

# Air Sealing Opportunities in New Construction



# Fiber Vs Foam. The Game is On!

Corning's groundbreaking air-sealing study, give us a better understanding of the impact air leakage has on a home's performance. We now know that most air leakage occurs where components are joined, not in framing cavities where most insulation is installed. Extensive research shows that once a building is sealed, R-value, not insulation type, is all that matters for thermal performance. **Owens Corning understands that insulating and air sealing are two separate concerns** that require dedicated solutions.



# What Is Bibs?

The acronym BIBS<sup>®</sup> is a registered trademark of BIBCA (Blown-in Blanket Contractors Association). Not all blown-in fiberglass manufacturers belong to this organization, and hence the acronym cannot be applied to all blown-in wall insulation systems.

Blown in place wall insulation is tested in accordance to ASTM C522 - Air resistance of Acoustical Materials. Results from the CertainTeed manufacturer's test indicated that when applied at densities of 2.2 lbs. per cu. ft., the material has the same resistance to airflow as cellulose at 3.5 lbs per cu. ft. (CertainTeed 2013).

# In Field QC



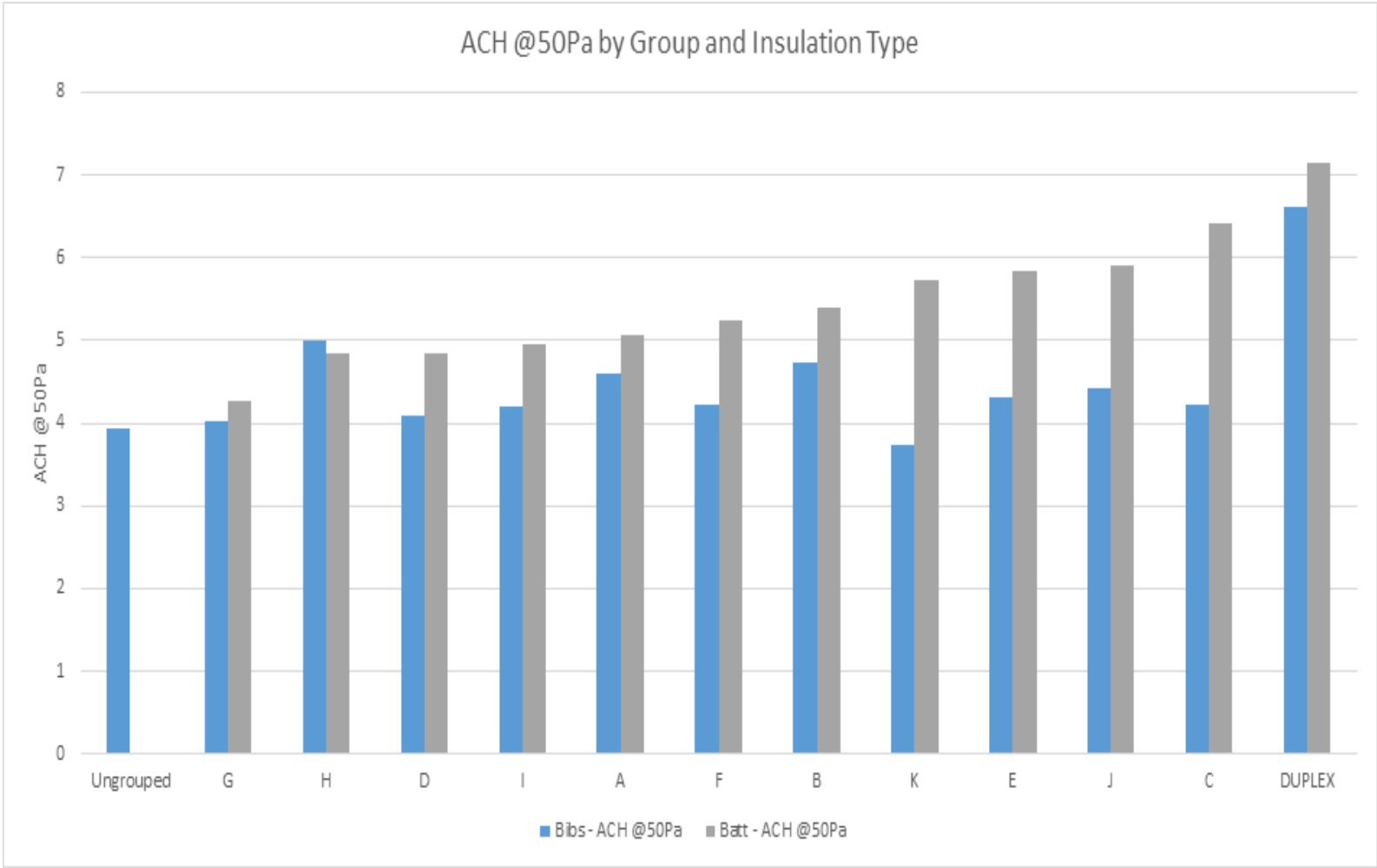
# ACH in Context. Northwest Energy Star Homes

Year	ID	MT	OR	WA
2004	6.81	-	-	5.28
2005	6.66	3.41	5.84	5.08
2006	5.33	2.06	5.77	5.02
2007	4.71	2.99	5.34	5.00
2008	4.40	3.16	5.21	4.00
2009	4.44	3.00	5.09	3.82
2010	3.57	3.27	4.44	3.59
2011	3.21	2.77	4.14	3.47
2012	3.39	2.35	3.68	3.22
2013	3.51	2.23	3.26	3.12

# Raw Numbers

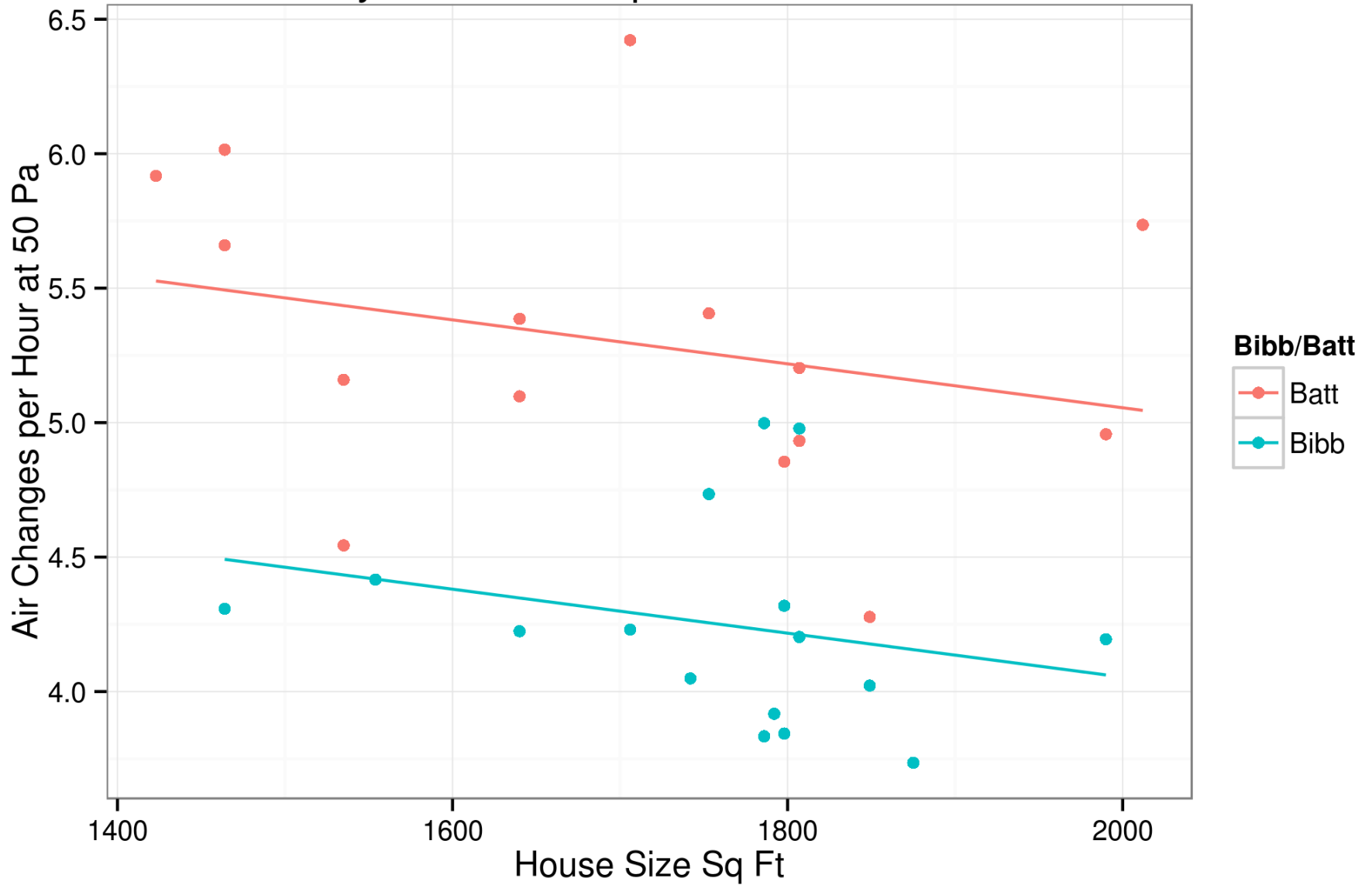
Measurement	Batt	Blown-in Wall	Difference
ACH50	5.766	4.724	-1.042
CFM50	1,314	1,114	-199
CFM50/sq. ft.	0.828	0.677	-0.151
CFM50/interior sq. ft.	0.307	0.252	-0.055

# Matched Pairs Results



# ACH50 by House Size

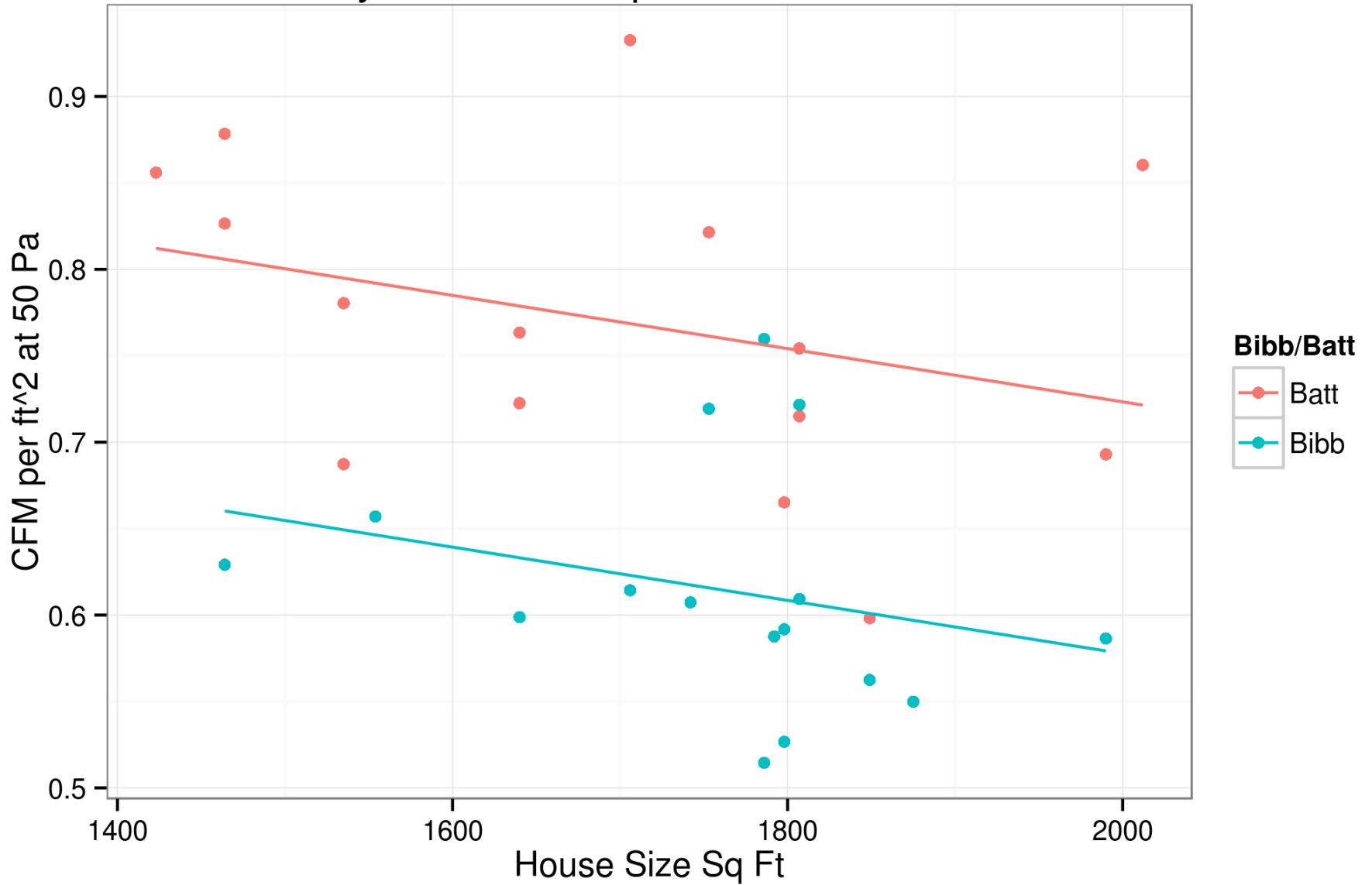
## Casey Meadows Duplex Homes Removed





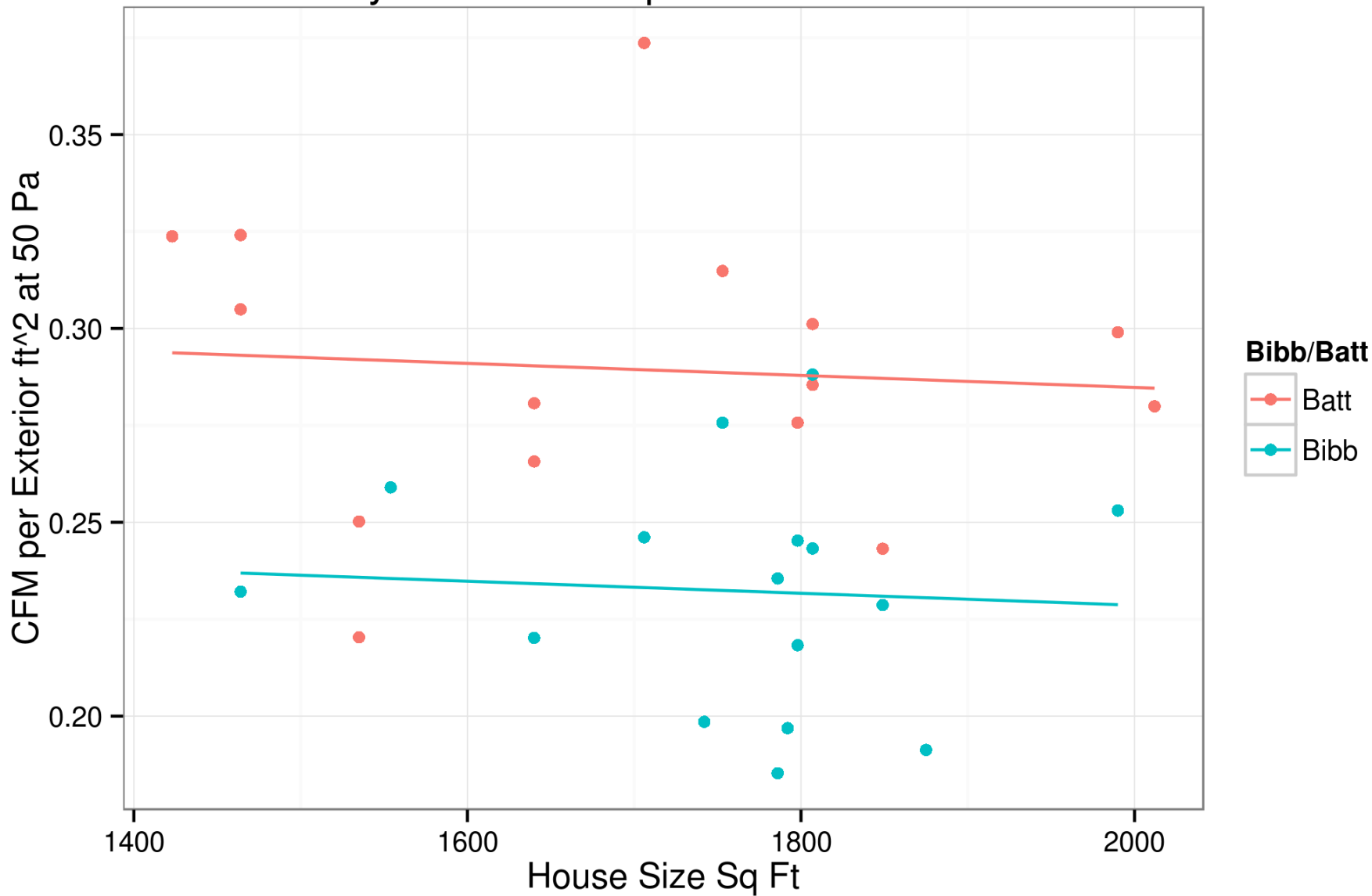
# CFM50 / Ft<sup>2</sup> by House Size

## Casey Meadows Duplex Homes Removed

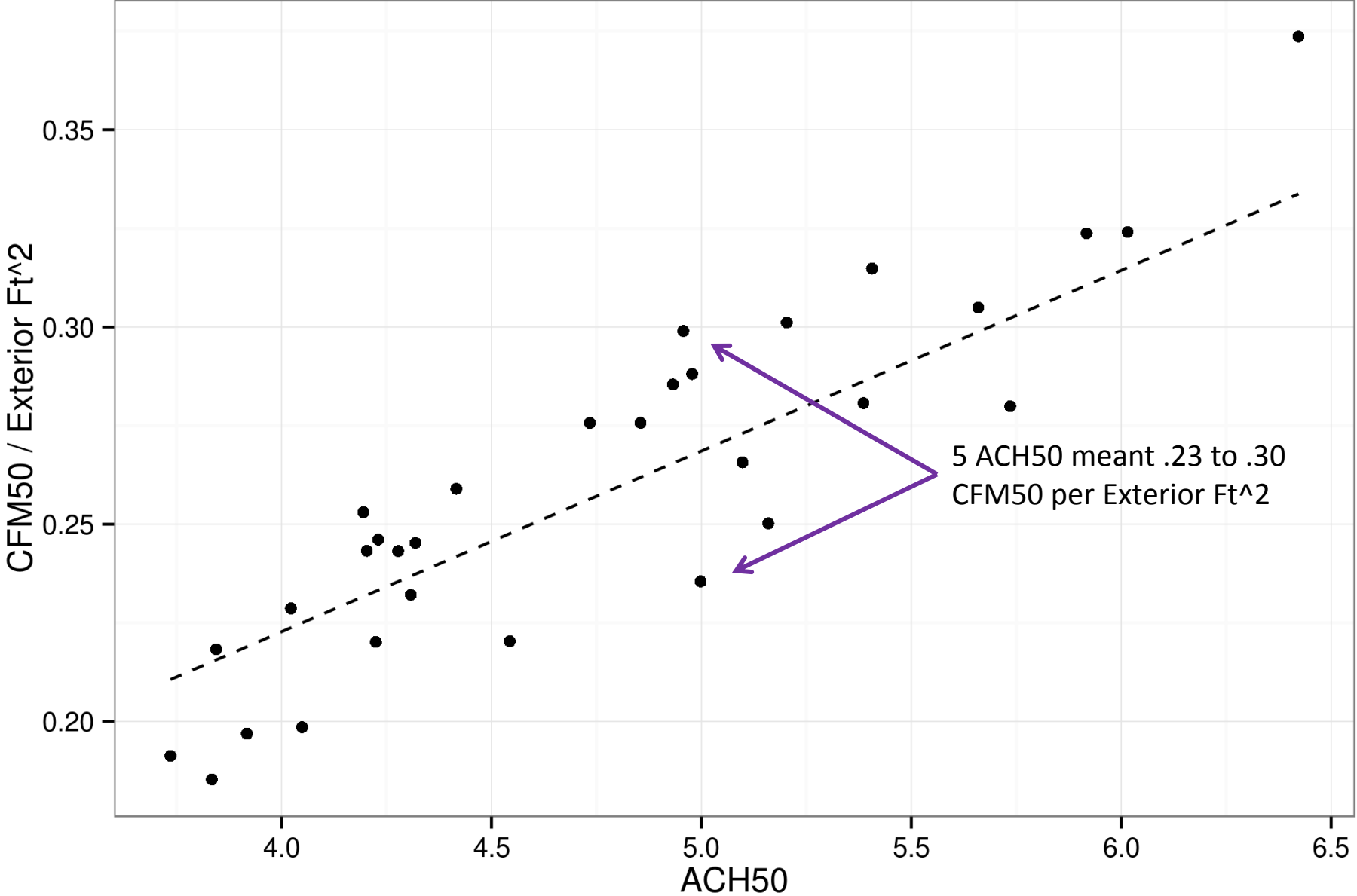


# CFM50/Exterior Ft^2

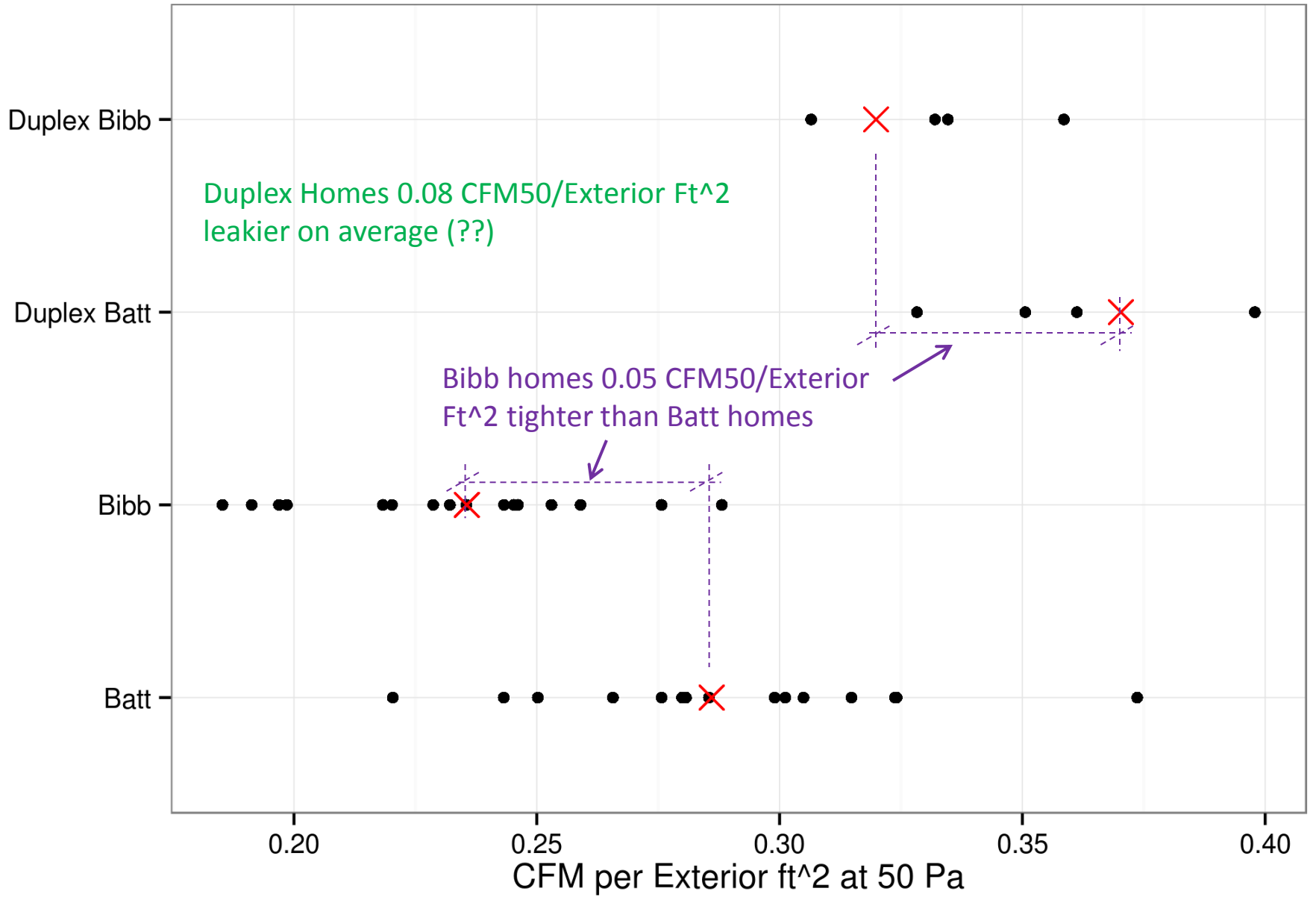
## Casey Meadows Duplex Homes Removed



# CFM50 Normalized by Exterior Area vs ACH50



# Estimated effect of Bibbs vs Batts



Heating Equipment	RTF Home Model #	Energy Savings	Cost	Benefits, 30-Year Life	TRC Result, 30- Year Life	Benefits, 45-Year Life	TRC Result, 45- Year Life	Benefits,70 -Year Life	TRC Result, 70- Year Life
Gas furnace with AC	1344	13.43 therms	\$500	\$118	0.24	\$124	0.25	\$148	0.30
	2200	24.79 therms		\$217	0.43	\$229	0.46	\$272	0.54
	2688	19.36 therms		\$170	0.34	\$179	0.36	\$213	0.43

# NEBS To The Rescue?

- “ The BIBS homes are quieter, I can sell quite.”

The builder