

**PHILADELPHIA HOUSING AUTHORITY
RFP #P-004440 UNIT-BASED OPERATING SUBSIDY PROGRAM
GALA – GOLDEN AGE LIVING ACCOMMODATIONS**

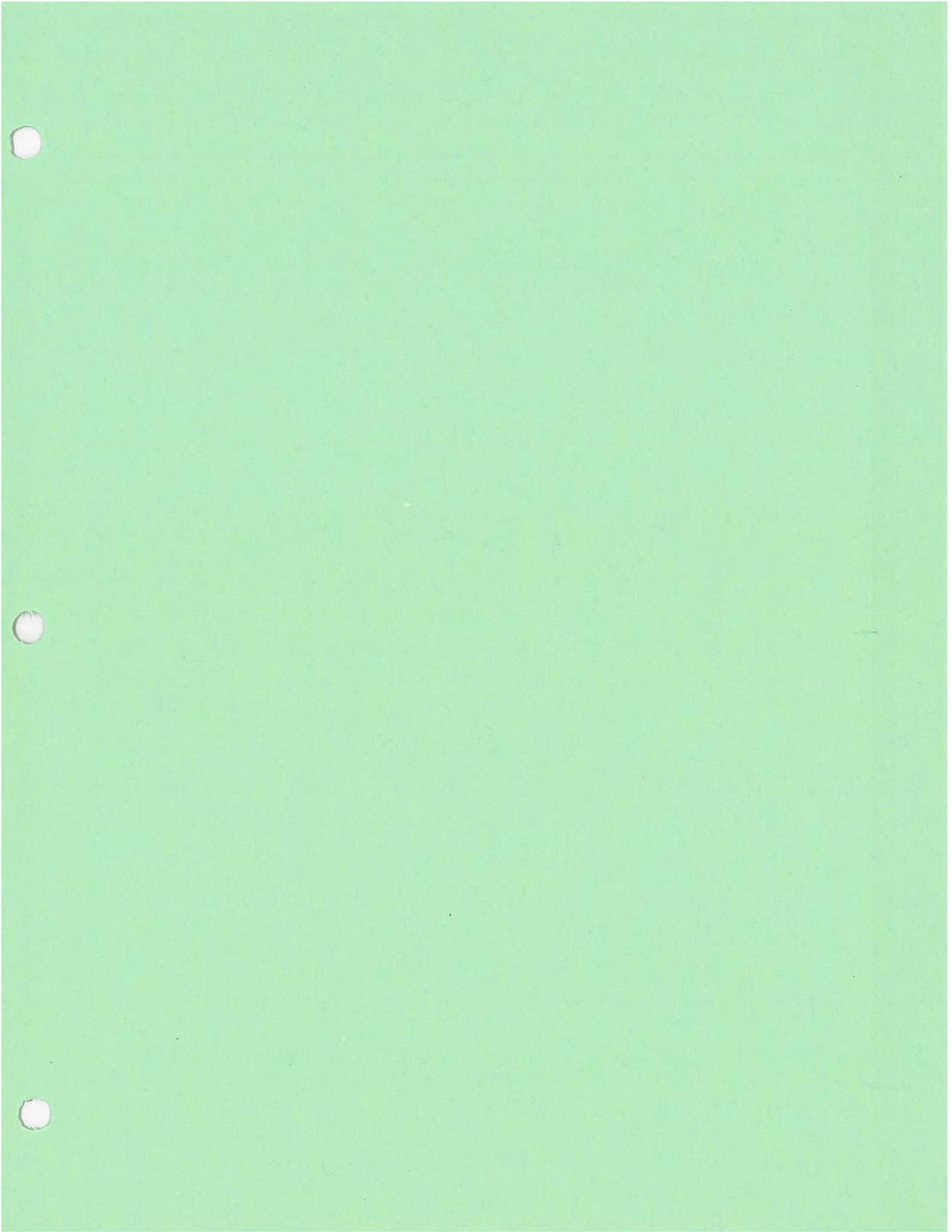
13. Occupancy and Affordability:

Enclosed please find:

1. A schedule illustrating the number of available affordable units broken down by bedroom size and rents. All of these units will be visitable.
2. A utility analysis performed by EAM Associates which takes into account the energy efficiencies achieved via the Energy Star appliances as well as through the construction of Enterprise Green Communities along with Passive House.
3. Each of the seven ACC units will require a rental subsidy of \$296/month.

GALA -- Mt. Airy Sr. Housing
Friday, November 07, 2014
Unit/Income Summary

	Number of Units	20% of Median	Mkt Rate Units	50% of Median	60% of Median	Total	Square Footage	Total Square Footage
1 Bdr	7	7	0	23	28	56	647	37,541
2 Bdr	0	0	0	2	2	4	608	3,232
Sub-Total	7	7	0	25	30	62		40,773
Common								13,457
Unfinished Basement Space								1,890
Livable Building								54,230
Total Building								56,120
	Number of Units	Gross Mthly Rent*	Utility Allowance**	Net Mthly Rent	Net Mthly Totals			
Units @ '14 Median 20% Rent -- All ACC Units								
1 Bdr	\$59,150	7	\$296	\$102	\$194	\$1,356		
2 Bdr	\$71,000	0	\$355	\$130	\$225	\$0		
3 Bdr	\$82,000	0	\$410	\$120	\$290	\$0		
		7				\$1,366		
	Number of Units	Gross Mthly Rent	Utility Allowance	Net Mthly Rent	Net Mthly Totals			
Market Rate Units								
1 Bdr	\$59,150	0	\$0	\$0	\$0	\$0		
2 Bdr	\$71,000	0	\$0	\$0	\$0	\$0		
3 Bdr	\$82,000	0	\$0	\$0	\$0	\$0		
		0				\$0		
	Number of Units	Gross Mthly Rent	Utility Allowance***	Net Mthly Rent	Net Mthly Totals			
Units @ '14 Median 50% Rent								
1 Bdr	\$59,150	23	\$739	\$57	\$682	\$15,695		
2 Bdr	\$71,000	2	\$888	\$65	\$823	\$1,645		
3 Bdr	\$82,000	0	\$1,025	\$120	\$905	\$0		
		25				\$17,340		
	Number of Units	Gross Mthly Rent	Utility Allowance***	Net Mthly Rent	Net Mthly Totals	Add'l Potential Rent		
Units @ '14 Median 60% Rent								
1 Bdr	\$59,150	28	\$887	\$57	\$830	\$23,247	\$0	
2 Bdr	\$71,000	2	\$1,065	\$65	\$975	\$1,950	\$25	
3 Bdr	\$82,000	0	\$1,230	\$120	\$1,110	\$0		
		30				\$26,197		
		62				\$43,893		
<p>* The Gross 20% rents assume the tenants pay 30% of their income in rent. The balance of the payment is subsidized by the ACC Payment. Thus the maximum amount of subsidy requested would be \$296/unit assuming the tenant has no income.</p> <p>** The seven ACC units assume PHA's utility allowance.</p> <p>*** The utility allowance for the 50 and 60% units, adjusted by bedroom size, was calculated by EAM based upon the actual construction, Enterprise Green Communities, Passive House and Energy Star appliances found at GALA. Tenant paid utilities include electric heat and air conditioning, electric usage for lighting and cooking. Hot water is provided to the entire building via a central boiler system and thus there is no charge to the tenant.</p> <p>**** All units are visitable.</p>								



PHIA UTILTY CALCULATION Fee
ACC UNITS

ALLOWANCES FOR TENANT-FURNISHED UTILITIES AND OTHER SERVICES
EFFECTIVE January 1, 2005

ELECTRIC HEAT - INNER ROW	Based upon All Electric Rate						
	0 BR	1 BR	2 BR	3 BR	4 BR	5 BR	6 BR
Elec Heat	24	34	44	54	68	78	83
Elec Cook	5	7	9	11	14	16	17
Electric	31	41	51	62	77	87	92
Electric AC	15	20	26	32	41	47	50
Electric HW	15	21	27	33	41	47	50
Sub Total	90	123	157	192	241	276	292
Water Use	32	38	47	53	61	67	70
Total	122	161	204	245	302	342	362

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ELECTRIC HEAT - END OF ROW	Based upon All Electric Rate						
	0 BR	1 BR	2 BR	3 BR	4 BR	5 BR	6 BR
Elec Heat	28	40	51	62	79	91	96
Elec Cook	5	7	9	11	14	16	17
Electric	31	41	51	62	77	87	92
Electric AC	15	20	26	32	41	47	50
Electric HW	15	21	27	33	41	47	50
Sub Total	94	129	164	200	252	288	305
Water Use	32	38	47	53	61	67	70
Total	126	167	211	253	313	356	375

ELECTRIC HEAT - DETACHED	Based upon All Electric Rate						
	0 BR	1 BR	2 BR	3 BR	4 BR	5 BR	6 BR
Elec Heat	33	46	59	72	92	105	112
Elec Cook	5	7	9	11	14	16	17
Electric	31	41	51	62	77	87	92
Electric AC	15	20	26	32	41	47	50
Electric HW	15	21	27	33	41	47	50
Sub Total	99	135	172	210	265	302	321
Water Use	32	38	47	53	61	67	70
Total	131	173	219	263	326	369	391

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November 3, 2014

James Haley
Principal
Haley • Donovan Architects
106 Kings Highway
East Haddonfield, NJ 08033

RE: Estimated Utility Usage Analysis
GALA: Golden Age Living Accommodations

Mr. Haley,

HERS energy models have been created using REM/Rate for (2) representative residential unit types in (2) building locations at the GALA Project. The energy models were created using dimensional take-offs from the available schematic plans, as well as the provided proposed specifications. Figures contained herein may fluctuate as the design documents are finalized.

As per your request we have generated this report detailing the estimated utility cost for each modeled residential unit type. Upon review of our analysis please let me know if you require any additional information.

Sincere Regards,

A handwritten signature in black ink, appearing to read "Frank Swol", written in a cursive style.

Frank Swol
Project Consultant
EAM Associates, Inc.



Estimated Utility Usage Analysis

GALA:

Golden Age Living Accommodations

Philadelphia, Pennsylvania

November 3, 2014



Energy Modeling Parameters:

- Based off "GALA: Golden Age Living Communities" Schematic Plans (*Dated October 24, 2014*), and projected proposed specifications provided to EAM by Haley-Donovan. EAM made certain specification selections based on this proposed Passive House design requirement. See attached listing of modeled specifications.
- REM/Rate 14.5.1 software was used for all modeling. All dimensional data and specifications provided to EAM were incorporated into the models. REM/Rate models take into account conditioned floor area/volume, various exposure types of the building shell, fenestration, insulation, HVAC equipment, domestic hot water equipment, building shell orientation & leakage, ductwork losses & leakage, lights, appliances, and ventilation.
- Estimated data is provided for the residential units and associated use of the common laundry; other common space usages are not included.
- Cost estimates utilize tariff rates current as of this writing from Philadelphia Gas Works and PECO.
 - PGW Gas: \$1.257 per ccf **\$12.00 monthly service charge*
 - PECO Electric: \$0.1571 per kWh **\$7.09 monthly service charge*

GALA: Golden Age Living Accommodations

Zone: 4
State: Pennsylvania
Weather
Station: Philadelphia
Version: Passive House

Modeling Inputs

Above Grade Walls:	Double 2x4 Walls (1" Interstitial Space) Blown Cellulose Fill (R-29)
Windows and Glass Doors:	U: 0.14 SHGC: 0.29 (Zoja ThermoClad Triple Glazed R-7)
Attic Insulation:	R-40 Blown Cellulose + R-20 Polyiso Roof Deck
Heating:	9.3 HSPF Ductless Mini-Split Heat Pump (Mitsubishi MXZ Series)
Cooling:	18 Ductless Mini-Split Heat Pump (Mitsubishi MXZ Series)
Thermostat:	70/75 Heating/Cooling setpoints with programmable thermostats
Water Heater:	95% Central Boiler w/Indirect-Fired Storage Tanks (1 Aereo BMK-2000 & 3 Lochinvar SIT119)
Ductwork Location:	In Conditioned Space
Air Sealing Guidelines:	Less than or equal to .60 ACH50 as per Passive House Requirements
Mechanical Ventilation:	Zehnder CA350 ERV
Lighting:	100% CFL and/or LED
Appliances:	Energy Star Rated Refrigerator (350 kWh/yr) Energy Star Rated Dishwasher (275 kWh/yr) Electric Range

Upgraded Specifications Required for Selected Models Below

All Models Covered by Base Specifications Package

Plans List w/Projected HERS Scores and Rebates Amounts

1 Bedroom (HERS: 50) Interior	Mid-Floor
1 Bedroom (HERS: 49) Interior	Top-Floor
2 Bedroom (HERS: 47) Exterior	Mid-Floor
2 Bedroom (HERS: 46) Exterior	Top-Floor

GALA - Golden Age Living Accommodations

Estimated Utility Analysis Results (Tenant Electric)

Annual End-Use Costs in \$/yr

Building Type	Model Type	Area	Bedrooms	Heating	Cooling	Lights & Appliances*	Services Charges	Total	Average Monthly
Apartment Building	1 Bedroom Interior (Mid)	694	1	\$87	\$82	\$406	\$85	\$660	\$55
Apartment Building	1 Bedroom Interior (Top)	694	1	\$106	\$83	\$406	\$85	\$680	\$57
Apartment Building	2 Bedroom Exterior (Mid)	841	2	\$101	\$103	\$460	\$85	\$749	\$63
Apartment Building	2 Bedroom Exterior (Top)	841	2	\$124	\$106	\$460	\$85	\$775	\$65

*This line item includes an estimate of user plug loads.