

architecture
that
works

**thoughtful
balance.**

Making Money Making Passive Houses

Presented By:

Laura Nettleton of Thoughtful Balance Architecture

**What makes clients want
to pursue Passive House...**

~~Performance?~~

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~~It's the right thing to do?~~

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to pursue Passive House...**

~~**Performance?**~~

~~**It's the right thing to do?**~~

~~**Healthmaybe?**~~



MONEY!

**There is Skepticism about
Sustainability:
Developers Want Measurable
Performance & Verification**

Utility Study

Landlord paid utilities, 3% increase/year; 50% Passive House savings on utilities

YEAR	MONTHLY UNIT SAVINGS	ANNUAL UNIT SAVINGS	ANNUAL SAVINGS ON 221 UNITS	CUMULATIVE SAVINGS	YEAR	MONTHLY UNIT SAVINGS	ANNUAL UNIT SAVINGS	ANNUAL SAVINGS ON 221 UNITS	CUMULATIVE SAVINGS
2016	54	642	141,882	141,882	2031	83	1,000	221,048	2,859,899
2017	55	661	146,138	288,020	2032	86	1,030	227,679	3,087,578
2018	57	681	150,523	438,543	2033	88	1,061	234,509	3,322,087
2019	58	702	155,038	593,581	2034	91	1,093	241,545	3,563,632
2020	60	723	159,689	753,271	2035	94	1,126	248,791	3,812,422
2021	62	744	164,480	917,751	2036	97	1,160	256,255	4,068,677
2022	64	767	169,415	1,087,165	2037	100	1,194	263,942	4,332,619
2023	66	790	174,497	1,261,662	2038	103	1,230	271,861	4,604,480
2024	68	813	179,732	1,441,394	2039	106	1,267	280,016	4,884,496
2025	70	838	185,124	1,626,518	2040	109	1,305	288,417	5,172,913
2026	72	863	190,678	1,817,196	2041	112	1,344	297,069	5,469,983
2027	74	889	196,398	2,013,594	2042	115	1,385	305,981	5,775,964
2028	76	915	202,290	2,215,883	2043	119	1,426	315,161	6,091,125
2029	79	943	208,359	2,424,242	2044	122	1,469	324,616	6,415,741
2030	81	971	214,609	2,638,851	2045	126	1,513	334,354	6,750,095

MORNINGSIDE CROSSING PASSIVE HOUSE

CO-DESIGNED BY THOUGHTFUL BALANCE AND NK ARCHITECTS





MORNINGSIDE
CROSSING

MORNINGSIDE PUBLIC SCHOOL

MORNINGSIDE
CROSSING



Morningside Crossing Numbers

\$167

Per square foot

\$168

Average PHFA Project

\$177

Average PHFA PH Project

\$9,832,000

Total Budget

\$636,809

Premium for Passive House

+6.5%

Morningside Crossing PH Premiums

Concrete	19.20%	Basement New Slab
Metals	3.80%	Thermal Bridge Free Connections
Wood & Plastics	5.00%	Floor Framing, Zip Instead of Tyvek
Thermal & Moisture Protection	31.90%	Spray Foam at Chimneys, Parking Deck, and Spray Foam Itself
Windows	26.40%	Cost of PH Windows
General Conditions	6.50%	Cost of Figuring It All Out
HVAC	-7.50%	Eliminate Heat Pump DHW (no more Natural Ventilation)



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**Even in Cases of Payback at 10 Years:
Passive House always has returned on
Investment!**

Developing Rules of Thumb to Maintain Budgets

In PH All Budgets Are Project Dependent

Choices Matter!

Using Modeling for Value Engineering

Smaller Premium for PH in New Construction

Smaller Buildings Pay a Higher Premium High as 10%

Smaller Buildings Consider Renewables Before Additional Insulation

In Remodels Be Careful About Switching Fuel Types

In Retrofits It is Cheaper to Insulate from the Outside

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Thank You.

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