

Belmont Middle and High School Building Committee

Photovoltaic System Executive Summary

October 19, 2023

	Base Bid	Base Bid + Alt 1	Base Bid + Alt 1&2	
Bid Summary				
11 MW-DC Rated Capacity	0.79	0.98	1.14	1.06
12 Successful low bidder	LeVangie	Griffin	Griffin	Griffin
13 PV RFP bid price	\$1,890,000	\$2,405,000	\$2,669,000	\$2,669,000
14 Additional cost allowance from other contractors	\$79,000	\$79,000	\$79,000	\$79,000
15 Skanska award value for PV	\$1,969,000	\$2,484,000	\$2,748,000	\$2,748,000
16 Design cost from SDA	\$77,810	\$77,810	\$77,810	\$77,810
17 PV all-in price	\$2,046,810	\$2,561,810	\$2,825,810	\$2,825,810
18 Price per rated watt DC - all in	\$2.79	\$2.76	\$2.60	\$3.22
19 Design changes to support PV	\$146,923	\$146,923	\$146,923	\$591,006
20 Overall PV costs to Project (PV all-in + design changes)	\$2,193,733	\$2,708,733	\$2,972,733	\$3,416,816
Budget Summary				
21 Total PV budget	\$2,600,000	\$2,600,000	\$2,600,000	\$2,600,000
22 GMP allowance for PV	\$2,143,100	\$2,143,100	\$2,143,100	\$2,143,100
23 Contingency allowance in budget for PV	\$456,900	\$456,900	\$456,900	\$456,900
24 Contingency allowance for PV after design changes and SDA costs	\$232,167	\$232,167	\$232,167	
25 Surplus or (deficit) in GMP (GMP allowance - Skanska award)	\$174,100	(\$340,900)	(\$604,900)	
26 Mark-up for CO funding deficit	\$0	\$34,391	\$61,024	
27 PCCO 43 for PV award (cost or (credit))	(\$174,100)	\$375,291	\$665,924	
28 Surplus or (deficit) in contingency funding for PV	\$406,267	(\$143,124)	(\$433,757)	
29 Total projected contingency at end of Project (10-31-2022)	\$455,979	\$455,979	\$455,979	
30 Total projected contingency at end of Project with PV	\$862,246	\$312,855	\$22,222	
Production Summary - Current				
31 Annual Production kWh - Yr 1	929,700	1,157,800	1,349,400	1,250,000
32 BMHS design estimated kWh total use per Yr	4,036,000	4,036,000	4,036,000	4,036,000
33 % of BMHS PV system	23%	29%	33%	31%
34 Actual BMHS usage kWh 12 months through June 2023	3,715,600	3,715,600	3,715,600	3,872,400
Value Summary - Current				
41 BL Municipal Rate projected as of 6-6-2023	\$0.17	\$0.17	\$0.17	\$0.16
42 MA Class I RECs per kWh (estimate for 2023)	\$0.03	\$0.03	\$0.03	\$0.03
43 Value of BMHS PV Energy - 2023 BL Rate	\$158,049	\$196,826	\$229,398	\$202,500
44 Value of BMHS PV RECs 2023	\$27,891	\$34,734	\$40,482	\$37,500
45 O&M costs estimated at \$10/kW - Yr 1	\$7,870	\$9,800	\$11,430	\$10,600
46 Net value of BMHS PV Energy - Yr 1	\$178,070	\$221,760	\$258,450	\$229,400
47 Payback PV cost in years based on value of Yr 1	12	12	12	15
48 Remainder BMHS kWh - not sourced by PV	3,106,300	2,878,200	2,686,600	2,786,000
49 Cost of BMHS remainder kWh - Yr 1	\$528,071	\$489,294	\$456,722	\$451,332
50 Net cost of BMHS electricity - Yr 1 (remainder + O&M - RECs)	\$508,050	\$464,360	\$427,670	\$424,432
Grant Consideration - Inflation Reduction Act of 2022				
51 Maximum possible reimbursement grant BMHS (estimate)	30.0%	30.0%	30.0%	30.0%
52 Reduction for tax-exempt municipality - 15%	25.5%	25.5%	25.5%	25.5%
53 Pro-rated reduction for pool heat exclusion - 5%	24.2%	24.2%	24.2%	24.2%
54 Potential payment in 2024 (based on Skanska PV award)	\$531,432	\$656,191	\$720,145	\$827,724
55 Cost of omitted PV panels in 2022 dollars	\$174,100	-\$375,291	\$0	\$0