



Indoor airPLUS

Better Environments Inside and Out



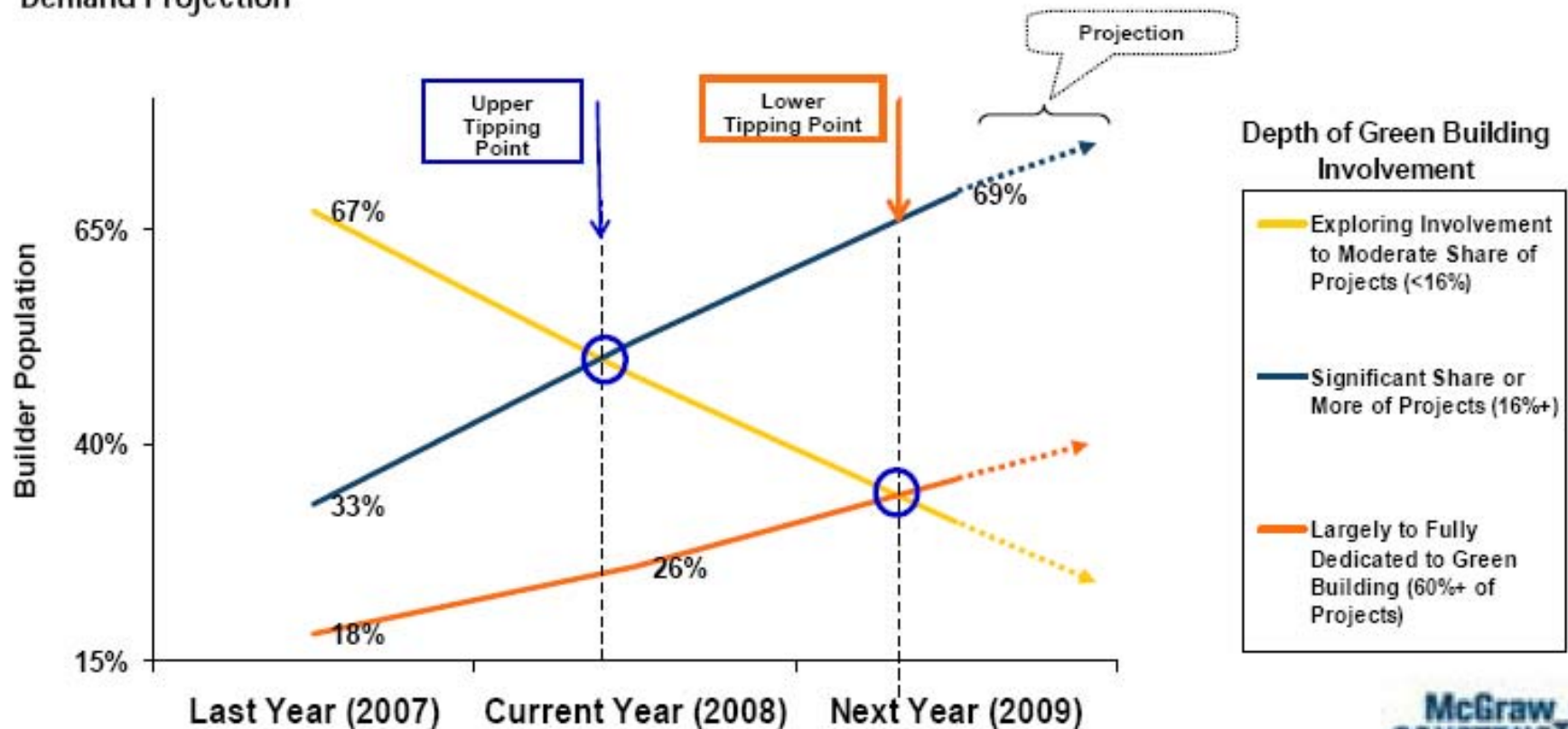
Indoor Air Quality (IAQ)

2008 Study: Green Home Building is at Critical Mass

The tipping point has been reached this year

Those with a significant share surpasses those with a lower share

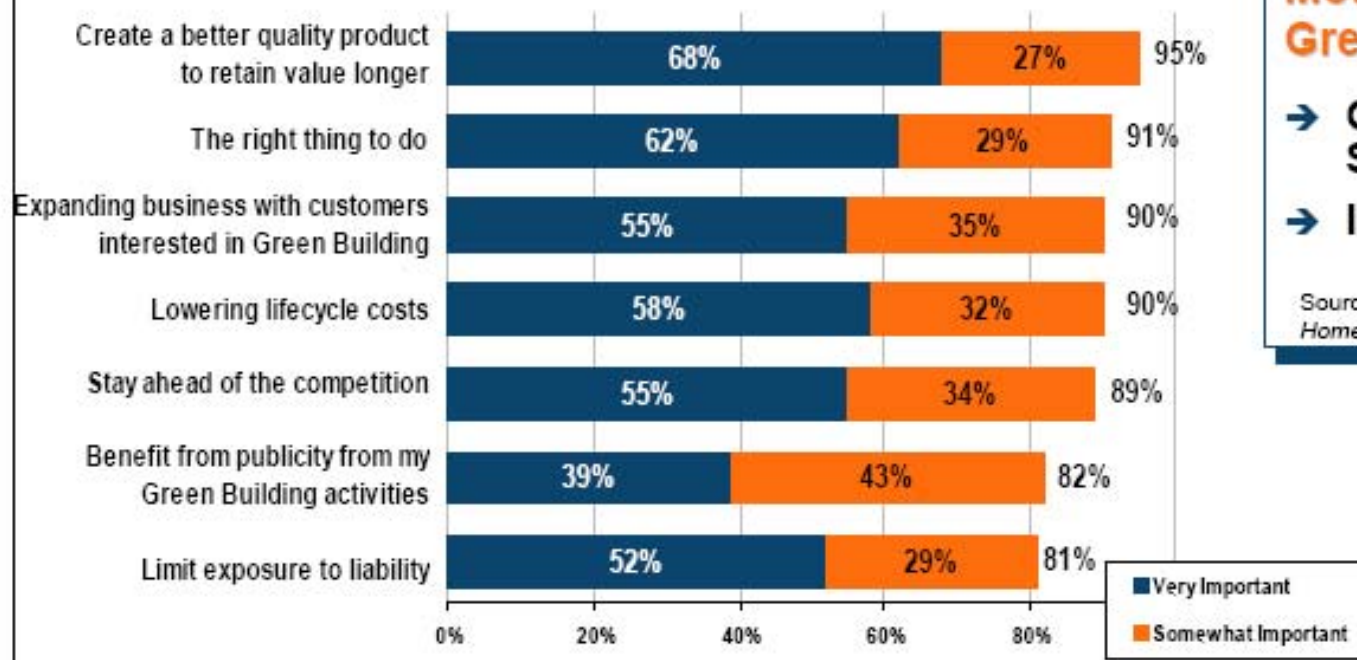
Demand Projection



Quality Becomes Most Important Motivation for 2008 Builders to Build Green

→ Top Motivator in 2006: “Right thing to do”

Important Motivations Behind Building Green according to 2008 builders

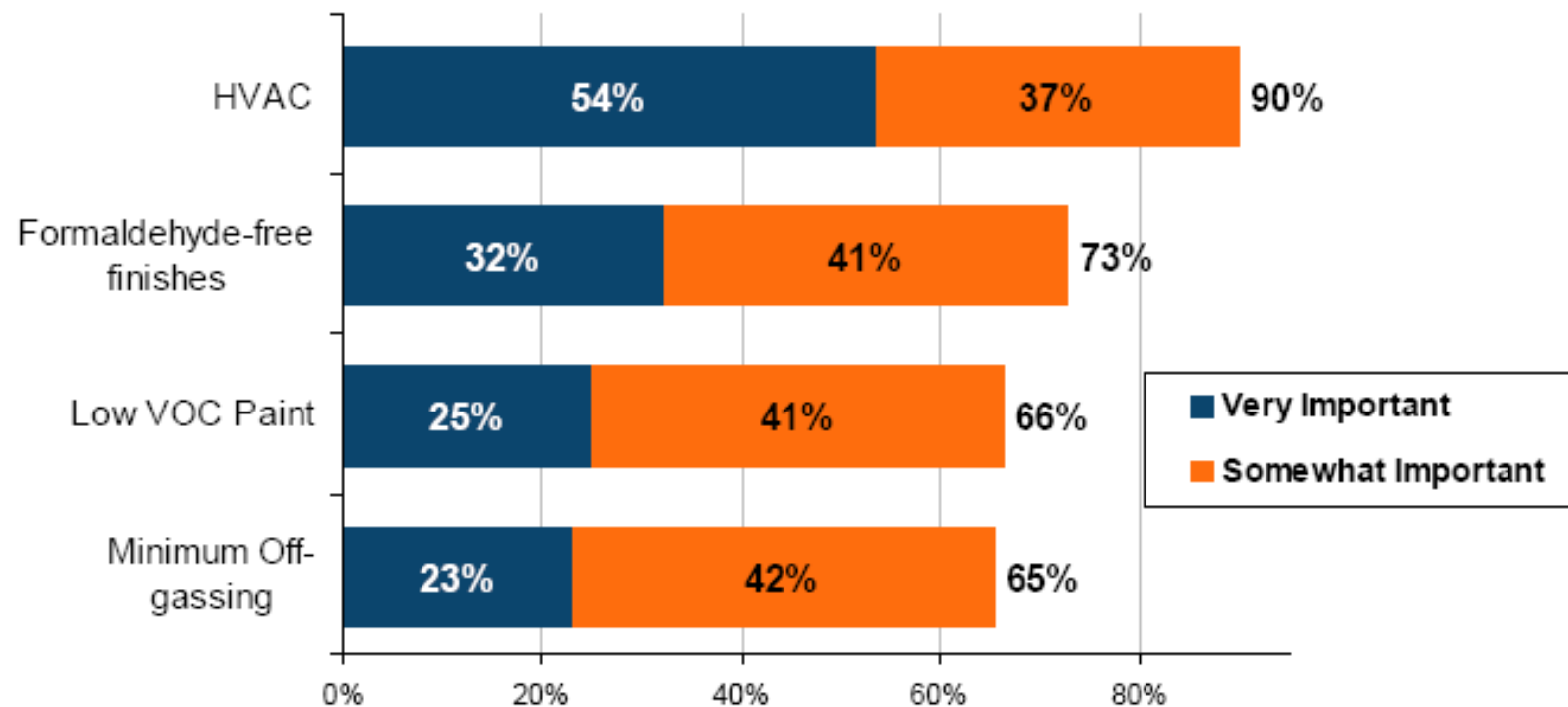


Green Home Buyers: Motivation Behind Green Home Purchase

- Operational Cost Savings
- Improved Health

Source: McGraw-Hill Construction, *The Green Homeowner SMR*, 2007

2008 Top Important Indoor-Air Quality Options



No difference found between medium/large and small builders

What is High Performance?

Speed, Power,
Sex Appeal ...



Efficiency?



at Home

CLEAN INDOOR AIR

ENERGY EFFICIENCY

Affordable

Attractive
Comfortable
Safe & Healthy



What is IAQ Performance?



1. Source Control
2. Ventilation
3. Air Cleaning

\$1 Billion

Amount Americans spend per year
on Indoor Air Quality at home.

Customers
pay for better
performance!

ASTHMA ATTACKS

**“I feel like a
FISH with
NO WATER”**

Jesse, Age 5



2,000,000

**# of ER Visits per year due to
Asthma Attacks in the U.S.**

19%

**% of U.S. Families with at least
One Asthmatic**



Which of your builder's customers have asthma?



Do They Ask?



40%



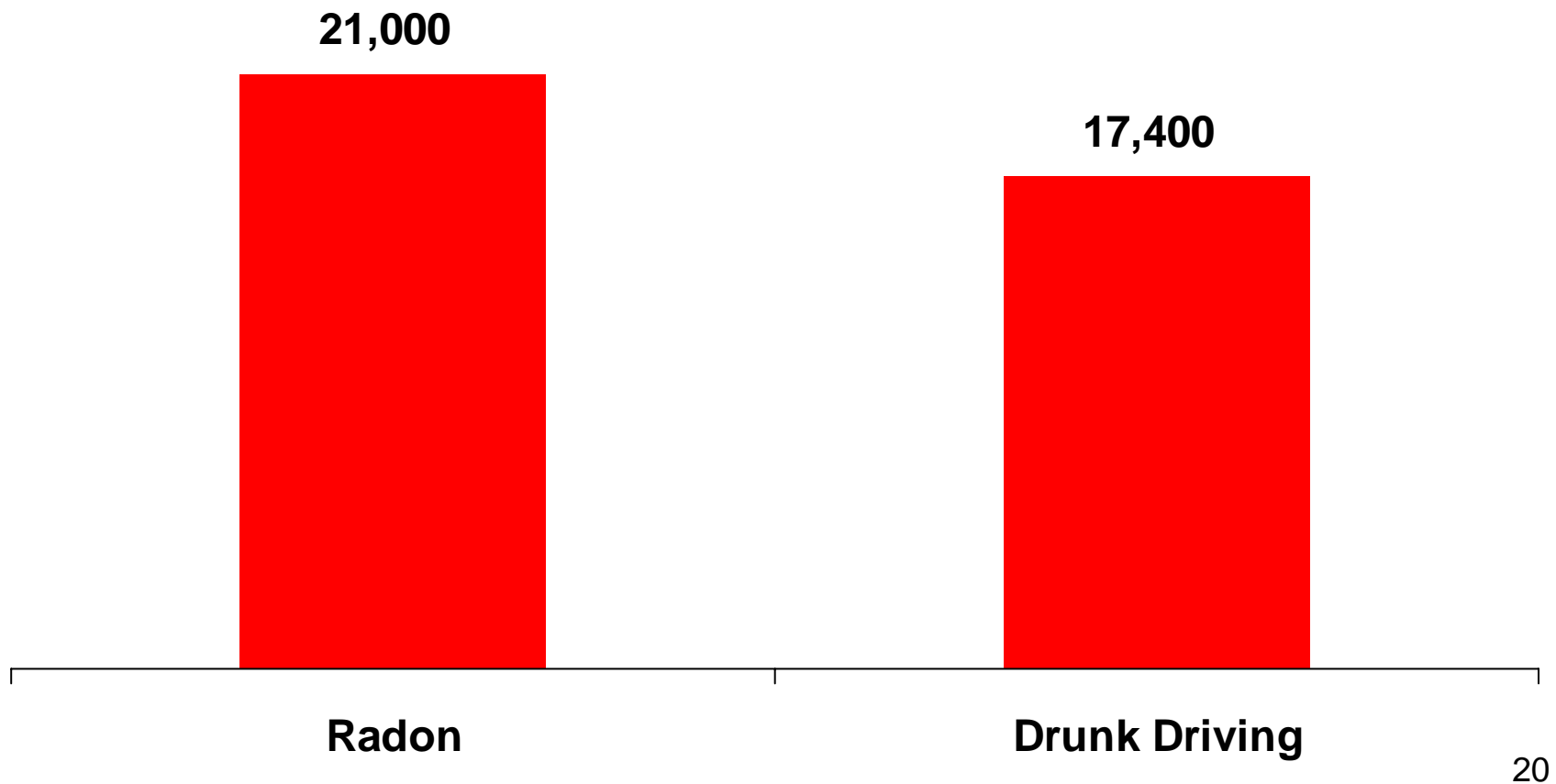
**Increased risk
of asthma
in damp houses***

Ever seen
moisture problems
in new homes?
In your area?

the other warning ...

**SURGEON GENERAL'S WARNING:
Radon causes lung cancer.**

Radon deaths per year



1 in 15



Ever tested homes
for radon?

Or built radon
resistant homes?

Air pollution



200% to 500%

**EPA estimates 2 to 5 times more
chemical pollutants in Indoor Air**

What chemicals are
in the homes you
rate?

Nutrition Facts

Serving Size 1/2 cup (57g)
Servings Per Container 15

Amount Per Serving

Calories 230 **Calories from Fat** 100

% Daily Value*

Total Fat 11g **17%**

Saturated Fat 2g **10%**

Trans Fat 0g

Cholesterol 0mg **0%**

Sodium 95mg **4%**

Total Carbohydrate 32g **11%**

Dietary Fiber 3g **12%**

Sugars 18g

Protein 5g

Vitamin A 0% • Vitamin C 0%

Calcium 4% • Iron 10%

*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:

		Calories	2,000	2,500
Total Fat	Less Than	65g	80g	
Saturated Fat	Less Than	20g	25g	
Cholesterol	Less Than	300mg	300 mg	
Sodium	Less Than	2,400mg	2,400mg	
Total Carbohydrate		300g	375g	
Dietary Fiber		25g	30g	

Calories per gram:

Fat 9 • Carbohydrate 4 • Protein 4

Do your builders
have a strategy that
addresses all this?

It Helps You to Help Them



Successful Program



All EPA Indoor airPLUS qualified homes meet strict guidelines for energy efficiency set by ENERGY STAR, the nationally-recognized symbol for energy efficiency.



+ Pest Barriers

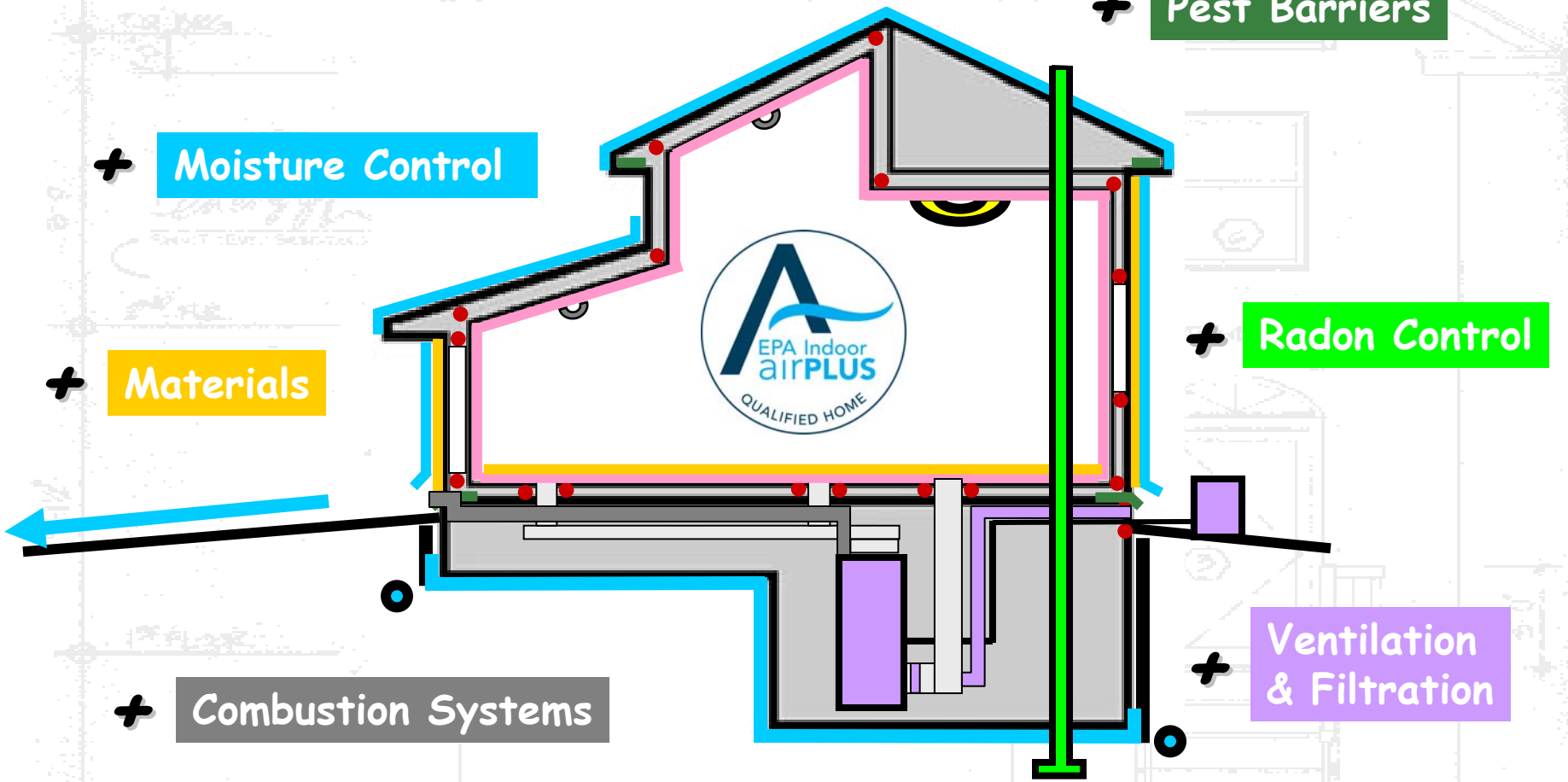
+ Moisture Control

+ Radon Control

+ Materials

+ Ventilation & Filtration

+ Combustion Systems



ask about



Take the Next Step

A new opportunity for leading builders to create better environments inside and out

Value Added
Less Business Risk
Easy Process



Better Environments Inside



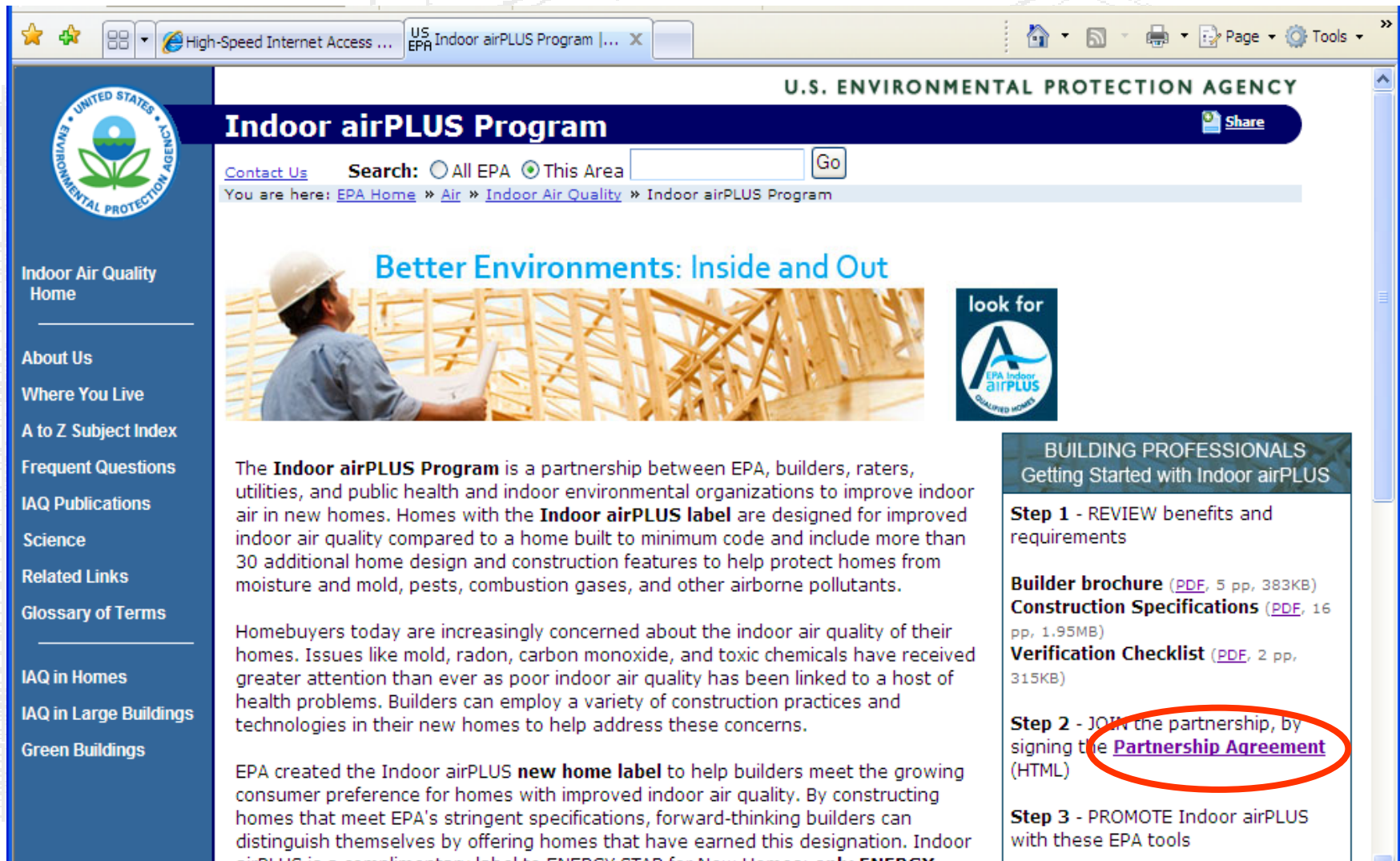
and Out



How to Partner with Indoor airPLUS

How to Partner with IAP

1. Program Education



The screenshot shows the EPA Indoor airPLUS Program website. The browser address bar displays "US EPA Indoor airPLUS Program |...". The page header includes the EPA logo and the text "U.S. ENVIRONMENTAL PROTECTION AGENCY". The main heading is "Indoor airPLUS Program" with a "Share" button. A search bar is present with "Search:" and options for "All EPA" and "This Area". A breadcrumb trail reads "You are here: EPA Home » Air » Indoor Air Quality » Indoor airPLUS Program". The main content area features a large image of a construction worker and the text "Better Environments: Inside and Out". A "look for" button with the Indoor airPLUS logo is also visible. The main text describes the program as a partnership between EPA, builders, raters, utilities, and public health to improve indoor air in new homes. It lists benefits like improved indoor air quality and protection from moisture, mold, and pests. A sidebar on the left contains navigation links such as "Indoor Air Quality Home", "About Us", "Where You Live", "A to Z Subject Index", "Frequent Questions", "IAQ Publications", "Science", "Related Links", "Glossary of Terms", "IAQ in Homes", "IAQ in Large Buildings", and "Green Buildings". On the right, a section titled "BUILDING PROFESSIONALS Getting Started with Indoor airPLUS" lists three steps: Step 1 - REVIEW benefits and requirements; Step 2 - JOIN the partnership, by signing the **Partnership Agreement** (HTML); and Step 3 - PROMOTE Indoor airPLUS with these EPA tools. The "Partnership Agreement" link in Step 2 is circled in red.

U.S. ENVIRONMENTAL PROTECTION AGENCY

Indoor airPLUS Program

Contact Us Search: All EPA This Area

You are here: [EPA Home](#) » [Air](#) » [Indoor Air Quality](#) » [Indoor airPLUS Program](#)

Better Environments: Inside and Out

look for
EPA Indoor airPLUS
QUALIFIED HOMES

BUILDING PROFESSIONALS
Getting Started with Indoor airPLUS

Step 1 - REVIEW benefits and requirements

Builder brochure ([PDF](#), 5 pp, 383KB)
Construction Specifications ([PDF](#), 16 pp, 1.95MB)
Verification Checklist ([PDF](#), 2 pp, 315KB)

Step 2 - JOIN the partnership, by signing the **Partnership Agreement** (HTML)

Step 3 - PROMOTE Indoor airPLUS with these EPA tools

The **Indoor airPLUS Program** is a partnership between EPA, builders, raters, utilities, and public health and indoor environmental organizations to improve indoor air in new homes. Homes with the **Indoor airPLUS label** are designed for improved indoor air quality compared to a home built to minimum code and include more than 30 additional home design and construction features to help protect homes from moisture and mold, pests, combustion gases, and other airborne pollutants.

Homebuyers today are increasingly concerned about the indoor air quality of their homes. Issues like mold, radon, carbon monoxide, and toxic chemicals have received greater attention than ever as poor indoor air quality has been linked to a host of health problems. Builders can employ a variety of construction practices and technologies in their new homes to help address these concerns.

EPA created the Indoor airPLUS **new home label** to help builders meet the growing consumer preference for homes with improved indoor air quality. By constructing homes that meet EPA's stringent specifications, forward-thinking builders can distinguish themselves by offering homes that have earned this designation. Indoor airPLUS is a complimentary label to ENERGY STAR for New Homes; only ENERGY

Indoor Air Quality Home

About Us

Where You Live

A to Z Subject Index

Frequent Questions

IAQ Publications

Science

Related Links

Glossary of Terms

IAQ in Homes

IAQ in Large Buildings

Green Buildings



How to Partner with IAP

2. Partner with EPA

Sign the Partnership Agreement at: epa.gov/indoorairplus

The screenshot shows a web browser window displaying the EPA Indoor airPLUS Program Partnership Agreement Form. The browser's address bar shows the URL <http://www.epa.gov/indoorairplus/test/form.html>. The page header includes the EPA logo and the text "U.S. ENVIRONMENTAL PROTECTION AGENCY". The main heading is "Indoor airPLUS Program". Below the heading, there is a search bar and a breadcrumb trail: "You are here: EPA Home » Air » Indoor Air Quality » Indoor airPLUS Program » Partnership Agreement Form". The main content area features a banner image of a construction worker and the text "Better Environments: Inside and Out". Below the banner, there is a "look for" logo and a paragraph explaining the partnership process: "Becoming an Indoor airPLUS partner is easy. Simply read the Partnership Agreement and Terms for your organization type and fill in the Partnership Agreement Form below. After completing and signing the Partnership Agreement, your organization will have access to Indoor airPLUS promotional logos, marketing tools and materials, and will be eligible for recognition through awards, case studies, and other Indoor airPLUS program outreach activities." Below this text, it states "There is no cost to partner with EPA or to use Indoor airPLUS promotional materials." The main heading for the form is "Indoor airPLUS Partnership Agreement Form". The form itself has a field for "Organization Name:" and a section for "Organization Type (check one):" with radio buttons for "Home Builder" and "Home Verification Organization".

US EPA http://www.epa.gov/indoorairplus/test/form.html

File Edit View Favorites Tools Help

Google G Go Bookmarks 26 blocked Check AutoLink AutoFill Send to

High-Speed Internet Access ... US EPA Partnership Agreement F...

Contact Email and Phone:

Phone Email

Street Address:

Address 1 City State Zip

Check those boxes that apply:

- Check this box if your organization participated in the original Indoor Air Package pilot.
- Check this box if your organization will be participating with Indoor airPLUS in conjunction with a green building program and enter the green building program here:

Partnership Agreements & Terms for:

- [Home Builders](#) (click to expand)
- [Home Energy Raters/Providers](#) (click to expand)
- [Other Program Allies](#) (click to expand)

- As an authorized representative of the partner organization, the contact listed above has the authority to bind this organization, has read the terms of the agreement and recognizes that by clicking the box that they are binding their organization to the terms of the agreement.

How to Partner with IAP

3. Promote the Program to Builders



Breathe Easier Inside and Out with a New Home from (BUILDER)

Look for EPA's Indoor airPLUS label next to the ENERGY STAR® on your new home. Special features reduce indoor air pollutants to protect your indoor environment. Energy-efficient features reduce global warming to protect the outdoor environment.

For more information, visit www.builder.com.

BUILDER NAME
www.builder.com

ask about
EPA Indoor airPLUS

All EPA Indoor airPLUS qualified homes offer superior indoor air quality and meet strict energy efficiency guidelines set by EPA's ENERGY STAR program.

ask about
EPA Indoor airPLUS

ask about
EPA Indoor Air Plus
A New Homes

ask about
EPA Indoor airPLUS

All EPA Indoor Air Plus qualified homes meet strict guidelines for energy efficiency set by ENERGY STAR, the nationally-recognized symbol for energy efficiency.





How to Partner with IAP

4. Verify and Label Qualified Homes

3. Label Here

1. Inspect

EPA Indoor airPLUS Verification Checklist

Address or District: _____ Date: _____

City/State/Zip: _____

Section	Requirements (see Indoor airPLUS Construction Specifications for details)	NA	OK	Not OK	Verified by		
Water Management	1.1 Site & foundation drainage: sloped grade, protected down tiles, & transverse floor drains	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
	1.2 Slightly sloped interior concrete slabs & countertops (Exception: see specifications)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
	1.3 Foundation wall damp-proofed or water-proofed (Except for homes without below-grade walls)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
	1.4 Basement/crawlspace finished & conditioned (Exception: see specifications)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
	Water Management Roof Assembly	1.5 Continuous & slope gable behind exterior cladding, properly finished to foundation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
		1.6 Window & door openings fully flashed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
		Water Management Roof Assembly	1.7 Cathedrally-vented eave with a minimum of 9" free foundation (Except in dry climates)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			1.8 Fully flashed roofwall intersections (step & lock-out flashing) & roof penetrations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			1.9 Bituminous membrane installed at valleys & penetrations (Except in dry climates)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			1.10 Ice blocking installed at eaves (Except in Climate Zones 1 - 4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Intrusion Water Management	1.11 Moisture-resistant exterior/protective systems installed (i.e., flashing, tub/shower backing, & piping)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
		1.12 Weep screed installed on interior side of exterior walls with high condensation potential	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
		1.13 No wet or water-damaged materials adjacent to building envelope	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
		2.1 Approved radon-resistant features installed (Exception: see specifications)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
2.2 Two radon test kits & instructions/procedure for follow-up action provided for buyer (Advisory-use specification)		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
3.1 Foundation joints & penetrations sealed, including air tight weep cover		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
3.2 Concrete-groove radon-resistant screens installed at all openings that cannot be fully sealed (e.g., attic vents)		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
4.1 HVAC room loads calculated, documented, system design documented, calls matched		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
4.2 Duct system design documented & properly installed OR duct system tested (check box if tested)		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
4.3 No air handling equipment or ductwork installed in garage, combustion or home supplied in adjacent enclosures		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
HVAC	4.4 Rooms pressure balanced using transfer grills or jump ducts as required OR tested (check box if tested)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
	4.5 Whole house ventilation system installed to meet ASHRAE 62.2 requirements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
	4.6 Local exhaust ventilation to outdoors installed for baths, kitchens, clothes dryer, central vacuum system, etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
	4.7 Central forced-air HVAC systems have minimum MERV 8 filter system & no return grilles	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
	4.8 All-fuel exhaust/ventilation systems or central HVAC exhaust/ventilation controls installed in warm humid climate only	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
	Combustion Source Controls	5.1 Gas fuel direct vented, oil fuel & water heaters properly vented & duct tested (Exception: see specifications)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
		5.2 Fireplace/heating stove vented outdoors & meet carbon-monoxide/safety standards/restrictions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
		5.3 Certified CO alarm installed in each sleeping zone (e.g., common hallway) according to NFPA 720	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
5.4 Smoking prohibited in common areas, outdoor smoking at least 25' from building opening (alternately shower only)		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
5.5 Common vented/egress doors & garage air-sealed before installation methods, doors door gasket & close installed		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Construction Details	5.6 Exhaust fan minimum 70 cfm, rated for continuous use installed in garage & vented to outdoors (optional)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
	6.1 Certified low-formaldehyde pressed wood materials used (i.e., plywood, OSB, MDF, cabinetry)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
	6.2 Certified low-VOC or no-VOC interior paints & finishes used	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
	6.3 Carpet, adhesive, & cushion qualify for CH Green Label Plus or Green Label testing program	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Final	7.1 HVAC system & ductwork tested dry, clean, & properly installed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
	7.2 Home ventilation balance occupancy OR initial ventilation instructions provided for buyer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
	7.3 Completed checklist & other required documentation provided for buyer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			

Rater/Provider: _____ Builder: _____

Company: _____ Company: _____

Signature: _____

Guidance for Completing the EPA Indoor airPLUS Verification Checklist:

- Only ENERGY STAR Qualified Homes verified to comply with these specifications can earn the "EPA Indoor airPLUS" label. See EPA Indoor airPLUS Construction Specifications for full description of requirements, terms, exceptions, abbreviations, references, and climate map used in this checklist. Verification is not complete until this checklist is completed in full and signed.
- Check one box per line: "N/A", "Builder Verified", or "Rater Verified". "N/A" applies to specifications that do not apply for specific conditions (e.g., climate) according to Exceptions described in the EPA Indoor airPLUS Construction Specifications. Check either "Builder Verified" or "Rater Verified" for all other items. Builder must sign the verification checklist if any items are checked in the "Builder Verified" column, and by so doing accepts full responsibility for verifying that those items have met EPA Indoor airPLUS requirements.
- When using Performance Alternatives (see 4.2 & 4.4), check tested box and include testing documentation in HERS/BOP file.
- Builder provides one copy of the completed/signatured checklist to homeowner; Provider or Rater files a copy with HERS/BOP and ENERGY STAR documentation (i.e., Thermal Diagram Checklist) for the home.
- The Checklist may be completed for a batch of homes using a RESNET-approved sampling protocol when qualifying homes as ENERGY STAR. For example, if the approved sampling protocol requires using one in seven homes, then the checklist will be completed for the one home that was rated.

Note: The EPA Indoor airPLUS Construction Specifications are designed to contribute to improved indoor air quality (IAQ) in new homes compared with code-built homes. However, these measures alone cannot prevent all IAQ problems. Rather, EPA Indoor airPLUS is a way to reduce the likelihood of experiencing IAQ problems. Occupant behavior is also important for IAQ. For example, products used in the home after occupancy and smoking inside may both negatively impact the home's IAQ and the performance of the specified EPA Indoor airPLUS measures.

Comments: _____

For more information, visit epa.gov/indoorairplus

Qualified homes earn the EPA Indoor airPLUS label. Place it next to the ENERGY STAR label.

AN EPA Indoor airPLUS qualified home must still continue to energy efficiency and by ENERGY STAR, the nationally-recognized symbol for energy efficiency.



2. Sign Here

Marketing Resources



ENERGY STAR Partner Locator

[Incentives Available in Colorado](#)



Denotes home builders or developers also offering the EPA Indoor airPLUS.

Select another partner type:

Site-Built Home Builders and Developers

Select another location:

Colorado

Go

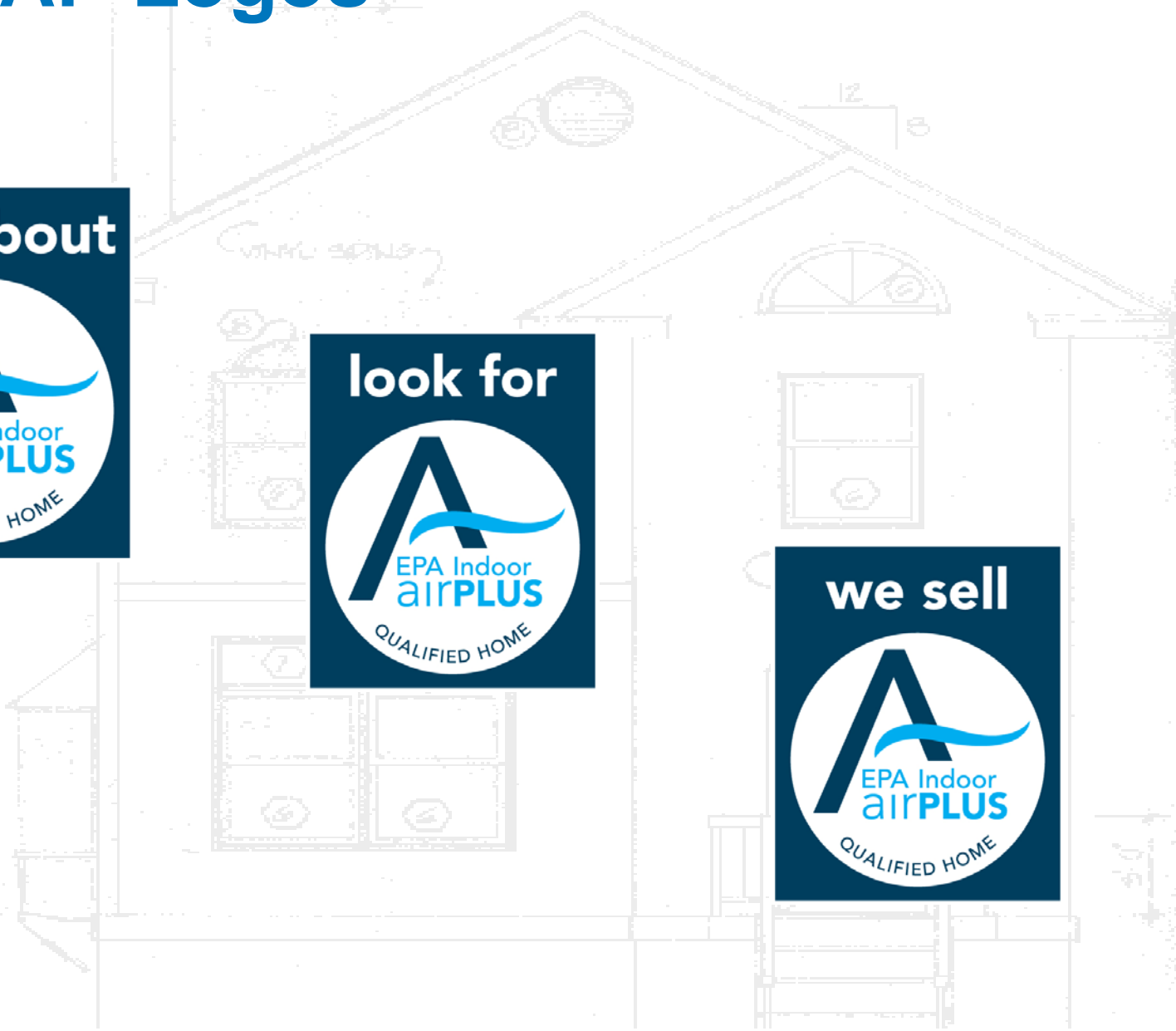
Results 1 - 50 of 187 [Next](#) | [View All](#)

All # [A](#) [B](#) [C](#) [D](#) [E](#) [F](#) [G](#) [H](#) [I](#) [J](#) [K](#) [L](#) [M](#) [N](#) [O](#) [P](#) [Q](#) [R](#) [S](#) [T](#) [U](#) [V](#) [W](#) [X](#) [Y](#) [Z](#)

Name	Service Area/Phone	Partner Since	Homes Labeled (Jul 2007-Jun 2008)*	Homes Labeled (Grand Total)*	Homes Labeled (State Total)*
4460 Chestnut Ridge Road, LLC	CO 512-732-1000	2008	148	148	0
Ades Design Builders, Inc.	Denver, Foothills, Mountains, CO 303-674-2280	2007	New Partner	New Partner	0
Affordable Custom Contracting	Aurora, Broomfield, Golden, Lakewood, San Antonio, CO 720-227-7857	2007	New Partner	New Partner	0
Alpine Post & Beam, Inc.	Park, Chaffee, Summit Counties, CO 978-790-5236	2008	New Partner	New Partner	0
Alta Development, LLC	Denver, CO 303-726-8100	2008	New Partner	New Partner	0
Amherst Construction	Boulder, CO 303-522-1010	2007	New Partner	New Partner	0
Ashley Construction, Inc.	Grand Junction, CO 970-242-2633	2008	New Partner	New Partner	0
Aspen Homes of Colorado Inc.	Loveland, CO 970-461-9696	2002	47	606	606
Austin Signature Homes	Denver, CO 303-771-2562	2005	4	8	8




IAP Logos



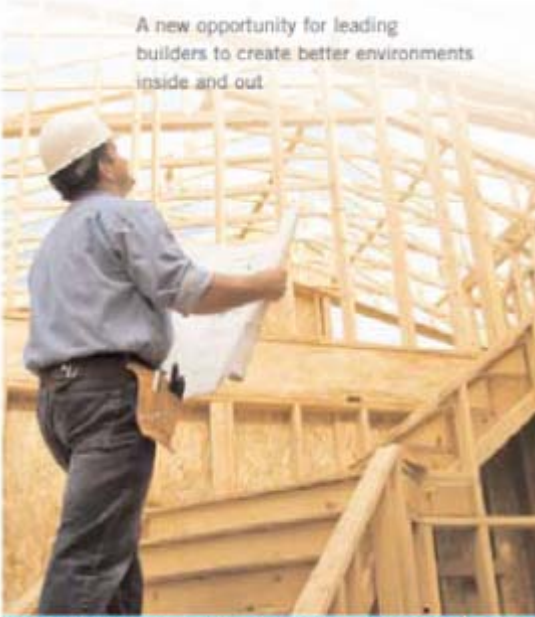
Builder & Consumer Brochures

EPA 402K-0900 | January 2009 | www.epa.gov/indoorairplus


ask about


Step up to Indoor airPLUS

A new opportunity for leading
builders to create better environments
inside and out.



All Indoor airPLUS qualified homes also meet strict guidelines for energy efficiency set by ENERGY STAR, the nationally recognized symbol for energy efficiency.



EPA 402F090001 | January 2009

ask about


Indoor airPLUS Better Environments Inside and Out



All Indoor airPLUS qualified homes meet strict guidelines for energy efficiency set by ENERGY STAR, the nationally recognized symbol for energy efficiency.





Promote IAP in Ads

ZURICH HOMES

where we build | available lots | homes for sale | custom homes | sub-contractors | home technology | about

More on Energy Star:

Plus!

we sell

EPA Indoor airPLUS QUALIFIED HOMES

CHANGE FOR THE BETTER WITH ENERGY STAR

Building an Energy Star certified home means that your home has met energy efficacy standards set by the EPA. In order to receive Energy Star certification your home is built to strict standards and its energy efficiency is inspected and verified by an independent home rater. Building an Energy Star certified home means lower monthly utility bills, adding resale value to your home, and possible eligibility for [available tax credits](#). By building Energy Star you are using smart building techniques that help conserve natural resources while saving you money on your energy bills.

To find out more about Energy Star contact us or visit: www.energystar.gov.

On-site Displays




Customizable Builder Ads

BUILDER NAME
www.builder.com

Make sure that the air your family breathes is as safe and clean as the food you buy. Look for EPA's Indoor airPLUS on new homes from BUILDER. These homes come with special features to improve the air inside and reduce energy use to improve the air outside.

For more information, visit www.builder.com.



To Do:

- Go to farmer's market
- Change water filter
- Research bike helmets
- Breathe clean air???

we sell
A
Indoor airPLUS
ENERGY STAR

All EPA Indoor airPLUS qualified homes are designed for superior indoor air quality and meet strict energy efficiency guidelines set by the U.S. Environmental Protection Agency. Learn more at epa.gov/iaq/indoorairplus.

we sell
ENERGY STAR

BUILDER NAME
www.builder.com

Make sure that the air your family breathes is as safe and clean as the food you buy. Look for EPA's Indoor airPLUS on new homes from BUILDER. These homes come with special features to improve the air inside and energy-efficient features to reduce greenhouse gas emissions—and improve the air—outside.

For more information, visit www.builder.com.



To Do:

- Go to farmer's market
- Change water filter
- Research bike helmets
- Breathe clean air???

we sell
A
Indoor airPLUS
ENERGY STAR

All EPA Indoor airPLUS qualified homes are designed for superior indoor air quality and meet strict energy efficiency guidelines set by the U.S. Environmental Protection Agency. Learn more at epa.gov/iaq/indoorairplus.

BUILDER NAME
www.builder.com

You do everything possible to protect your family. What about the air your family breathes? Help reduce exposure to pollutants such as mold, carbon monoxide, and radon gas by looking for the EPA Indoor airPLUS and ENERGY STAR® labels on new homes from (BUILDER).

For more information, visit www.builder.com.



To Do:

- Choose a car seat
- Install safety locks
- Research preschools
- Breathe clean air???

we sell
A
Indoor airPLUS
ENERGY STAR

All EPA Indoor airPLUS qualified homes are designed for superior indoor air quality and meet strict energy efficiency guidelines set by the U.S. Environmental Protection Agency. Learn more at epa.gov/iaq/indoorairplus.

we sell
ENERGY STAR



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Spe
End

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You

Mold, rad
new (BUIL
provide s

For more



BUILDER NAME
www.builder.com

A Greener Environment Starts Here

[Builder] is helping your environment inside and out by offering new homes that have earned the EPA Indoor airPLUS and ENERGY STAR® labels. This greens your home by improving air quality inside and preventing the greenhouse gas emissions that cause global warming outside. So breath easy.



All EPA Indoor airPLUS qualified homes are designed for superior indoor air quality and meet strict energy efficiency guidelines set by the U.S. Environmental Protection Agency.

Learn more at epa.gov/iaq/indoorairplus.



Technical Resources



Checklist

EPA Indoor airPLUS Verification Checklist

Address or Div/Lot#: _____ Date: _____ Verified by: _____

City/State/Zip: _____

Section	Requirements (see Indoor airPLUS Construction Specifications for details)	N/A	Builder	Rater
Water-Managed Site and Foundation				
1.1	Site & foundation drainage: sloped grade, protected drain tile, & foundation floor drains	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.2	Capillary break below concrete slabs & in crawlspaces (Exception - see specification)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.3	Foundation wall damp-proofed or water-proofed (Except for homes without below-grade walls)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.4	Basements/crawlspaces insulated & conditioned (Exceptions - see specification)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Water-Managed Wall Assemblies				
1.5	Continuous drainage plane behind exterior cladding, properly flashed to foundation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.6	Windows & door openings fully flashed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Water-Managed Roof Assemblies				
1.7	Catchment/drainage direct water a minimum of 5' from foundation (Except in dry climates)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.8	Fully flashed roof/parapet intersections along & above roof flashing & roof penetrations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.9	Skirt/membrane membrane installed at valleys & penetrations (Except in dry climates)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.10	Ice backing installed at eaves (Except in Climate Zones 1 - 4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Interior Water Management				
1.11	Minimum required moisture/pesticide systems installed (i.e., flooring, subfloor, backing, & piping)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.12	No vapor barriers installed on interior side of exterior walls with high condensable potential	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.13	No wet or water-damaged materials enclosed in building assemblies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.1	Approved radon-resistant features installed (Exception - see specification)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.2	The radon test kit, & radon mitigation or the radon gas action provided for the buyer (Radon see specifications)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Parts				
3.1	Foundation joints & penetrations sealed, including all tight seal covers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.2	Corrosion proof rodent/bird screens installed at all openings that cannot be fully sealed (e.g., attic vents)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.1	HRV/ERV units tested, calibrated, documented, system design specifications, CRV method	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.2	Duct systems design documented & properly installed OR duct system tested (check box if tested) <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.3	No air handling equipment or ductwork installed in garage, continuous air barrier required in adjacent assemblies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.4	Rooms pressure balanced using transfer grille or jump ducts as required OR tested (check box if tested) <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.5	Whole house ventilation system installed to meet ASHRAE 62.2 requirements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.6	Local exhaust ventilation for outdoor activities for baths, kitchen, dryer, central vacuum system, etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.7	Central forced-air HVAC systems) have minimum MERV 8 filter, no filter bypass, & no ozone generator	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.8	Airtight dehumidification systems) or central HVAC dehumidification controls installed in warm-humid climate only	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Construction Details				
5.1	Gas tight direct vented, all heat & water heaters power vented or direct vented (Exceptions - see specifications)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.2	Flue/pass-through stoves vented outdoors & meet ventilation/efficiency standards/requirements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.3	Certified CO alarms installed in each sleeping zone (e.g., common hallway) according to NFPA 720	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.4	Leak testing performed in common areas, outside air intake at least 20' from building opening, immediately before only	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Attached Garage Isolation				
5.5	Common wall/ceiling doors & garage air sealed before installation, house doors gasketed & close installed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.6	Exhaust fan (minimum 70 cfm, rated for continuous use) installed in garage & vented to outdoors (optional)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.1	Certified non-toxic/zero-pVOC wood materials used (i.e., plywood, OSB, MDF, cabinetry)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.2	Certified low-VOC or no-VOC interior paints & finishes used	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.3	Carpet, adhesive, & cushion qualify for CRV Green Label Plus or Green Label testing program	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.1	HRV/ERV system & ductwork method dry, clean, & properly installed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.2	Homes ventilated before occupancy OR initial ventilation test reports provided for buyer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.3	Completed checklist & other required documentation provided for buyer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Rater/Provider: _____ Builder: _____
 Company: _____ Company: _____
 Signature: _____ Signature: _____



Indoor airPLUS Verification Checklist



Address or Div/Lot#: _____

City/State/Zip: _____ Date: _____ Verified by: _____

Section	Requirements (see Indoor airPLUS Construction Specifications for details)	N/A	Builder	Rater
Water-Managed Site and Foundation				
1.1	Site & foundation drainage: sloped grade, protected drain tile, & foundation floor drains	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.2	Capillary break below concrete slabs & in crawlspaces (Exception - see specification)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.3	Foundation wall damp-proofed or water-proofed (Except for homes without below-grade walls)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.4	Basements/crawlspaces insulated & conditioned (Exceptions - see specification)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Technical Specification

1.2 Install capillary breaks as follows:

Beneath concrete slabs, including basement floors:

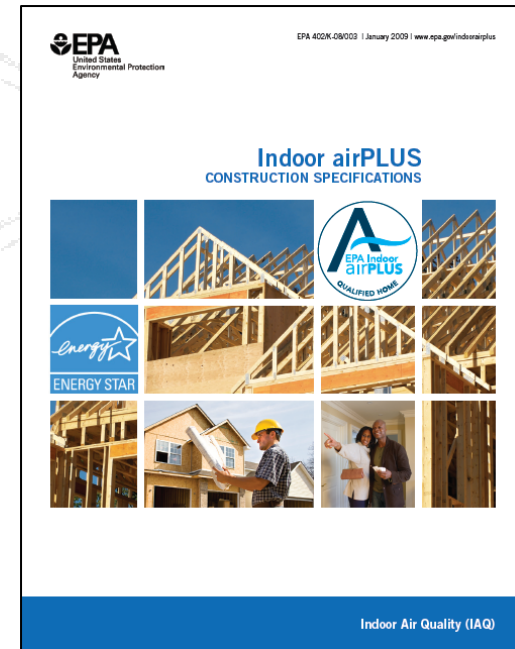
- Install a 4 in. layer of ½ in. diameter or greater clean aggregate, covered with 6 mil (or thicker) polyethylene sheeting, overlapped 6 to 12 in. at the seams, and in direct contact with the concrete slab above

Crawlspace floors:

- Cover crawlspace floors with a concrete slab over 6 mil (or thicker) polyethylene sheeting overlapped 6 to 12 in. at the seams; OR
- Cover crawlspace floors with 6 mil polyethylene (10 mil recommended) sheeting, overlapped 6 to 12 in. and sealed or taped at the seams and penetrations. The sheeting shall be attached to walls and piers with adhesive and furring strips.

Exceptions:

- In areas of free-draining soils—identified as Group 1 by a certified hydrologist, soil scientist, or engineer through a site visit—a gravel layer or geotextile matting is not required under concrete slabs.
- Polyethylene sheeting is not required in Dry (B) climates, as defined by IECC Figure 301.1, unless the sheeting is required for radon resistance (see Specification 2.1).
 - Install a 4 in. uniform layer of sand, overlain with a layer or strips of geotextile drainage matting installed according to the manufacturer's instructions, and covered with polyethylene sheeting overlapped 6 to 12 in. at the seams.

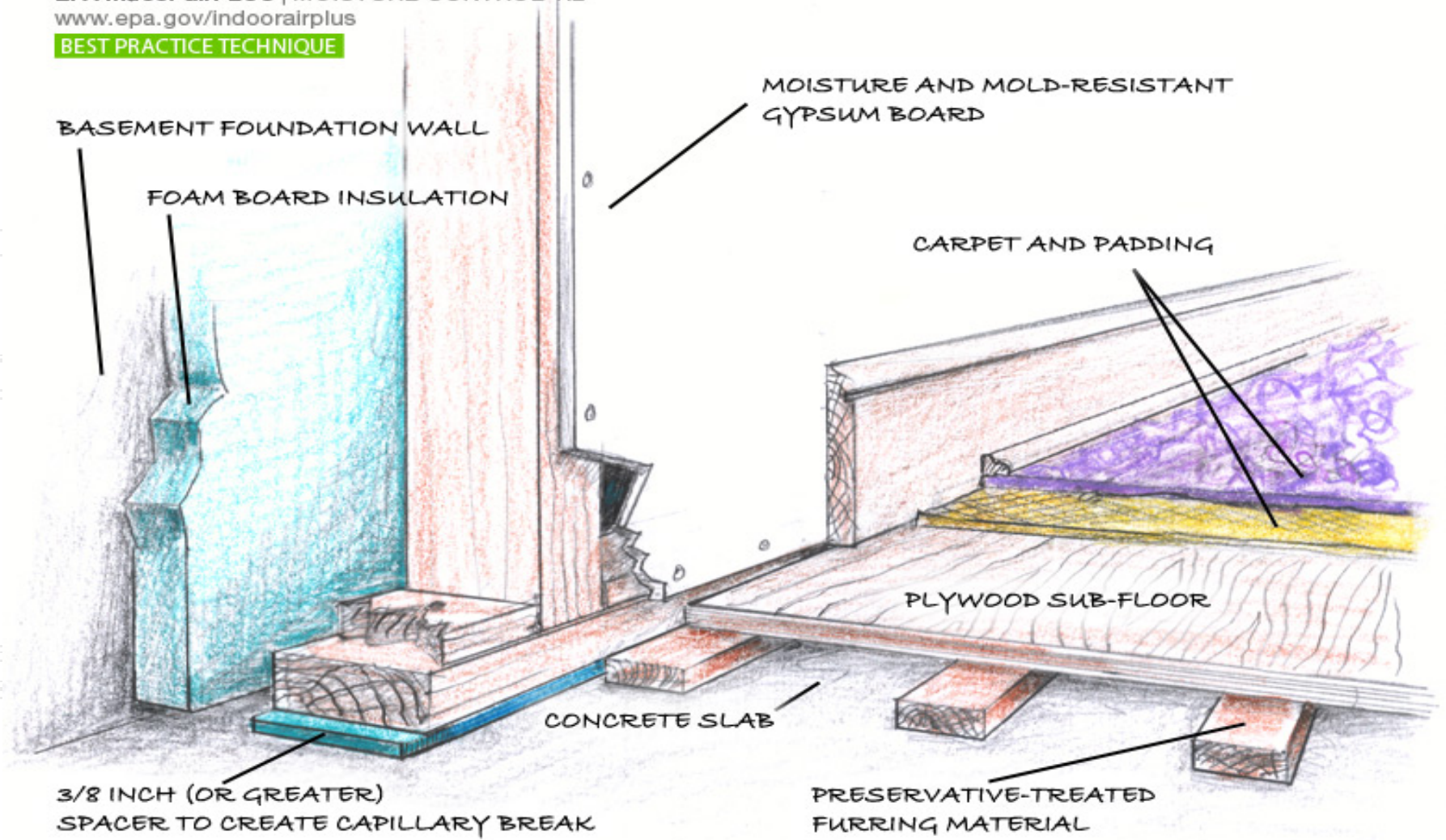


Builder (and rater) Guide

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BEST PRACTICE TECHNIQUE



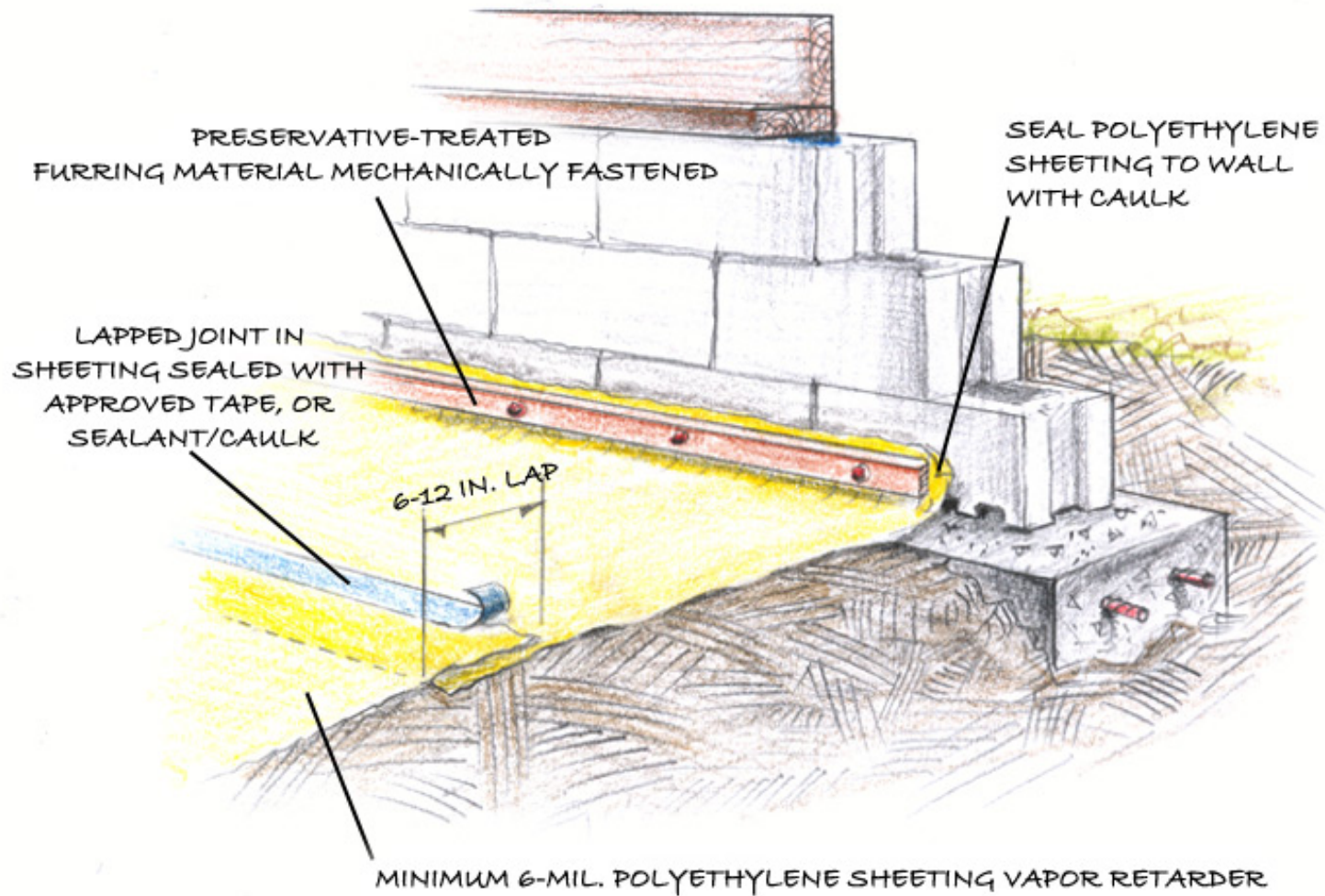
BEST PRACTICE - BASEMENT FLOOR DESIGN



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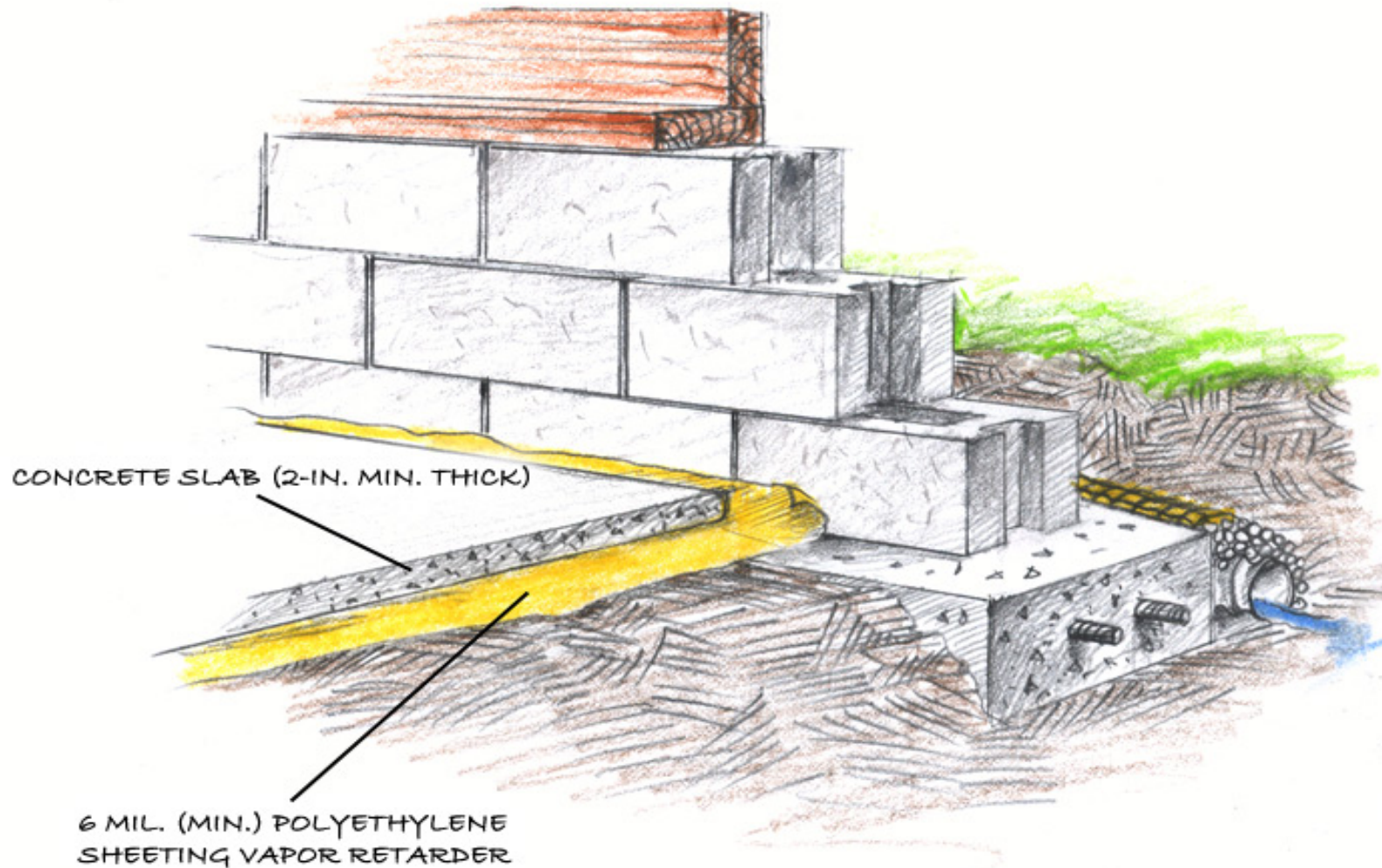


CRAWLSPACE FLOOR WITH SEALED POLYETHYLENE VAPOR RETARDER



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CRAWLSPACE FLOOR - "RAT SLAB" OVER POLYETHYLENE VAPOR RETARDER

ask about



Indoor airPLUS

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Questions?

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or 202-343-9495**