

2008

Builder Practices Survey

March 2009

Dear Home Builder,

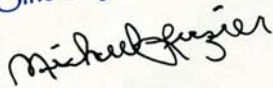
We need your input! For more than 20 years, the NAHB Research Center has relied upon your support for getting the information needed to improve the housing industry. Past participation in our survey efforts has been vital to our continued progress. Please complete and return this questionnaire as soon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

NAHB
RESEARCH
CENTER

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
Total Rooms (Exclude Bathrooms)	24	47	70	90	107
Closets (Include 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)	
Total need not add to 100%	

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)	100%	100%	100%

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)			
Nothing 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
	100%	100%

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
		100%

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
		100%

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
		100%

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
		100%

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
		100%	100%

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	
		100%

INTERIOR WALL & CEILING FINISH

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

	WALLS	CEILINGS
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)	100%	100%

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:

NONE (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)	100%

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
	100%	100%

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"	[]	[]	[]	[] ₁
10" (or 9-7/8")	[]	[]	[]	[] ₂
12" (or 11-7/8")	[]	[]	[]	[] ₃
14" or greater	[] 1033	[] 1034	[] 1035	[] 1035a

TYPES OF WOOD FLOOR FRAMING

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

	GROUND FLOOR	UPPER FLOORS
<i>Do not include support beams.</i>		
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)	100%	100%

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
	100%	100%	100%	100%

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
	100%	100%

RIMBOARD FOR WOODEN I-JOISTS

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

NO 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
	100%

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 ₁₀₆₁	_____ LF ₁₀₆₄
Single-family attached (SFA) floor beams: LF per UNIT	_____ LF _{1061a}	_____ LF _{1064a}
Multifamily floor beams: LF per UNIT	_____ LF ₁₀₆₂	_____ LF ₁₀₆₅

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
	100%	100%

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 ₁₀₈₀
Single-family attached (SFA) roof beams ...	_____ LF _{1080a}
Multifamily building roof beams	_____ LF _{1080b}

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
	100%

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
		100%

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
		100%

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
	100%	100%

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
		100%

RAFTER ROOFS

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

Lumber	_____	276
I-joists	_____	277
Steel	_____	278
		100%

TRUSS ROOFS

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

Lumber	_____	276a
I-joists	_____	277a
Steel	_____	278a
		100%

CEILING TYPE

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

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

OVERHANG / EAVES

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

Inches	_____	267
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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
		100%

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
		100%

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
		100%

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
Totals need not add to 100%			

ROOF SHEATHING

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

NONE (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)	100%

SOFFIT & FASCIA MATERIAL – EAVES & RAKES

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

	SOFFIT	FASCIA
NO 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)	100%	100%

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
Other	357
(PLEASE SPECIFY)	100%

EXTERIOR TRIM MATERIAL

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

NO 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)	100%

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 []	[]	[]	[]	[] ₁
Board and crown []	[]	[]	[]	[] ₂
Crown only []	[]	[]	[]	[] ₃
Dentil molding []	[]	[]	[]	[] ₄
Pediments []	[]	[]	[]	[] ₅
Pilasters []	[]	[]	[]	[] ₆
Arches []	[]	[]	[]	[] ₇
Other special moldings .. []	[]	[]	[]	[] ₈
None (part of door / window) []	[]	[]	[]	[] ₉
	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
	100%

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)	100%	100%	100%

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)	100%	100%	100%

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
	100%	100%	100%

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
	100%	100%	100%

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
	100%	100%	100%

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
	100%	100%

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
	100%	100%

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
	100%

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
	100%

INTERIOR DOOR MATERIAL

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

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

CABINETS & COUNTERTOPS

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

	SFD & SFA	MF
Number of Kitchen cabinets	_____ 542	_____ 558
Number of Vanity cabinets	_____ 543	_____ 559
Number of Medicine cabinets	_____ 543a	_____ 559a
Number of Other cabinets	_____ 544	_____ 560
Linear feet 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 [®] , Surell [®] , Swanstone [®])	_____ 584	_____ 590
Laminate (e.g., Formica [®] , WilsonArt [®])	_____ 585	_____ 591
Ceramic tile	_____ 586	_____ 592
Cultured marble	_____ 587	_____ 593
Engineered stone or quartz surfacing (Zodiaq [®] , Silestone [®])	_____ 587a	_____ 593a
Solid wood (butcher block)	_____ 588	_____ 594
Granite	_____ 589	_____ 594a
Marble, slate, or other natural stone..	_____ 589a	_____ 595a
Other _____ (PLEASE SPECIFY)	_____ 589b	_____ 595b
	100%	100%

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
	100%	100%

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
	100%	100%

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
	100%	100%

DRIVEWAYS

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

Percent of single-family homes with driveways ...	_____ 777
Length (in feet) of typical driveway.....	_____ 777_L
Width (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) with concrete parking pad	_____ 782
Gravel (crushed stone) no concrete parking pad	_____ 783
Other _____ (PLEASE SPECIFY)	_____ 784
	100%

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) 100%

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
	100%

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

Steel	_____ 754
Wood	_____ 755
Fiberglass or Plastic	_____ 756
Other	_____ 757
	100%

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

Raised panel	_____ 759
Flat panel	_____ 760
Other	_____ 761
	100%

What **percent** of your garage doors were insulated?

What **percent** of your garage doors had windows? ..

What **percent** of your garage doors had openers? ..

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, [®] Wilsonart [®])	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 [®] , Viroc [®])	_____	685a
Cement board (glass fiber reinforced, Durock [®])	_____	685
Gypsum panel (FibeRock [®] or Dens-Shield [®]) ..	_____	686
Poured lightweight concrete (Gypcrete [®] , etc.) ..	_____	686a
Other _____	_____	687
(PLEASE SPECIFY)		100%

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
NOT 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)		100%

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.)	[]	[] ₁
Expanded polystyrene (bead board)	[]	[] ₂
Polyisocyanurate (e.g., Thermax®)	[]	[] ₃
Fiberglass	[]	[] ₄
No insulation used for slab	[] ₈₄₃	[] ₈₄₄

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"	[]	[] ₁
1"	[]	[] ₂
1-1/2"	[]	[] ₃
2" or more	[] ₈₄₅	[] ₈₄₆

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	[]	[] ₁
Entire interior and exterior surfaces of the foundation wall	[]	[] ₂
Entire interior surface of foundation wall	[]	[] ₃
Only above-grade interior	[]	[] ₄
Entire exterior surface of foundation wall	[]	[] ₅
Only below-grade portion of foundation wall exterior	[]	[] ₆
Only above-grade portion of foundation wall exterior	[]	[] ₇
Foundation wall cavity	[]	[] ₈
NO foundation insulation used	[] ₈₄₇	[] ₈₄₈

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	[] _{851_1}	_____ 851_1r
Rockwool batt	[] _{851_2}	_____ 851_2r
Fiberglass / rockwool board	[] _{851_3}	_____ 851_3r
Extruded polystyrene (XPS)	[] _{851_4}	_____ 851_4r
Expanded polystyrene (EPS)	[] _{851_5}	_____ 851_5r
Polyisocyanurate	[] _{851_6}	_____ 851_6r
Spray foam	[] _{851_8}	_____ 851_8r
Other	[] _{851_7}	_____ 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	[] ₁	_____
Rockwool batt	[] ₂	_____
Fiberglass blown	[] ₃	_____
Cellulose blown	[] ₄	_____
Spray foam	[] ₅	_____
Foam board or SIPs	[] ₈₄₉	_____ 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
NO 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	[] ₁
No	[] ₂
Don't know	[] ₃

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
NOT 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 wall sound insulation	_____ 806	_____ 807	_____ 808
Homes with floor 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 wall 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 floor 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
	100%

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)
	100%

RUN-OUT DUCTS

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

WALL STACKS

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

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
NOT insulated	_____ 924
Other	_____ 923
	(PLEASE SPECIFY)
	100%

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
NO fireplaces or chimneys	_____ 712	_____ 712a	_____ 712b
One fireplace / chimney ..	_____ 713	_____ 713a	_____ 713b
Two fireplaces / chimneys	_____ 714	_____ 714a	_____ 714b
Three or more	_____ 715	_____ 715a	_____ 715b
	100%	100%	100%

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)
	100%

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
	100%	

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
	Totals need not add to 100%	

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) 100%

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	
Tiles – brick or clay	_____ 975b	
Concrete (include stamped and stenciled)	_____ 975	
Natural stone	_____ 975c	
	100%	100%

DECK AND PORCH RAILINGS

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

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

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) 100%	100%

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) 100%

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 Detached Houses	_____ % 987	_____ % 998
SF Attached Houses	_____ % 987a	_____ % 998a
Multifamily Buildings	_____ % 987b	_____ % 998b
	Totals need not add to 100%	

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 Detached Houses	_____ LF 988	_____ LF 999
SF Attached Houses	_____ LF 988a	_____ LF 999a
Multifamily Buildings	_____ LF 988b	_____ LF 999b
	Totals need not add to 100%	

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

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

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
	100%	100%

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 Detached pool: _____ FT. x _____ FT.	984	985
Average size of SF Attached 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	[] ₁
Shotcrete (gunnite)	[] ₂
Other _____	[] ₃
	(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
NO 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
	100%	100%

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)

NO 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	[] ₁
\$200 to \$299	[] ₂
\$300 to \$399	[] ₃
\$400 to \$499	[] ₄
\$500 to \$599	[] ₅
\$600 to \$799	[] ₆
\$800 or more	[] ₇
	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	[] ₁
\$450 to \$549	[] ₂
\$550 to \$649	[] ₃
\$650 to \$749	[] ₄
\$750 to \$849	[] ₅
\$850 to \$1049	[] ₆
\$1050 or more	[] ₇
	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
	100%

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
	100%

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
	100%

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
	100%

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
	100%

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
	100%

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
	100%

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
	100%

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
	100%

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)		
100%		

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)		
100%		

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)		
100%		

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
Totals need not add to 100%		

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)		
100%		

SHOWER BASES

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

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
100%		

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)		
100%		

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
Totals need not add to 100%		

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
100%		

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

Elongated	_____	v85_3
Standard	_____	v85_4
100%		

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?

	Percent
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)	
100%	

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:

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

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
100%		

BURNER TYPE

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

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

FUEL TYPE

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

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

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
NO microwave oven	_____ a61	_____ a65	_____ a69
	100%	100%	100%

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
NO refrigerator	_____ a73	_____ a77	_____ a81
	100%	100%	100%

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
NO dishwasher	_____ a84	_____ a87	_____ a90
	100%	100%	100%

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
NO washing machine ...	_____ a93	_____ a96	_____ a99
	100%	100%	100%

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
NO clothes dryer	_____ a102	_____ a105	_____ a108
	100%	100%	100%

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
	100%	100%

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
	100%	100%

STANDBY GENERATORS

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

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

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

Less than 8 KW	_____ g114
8 KW to 12 KW	_____ g115
13 KW or more	_____ g116
	100%

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
	100%		100%		100%	

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 Wisbo)	_____	v223p	_____	v223m
Viega (formerly Vanguard)	_____	v224p	_____	v224m
Watts	_____	v225p	_____	v225m
Zurn	_____	v226p	_____	v226m
Don't know	_____	v227p	_____	v227m
Other	_____	v228p	_____	v228m
	100%	100%	100%	

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	_____	_____	_____	_____	_____
	100%	100%	100%	100%	100%

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	_____	_____	_____	_____	_____
	100%	100%	100%	100%	100%

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 ...	_____	_____	_____	_____	_____
	100%	100%	100%	100%	100%

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 Wisbo)	_____	v242p	_____	v242c
Viega (formerly Vanguard)	_____	v243p	_____	v243c
Watts	_____	v244p	_____	v244c
Zurn	_____	v245p	_____	v245c
Don't know	_____	v246p	_____	v246c
Other	_____	v247p	_____	v247c
	100%	100%	100%	

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
Total need not add to 100%		

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
100%		

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
100%		

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
100%		

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
100%		

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
100%		

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
Total need not add to 100%		

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
100%		

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
100%		

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

UPDATES

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

No []₁ Yes []₂ a160

(PLEASE SPECIFY E-MAIL ADDRESS)

PLEASE SELECT ONE OF THE FOLLOWING GIFTS:

- | | | |
|---|--|--|
| <input type="checkbox"/> Embroidered Shirt (M) | <input type="checkbox"/> Embroidered Jacket (M) | <input type="checkbox"/> Silver Tone Business Card Case |
| <input type="checkbox"/> Embroidered Shirt (L) | <input type="checkbox"/> Embroidered Jacket (L) | <input type="checkbox"/> 100' Contractor Measuring Tape |
| <input type="checkbox"/> Embroidered Shirt (XL) | <input type="checkbox"/> Embroidered Jacket (XL) | <input type="checkbox"/> Stainless Steel Thermos |
| <input type="checkbox"/> Embroidered Shirt (XXL) | <input type="checkbox"/> Embroidered Jacket (XXL) | <input type="checkbox"/> Swiss Army Knife |
| <input type="checkbox"/> Embroidered Shirt (XXXL) | <input type="checkbox"/> Embroidered Jacket (XXXL) | <input type="checkbox"/> Random Gift (inventories too low to list items) |

Thank You for Your Time and Cooperation!

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. Place your completed survey in the postage-paid return envelope (see center of survey) and drop it in the mail

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 – not 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

Total need not add to 100%