	0.0
<b>TOTAL</b>	<b>0.4</b>	<b>0.3</b>	<b>0.4</b>	<b>0.5</b>	<b>0.7</b>	<b>0.7</b>

	2008	2009 <i>(forecast)</i>	2010 <i>(forecast)</i>	2011 <i>(forecast)</i>	2012 <i>(forecast)</i>	2013 <i>(forecast)</i>
WEST NORTH CENTRAL						
All Data in Thousands						
FEATURES OF SOLAR ELECTRIC (PV) SYSTEMS						
Homes with Solar Electric Systems						
Connected to a utility grid	0.0	0.0	0.0	0.0	0.0	0.0
Had battery storage	0.0	0.0	0.0	0.0	0.0	0.0
Home was completely Off-The-Grid	0.0	0.0	0.0	0.0	0.0	0.0
Had easy-to-read energy monitor	0.0	0.0	0.0	0.0	0.0	0.0
Net Metering enabled	0.0	0.0	0.0	0.0	0.0	0.0
Unspecified	0.3	0.1	0.2	0.3	0.4	0.4
CAPACITIES OF SOLAR ELECTRIC (PV) SYSTEMS						
Homes with Solar Electric Systems						
Less than 3 KW	0.2	0.1	0.1	0.2	0.2	0.2
3 KW to 5 KW	0.1	0.0	0.1	0.1	0.1	0.1
More than 5 KW	0.1	0.0	0.0	0.1	0.1	0.1
TOTAL	0.3	0.2	0.2	0.3	0.4	0.4
INCENTIVE SOURCES FOR SOLAR SYSTEMS						
Homes with Solar Systems						
No incentives	0.1	0.0	0.1	0.1	0.1	0.1
Federal government	0.0	0.0	0.0	0.0	0.0	0.0
State government	0.0	0.0	0.0	0.0	0.0	0.0
Local government	0.0	0.0	0.0	0.0	0.0	0.0
Public utility	0.0	0.0	0.0	0.0	0.0	0.0
Another source offered incentives	0.0	0.0	0.0	0.0	0.0	0.0
Unspecified	0.7	0.4	0.5	0.8	1.0	1.0



	2008	2009 <i>(forecast)</i>	2010 <i>(forecast)</i>	2011 <i>(forecast)</i>	2012 <i>(forecast)</i>	2013 <i>(forecast)</i>
<b>SOUTH ATLANTIC</b>						
All Data in Thousands						
<b>HOUSING STARTS</b>						
Single-Family Detached	141.4	86.8	122.7	200.7	275.8	278.3
Multifamily (SFA & MF)	50.6	32.0	38.9	59.7	90.3	97.1
<b>TOTAL</b>	<b>192.1</b>	<b>118.8</b>	<b>161.6</b>	<b>260.4</b>	<b>366.1</b>	<b>375.5</b>
<b>SOLAR</b>						
<b>SOLAR ENERGY SYSTEMS</b>						
Homes with Solar Systems						
Solar electric (photovoltaic, or PV) system	3.8	2.3	3.1	5.2	8.0	8.0
Solar domestic hot water	6.4	3.9	5.4	9.0	13.1	13.2
Solar pool heater	1.8	1.1	1.4	2.4	3.6	3.6
<b>TYPE OF SOLAR ELECTRIC (PV) SYSTEMS</b>						
Homes with Solar Electric Systems						
Flat panel collectors installed on the roof	3.8	2.3	3.1	5.2	8.0	8.0
Flat panel collectors installed on supports attached to the ground	0.0	0.0	0.0	0.0	0.0	0.0
Integrated (BIPV) into the roofing or other element of the home	0.0	0.0	0.0	0.0	0.0	0.0
Another type of PV system	0.0	0.0	0.0	0.0	0.0	0.0
<b>TOTAL</b>	<b>3.8</b>	<b>2.3</b>	<b>3.1</b>	<b>5.2</b>	<b>8.0</b>	<b>8.0</b>
<b>HOW SOLAR ELECTRIC (PV) SYSTEMS WERE OFFERED</b>						
Homes Offered						
Standard on some or all homes	0.0	0.0	0.0	0.0	0.0	0.0
An option we actively promoted	6.2	3.7	5.1	8.5	12.9	12.9
Installed only at home buyer's request	7.0	4.1	5.7	9.5	13.2	13.3
<b>HOW SOLAR DOMESTIC HOT WATER SYSTEMS WERE OFFERED</b>						
Homes Offered						
Standard on some or all homes	0.2	0.2	0.2	0.3	0.5	0.4
An option we actively promoted	17.4	11.0	15.6	25.6	36.4	36.8
Installed only at home buyer's request	6.6	3.9	5.4	9.0	12.8	12.9
<b>PRIMARY INSTALLER OF SOLAR ELECTRIC (PV) SYSTEMS</b>						
Homes with Solar Electric Systems						
Solar contractor	0.0	0.0	0.0	0.0	0.0	0.0
Builder	0.0	0.0	0.0	0.0	0.0	0.0
Electrician	3.8	2.3	3.1	5.2	8.0	8.0
Utility company	0.0	0.0	0.0	0.0	0.0	0.0
Other	0.0	0.0	0.0	0.0	0.0	0.0
<b>TOTAL</b>	<b>3.8</b>	<b>2.3</b>	<b>3.1</b>	<b>5.2</b>	<b>8.0</b>	<b>8.0</b>
<b>PRIMARY INSTALLER OF SOLAR DOMESTIC HOT WATER</b>						
Homes with Solar Domestic Hot Water Systems						
Solar contractor	1.0	0.6	0.9	1.5	2.0	2.0
Builder	0.4	0.2	0.3	0.6	0.7	0.7
Plumber	5.0	3.0	4.1	6.9	10.2	10.3
Utility company	0.0	0.0	0.0	0.0	0.0	0.0
Other	0.1	0.0	0.1	0.1	0.1	0.1
<b>TOTAL</b>	<b>6.4</b>	<b>3.9</b>	<b>5.4</b>	<b>9.0</b>	<b>13.1</b>	<b>13.2</b>

	2008	2009 (forecast)	2010 (forecast)	2011 (forecast)	2012 (forecast)	2013 (forecast)
SOUTH ATLANTIC						
All Data in Thousands						
FEATURES OF SOLAR ELECTRIC (PV) SYSTEMS						
Homes with Solar Electric Systems						
Connected to a utility grid	3.8	2.3	3.1	5.2	8.0	8.0
Had battery storage	0.0	0.0	0.0	0.0	0.0	0.0
Home was completely Off-The-Grid	0.0	0.0	0.0	0.0	0.0	0.0
Had easy-to-read energy monitor	0.0	0.0	0.0	0.0	0.0	0.0
Net Metering enabled	0.0	0.0	0.0	0.0	0.0	0.0
Unspecified	0.0	0.0	0.0	0.0	0.0	0.0
CAPACITIES OF SOLAR ELECTRIC (PV) SYSTEMS						
Homes with Solar Electric Systems						
Less than 3 KW	3.8	2.3	3.1	5.2	8.0	8.0
3 KW to 5 KW	0.0	0.0	0.0	0.0	0.0	0.0
More than 5 KW	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	3.8	2.3	3.1	5.2	8.0	8.0
INCENTIVE SOURCES FOR SOLAR SYSTEMS						
Homes with Solar Systems						
No incentives	2.2	1.4	2.0	3.2	4.4	4.5
Federal government	8.0	4.7	6.6	11.0	16.7	16.6
State government	7.6	4.5	6.2	10.4	15.9	15.9
Local government	7.6	4.5	6.2	10.4	15.9	15.9
Public utility	7.6	4.5	6.2	10.4	15.8	15.8
Another source offered incentives	0.2	0.1	0.2	0.3	0.5	0.5
Unspecified	0.0	0.0	0.0	0.0	0.0	0.0

	2008	2009 <i>(forecast)</i>	2010 <i>(forecast)</i>	2011 <i>(forecast)</i>	2012 <i>(forecast)</i>	2013 <i>(forecast)</i>
<b>EAST SOUTH CENTRAL</b>						
All Data in Thousands						
<b>HOUSING STARTS</b>						
Single-Family Detached	49.3	35.6	47.3	69.6	96.6	93.0
Multifamily (SFA & MF)	17.7	11.8	12.4	16.5	20.2	20.2
<b>TOTAL</b>	<b>67.0</b>	<b>47.4</b>	<b>59.6</b>	<b>86.0</b>	<b>116.8</b>	<b>113.2</b>
<b>SOLAR</b>						
<b>SOLAR ENERGY SYSTEMS</b>						
Homes with Solar Systems						
Solar electric (photovoltaic, or PV) system	0.0	0.0	0.0	0.0	0.0	0.0
Solar domestic hot water	0.1	0.1	0.1	0.2	0.2	0.2
Solar pool heater	0.1	0.1	0.1	0.2	0.2	0.2
<b>TYPE OF SOLAR ELECTRIC (PV) SYSTEMS</b>						
Homes with Solar Electric Systems						
Flat panel collectors installed on the roof	0.0	0.0	0.0	0.0	0.0	0.0
Flat panel collectors installed on supports attached to the ground	0.0	0.0	0.0	0.0	0.0	0.0
Integrated (BIPV) into the roofing or other element of the home	0.0	0.0	0.0	0.0	0.0	0.0
Another type of PV system	0.0	0.0	0.0	0.0	0.0	0.0
<b>TOTAL</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>HOW SOLAR ELECTRIC (PV) SYSTEMS WERE OFFERED</b>						
Homes Offered						
Standard on some or all homes	0.0	0.0	0.0	0.0	0.0	0.0
An option we actively promoted	0.0	0.0	0.0	0.0	0.0	0.0
Installed only at home buyer's request	1.5	1.1	1.5	2.2	3.0	2.9
<b>HOW SOLAR DOMESTIC HOT WATER SYSTEMS WERE OFFERED</b>						
Homes Offered						
Standard on some or all homes	0.0	0.0	0.0	0.0	0.0	0.0
An option we actively promoted	0.0	0.0	0.0	0.0	0.0	0.0
Installed only at home buyer's request	0.8	0.6	0.8	1.2	1.7	1.7
<b>PRIMARY INSTALLER OF SOLAR ELECTRIC (PV) SYSTEMS</b>						
Homes with Solar Electric Systems						
Solar contractor	0.0	0.0	0.0	0.0	0.0	0.0
Builder	0.0	0.0	0.0	0.0	0.0	0.0
Electrician	0.0	0.0	0.0	0.0	0.0	0.0
Utility company	0.0	0.0	0.0	0.0	0.0	0.0
Other	0.0	0.0	0.0	0.0	0.0	0.0
<b>TOTAL</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>PRIMARY INSTALLER OF SOLAR DOMESTIC HOT WATER</b>						
Homes with Solar Domestic Hot Water Systems						
Solar contractor	0.0	0.0	0.0	0.0	0.0	0.0
Builder	0.0	0.0	0.0	0.0	0.0	0.0
Plumber	0.1	0.1	0.1	0.2	0.2	0.2
Utility company	0.0	0.0	0.0	0.0	0.0	0.0
Other	0.0	0.0	0.0	0.0	0.0	0.0
<b>TOTAL</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>

	2008	2009 <i>(forecast)</i>	2010 <i>(forecast)</i>	2011 <i>(forecast)</i>	2012 <i>(forecast)</i>	2013 <i>(forecast)</i>
EAST SOUTH CENTRAL						
All Data in Thousands						
FEATURES OF SOLAR ELECTRIC (PV) SYSTEMS						
Homes with Solar Electric Systems						
Connected to a utility grid	0.0	0.0	0.0	0.0	0.0	0.0
Had battery storage	0.0	0.0	0.0	0.0	0.0	0.0
Home was completely Off-The-Grid	0.0	0.0	0.0	0.0	0.0	0.0
Had easy-to-read energy monitor	0.0	0.0	0.0	0.0	0.0	0.0
Net Metering enabled	0.0	0.0	0.0	0.0	0.0	0.0
Unspecified	0.0	0.0	0.0	0.0	0.0	0.0
CAPACITIES OF SOLAR ELECTRIC (PV) SYSTEMS						
Homes with Solar Electric Systems						
Less than 3 KW	0.0	0.0	0.0	0.0	0.0	0.0
3 KW to 5 KW	0.0	0.0	0.0	0.0	0.0	0.0
More than 5 KW	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	0.0	0.0	0.0
INCENTIVE SOURCES FOR SOLAR SYSTEMS						
Homes with Solar Systems						
No incentives	0.1	0.1	0.1	0.2	0.2	0.2
Federal government	0.0	0.0	0.0	0.0	0.0	0.0
State government	0.0	0.0	0.0	0.0	0.0	0.0
Local government	0.0	0.0	0.0	0.0	0.0	0.0
Public utility	0.0	0.0	0.0	0.0	0.0	0.0
Another source offered incentives	0.0	0.0	0.0	0.0	0.0	0.0
Unspecified	0.0	0.0	0.0	0.0	0.0	0.0

	2008	2009 (forecast)	2010 (forecast)	2011 (forecast)	2012 (forecast)	2013 (forecast)
<b>WEST SOUTH CENTRAL</b>						
All Data in Thousands						
<b>HOUSING STARTS</b>						
Single-Family Detached	115.4	86.8	119.9	171.3	223.4	210.5
Multifamily (SFA & MF)	37.3	27.2	28.0	36.0	50.0	49.3
<b>TOTAL</b>	<b>152.7</b>	<b>114.0</b>	<b>147.9</b>	<b>207.4</b>	<b>273.4</b>	<b>259.8</b>
<b>SOLAR</b>						
<b>SOLAR ENERGY SYSTEMS</b>						
Homes with Solar Systems						
Solar electric (photovoltaic, or PV) system	0.8	0.7	1.0	1.4	1.8	1.7
Solar domestic hot water	1.0	0.7	1.1	1.5	2.0	1.8
Solar pool heater	0.9	0.7	1.0	1.4	1.9	1.8
<b>TYPE OF SOLAR ELECTRIC (PV) SYSTEMS</b>						
Homes with Solar Electric Systems						
Flat panel collectors installed on the roof	0.8	0.6	0.9	1.2	1.6	1.5
Flat panel collectors installed on supports attached to the ground	0.0	0.0	0.0	0.0	0.0	0.0
Integrated (BIPV) into the roofing or other element of the home	0.1	0.1	0.1	0.1	0.2	0.2
Another type of PV system	0.0	0.0	0.0	0.0	0.0	0.0
<b>TOTAL</b>	<b>0.8</b>	<b>0.7</b>	<b>1.0</b>	<b>1.4</b>	<b>1.8</b>	<b>1.7</b>
<b>HOW SOLAR ELECTRIC (PV) SYSTEMS WERE OFFERED</b>						
Homes Offered						
Standard on some or all homes	0.0	0.0	0.0	0.0	0.0	0.0
An option we actively promoted	9.4	7.4	10.7	15.2	19.7	18.4
Installed only at home buyer's request	1.2	0.9	1.2	1.7	2.2	2.1
<b>HOW SOLAR DOMESTIC HOT WATER SYSTEMS WERE OFFERED</b>						
Homes Offered						
Standard on some or all homes	0.0	0.0	0.0	0.0	0.0	0.0
An option we actively promoted	7.9	6.2	9.0	12.7	16.5	15.4
Installed only at home buyer's request	1.3	1.0	1.3	1.9	2.5	2.4
<b>PRIMARY INSTALLER OF SOLAR ELECTRIC (PV) SYSTEMS</b>						
Homes with Solar Electric Systems						
Solar contractor	0.8	0.6	0.9	1.2	1.6	1.5
Builder	0.0	0.0	0.0	0.0	0.0	0.0
Electrician	0.0	0.0	0.0	0.0	0.0	0.0
Utility company	0.0	0.0	0.0	0.0	0.0	0.0
Other	0.1	0.1	0.1	0.1	0.2	0.2
<b>TOTAL</b>	<b>0.8</b>	<b>0.7</b>	<b>1.0</b>	<b>1.4</b>	<b>1.8</b>	<b>1.7</b>
<b>PRIMARY INSTALLER OF SOLAR DOMESTIC HOT WATER</b>						
Homes with Solar Domestic Hot Water Systems						
Solar contractor	0.8	0.6	0.9	1.3	1.7	1.6
Builder	0.0	0.0	0.0	0.1	0.1	0.1
Plumber	0.1	0.1	0.1	0.1	0.2	0.2
Utility company	0.0	0.0	0.0	0.0	0.0	0.0
Other	0.0	0.0	0.0	0.0	0.0	0.0
<b>TOTAL</b>	<b>1.0</b>	<b>0.7</b>	<b>1.1</b>	<b>1.5</b>	<b>2.0</b>	<b>1.8</b>

	2008	2009 <i>(forecast)</i>	2010 <i>(forecast)</i>	2011 <i>(forecast)</i>	2012 <i>(forecast)</i>	2013 <i>(forecast)</i>
WEST SOUTH CENTRAL						
All Data in Thousands						
FEATURES OF SOLAR ELECTRIC (PV) SYSTEMS						
Homes with Solar Electric Systems						
Connected to a utility grid	0.1	0.1	0.1	0.1	0.2	0.2
Had battery storage	0.8	0.6	0.9	1.2	1.6	1.5
Home was completely Off-The-Grid	0.0	0.0	0.0	0.0	0.0	0.0
Had easy-to-read energy monitor	0.0	0.0	0.0	0.0	0.0	0.0
Net Metering enabled	0.0	0.0	0.0	0.0	0.0	0.0
Unspecified	0.0	0.0	0.0	0.0	0.0	0.0
CAPACITIES OF SOLAR ELECTRIC (PV) SYSTEMS						
Homes with Solar Electric Systems						
Less than 3 KW	0.0	0.0	0.1	0.1	0.1	0.1
3 KW to 5 KW	0.8	0.6	0.9	1.3	1.7	1.6
More than 5 KW	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.8	0.7	1.0	1.4	1.8	1.7
INCENTIVE SOURCES FOR SOLAR SYSTEMS						
Homes with Solar Systems						
No incentives	1.7	1.3	1.9	2.7	3.6	3.3
Federal government	0.0	0.0	0.0	0.0	0.0	0.0
State government	0.0	0.0	0.0	0.0	0.0	0.0
Local government	0.0	0.0	0.0	0.0	0.0	0.0
Public utility	0.0	0.0	0.0	0.0	0.0	0.0
Another source offered incentives	0.1	0.1	0.1	0.1	0.2	0.2
Unspecified	0.0	0.0	0.0	0.0	0.0	0.0

	2008	2009 <i>(forecast)</i>	2010 <i>(forecast)</i>	2011 <i>(forecast)</i>	2012 <i>(forecast)</i>	2013 <i>(forecast)</i>
<b>MOUNTAIN</b>						
All Data in Thousands						
<b>HOUSING STARTS</b>						
Single-Family Detached	53.2	31.7	49.6	81.0	109.5	107.2
Multifamily (SFA & MF)	22.7	12.4	14.8	21.9	33.9	34.9
<b>TOTAL</b>	<b>75.8</b>	<b>44.0</b>	<b>64.4</b>	<b>103.0</b>	<b>143.4</b>	<b>142.1</b>
<b>SOLAR</b>						
<b>SOLAR ENERGY SYSTEMS</b>						
Homes with Solar Systems						
Solar electric (photovoltaic, or PV) system	1.8	1.1	1.7	2.8	3.8	3.8
Solar domestic hot water	2.4	1.5	2.2	3.6	5.0	5.0
Solar pool heater	1.6	1.0	1.5	2.5	3.4	3.4
<b>TYPE OF SOLAR ELECTRIC (PV) SYSTEMS</b>						
Homes with Solar Electric Systems						
Flat panel collectors installed on the roof	1.4	0.9	1.3	2.2	3.0	3.0
Flat panel collectors installed on supports attached to the ground	0.4	0.2	0.3	0.6	0.8	0.8
Integrated (BIPV) into the roofing or other element of the home	0.0	0.0	0.0	0.0	0.0	0.0
Another type of PV system	0.0	0.0	0.0	0.0	0.0	0.0
<b>TOTAL</b>	<b>1.8</b>	<b>1.1</b>	<b>1.7</b>	<b>2.8</b>	<b>3.8</b>	<b>3.8</b>
<b>HOW SOLAR ELECTRIC (PV) SYSTEMS WERE OFFERED</b>						
Homes Offered						
Standard on some or all homes	0.1	0.0	0.1	0.1	0.1	0.1
An option we actively promoted	2.1	1.3	1.9	3.2	4.4	4.4
Installed only at home buyer's request	5.2	3.2	4.7	8.0	11.0	11.0
<b>HOW SOLAR DOMESTIC HOT WATER SYSTEMS WERE OFFERED</b>						
Homes Offered						
Standard on some or all homes	0.1	0.1	0.1	0.2	0.2	0.2
An option we actively promoted	3.3	2.0	3.0	5.0	6.9	6.9
Installed only at home buyer's request	4.6	2.8	4.2	6.9	9.5	9.6
<b>PRIMARY INSTALLER OF SOLAR ELECTRIC (PV) SYSTEMS</b>						
Homes with Solar Electric Systems						
Solar contractor	1.8	1.1	1.7	2.8	3.8	3.8
Builder	0.0	0.0	0.0	0.0	0.0	0.0
Electrician	0.0	0.0	0.0	0.0	0.0	0.0
Utility company	0.0	0.0	0.0	0.0	0.0	0.0
Other	0.0	0.0	0.0	0.0	0.0	0.0
<b>TOTAL</b>	<b>1.8</b>	<b>1.1</b>	<b>1.7</b>	<b>2.8</b>	<b>3.8</b>	<b>3.8</b>
<b>PRIMARY INSTALLER OF SOLAR DOMESTIC HOT WATER</b>						
Homes with Solar Domestic Hot Water Systems						
Solar contractor	1.9	1.2	1.8	3.0	4.1	4.1
Builder	0.0	0.0	0.0	0.0	0.0	0.0
Plumber	0.4	0.3	0.4	0.7	0.9	0.9
Utility company	0.0	0.0	0.0	0.0	0.0	0.0
Other	0.0	0.0	0.0	0.0	0.0	0.0
<b>TOTAL</b>	<b>2.4</b>	<b>1.5</b>	<b>2.2</b>	<b>3.6</b>	<b>5.0</b>	<b>5.0</b>

	2008	2009 <i>(forecast)</i>	2010 <i>(forecast)</i>	2011 <i>(forecast)</i>	2012 <i>(forecast)</i>	2013 <i>(forecast)</i>
MOUNTAIN						
	All Data in Thousands					
FEATURES OF SOLAR ELECTRIC (PV) SYSTEMS						
Homes with Solar Electric Systems						
Connected to a utility grid	0.9	0.5	0.8	1.4	1.9	1.9
Had battery storage	0.6	0.4	0.5	0.9	1.3	1.3
Home was completely Off-The-Grid	0.0	0.0	0.0	0.0	0.0	0.0
Had easy-to-read energy monitor	0.0	0.0	0.0	0.0	0.0	0.0
Net Metering enabled	0.5	0.3	0.5	0.8	1.2	1.1
Unspecified	0.2	0.1	0.2	0.3	0.4	0.4
CAPACITIES OF SOLAR ELECTRIC (PV) SYSTEMS						
Homes with Solar Electric Systems						
Less than 3 KW	0.7	0.4	0.6	1.0	1.4	1.4
3 KW to 5 KW	0.6	0.4	0.6	0.9	1.3	1.3
More than 5 KW	0.5	0.3	0.5	0.8	1.1	1.1
TOTAL	1.8	1.1	1.7	2.8	3.8	3.8
INCENTIVE SOURCES FOR SOLAR SYSTEMS						
Homes with Solar Systems						
No incentives	0.1	0.0	0.1	0.1	0.1	0.1
Federal government	1.4	0.9	1.3	2.2	3.0	3.0
State government	1.0	0.6	0.9	1.5	2.0	2.0
Local government	0.5	0.3	0.5	0.8	1.1	1.1
Public utility	3.8	2.3	3.4	5.7	7.9	7.9
Another source offered incentives	0.0	0.0	0.0	0.0	0.0	0.0
Unspecified	0.0	0.0	0.0	0.0	0.0	0.0



	2008	2009 <i>(forecast)</i>	2010 <i>(forecast)</i>	2011 <i>(forecast)</i>	2012 <i>(forecast)</i>	2013 <i>(forecast)</i>
<b>PACIFIC</b>						
All Data in Thousands						
<b>HOUSING STARTS</b>						
Single-Family Detached	56.6	42.7	60.1	95.4	136.7	136.5
Multifamily (SFA & MF)	20.9	14.9	17.4	25.9	39.7	40.9
<b>TOTAL</b>	<b>77.4</b>	<b>57.6</b>	<b>77.6</b>	<b>121.3</b>	<b>176.4</b>	<b>177.4</b>
<b>SOLAR</b>						
<b>SOLAR ENERGY SYSTEMS</b>						
Homes with Solar Systems						
Solar electric (photovoltaic, or PV) system	1.5	1.1	1.4	2.2	3.2	3.3
Solar domestic hot water	1.0	0.7	1.0	1.6	2.3	2.3
Solar pool heater	1.9	1.3	1.6	2.5	3.8	3.9
<b>TYPE OF SOLAR ELECTRIC (PV) SYSTEMS</b>						
Homes with Solar Electric Systems						
Flat panel collectors installed on the roof	0.8	0.6	0.7	1.2	1.7	1.8
Flat panel collectors installed on supports attached to the ground	0.0	0.0	0.0	0.0	0.0	0.0
Integrated (BIPV) into the roofing or other element of the home	0.7	0.5	0.6	1.0	1.5	1.5
Another type of PV system	0.0	0.0	0.0	0.0	0.0	0.0
<b>TOTAL</b>	<b>1.5</b>	<b>1.1</b>	<b>1.4</b>	<b>2.2</b>	<b>3.2</b>	<b>3.3</b>
<b>HOW SOLAR ELECTRIC (PV) SYSTEMS WERE OFFERED</b>						
Homes Offered						
Standard on some or all homes	0.9	0.7	0.8	1.2	1.8	1.8
An option we actively promoted	0.8	0.6	1.0	1.5	2.1	2.0
Installed only at home buyer's request	1.2	0.9	1.2	2.0	2.9	2.9
<b>HOW SOLAR DOMESTIC HOT WATER SYSTEMS WERE OFFERED</b>						
Homes Offered						
Standard on some or all homes	0.5	0.3	0.5	0.7	1.1	1.1
An option we actively promoted	1.0	0.8	1.1	1.7	2.5	2.5
Installed only at home buyer's request	0.5	0.4	0.5	0.8	1.2	1.2
<b>PRIMARY INSTALLER OF SOLAR ELECTRIC (PV) SYSTEMS</b>						
Homes with Solar Electric Systems						
Solar contractor	0.8	0.6	0.8	1.2	1.8	1.9
Builder	0.1	0.1	0.1	0.2	0.3	0.3
Electrician	0.5	0.4	0.4	0.7	1.0	1.0
Utility company	0.0	0.0	0.0	0.1	0.1	0.1
Other	0.0	0.0	0.0	0.0	0.0	0.0
<b>TOTAL</b>	<b>1.5</b>	<b>1.1</b>	<b>1.4</b>	<b>2.2</b>	<b>3.2</b>	<b>3.3</b>
<b>PRIMARY INSTALLER OF SOLAR DOMESTIC HOT WATER</b>						
Homes with Solar Domestic Hot Water Systems						
Solar contractor	0.8	0.6	0.8	1.3	1.9	1.9
Builder	0.2	0.1	0.2	0.3	0.4	0.4
Plumber	0.0	0.0	0.0	0.0	0.0	0.0
Utility company	0.0	0.0	0.0	0.0	0.0	0.0
Other	0.0	0.0	0.0	0.0	0.0	0.0
<b>TOTAL</b>	<b>1.0</b>	<b>0.7</b>	<b>1.0</b>	<b>1.6</b>	<b>2.3</b>	<b>2.3</b>

	2008	2009 <i>(forecast)</i>	2010 <i>(forecast)</i>	2011 <i>(forecast)</i>	2012 <i>(forecast)</i>	2013 <i>(forecast)</i>
PACIFIC						
	All Data in Thousands					
FEATURES OF SOLAR ELECTRIC (PV) SYSTEMS						
Homes with Solar Electric Systems						
Connected to a utility grid	1.3	1.0	1.2	1.8	2.8	2.8
Had battery storage	0.1	0.1	0.1	0.1	0.2	0.2
Home was completely Off-The-Grid	0.1	0.1	0.1	0.1	0.2	0.2
Had easy-to-read energy monitor	0.1	0.1	0.1	0.2	0.3	0.3
Net Metering enabled	0.3	0.2	0.3	0.5	0.8	0.8
Unspecified	0.1	0.0	0.1	0.1	0.1	0.2
CAPACITIES OF SOLAR ELECTRIC (PV) SYSTEMS						
Homes with Solar Electric Systems						
Less than 3 KW	0.8	0.6	0.8	1.2	1.8	1.8
3 KW to 5 KW	0.4	0.3	0.4	0.6	0.9	0.9
More than 5 KW	0.2	0.2	0.2	0.3	0.5	0.5
TOTAL	1.5	1.1	1.4	2.2	3.2	3.3
INCENTIVE SOURCES FOR SOLAR SYSTEMS						
Homes with Solar Systems						
No incentives	0.0	0.0	0.1	0.1	0.1	0.1
Federal government	0.8	0.6	0.8	1.2	1.8	1.8
State government	2.6	1.9	2.4	3.8	5.7	5.7
Local government	1.2	0.9	1.0	1.6	2.4	2.4
Public utility	0.9	0.6	0.9	1.4	2.1	2.1
Another source offered incentives	0.0	0.0	0.0	0.1	0.1	0.1
Unspecified	0.0	0.0	0.0	0.0	0.0	0.0

# **APPENDIX B**

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## **SINGLE-FAMILY DETACHED USAGE COEFFICIENT TABLES**

	NEW ENG	MID ATL	E N CEN	W N CEN	S ATL	E S CEN	W S CEN	MTN	PAC	US TOTAL
<b>SOLAR</b>										
IN THE NEXT FIVE YEARS, HOW LIKELY IS YOUR COMPANY TO DO THE FOLLOWING: 1=Not Likely; 5=Very Likely										
AVERAGE SCORE										
Offer solar electric as standard equipment	1.971	2.339	1.511	1.518	1.892	1.764	1.401	2.356	1.436	1.745
Offer solar electric as an option to home buyers	2.590	2.903	2.325	1.937	2.928	1.969	2.307	3.079	2.494	2.552
Investigate alternatives in solar electric	3.240	3.294	2.649	2.361	3.215	2.600	2.357	3.489	2.605	2.841
Offer solar water heating as standard equipment	2.287	2.458	1.688	1.734	2.202	1.910	1.720	3.160	1.667	2.052
Offer solar water heating as an option to home buyers	2.862	2.703	2.457	2.086	3.129	2.260	2.440	3.374	2.046	2.656
Investigate alternatives in solar water heating	3.463	3.273	2.820	2.372	3.451	2.734	2.598	3.318	2.598	2.968
IN THE NEXT FIVE YEARS, HOW LIKELY IS YOUR COMPANY TO DO THE FOLLOWING: OFFER SOLAR ELECTRIC AS STANDARD EQUIPMENT										
Percent										
1 = Not Likely	0.466	0.480	0.720	0.689	0.595	0.561	0.795	0.523	0.825	0.658
2 =	0.263	0.084	0.091	0.136	0.176	0.290	0.019	0.044	0.048	0.114
3 =	0.159	0.202	0.163	0.153	0.089	0.037	0.179	0.125	0.050	0.122
4 =	0.058	0.083	0.008	0.010	0.022	0.048	0.004	0.168	0.019	0.037
5 = Very Likely	0.054	0.150	0.017	0.011	0.118	0.064	0.003	0.139	0.058	0.069
TOTAL	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
IN THE NEXT FIVE YEARS, HOW LIKELY IS YOUR COMPANY TO DO THE FOLLOWING: OFFER SOLAR ELECTRIC AS AN OPTION TO HOME BUYERS										
Percent										
1 = Not Likely	0.314	0.320	0.481	0.488	0.321	0.517	0.449	0.223	0.436	0.393
2 =	0.234	0.106	0.100	0.238	0.065	0.192	0.153	0.221	0.018	0.126
3 =	0.200	0.205	0.158	0.185	0.244	0.186	0.147	0.133	0.270	0.195
4 =	0.053	0.089	0.133	0.025	0.104	0.014	0.143	0.099	0.171	0.106
5 = Very Likely	0.199	0.280	0.127	0.063	0.266	0.091	0.108	0.324	0.106	0.179
TOTAL	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
IN THE NEXT FIVE YEARS, HOW LIKELY IS YOUR COMPANY TO DO THE FOLLOWING: INVESTIGATE ALTERNATIVES IN SOLAR ELECTRIC										
Percent										
1 = Not Likely	0.241	0.140	0.329	0.363	0.260	0.450	0.470	0.133	0.475	0.336
2 =	0.064	0.081	0.073	0.149	0.062	0.031	0.020	0.214	0.024	0.069
3 =	0.139	0.360	0.343	0.319	0.208	0.159	0.332	0.101	0.179	0.244
4 =	0.326	0.181	0.129	0.102	0.143	0.189	0.039	0.135	0.065	0.119
5 = Very Likely	0.230	0.238	0.126	0.067	0.326	0.171	0.139	0.417	0.257	0.232
TOTAL	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

	NEW ENG	MID ATL	E N CEN	W N CEN	S ATL	E S CEN	W S CEN	MTN	PAC	US TOTAL
IN THE NEXT FIVE YEARS, HOW LIKELY IS YOUR COMPANY TO DO THE FOLLOWING: OFFER SOLAR WATER HEATING AS STANDARD EQUIPMENT										
Percent										
1 = Not Likely	0.348	0.465	0.642	0.543	0.471	0.550	0.660	0.272	0.703	0.540
2 =	0.239	0.072	0.102	0.230	0.174	0.220	0.138	0.080	0.061	0.142
3 =	0.255	0.173	0.196	0.191	0.138	0.103	0.102	0.179	0.152	0.146
4 =	0.093	0.117	0.048	0.023	0.114	0.023	0.023	0.155	0.034	0.070
5 = Very Likely	0.065	0.172	0.013	0.013	0.103	0.104	0.078	0.315	0.050	0.102
TOTAL	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
IN THE NEXT FIVE YEARS, HOW LIKELY IS YOUR COMPANY TO DO THE FOLLOWING: OFFER SOLAR WATER HEATING AS AN OPTION TO HOME BUYERS										
Percent										
1 = Not Likely	0.286	0.320	0.457	0.414	0.276	0.444	0.393	0.143	0.537	0.358
2 =	0.218	0.129	0.050	0.277	0.038	0.131	0.108	0.214	0.131	0.114
3 =	0.106	0.259	0.196	0.162	0.263	0.246	0.267	0.112	0.182	0.222
4 =	0.126	0.111	0.173	0.103	0.127	0.078	0.129	0.190	0.048	0.123
5 = Very Likely	0.264	0.181	0.124	0.044	0.296	0.101	0.103	0.341	0.102	0.182
TOTAL	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
IN THE NEXT FIVE YEARS, HOW LIKELY IS YOUR COMPANY TO DO THE FOLLOWING: INVESTIGATE ALTERNATIVES IN SOLAR WATER HEATING										
Percent										
1 = Not Likely	0.207	0.148	0.286	0.384	0.245	0.390	0.331	0.201	0.470	0.301
2 =	0.031	0.065	0.067	0.172	0.030	0.056	0.047	0.192	0.025	0.066
3 =	0.134	0.397	0.339	0.235	0.145	0.155	0.459	0.099	0.180	0.250
4 =	0.348	0.146	0.158	0.107	0.187	0.228	0.021	0.108	0.087	0.131
5 = Very Likely	0.280	0.244	0.150	0.102	0.392	0.171	0.143	0.401	0.238	0.252
TOTAL	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

	NEW ENG	MID ATL	E N CEN	W N CEN	S ATL	E S CEN	W S CEN	MTN	PAC	US TOTAL
<b>SOLAR ENERGY SYSTEMS</b>										
Percent of Homes with Solar Systems										
Solar electric (photovoltaic, or PV) system	0.003	0.062	0.001	0.008	0.027	0.000	0.007	0.034	0.011	0.017
Solar domestic hot water	0.020	0.055	0.000	0.012	0.044	0.002	0.008	0.045	0.015	0.024
Solar pool heater	0.001	0.017	0.000	0.008	0.011	0.002	0.008	0.031	0.009	0.010
<b>TYPE OF SOLAR ELECTRIC (PV) SYSTEMS</b>										
Percent of Solar Electric Systems										
Flat panel collectors installed on the roof	0.003	0.391	0.792	0.808	1.000	0.793	0.909	0.789	0.743	0.792
Flat panel collectors installed on supports attached to the ground	0.000	0.116	0.068	0.063	0.000	0.068	0.000	0.211	0.000	0.068
Integrated (BIPV) into the roofing or other element of the home	0.997	0.376	0.114	0.106	0.000	0.113	0.091	0.000	0.257	0.114
Another type of PV system	0.000	0.116	0.026	0.024	0.000	0.026	0.000	0.000	0.000	0.026
TOTAL	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
<b>HOW SOLAR ELECTRIC (PV) SYSTEMS WERE OFFERED</b>										
Percent of Homes Offered										
Standard on some or all homes	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.000
An option we actively promoted	0.011	0.093	0.000	0.000	0.044	0.000	0.081	0.040	0.014	0.040
Installed only at home buyer's request	0.011	0.063	0.012	0.002	0.049	0.030	0.010	0.098	0.022	0.035
Did not offer or consider offering PV	0.974	0.844	0.988	0.998	0.907	0.970	0.908	0.861	0.964	0.926
TOTAL	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
<b>HOW SOLAR DOMESTIC HOT WATER SYSTEMS WERE OFFERED</b>										
Percent of Homes Offered										
Standard on some or all homes	0.003	0.056	0.000	0.000	0.002	0.000	0.000	0.002	0.006	0.005
An option we actively promoted	0.017	0.037	0.000	0.000	0.123	0.000	0.068	0.062	0.018	0.057
Installed only at home buyer's request	0.014	0.061	0.010	0.013	0.045	0.017	0.012	0.086	0.009	0.031
Did not offer or consider offering PV	0.966	0.846	0.990	0.987	0.830	0.983	0.920	0.850	0.967	0.908
TOTAL	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
<b>PRIMARY INSTALLER OF SOLAR ELECTRIC (PV) SYSTEMS</b>										
Percent of Solar Electric Systems										
Solar contractor	0.347	0.016	0.347	0.397	0.000	0.340	0.908	1.000	0.877	0.347
Builder	0.047	0.194	0.047	0.044	0.000	0.071	0.000	0.000	0.051	0.047
Electrician	0.496	0.339	0.496	0.458	1.000	0.482	0.001	0.000	0.072	0.496
Utility company	0.102	0.451	0.102	0.094	0.000	0.099	0.000	0.000	0.000	0.102
Other	0.008	0.000	0.008	0.008	0.000	0.008	0.091	0.000	0.000	0.008
TOTAL	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
<b>PRIMARY INSTALLER OF SOLAR DOMESTIC HOT WATER</b>										
Percent of Solar Domestic Hot Water Systems										
Solar contractor	0.432	0.000	0.359	0.332	0.153	0.002	0.856	0.813	0.943	0.364
Builder	0.000	0.618	0.126	0.116	0.062	0.001	0.046	0.000	0.057	0.128
Plumber	0.317	0.382	0.492	0.543	0.775	0.998	0.098	0.187	0.000	0.498
Utility company	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Other	0.252	0.000	0.024	0.009	0.010	0.000	0.000	0.000	0.000	0.010
TOTAL	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

	NEW ENG	MID ATL	E N CEN	W N CEN	S ATL	E S CEN	W S CEN	MTN	PAC	US TOTAL
FEATURES OF SOLAR ELECTRIC (PV) SYSTEMS										
Percent of Solar Electric Systems										
Connected to a utility grid	0.997	0.207	0.000	0.000	1.000	0.027	0.091	0.499	0.700	0.595
Had battery storage	0.000	0.210	0.000	0.077	0.000	0.000	0.908	0.330	0.107	0.198
Home was completely Off-The-Grid	0.000	0.790	0.000	0.000	0.000	0.000	0.000	0.012	0.107	0.181
Had easy-to-read energy monitor	0.997	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.158	0.014
Net Metering enabled	0.997	0.012	0.000	0.000	0.000	0.000	0.000	0.300	0.492	0.096
Unspecified	0.003	0.000	1.000	0.923	0.000	0.973	0.001	0.107	0.097	0.062
CAPACITIES OF SOLAR ELECTRIC (PV) SYSTEMS										
Percent of Solar Electric Systems										
Less than 3 KW	0.002	0.330	0.605	0.558	1.000	0.614	0.056	0.374	0.591	0.605
3 KW to 5 KW	0.001	0.437	0.270	0.249	0.000	0.263	0.933	0.340	0.280	0.270
More than 5 KW	0.997	0.233	0.126	0.193	0.000	0.122	0.012	0.286	0.128	0.125
TOTAL	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
INCENTIVE SOURCES FOR SOLAR SYSTEMS										
Percent of Solar Systems										
No incentives	0.220	0.002	0.000	0.084	0.203	0.992	0.947	0.013	0.030	0.181
Federal government	0.402	0.161	0.000	0.000	0.797	0.000	0.000	0.340	0.410	0.476
State government	0.402	0.632	0.000	0.000	0.755	0.000	0.000	0.230	0.872	0.549
Local government	0.000	0.359	0.000	0.000	0.755	0.000	0.000	0.124	0.041	0.423
Public utility	0.277	0.359	0.000	0.000	0.751	0.000	0.000	0.894	0.491	0.597
Another source offered incentives	0.094	0.000	0.000	0.000	0.023	0.000	0.052	0.000	0.026	0.017
Unspecified	0.378	0.000	0.999	0.916	0.000	0.008	0.001	0.000	0.001	0.038

	NEW ENG	MID ATL	E N CEN	W N CEN	S ATL	E S CEN	W S CEN	MTN	PAC	US TOTAL
<b>SOLAR ENERGY SYSTEMS</b>										
Homes with Solar Systems										
Solar electric (photovoltaic, or PV) system	0.003	0.062	0.001	0.008	0.027	0.000	0.007	0.034	0.011	0.017
Solar domestic hot water	0.020	0.055	0.000	0.012	0.044	0.002	0.008	0.045	0.015	0.024
Solar pool heater	0.001	0.017	0.000	0.008	0.011	0.002	0.008	0.031	0.009	0.010
<b>TYPE OF SOLAR ELECTRIC (PV) SYSTEMS</b>										
Homes with Solar Electric Systems										
Flat panel collectors installed on the roof	0.000	0.024	0.001	0.007	0.027	0.000	0.007	0.027	0.008	0.014
Flat panel collectors installed on supports attached to the ground	0.000	0.007	0.000	0.001	0.000	0.000	0.000	0.007	0.000	0.001
Integrated (BIPV) into the roofing or other element of the home	0.003	0.023	0.000	0.001	0.000	0.000	0.001	0.000	0.003	0.002
Another type of PV system	0.000	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TOTAL	0.003	0.062	0.001	0.008	0.027	0.000	0.007	0.034	0.011	0.017
<b>HOW SOLAR ELECTRIC (PV) SYSTEMS WERE OFFERED</b>										
Homes Offered										
Standard on some or all homes	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.000
An option we actively promoted	0.011	0.093	0.000	0.000	0.044	0.000	0.081	0.040	0.014	0.040
Installed only at home buyer's request	0.011	0.063	0.012	0.002	0.049	0.030	0.010	0.098	0.022	0.035
Did not offer or consider offering	0.974	0.844	0.988	0.998	0.907	0.970	0.908	0.861	0.964	0.926
TOTAL	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
<b>HOW SOLAR DOMESTIC HOT WATER SYSTEMS WERE OFFERED</b>										
Homes Offered										
Standard on some or all homes	0.003	0.056	0.000	0.000	0.002	0.000	0.000	0.002	0.006	0.005
An option we actively promoted	0.017	0.037	0.000	0.000	0.123	0.000	0.068	0.062	0.018	0.057
Installed only at home buyer's request	0.014	0.061	0.010	0.013	0.045	0.017	0.012	0.086	0.009	0.031
Did not offer or consider offering	0.966	0.846	0.990	0.987	0.830	0.983	0.920	0.850	0.967	0.908
TOTAL	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
<b>PRIMARY INSTALLER OF SOLAR ELECTRIC (PV) SYSTEMS</b>										
Homes with Solar Electric Systems										
Solar contractor	0.001	0.001	0.000	0.003	0.000	0.000	0.007	0.034	0.010	0.006
Builder	0.000	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001
Electrician	0.001	0.021	0.001	0.004	0.027	0.000	0.000	0.000	0.001	0.009
Utility company	0.000	0.028	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.002
Other	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000
TOTAL	0.003	0.062	0.001	0.008	0.027	0.000	0.007	0.034	0.011	0.017
<b>PRIMARY INSTALLER OF SOLAR DOMESTIC HOT WATER</b>										
Homes with Solar Domestic Hot Water Systems										
Solar contractor	0.009	0.000	0.000	0.004	0.007	0.000	0.007	0.036	0.014	0.009
Builder	0.000	0.034	0.000	0.001	0.003	0.000	0.000	0.000	0.001	0.003
Plumber	0.006	0.021	0.000	0.007	0.034	0.002	0.001	0.008	0.000	0.012
Utility company	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Other	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TOTAL	0.020	0.055	0.000	0.012	0.044	0.002	0.008	0.045	0.015	0.024



	NEW ENG	MID ATL	E N CEN	W N CEN	S ATL	E S CEN	W S CEN	MTN	PAC	US TOTAL
FEATURES OF SOLAR ELECTRIC (PV) SYSTEMS										
Homes with Solar Electric Systems										
Connected to a utility grid	0.003	0.013	0.000	0.000	0.027	0.000	0.001	0.017	0.008	0.010
Had battery storage	0.000	0.013	0.000	0.001	0.000	0.000	0.007	0.011	0.001	0.003
Home was completely Off-The-Grid	0.000	0.049	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.003
Had easy-to-read energy monitor	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.000
Net Metering enabled	0.003	0.001	0.000	0.000	0.000	0.000	0.000	0.010	0.005	0.002
Unspecified	0.000	0.000	0.001	0.008	0.000	0.000	0.000	0.004	0.001	0.001
CAPACITIES OF SOLAR ELECTRIC (PV) SYSTEMS										
Homes with Solar Electric Systems										
Less than 3 KW	0.000	0.020	0.001	0.005	0.027	0.000	0.000	0.013	0.007	0.011
3 KW to 5 KW	0.000	0.027	0.000	0.002	0.000	0.000	0.007	0.012	0.003	0.005
More than 5 KW	0.003	0.014	0.000	0.002	0.000	0.000	0.000	0.010	0.001	0.002
TOTAL	0.003	0.062	0.001	0.008	0.027	0.000	0.007	0.034	0.011	0.017
INCENTIVE SOURCES FOR SOLAR SYSTEMS										
Homes with Solar Systems										
No incentives	0.005	0.000	0.000	0.002	0.014	0.002	0.015	0.001	0.001	0.007
Federal government	0.009	0.019	0.000	0.000	0.057	0.000	0.000	0.027	0.011	0.020
State government	0.009	0.074	0.000	0.000	0.054	0.000	0.000	0.018	0.023	0.023
Local government	0.000	0.042	0.000	0.000	0.054	0.000	0.000	0.010	0.001	0.017
Public utility	0.006	0.042	0.000	0.000	0.053	0.000	0.000	0.071	0.013	0.025
Another source offered incentives	0.002	0.000	0.000	0.000	0.002	0.000	0.001	0.000	0.001	0.001
Unspecified	0.009	0.000	0.001	0.019	0.000	0.000	0.000	0.000	0.000	0.002

# **APPENDIX C**

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## **MULTIFAMILY USAGE COEFFICIENT TABLES**

	NEW ENG	MID ATL	E N CEN	W N CEN	S ATL	E S CEN	W S CEN	MTN	PAC	US TOTAL
<b>SOLAR</b>										
IN THE NEXT FIVE YEARS, HOW LIKELY IS YOUR COMPANY TO DO THE FOLLOWING: 1=Not Likely; 5=Very Likely										
AVERAGE SCORE										
Offer solar electric as standard equipment	2.257	4.411	1.442	1.044	1.186	2.955	1.198	1.168	2.466	1.743
Offer solar electric as an option to home buyers	4.259	4.525	1.552	1.356	1.916	2.845	1.537	1.276	2.358	2.086
Investigate alternatives in solar electric	4.018	4.504	1.697	2.073	2.312	4.312	4.929	2.674	3.454	3.290
Offer solar water heating as standard equipment	3.384	4.409	1.314	1.255	1.981	3.297	1.189	2.847	1.462	2.102
Offer solar water heating as an option to home buyers	4.543	4.406	1.716	1.676	2.620	3.254	1.533	2.661	1.838	2.442
Investigate alternatives in solar water heating	4.498	4.416	2.019	2.166	2.973	4.782	4.929	3.470	2.819	3.573
IN THE NEXT FIVE YEARS, HOW LIKELY IS YOUR COMPANY TO DO THE FOLLOWING: OFFER SOLAR ELECTRIC AS STANDARD EQUIPMENT										
Percent										
1 = Not Likely	0.388	0.125	0.789	0.978	0.855	0.026	0.811	0.958	0.616	0.695
2 =	0.000	0.000	0.064	0.000	0.125	0.122	0.184	0.000	0.011	0.086
3 =	0.577	0.000	0.096	0.022	0.010	0.733	0.000	0.000	0.013	0.099
4 =	0.034	0.090	0.018	0.000	0.000	0.110	0.005	0.000	0.012	0.021
5 = Very Likely	0.000	0.785	0.034	0.000	0.010	0.009	0.000	0.042	0.348	0.099
TOTAL	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
IN THE NEXT FIVE YEARS, HOW LIKELY IS YOUR COMPANY TO DO THE FOLLOWING: OFFER SOLAR ELECTRIC AS AN OPTION TO HOME BUYERS										
Percent										
1 = Not Likely	0.089	0.070	0.769	0.785	0.701	0.026	0.802	0.749	0.579	0.601
2 =	0.028	0.049	0.034	0.093	0.000	0.122	0.000	0.238	0.015	0.052
3 =	0.123	0.009	0.106	0.101	0.064	0.843	0.071	0.000	0.016	0.127
4 =	0.052	0.030	0.056	0.020	0.154	0.000	0.114	0.013	0.252	0.100
5 = Very Likely	0.707	0.842	0.034	0.000	0.082	0.009	0.014	0.000	0.139	0.120
TOTAL	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
IN THE NEXT FIVE YEARS, HOW LIKELY IS YOUR COMPANY TO DO THE FOLLOWING: INVESTIGATE ALTERNATIVES IN SOLAR ELECTRIC										
Percent										
1 = Not Likely	0.072	0.068	0.703	0.451	0.441	0.026	0.000	0.412	0.369	0.296
2 =	0.033	0.003	0.027	0.082	0.237	0.000	0.000	0.226	0.011	0.096
3 =	0.034	0.047	0.200	0.436	0.042	0.231	0.000	0.000	0.012	0.075
4 =	0.524	0.121	0.012	0.005	0.131	0.122	0.071	0.000	0.012	0.086
5 = Very Likely	0.336	0.761	0.058	0.026	0.149	0.621	0.929	0.362	0.596	0.446
TOTAL	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

	NEW ENG	MID ATL	E N CEN	W N CEN	S ATL	E S CEN	W S CEN	MTN	PAC	US TOTAL
IN THE NEXT FIVE YEARS, HOW LIKELY IS YOUR COMPANY TO DO THE FOLLOWING: OFFER SOLAR WATER HEATING AS STANDARD EQUIPMENT										
Percent										
1 = Not Likely	0.110	0.124	0.854	0.880	0.343	0.026	0.811	0.493	0.831	0.523
2 =	0.051	0.000	0.071	0.004	0.470	0.122	0.189	0.051	0.015	0.186
3 =	0.471	0.000	0.019	0.096	0.064	0.501	0.000	0.015	0.017	0.087
4 =	0.082	0.096	0.019	0.020	0.107	0.231	0.000	0.000	0.138	0.075
5 = Very Likely	0.287	0.780	0.037	0.000	0.015	0.119	0.000	0.442	0.000	0.129
TOTAL	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
IN THE NEXT FIVE YEARS, HOW LIKELY IS YOUR COMPANY TO DO THE FOLLOWING: OFFER SOLAR WATER HEATING AS AN OPTION TO HOME BUYERS										
Percent										
1 = Not Likely	0.037	0.073	0.719	0.679	0.307	0.025	0.802	0.412	0.733	0.465
2 =	0.056	0.049	0.017	0.146	0.348	0.000	0.000	0.226	0.031	0.133
3 =	0.022	0.030	0.124	0.000	0.015	0.711	0.071	0.000	0.000	0.096
4 =	0.095	0.094	0.111	0.173	0.080	0.224	0.118	0.013	0.138	0.107
5 = Very Likely	0.790	0.753	0.030	0.003	0.251	0.040	0.009	0.349	0.098	0.199
TOTAL	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
IN THE NEXT FIVE YEARS, HOW LIKELY IS YOUR COMPANY TO DO THE FOLLOWING: INVESTIGATE ALTERNATIVES IN SOLAR WATER HEATING										
Percent										
1 = Not Likely	0.005	0.071	0.589	0.452	0.177	0.025	0.000	0.046	0.495	0.186
2 =	0.038	0.000	0.050	0.078	0.334	0.000	0.000	0.216	0.016	0.123
3 =	0.119	0.132	0.205	0.345	0.132	0.000	0.000	0.349	0.000	0.122
4 =	0.132	0.036	0.066	0.100	0.056	0.118	0.071	0.000	0.153	0.072
5 = Very Likely	0.707	0.761	0.091	0.024	0.302	0.857	0.929	0.389	0.336	0.497
TOTAL	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

	NEW ENG	MID ATL	E N CEN	W N CEN	S ATL	E S CEN	W S CEN	MTN	PAC	US TOTAL
<b>SOLAR ENERGY SYSTEMS</b>										
Percent of Homes with Solar Systems										
Solar electric (photovoltaic, or PV) system	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Solar domestic hot water	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Solar pool heater	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
<b>TYPE OF SOLAR ELECTRIC (PV) SYSTEMS</b>										
Percent of Solar Electric Systems										
Flat panel collectors installed on the roof	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Flat panel collectors installed on supports attached to the ground	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Integrated (BIPV) into the roofing or other element of the home	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Another type of PV system	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
TOTAL	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
<b>HOW SOLAR ELECTRIC (PV) SYSTEMS WERE OFFERED</b>										
Percent of Homes Offered										
Standard on some or all homes	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
An option we actively promoted	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Installed only at home buyer's request	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Did not offer or consider offering PV	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
TOTAL	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
<b>HOW SOLAR DOMESTIC HOT WATER SYSTEMS WERE OFFERED</b>										
Percent of Homes Offered										
Standard on some or all homes	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
An option we actively promoted	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Installed only at home buyer's request	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Did not offer or consider offering PV	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
TOTAL	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
<b>PRIMARY INSTALLER OF SOLAR ELECTRIC (PV) SYSTEMS</b>										
Percent of Solar Electric Systems										
Solar contractor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Builder	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Electrician	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Utility company	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Other	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
TOTAL	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
<b>PRIMARY INSTALLER OF SOLAR DOMESTIC HOT WATER</b>										
Percent of Solar Domestic Hot Water Systems										
Solar contractor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Builder	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Plumber	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Utility company	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Other	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
TOTAL	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

	NEW ENG	MID ATL	E N CEN	W N CEN	S ATL	E S CEN	W S CEN	MTN	PAC	US TOTAL
<b>FEATURES OF SOLAR ELECTRIC (PV) SYSTEMS</b>										
Percent of Solar Electric Systems										
Connected to a utility grid	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Had battery storage	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Home was completely Off-The-Grid	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Had easy-to-read energy monitor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Net Metering enabled	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Unspecified	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
<b>CAPACITIES OF SOLAR ELECTRIC (PV) SYSTEMS</b>										
Percent of Solar Electric Systems										
Less than 3 KW	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
3 KW to 5 KW	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
More than 5 KW	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
TOTAL	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
<b>INCENTIVE SOURCES FOR SOLAR SYSTEMS</b>										
Percent of Solar Systems										
No incentives	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Federal government	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
State government	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Local government	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Public utility	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Another source offered incentives	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Unspecified	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

	NEW ENG	MID ATL	E N CEN	W N CEN	S ATL	E S CEN	W S CEN	MTN	PAC	US TOTAL
<b>SOLAR ENERGY SYSTEMS</b>										
Homes with Solar Systems										
Solar electric (photovoltaic, or PV) system	0.000	0.138	0.000	0.000	0.000	0.000	0.000	0.000	0.043	0.013
Solar domestic hot water	0.007	0.092	0.000	0.000	0.004	0.000	0.000	0.000	0.007	0.008
Solar pool heater	0.004	0.062	0.000	0.000	0.003	0.000	0.000	0.000	0.064	0.012
<b>TYPE OF SOLAR ELECTRIC (PV) SYSTEMS</b>										
Homes with Solar Electric Systems										
Flat panel collectors installed on the roof	0.000	0.039	0.000	0.000	0.000	0.000	0.000	0.000	0.015	0.004
Flat panel collectors installed on supports attached to the ground	0.000	0.029	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002
Integrated (BIPV) into the roofing or other element of the home	0.000	0.039	0.000	0.000	0.000	0.000	0.000	0.000	0.028	0.006
Another type of PV system	0.000	0.029	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002
TOTAL	0.000	0.138	0.000	0.000	0.000	0.000	0.000	0.000	0.043	0.013
<b>HOW SOLAR ELECTRIC (PV) SYSTEMS WERE OFFERED</b>										
Homes Offered										
Standard on some or all homes	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.042	0.005
An option we actively promoted	0.000	0.106	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.007
Installed only at home buyer's request	0.000	0.032	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002
Did not offer or consider offering	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TOTAL	0.000	0.138	0.000	0.000	0.000	0.000	0.000	0.000	0.043	0.013
<b>HOW SOLAR DOMESTIC HOT WATER SYSTEMS WERE OFFERED</b>										
Homes Offered										
Standard on some or all homes	0.000	0.014	0.000	0.000	0.000	0.000	0.000	0.000	0.007	0.002
An option we actively promoted	0.005	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003
Installed only at home buyer's request	0.001	0.032	0.000	0.000	0.004	0.000	0.000	0.000	0.000	0.003
Did not offer or consider offering	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TOTAL	0.007	0.092	0.000	0.000	0.004	0.000	0.000	0.000	0.007	0.008
<b>PRIMARY INSTALLER OF SOLAR ELECTRIC (PV) SYSTEMS</b>										
Homes with Solar Electric Systems										
Solar contractor	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.012	0.001
Builder	0.000	0.092	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.006
Electrician	0.000	0.032	0.000	0.000	0.000	0.000	0.000	0.000	0.022	0.004
Utility company	0.000	0.014	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.001
Other	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TOTAL	0.000	0.138	0.000	0.000	0.000	0.000	0.000	0.000	0.043	0.013
<b>PRIMARY INSTALLER OF SOLAR DOMESTIC HOT WATER</b>										
Homes with Solar Domestic Hot Water Systems										
Solar contractor	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Builder	0.000	0.060	0.000	0.000	0.000	0.000	0.000	0.000	0.007	0.005
Plumber	0.004	0.032	0.000	0.000	0.004	0.000	0.000	0.000	0.000	0.003
Utility company	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Other	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TOTAL	0.007	0.092	0.000	0.000	0.004	0.000	0.000	0.000	0.007	0.008

	NEW ENG	MID ATL	E N CEN	W N CEN	S ATL	E S CEN	W S CEN	MTN	PAC	US TOTAL
<b>FEATURES OF SOLAR ELECTRIC (PV) SYSTEMS</b>										
Homes with Solar Electric Systems										
Connected to a utility grid	0.000	0.092	0.000	0.000	0.000	0.000	0.000	0.000	0.043	0.010
Had battery storage	0.000	0.092	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.006
Home was completely Off-The-Grid	0.000	0.045	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003
Had easy-to-read energy monitor	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Net Metering enabled	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Unspecified	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>CAPACITIES OF SOLAR ELECTRIC (PV) SYSTEMS</b>										
Homes with Solar Electric Systems										
Less than 3 KW	0.000	0.016	0.000	0.000	0.000	0.000	0.000	0.000	0.023	0.003
3 KW to 5 KW	0.000	0.062	0.000	0.000	0.000	0.000	0.000	0.000	0.012	0.005
More than 5 KW	0.000	0.059	0.000	0.000	0.000	0.000	0.000	0.000	0.008	0.005
<b>TOTAL</b>	<b>0.000</b>	<b>0.138</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.043</b>	<b>0.013</b>
<b>INCENTIVE SOURCES FOR SOLAR SYSTEMS</b>										
Homes with Solar Systems										
No incentives	0.000	0.000	0.000	0.000	0.004	0.000	0.000	0.000	0.000	0.001
Federal government	0.010	0.185	0.000	0.000	0.000	0.000	0.000	0.000	0.008	0.013
State government	0.007	0.212	0.000	0.000	0.000	0.000	0.000	0.000	0.064	0.021
Local government	0.000	0.079	0.000	0.000	0.000	0.000	0.000	0.000	0.056	0.011
Public utility	0.007	0.079	0.000	0.000	0.000	0.000	0.000	0.000	0.008	0.006
Another source offered incentives	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Unspecified	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000



# **APPENDIX D**

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## **GENERAL CHARACTERISTICS**

**GENERAL CHARACTERISTICS**

of

**SINGLE-FAMILY  
DETACHED DWELLINGS**

	NEW ENG	MID ATL	E N CEN	W N CEN	S ATL	E S CEN	W S CEN	MTN	PAC	US TOTAL
<b>GENERAL CHARACTERISTICS</b>										
<b>ALL SINGLE FAMILY DETACHED HOMES</b>										
ALL SINGLE FAMILY DETACHED HOMES										
Builders in Sample	105	150	228	153	261	98	134	93	155	1,377
Units in Sample	352	1,109	1,268	926	1,704	568	1,733	467	1,146	9,273
Average Square Feet of Finished Floor	2,473	2,530	2,394	1,950	2,605	2,128	2,663	2,799	2,035	2,465
Average Sales Price Including Land	\$378,899	\$314,899	\$311,260	\$296,432	\$407,883	\$243,948	\$288,856	\$565,874	\$364,278	\$356,428
Average Lot Size in Square Feet	41,785	38,350	33,598	32,643	31,631	25,045	18,290	34,054	17,595	27,931
Average SF of Finished Basement	123	109	244	564	171	113	10	68	22	134
Percent Homes w/Finished Basement	23.3%	13.6%	20.1%	50.7%	12.9%	7.0%	0.6%	4.8%	3.2%	11.4%
STARTER HOMES										
Builders in Sample	39	56	72	50	92	37	46	28	49	469
Units in Sample	132	312	338	336	694	242	606	213	590	3,462
Average Square Feet of Finished Floor	1,730	1,640	1,625	1,377	1,542	1,319	1,637	1,526	1,417	1,535
Average Sales Price Including Land	\$195,026	\$156,487	\$155,248	\$162,544	\$176,687	\$129,045	\$125,251	\$169,207	\$175,011	\$157,030
Average Lot Size in Square Feet	24,965	38,036	28,267	15,559	31,823	14,289	10,462	14,707	10,517	20,730
Average SF of Finished Basement	118	143	173	423	66	0	0	54	6	78
Percent Homes w/Finished Basement	15.9%	25.0%	14.8%	44.3%	6.4%	0.0%	0.0%	3.9%	0.6%	8.3%
MOVE-UP HOMES										
Builders in Sample	41	76	114	92	104	50	76	36	80	669
Units in Sample	140	564	705	429	581	225	820	166	428	4,057
Average Square Feet of Finished Floor	2,322	2,451	2,287	2,014	2,563	2,451	2,468	2,194	2,255	2,392
Average Sales Price Including Land	\$345,075	\$290,856	\$276,638	\$285,926	\$354,230	\$273,965	\$220,336	\$366,405	\$400,533	\$309,167
Average Lot Size in Square Feet	39,792	28,020	35,141	36,206	26,244	24,919	18,626	38,064	20,336	26,966
Average SF of Finished Basement	124	100	338	710	328	103	3	34	34	188
Percent Homes w/Finished Basement	41.0%	11.4%	29.4%	60.5%	24.5%	9.1%	0.4%	2.6%	5.5%	16.4%
LUXURY HOMES										
Builders in Sample	45	58	90	50	131	39	69	47	59	588
Units in Sample	80	234	225	161	429	101	307	88	128	1,753
Average Square Feet of Finished Floor	3,885	3,996	3,868	3,127	3,920	3,282	4,770	4,208	4,135	4,039
Average Sales Price Including Land	\$732,449	\$592,337	\$623,778	\$676,504	\$736,049	\$451,907	\$748,308	\$1,015,696	\$1,053,924	\$749,899
Average Lot Size in Square Feet	70,710	63,577	41,297	59,837	38,679	54,128	33,812	61,426	46,619	45,997
Average SF of Finished Basement	179	133	247	520	14	419	42	306	19	151
Percent Homes w/Finished Basement	12.9%	7.1%	14.3%	35.9%	0.8%	18.7%	2.3%	12.8%	1.5%	8.2%
AGGREGATION BY TYPE										
By Units										
Starter	37.5%	31.6%	28.7%	34.7%	38.1%	42.3%	35.0%	30.4%	51.0%	36.9%
Move-up	39.8%	47.3%	51.8%	49.3%	32.2%	40.1%	46.3%	29.9%	37.8%	40.2%
Luxury	22.7%	21.1%	19.5%	16.1%	29.7%	17.6%	18.7%	39.7%	11.2%	22.9%
TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

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	NEW ENG	MID ATL	E N CEN	W N CEN	S ATL	E S CEN	W S CEN	MTN	PAC	US TOTAL
<b>ALL HOMES</b>										
<b>TYPE OF FOUNDATION</b>										
Percent of new homes										
Full basement	94.6%	75.8%	75.8%	95.5%	29.3%	14.4%	1.1%	10.3%	4.6%	30.7%
Partial basement & crawl space	1.7%	3.7%	8.8%	1.5%	2.2%	2.3%	0.3%	13.1%	4.2%	3.7%
Partial basement & slab	0.4%	1.9%	0.5%	0.2%	0.7%	0.7%	1.0%	3.5%	1.2%	1.1%
Crawl space, continuous wall	1.7%	1.6%	10.0%	1.5%	28.5%	15.1%	2.0%	34.6%	34.8%	17.2%
Slab	1.3%	17.1%	3.9%	1.2%	35.7%	66.9%	92.4%	38.3%	54.3%	45.5%
Piers	0.3%	0.0%	1.0%	0.1%	3.6%	0.5%	3.2%	0.2%	0.9%	1.9%
<b>TOTAL</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>
<b>NUMBER OF STORIES</b>										
Percent of new homes										
One	36.6%	41.1%	58.2%	73.0%	56.7%	78.8%	65.9%	59.8%	52.6%	60.3%
Two	61.4%	55.3%	41.3%	26.3%	40.1%	20.4%	33.6%	37.9%	44.9%	37.9%
Three	2.0%	3.5%	0.4%	0.7%	3.2%	0.8%	0.5%	2.3%	2.4%	1.8%
<b>TOTAL</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>
<b>GARAGES</b>										
Percent of new homes										
One car garages	7.6%	16.7%	2.7%	1.3%	4.6%	8.5%	6.8%	3.3%	2.5%	5.5%
Two car garages	65.9%	59.8%	56.2%	36.8%	54.3%	55.6%	61.1%	54.1%	79.4%	58.1%
Three or more car garages	17.9%	20.6%	37.8%	60.1%	26.2%	11.8%	23.3%	38.7%	16.2%	27.2%
One car carport	0.3%	0.1%	0.0%	0.0%	0.4%	0.4%	0.9%	0.1%	0.4%	0.4%
Two car carport	0.9%	0.2%	0.3%	0.2%	0.4%	0.4%	3.4%	0.6%	0.3%	1.0%
No garage	7.5%	2.7%	2.9%	1.5%	14.0%	23.3%	4.4%	3.2%	1.3%	7.8%
<b>TOTAL</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>
<b>AVERAGE NUMBER OF ROOMS</b>										
Per Home										
Bedrooms	3.45	3.56	3.41	3.38	3.51	3.47	3.60	3.42	3.40	3.49
Full or 3/4 Bathrooms	2.09	2.11	2.19	2.15	2.54	2.28	2.28	2.49	2.13	2.32
Half Bathrooms	0.96	1.03	0.85	0.61	0.74	0.56	0.77	0.81	0.56	0.74
Total Rooms	7.55	8.64	8.12	7.86	8.45	7.46	8.49	7.73	6.88	8.06
Closets	6.98	6.53	6.86	6.08	6.88	5.98	5.49	6.45	5.32	6.23
<b>HOMES FOR OLDER BUYERS</b>										
Percent of New Homes										
Built in "active adult" / age-restricted commun	2.8%	17.1%	2.0%	5.7%	5.9%	4.1%	1.6%	1.7%	2.4%	4.3%
Sold to occupants over the age of 55	15.2%	34.5%	24.4%	15.7%	32.6%	24.7%	25.1%	27.4%	32.1%	27.6%
<b>AVERAGE UNITS PER BUILDER</b>										
All Single-Family Detached Homes	3.7	7.8	6.6	7.2	6.5	6.3	16.1	5.1	8.8	8.7

	NEW ENG	MID ATL	E N CEN	W N CEN	S ATL	E S CEN	W S CEN	MTN	PAC	US TOTAL
<b>STARTER HOMES</b>										
<b>TYPE OF FOUNDATION</b>										
Percent of new homes										
Full basement	95.3%	77.7%	65.3%	93.4%	11.6%	2.9%	0.0%	6.7%	2.7%	23.4%
Partial basement & crawl space	3.6%	4.0%	9.9%	1.6%	4.3%	2.0%	0.3%	0.1%	2.1%	2.9%
Partial basement & slab	0.4%	4.9%	0.4%	0.0%	2.0%	0.0%	1.7%	0.0%	1.5%	1.4%
Crawl space, continuous wall	0.7%	1.6%	14.5%	2.8%	28.6%	15.9%	2.1%	39.0%	32.5%	18.0%
Slab	0.0%	11.7%	7.5%	2.2%	52.7%	79.2%	88.8%	54.2%	60.5%	52.4%
Piers	0.0%	0.0%	2.4%	0.0%	0.7%	0.0%	7.0%	0.0%	0.7%	1.9%
<b>TOTAL</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>
<b>NUMBER OF STORIES</b>										
Percent of new homes										
One	59.0%	44.3%	67.6%	89.8%	85.0%	99.5%	71.3%	79.8%	68.3%	76.8%
Two	40.3%	51.9%	32.4%	10.2%	15.0%	0.5%	28.7%	20.2%	31.7%	22.9%
Three	0.7%	3.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%
<b>TOTAL</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>
<b>GARAGES</b>										
Percent of new homes										
One car garages	14.4%	32.6%	6.6%	4.0%	8.5%	11.6%	18.0%	5.7%	4.2%	11.2%
Two car garages	68.2%	52.9%	71.6%	54.9%	54.6%	35.9%	65.7%	90.3%	89.2%	64.1%
Three or more car garages	1.7%	4.8%	13.9%	37.5%	2.1%	0.9%	0.3%	0.9%	4.8%	5.3%
One car carport	0.0%	0.0%	0.0%	0.0%	0.5%	0.9%	2.1%	0.2%	0.7%	0.7%
Two car carport	2.1%	0.5%	0.0%	0.0%	0.0%	0.1%	3.7%	0.0%	0.2%	0.9%
No garage	13.6%	9.2%	7.9%	3.6%	34.2%	50.5%	10.3%	3.0%	0.8%	17.7%
<b>TOTAL</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>
<b>AVERAGE NUMBER OF ROOMS</b>										
Per Home										
Bedrooms	3.03	3.24	3.00	2.90	3.02	2.98	3.13	3.11	3.10	3.06
Full or 3/4 Bathrooms	1.60	1.72	1.74	1.86	1.85	1.93	2.03	1.91	1.90	1.88
Half Bathrooms	0.65	0.72	0.58	0.22	0.39	0.06	0.16	0.32	0.48	0.35
Total Rooms	6.53	6.84	6.19	7.11	6.33	6.55	6.81	6.02	5.74	6.43
Closets	5.84	5.12	5.30	5.01	5.25	5.01	4.36	5.74	4.23	4.98

	NEW ENG	MID ATL	E N CEN	W N CEN	S ATL	E S CEN	W S CEN	MTN	PAC	US TOTAL
<b>MOVE-UP HOMES</b>										
<b>TYPE OF FOUNDATION</b>										
Percent of new homes										
Full basement	96.3%	73.1%	75.2%	96.4%	33.8%	17.4%	0.5%	14.9%	4.4%	32.3%
Partial basement & crawl space	0.8%	3.6%	10.2%	1.7%	1.9%	2.6%	0.2%	20.0%	4.9%	4.5%
Partial basement & slab	0.0%	0.0%	0.5%	0.0%	0.8%	1.3%	0.3%	1.3%	0.9%	0.7%
Crawl space, continuous wall	0.6%	2.0%	10.9%	1.3%	29.2%	12.3%	1.9%	23.5%	38.4%	16.5%
Slab	2.2%	21.3%	3.2%	0.4%	29.9%	66.3%	96.6%	39.8%	49.0%	44.5%
Piers	0.0%	0.0%	0.0%	0.1%	4.5%	0.0%	0.4%	0.5%	2.5%	1.5%
<b>TOTAL</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>
<b>NUMBER OF STORIES</b>										
Percent of new homes										
One	22.7%	40.0%	63.4%	65.5%	58.9%	69.0%	66.8%	55.4%	32.5%	57.2%
Two	76.7%	57.7%	36.6%	33.6%	40.3%	29.1%	33.2%	44.6%	63.9%	41.8%
Three	0.6%	2.2%	0.0%	0.9%	0.8%	1.9%	0.0%	0.0%	3.7%	1.0%
<b>TOTAL</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>
<b>GARAGES</b>										
Percent of new homes										
One car garages	0.8%	12.5%	0.7%	0.2%	5.0%	6.1%	0.6%	0.6%	0.7%	3.0%
Two car garages	82.8%	70.3%	58.3%	30.7%	69.9%	79.5%	74.8%	60.1%	74.5%	68.0%
Three or more car garages	13.3%	15.9%	39.4%	67.7%	22.3%	8.5%	18.0%	31.9%	21.2%	24.9%
One car carport	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%
Two car carport	0.0%	0.0%	0.0%	0.5%	0.3%	0.5%	5.0%	0.4%	1.7%	1.4%
No garage	3.0%	1.3%	1.6%	0.8%	2.5%	5.4%	1.4%	7.0%	1.9%	2.7%
<b>TOTAL</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>
<b>AVERAGE NUMBER OF ROOMS</b>										
Per Home										
Bedrooms	3.54	3.51	3.35	3.57	3.63	3.61	3.72	3.15	3.63	3.56
Full or 3/4 Bathrooms	2.06	2.03	2.10	2.12	2.50	2.20	2.08	2.18	2.14	2.22
Half Bathrooms	1.14	1.11	0.90	0.71	0.94	0.80	0.77	0.65	0.70	0.83
Total Rooms	7.49	8.60	8.02	7.68	8.63	7.55	8.75	6.49	7.27	8.06
Closets	6.95	6.44	6.88	6.22	6.85	6.26	5.36	5.95	5.94	6.24

	NEW ENG	MID ATL	E N CEN	W N CEN	S ATL	E S CEN	W S CEN	MTN	PAC	US TOTAL
<b>LUXURY HOMES</b>										
<b>TYPE OF FOUNDATION</b>										
Percent of new homes										
Full basement	91.4%	89.5%	90.7%	95.0%	36.6%	37.5%	3.7%	18.4%	13.3%	39.0%
Partial basement & crawl space	0.0%	4.3%	5.9%	1.0%	1.5%	2.4%	0.6%	16.5%	11.7%	4.4%
Partial basement & slab	1.0%	0.9%	1.5%	2.3%	0.4%	1.4%	1.3%	4.8%	1.5%	1.5%
Crawl space, continuous wall	4.1%	1.1%	1.9%	1.2%	29.6%	18.7%	2.1%	26.8%	41.0%	17.0%
Slab	2.5%	4.1%	0.0%	0.5%	25.3%	37.5%	90.8%	33.5%	32.2%	35.9%
Piers	1.0%	0.0%	0.0%	0.0%	6.6%	2.4%	1.4%	0.0%	0.2%	2.3%
<b>TOTAL</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>
<b>NUMBER OF STORIES</b>										
Percent of new homes										
One	26.3%	30.8%	31.9%	64.7%	19.3%	55.8%	56.2%	56.0%	17.8%	38.7%
Two	67.7%	63.3%	65.4%	34.5%	70.8%	44.2%	40.9%	38.7%	78.9%	56.5%
Three	6.1%	5.9%	2.7%	0.8%	9.9%	0.0%	2.8%	5.3%	3.3%	4.8%
<b>TOTAL</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>
<b>GARAGES</b>										
Percent of new homes										
One car garages	8.0%	4.7%	0.2%	0.5%	1.6%	7.6%	0.3%	0.2%	0.0%	1.7%
Two car garages	32.2%	34.5%	29.4%	7.5%	32.6%	45.7%	23.9%	20.8%	29.2%	28.6%
Three or more car garages	51.7%	59.5%	68.4%	90.8%	60.7%	45.1%	73.8%	78.1%	69.1%	67.0%
One car carport	1.0%	0.4%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	0.9%	0.2%
Two car carport	0.0%	0.0%	0.9%	0.0%	1.2%	0.8%	1.7%	0.7%	0.0%	0.9%
No garage	7.0%	0.8%	1.0%	1.2%	3.6%	0.8%	0.2%	0.2%	0.8%	1.5%
<b>TOTAL</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>
<b>AVERAGE NUMBER OF ROOMS</b>										
Per Home										
Bedrooms	3.94	4.32	4.11	3.94	4.11	4.36	4.22	4.07	4.33	4.17
Full or 3/4 Bathrooms	2.83	2.84	3.16	2.84	3.47	3.31	3.33	3.29	3.37	3.27
Half Bathrooms	1.25	1.41	1.08	1.27	1.09	1.24	1.68	1.34	0.93	1.27
Total Rooms	9.31	11.75	10.78	10.17	10.74	9.33	10.86	9.94	10.86	10.57
Closets	8.88	8.84	8.80	8.58	8.93	7.61	7.78	7.62	8.39	8.35

	NEW ENG	MID ATL	E N CEN	W N CEN	S ATL	E S CEN	W S CEN	MTN	PAC	US TOTAL
ALL HOMES										
DISTRIBUTION BY SIZE OF BUILDER										
Percentage of Builders in Sample										
1 to 10 homes	97.2%	89.2%	92.3%	90.9%	89.5%	90.7%	80.2%	92.0%	88.2%	90.0%
11 to 25 homes	0.8%	4.9%	3.2%	4.9%	6.6%	4.2%	11.1%	4.5%	4.8%	5.0%
26 to 100 homes	2.0%	4.5%	4.0%	3.6%	3.1%	5.1%	3.7%	3.4%	5.5%	3.9%
Over 100 homes	0.0%	1.4%	0.5%	0.6%	0.8%	0.0%	5.0%	0.0%	1.5%	1.1%
TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
DISTRIBUTION BY SIZE OF BUILDER										
Percentage of Homes in Sample										
1 to 10 homes	62.9%	30.4%	57.0%	57.9%	43.0%	46.1%	26.6%	62.6%	28.1%	46.1%
11 to 25 homes	3.5%	11.0%	6.8%	10.8%	17.1%	10.2%	17.2%	12.9%	12.8%	11.4%
26 to 100 homes	33.5%	38.3%	30.1%	23.9%	28.3%	43.7%	20.4%	24.5%	38.9%	31.3%
Over 100 homes	0.0%	20.2%	6.1%	7.3%	11.6%	0.0%	35.7%	0.0%	20.3%	11.2%
TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%



**GENERAL CHARACTERISTICS**  
of  
**MULTIFAMILY DWELLINGS**

	NEW ENG	MID ATL	E N CEN	W N CEN	S ATL	E S CEN	W S CEN	MTN	PAC	US TOTAL
<b>GENERAL CHARACTERISTICS</b>										
<b>ALL MULTIFAMILY HOMES</b>										
ALL MULTIFAMILY HOMES										
Builders in Sample	16	18	32	21	26	12	12	11	20	168
Units in Sample	310	411	292	564	875	267	288	560	1,003	4,569
Average Square Feet of Finished Floor	1,444	1,808	1,354	995	1,334	1,366	1,075	1,375	1,064	1,283
Average Sales Price Including Land	\$244,869	\$171,020	\$149,724	\$145,566	\$139,731	\$157,402	\$129,002	\$199,329	\$148,321	\$153,762
TOWNHOUSES (SINGLE-FAMILY ATTACHED)										
Builders in Sample	8	11	20	15	13	6	6	9	9	97
Units in Sample	99	120	113	135	282	93	47	319	86	1,294
Average Square Feet of Finished Floor	2,018	2,128	1,697	1,345	1,899	1,665	1,453	1,479	1,626	1,689
Average Sales Price Including Land	\$423,262	\$209,351	\$219,243	\$183,247	\$157,451	\$160,951	\$192,091	\$223,170	\$210,968	\$196,635
Average Lot Size in Square Feet	4,667	4,641	4,582	7,795	2,955	6,765	4,119	4,648	5,199	4,492
Average SF of Finished Basement	676	1,216	30	228	19	0	0	35	15	123
Percent Homes w/Finished Basement	81.82%	68.99%	12.39%	41.48%	2.84%	0.00%	0.00%	3.76%	4.65%	11.74%
APARTMENTS										
Builders in Sample	10	12	16	11	14	8	8	5	16	100
Units in Sample	211	290	179	429	593	174	241	241	917	3,275
Average Square Feet of Finished Floor	1,175	1,675	1,137	885	1,065	1,206	1,001	1,238	1,011	1,121
Average Sales Price Including Land	\$161,327	\$155,133	\$105,888	\$133,710	\$131,302	\$155,501	\$116,688	\$167,745	\$142,445	\$136,429
AGGREGATION BY TYPE										
By Units										
Townhouses	31.9%	29.3%	38.7%	23.9%	32.2%	34.9%	16.3%	57.0%	8.6%	29.8%
Apartments	68.1%	70.7%	61.3%	76.1%	67.8%	65.1%	83.7%	43.0%	91.4%	70.2%
TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
DISTRIBUTION BY SIZE OF BUILDER										
Percentage of Builders in Sample										
1 to 10 homes	62.5%	61.1%	78.1%	61.9%	38.5%	50.0%	41.7%	45.5%	35.0%	52.7%
11 to 25 homes	18.8%	22.2%	15.6%	9.5%	34.6%	33.3%	50.0%	18.2%	0.0%	22.5%
26 to 100 homes	18.8%	11.1%	6.3%	19.1%	15.4%	8.3%	0.0%	9.1%	50.0%	15.3%
Over 100 homes	0.0%	5.6%	0.0%	9.5%	11.5%	8.3%	8.3%	27.3%	15.0%	9.5%
TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
DISTRIBUTION BY SIZE OF BUILDER										
Percentage of Homes in Sample										
1 to 10 homes	17.7%	16.1%	39.3%	7.4%	5.5%	12.3%	5.9%	4.5%	3.4%	12.5%
11 to 25 homes	12.6%	17.7%	25.3%	7.1%	15.1%	27.6%	33.3%	5.2%	0.0%	16.0%
26 to 100 homes	69.7%	23.5%	35.5%	33.4%	19.0%	20.5%	0.0%	10.4%	58.2%	30.0%
Over 100 homes	0.0%	42.6%	0.0%	52.1%	60.5%	39.6%	60.8%	80.0%	38.4%	41.6%
TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

	NEW ENG	MID ATL	E N CEN	W N CEN	S ATL	E S CEN	W S CEN	MTN	PAC	US TOTAL
<b>ALL HOMES</b>										
TYPE OF FOUNDATION -- ALL MULTIFAMILY										
Percent of new homes										
Full basement	79.6%	36.4%	62.5%	14.0%	25.7%	0.0%	0.0%	3.2%	6.1%	19.0%
Partial basement & crawl space	0.0%	2.5%	4.0%	0.5%	0.0%	3.9%	0.0%	0.9%	5.3%	1.6%
Partial basement & slab	3.0%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%	0.2%
Crawl space, continuous wall	0.0%	0.0%	7.4%	0.0%	0.4%	0.0%	4.5%	16.1%	22.8%	6.0%
Slab	17.4%	61.0%	25.7%	85.5%	73.9%	96.1%	95.5%	78.3%	64.3%	73.0%
Piers	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.5%	1.0%	0.3%
TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
NUMBER OF STORIES -- ALL MULTIFAMILY										
Percent of new homes										
One	25.6%	23.6%	46.6%	18.5%	3.8%	36.7%	16.3%	15.2%	6.7%	17.4%
Two	48.2%	66.7%	42.9%	30.3%	33.6%	21.0%	41.5%	51.3%	33.7%	39.3%
Three	17.1%	8.2%	8.6%	49.9%	28.7%	36.6%	23.9%	29.8%	37.9%	27.0%
Four	9.1%	1.5%	1.9%	1.3%	33.9%	5.7%	18.3%	3.8%	21.7%	16.3%
TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
GARAGES										
Percent of new homes										
One car garage	33.2%	62.1%	11.3%	43.0%	26.9%	8.6%	17.5%	23.6%	34.6%	25.6%
Two car garage	16.3%	8.0%	72.5%	21.7%	3.6%	32.8%	23.9%	58.0%	14.6%	25.5%
Three or more car garages	0.0%	1.9%	1.0%	1.2%	5.4%	0.0%	0.0%	0.0%	21.1%	3.9%
One car carport	7.7%	0.0%	0.0%	0.0%	0.0%	0.0%	3.9%	1.5%	15.5%	2.8%
Two car carport	0.0%	20.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.0%	1.9%
No garage or carport	42.9%	7.1%	15.2%	34.1%	64.1%	58.6%	54.7%	17.0%	9.1%	40.2%
TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
AVERAGE NUMBER OF ROOMS										
Per Home										
Bedrooms	2.35	3.24	2.28	1.83	2.39	2.58	2.49	2.43	2.18	2.43
Full or 3/4 Bathrooms	1.59	1.60	1.87	1.80	1.67	1.89	1.75	1.97	1.81	1.77
Half Bathrooms	0.57	0.89	0.23	0.82	0.62	0.09	0.21	0.76	0.31	0.46
Total Rooms	5.57	5.67	5.02	4.64	4.78	4.85	4.95	5.15	4.50	4.93
Closets	5.09	5.72	5.49	4.46	3.65	4.68	4.44	4.70	3.50	4.39
HOMES FOR OLDER BUYERS										
Percent of New Homes										
Built in "active adult" / age-restricted commur	30.2%	13.0%	35.4%	4.7%	8.4%	0.0%	8.0%	2.9%	5.9%	10.0%
Sold to occupants over the age of 55	44.1%	34.2%	57.3%	44.3%	56.4%	74.1%	71.1%	34.3%	48.7%	55.1%
AVERAGE UNITS PER BUILDER										
All Multifamily Homes	19.4	22.8	9.1	26.9	33.7	22.2	24.0	50.9	50.2	28.8

	NEW ENG	MID ATL	E N CEN	W N CEN	S ATL	E S CEN	W S CEN	MTN	PAC	US TOTAL
<b>TOWNHOUSES</b>										
TYPE OF FOUNDATION										
Percent of Townhouses										
Full basement	90.9%	84.5%	58.4%	57.8%	9.9%	0.0%	0.0%	4.7%	0.0%	19.4%
Partial basement & crawl space	0.0%	6.8%	8.9%	0.0%	0.0%	1.2%	0.0%	1.3%	0.0%	1.5%
Partial basement & slab	6.1%	0.0%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	11.1%	1.5%
Crawl space, continuous wall	0.0%	0.0%	11.5%	0.0%	1.1%	0.0%	27.7%	21.3%	61.1%	15.7%
Slab	3.0%	8.7%	20.4%	42.2%	89.0%	98.8%	72.3%	72.7%	27.8%	61.9%
Piers	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
NUMBER OF STORIES										
Percent of Townhouses										
One	45.5%	64.2%	62.0%	69.3%	8.2%	68.8%	55.3%	23.8%	29.1%	39.2%
Two	48.5%	33.7%	28.3%	30.1%	75.2%	25.8%	44.7%	76.2%	66.3%	54.2%
Three	6.1%	2.2%	9.7%	0.7%	16.7%	5.4%	0.0%	0.0%	4.7%	6.6%
Four	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
GARAGES										
Percent of Townhouses										
One car garage	68.7%	20.8%	12.4%	14.8%	80.5%	24.7%	2.1%	16.9%	9.3%	32.0%
Two car garage	31.3%	27.4%	84.1%	74.1%	7.8%	52.7%	66.0%	83.1%	90.7%	52.7%
Three or more car garages	0.0%	0.0%	2.7%	0.7%	0.7%	0.0%	0.0%	0.0%	0.0%	0.5%
One car carport	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Two car carport	0.0%	41.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.7%
No garage or carport	0.0%	10.2%	0.9%	10.4%	11.0%	22.6%	31.9%	0.0%	0.0%	12.2%
TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
AVERAGE NUMBER OF ROOMS										
Per Townhouse										
Bedrooms	2.10	2.57	2.40	2.32	3.00	3.05	2.21	2.29	3.16	2.64
Full or 3/4 Bathrooms	1.88	1.38	1.87	1.48	2.12	2.30	1.72	2.04	1.97	1.93
Half Bathrooms	1.11	0.86	0.48	0.30	0.98	0.15	0.94	0.96	0.74	0.79
Total Rooms	6.77	5.87	5.81	5.73	5.39	5.31	5.70	5.41	5.43	5.58
Closets	5.86	4.48	6.16	5.02	4.42	5.56	4.64	4.86	5.38	4.96

	NEW ENG	MID ATL	E N CEN	W N CEN	S ATL	E S CEN	W S CEN	MTN	PAC	US TOTAL
<b>APARTMENTS</b>										
TYPE OF FOUNDATION										
Percent of New Apartments										
Full basement	68.4%	16.1%	65.8%	0.0%	33.9%	0.0%	0.0%	0.0%	6.4%	18.8%
Partial basement & crawl space	0.0%	0.8%	0.0%	0.7%	0.0%	5.9%	0.0%	0.0%	5.6%	1.2%
Partial basement & slab	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Crawl space, continuous wall	0.0%	0.0%	4.1%	0.0%	0.0%	0.0%	0.0%	4.8%	21.0%	3.2%
Slab	31.6%	83.2%	30.1%	99.3%	66.1%	94.1%	100.0%	90.4%	66.0%	76.1%
Piers	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.8%	1.0%	0.7%
TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
NUMBER OF STORIES										
Percent of New Apartments										
One	16.3%	6.7%	36.9%	2.5%	1.7%	19.5%	8.7%	3.7%	4.6%	9.3%
Two	48.1%	80.4%	52.1%	30.3%	13.9%	18.5%	40.9%	18.2%	30.6%	31.4%
Three	22.2%	10.7%	7.9%	65.4%	34.4%	53.4%	28.5%	69.2%	41.0%	36.8%
Four	13.4%	2.1%	3.2%	1.7%	50.0%	8.7%	21.9%	8.9%	23.7%	22.5%
TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
GARAGES										
Percent of New Apartments										
One car garage	16.6%	79.3%	10.6%	51.9%	1.4%	0.0%	20.5%	32.3%	37.0%	20.9%
Two car garage	9.3%	0.0%	65.2%	5.2%	1.5%	22.2%	15.7%	24.7%	7.5%	15.6%
Three or more car garages	0.0%	2.7%	0.0%	1.3%	7.7%	0.0%	0.0%	0.0%	23.1%	4.7%
One car carport	11.3%	0.0%	0.0%	0.0%	0.0%	0.0%	4.7%	3.5%	17.0%	3.5%
Two car carport	0.0%	12.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.5%	1.4%
No garage or carport	62.9%	5.8%	24.2%	41.6%	89.4%	77.8%	59.1%	39.5%	10.0%	53.9%
TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
AVERAGE NUMBER OF ROOMS										
Per Apartment										
Bedrooms	2.47	3.52	2.21	1.68	2.10	2.32	2.54	2.62	2.09	2.36
Full or 3/4 Bathrooms	1.45	1.69	1.87	1.91	1.45	1.68	1.75	1.88	1.80	1.69
Half Bathrooms	0.32	0.90	0.08	0.99	0.45	0.06	0.07	0.48	0.27	0.34
Total Rooms	5.00	5.59	4.53	4.29	4.49	4.60	4.80	4.81	4.41	4.67
Closets	4.74	6.24	5.06	4.29	3.28	4.21	4.40	4.49	3.32	4.17

# **APPENDIX E**

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## **ANNUAL BUILDER PRACTICES QUESTIONNAIRE**

# 2008

# Builder Practices Survey

February 2009

Dear Home Builder,

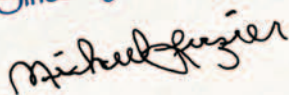
We need your input! For more than 20 years, the NAHB Research Center has relied upon your support for getting the information needed to improve America's housing industry. Past participation in our survey efforts has been vital to our continued progress. Please complete and return this questionnaire as soon as possible.

We understand there are many demands on your time and at first glance this questionnaire may appear long and complicated, but it uses checkmarks and percentages to make it easy to describe your typical construction practices – not an exact accounting of building materials.

Please be assured that all information about your firm will remain confidential. If you have any questions or would like an additional copy of this questionnaire for a fellow builder, please contact Joanne McAlpin at (800) 638-8556, ext. 6306, or send an e-mail to [jmcalpin@nahbrc.org](mailto:jmcalpin@nahbrc.org).

Thank you in advance for your assistance.

Sincerely,



Michael Luzier  
President  
NAHB Research Center

Respondents who complete and return the survey will receive their choice of one of the following gifts.  
(Please check ONE)

- Embroidered Shirt (M)
- Embroidered Shirt (L)
- Embroidered Shirt (XL)
- Embroidered Shirt (XXL)
- Embroidered Shirt (XXXL)
- Silver Tone Business Card Case
- 100' Contractor Measuring Tape
- Stainless Steel Thermos
- Swiss Army Knife
- Random Gift (inventories too low to list items)
- Embroidered Jacket (M)
- Embroidered Jacket (L)
- Embroidered Jacket (XL)
- Embroidered Jacket (XXL)
- Embroidered Jacket (XXXL)

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**GARAGES AND CARPORTS**

	SFD STARTER # HOUSES ↓	SFD MOVE-UP # HOUSES ↓	SFD LUXURY # HOUSES ↓	SFA TOWNHOUSE/DUPLEX # UNITS ↓	MF MULTIFAMILY # UNITS ↓
1 Car Garage .....	18	41	64	766	773
2 Car Garage .....	19	42	65	767	774
3 or more Car Garage .....	20	43	66	767a	774a
1 Car Carport .....	20a	43a	66a	768	775
2 or more Car Carport .....	20b	43b	66b	769	776
No Garage or Carport .....	21	44	67	769a	776a

**NUMBER OF ROOMS**

	SFD STARTER # ROOMS PER HOUSE ↓	SFD MOVE-UP # ROOMS PER HOUSE ↓	SFD LUXURY # ROOMS PER HOUSE ↓	SFA TOWNHOUSE/DUPLEX # ROOMS PER UNIT ↓	MF MULTIFAMILY # ROOMS PER UNIT ↓
Bedroom(s) .....	22	45	68	88	105
Half Bathroom(s) .....	23a	46a	69a	89a	106a
Full or ¾ Bathroom(s).....	23	46	69	89	106
<b>Total Rooms (Exclude Bathrooms) .....</b>	<b>24</b>	<b>47</b>	<b>70</b>	<b>90</b>	<b>107</b>
Closets ( <b>Include</b> Coat / Linen / Pantry) .....	25	48	71	91	108

**GREEN CERTIFICATION**

What **percent** of your homes or multifamily units were “Green” certified by any of the following programs?

Local or State Green Home Building Program .....	2020
NAHB National Green Building Program™ .....	2021
LEED for Homes .....	2022
Other _____	2023
(PLEASE SPECIFY)	
<b>Total need not add to 100%</b>	

If you built any “Green” certified homes, what was the typical increase in cost per home or living unit to reach a certification threshold, compared to your non-certified homes?

Write ZERO if no increase in cost..... \$ \_\_\_\_\_ 2024

**BASEMENT / CRAWL SPACE WALL MATERIAL**

What **percent** of your homes or multifamily buildings had basement or crawlspace walls made of the following materials?

*Do not include brick veneer.*

	SFD HOUSES	SFA UNITS	MF BUILDINGS
Poured concrete, reusable forms .....	109	109a	109b
Concrete block (CMU) .....	110	110a	110b
Precast concrete (e.g., Superior Walls®).....	111	111a	111b
Insulated concrete forms (ICFs) .....	112	112a	112b
Pressure treated wood .....	113	113a	113b
Other _____	114	114a	114b
(PLEASE SPECIFY)	<b>100%</b>	<b>100%</b>	<b>100%</b>

**SUBSLAB PREPARATION**

What did you place under your concrete slabs floors for your living areas?

	(✓ all you use)	SLAB- ON-GRADE	BASEMENT SLAB
4” or greater layer of stone or gravel .....	[ ]	121_1	[ ] 121_2
Less than 4” layer of stone or gravel .....	[ ]	122_1	[ ] 122_2
Sand .....	[ ]	122c_1	[ ] 122c_2
Strips or layers of geotextile drainage mat .....	[ ]	123_1	[ ] 123_2
Rigid foam insulation .....	[ ]	124_1	[ ] 124_2
Perforated plastic pipe .....	[ ]	125_1	[ ] 125_2
Plastic sheet (vapor barrier, 6 mil poly) .....	[ ]	125c_1	[ ] 125c_2
Other _____	[ ]	126_1	[ ] 126_2
(PLEASE SPECIFY)			
<b>Nothing</b> under slab .....	[ ]	127_1	[ ] 127_2

**ABOVE-GRADE STRUCTURAL WALLS**

What **percent** of your homes’ above-grade exterior walls had the following as a **primary** structural material?

*Do not include foundation walls or brick veneer finish.*

	FIRST STORY	UPPER STORIES
Concrete or masonry .....	128	131
Wood (all types) .....	129	132
Steel (all types) .....	130	133
	<b>100%</b>	<b>100%</b>

## CONCRETE & MASONRY ABOVE-GRADE WALLS

If any of your homes had concrete or masonry **above-grade** walls, what **percent** were each of the following types?

**Do not include** basement walls or brick veneer finish.

Poured concrete, reusable forms .....	_____	146
Concrete block (CMU) .....	_____	147
Precast concrete (e.g., Superior Walls®) .....	_____	148
Insulated concrete forms (ICFs) .....	_____	149
Autoclaved aerated concrete (AAC) .....	_____	150
Structural brick (brick wall supports roof) .....	_____	151
Other concrete or masonry _____	(PLEASE SPECIFY)	152
		<b>100%</b>

## TYPES OF EXTERIOR WOOD & STEEL WALLS

What **percent** of your homes with wood and steel walls used the following types of construction?

Site-built light-frame (2x4s, 2x6s, etc.) .....	_____	134
Panelized light-frame (factory-built wall panels) .....	_____	135
Modular (factory-built structure) .....	_____	136
Structural insulated panels (SIPs) .....	_____	137
Post and beam or "timber frame" .....	_____	138
Logs .....	_____	139
		<b>100%</b>

## LIGHT-FRAME EXTERIOR WALL DEPTH & SPACING

What **percent** of all your exterior light-frame walls were:

	WOOD	STEEL
2x4s at 16" o.c. ....	_____ 140	_____ 140a
2x4s at 24" o.c. ....	_____ 141	_____ 141a
2x6s at 16" o.c. ....	_____ 142	_____ 142a
2x6s at 24" o.c. ....	_____ 143	_____ 143a
Other _____	(PLEASE SPECIFY)	144a
		<b>100%</b>

## WALL HEIGHT

What **percent** of your interior walls had the following heights? **Exclude** two-story foyers from your estimates.

	FIRST STORY	UPPER STORIES
7' or less .....	_____ 501	_____ 508
7½' .....	_____ 502	_____ 509
8' .....	_____ 503	_____ 510
8½' .....	_____ 504	_____ 511
9' .....	_____ 505	_____ 512
10' .....	_____ 506	_____ 513
12' or more .....	_____ 507	_____ 514
		<b>100%</b>

## TYPE OF WOOD WALL STUDS

What is the most common type or species of wood for your **wall studs**? (✓one)

Timberstrand® or laminated strand lumber (LSL) .....	[ ]	1
Finger-jointed (any species) .....	[ ]	2
Southern yellow pine (SYP) .....	[ ]	3
Douglas fir .....	[ ]	4
Hem-fir or other western woods .....	[ ]	5
Spruce / Pine / Fir (SPF) or eastern spruce .....	[ ]	6
LVL (laminated veneer lumber) .....	[ ]	7
Treated lumber .....	[ ]	8
Don't know .....	[ ]	9
Other _____	(PLEASE SPECIFY)	145

## WALL HEADERS: WINDOWS, DOORS, AND FIREPLACES

What **percent** of the (1) single window, door, and fireplace openings, (2) multiple window and door openings, and (3) garage door openings were spanned by headers of the following materials?

	SINGLE Window / Door / Fireplace Headers	MULTIPLE Window / Door Headers	Garage Door Headers
Built-up dimensional lumber .....	_____ 153	_____ 153a	_____ 167
Solid wood (4xs, etc.) .....	_____ 154	_____ 154a	_____ 168
Glulam .....	_____ 155	_____ 155a	_____ 169
Wooden I-joists used singly .....	_____ 156	_____ 156a	_____ 170
Wooden I-joists doubled .....	_____ 157	_____ 157a	_____ 171
LVL single .....	_____ 158	_____ 158a	_____ 172
LVL doubled .....	_____ 159	_____ 159a	_____ 173
Parallam® .....	_____ 160	_____ 160a	_____ 174
Concrete .....	_____ 161	_____ 161a	_____ 175
Steel (all types) .....	_____ 162	_____ 162a	_____ 176
Glued & nailed box headers .....	_____ 163	_____ 163a	_____ 177
Wood truss .....	_____ 164	_____ 164a	_____ 178
Timberstrand® (LSL) .....	_____ 165	_____ 165a	_____ 179
Flitch plate beams (lumber with steel plate, bolted) .....	_____ 166	_____ 166a	_____ 180
		<b>100%</b>	<b>100%</b>

## INTERIOR WALLS

What **percent** of all your interior walls were:

Masonry or concrete .....	_____ 522	
Steel (all spacing) .....	_____ 521a	
Lumber: 2x3s at 16" o.c. ....	_____ 515	
Lumber: 2x3s at 24" o.c. ....	_____ 516	
Lumber: 2x4s at 16" o.c. ....	_____ 517	
Lumber: 2x4s at 24" o.c. ....	_____ 518	
Lumber: 2x6s at 16" o.c. ....	_____ 519	
Lumber: 2x6s at 24" o.c. ....	_____ 520	
Lumber: Other dimensions / spacing .....	_____ 520a	
		<b>100%</b>

## INTERIOR WALL & CEILING FINISH

What **percent** of your typical home's total wall and ceiling area had the following interior finishes?

	WALLS	CEILING
1/4" plywood paneling .....	_____ 523	_____ 532
1/4" hardboard paneling .....	_____ 524	_____ 533
3/8" gypsum drywall (all types).....	_____ 525	_____ 534
1/2" gypsum drywall (all types).....	_____ 526	_____ 535
Cement board (glass-reinforced).....	_____ 527	_____ 536
Fiber cement (Hardibacker®, etc).....	_____ 530a	_____ 539a
5/8" gypsum drywall (all types).....	_____ 528	_____ 537
3/4" gypsum drywall (all types).....	_____ 529	_____ 538
Lumber boards or shingles.....	_____ 530	_____ 539
Acoustical ceiling tiles.....	_____ 540	
Other .....	_____ 531	_____ 541
(PLEASE SPECIFY)	<b>100%</b>	<b>100%</b>

## EXTERIOR WALL SHEATHING

Please consider "sheathing" to be the panel product that is fastened directly to wall studs. What **percent** of your total exterior wall area was sheathed with:

<b>NONE</b> (SIPs, masonry or log walls, etc.) .....	_____ 182
Plywood, 3/8" .....	_____ 183
Plywood, 1/2" .....	_____ 184
Plywood, 5/8" .....	_____ 185
Plywood, 3/4" .....	_____ 186
OSB, 3/8" .....	_____ 187
OSB, 7/16".....	_____ 188
OSB, 1/2".....	_____ 188a
OSB, 5/8" .....	_____ 189
OSB, 3/4" .....	_____ 190
Fiberboard (including Homosote & Built-Rite®)	_____ 191
Cement board (glass mesh reinforced, Durock®).	_____ 192
Fiber Cement (Hardipanel®, etc.).....	_____ 192a
Gypsumboard (including Dens-Glass®, FibeRock®)	_____ 193
1/8" foil-faced 3-ply kraft paper (Thermoply®) ...	_____ 194
Lumber board sheathing .....	_____ 195
Extruded polystyrene – XPS (blue Dow Styrofoam®, pink Owens Corning) .....	_____ 196
Expanded polystyrene – EPS, or "bead board" ....	_____ 197
Polyisocyanurate (Tuff-R®, Thermax®, R-Max®)	_____ 198
Other .....	_____ 199
(PLEASE SPECIFY)	<b>100%</b>

## TWO LAYERS OF EXTERIOR WALL SHEATHING

What **percent** of your homes had a layer of foam sheathing placed over a layer of structural sheathing material? **Do not include** layer of foam for EIFS finish. \_\_\_\_\_%

181

Check the most common material of second layer of foam:

1 [ ] XPS    2 [ ] EPS    3 [ ] Polyisocyanurate  
181a

## THICKNESS OF FOAM

What was the **typical thickness** of the foam you used? (✓one)

1 [ ] 1/2"                      4 [ ] 1-1/2"  
2 [ ] 5/8 or 3/4"              5 [ ] 2" or greater  
3 [ ] 1"                              200

What percentage of your homes are fully sheathed with either plywood or OSB? \_\_\_\_\_ 2025

## MATERIAL OF STRUCTURAL FLOOR SYSTEM

What **percent** of your structural floors in finished areas of your homes (exclude basement and garage floors) were:

	GROUND FLOOR	UPPER FLOORS
Cast-in-place concrete .....	_____ 212	_____ 216
Precast concrete .....	_____ 213	_____ 217
Wood, lumber, or beams .....	_____ 214	_____ 218
Steel (all types) .....	_____ 215	_____ 219
	<b>100%</b>	<b>100%</b>

## DEPTH OF STRUCTURAL FLOOR

For each material you used, ✓the **most common depth** of your floor framing:

	LUMBER JOISTS	WOODEN I-JOISTS	OPEN-WEB JOISTS	STEEL JOISTS
8" .....	[ ]	[ ]	[ ]	[ ] <sub>1</sub>
10" (or 9-7/8") .....	[ ]	[ ]	[ ]	[ ] <sub>2</sub>
12" (or 11-7/8") .....	[ ]	[ ]	[ ]	[ ] <sub>3</sub>
14" or greater .....	[ ] <sub>1033</sub>	[ ] <sub>1034</sub>	[ ] <sub>1035</sub>	[ ] <sub>1035a</sub>

## TYPES OF WOOD FLOOR FRAMING

What **percent** of your structural wood floors on ground and upper floors were:

Do not include support beams.	GROUND FLOOR	UPPER FLOORS
Lumber joists, solid wood .....	_____ 220	_____ 225
Wooden I-joists .....	_____ 221	_____ 226
Open-web joists (wood floor truss).....	_____ 222	_____ 227
Structural insulated panels (SIPs) ...	_____ 223	_____ 228
Other .....	_____ 224	_____ 229
(PLEASE SPECIFY)	<b>100%</b>	<b>100%</b>

## SPACING OF FLOOR FRAMING

What **percent** of your framed floor area had joists spaced at:

	LUMBER JOISTS	WOODEN I-JOISTS	OPEN-WEB JOISTS	STEEL JOISTS
12" o.c.....	_____ 1036	_____ 1042	_____ 1048	_____ 1048a
16" o.c.....	_____ 1037	_____ 1043	_____ 1049	_____ 1049a
19.2" o.c.....	_____ 1038	_____ 1044	_____ 1050	_____ 1050a
24" o.c.....	_____ 1039	_____ 1045	_____ 1051	_____ 1051a
32" o.c.....	_____ 1040	_____ 1046	_____ 1052	_____ 1052a
Other spacing .....	_____ 1041	_____ 1047	_____ 1053	_____ 1053a
	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

## SPECIES OF WOOD FLOOR FRAMING

What species of dimensional lumber joist (*not* I-joists) did you **most commonly** use for your floor framing?

(✓one only)

Southern yellow pine (SYP) .....	[ ]	1
Douglas fir or hem-fir .....	[ ]	2
Spruce / Pine / Fir (SPF), or eastern spruce .....	[ ]	3
Treated lumber .....	[ ]	4
Don't know .....	[ ]	5
Other _____ (PLEASE SPECIFY)	[ ]	6 230

## FLOOR SHEATHING (SUBFLOORING)

What **percent** of your total floor area used each of the following sheathing (sub-flooring) materials?

	GROUND FLOOR	UPPER FLOORS
Concrete or SIPs .....	_____ 231	_____ 246
1/2" plywood .....	_____ 232	_____ 247
5/8" plywood .....	_____ 233	_____ 248
3/4" plywood .....	_____ 234	_____ 249
1-1/8" plywood .....	_____ 235	_____ 250
7/16" or 1/2" OSB .....	_____ 236	_____ 251
5/8" OSB (including Advantech) ..	_____ 237	_____ 252
3/4" OSB (including Advantech) ..	_____ 238	_____ 253
7/8" OSB .....	_____ 239	_____ 254
1" OSB .....	_____ 240	_____ 255
1-1/8" or thicker OSB .....	_____ 241	_____ 256
1x boards (3/4" actual, including T&G) ..	_____ 243	_____ 258
2x boards (1-1/2" actual, including T&G) ..	_____ 244	_____ 259
Other _____ (PLEASE SPECIFY)	_____ 245	_____ 260
	<b>100%</b>	<b>100%</b>

## RIMBOARD FOR WOODEN I-JOISTS

What percent of your I-joist floor systems used each of the following **rimboard** materials?

<b>NO</b> rimboard used (sheathing only) .....	_____ 1117h
TimberStrand® .....	_____ 1117a
OSB (G-P Fiberstrong®, L-P Solid Start®, etc.) ..	_____ 1117b
Wooden I-joists with blocking .....	_____ 1117c
Plywood .....	_____ 1117d
Dimensional lumber (2x10's, etc.) .....	_____ 1117e
LVL (laminated veneer lumber) .....	_____ 1117f
Re-sawn glulam .....	_____ 1117g
	<b>100%</b>

## FLOOR BEAMS: SUPPORT, FLUSH, AND EDGE BEAMS

Floor beams may include 1) **support beams**, which provide a bearing point for floor joists, 2) **flush beams**, which provide support and are recessed into the floor, and 3) **edge beams** that typically support the edge of a loft or stairway (exclude rimboard)..

About how many linear feet (LF) of floor beams did you use in a **typical** house or multifamily living unit?

	GROUND FLOOR	UPPER FLOORS
Single-family detached (SFD) floor beams: LF per HOUSE ..	_____ LF <sub>1061</sub>	_____ LF <sub>1064</sub>
Single-family attached (SFA) floor beams: LF per UNIT .....	_____ LF <sub>1061a</sub>	_____ LF <sub>1064a</sub>
Multifamily floor beams: LF per UNIT .....	_____ LF <sub>1062</sub>	_____ LF <sub>1065</sub>

## FLOOR BEAM MATERIAL

What **percent** of your floor beams were:

	GROUND FLOOR	UPPER FLOORS
Built-up dimension lumber ....	_____ 1099	_____ 1108
Solid wood beams (4x6 or greater) ..	_____ 1100	_____ 1109
Glulam .....	_____ 1101	_____ 1110
LVL .....	_____ 1102	_____ 1111
Parallam® .....	_____ 1103	_____ 1112
TimberStrand® .....	_____ 1103a	_____ 1112a
Open-web Joist .....	_____ 1104	_____ 1113
Steel (all types) .....	_____ 1105	_____ 1114
I-Joist (multiple) .....	_____ 1106	_____ 1115
Other _____ (PLEASE SPECIFY)	_____ 1107	_____ 1116
	<b>100%</b>	<b>100%</b>

## ROOF BEAMS AND CEILING SUPPORT BEAMS

For a **typical** house or multifamily **building**, how many **linear feet (LF)** of roof beams (ridge, hip, and valley) and beams located on the ceiling assembly did you use?

**Do not include** wall headers that support roofs.

Single-family detached (SFD) roof beams....	_____ LF <sub>1080</sub>
Single-family attached (SFA) roof beams ...	_____ LF <sub>1080a</sub>
Multifamily <b>building</b> roof beams .....	_____ LF <sub>1080b</sub>

What **percent** of your roof and ceiling assembly beams were:

Built-up dimensional lumber .....	_____ 1081
Solid wood beams (4x6 or greater) .....	_____ 1082
Glulam .....	_____ 1083
LVL .....	_____ 1084
Parallam® .....	_____ 1085
TimberStrand® .....	_____ 1085a
Girder truss .....	_____ 1086
Steel (all types) .....	_____ 1087
I-Joist (multiple) .....	_____ 1088
Other _____ (PLEASE SPECIFY)	_____ 1089
	<b>100%</b>

## ROOF FRAMING

What **percent** of the total roof area on your homes were the following shapes?

Gable .....	_____	261
Hip .....	_____	262
Gambrel .....	_____	263
Flat .....	_____	264a
Other _____ (PLEASE SPECIFY)	_____	264
		<b>100%</b>

## TURNED GABLES AND DORMERS

How many turned gables (gables perpendicular to the main ridge of the roof) and dormers did your typical house or multifamily building have?

	SFD	SFA	MF BUILDINGS
Turned gables..	_____ 265	_____ 265a	_____ 265b
Dormers .....	_____ 266	_____ 266a	_____ 266b

## TYPE OF ROOF FRAMING

What **percent** of your houses had roofs framed with:

Combination of trusses and rafters .....	_____	270
Rafters only .....	_____	268
Trusses only .....	_____	269
Structural insulated panels (SIPs) .....	_____	271
Beams and purlins .....	_____	272
Other _____ (PLEASE SPECIFY)	_____	273
		<b>100%</b>

## SPECIES OF ROOF FRAMING LUMBER

What percent of your dimensional lumber trusses or rafters / ceiling joists (**not** I-joists) were:

	TRUSSES	RAFTERS
Southern yellow pine (SYP) .....	_____ 280	_____ 285
Douglas fir or hem-fir .....	_____ 281	_____ 286
Spruce / Pine / Fir (SPF) .....	_____ 282	_____ 287
Treated lumber .....	_____ 282a	_____ 287a
Don't know .....	_____ 283	_____ 288
Other _____ (PLEASE SPECIFY)	_____ 284	_____ 289
	<b>100%</b>	<b>100%</b>

## COMBINATION TRUSS & RAFTER ROOFS

For roofs framed with both trusses and rafters, what **percent** of the roof was typically framed with each?

Trusses .....	_____	274
Rafters .....	_____	275
		<b>100%</b>

## RAFTER ROOFS

If you built with rafters, what **percent** of your rafters were:

Lumber .....	_____	276
I-joists .....	_____	277
Steel .....	_____	278
		<b>100%</b>

## TRUSS ROOFS

If you built with roof trusses, what **percent** of your trusses were:

Lumber .....	_____	276a
I-joists .....	_____	277a
Steel .....	_____	278a
		<b>100%</b>

## CEILING TYPE

What **percent** of the ceiling area **directly under the roof** was:

Sloped (i.e., cathedral or vaulted) .....	_____	296
Flat .....	_____	297
		<b>100%</b>

## OVERHANG / EAVES

How deep was the eave or overhang of your typical house?

Inches .....	_____	267
--------------	-------	-----

## ROOF PITCH

What **percent** of your roofs had pitches of:

Flat to 1/2 / 12" .....	_____	290
1/2 / 12" to 4/12" .....	_____	291
5/12" or 6/12" .....	_____	292
7/12" or 8/12" .....	_____	293
9/12" or 10/12" .....	_____	294
11/12" or greater .....	_____	295
		<b>100%</b>

## ROOFING MATERIAL

What **percent** of your typical home's total roof area was roofed with:

Asphalt shingle, three tab, standard weight .....	_____	310
Asphalt shingle, "Architectural" or laminated .....	_____	311
Cedar shingles (sawn) .....	_____	312
Cedar shakes (split) .....	_____	313
Clay or ceramic roof tiles .....	_____	315
Concrete roof tiles .....	_____	316
Fiber-cement shingles .....	_____	317
Slate (natural) .....	_____	318
Steel .....	_____	319
Aluminum .....	_____	320
Copper .....	_____	314
Built-up roof (e.g., hot-mopped asphalt) .....	_____	321
Single ply (EPDM, vinyl, modified bitumen) .....	_____	322
Composite shingles (plastic or recycled rubber) ...	_____	322b
Other _____ (PLEASE SPECIFY)	_____	322a
		<b>100%</b>

## METAL ROOFING STYLE

What **percent** of your non-copper metal roofing was:

Metal shakes/shingles/tiles .....	_____	310
Standing seam/Vertical ribbed .....	_____	311
Corrugated .....	_____	312
Flat panel .....	_____	313
Granulated .....	_____	322c
Don't know .....	_____	322b
Other _____ (PLEASE SPECIFY)	_____	322a
		<b>100%</b>

**ROOF VENTILATION**

What **percent** of your homes and multifamily buildings had:

	SFD	SFA	MF BUILDINGS
Ridge vents .....	329	329a	329b
Roof vents – not powered .....	330	330a	330b
Wind turbine roof vents .....	331	331a	331b
Roof mounted attic fans .....	332	332a	332b
Gable wall louvers .....	333	333a	333b
Gable mounted attic fans .....	334	334a	334b
Whole house fans .....	335	335a	335b
Soffit vents .....	336	336a	336b
<b>Totals need not add to 100%</b>			

**ROOF SHEATHING**

What **percent** of your total roof area was sheathed with:

<b>NONE</b> (roofing attached directly to framing, or SIPs) ..	298
3/8” plywood .....	299
1/2” plywood .....	300
5/8” plywood .....	301
3/4” plywood .....	302
7/16” OSB (including Advantech) .....	303
1/2” OSB (including Advantech) .....	303a
5/8” OSB (including Advantech) .....	304
3/4” OSB (including Advantech) .....	305
1”x boards (3/4” actual) – no spacing .....	306
1”x boards (3/4” actual) – spaced .....	307
2”x lumber (1-1/2” actual – including T&G) .....	308
Other .....	309
(PLEASE SPECIFY)	
<b>100%</b>	

**SOFFIT & FASCIA MATERIAL – EAVES & RAKES**

What **percent** of your soffit and fascia material was made of:

	SOFFIT	FASCIA
<b>NO</b> soffit or fascia installed .....	358	366
Solid wood / Lumber .....	359	367
Plywood / LVL .....	360a	368a
Hardboard or MDF (e.g., Miratec®, PrimeTrim®, engineered wood trim) .....	361	369
OSB (LP SmartSide®) .....	362	370
Stucco .....	363	371
Cellular PVC (Azek® or Koma®) .....	365e	373e
Vinyl (wrap for fascia) .....	364	372
Aluminum (wrap for fascia) .....	365	373
Steel .....	365b	373b
Fiber Cement .....	365c	373c
Urethane / Polyurethane plastic .....	365d	373d
Plastic & wood fiber composite .....	365f	373f
Other .....	365a	373a
(PLEASE SPECIFY)		
<b>100%</b>		<b>100%</b>

**SIDING / EXTERIOR FINISH MATERIAL**

What **percent** of the total exterior wall area for all the homes you built, including garages and dormers, was finished (sided) with the following materials?

**Wood-based Siding**

Plywood panels (e.g., T-111) .....	341
Hardboard (e.g., Masonite®, ABTCO) .....	342
Lumber boards (cedar or pine clapboards, etc.) .....	343
Cedar shingles (sawn) or shakes (split) .....	344
OSB (e.g., LP SmartLap®, LP SmartPanel®) ...	345
Other type of wood siding .....	346
(PLEASE SPECIFY)	

**Masonry and Cement Materials**

Brick .....	347
Natural stone .....	348
Manufactured stone (“synthetic stone”) .....	349
Cement stucco .....	350
Synthetic stucco or EIFS (e.g., Dryvit®, STO®) .....	351
Architectural concrete block (split-face, etc.) ...	352
Fiber-cement siding (e.g., Hardiplank®, CertainTeed) .....	353

**Plastic & Metal Siding**

Vinyl .....	354
Aluminum .....	355
Steel .....	356
<b>Other</b> .....	357
(PLEASE SPECIFY)	
<b>100%</b>	

**EXTERIOR TRIM MATERIAL**

What **percent** of the total exterior ornamental trim you installed was made of (exclude soffit & fascia):

<b>NO</b> exterior ornamental trim installed .....	719
Solid wood / Lumber .....	720
Plywood / LVL .....	721
Hardboard or MDF (e.g., Miratec®, PrimeTrim®, engineered wood trim) .....	722
OSB (LP SmartSide®) .....	723
Stucco .....	723a
Vinyl (wrap) .....	723b
Aluminum (wrap) .....	723c
Steel .....	725
Fiber Cement .....	725a
Urethane / Polyurethane plastic .....	725b
Cellular PVC (Azek® or Koma®) .....	725c
Plastic & wood fiber composite .....	725d
Other .....	724
(PLEASE SPECIFY)	
<b>100%</b>	

**EXTERIOR TRIM TYPE**

Considering your typical house, what style of exterior trim / molding do you **most commonly** apply?

	EAVES	FRONT DOOR	FRONT WINDOWS	OTHER DOORS OR WINDOWS
Board only, no crown .... [ ]	[ ]	[ ]	[ ]	[ ] <sub>1</sub>
Board and crown ..... [ ]	[ ]	[ ]	[ ]	[ ] <sub>2</sub>
Crown only ..... [ ]	[ ]	[ ]	[ ]	[ ] <sub>3</sub>
Dentil molding ..... [ ]	[ ]	[ ]	[ ]	[ ] <sub>4</sub>
Pediments ..... [ ]	[ ]	[ ]	[ ]	[ ] <sub>5</sub>
Pilasters ..... [ ]	[ ]	[ ]	[ ]	[ ] <sub>6</sub>
Arches ..... [ ]	[ ]	[ ]	[ ]	[ ] <sub>7</sub>
Other special moldings .. [ ]	[ ]	[ ]	[ ]	[ ] <sub>8</sub>
None (part of door / window) . [ ]	[ ]	[ ]	[ ]	[ ] <sub>9</sub>
	N76	N77	N78	N79

**WINDOWS**

**AVERAGE WINDOW OPENINGS PER HOUSE**

What was the **average number** of window **openings** (in the wall framing) in your typical house?

**Exclude** openings for doors and non-prime windows.

SFD Starter	SFD Move-up	SFD Luxury	SFA Per UNIT	MF Per UNIT
_____ 374a	_____ 374b	_____ 374c	_____ 375	_____ 376

**AVERAGE WINDOW UNITS PER HOUSE**

Considering that some window **openings** have more than one window **unit** per opening: how many window **units** were in your **typical** home?

Include both operable (venting) and fixed units.

Average number of window **units** per new home:

SFD Starter	SFD Move-up	SFD Luxury	SFA Per UNIT	MF Per UNIT
_____ 377a	_____ 377b	_____ 377c	_____ 378	_____ 379

**GLAZING**

What **percent** of your windows were:

Single glazed .....	_____ 422
Double glazed .....	_____ 423
Triple glazed .....	_____ 424
Heat-Mirror® .....	_____ 425
	<b>100%</b>

**GLASS TYPE**

What **type** of glass did your windows **most commonly** have?

Clear .....	_____ 426
Low-E .....	_____ 427
Argon filled .....	_____ 427a
Tinted .....	_____ 428
Impact resistant .....	_____ 428a

**Totals need not add to 100%**

**MATERIAL OF WINDOW FRAMES**

What **percent** of all the window **units** you installed had the following frame material?

	SFD	SFA	MF UNITS
Wood (no cladding) ....	_____ 380	_____ 387	_____ 394
Wood, aluminum clad. ....	_____ 381	_____ 388	_____ 395
Wood, vinyl clad .....	_____ 382	_____ 389	_____ 396
Aluminum .....	_____ 383	_____ 390	_____ 397
Vinyl .....	_____ 384	_____ 391	_____ 398
Composite (fiberglass) .....	_____ 385	_____ 392	_____ 399
Other _____	_____ 386	_____ 393	_____ 400
(PLEASE SPECIFY)	<b>100%</b>	<b>100%</b>	<b>100%</b>

**WINDOW TYPE**

What **percent** of all the window **units** you installed were:

	SFD	SFA	MF UNITS
Casement .....	_____ 401	_____ 408	_____ 415
Awning .....	_____ 402	_____ 409	_____ 416
Double hung .....	_____ 403	_____ 410	_____ 417
Single hung .....	_____ 404	_____ 411	_____ 418
Sliding (side-by-side) .....	_____ 405	_____ 412	_____ 419
Fixed (rectangular) .....	_____ 406	_____ 413	_____ 420
Fixed (non- rectangular) .	_____ 407	_____ 414	_____ 421
Other _____	_____ 407a	_____ 414a	_____ 421a
(PLEASE SPECIFY)	<b>100%</b>	<b>100%</b>	<b>100%</b>

**SKYLIGHTS AND ROOF WINDOWS**

**How many** skylights/roof windows did your **typical** house have?

	SFD	SFA	MF Per BUILDING
Skylights .....	_____ 323	_____ 325	_____ 327
Tubular Skylights .....	_____ 323a	_____ 325a	_____ 327a
Roof windows .....	_____ 324	_____ 326	_____ 328

**EXTERIOR SHUTTERS**

**How many PAIRS** of exterior shutters did your **typical** house have?

	SFD	SFA	MF Per UNIT
	_____ 731	_____ 731a	_____ 731b

What **percent** of the shutters were made of:

Wood (any type) .....	_____ 732	_____ 732a	_____ 732b
Plastic (including polyurethane and PVC) .....	_____ 733	_____ 733a	_____ 733b
Other .....	_____ 734	_____ 734a	_____ 734b
	<b>100%</b>	<b>100%</b>	<b>100%</b>

What **percent** of the shutters were of the following styles?

Raised panel .....	_____ 735	_____ 735a	_____ 735b
Louvered .....	_____ 736	_____ 736a	_____ 736b
Board and Batten .....	_____ 737	_____ 737a	_____ 737b
Other .....	_____ 738	_____ 738a	_____ 738b
	<b>100%</b>	<b>100%</b>	<b>100%</b>

## PATIO DOORS

How many patio door **openings** did your typical house have?  
Please include both sliding and hinged patio doors.

SFD Starter	SFD Move-up	SFD Luxury	SFA Per UNIT	MF Per UNIT
_____ 429a	_____ 429b	_____ 429c	_____ 430	_____ 431

## PATIO DOOR TYPE

What **percent** of all your patio doors were:

	SFD	SFA	MF
Swinging (hinged) .....	_____ 432	_____ 434	_____ 436
Sliding .....	_____ 433	_____ 435	_____ 437
	<b>100%</b>	<b>100%</b>	<b>100%</b>

## PATIO DOOR MATERIAL

What **percent** of all your patio doors were:

	HINGED	SLIDING
Wood (no cladding) .....	_____ 438	_____ 446
Wood, aluminum clad .....	_____ 439	_____ 447
Wood, vinyl clad .....	_____ 440	_____ 448
Steel .....	_____ 441	_____ 449
Aluminum .....	_____ 442	_____ 450
Vinyl .....	_____ 443	_____ 451
Composite (fiberglass, etc.) .....	_____ 444	_____ 452
Other _____ (PLEASE SPECIFY)	_____ 445	_____ 453
	<b>100%</b>	<b>100%</b>

## EXTERIOR DOORS

How many exterior entry door **OPENINGS** were in your typical house?

Exclude patio doors.

SFD Starter	SFD Move-up	SFD Luxury	SFA Per UNIT	MF Per UNIT
_____ 454a	_____ 454b	_____ 454c	_____ 455	_____ 456

## EXTERIOR DOOR MATERIAL

What **percent** of all your exterior doors were: (If glass, answer for frame material)

Exclude patio doors.

	FRONT	OTHER
Solid wood – raised panel .....	_____ 457	_____ 462
Wood – flush .....	_____ 458	_____ 463
Steel – raised panel .....	_____ 459	_____ 464
Steel – flush .....	_____ 460	_____ 465
Fiberglass .....	_____ 461	_____ 466
Other _____ (PLEASE SPECIFY)	_____ 461a	_____ 466a
	<b>100%</b>	<b>100%</b>

## DOUBLE FRONT DOORS

What **percent** of your front doors were double doors? \_\_\_\_\_ 467

## SIDELITES

What **percent** of your front doors had sidelites?

Sidelites on one side .....	_____ 468
Sidelites on both sides .....	_____ 469
NO sidelites .....	_____ 470
	<b>100%</b>

## MULTIFAMILY COMMON ENTRY DOORS

In some multifamily buildings, the individual living units have entry doors opening directly to the outside. Other buildings have common entry doors opening to hallways leading to entry doors for the individual living units.

What **percent** of your multifamily buildings used common entry doors? .....

Of the new multifamily buildings with common entry doors, how many common entry doors, including double doors, did a **typical** building have? .....

## INTERIOR DOORS

Interior doors include bedroom, bathroom, closet, and all other interior doors. What **percent** of your interior doors were:

Single interior hinged door(s) .....	_____ 477a
Double interior hinged door(s) .....	_____ 477b
Single bi-fold door(s) .....	_____ 477c
Double bi-fold door(s) .....	_____ 477d
Sliding / Pocket / Bypass door(s) .....	_____ 477e
Other door(s) _____ (PLEASE SPECIFY)	_____ 477f
	<b>100%</b>

## INTERIOR DOOR MATERIAL

What **percent** of all your interior doors were:

	PASSAGE	CLOSET
<b>SOLID WOOD DOORS</b>		
Panel door .....	_____ 478	_____ 487
Flush door .....	_____ 479	_____ 488
Louvered door .....	_____ 479a	_____ 488a
Door with glass units .....	_____ 480	_____ 489
<b>ENGINEERED WOOD DOORS</b>		
Hollow core panel door .....	_____ 480a	_____ 489a
Hollow core flush door .....	_____ 481	_____ 490
Solid core panel door .....	_____ 482	_____ 491
Solid core flush door .....	_____ 482a	_____ 491a
<b>OTHER TYPES OF DOORS</b>		
Mirror on steel frame .....	_____ 483	_____ 492
Steel (no mirror) .....	_____ 484	_____ 493
Other _____ (PLEASE SPECIFY)	_____ 486	_____ 495
	<b>100%</b>	<b>100%</b>



## CABINETS & COUNTERTOPS

Indicate the **number** of cabinets and the **linear feet** of kitchen countertop you installed in a typical home.

	SFD & SFA	MF
<b>Number</b> of Kitchen cabinets .....	_____ 542	_____ 558
<b>Number</b> of Vanity cabinets .....	_____ 543	_____ 559
<b>Number</b> of Medicine cabinets .....	_____ 543a	_____ 559a
<b>Number</b> of Other cabinets .....	_____ 544	_____ 560
<b>Linear feet</b> of Kitchen countertops ..	_____ 545	_____ 561

## KITCHEN AND VANITY COUNTERTOP MATERIAL

What **percent** of your kitchen and bathroom vanity countertops were made of:

	KITCHEN	VANITY
Solid Surface (e.g., Corian <sup>®</sup> , Surell <sup>®</sup> , Swanstone <sup>®</sup> ) .....	_____ 584	_____ 590
Laminate (e.g., Formica <sup>®</sup> , WilsonArt <sup>®</sup> ) .....	_____ 585	_____ 591
Ceramic tile .....	_____ 586	_____ 592
Cultured marble .....	_____ 587	_____ 593
Engineered stone or quartz surfacing (Zodiaq <sup>®</sup> , Silestone <sup>®</sup> ) .....	_____ 587a	_____ 593a
Solid wood (butcher block) .....	_____ 588	_____ 594
Granite .....	_____ 589	_____ 594a
Marble, slate, or other natural stone..	_____ 589a	_____ 595a
Other _____ (PLEASE SPECIFY)	_____ 589b	_____ 595b
	<b>100%</b>	<b>100%</b>

## MATERIAL OF CABINET BOX

What **percent** of the cabinets you installed had sides and shelves made of:

	SFD & SFA	MF
Wood veneer on particleboard or MDF ..	_____ 576	_____ 580
Solid Wood .....	_____ 576a	_____ 580a
Plastic or paper overlay, or laminate on particleboard or MDF .....	_____ 577	_____ 581
Plywood (all types) .....	_____ 578	_____ 582
Other _____ (PLEASE SPECIFY)	_____ 579	_____ 583
	<b>100%</b>	<b>100%</b>

## CABINET DOOR TYPE

What **percent** of the cabinets you installed had the following types of doors?

	SFD & SFA	MF
Wood finish, raised panel in frame .	_____ 563	_____ 570
Wood finish, flat panel in frame ....	_____ 564	_____ 571
Glass panel in wood frame .....	_____ 564a	_____ 571a
Laminate with raised panel look ....	_____ 567	_____ 574
Wood finish, flat panel, no frame ..	_____ 565	_____ 570
Laminate finish, flat panel, no frame	_____ 566	_____ 573
Other _____ (PLEASE SPECIFY)	_____ 568	_____ 575
	<b>100%</b>	<b>100%</b>

## CABINET FRAME TYPE

What **percent** of the cabinets you installed had the following types of face frames?

	SFD & SFA	MF
Frameless (European style) .....	_____ 562a	_____ 569a
Face-framed (Traditional) .....	_____ 562b	_____ 569b
Other: _____ (PLEASE SPECIFY)	_____ 562c	_____ 569c
	<b>100%</b>	<b>100%</b>

## DRIVEWAYS

The following questions deal **only** with **single-family** homes.

<b>Percent</b> of single-family homes with driveways ...	_____ 777
<b>Length</b> (in feet) of typical driveway.....	_____ 777_L
<b>Width</b> (in feet) of typical driveway .....	_____ 777_W

What **percent** of your driveways were made of:

Asphalt .....	_____ 778
Poured concrete (including stamped/stenciled) .....	_____ 779
Brick .....	_____ 780
Concrete paver .....	_____ 781
Gravel (crushed stone) <b>with</b> concrete parking pad .....	_____ 782
Gravel (crushed stone) <b>no</b> concrete parking pad .....	_____ 783
Other _____ (PLEASE SPECIFY)	_____ 784
	<b>100%</b>

## GARAGE DOORS

What **percent** of your garages had the following types of doors?

One single door .....	_____ 750a
One double door .....	_____ 750
Two single doors .....	_____ 751
One double door, one single door .....	_____ 752
Three single doors.....	_____ 753
Other configuration .....	_____ 753a
	(PLEASE SPECIFY) <b>100%</b>

## GARAGE DOOR OPTIONS

What **percent** of your garage doors were the following types?

Sectional .....	_____ 739
One-piece (canopy or retractable).....	_____ 740
Side hinged .....	_____ 741
Other .....	_____ 742
	<b>100%</b>

What **percent** of your garage doors were the following materials?

Steel .....	_____ 754
Wood .....	_____ 755
Fiberglass or Plastic .....	_____ 756
Other .....	_____ 757
	<b>100%</b>

What **percent** of your garage doors were the following styles?

Raised panel .....	_____ 759
Flat panel .....	_____ 760
Other .....	_____ 761
	<b>100%</b>

What **percent** of your garage doors were insulated? \_\_\_\_\_ 821a

What **percent** of your garage doors had windows? .. \_\_\_\_\_ 824a

What **percent** of your garage doors had openers? .. \_\_\_\_\_ 745

## FINISHED FLOORING TYPE

What type of flooring do you **most commonly** install in the following rooms?

(✓only one box per row)	Wall- to-Wall Carpet	Hardwood (solid)	Hardwood (engineered)	Vinyl Sheet	Vinyl Tile	Laminate (Pergo, <sup>®</sup> Wilsonart <sup>®</sup> )	Ceramic Tile	Slate	Marble	Other	
	1	2	3	4	5	6	7	8	9	10	
Entry foyer (✓one) .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	642
Living room (✓one) .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	643
Dining room (✓one) .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	644
Family room, den, rec room (✓one) ..	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	645
Kitchen (✓one) .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	646
Bedrooms (✓one) .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	647
Half bathrooms (✓one) .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	648
Full bathrooms (✓one) .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	649
Hallway (✓one) .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	651
Finished basement (✓one) .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	651a

### FLOORING UNDERLAYMENT MATERIAL

Underlayment is a second layer of sheet goods over the structural floor sheathing or concrete slab.

What **percent** of all the flooring underlayment you used was:

Luan plywood .....	_____	668
1/4" OSB .....	_____	669
3/8" OSB .....	_____	670
7/16" or 1/2" OSB .....	_____	671
5/8" OSB .....	_____	672
3/4" OSB .....	_____	673
1/4" plywood (other than luan) .....	_____	674
3/8" plywood .....	_____	675
1/2" plywood .....	_____	676
5/8" plywood .....	_____	677
3/4" plywood .....	_____	678
1/4" particleboard .....	_____	679
3/8" particleboard .....	_____	680
1/2" particleboard .....	_____	681
5/8" particleboard .....	_____	682
3/4" particleboard .....	_____	683
1/4" hardboard .....	_____	684
Fiber-cement (e.g., Hardibacker <sup>®</sup> , Viroc <sup>®</sup> ) .....	_____	685a
Cement board (glass fiber reinforced, Durock <sup>®</sup> ) .....	_____	685
Gypsum panel (FibeRock <sup>®</sup> or Dens-Shield <sup>®</sup> ) ..	_____	686
Poured lightweight concrete (Gypcrete <sup>®</sup> , etc.) ..	_____	686a
Other _____	_____	687
(PLEASE SPECIFY)		<b>100%</b>

### ROOMS WITH FLOORING UNDERLAYMENT

In which rooms did you **typically** use underlayment?

(✓all that apply)

None .....	[ ]	661a
All Rooms .....	[ ]	661b
Entry foyer .....	[ ]	652
Living room .....	[ ]	653
Dining room .....	[ ]	655
Family room, den, rec room .....	[ ]	656
Kitchen .....	[ ]	657
Bedrooms .....	[ ]	658
Half bathrooms .....	[ ]	659
Full bathrooms .....	[ ]	661
Hallway .....	[ ]	661c
Other rooms _____	[ ]	662
(PLEASE SPECIFY)		

### INSULATION

#### FLAT CEILINGS / ATTIC INSULATION MATERIAL

What **percent** of your total **flat** ceiling areas (e.g., attics) were insulated with the following materials, and what was the typical R-value?

	% FLAT CEILINGS INSULATED	R-VALUE
<b>NOT</b> insulated .....	_____	820
Fiberglass batt and blown .....	_____	812 _____ 812r
Fiberglass batt .....	_____	813 _____ 813r
Fiberglass blown .....	_____	814 _____ 814r
Rockwool batt .....	_____	815 _____ 815r
Rockwool blown .....	_____	816 _____ 816r
Cellulose blown .....	_____	817 _____ 817r
Spray foam .....	_____	818 _____ 818r
Foam board .....	_____	822 _____ 822r
Other _____	_____	819 _____ 819r
(PLEASE SPECIFY)		<b>100%</b>

### SLAB-ON-GRADE FOUNDATION INSULATION

What type of insulation did you **typically** use with slab-on-grade foundations, beneath the slab and / or around the perimeter?  
**One ✓ per column:**

	BENEATH SLAB	PERIMETER
Extruded polystyrene (e.g., Dow-Styrofoam®, etc.)	[ ]	[ ] <sub>1</sub>
Expanded polystyrene (bead board)	[ ]	[ ] <sub>2</sub>
Polyisocyanurate (e.g., Thermax®)	[ ]	[ ] <sub>3</sub>
Fiberglass	[ ]	[ ] <sub>4</sub>
No insulation used for slab	[ ] <sub>843</sub>	[ ] <sub>844</sub>

### THICKNESS OF SLAB INSULATION MATERIAL

What was the **typical thickness** of the insulation you used with slab-on-grade foundations, beneath the slab and / or around the perimeter?  
**One ✓ per column:**

	BENEATH SLAB	PERIMETER
3/4"	[ ]	[ ] <sub>1</sub>
1"	[ ]	[ ] <sub>2</sub>
1-1/2"	[ ]	[ ] <sub>3</sub>
2" or more	[ ] <sub>845</sub>	[ ] <sub>846</sub>

### BASEMENT AND CRAWL SPACE INSULATION

What method did you **typically** use to insulate the foundations of homes with basements or crawl spaces? **(One ✓ per column)**

	BASE- MENTS	CRAWL SPACES
Between floor joists of the ground floor	[ ]	[ ] <sub>1</sub>
Entire <b>interior</b> and <b>exterior</b> surfaces of the foundation wall	[ ]	[ ] <sub>2</sub>
Entire <b>interior</b> surface of foundation wall	[ ]	[ ] <sub>3</sub>
Only above-grade <b>interior</b>	[ ]	[ ] <sub>4</sub>
Entire <b>exterior</b> surface of foundation wall	[ ]	[ ] <sub>5</sub>
Only below-grade portion of foundation wall <b>exterior</b>	[ ]	[ ] <sub>6</sub>
Only above-grade portion of foundation wall <b>exterior</b>	[ ]	[ ] <sub>7</sub>
Foundation wall cavity	[ ]	[ ] <sub>8</sub>
<b>NO</b> foundation insulation used	[ ] <sub>847</sub>	[ ] <sub>848</sub>

### FOUNDATION WALL INSULATION TYPE

What material did you **typically** use to insulate your basement or crawl space walls, and what was the R-value?

If you insulated **both the interior and exterior** surfaces, you may ✓ **two** materials; otherwise ✓ **only one**.

	MATERIAL	R-VALUE
Fiberglass batt or blanket	[ ] <sub>851_1</sub>	_____ 851_1r
Rockwool batt	[ ] <sub>851_2</sub>	_____ 851_2r
Fiberglass / rockwool board	[ ] <sub>851_3</sub>	_____ 851_3r
Extruded polystyrene (XPS)	[ ] <sub>851_4</sub>	_____ 851_4r
Expanded polystyrene (EPS)	[ ] <sub>851_5</sub>	_____ 851_5r
Polyisocyanurate	[ ] <sub>851_6</sub>	_____ 851_6r
Spray foam	[ ] <sub>851_8</sub>	_____ 851_8r
Other	[ ] <sub>851_7</sub>	_____ 851_7r

(PLEASE SPECIFY)

### HOUSES INSULATED BETWEEN FLOOR JOISTS

What material did you **typically** use to insulate between ground floor joists and what was the **typical R-value**?

	MATERIAL	R-VALUE
Fiberglass batt or blanket	[ ] <sub>1</sub>	_____
Rockwool batt	[ ] <sub>2</sub>	_____
Fiberglass blown	[ ] <sub>3</sub>	_____
Cellulose blown	[ ] <sub>4</sub>	_____
Spray foam	[ ] <sub>5</sub>	_____
Foam board or SIPs	[ ] <sub>849</sub>	_____ 850

### GARAGE INSULATION

What **percent** of your garages had insulation installed in the:

Ceilings	_____ 853
All walls	_____ 854
Only walls shared with living space	_____ 855

**Total need not add to 100%**

### WALL CAVITY INSULATION MATERIAL

What **percent** of your homes had the following wall cavity insulation materials, and what were their R-values?

**Do not include** foam exterior wall sheathing.

	% HOMES	R-VALUE
<b>NO</b> wall cavity insulation	_____ 840	
Fiberglass batt	_____ 832	_____ 832r
Rockwool batt	_____ 833	_____ 833r
Fiberglass blown behind mesh	_____ 834	_____ 834r
Fiberglass blown-in, no mesh	_____ 835	_____ 835r
Cellulose blown behind mesh	_____ 836	_____ 836r
Cellulose blown-in, no mesh	_____ 837	_____ 837r
Spray foam	_____ 868	_____ 868r
Foam board or SIPs	_____ 838	_____ 838r
Other	_____ 839	_____ 839r

(PLEASE SPECIFY) **100%**

If you used spray foam insulation **anywhere** in your homes, was it typically Polyurethane?

Yes	[ ] <sub>1</sub>
No	[ ] <sub>2</sub>
Don't know	[ ] <sub>3</sub>

945

### CATHEDRAL CEILING INSULATION MATERIAL

What **percent** of your cathedral / sloped ceilings were insulated with the following materials, and what was the typical R-value?

	% CATHEDRAL CEILINGS INSULATED	R-VALUE
<b>NOT</b> insulated	_____ 831	
Fiberglass batt	_____ 827	_____ 827r
Rockwool batt	_____ 828	_____ 828r
Spray foam	_____ 842	_____ 842r
Foam board or SIPs	_____ 829	_____ 829r
Other	_____ 830	_____ 830r

(PLEASE SPECIFY) **100%**

**SOUND INSULATION**

What **percent** of your homes had some insulation in their interior partition walls and / or floors-between-stories to dampen sound?

	SFD	SFA	MF BUILDINGS
Homes with <b>wall</b> sound insulation	_____ 806	_____ 807	_____ 808
Homes with <b>floor</b> sound insulation	_____ 806a	_____ 807a	_____ 808a

Of your homes with **wall sound insulation**, how many linear feet (LF) of interior partition wall did you insulate in your **typical** house or unit?

LF of <b>wall</b> with sound insulation	_____ 809	_____ 810	_____ 811
---	-----------	-----------	-----------

Of your homes with **floor sound insulation**, how many square feet (SF) of floor area did you insulate in your **typical** house or unit?

Sq.Ft. of <b>floor</b> with sound insulation	_____ 809a	_____ 810a	_____ 811a
--	------------	------------	------------

**AIR INFILTRATION BARRIERS / HOUSE WRAP**

What **percent** of your homes and multifamily buildings were wrapped with **air infiltration barrier** material? **Exclude** roofing felt.

	SFD	SFA	MF BUILDINGS
Percent wrapped: .....	_____ 856	_____ 856a	_____ 856b

**RADIANT BARRIERS**

What **percent** of your houses had radiant barriers in the wall, roof, or ceiling assembly?

Radiant barrier roof sheathing .....	_____ 857
Other roof/ceiling/attic radiant barrier .....	_____ 857a
Radiant barrier in wall .....	_____ 858

**Totals need not add to 100%**

**AIR (HVAC) DUCTS**

What **percent** of your houses with ducted HVAC systems had the main duct and run-outs located in the:

Basement, crawl space or in framed floors only	_____ 1008
Attic only .....	_____ 1009
Both attic and basement or crawlspace .....	_____ 1010
In or under concrete floor slab .....	_____ 1011
Both in attic and concrete floor slab .....	_____ 1011a
	<b>100%</b>

**AIR DUCT MATERIAL**

What **percent** of your houses with ducted HVAC systems had the following types of duct material?

**MAIN DUCTS**

Metal .....	_____ 912
Flexible .....	_____ 913
Fiberglass, rigid (foil-faced fiberglass board).....	_____ 914
Other .....	_____ 914a
	(PLEASE SPECIFY)
	<b>100%</b>

**RUN-OUT DUCTS**

Metal .....	_____ 915
Flexible .....	_____ 916
Fiberglass, rigid (foil-faced fiberglass board) ...	_____ 917
Other .....	_____ 917a
	(PLEASE SPECIFY)
	<b>100%</b>

**WALL STACKS**

Metal .....	_____ 918
Fiberglass, rigid (foil-faced fiberglass board) ...	_____ 919
<b>NONE</b> (wall cavity) .....	_____ 920
Other .....	_____ 920a
	(PLEASE SPECIFY)
	<b>100%</b>

**RIGID FIBERGLASS DUCTS**

If you used any rigid fiberglass ducts, what was the typical thickness of the fiberglass board used. (**✓one**)

1 inch .....	[ ] 1
2 inch .....	[ ] 2
Other .....	[ ] 3
	926
	(PLEASE SPECIFY)

**METAL DUCT INSULATION**

If you used any metal duct, what **percent** of all the metal ducting was insulated by the following methods, if any?

Lined with insulation (insulation inside the duct)	_____ 921
Wrapped with insulation .....	_____ 922
<b>NOT</b> insulated .....	_____ 924
Other .....	_____ 923
	(PLEASE SPECIFY)
	<b>100%</b>

**METAL DUCT WRAP THICKNESS**

If you used any duct insulation wrap, what was the typical thickness? (**✓one**)

1-1/2 inches or less .....	[ ] 1
2 inches .....	[ ] 2
More than 2 inches .....	[ ] 3
	925

**FIREPLACES**

What **percent** of your homes had fireplaces (or chimneys for wood stoves)?

	SFD	SFA	MF UNITS
<b>NO</b> fireplaces or chimneys	_____ 712	_____ 712a	_____ 712b
One fireplace / chimney ..	_____ 713	_____ 713a	_____ 713b
Two fireplaces / chimneys	_____ 714	_____ 714a	_____ 714b
Three or more .....	_____ 715	_____ 715a	_____ 715b
	<b>100%</b>	<b>100%</b>	<b>100%</b>

What **percent** of your fireplaces and stoves were:

Site-built brick or stone .....	_____ 705
Site-built concrete masonry units .....	_____ 706
Factory-built steel – open-front .....	_____ 708
Factory-built steel – closed front .....	_____ 709
Stoves – wood or pellet burning .....	_____ 710
Chimney only – ready for stove .....	_____ 711
Other .....	_____ 711a
	(PLEASE SPECIFY)
	<b>100%</b>

What **percent** of your fireplaces and stoves were:

Gas .....	_____	716a
Wood, pellet, or corn .....	_____	716b
Electric .....	_____	716c
Jel / Gel .....	_____	716d
Other or not operational .....	_____	716e
	<b>100%</b>	

**DECKS, PATIOS, PORCHES, & FLATWORK**

What **percent** of your homes had the following structures, and what was their typical **size** in square feet?

	PERCENT	SQ. FT.
Deck (outside) .....	_____ 927	_____ 928
Patio / Pool deck .....	_____ 929	_____ 930
Breezeway .....	_____ 931	_____ 932
Front porch .....	_____ 933	_____ 934
Front stoop .....	_____ 935	_____ 936
Side porch .....	_____ 937	_____ 938
Screened-in porch .....	_____ 939	_____ 940
	<b>Totals need not add to 100%</b>	

**TYPE OF PATIO / POOL DECK**

What **percent** of your patios had surfacing material made of:

Poured concrete (include stamped or stenciled) ..	_____	955
Concrete pavers .....	_____	956
Brick pavers .....	_____	957
Tiles – brick or clay .....	_____	957a
Natural stone .....	_____	958
Treated wood block .....	_____	959
Treated lumber .....	_____	959a
Other _____	_____	960
	(PLEASE SPECIFY)	<b>100%</b>

**DECK AND PORCH MATERIAL**

What **percent** of the decks and porches you built had decking or surface material made of:

	DECKS	PORCHES
Treated wood .....	_____ 961	_____ 968
Cedar .....	_____ 964	_____ 971
Redwood .....	_____ 965	_____ 972
Other untreated wood .....	_____ 966	_____ 973
Plastic & wood fiber composite (Trex, etc.) .....	_____ 966a	_____ 973a
PVC, vinyl, or fiberglass .....	_____ 967	_____ 974
Brick .....	_____ 975a	_____ 975a
Tiles – brick or clay .....	_____ 975b	_____ 975b
Concrete (include stamped and stenciled) .....	_____ 975	_____ 975
Natural stone .....	_____ 975c	_____ 975c
	<b>100%</b>	<b>100%</b>

**DECK AND PORCH RAILINGS**

What **percent** of your decks and porches had railings?

Decks _____ %	1121	Porches _____ %	1122a
---------------	------	-----------------	-------

What **percent** of your deck and porch railings consisted primarily of the following materials?

	DECKS	PORCHES
Treated wood .....	_____ 1123	_____ 1122
Cedar .....	_____ 1125	_____ 1124
Redwood .....	_____ 1127	_____ 1126
Other untreated wood .....	_____ 1129	_____ 1128
Plastic & wood fiber composite (Trex)...	_____ 1131	_____ 1130
PVC, vinyl, or fiberglass .....	_____ 1133	_____ 1132
Aluminum .....	_____ 1135	_____ 1134
Wrought iron or steel .....	_____ 1137	_____ 1136
Masonry or concrete (all types) ..	_____ 1139	_____ 1138
Other .....	_____ 1141	_____ 1140
	(PLEASE SPECIFY)	<b>100%</b>
	<b>100%</b>	<b>100%</b>

**WALKWAYS & SIDEWALKS**

How many **linear feet** of walkways and sidewalk did your typical home have?

\_\_\_\_\_ LF  
976

What **percent** of all your sidewalks and walkways were:

Poured concrete .....	_____ 977
Concrete paver .....	_____ 978
Asphalt .....	_____ 978a
Brick paver .....	_____ 979
Brick or clay tiles .....	_____ 979a
Natural stone .....	_____ 980
Crushed stone or gravel.....	_____ 981
Other _____	_____ 982
	(PLEASE SPECIFY)
	<b>100%</b>

**FENCING AND LANDSCAPE WALLS**

What **percent** of your homes or living units had fencing / privacy walls or landscape / retaining walls installed on the lot as part of their sales contract?

	Fence / Privacy Wall	Landscape / Retaining Wall
SF <b>Detached</b> Houses .....	_____ % 987	_____ % 998
SF <b>Attached</b> Houses .....	_____ % 987a	_____ % 998a
Multifamily <b>Buildings</b> .....	_____ % 987b	_____ % 998b
	<b>Totals need not add to 100%</b>	

For houses with fencing or walls, what was the typical **length** of fence or wall? (per building if multifamily)

	Fence / Privacy Wall	Landscape / Retaining Wall
SF <b>Detached</b> Houses .....	_____ LF 988	_____ LF 999
SF <b>Attached</b> Houses .....	_____ LF 988a	_____ LF 999a
Multifamily <b>Buildings</b> .....	_____ LF 988b	_____ LF 999b
	<b>Totals need not add to 100%</b>	

What was the typical **fence / wall height**?

	Fence / Privacy Wall	Landscape / Retaining Wall
SF <b>Detached</b> Houses .....	_____ FT 989	_____ FT 1000
SF <b>Attached</b> Houses .....	_____ FT 989a	_____ FT 1000a
Multifamily <b>Buildings</b> .....	_____ FT 989b	_____ FT 1000b
	<b>Totals need not add to 100%</b>	

**FENCING AND LANDSCAPE WALL MATERIAL**

What **percent** of the fences or walls were:

	Fence / Privacy Wall	Landscape / Retaining Wall
Wood – vertical boards on alternating sides .....	_____ 990	
Wood – vertical boards on one side ..	_____ 991	
Wood with horizontal rails / boards ..	_____ 992	
Chain link or wire w/ steel posts .....	_____ 993	
Wrought iron .....	_____ 993b	
Ornamental steel .....	_____ 997d	
Aluminum .....	_____ 993c	
Plastic & wood fiber composite (Trex, etc.) ..	_____ 993a	
Vinyl, PVC, or other plastic .....	_____ 994	
Pre-cast concrete .....	_____ 997	
Poured concrete .....	_____ 997a	_____ 1004
Concrete retaining wall blocks (dry stacked) .....	_____ 997c	_____ 1003a
Mortared concrete block .....	_____ 997b	_____ 1003
Stone .....	_____ 995	_____ 1001
Brick .....	_____ 996	_____ 1002
Treated lumber or timbers .....		_____ 1006
	<b>100%</b>	<b>100%</b>

**SWIMMING POOLS**

What **percent** of your homes included their own swimming pool as part of the sales contract?

SFD	SFA	MF BUILDINGS
_____ % 983	_____ % 983a	_____ % 983b

What was the typical size of the swimming pool?

Average size of SF <b>Detached</b> pool: _____ FT. x _____ FT.	984	985
Average size of SF <b>Attached</b> pool: _____ FT. x _____ FT.	984a	985a
Average size of Multifamily pool: _____ FT. x _____ FT.	984b	985b

**SWIMMING POOL MATERIAL**

What was the **primary method** used for constructing swimming pools?

	(✓ one)
Cast-in-place concrete .....	[ ] <sub>1</sub>
Shotcrete (gunnite) .....	[ ] <sub>2</sub>
Other _____	[ ] <sub>3</sub>
	(PLEASE SPECIFY) 986

**HOMES FOR OLDER BUYERS**

What **percent** of your homes were:

Constructed in “active adult” or age-restricted communities .....	_____ 746
Sold to occupants over the age of 55 .....	_____ 747

**PRACTICES REGARDING RADON GAS**

Please answer these questions even if you used **NO** radon-reducing practices.

**SUB-SLAB OR SUB-MEMBRANE VENTILATION**

What **percent** of the houses you built had the following types of ventilation systems to reduce radon:

	BASEMENTS OR SLABS	CRAWL SPACES
<b>NO</b> venting installed to reduce radon .....	_____ 791	_____ 795
A rough-in for ventilation (not a complete system, e.g., capped pipe riser in basement) .....	_____ 788	
Passive stack ventilation .....	_____ 789	_____ 792
Fan-driven (active) depressurization .....	_____ 790	_____ 793
Foundation wall vents .....	_____ 794	_____ 794
	<b>100%</b>	<b>100%</b>

**SEALING METHODS OF HOUSES WITH SLAB OR BASEMENT FOUNDATIONS**

How do you seal your slabs? If you **don't** seal, ✓ “**NO** slab sealing method used.”

(✓ all that apply)

<b>NO</b> slab sealing method used .....	[ ] 803
Polyethylene or other membrane under slab .....	[ ] 796
Membrane on foundation walls below grade .....	[ ] 797
Caulk around slab, wall openings and slab joints .....	[ ] 798
Seal interior of foundation walls .....	[ ] 799
Locate sump access outside of basement .....	[ ] 800
Install air tight sump pit covers .....	[ ] 801
Other _____	[ ] 802
	(PLEASE SPECIFY)

**RADON TESTING**

What **percent** of your homes were tested for radon? \_\_\_\_\_ %  
804

Of the houses tested for radon, what **percent** needed further work to reduce radon to less than 4 pCi/L? \_\_\_\_\_ %  
805

**PASSIVE vs. ACTIVE SUBSLAB VENTILATION**

If you installed **PASSIVE** sub-slab or sub-membrane ventilation (without a fan), what was the typical cost for you to include these features per home? (✓ one)

Less than \$200 .....	[ ] <sub>1</sub>
\$200 to \$299 .....	[ ] <sub>2</sub>
\$300 to \$399 .....	[ ] <sub>3</sub>
\$400 to \$499 .....	[ ] <sub>4</sub>
\$500 to \$599 .....	[ ] <sub>5</sub>
\$600 to \$799 .....	[ ] <sub>6</sub>
\$800 or more .....	[ ] <sub>7</sub>
	v114

If you installed **ACTIVE** sub-slab or sub-membrane ventilation (with a fan), what was the typical cost for you to include these features per home? (✓ one)

Less than \$450 .....	[ ] <sub>1</sub>
\$450 to \$549 .....	[ ] <sub>2</sub>
\$550 to \$649 .....	[ ] <sub>3</sub>
\$650 to \$749 .....	[ ] <sub>4</sub>
\$750 to \$849 .....	[ ] <sub>5</sub>
\$850 to \$1049 .....	[ ] <sub>6</sub>
\$1050 or more .....	[ ] <sub>7</sub>
	v120

## PLUMBING FIXTURES

What was the typical **number** of plumbing fixtures installed in each your homes?

	SFD Starter ↓	SFD Move-up ↓	SFD Luxury ↓	SFA Per UNIT ↓	MF Per UNIT ↓
Lavatory sinks .....	v1	v10	v19	v28	v37
Bathtubs (both standard and whirlpool).....	v2	v11	v20	v29	v38
Separate shower Stalls	v3	v12	v21	v30	v39
Toilets .....	v4	v13	v22	v31	v40
Bidets .....	v5	v14	v23	v32	v41
Kitchen sinks .....	v6	v15	v24	v33	v42
Bar sinks .....	v7	v16	v25	v34	v43
Laundry tubs / sinks .	v8	v17	v26	v35	v44
Other _____ (PLEASE SPECIFY)	v9	v18	v27	v36	v45

## KITCHEN SINK TYPE

What **percent** of your kitchen sinks were:

Drop-in (self-rimming, overmount) .....	v95
Undermount (sub-mount or under-counter) .....	v96
Other _____ (PLEASE SPECIFY)	v97
	<b>100%</b>

## KITCHEN SINK MATERIAL

What **percent** of your kitchen sinks installed were:

Stainless steel .....	v58
Enameled cast iron .....	v59
Enameled steel (include Americast®) .....	v60
Cultured marble .....	v61
Solid-surface (Corian®, Swanstone®, etc.) .....	v62
Granite / Stone (Moenstone®, Silgranit®, Kindred Granite®, etc.) .....	v62c
Acrylic .....	v62a
Other _____ (PLEASE SPECIFY)	v62b
	<b>100%</b>

## KITCHEN SINK BASINS

What **percent** of your kitchen sinks had the following number of basins?

Single basin .....	v90
Double basin .....	v91
Triple basin .....	v92
Other _____ (PLEASE SPECIFY)	v93
	<b>100%</b>

## KITCHEN SINK FAUCETS

What **percent** of your kitchen sink faucets had the following control types:

Single control (handle or lever) .....	v201
Two controls (one for hot and one for cold).....	v202
	<b>100%</b>

What **percent** of your kitchen sink faucets had the following finishes:

Chrome .....	v203
Brass / Gold.....	v204
Bronze (oil rubbed, polished, brushed, etc.).....	v205
Solid color (almond, white, black, biscuit, etc.).....	v206
Nickel / Pewter .....	v207
Stainless steel .....	v208
Other _____ (PLEASE SPECIFY)	v209
	<b>100%</b>

## LAVATORY SINK TYPE

What **percent** of the lavatory sinks you installed were:

One-piece sink and countertop .....	v46
Drop-in (self-rimming, overmount) .....	v47
Wall-hung .....	v48
Pedestal .....	v50
Undermount (sub-mount or under-counter) .....	v49
Vessel .....	v49a
	<b>100%</b>

## LAVATORY SINK MATERIAL

What **percent** of all the lavatory sinks you installed were:

Vitreous china (ceramic) .....	v51
Enameled cast iron .....	v52
Enameled steel (include Americast®) .....	v53
Cultured marble .....	v54
Coated fiberglass .....	v55
Acrylic .....	v56
Solid-surface (Corian®, Swanstone®, etc.) .....	v57
Other _____ (PLEASE SPECIFY)	v57a
	<b>100%</b>

## LAVATORY SINK FAUCETS

What **percent** of your lavatory sink faucets had the following control types:

Single control (handle or lever) .....	v211
Two controls (one for hot and one for cold).....	v212
	<b>100%</b>

What **percent** of your lavatory sink faucets had the following finishes:

Chrome .....	v213
Brass / Gold.....	v214
Bronze (oil rubbed, polished, brushed, etc.).....	v215
Solid color (almond, white, black, biscuit, etc.).....	v216
Nickel / Pewter .....	v217
Stainless steel .....	v218
Other _____ (PLEASE SPECIFY)	v219
	<b>100%</b>

**BATHTUB AND WHIRLPOOL SURROUNDS**

What **percent** of the separate bathtubs and whirlpool baths you installed had **site-constructed** surrounds of the following materials?

NO separate bathtub surrounds were constructed	_____ %	v76
Ceramic tile	_____ %	v71
Marble, slate, or other natural stone	_____ %	v71a
Solid surface (e.g., Corian®, Avonite®, etc.)	_____ %	v72
High-pressure laminate (e.g., Formica, Wilsonart)	_____ %	v73
Fiberglass / Plastic	_____ %	v73a
Cultured marble	_____ %	v74
Other _____	_____ %	v75
(PLEASE SPECIFY)		
<b>100%</b>		

**BATHTUBS (NON-WHIRLPOOL)**

What **percent** of all the non-whirlpool bathtubs you installed were:

**Tub / Shower Combination**

Coated fiberglass, one-piece	_____	v63
Coated fiberglass, multi-piece	_____	v63m
Acrylic, one-piece	_____	v64
Acrylic, multi-piece	_____	v64m
Other _____	_____	v64a
(PLEASE SPECIFY)		

**Tub only**

Enameled cast iron	_____	v65
Enameled steel	_____	v66
Cultured marble	_____	v67
Coated fiberglass	_____	v68
Acrylic	_____	v69
Solid-surface (e.g., Swanstone®, Avonite®, etc.)	_____	v70
Other _____	_____	v70a
(PLEASE SPECIFY)		
<b>100%</b>		

**WHIRLPOOL BATHTUBS**

What **percent** of your homes had whirlpool baths?

	SFD Starter ↓	SFD Move-up ↓	SFD Luxury ↓	SFA Units ↓	MF Units ↓
Whirlpool bathtubs _____	_____	_____	_____	_____	_____
	v2w	v11w	v20w	v29w	v38w

What **percent** of all the whirlpool baths you installed were:

**Tub / Shower Combination**

Coated fiberglass, one-piece	_____	v63w
Coated fiberglass, multi-piece	_____	v63wm
Acrylic, one-piece	_____	v64w
Acrylic, multi-piece	_____	v64wm
Other _____	_____	v64aw
(PLEASE SPECIFY)		

**Tub only**

Enameled cast iron	_____	v65w
Enameled steel	_____	v66w
Cultured marble	_____	v67w
Coated fiberglass	_____	v68w
Acrylic	_____	v69w
Solid-surface (e.g., Swanstone®, Avonite®, etc.)	_____	v70w
Other _____	_____	v70aw
(PLEASE SPECIFY)		
<b>100%</b>		

**TUB / SHOWER DOORS**

What **percent** of the tubs, showers, and whirlpool baths you installed had shower doors?

Bathtubs (non-whirlpool)	_____	v231
Showers	_____	v232
Whirlpool baths	_____	v233
<b>Totals need not add to 100%</b>		

**SEPARATE SHOWER STALLS**

What **percent** of all the shower stalls you installed were:

**Fabricated on-site from:**

Ceramic tile	_____	v77
Marble, slate, or other natural stone	_____	v77a
Solid surface (e.g., Corian®, Avonite®, etc.)	_____	v78
High pressure laminate (e.g., Formica®, Wilsonart®)	_____	v79
Cultured marble	_____	v80
Other _____	_____	v81
(PLEASE SPECIFY)		

**Manufactured units of:**

Coated fiberglass, one-piece	_____	v82
Coated fiberglass, multi-piece	_____	v82m
Acrylic, one-piece	_____	v83
Acrylic, multi-piece	_____	v83m
Other _____	_____	v84
(PLEASE SPECIFY)		
<b>100%</b>		

**SHOWER BASES**

What **percent** of the fabricated on-site showers you installed had manufactured bases or pans?

_____	_____	v256
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**BATHTUB / SHOWER FAUCETS**

What **percent** of your bathtub / shower faucets used the following control types:

Single control, pulled or lifted to turn on water	_____	v221
Single control, twisted to turn on water	_____	v222
Two controls (one for hot and one for cold)	_____	v223
<b>100%</b>		

What **percent** of your bathtub / shower faucets had the following finishes:

Chrome	_____	v224
Brass / Gold	_____	v225
Bronze (oil rubbed, polished, brushed, etc.)	_____	v226
Solid color (almond, white, black, biscuit, etc.)	_____	v227
Nickel / Pewter	_____	v228
Stainless steel	_____	v229
Other _____	_____	v230
(PLEASE SPECIFY)		
<b>100%</b>		

**STEAM GENERATORS**

What **percent** of all the tubs, showers, and whirlpool baths you installed had Steam Generators?

Bathtubs	_____	v234
Showers	_____	v235
Whirlpools	_____	v236



**SHOWERHEADS**

What **percent** of the bathtubs and showers you installed had showerheads of the following types:

Standard / Fixed showerhead .....	_____	v249
Hand-held showerhead .....	_____	v250
Massaging showerhead .....	_____	v251
Thermostatic valves .....	_____	v252
Body sprays .....	_____	v253
Steam head .....	_____	v254
Other .....	_____	v255
(PLEASE SPECIFY)		

What **percent** of the bathtubs and showers you installed had the following:

More than 1 Standard showerhead .....	_____	v257
More than 1 Hand-held showerhead .....	_____	v258
<b>Totals need not add to 100%</b>		

**TOILETS**

What **percent** of the toilets installed in your new homes were:

One piece (bowl and tank one casting) .....	_____	v85_1
Two piece .....	_____	v85_2
<b>100%</b>		

What **percent** of the toilets had the following bowl styles?

Elongated .....	_____	v85_3
Standard .....	_____	v85_4
<b>100%</b>		

What **percent** of your toilets were dual flush?

Percent of toilets with Dual Flush .....	_____	v85_5
--	-------	-------

**TOILET BRANDS**

Of all the toilets you installed last year, what **percent** were the following brands?

	<b>Percent</b>
American Standard .....	_____ v85
Briggs .....	_____ v85a
Crane .....	_____ v85b
Eljer .....	_____ v85c
Gerber .....	_____ v86
Kohler .....	_____ v86a
Mansfield .....	_____ v86b
Sterling .....	_____ v86c
Toto .....	_____ v87
Universal-Rundle .....	_____ v87a
St. Thomas Creations .....	_____ v87b
Other .....	_____ v87c
(PLEASE SPECIFY)	
<b>100%</b>	

**MOUNTED BATH ACCESSORIES**

**How many** of the following are installed in your typical bathroom?

Towel bar .....	_____	v241
Towel ring .....	_____	v242
Robe hook .....	_____	v243
Toilet paper holder .....	_____	v244
Toothbrush/Tumbler holder .....	_____	v245
Shelf .....	_____	v246
Soapdish .....	_____	v247
Grab bars .....	_____	v248

**APPLIANCES**

**RANGES, COOKTOPS & OVENS**

What **percent** of your homes were equipped with ranges or cooktops and ovens that were:

	<b>SFD</b>	<b>SFA</b>	<b>MF UNITS</b>
Freestanding .....	_____ a1	_____ a6	_____ a11
Slide-in .....	_____ a2	_____ a7	_____ a12
Drop-in .....	_____ a3	_____ a8	_____ a13
Cooktop & wall oven(s) ..	_____ a4	_____ a9	_____ a14
<b>NO</b> range / cooktop / oven .....	_____ a5	_____ a10	_____ a15
<b>100%      100%      100%</b>			

**WALL OVEN CONFIGURATION**

What **percent** of your new homes with built-in wall ovens had:

A single wall oven .....	_____	a34
Two separate wall ovens .....	_____	a35
Stacked double ovens in a single unit .....	_____	a36
<b>100%</b>		

**BURNER TYPE**

What **percent** of the cooking appliances you installed had the following types of burners?

	<b>RANGES</b>	<b>COOKTOPS</b>
<b>Electric</b>		
Halogen burner / smoothtop .....	_____ a22	_____ a28
Smoothtop, not halogen .....	_____ a23	_____ a29
Conventional heat coils .....	_____ a24	_____ a30
Modular units for grill .....	_____ a25	_____ a31
<b>Gas</b>		
Sealed gas burners .....	_____ a26	_____ a32
Conventional gas .....	_____ a27	_____ a33
<b>100%</b>		<b>100%</b>

**FUEL TYPE**

What **percent** of the equipment you installed used the following fuel types?

	<b>RANGES</b>	<b>COOKTOPS</b>	<b>WALL OVENS</b>	<b>WATER HEATERS</b>
Gas .....	_____ a16	_____ a18	_____ a18a	_____ a20
Electric .....	_____ a17	_____ a19	_____ a19a	_____ a21
Oil .....	_____ a21a			
<b>100%</b>		<b>100%</b>	<b>100%</b>	<b>100%</b>

**MICROWAVE OVENS**

What **percent** of your homes were equipped with microwave ovens that were:

	SFD	SFA	MF UNITS
Built-in with range .....	_____ a58	_____ a62	_____ a66
Built into cabinet .....	_____ a58a	_____ a62a	_____ a66a
Over-the-range .....	_____ a59	_____ a63	_____ a67
Countertop or hung under cabinets .....	_____ a60	_____ a64	_____ a68
Top unit of double wall oven .....	_____ a60a	_____ a64a	_____ a68a
<b>NO</b> microwave oven ....	_____ a61	_____ a65	_____ a69
	<b>100%</b>	<b>100%</b>	<b>100%</b>

**REFRIGERATORS**

What **percent** of your homes were equipped with refrigerators that were:

	SFD	SFA	MF UNITS
Freezer on top, refrigerator below .....	_____ a70	_____ a74	_____ a78
Refrigerator on top, freezer below .....	_____ a71	_____ a75	_____ a79
Side-by-side refrigerator / freezer ...	_____ a72	_____ a76	_____ a80
Refrigerator with no freezer .....	_____ a72a	_____ a76a	_____ a80a
<b>NO</b> refrigerator .....	_____ a73	_____ a77	_____ a81
	<b>100%</b>	<b>100%</b>	<b>100%</b>

**DISHWASHERS**

What **percent** of your homes were equipped with:

	SFD	SFA	MF UNITS
Dishwashers with timing cycles .....	_____ a82	_____ a85	_____ a88
Dishwashers with cleaning sensors .....	_____ a83	_____ a86	_____ a89
<b>NO</b> dishwasher .....	_____ a84	_____ a87	_____ a90
	<b>100%</b>	<b>100%</b>	<b>100%</b>

**CLOTHES WASHERS**

What **percent** of your homes were equipped with clothes washers that were:

	SFD	SFA	MF UNITS
Top loading washing machine .....	_____ a91	_____ a94	_____ a97
Front loading washing machine .....	_____ a92	_____ a95	_____ a98
<b>NO</b> washing machine ...	_____ a93	_____ a96	_____ a99
	<b>100%</b>	<b>100%</b>	<b>100%</b>

**CLOTHES DRYERS**

What **percent** of your homes were equipped with clothes dryers that were:

	SFD	SFA	MF UNITS
Electric dryer .....	_____ a100	_____ a103	_____ a106
Gas powered dryer .....	_____ a101	_____ a104	_____ a107
<b>NO</b> clothes dryer .....	_____ a102	_____ a105	_____ a108
	<b>100%</b>	<b>100%</b>	<b>100%</b>

**OTHER APPLIANCES / AMENITIES**

What **percent** of your homes were equipped with the following appliances?

	SFD	SFA	MF UNITS
Garbage disposal .....	_____ a113	_____ a117	_____ a121
Trash compactor .....	_____ a114	_____ a118	_____ a122
Hot water dispenser .....	_____ a115	_____ a119	_____ a123
Central vacuum – full system .....	_____ a116	_____ a120	_____ a124
Central vacuum – pre-pipe only .....	_____ a141	_____ a142	_____ a143
Elevator .....	_____ a144	_____ a145	_____ a146
Standby generator .....	_____ a147	_____ a148	_____ a149
Water softener .....	_____ a147a	_____ a148a	_____ a149a
Hot water recirculation piping .....	_____ a147b	_____ a148b	_____ a149b
Code required fire sprinkler system .....	_____ a147d	_____ a148d	_____ a149d
Non-code required fire sprinkler system .....	_____ a147c	_____ a148c	_____ a149c

**Totals need not add to 100%**

**FIRE SPRINKLER SYSTEMS**

What **percent** of your fire sprinkler piping was:

	SFD & SFA	MF
CPVC .....	_____ s101	_____ s106
PEX .....	_____ s102	_____ s107
Steel/Iron .....	_____ s103	_____ s108
Copper .....	_____ s104	_____ s109
Other _____ (PLEASE SPECIFY)	_____ s105	_____ s110
	<b>100%</b>	<b>100%</b>

What **percent** of your fire sprinkler systems were:

	SFD & SFA	MF
Stand-alone fire sprinkler systems .....	_____ s111	_____ s113
Combined plumbing and fire sprinkler systems .....	_____ s112	_____ s114
	<b>100%</b>	<b>100%</b>

**STANDBY GENERATORS**

What **percent** of your standby generators were:

Natural gas .....	_____ g106
Propane/LP gas .....	_____ g107
Gasoline .....	_____ g108
Diesel .....	_____ g109
Other .....	_____ g110
	<b>100%</b>

What **percent** of your standby generators were:

Less than 8 KW .....	_____ g114
8 KW to 12 KW .....	_____ g115
13 KW or more .....	_____ g116
	<b>100%</b>

**WATER PIPES**

What percent of your homes' **water service** (from the street to the house); **distribution** (hot/cold water plumbing within the house); **waste** (DWV piping that drains water from the sinks, toilets, etc) pipe was the following types:

	WATER SERVICE			DISTRIBUTION	WASTE	
Copper .....	_____	v210s	_____	v210d	_____	v210w
PVC or CPVC .....	_____	v211s	_____	v211d	_____	v211w
Polyethylene (PE) ...	_____	v212s	_____		_____	
PEX (Cross linked PE)	_____	v213s	_____	v213d	_____	
PEX-AL-PEX .....	_____	v214s	_____	v214d	_____	
Steel / Cast iron .....	_____	v215s	_____		_____	v215w
ABS .....	_____		_____		_____	v216w
	<b>100%</b>		<b>100%</b>		<b>100%</b>	

If you used PEX **plumbing** systems, what percent of the piping, fittings, and manifolds were the following brands:

	PIPING	FITTINGS	MANIFOLDS	
Bow .....	_____	v217p	_____	v217m
IPEX .....	_____	v218p	_____	v218m
JM Eagle .....	_____	v219p	_____	v219m
NIBCO .....	_____	v220p	_____	v220m
Rehau .....	_____	v221p	_____	v221m
Sioux Chief .....	_____		_____	v222m
Uponor (formerly <del>Wisbo</del> )	_____	v223p	_____	v223m
Viega (formerly <del>Vanguard</del> )	_____	v224p	_____	v224m
Watts .....	_____	v225p	_____	v225m
Zurn .....	_____	v226p	_____	v226m
Don't know .....	_____	v227p	_____	v227m
Other .....	_____	v228p	_____	v228m
	<b>100%</b>	<b>100%</b>	<b>100%</b>	

What percent of the PEX **plumbing** systems you installed were:

	SFD Starter	SFD Move-up	SFD Luxury	SFA Units	MF Units
Trunk & Branch .	_____	_____	_____	_____	_____
Home Run .....	_____	_____	_____	_____	_____
Zone (remote manifold).....	_____	_____	_____	_____	_____
Other .....	_____	_____	_____	_____	_____
Don't know .....	_____	_____	_____	_____	_____
	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
	v229s	v229m	v229l	v229t	v229a

What percent of the **fittings** for your PEX **plumbing** systems were:

	SFD Starter	SFD Move-up	SFD Luxury	SFA Units	MF Units
Engineered plastic .	_____	_____	_____	_____	_____
Copper / Brass .....	_____	_____	_____	_____	_____
Other .....	_____	_____	_____	_____	_____
Don't know .....	_____	_____	_____	_____	_____
	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
	v230s	v230m	v230l	v230t	v230a

**HYDRONIC RADIANT HEAT**

What percent of your homes had **hydronic radiant heat** installed in:

	SFD Starter	SFD Move-up	SFD Luxury	SFA Units	MF Units
None .....	_____	_____	_____	_____	_____
Less than 25% of square footage ...	_____	_____	_____	_____	_____
25 – 50 % of square footage ...	_____	_____	_____	_____	_____
50% or more square footage ...	_____	_____	_____	_____	_____
	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
	v231s	v231m	v231l	v231t	v231a

If you used PEX **radiant** systems, what percent of the piping, manifolds, and controls were the following brands:

	PIPING	MANIFOLDS	CONTROLS	
Bow .....	_____	v232p	_____	v232c
Caleffi .....	_____		_____	v233m
Heat Link .....	_____	v234p	_____	v234c
Heat-Timer .....	_____		_____	v235c
Honeywell .....	_____		_____	v236c
IPEX .....	_____	v237p	_____	v237c
JM Eagle .....	_____	v238p	_____	v238c
Rehau .....	_____	v239p	_____	v239c
Roth .....	_____	v240p	_____	v240c
Tekmar .....	_____		_____	v241c
Uponor (formerly <del>Wisbo</del> )	_____	v242p	_____	v242c
Viega (formerly <del>Vanguard</del> )	_____	v243p	_____	v243c
Watts .....	_____	v244p	_____	v244c
Zurn .....	_____	v245p	_____	v245c
Don't know .....	_____	v246p	_____	v246c
Other .....	_____	v247p	_____	v247c
	<b>100%</b>	<b>100%</b>	<b>100%</b>	

**ALTERNATIVE ENERGY SYSTEMS**

In the **next five years**, how likely is your company to do **any** of the following for your homes:

	Not Likely	1	2	3	4	5	Very Likely
Offer solar electric as standard equipment .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2052
Offer solar electric as an option to home buyers .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2053
Investigate alternatives in solar electric .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2054
Offer solar water heating as standard equipment .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2055
Offer solar water heating as an option to home buyers .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2056
Investigate alternatives in solar water heating .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2057

What **percent** of your homes had the following solar energy systems?

Solar electric (photovoltaic, or PV) system .....	_____	2026
Solar domestic hot water .....	_____	2027
Solar pool heater .....	_____	2028
<b>Total need not add to 100%</b>		

What **percent** of your solar electric systems (PV) were:

Flat panel collectors installed on the roof .....	_____	2029
Flat panel collectors installed on supports attached to the ground .....	_____	2030
Integrated (BIPV) into the roofing or other element of the home .....	_____	2031
Another type of PV system .....	_____	2032
<b>100%</b>		

How did you offer solar electric (PV) and solar water heating systems?

	Solar Electric System (PV)	Solar Domestic Hot Water
Standard on some or all of our homes... [ ]	[ ]	1
An option we actively promoted .....	[ ]	2
Installed only at home buyer's request... [ ]	[ ]	3
Did not offer/consider offering PV .....	[ ]	4
	2033	2034

Who was your **primary installer** for each of the following systems?

	Solar Electric System (PV)	Solar Domestic Hot Water
Solar contractor .....	[ ]	1
We did (builder) .....	[ ]	2
Electrician or plumber .....	[ ]	3
Utility company .....	[ ]	4
Other contractor .....	[ ]	5
	2035	2036

Which sources provided incentives to offset some or all of the cost of solar electric (PV) or solar water heating systems?

We paid in full—no incentives .....	[ ]	2037
Federal government .....	[ ]	2038
State government .....	[ ]	2039
Local government .....	[ ]	2040
Public utility .....	[ ]	2041
Another source offered incentives .....	[ ]	2042

Which of the following were true about your typical solar electric installation on new homes:

Connected to a utility grid.....	[ ]	2044
Had battery storage .....	[ ]	2045
Home was completely “off the grid” .....	[ ]	2046
Had easy-to-read energy monitor.....	[ ]	2047
“Net metering” enabled.....	[ ]	2048

What were the capacities of your solar electric systems?

Less than 3 KW .....	_____	2049
3 KW to 5 KW .....	_____	2050
More than 5 KW .....	_____	2051
<b>100%</b>		

## CONFIGURATION OF HVAC SYSTEMS

What **percent** of your homes (or multifamily units) had the following **primary heating systems**:

Standard heat pump w/ electric backup heat .....	_____	h101
Standard heat pump w/ gas or propane backup .....	_____	h102
Geothermal heat pump .....	_____	h103
Gas or propane furnace or boiler .....	_____	h104
Oil furnace or boiler .....	_____	h105
Electric furnace, baseboard, or radiant .....	_____	h106
No primary heating system .....	_____	h107
<b>100%</b>		

## HEATING DISTRIBUTION SYSTEMS

What **percent** of your homes with primary heating systems had the following **heating distribution systems**:

Ductless Heat Pump .....	_____	h111
Forced Air—one zone only .....	_____	h112
Forced Air—two or more zones .....	_____	h113
Hydronic—radiant floor .....	_____	h114
Hydronic—baseboard or radiators .....	_____	h115
Another type of distribution system .....	_____	h116
<b>100%</b>		

## AIR CONDITIONING SYSTEMS

What **percent** of your homes had the following types of air conditioning systems:

No air conditioning system installed .....	_____	h121
Evaporative cooler .....	_____	h122
Single AC unit .....	_____	h123
Two or more AC units .....	_____	h124
Ductless heat pump or AC .....	_____	h125
<b>100%</b>		

## HVAC SYSTEM FEATURES

What **percent** of your homes had the following as part of their HVAC systems:

High performance air cleaner (HEPA, electronic) .....	_____	h131
Humidifier .....	_____	h132
Heat Recovery Ventilators (HRV, ERV) .....	_____	h133
Non-energy-recovery fresh air exchangers .....	_____	h134
<b>Total need not add to 100%</b>		

## EFFICIENCY RATINGS OF WARM AIR FURNACES

Of all the furnaces installed in the homes your firm built, what **percent** had efficiency ratings of:

Less than 78% .....	_____	h141
78% to 79.9% .....	_____	h142
80% to 89.9% .....	_____	h143
90% to 95% .....	_____	h144
95.1% or greater .....	_____	h145
Don't know .....	_____	h146
<b>100%</b>		

## AIR CONDITIONER EFFICIENCY

What **percent** of air conditioning systems and heat pumps installed in your home had SEER ratings of:

Less than 13 .....	_____	h151
13.0 to 14.9 .....	_____	h152
15.0 to 16.9 .....	_____	h153
17.0 to 18.9 .....	_____	h154
19.0 to 20.9 .....	_____	h155
21 or higher .....	_____	h156
Don't know .....	_____	h157
<b>100%</b>		

**TYPE OF STAIRS**

Which of the following describes the **typical** stairs you use?

	TO BASEMENT	TO UPPER STORIES
Prefabricated .....	[ ]	[ ] 1
Fabricated on-site .....	[ ] 501a	[ ] 2 501b

**MATERIAL OF STAIRS**

What materials did you use in your **typical** stairs:

	TO BASEMENT	TO UPPER STORIES
Softwood lumber .....	[ ]	[ ] 1
Hardwood lumber .....	[ ]	[ ] 2
Plywood .....	[ ]	[ ] 3
OSB .....	[ ]	[ ] 4
Particleboard .....	[ ]	[ ] 5
Metal or other .....	[ ] 503a	[ ] 6 503b

**RISER MATERIAL**

Softwood lumber .....	[ ]	[ ] 1
Hardwood lumber .....	[ ]	[ ] 2
Plywood .....	[ ]	[ ] 3
OSB .....	[ ]	[ ] 4
Particleboard .....	[ ]	[ ] 5
Metal or other .....	[ ]	[ ] 6
MDF .....	[ ] 504a	[ ] 7 504b

**STRINGER MATERIAL**

Softwood lumber .....	[ ]	[ ] 1
Hardwood lumber .....	[ ]	[ ] 2
Plywood .....	[ ]	[ ] 3
Metal or other .....	[ ]	[ ] 4
LVL .....	[ ] 502a	[ ] 5 502b

**STRUCTURED WIRING AND HOME NETWORKS**

Structured wiring, or “home networks,” consist typically of a central distribution panel that connects cable for audio / video signals (coaxial cable, or RG6) and wiring for data / voice outlets throughout the house.

What **percent** of the homes you built in 2008 had structured wiring, or “home networks” with outlets in 3 rooms or more?

\_\_\_\_\_ %  
a140

**HOME ELECTRONICS**

What **percent** of your homes were equipped with the following home electronics systems?

	Percent of HOMES
Intercom / Entrance phone .....	_____ a125
Video entrance phone .....	_____ a126
Whole home control or automation system .....	_____ a127
Security system – <b>not</b> monitored by protection service .....	_____ a128
Security system – monitored by protection service .....	_____ a129
Lighting control system .....	_____ a130
Programmable thermostat .....	_____ a131
Communicating thermostat .....	_____ a132
Monitored fire / toxic gas alarm system .....	_____ a133
Whole-house audio system .....	_____ a134
Whole-house video access .....	_____ a135
Built-in home theater .....	_____ a136
Electrical load-monitoring / control system .....	_____ a137
Multi-line phone system .....	_____ a138
<b>Total need not add to 100%</b>	

**UPDATES**

Would you like to receive periodic communications on NAHB Research Center testing results and programs via e-mail?

No [ ]<sub>1</sub> Yes [ ]<sub>2</sub> a160

(PLEASE SPECIFY E-MAIL ADDRESS)

**PLEASE SELECT ONE OF THE FOLLOWING GIFTS:**

- |                              |                               |   |
|------------------------------|-------------------------------|---|
| [ ] Embroidered Shirt (M)    | [ ] Embroidered Jacket (M)    | [ ] Silver Tone Business Card Case                  |
| [ ] Embroidered Shirt (L)    | [ ] Embroidered Jacket (L)    | [ ] 100’ Contractor Measuring Tape                  |
| [ ] Embroidered Shirt (XL)   | [ ] Embroidered Jacket (XL)   | [ ] Stainless Steel Thermos                         |
| [ ] Embroidered Shirt (XXL)  | [ ] Embroidered Jacket (XXL)  | [ ] Swiss Army Knife                                |
| [ ] Embroidered Shirt (XXXL) | [ ] Embroidered Jacket (XXXL) | [ ] Random Gift (inventories too low to list items) |

**Thank You for Your Time and Cooperation!**

Completing and returning this questionnaire entitles you to a free report summarizing the results from this survey nationally with a special tabulation of respondents from your area. Reports will be available late 2009. Please call Joanne McAlpin at 1-800-638-8556 ext. 6306 to request your copy.

**Returning the Questionnaire**

1. If your name or address differs from the address label, please make appropriate corrections (this will be used to send your gift)
2. If you’d like to participate in online surveys and earn more free gifts, please include your email address above
3. Place your completed survey in the postage-paid return envelope (see center of survey) and drop it in the mail