

SUPPLEMENTAL INFORMATION

JANUARY 28, 2019

# SUPPLEMENTAL INFORMATION



## PREDESIGN STUDY

### NURSING FACILITY NEW CAPACITY at FIRCREST SCHOOL, SHORELINE

PREPARED FOR:

DEPARTMENT OF SOCIAL AND HEALTH SERVICES (DSHS)  
WASHINGTON STATE OFFICE OF FINANCIAL MANAGEMENT (OFM)

PREPARED BY:

SAGE ARCHITECTURAL ALLIANCE

PROJECT # 2018-477



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### Chapter 4 Clarifications:

Page 4.11 correction:

#### Occupancy Numbers

A ~~400-~~ 120-bed facility is the preferred Nursing Facility size. The ~~400-~~ 120-beds consist of ~~five~~ ~~(5)~~ six (6) 20-bed Pods/ Clusters that are described above and strongly preferred for 20-beds being operationally efficient for care staffing.

#### Basic Configuration

Each 20-bed Pod is 14,690 gross sf and the preferred 120-bed facility is 110,130 gross sf. An important layout feature of the 20-bed pods is that they are linked to other pods and the Administration Wing by a circulation spine that ...



Page 4.20 correction:

#### Phase 2

Southern 4 Cottages

Complete sitework.

Move-in for ~~60~~ 80 clients and staffing.

## SUPPLEMENTAL INFORMATION

### CHAPTER 5 – PROJECT BUDGET ASSUMPTIONS

i. Major assumptions used in preparing the cost estimate:

1. Assumes an April 2021 Construction Start and an anticipated move-in date of December 2022 to February 2023 for an 18 month construction duration.
2. Cost estimates assume a 3.12% inflation rate.
3. A/E fee is Class B of 6.12%
4. Assumed construction delivery method is GCCM (General Contractor / Construction Manager).
5. Cost estimate Alternatives are either LEED Silver or LEED Silver plus Netzero as shown.

### COST ESTIMATE SUMMARIES (ALTERNATIVES 1A – 3C)

ii. Summary table of Uniformat II Level 2 cost estimates.

90 BEDS	<b>ALTERNATIVE 1 - LEED SILVER</b>				
	<b>90-Beds Building 66 Renovation plus Expansion</b>				
	Item	Description	Gross Square Feet	\$/ GSF	Cost
	1	Site Construction			\$ 9,188,390
	2	Relocate 1st Fl Offices	3,600	400	\$ 1,440,000
	3	Renovation Building Construction	67,100	266	\$ 17,834,553
	4	New Building Construction	39,480	450	\$ 17,766,000
	5	Water Infrastructure			\$ 2,430,000
	6	Frontage Improvements			\$ 1,081,739
	<b>Total Estimate Construction Cost in Today's Dollars*</b>				<b>\$ 49,740,682</b>
	*Escalation is EXCLUDED. See C-100 Form for Total Construction Budget w/ Escalation*				
	<b>ALTERNATIVE 1 - LEED SILVER + NETZERO</b>				
	<b>90-Beds Building 66 Renovation plus Expansion</b>				
	Item	Description	Gross Square Feet	\$/ GSF	Cost
1	Site Construction			\$ 9,188,390	
2	Relocate 1st Fl Offices	3,600	400	\$ 1,440,000	
3	Renovation Building Construction	67,100	277	\$ 18,617,610	
4	New Building Construction	39,480	489	\$ 19,325,127	
5	Water Infrastructure			\$ 2,430,000	
6	Frontage Improvements			\$ 1,081,739	
<b>Total Estimate Construction Cost in Today's Dollars</b>				<b>\$ 52,082,866</b>	

\*Escalation is EXCLUDED. See C-100 Form for Total Construction Budget w/ Escalation\*

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100 BEDS	<b>ALTERNATIVE 2A - LEED SILVER</b>				
	<b>100-Beds ATP Site</b>				
	Item	Description	Gross Square Feet	\$/GSF	Cost
	1	Site Construction			\$ 10,168,421
	2	Relocate ATP program	54,000	400	\$ 21,600,000
	3	Demo ATP Building (wood-frame)	54,000	30	\$ 1,620,000
	4	New Building Construction	101,300	413	\$ 41,874,025
	5	Frontage Improvements			\$ 1,081,739
	6	Water Infrastructure			\$ 2,430,000
	<b>Total Estimate Construction Cost in Today's Dollars</b>				<b>\$ 78,774,185</b>
*Escalation is EXCLUDED. See C-100 Form for Total Construction Budget w/ Escalation*					
<b>ALTERNATIVE 2A - LEED SILVER + NETZERO</b>					
<b>100-Beds ATP Site</b>					
Item	Description	Gross Square Feet	\$/GSF	Cost	
1	Site Construction			\$ 10,168,421	
2	Relocate ATP program	54,000	400	\$ 21,600,000	
3	Demo ATP Building (wood-frame)	54,000	30	\$ 1,620,000	
4	New Building Construction	101,300	451	\$ 45,676,469	
5	Frontage Improvements			\$ 1,081,739	
6	Water Infrastructure			\$ 2,430,000	
<b>Total Estimate Construction Cost in Today's Dollars</b>				<b>\$ 82,576,629</b>	
*Escalation is EXCLUDED. See C-100 Form for Total Construction Budget w/ Escalation*					
160 BEDS	<b>ALTERNATIVE 2B - LEED SILVER</b>				
	<b>160-Beds ATP Site</b>				
	Item	Description	Gross Square Feet	\$/GSF	Cost
	1	Site Construction			\$ 11,811,030
	2	Relocate ATP program	54,000	400	\$ 21,600,000
	3	Demo ATP Building (wood-frame)	54,000	30	\$ 1,620,000
	4	New Building Construction	149,300	414	\$ 61,811,434
	3	Frontage Improvements			\$ 1,081,739
	5	Water Infrastructure			\$ 2,430,000
	<b>Total Estimate Construction Cost in Today's Dollars</b>				<b>\$ 100,354,203</b>
*Escalation is EXCLUDED. See C-100 Form for Total Construction Budget w/ Escalation*					
<b>ALTERNATIVE 2B - LEED SILVER + NETZERO</b>					
<b>160-Beds ATP Site</b>					
Item	Description	Gross Square Feet	\$/GSF	Cost	
1	Site Construction			\$ 11,811,030	
2	Relocate ATP program	54,000	400	\$ 21,600,000	
3	Demo ATP Building (wood-frame)	54,000	30	\$ 1,620,000	
4	New Building Construction	149,300	455	\$ 67,945,581	
5	Frontage Improvements			\$ 1,081,739	
6	Water Infrastructure			\$ 2,430,000	
<b>Total Estimate Construction Cost in Today's Dollars</b>				<b>\$ 106,488,350</b>	

## SUPPLEMENTAL INFORMATION

\*Escalation is EXCLUDED. See C-100 Form for Total Construction Budget w/ Escalation\*

100 BEDS	<b>ALTERNATIVE 3A - LEED SILVER</b>				
	<b>100-Beds Madrona Site</b>				
	Item	Description	Gross Square Feet	\$/ GSF	Cost
	1	Site Construction			\$ 13,491,517
	2	Frontage Improvements			\$ 1,081,739
	3	New Building Construction	97,200	413	\$ 40,143,600
	4	Water Infrastructure			\$ 2,430,000
	<b>Total Estimate Construction Cost in Today's Dollars</b>				<b>\$ 57,146,856</b>
	*Escalation is EXCLUDED. See C-100 Form for Total Construction Budget w/ Escalation*				
	<b>ALTERNATIVE 3A - LEED SILVER + NETZERO</b>				
<b>100-Beds Madona Site</b>					
Item	Description	Gross Square Feet	\$/ GSF	Cost	
1	Site Construction			\$ 13,491,517	
2	Frontage Improvements			\$ 1,081,739	
3	New Building Construction	97,200	451	\$ 43,837,200	
4	Water Infrastructure			\$ 2,430,000	
<b>Total Estimate Construction Cost in Today's Dollars</b>				<b>\$ 60,840,456</b>	

\*Escalation is EXCLUDED. See C-100 Form for Total Construction Budget w/ Escalation\*

120 BEDS	<b>ALTERNATIVE 3B - LEED SILVER **** Preferred</b>				
	<b>120-Beds Madona Site</b>				
	Item	Description	Gross Square Feet	\$/ GSF	Cost
	1	Site Construction			\$ 13,340,093
	2	Frontage Improvements			\$ 1,081,739
	3	New Building Construction	112,220	421	\$ 47,249,713
	4	Water Infrastructure			\$ 2,430,000
	<b>Total Estimate Construction Cost in Today's Dollars</b>				<b>\$ 64,101,545</b>
	*Escalation is EXCLUDED. See C-100 Form for Total Construction Budget w/ Escalation*				
	**** Includes Water Tank , Frontage Improvements				
<b>ALTERNATIVE 3B - LEED SILVER + NETZERO **** Preferred</b>					
<b>120-Beds Madona Site</b>					
Item	Description	Gross Square Feet	\$/ GSF	Cost	
1	Site Construction			\$ 13,340,092	
2	Frontage Improvements			\$ 1,081,739	
3	New Building Construction	112,220	459	\$ 51,457,992	
4	Water Infrastructure			\$ 2,430,000	
<b>Total Estimate Construction Cost in Today's Dollars</b>				<b>\$ 68,309,823</b>	

\*Escalation is EXCLUDED. See C-100 Form for Total Construction Budget w/ Escalation\*

\*\*\*\* Includes Water Tank , Frontage Improvements

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160 BEDS	<b>ALTERNATIVE 3C - LEED SILVER</b>				
	<b>160-Beds Madrona Site</b>				
	Item	Description	Gross Square Feet	\$/ GSF	Cost
	1	Site Construction			\$ 14,532,660
	2	Demo 2 Y-Buildings	26,000	39	\$ 1,003,248
	3	Frontage Improvements			\$ 1,081,739
	4	New Building Construction	140,006	413	\$ 57,822,478
	5	Water Infrastructure			\$ 2,430,000
	<b>Total Estimate Construction Cost in Today's Dollars</b>				<b>\$ 76,870,125</b>
	*Escalation is EXCLUDED. See C-100 Form for Total Construction Budget w/ Escalation*				
	<b>ALTERNATIVE 3C - LEED SILVER + NETZERO **** Preferred</b>				
	<b>160-Beds Madrona Site</b>				
Item	Description	Gross Square Feet	\$/ GSF	Cost	
1	Site Construction			\$ 14,532,660	
2	Demo (2) Y-Buildings	26,000	39	\$ 1,003,248	
3	Frontage Improvements			\$ 1,081,739	
4	New Building Construction	140,006	449	\$ 62,810,004	
5	Water Infrastructure			\$ 2,430,000	
<b>Total Estimate Construction Cost in Today's Dollars</b>				<b>\$ 81,857,651</b>	

\*Escalation is EXCLUDED. See C-100 Form for Total Construction Budget w/ Escalation\*

### LEED SILVER VERSUS NETZERO PAYBACK

120 BEDS	<b>ALTERNATIVE 3B1 - LIFE CYCLE COSTS - LEED SILVER</b>		
	<b>120-Beds Madrona Site</b>		
	Years	Net Present Value	
	0	\$	-
	30	\$	170,963,100
	50	\$	239,996,264
	<b>ALTERNATIVE 3B2 - LEED SILVER + NETZERO</b>		
	<b>120-Beds Madrona Site</b>		
	Years	Net Present Value	
	0	\$	-
	30	\$	183,245,194
50	\$	247,529,973	

\* Netzero does not payback with current technology

## SUPPLEMENTAL INFORMATION

### PROPOSED FUNDING

*Identify the fund sources and expected receipt of the funds. If alternatively financed, provide the projected debt service and fund source:*

Funds are expected to be sourced from the Washington State building construction account with design and construction funding appropriated November 2019.

Alternative financing is not being pursued.

### OPERATIONS & MAINTENANCE

*i. Define the anticipated impact of the proposed project on the operating budget for the agency or institution. Include maintenance and operating assumptions (including FTEs)*

The utilities and maintenance costs for the new 120-bed LEED Silver Netzero will be less than the existing 90-bed nursing facility.

Currently there are 5 operating Y-Buildings, but the plan is to put all 6 Y-Buildings in operation. The staffing of (6) 16-bed Y-Buildings is expected to be same as staffing (6) 20-bed cottages because the new design optimizes nursing care staffing.

*ii. How five biennia of capital and operating costs from the time of occupancy, including an estimate of building repairs, replacement, and maintenance:*

#### Staffing Cost Assumptions

Staffing projections and associated operations costs were generated by operations consultant Attune Healthcare.

Staffing operations budget projections include the following assumptions:

1. Five Bieniums of capital and staffing operations costs (10 years, 2020-2029)
2. 5% per year discount rate for NPV (net present value).
3. 3.34% per year escalation rate for budget line items.

#### Building Utilities & Maintenance Assumptions

Operations and maintenance costs for the proposed nursing facility were calculated using the Life Cycle Cost Model. Utility charges were projected using historical utility charges and energy modeling from the mechanical and sustainability engineers.

### FIVE BIENNIA OF CAPITAL AND OPERATING COSTS

<b>ALTERNATIVE 1 - LEED SILVER + NETZERO- OPERATING COST</b>				
<b>90-Beds Building 66 Renovation plus Expansion</b>				
Biennia	Years	Staffing Costs	Utility & Mtn Costs	Total Cost
1	2022-2023	\$35,690,545	\$2,136,994	\$ 37,827,539
2	2024-2025	\$34,571,194	\$1,938,224	\$ 36,509,418
3	2026-2027	\$33,571,194	\$1,758,061	\$ 35,329,255
4	2028-2029	\$32,436,278	\$1,594,646	\$ 34,030,924
5	2030-2031	\$28,922,648	\$1,446,334	\$ 30,368,982
<b>Total Operating Cost in Today's Dollars (NPV)</b>				<b>\$ 174,066,118</b>

## SUPPLEMENTAL INFORMATION

### FIVE BIENNIA OF CAPITAL AND OPERATING COSTS

<b>ALTERNATIVE 2A - LEED SILVER + NETZERO- OPERATING COST</b>				
<b>100-Beds ATP Site</b>				
Biennia	Years	Staffing Costs	Utility & Mtn Costs	Total Cost
1	2022-2023	\$36,752,599	\$2,215,818	\$ 38,968,417
2	2024-2025	\$35,599,703	\$2,009,716	\$ 37,609,419
3	2026-2027	\$34,482,973	\$1,822,909	\$ 36,305,882
4	2028-2029	\$33,401,273	\$1,653,465	\$ 35,054,738
5	2030-2031	\$30,813,551	\$1,499,683	\$ 32,313,234
<b>Total Operating Cost in Today's Dollars (NPV)</b>				<b>\$ 180,251,690</b>

### FIVE BIENNIA OF CAPITAL AND OPERATING COSTS

<b>ALTERNATIVE 2B - LEED SILVER + NETZERO- OPERATING COST</b>				
<b>160-Beds ATP Site</b>				
Biennia	Years	Staffing Costs	Utility & Mtn Costs	Total Cost
1	2022-2023	\$58,040,337	\$3,247,013	\$ 61,287,350
2	2024-2025	\$56,219,662	\$2,944,996	\$ 59,164,658
3	2026-2027	\$54,456,102	\$2,671,252	\$ 57,127,354
4	2028-2029	\$52,694,252	\$2,422,953	\$ 55,117,205
5	2030-2031	\$48,660,200	\$2,197,604	\$ 50,857,804
<b>Total Operating Cost in Today's Dollars (NPV)</b>				<b>\$ 283,554,372</b>

### FIVE BIENNIA OF CAPITAL AND OPERATING COSTS

<b>ALTERNATIVE 3A - LEED SILVER + NETZERO- OPERATING COST</b>				
<b>100-Beds Madrona Site</b>				
Biennia	Years	Staffing Costs	Utility & Mtn Costs	Total Cost
1	2022-2023	\$36,752,599	\$2,007,534	\$ 38,760,133
2	2024-2025	\$35,599,703	\$1,820,806	\$ 37,420,509
3	2026-2027	\$34,482,973	\$1,651,557	\$ 36,134,530
4	2028-2029	\$33,401,273	\$1,498,041	\$ 34,899,314
5	2030-2031	\$30,812,861	\$1,358,715	\$ 32,171,576
<b>Total Operating Cost in Today's Dollars (NPV)</b>				<b>\$ 179,386,062</b>

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**FIVE BIENNIA OF CAPITAL AND OPERATING COSTS**

<b>ALTERNATIVE 3B1 - LEED SILVER - OPERATING COST</b>				
<b>120-Beds Madrona Site</b>				
Biennia	Years	Staffing Costs	Utility & Mtn Costs	Total Cost
1	2022-2023	\$42,409,232	\$ 2,599,609	\$ 45,008,841
2	2024-2025	\$41,124,586	\$ 2,357,810	\$ 43,482,396
3	2026-2027	\$39,833,645	\$ 2,138,646	\$ 41,972,291
4	2028-2029	\$38,584,970	\$ 1,939,854	\$ 40,524,824
5	2030-2031	\$37,374,595	\$ 1,759,436	\$ 39,134,031
<b>Total Operating Cost in Today's Dollars (NPV)</b>				<b>\$ 210,122,382</b>

5% Annual Discount Rate

**FIVE BIENNIA OF CAPITAL AND OPERATING COSTS**

<b>ALTERNATIVE 3B2 - LEED SILVER+ NETZERO- OPERATING COST</b>				
<b>120-Beds Madrona Site</b>				
Biennia	Years	Staffing Costs	Utility & Mtn Costs	Total Cost
1	2022-2023	\$42,409,232	\$ 2,420,798.33	\$ 44,830,030
2	2024-2025	\$41,124,586	\$ 2,195,630.86	\$ 43,320,217
3	2026-2027	\$39,833,645	\$ 1,991,541.84	\$ 41,825,187
4	2028-2029	\$38,584,970	\$ 1,806,423.42	\$ 40,391,393
5	2030-2031	\$37,374,595	\$ 1,638,415.75	\$ 39,013,011
<b>Total Operating Cost in Today's Dollars (NPV)</b>				<b>\$ 209,379,838</b>

5% Annual Discount Rate

**FIVE BIENNIA OF CAPITAL AND OPERATING COSTS**

<b>ALTERNATIVE 3C - LEED SILVER + NETZERO- OPERATING COST</b>				
<b>160-Beds Madrona Site</b>				
Biennia	Years	Staffing Costs	Utility & Mtn Costs	Total Cost
1	2022-2023	\$55,385,792	\$3,016,915	\$ 58,402,707
2	2024-2025	\$53,649,881	\$ 2,736,300.37	\$ 56,386,181
3	2026-2027	\$51,965,487	\$ 2,481,954.85	\$ 54,447,442
4	2028-2029	\$50,335,376	\$ 2,251,251.41	\$ 52,586,627
5	2030-2031	\$46,434,667	\$ 2,041,872.21	\$ 48,476,539
<b>Total Operating Cost in Today's Dollars (NPV)</b>				<b>\$ 270,299,497</b>

**FURNITURE & EQUIPMENT**

*Clarify whether furniture, fixtures, and equipment are included in the project budget. If not included, explain:*

Furniture and Equipment is included in the total project cost.

## SUPPLEMENTAL INFORMATION

### Information required by RCW 43.88.0301(1)

(1) The office of financial management must include in its capital budget instructions, beginning with its instructions for the 2003-05 capital budget, a request for "yes" or "no" answers for the following additional informational questions from capital budget applicants for all proposed major capital construction projects valued over five million dollars and required to complete a predesign:

(a) For proposed capital projects identified in this subsection that are located in or serving city or county planning under RCW 36.70A.040:

#### QUESTION

(i) Whether the proposed capital project is identified in the host city or county comprehensive plan, including the capital facility plan, and implementing rules adopted under chapter [36.70A](#) RCW;

#### RESPONSE

The host city is Shoreline. The proposed capital project was not identified in the City of Shoreline comprehensive plan but the Fircrest Campus, where the project is located, is identified on the Shoreline comprehensive plan.

The proposed project was not part of the Fircrest Master Plan at the time of the study but further Master Planning by consultant AHBL is now underway.

#### QUESTION

(ii) Whether the proposed capital project is located within an adopted urban growth area:

#### RESPONSE

A new light rail station is planned 15 blocks to the southwest of the Fircrest Campus and urban growth is planned along 15<sup>th</sup> Avenue, south of the site. Shoreline is notably pursuing affordable housing in this area.

#### QUESTION

(A) If at all located within an adopted urban growth area boundary, whether a project facilitates, accommodates, or attracts planned population and employment growth;

#### RESPONSE

The project relocates existing staff and likely adds some additional staff to the west side of campus where there is better access to public transit along 15<sup>th</sup> Avenue.

#### QUESTION

(B) If at all located outside an urban growth area boundary, whether the proposed capital project may create pressures for additional development;

#### RESPONSE

The north end of the Fircrest Campus, where the project is located, is close to the boundary of the urban growth area. If the project uses existing intersections for driving onto

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Fircrest Campus, the impact of the project would be less. The ongoing Master Planning will likely address this question in more depth.

### QUESTION

(b) For proposed capital projects identified in this subsection that are requesting state funding:

(i) Whether there was regional coordination during project development;

### RESPONSE

Yes, the project has looked at state-wide needs and has looked in depth at potential solutions across the Seattle and Tacoma metropolitan regions. A separate but parallel Feasibility Study has studied the needs and potential solutions at the Rainier Campus in depth. The Fircrest Feasibility Study, page 3.24 – 3.26, reports the results of Off-Site Alternatives that were analyzed.

### QUESTION

(ii) Whether local and additional funds were leveraged;

### RESPONSE

Pursuit of additional funds for sustainability measures is recommended as the project progresses. We are not aware of additional funding opportunities currently.

### QUESTION

(iii) Whether environmental outcomes and the reduction of adverse environmental impacts were examined.

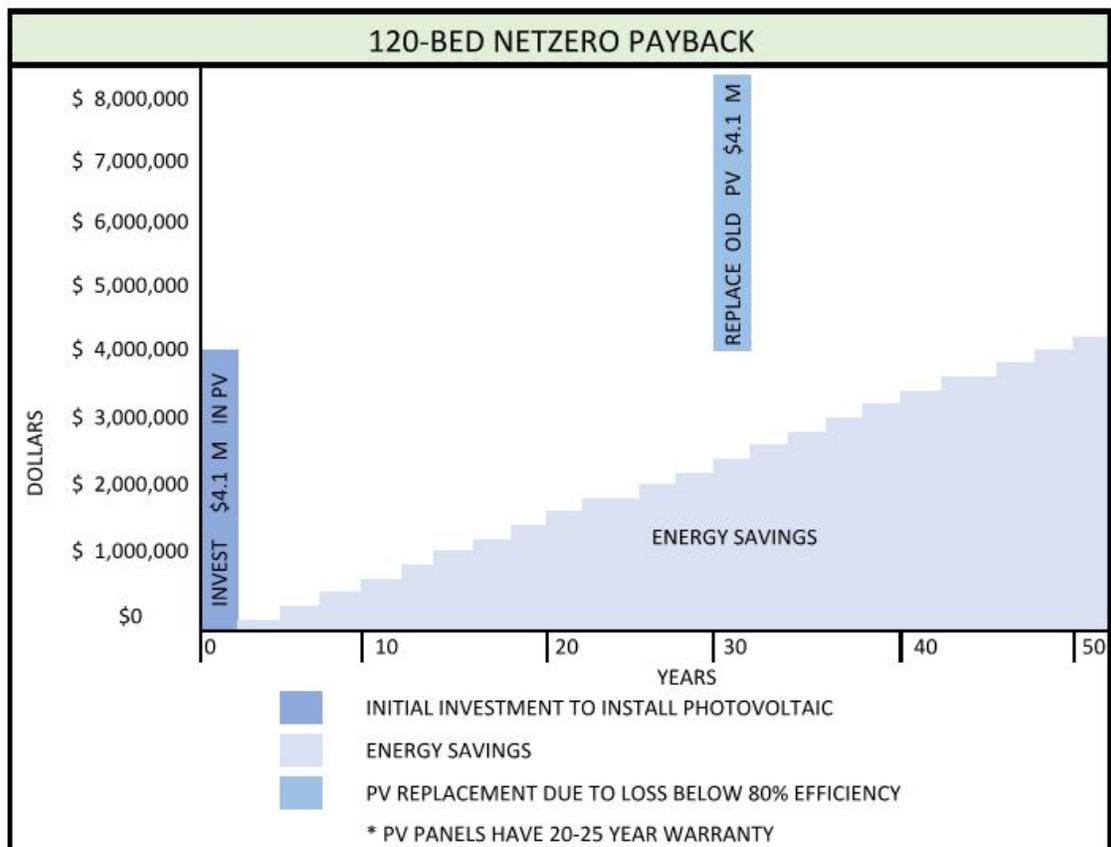
### RESPONSE

The concern for the Hamlin creek waterway was a major factor in the choice of the preferred alternative on the higher, west side of the campus. The report has noted the history of demolished structures at the proposed site that is expected to require some remediation. The study has modeled energy savings for each of the alternatives studied and compared LEED Silver design to LEED Silver with photovoltaics added to bring the energy consumption to Netzero.

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### Netzero Payback

The initial investment to install PV panels is \$4.1 M shown in the graph below. That results in savings as shown in light blue below. The model shows that by year 48, the initial investment is paid off by the utility energy savings. But the model doesn't account for the practical life of the PV panels, which have a 20-year warranty for efficient operation. The efficiency of the PV panels decreases over time and by 20 years the PV panels on average, will be at only 80% efficiency according to warranty information. The graph shows the PV panels being replaced at 30 years. This means that the PV panels energy savings don't payback on the investment.



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### **Moving Residents with an Option for a Compressed Schedule**

This subject was discussed on page 4.20 of the report. It was suggested that the first two northern “cottages” and central administrative block be completed in phase 1, allowing for an early move-in for phase 1. It was also noted that the new water tank and water distribution needs to be installed prior to opening the nursing facility, so design and installation of the water system should proceed as fast as possible.

Another suggestion for compressing the schedule was with a GC/CM project delivery method which should cut time from the process.

On page 4.21 the concern for relocation trauma was discussed. This client population is highly sensitive to change to the point that relocation trauma has led to deaths. Relocation trauma was also discussed on pages 2.8 and 2.9. Moving the clients should only occur with careful planning involving staff who know the individual clients and how to minimize their trauma. It is important that ample time be given to planning everyone’s move and that the clients don’t suffer from a compression of the schedule.