

# A History of Energy Efficiency in Affordable Housing in Pennsylvania

# Why Energy Efficiency?

In the early 2000s

- Real Estate Tax Increases
- Property Insurance Increases
- Lack of rent increases

One solution:

Energy conservation reduces operating costs

# LIHTC Process

- Application includes threshold (mandatory) criteria & selection (optional) criteria
- Points awarded for selection criteria
- Tax credits are awarded to highest scoring projects
- Tax Credits sold to investors to provide capital for construction

# Energy Efficiency History

2003 – 2004 Selection Criteria:

Exceed insulation standards of IECC by 10% min.

2005 Selection Criteria:

Exceed insulation standards by 10%

Air Tightness of 3.5-5.0 ACH 50

Energy Star Appliances, HVAC & Wtr Htrs

2006-2007 Selection Criteria:

Exceed insulation standards by 10%

Energy Star Appliances, HVAC & Wtr Htrs

HERS score of 85 minimum

# Energy Efficiency History (cont'd)

## Threshold Criteria

## Selection Criteria

2008-2010 E Star Ltg, Appl & Equip  
HERS index req'd for E Star

Exceed insulation standards  
by 10%

2011-2014 E Star Ltg, Appl & Equip  
HERS index req'd for E Star  
Exceed insul stds by 10%

Renewables: Solar Thermal,  
Solar PV, Geothermal,  
Wind Turbines

2015-2016 E Star Ltg, Appl & Equip  
Exceed insul stds by 10%  
Mandatory criteria of EGC  
(req's E Star Label)

Exceed mandatory EGC by  
25 points  
Achieve reduced HERS index  
Build to Passive House stds  
(certification not req'd)

# Energy Efficiency History (cont'd)

## Threshold Criteria

## Selection Criteria

2018	E Star Ltg, Appl & Equip Exceed insul stds by 10% Mandatory criteria of EGC (req's E Star Label)	EGC, LEED or NGBS certif. Achieve reduced HERS index Build to Passive House stds (certification not req'd)
2019	E Star Ltg, Appl, & Equip Exceed "U-Overall" by 10% E Star for Homes or MF High Rise program certification	EGC, LEED or NGBS certification Achieve reduced HERS Index or Zero Energy Ready Home certif. or Passive House certification

# Summary of 2015-2018 Applications

	<u>2015</u>	<u>2016</u>	<u>2018</u>
No. of eligible applications:	85	94	89
No. of Passive House applications:	31	27	15
No. of applications awarded LIHTCs:	31	33	35
No. of Passive House projects awarded:	7	10	8

# Summary of Green Building & Energy Efficiency Measures in 2018 Applications

Total number of applications:	99
No. committing to certification In National Green Bldg Program:	98
No. of Reduced HERS applications:	79
No. of Passive House applications:	15



# Results – 2015 Passive House Projects

- 7 Passive House developments awarded tax credits
- 3 are certified Passive House projects
- 1 passed all requirements, but did not pursue certification
- 1 passed all but one requirement
- 1 failed air tightness on 3 of 3 buildings, and over slightly on 2 other categories at one building
- 1 failed 4 of 5 requirements

Construction Cost Summary for PHFA 2015 Applications												
Proj. No.	County	Climate Zone	Units (by BR Qty)				Total Units	Bldg. Area	Constr. \$	\$/Unit	\$/SF	
			0	1	2	3						4+
SF-1	Franklin	5A			33	21	54	70,218	7,051,522	130,584	100	
SF-2	Schuykill	5A		3	9	5	17	21,151	2,238,725	131,690	106	
SF-3	Philadelphia	4A		5	19	31	55	79,795	9,363,626	156,060	117	
SF-4	Allegheny	5A			26	19	45	63,548	8,863,631	196,970	117	
SF-5	Lycoming	5A		16	34		50	66,147	8,141,437	162,829	123	
SF-6	Bradford	5A		10	24	16	50	62,956	7,964,823	159,296	127	
SF-7	Centre	5A			20	20	40	53,652	7,523,233	188,081	140	
SF-8	Lebanon	5A			46	16	62	84,168	11,742,459	189,395	140	
SF-9	Bradford	5A		2	26	12	40	59,954	8,369,296	209,232	140	
SF-10	Butler	5A		3	39	18	60	67,904	9,827,275	163,788	145	
SF-11	Erie	5A			9	34	43	53,454	7,870,669	183,039	147	
SF-12	Dauphin	5A		3	3	25	4	35	61,504	9,192,750	262,650	149
SF-13	Berks	5A		22	20	16	58	62,097	9,305,340	160,437	150	
SF-14	Franklin	5A		7	25	24	56	77,469	11,791,991	210,571	152	
SF-15	Luzerne	5A		26	15	15	56	56,250	8,968,491	160,152	159	
SF-16	Union	5A		5	12	8	6	31	43,868	7,071,066	228,099	161
SF-17	Chester	4A		48	12		60	58,349	9,809,238	163,487	168	
SF-18	Allegheny	5A		4	30	18	52	77,351	12,979,386	249,604	168	
SF-19	Berks	5A		10	21	11	42	57,722	9,785,000	232,976	170	
SF-20	Montgomery	4A		16	24	15	55	61,480	11,113,700	202,067	181	
SF-21	Delaware	4A		8	34	14	56	65,790	12,184,074	217,573	196	
SF-22	Philadelphia	4A			17	16	2	35	45,476	8,905,240	254,435	196
SF-23	Allegheny	5A		14	9		23	28,205	5,552,583	241,417	197	
SF-24	Westmoreland	5A		28	8		36	43,872	8,331,567	231,432	245	
SF-25	Philadelphia	4A		10	19	11	40	46,757	11,453,809	286,345	245	

Construction Cost Summary for PHFA 2015 Applications											
Proj. No.	County	Climate Zone	Units (by BR Qty)				Total Units	Bldg. Area	Constr. \$	\$/Unit	\$/SF
			0	1	2	3					
AR-1	Lehigh	5A		34	4	11	49	65,339	6,392,809	130,465	98
AR-2	Erie	5A		29	16		45	53,021	6,152,972	136,733	116
AR-3	Philadelphia	4A	12	54			66	77,975	9,751,707	147,753	125
AR-4	Allegheny	5A	2	49	4		55	65,577	9,514,764	172,996	145
AR-5	Delaware	4A		53			53	51,690	8,030,480	151,518	155
AR-6	Philadelphia	4A		44			44	49,406	8,361,579	190,036	169
AR-7	Montgomery	4A		33	3	7	43	55,832	9,468,816	220,205	170
AR-8	Philadelphia	4A			28	10	38	53,840	9,515,893	250,418	177
AR-9	Dauphin	5A	5	17	6		28	45,434	8,075,064	288,395	178
AR-10	Allegheny	5A		33	3		36	50,664	9,436,523	262,126	186
AR-11	Philadelphia	4A		46			46	56,478	10,795,027	234,675	191
AR-12	Philadelphia	4A		27	10		37	48,768	9,658,098	261,030	198
AR-13	Philadelphia	4A		30	21		51	62,509	13,609,683	266,857	218
AR-14	Washington	4A		17	7		24	35,299	7,856,113	327,338	223
AR-15	Philadelphia	4A		62			62	70,991	25,995,741	419,286	366

Construction Cost Summary for PHFA 2015 Applications											
Proj. No.	County	Climate Zone	Units (by BR Qty)				Total Units	Bldg. Area	Constr. \$	\$/Unit	\$/SF
			0	1	2	3					
MS-1	Northumberland	5A			35		35	40,397	4,276,084	122,174	106
MS-2	Dauphin	5A		22	14	14	50	88,314	10,055,562	201,111	114
MS-3	Dauphin	5A		18	59		77	92,000	10,668,511	138,552	116
MS-4	Lancaster	5A		46	6		52	71,758	8,456,719	162,629	118
MS-5	Blair	5A		33	20		53	82,070	9,727,007	183,528	119
MS-6	Chester	4A		46	15		61	76,340	9,638,964	158,016	126
MS-7	Lancaster	5A		13	39	26	78	88,910	11,681,226	149,759	131
MS-8	Clearfield	6A		24	6		30	42,254	5,551,584	185,053	131
MS-9	Indiana	5A		40			40	36,743	4,898,995	122,475	133
MS-10	Bradford	5A		50	6		56	57,817	7,738,172	138,182	134
MS-11	Cambria	5A		32	11		43	44,887	6,341,616	147,479	141
MS-12	Dauphin	5A		38	16		54	58,335	8,201,250	151,875	141
MS-13	Mifflin	5A		30	4		34	39,447	5,559,187	163,506	141
MS-14	Fayette	5A		12	12		24	29,586	4,192,325	174,680	142
MS-15	Allegheny	5A		24	12	13	49	67,340	9,698,634	197,931	144
MS-16	Lackawanna	5A		44	4		48	49,460	7,159,738	149,161	145
MS-17	Centre	5A		37	11		48	57,959	8,490,644	176,888	146
MS-18	Chester	4A		41	3	5	49	54,287	8,007,477	163,418	148
MS-19	Lehigh	5A		54	7		61	63,949	9,520,945	156,081	149
MS-20	Fayette	5A		21	3		24	36,064	5,407,359	225,307	150
MS-21	Chester	4A		61	3		64	70,083	10,557,500	164,961	151
MS-22	Allegheny	5A		54	12		66	70,689	10,787,052	163,440	153
MS-23	Allegheny	5A		40	6		46	58,617	9,134,790	198,582	156
MS-24	Wayne	6A		36	4		40	40,959	6,460,530	161,513	158
MS-25	Centre	5A			12		12	16,796	2,683,900	223,658	160
MS-26	Beaver	5A		40	12		52	55,361	9,468,440	182,085	171
MS-27	Lancaster	5A		51			51	51,500	8,871,635	173,954	172
MS-28	Allegheny	5A		52	8		60	66,733	11,716,729	195,279	176
MS-29	Montgomery	4A		40	4		44	44,687	8,202,314	186,416	184
MS-30	Montgomery	4A		50			50	42,265	8,029,015	160,580	190
MS-31	Crawford	5A		36	4		40	38,953	7,490,675	187,267	192
MS-32	Philadelphia	4A		9	8	7	24	31,220	6,031,050	251,294	193
MS-33	Westmoreland	5A		47			47	49,080	9,825,224	209,407	200
MS-34	Philadelphia	4A		58	4		62	56,120	11,262,762	181,657	201
MS-35	Philadelphia	4A	60				60	57,672	11,915,227	198,587	207
MS-36	Philadelphia	4A		20	4		24	26,284	5,523,620	230,151	210
MS-37	Philadelphia	4A		34	11		45	42,523	8,964,723	199,216	211
MS-38	Philadelphia	4A		52			52	50,275	10,703,403	205,835	213
MS-39	Philadelphia	4A		39	11		50	53,416	11,371,112	227,422	213
MS-40	Philadelphia	4A		24			24	24,284	5,194,462	216,436	214
MS-41	Philadelphia	4A		45			45	46,754	10,118,014	224,845	216
MS-42	Philadelphia	4A		53			53	50,312	10,900,733	205,674	217
MS-43	Philadelphia	4A		54			54	48,965	10,664,381	197,489	218
MS-44	Philadelphia	4A		45	5		50	55,099	12,137,508	242,750	220
MS-45	Philadelphia	4A	88				88	79,650	18,005,791	204,611	226

Construction Cost Summary for PHFA 2016 Applications												
Proj. No.	County	Climate Zone	Units by BR Qty					Total Units	Resid. Bldg. Area	Resid. Constr. \$	\$ / Unit	\$ / SF
			0	1	2	3	4+					
SF-01	Dauphin	5A	14	16	15	15	60	99,625	10,419,031	173,651	105	
SF-02	Lebanon	5A	9	32	14		55	78,627	8,446,000	153,564	107	
SF-03	Lycoming	5A	20	40			60	82,730	9,436,382	157,273	114	
SF-04	Columbia	5A		7	17		24	48,499	5,669,777	236,241	117	
SF-05	Philadelphia	4A	5	19	31	5	60	79,795	9,739,093	162,318	122	
SF-06	Wyoming	5A		30	12		42	72,100	9,168,380	218,295	127	
SF-07	Erie	5A	8	20	18		46	85,819	10,964,900	238,367	128	
SF-08	Lancaster	5A	6	33	21		60	78,825	10,259,118	170,985	130	
SF-09	Cumberland	5A		18	34		52	75,275	9,921,606	190,800	132	
SF-10	Centre	5A	6	24	18		48	75,737	10,193,457	212,364	135	
SF-11	Lehigh	5A	19	27	16		62	71,254	9,631,860	155,353	135	
SF-12	Lancaster	5A	41	79	18		138	154,370	21,137,388	153,169	137	
SF-13	Erie	5A		9	31		40	53,454	7,870,669	196,767	147	
SF-14	Montgomery	4A		19	29		48	59,976	8,858,000	184,542	148	
SF-15	Lebanon	5A		49	13		62	82,974	12,349,192	199,181	149	
SF-16	Cumberland	5A		10	30	10	50	72,707	10,865,524	217,310	149	
SF-17	Schuylkill	5A	1	11	5		17	21,544	3,225,548	189,738	150	
SF-18	Berks	5A	10	21	11		42	57,722	8,755,000	208,452	152	
SF-19	Berks	5A	22	20	16		58	62,097	9,440,383	162,765	152	
SF-20	Franklin	5A	6	21	21		48	66,583	10,404,256	216,755	156	
SF-21	Lehigh	5A	9	15	20	4	48	53,333	8,377,963	174,541	157	
SF-22	Chester	4A	19	18	11		48	58,541	9,248,927	192,686	158	
SF-23	Cumberland	5A	5	22	8		35	44,186	7,656,200	218,749	173	
SF-24	Montgomery	4A	8	21	15	6	50	65,907	11,589,411	231,788	176	
SF-25	Allegheny	5A	35	16	14		65	87,255	15,376,648	236,564	176	
SF-26	Delaware	4A	8	34	14		56	65,212	11,914,849	212,765	183	
SF-27	Philadelphia	4A		17	16	2	35	45,476	9,441,620	269,761	208	
SF-28	Armstrong	5A		24			24	28,812	6,017,450	250,727	209	
SF-29	Philadelphia	4A		28	14		42	47,964	10,022,268	238,625	209	
SF-30	Philadelphia	4A	11	10	11		32	31,619	6,732,433	210,389	213	
SF-31	Philadelphia	4A	8	19	24	4	55	66,383	19,011,723	345,668	286	
SF-32	Philadelphia	4A	45				45	23,302	7,408,602	164,636	318	

Construction Cost Summary for PHFA 2016 Applications												
Proj. No.	County	Climate Zone	Units by BR Qty					Total Units	Resid. Bldg. Area	Resid. Constr. \$	\$ / Unit	\$ / SF
			0	1	2	3	4+					
AR-01	Monroe	5A		36	4		40	54,215	5,753,672	143,842	106	
AR-02	Luzerne	5A	6	54	2		62	88,489	9,900,711	159,689	112	
AR-03	Philadelphia	4A	12	54			66	77,978	10,123,117	153,381	130	
AR-04	Allegheny	5A	33	8			41	70,409	9,181,888	223,948	130	
AR-05	Butler	5A	44	18			62	73,114	10,046,992	162,048	137	
AR-06	Washington	5A	24	41,046			24	41,046	6,169,663	257,069	150	
AR-07	Allegheny	5A	2	49	4		55	65,190	10,592,039	192,583	162	
AR-08	Delaware	4A	50				50	50,548	8,727,828	174,557	173	
AR-09	Philadelphia	4A	60				60	65,041	11,803,992	196,733	181	
AR-10	Philadelphia	4A	74				74	93,285	20,223,060	273,285	217	
AR-11	Philadelphia	4A	20	37			57	63,960	14,005,881	245,717	219	
AR-12	Perry	5A	28	3			31	36,152	8,548,665	275,763	236	

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Proj. No.	County	Climate Zone	Units by BR Qty					Total Units	Resid. Bldg. Area	Resid. Constr. \$	\$ / Unit	\$ / SF
			0	1	2	3	4+					
MS-01	Berks	5A	40	20			60	62,149	7,432,636	123,877	120	
MS-02	Tioga	6A	34	6			40	48,735	5,999,734	149,993	123	
MS-03	Dauphin	5A	35	2			37	43,964	5,421,065	146,515	123	
MS-04	Bradford	5A	38	12	6		56	63,768	8,446,000	150,821	132	
MS-05	Lancaster	5A	46	6			52	92,370	12,565,629	241,647	136	
MS-06	Fayette	5A	12	12			24	28,904	3,942,323	164,263	136	
MS-07	Cambria	5A	32	11			43	49,491	6,879,001	159,977	138	
MS-08	Clearfield	6A	24	6			30	41,915	5,855,263	195,175	140	
MS-09	Chester	4A	56	3			59	64,180	9,033,100	153,103	141	
MS-10	Centre	5A	16	34			50	60,912	8,666,068	173,321	142	
MS-11	Clinton	5A	28	4			32	37,454	5,333,806	166,681	142	
MS-12	Allegheny	5A	24	12	13		49	67,340	9,698,634	197,931	144	
MS-13	Luzerne	5A	32	3			35	44,543	6,503,636	185,818	146	
MS-14	Dauphin	5A	20				20	19,157	2,803,860	140,193	146	
MS-15	Butler	5A	68				68	66,845	9,821,302	144,431	147	
MS-16	Westmoreland	5A	15	13	8		36	46,095	6,855,424	190,428	149	
MS-17	Lackawanna	5A	12	12	8	4	36	50,019	7,560,000	210,000	151	
MS-18	Northumberland	5A	32				32	38,240	5,789,694	180,928	151	
MS-19	Centre	5A	37	11			48	57,959	8,781,136	182,940	152	
MS-20	Lackawanna	5A	44	4			48	49,460	7,493,999	156,125	152	
MS-21	Allegheny	5A	30	34			64	69,605	10,837,117	169,330	156	
MS-22	Dauphin	5A	43	11			54	51,319	8,411,465	155,768	164	
MS-23	Montgomery	4A	60				60	58,681	9,643,959	160,733	164	
MS-24	Adams	5A	39	4			43	50,532	8,515,443	198,034	169	
MS-25	Clarion	5A	48				48	53,668	9,090,720	189,390	169	
MS-26	Allegheny	5A	40	6			46	56,969	10,124,143	220,090	178	
MS-27	Allegheny	5A	28	8			36	42,500	7,582,274	210,619	178	
MS-28	Chester	4A	47	13			60	61,551	10,982,435	183,041	178	
MS-29	Delaware	4A	38	3			41	47,797	8,539,207	208,273	179	
MS-30	Allegheny	5A	52	8			60	63,861	11,647,354	194,123	182	
MS-31	Philadelphia	4A	37	44			81	93,000	17,635,125	217,718	190	
MS-32	Crawford	5A	36	4			40	38,953	7,552,475	188,812	194	
MS-33	Westmoreland	5A	47				47	49,080	9,801,657	208,546	200	
MS-34	Bucks	4A	56	10			66	61,576	12,448,922	188,620	202	
MS-35	Lycoming	5A	23	11			34	35,437	7,169,151	210,857	202	
MS-36	Philadelphia	4A	61				61	60,137	12,416,322	203,546	206	
MS-37	Bradford	5A	40	10			50	56,580	11,852,026	237,041	209	
MS-38	Philadelphia	4A	58	4			62	57,653	12,079,768	194,835	210	
MS-39	Philadelphia	4A	52				52	46,619	9,903,739	190,457	212	
MS-40	Philadelphia	4A	60				60	56,672	12,174,301	202,905	215	
MS-41	Philadelphia	4A	45				45	48,351	10,464,750	232,550	216	
MS-42	Montgomery	4A	50				50	42,265	9,236,729	184,735	219	
MS-43	Allegheny	5A	29	4			33	37,592	8,284,054	251,032	220	
MS-44	Philadelphia	4A	46	4			50	46,640	10,701,164	214,023	225	
MS-45	Philadelphia	4A	53				53	50,312	11,711,200	220,966	233	
MS-46	Philadelphia	4A	34	11			45	42,520	10,560,747	234,683	248	
MS-47	Philadelphia	4A	24				24	24,284	6,040,593	251,691	249	
MS-48	Philadelphia	4A	60				60	65,340	17,249,402	287,490	264	
MS-49	Luzerne	5A	36				36	27,296	7,653,000	212,583	280	
MS-50	Philadelphia	4A	48				48	46,000	12,915,822	269,080	281	

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Ref. No.	County	Climate Zone	Units by BR Qty					Total Units	Resid. Bldg Area	Resid Constr \$	\$ / Unit	\$ / SF
			0	1	2	3	4+					
			SF-01	York	5A							
SF-02	Dauphin	5A				22	22	44	66,603	8,409,248	191,119	129
SF-03	York	5A		6	23	24	3	56	72,013	9,258,025	165,322	126
SF-04	Berks	5A			24	22		46	66,030	8,557,500	186,033	130
SF-05	Lebanon	5A		18	26	16		60	76,101	10,333,056	172,218	136
SF-06	Franklin	5A		7	7	25		32	54,375	8,150,464	254,702	150
SF-07	Philadelphia	4A		2	5	11	2	20	29,503	4,490,975	224,549	152
SF-08	Lackawanna	5A		12	12	8	4	36	50,019	7,805,595	216,822	156
SF-09	Franklin	5A		6	21	21		48	66,583	10,727,005	223,479	161
SF-10	Multiple Co's	5A	52					52	52,330	8,909,580	171,338	170
SF-11	York	5A		18	9	7		34	35,636	6,396,969	188,146	180
SF-12	Allegheny	5A		47	10			57	48,150	9,106,659	159,766	189
SF-13	Westmoreland	5A		3	6	9		18	20,489	4,108,548	228,253	201
SF-14	Allegheny	5A		4	7	9		20	26,198	5,407,155	270,358	206
SF-15	Armstrong	5A			24			24	29,147	6,230,195	259,591	214
SF-16	Susquehanna	6A		34	2			36	31,103	7,031,404	195,317	226
SF-17	Philadelphia	4A			17	16	2	35	45,476	10,281,980	293,771	226
SF-18	Philadelphia	4A		11	10	12		33	34,388	8,875,449	268,953	258
SF-19	Philadelphia	4A		28	12			40	46,232	12,214,948	305,374	264
SF-20	Philadelphia	4A		12	18	11	9	50	71,903	21,367,901	427,358	297

Construction Cost Summary of 2018 PHFA Applications												
Ref. No.	County	Climate Zone	Units by BR Qty					Total Units	Resid. Bldg Area	Resid Constr \$	\$ / Unit	\$ / SF
			0	1	2	3	4+					
			AR-01	Montgomery	4A	2	20					
AR-02	Berks			12	26	12		50	68,514	8,926,251	178,525	130
AR-03	Philadelphia	4A			28	12		40	60,600	9,683,347	242,084	160
AR-04	Delaware	4A		50				50	50,548	8,892,507	177,850	176
AR-05	Allegheny	5A	3	27	10			40	45,120	8,047,850	201,196	178
AR-06	Philadelphia	4A	30	12				42	50,902	9,712,500	231,250	191
AR-07	Schuykill	5A		27	3			30	43,539	8,656,817	288,561	199
AR-08	Philadelphia	4A	0	59				59	113,868	22,919,307	388,463	201
AR-09	Philadelphia	4A		63	4			67	88,911	18,256,101	272,479	205
AR-10	Perry	5A		28	3			31	44,090	9,201,187	296,812	209
AR-11	Delaware	4A		50				50	61,346	12,879,125	257,583	210
AR-12	Allegheny	5A	7	27	1			35	43,900	10,633,286	303,808	242

Construction Cost Summary of 2018 PHFA Applications												
Ref. No.	County	Climate Zone	Units by BR Qty					Total Units	Resid. Bldg Area	Resid Constr \$	\$ / Unit	\$ / SF
			0	1	2	3	4+					
			MS-01	Erie	5A							
MS-02	Lancaster	5A		44	18			62	76,045	8,306,538	133,976	109
MS-03	Lancaster	5A		45	15			60	68,993	8,544,047	142,401	124
MS-04	Cumberland	5A		14	12	16		42	49,581	6,440,993	153,357	130
MS-05	Berks	5A		45	12			57	59,916	7,892,757	138,469	132
MS-06	Westmoreland	5A		15	13	8		36	46,095	6,087,669	169,102	132
MS-07	Fayette	5A		18	18			36	42,820	5,679,247	157,757	133
MS-08	Dauphin	5A		35	2			37	43,928	5,896,750	159,272	134
MS-09	Bradford	5A		38	12			56	63,759	8,603,563	153,635	135
MS-10	Allegheny	5A		30	10			40	54,495	7,335,750	183,394	135
MS-11	Lancaster	5A		46	6			52	94,440	12,791,060	245,982	135
MS-12	Centre	5A		16	34			50	60,599	8,371,068	167,421	138
MS-13	Montgomery	4A		42	14			56	60,166	8,477,023	151,375	141
MS-14	Luzerne	5A		32	3			35	44,543	6,416,086	183,317	144
MS-15	Clinton	5A		28	4			32	37,454	5,470,901	170,966	146
MS-16	Dauphin	5A		20	29			49	53,976	8,066,609	164,625	149
MS-17	Washington	5A		21	25			46	53,310	8,000,885	173,932	150
MS-18	Franklin	5A		36	4			40	54,596	8,326,929	208,173	153
MS-19	Chester	4A		57	3			60	60,931	9,310,170	155,170	153
MS-20	Northumberland	5A		32	4			36	43,826	6,998,140	194,393	160
MS-21	York	5A		16	26	8		50	63,425	10,125,538	202,511	160
MS-22	Allegheny	5A		27	18	9		54	64,875	10,797,000	199,944	166
MS-23	Westmoreland	5A		43	4			47	50,680	8,439,569	179,565	167
MS-24	Clearfield	5A		24	6			30	35,984	6,065,728	202,191	169
MS-25	Beaver	5A		44	8			52	57,297	9,797,660	188,417	171
MS-26	Northampton	5A		12	33	15		60	60,212	10,329,351	172,156	172
MS-27	Montgomery	4A		60	11			71	61,110	10,869,266	181,154	178
MS-28	Dauphin	5A		38	11			49	48,638	8,730,738	178,178	180
MS-29	Montgomery	4A		66	8			74	74,468	13,541,230	182,990	182
MS-30	Clarion	5A		39	3			42	48,847	8,988,545	214,013	184
MS-31	Philadelphia	4A		28	13			41	49,625	9,204,879	224,509	185
MS-32	Lehigh	5A		27	13			40	40,937	7,663,199	191,580	187
MS-33	Allegheny	5A		31	3	1		35	46,015	8,714,276	248,979	189
MS-34	Butler	5A		30	13	1		44	50,825	9,697,495	220,398	191
MS-35	Delaware	4A		58				58	57,365	11,293,126	194,709	197
MS-36	Bucks	4A		68	1			69	62,844	12,503,344	181,208	199
MS-37	Delaware	4A		38	3			41	43,515	8,746,409	213,327	201
MS-38	Blair	5A		43	2			45	47,642	9,595,216	213,227	201
MS-39	Tioga	5A		34	6			40	32,800	6,591,082	164,777	201
MS-40	Lycoming	5A		18	6			24	26,749	5,419,721	225,822	203
MS-41	Philadelphia	4A		44				44	46,306	9,443,528	214,626	204
MS-42	Philadelphia	4A		52				52	46,619	9,893,465	190,259	212
MS-43	Crawford	5A		37	2			39	40,256	8,580,594	220,015	213
MS-44	Allegheny	5A		46				46	48,600	10,405,629	226,209	214
MS-45	Luzerne	5A		36				36	36,784	8,100,000	225,000	220
MS-46	Philadelphia	4A		11	11	8		30	39,650	8,957,527	298,584	226
MS-47	Allegheny	5A		19	13	11		43	41,797	9,558,272	222,285	229
MS-48	Philadelphia	4A		46	4			50	48,315	11,197,257	223,945	232
MS-49	Philadelphia	4A	60					60	57,672	13,556,215	225,937	235
MS-50	Philadelphia	4A		45				45	48,351	11,428,626	253,969	236
MS-51	Philadelphia	4A		37	10			47	50,527	12,095,152	257,344	239
MS-52	Philadelphia	4A		32	6	6		44	44,889	10,869,638	247,037	242
MS-53	Philadelphia	4A		24				24	24,284	6,253,770	260,574	258
MS-54	Allegheny	5A		30	20			50	37,290	9,905,483	198,110	266
MS-55	Philadelphia	4A		20	30			50	46,110	12,718,548	254,371	276
MS-56	Philadelphia	4A		48				48	45,000	14,294,705	297,806	318
MS-57	Philadelphia	4A		46				46	31,878	11,701,929	254,390	367

Proj. No.	Total Units	Residnt'l Bldg. Area	\$/SF @ Applic	\$/SF @ Cost Cert	% Change
2015-443	51	62,509	\$ 218	\$ 186	-15%
2015-431	52	43,868	\$ 296	\$ 287	-3%
2015-436	23	28,205	\$ 197	\$ 193	-2%
2015-608	40	40,959	\$ 158	\$ 157	-1%
2015-810	35	61,504	\$ 149	\$ 149	-1%
2015-419	28	45,434	\$ 178	\$ 178	0%
2015-809	37	48,768	\$ 198	\$ 199	1%
2015-612	31	43,868	\$ 161	\$ 162	1%
2015-804	88	79,650	\$ 226	\$ 228	1%
2015-416	66	70,689	\$ 153	\$ 155	2%
2015-619	34	39,447	\$ 141	\$ 145	3%
2015-806	49	54,287	\$ 148	\$ 151	3%
2015-466	40	53,652	\$ 140	\$ 144	3%
2015-445	50	55,099	\$ 220	\$ 226	3%
2015-439	53	51,690	\$ 155	\$ 163	5%
2015-448	44	49,406	\$ 169	\$ 177	5%
2015-449	61	63,949	\$ 149	\$ 157	5%
2015-616	24	36,064	\$ 150	\$ 160	7%
2015-620	53	82,070	\$ 119	\$ 129	8%
2015-807	43	55,832	\$ 170	\$ 185	9%
2015-614	45	53,021	\$ 116	\$ 128	10%
2015-440	52	50,275	\$ 213	\$ 233	10%
2015-415	56	56,250	\$ 159	\$ 176	10%
2015-467	45	63,548	\$ 139	\$ 154	11%
2015-459	12	16,796	\$ 160	\$ 181	13%

## Construction Cost Change from Application to Construction Completion





**Hillcrest Senior Residences - Pittsburgh**



Morningside Crossing - Pittsburgh