



Town of Reading Meeting Posting with Agenda

2018-07-16 LAG

Board - Committee - Commission - Council:

Permanent Building Committee

Killam School Building Committee

Date: 2024-12-16

Time: 7:00 PM

Building: Reading Town Hall

Location: Select Board Meeting Room

Address: 16 Lowell Street

Agenda: Revised

Purpose: General Business

Meeting Called By: Joshua Delaune on behalf of Chair Carla Nazzaro

Notices and agendas are to be posted 48 hours in advance of the meetings excluding Saturdays, Sundays and Legal Holidays. Please keep in mind the Town Clerk's hours of operation and make necessary arrangements to be sure your posting is made in an adequate amount of time. A listing of topics that the chair reasonably anticipates will be discussed at the meeting must be on the agenda.

All Meeting Postings must be submitted in typed format; handwritten notices will not be accepted.

Topics of Discussion:

This meeting will be held in-person in the Select Board Meeting Room at Town Hall and remotely

via Zoom:

Join Zoom Meeting

<https://us06web.zoom.us/j/88595512287>

Meeting ID: 885 9551 2287

One tap mobile

+16465588656,,88595512287# US (New York)

16465189805,,88595512287# US

+(New York)

Dial by your location

• +1 646 558 8656 US (New York)

• +1 646 518 9805 US (New York)

Find your local number: <https://us06web.zoom.us/j/88595512287>

1. Call to order
2. Public Comment
3. Liaison Report
4. Designer Update
 - a. Traffic Update
 - b. Energy Feasibility Study*
5. OPM Update
 - a. Financial*
 - b. Schedule
6. Chapter 149 vs 149A Follow up*
7. Meeting Minutes*
8. Next KSBC Meeting – January 22nd, 2024
9. Adjourn

*Noted potential vote required

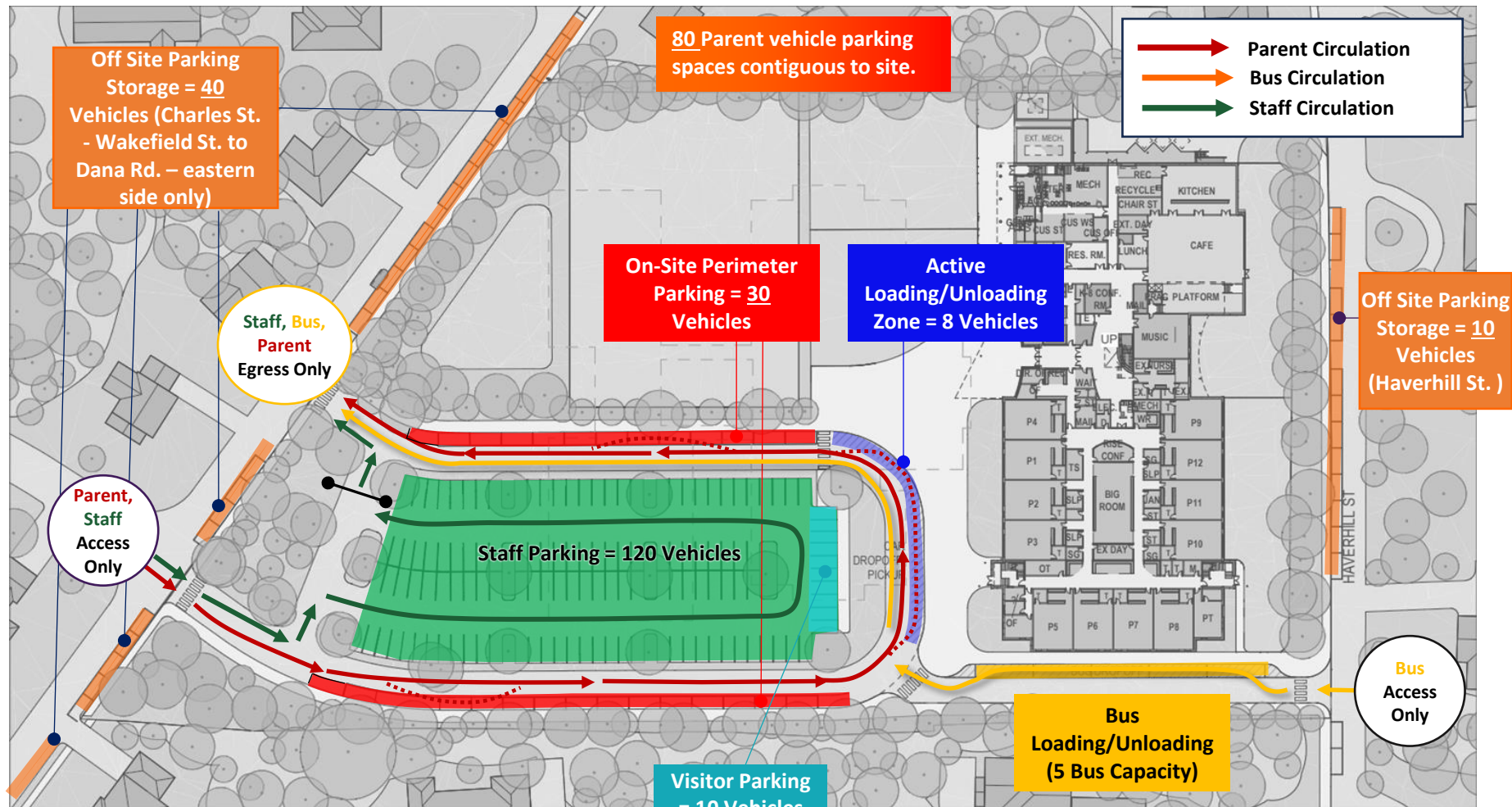
This Agenda has been prepared in advance and represents a listing of topics that the chair reasonably anticipates will be discussed at the meeting. However the agenda does not necessarily include all matters which may be taken up at this meeting.

"A PLACE WHERE EVERYONE BELONGS"



AGENDA

- **Community Meeting Traffic Update**
- **HVAC**
 - System Options
 - Costs & Incentives
 - Life-Cycle Cost Analysis
 - Cost Analysis with Solar PV Rooftop Array
 - HVAC System Vote



PROJECTED AM OPERATIONS
**Predominantly rolling drop-off with
some parents parking and walking.**

**K-5 Serviced First
Followed by Pre-K**

AM QUEUE

K-5 (455 Students)

195 Arrival Vehicles Expected

20% Expected to Park (~ 39 Vehicles)

- Mix of **on-** and **off-site**

80% Expected to Join Rolling Queue (~156 Vehicles) with a maximum rolling queue of 36 vehicles

- **8 Vehicles processed in active unloading zone**
- **22 Vehicles queued on-site**
- **6 Vehicles queued off-site**

J. WARREN KILLAM ELEMENTARY SCHOOL
TOWN OF READING



VEHICLE ARRIVAL PERIOD
8:05-8:25

MUST CLEAR BY 8:30 AM

AM QUEUE

Pre- K (165 Students)

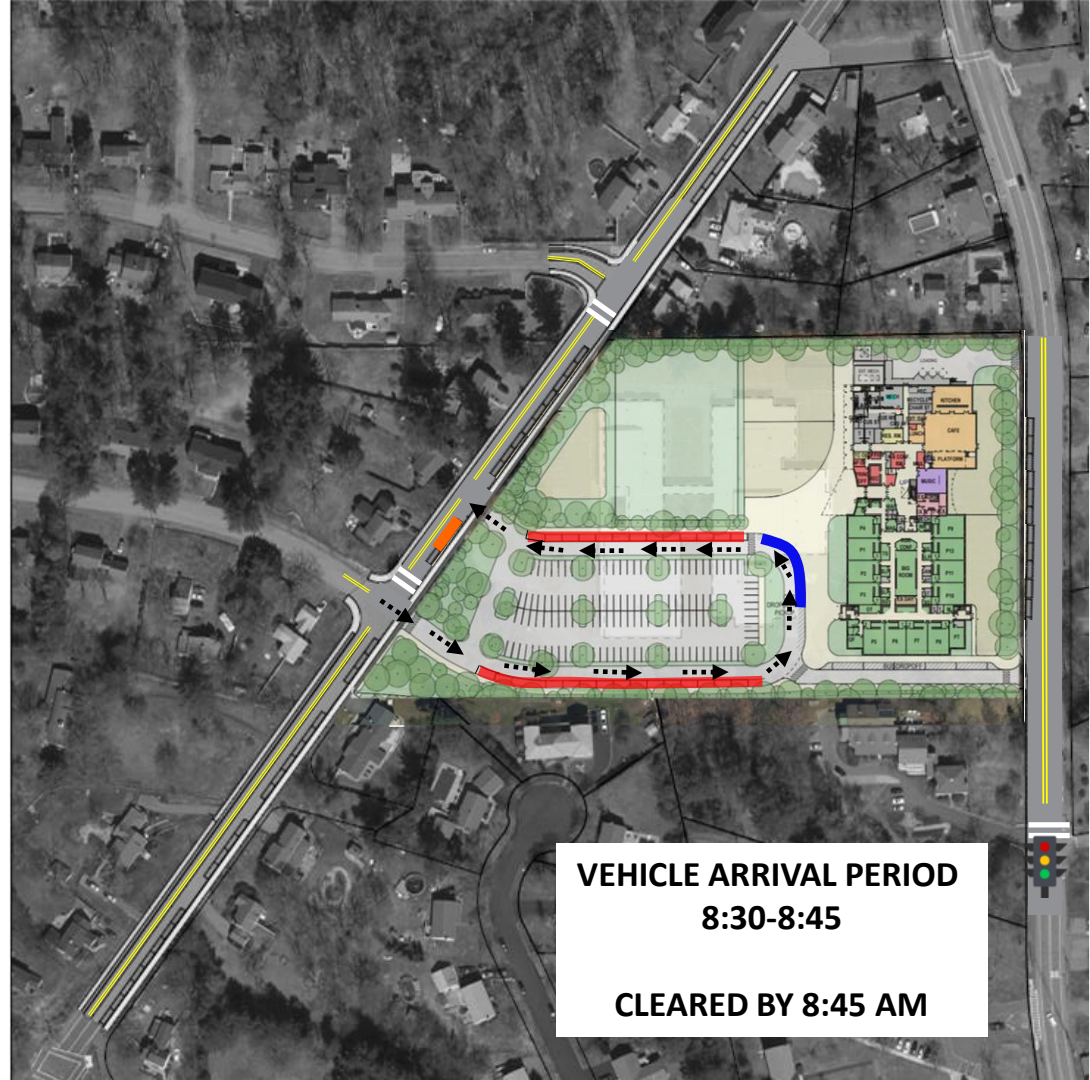
81 Arrival Vehicles Expected

40% Expected to Park (~ 32 Vehicles)

- **30 on-site parked vehicles**
- **2 off-site parked vehicles**

60% Expected to Join Rolling Queue (~49 Vehicles) with a maximum rolling queue of 4 vehicles

- **4 Vehicles processed in active unloading zone**



**VEHICLE ARRIVAL PERIOD
8:30-8:45**

CLEARED BY 8:45 AM

PROJECTED PM OPERATIONS
All vehicles park for pick-up
(4th & 5th grade may be picked up in active loading zone)

Pre-K Serviced First
Followed by K-5

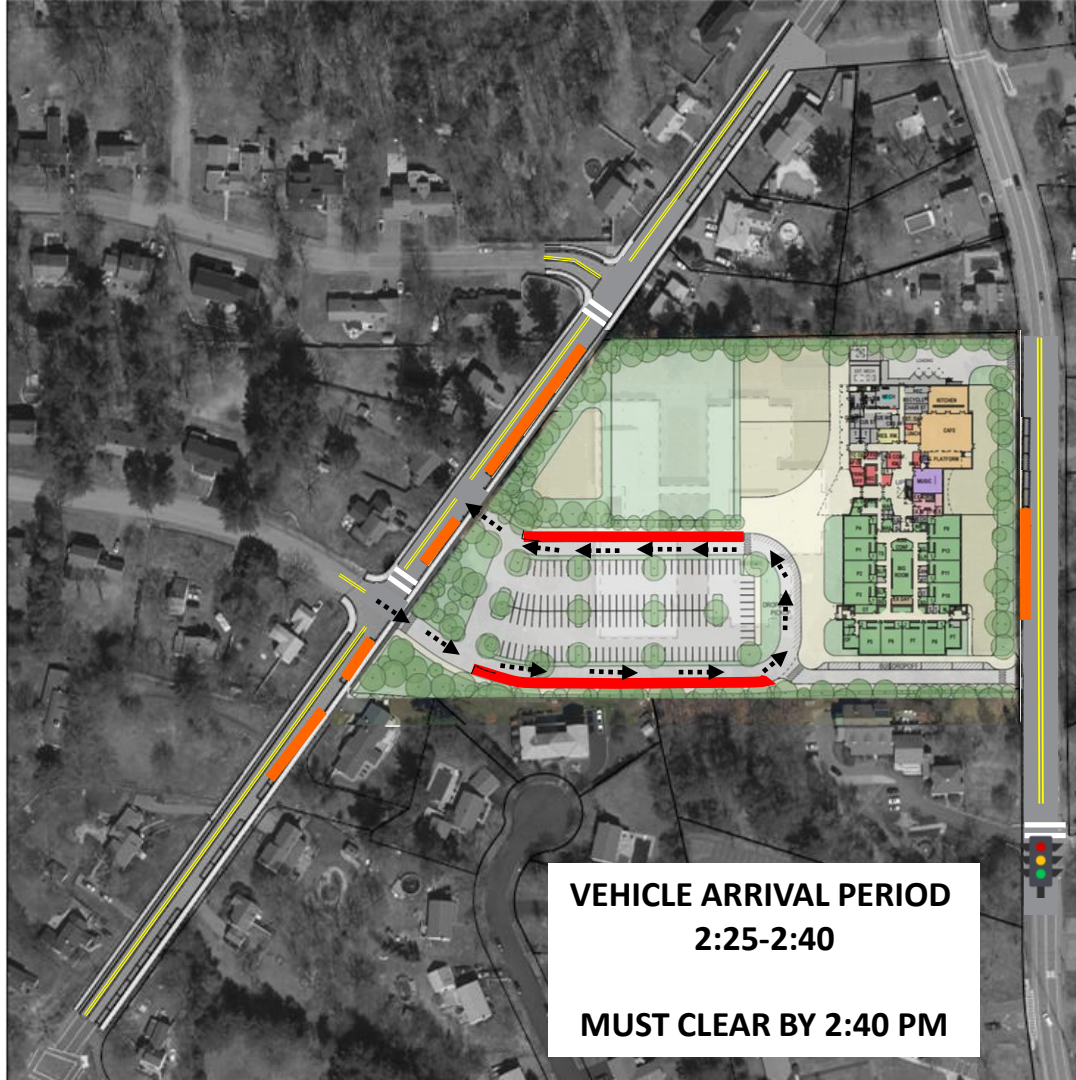
PM PARKING

Pre-K (150 Students)

53 Arrival Vehicles Expected

- 30 On-site parked vehicles
- 23 Off-Site parked vehicles via dedicated spaces on Charles Street/Haverhill Street

J. WARREN KILLAM ELEMENTARY SCHOOL
TOWN OF READING



VEHICLE ARRIVAL PERIOD
2:25-2:40

MUST CLEAR BY 2:40 PM

PM PARKING

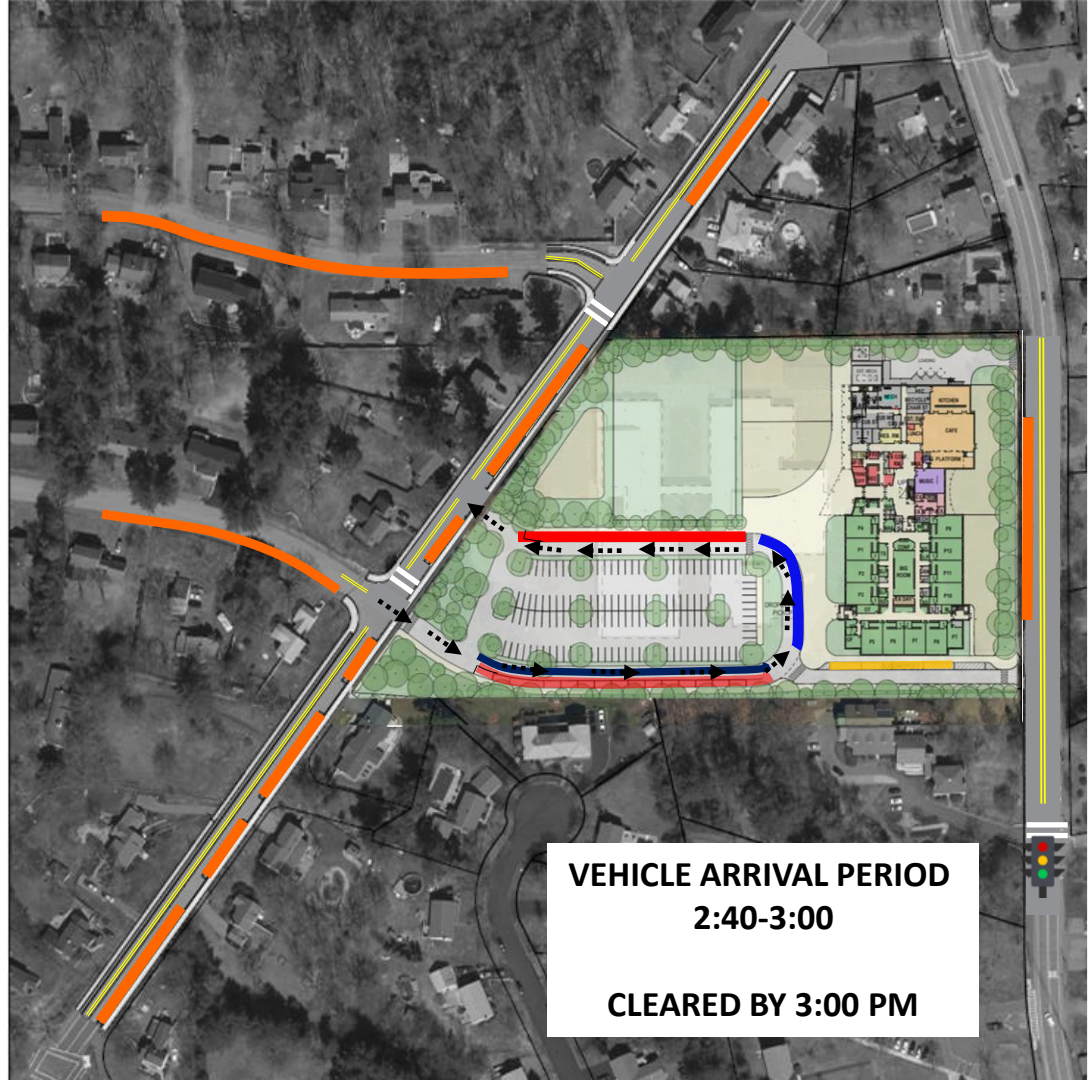
K-5 (455 Students)

145 Arrival Vehicles Expected

- **30 on-site** parked vehicles
- **91 off-site** parked vehicles accommodated via dedicated spaces on Charles Street (40) /Haverhill Street (10) and remaining 41 on Dana Road and Boswell Road

(4th and 5th graders may be picked up in rolling active loading zone – Assuming 50% will utilize loading ~24 vehicles)

- **8 Vehicles processed in Active loading area**
- **16 vehicles queued on-site**



ENERGY FEASIBILITY STUDY - GOALS

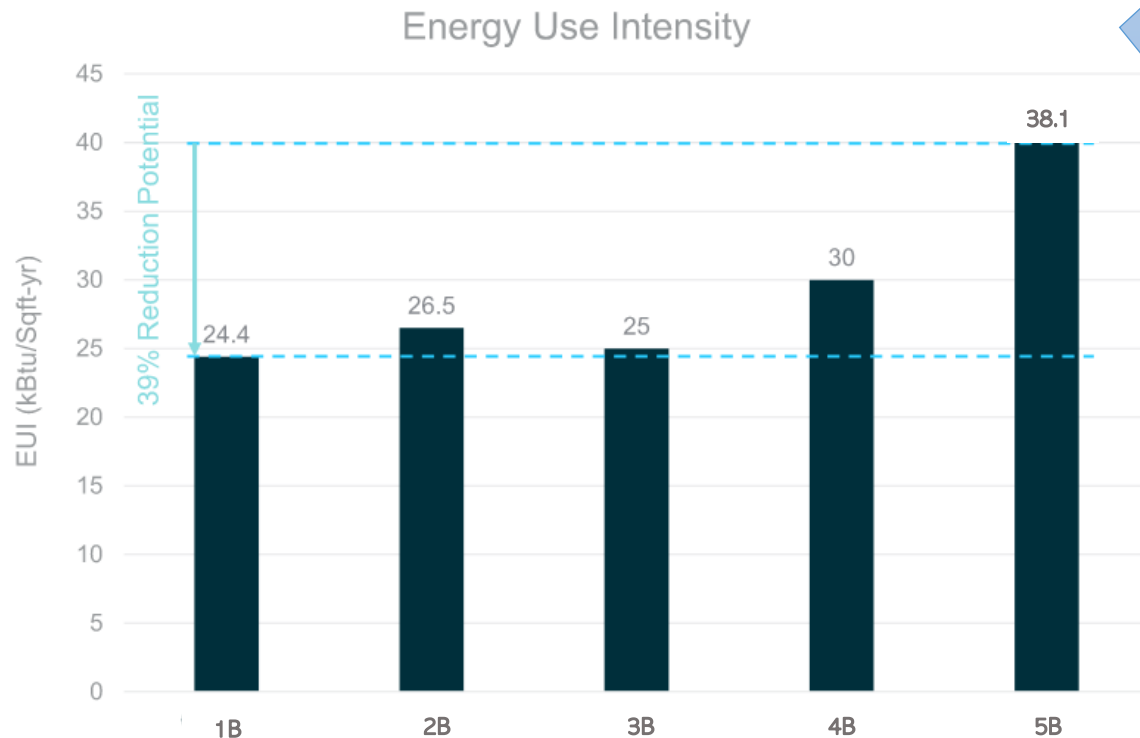
- ☑ Site logistics plan during construction.
- ☑ Number of wells needed based on energy model.
- ☑ Layout of wells on the site.
- ☑ Layout of site utilities coordinated with well field.
- ☑ Reliability and operating cost.
 - Cost comparison, with first cost, life-cycle cost, and incentives.

HVAC SYSTEMS

HVAC SYSTEMS

	System Type	System Description
1A	Full Geothermal <i>60 wells</i>	Ground-source heat pump connected to 60 geothermal wells.
2A	Hybrid Geothermal <i>40 wells</i>	Ground source heat pump connected to 40 geothermal wells supplemented by a cooling tower and a boiler.
3A	Half Geothermal <i>44 wells</i>	Ground source heat pump connected to 44 geothermal wells; separate DOAS for ventilation air with air-source heat pump.
4A	Air-Source <i>all-electric</i>	Heat Pump Chiller and Boiler serving chilled water and hot water to the 4-pipe hydronic system. Heat recovered to hot water loop from Heat Pump Chiller.
5A	Chiller-Boiler <i>gas-fired</i>	Electric Screw Chiller and Gas Fired Boiler serving chilled water and hot water to the 4-pipe hydronic system. Heat recovered to hot water loop from Heat Pump Chiller. Changed Chiller to a more efficient type.

EUI WITH OPTION 5A UPGRADED CHILLER



Energy Use Intensity is a metric that measures how much energy a building uses based on the **efficiency of building systems and envelope**.

Addition of renewables like solar does not change the baseline EUI, but offsets some of the building's energy use to renewables vs. energy from the grid.

Option 1, the full geothermal system, achieves the highest performance with an annual EUI of **24.4 kBtu/Sqft-yr**

COSTS and INCENTIVES

FIRST COST – UPDATES FROM 11/20

		A.	B.	C.	F.	F.
		HVAC System Construction Cost	HVAC Town Share	MSBA Grant Value	Ir	
1A	Full Geothermal 60 wells	\$ 21,400,000	\$ 21,400,000	INCL		
2A	Hybrid Geothermal 40 wells	\$ 20,100,000	\$ 20,100,000	INCL		
3A	Half Geothermal 44 wells	\$ 18,700,000	\$ 18,700,000	INCL		
4A	Air-Source all-electric	\$ 15,900,000	\$ 15,900,000	INCL		
5A	Chiller-Boiler gas-fired	\$ 18,500,000	\$ 18,500,000	\$ 0		

Added markups, escalation, and general conditions related to early site package to HVAC system cost

MSBA grant value is included in the town share calculation.

Town Share is 100% of construction cost because in every case, the cost of construction before addition of the HVAC system is over the MSBA cost/SF cap of \$550/SF

INFLATION REDUCTION ACT – FUTURE VIABILITY

- The IRA received bipartisan support
- No appropriation is required to fund the IRA.
- Republican leaders are sending strong signals that the new Administration is unlikely to attempt a full repeal, but is more likely to pursue targeted changes.
- It is unclear how Elective Pay (funding for schools) will fare.
- Incoming Administration has indicated an intention to pass a tax bill within the first 100 days.

Source:

 **UNDAUNTEDK12**

**An update on federal funding
for school infrastructure**



<https://www.undauntedk12.org/ourwork/an-update-on-federal-funding-for-school-infrastructure>

FIRST COST LESS INCENTIVES & GRANTS

		A.	B.	C.	E.	F. =B-C-E
		HVAC System Construction Cost	HVAC Town Share	MSBA Grant Value	IRA Incentive Value	Town Share Less Incentives & Grants
1A	Full Geothermal 60 wells	\$ 21,400,000	\$ 21,400,000	INCL	\$ (6,300,000)	\$ 15,100,000
2A	Hybrid Geothermal 40 wells	\$ 20,100,000	\$ 20,100,000	INCL	\$ (4,700,000)	\$ 15,400,000
3A	Half Geothermal 44 wells	\$ 18,700,000	\$ 18,700,000	INCL	\$ (2,600,000)	\$ 16,100,000
4A	Air-Source all-electric	\$ 15,900,000	\$ 15,900,000	INCL	\$ 0	\$ 15,900,000
5A	Chiller-Boiler gas-fired	\$ 18,500,000	\$ 18,500,000	\$ 0	\$ 0	\$ 18,500,000

LIFE-CYCLE COST ANALYSIS

LIFE-CYCLE COST ANALYSIS

$$NPV = \sum (C_t / (1 + r)^t)$$

Life Cycle Cost Analysis (LCCA) - An economic evaluation technique that determines the total cost of owning and operating a facility over a period of time.

NPV – Net Present Value

The current value of future costs and benefits discounted to account for the time value of money.

Σ - Sum of all costs across the life cycle of the asset

C_t – Cost in year t

The cost incurred in year "t"

r – Discount Rate – 2.0%

The interest rate used to discount future cash flows to their present value.

t – Time

The time period (year) in which the cost occurs

Inflation Rate – 2.5%

The rate at which the general level of prices for goods and services rises, eroding purchasing power. The 20-year replacement cost is escalated using the inflation rate.

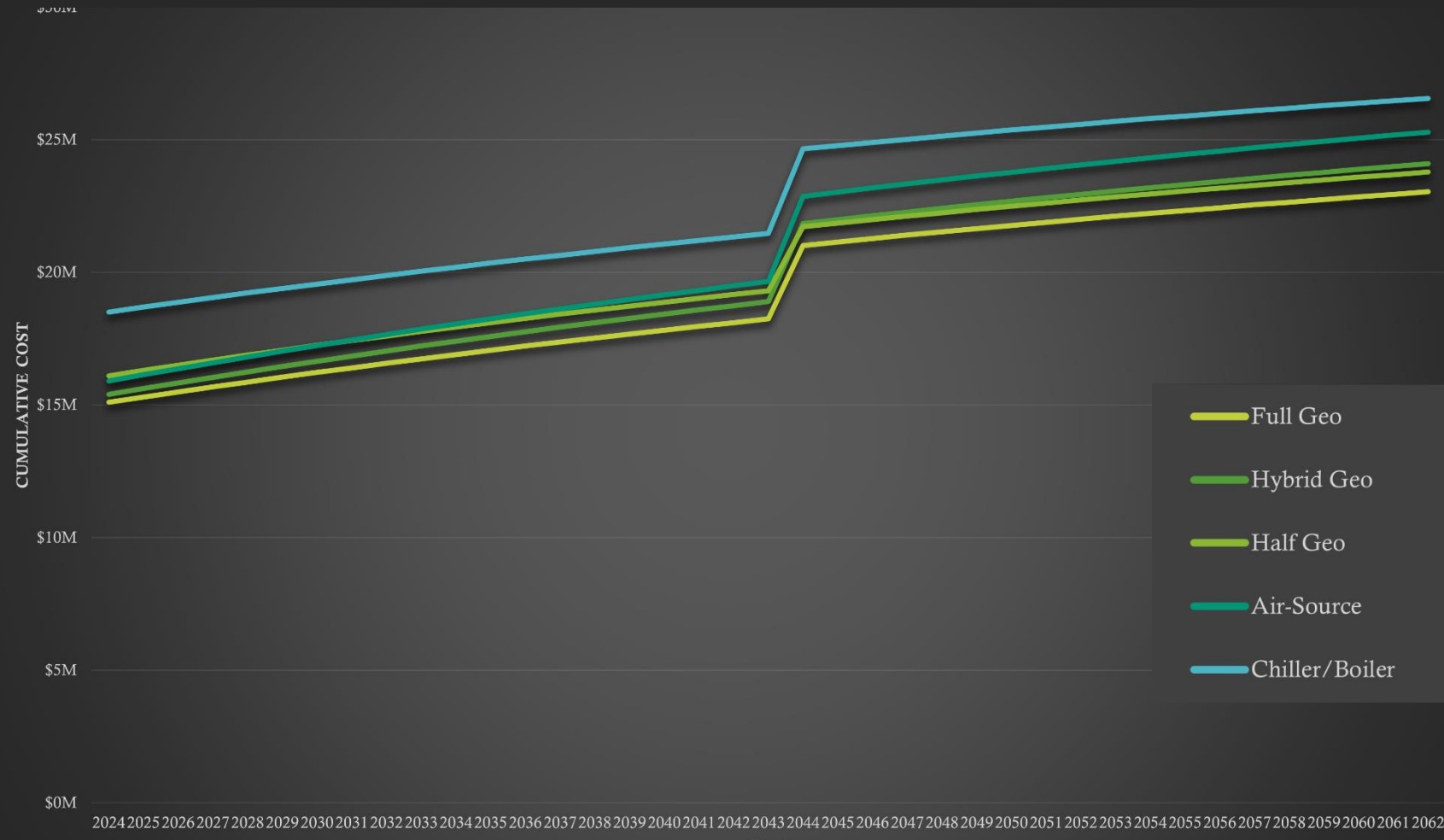
LIFE-CYCLE COST ANALYSIS

Electrical Rate	0.19 \$/kWh	0.064 \$/kBTU
Gas Rate	15.52 \$/ccf	0.016 \$/kBTU

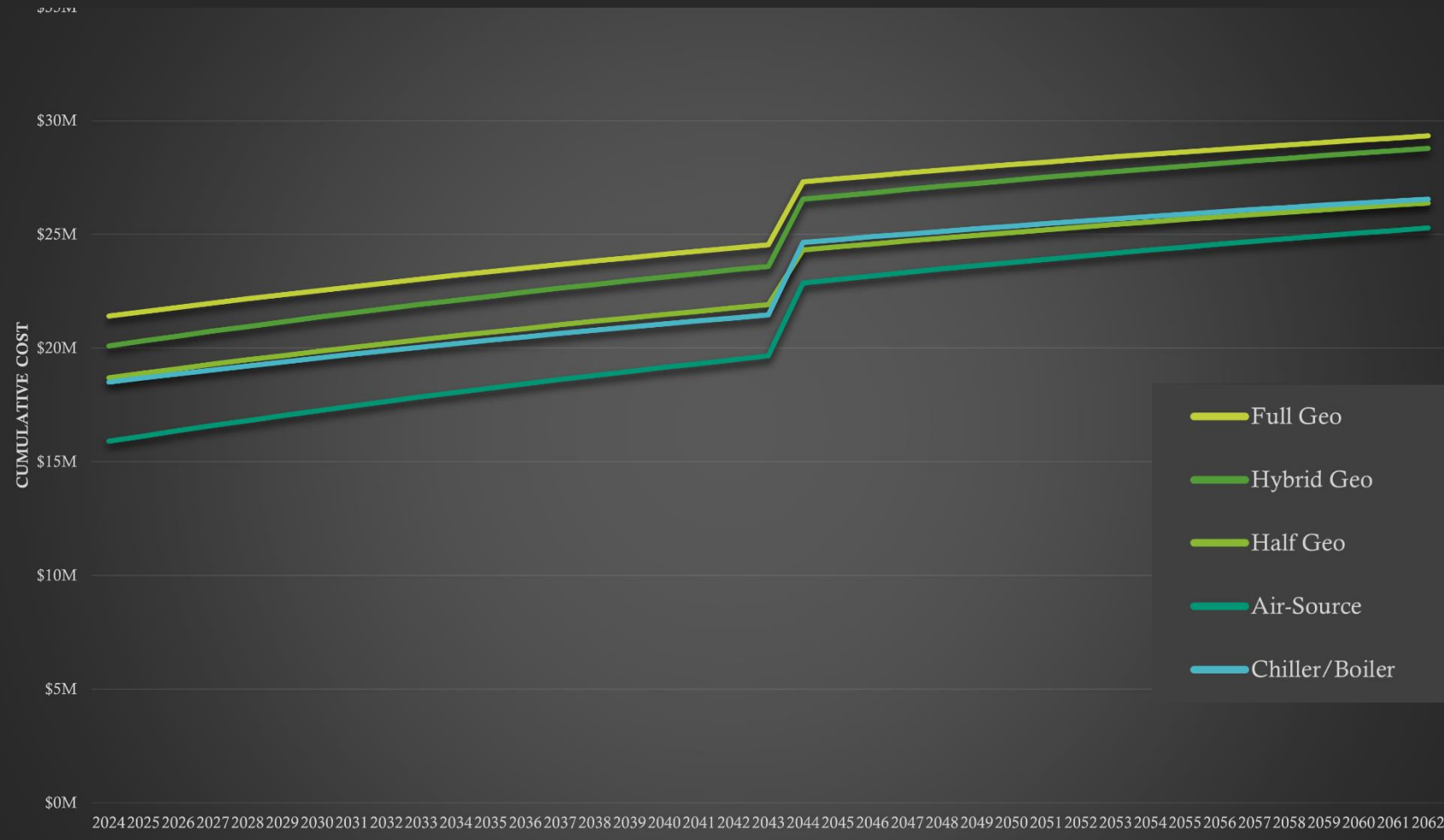


	HVAC System Description	HVAC Town Share Less Incentives & Grants (\$)	Energy Cost			Annual Maint. Cost (\$/yr)	20-year Replacement Cost Present \$	[40] Year Life-Cycle Cost Present Worth	[40] Year Life-Cycle Cost Without IRA Present Worth
			EUI (kBtu/sf/yr)	Energy Rate (\$/sf/yr)	Annual Energy Cost (\$/yr)				
1A	Full Geothermal	\$ 15,100,000	24.4	\$ 1.34	\$ 165,000	\$ 35,000	\$ 2,500,000	\$ 23,200,000	\$ 29,500,000
2A	Hybrid Geothermal	\$ 15,400,000	26.5	\$ 1.46	\$ 179,000	\$ 44,000	\$ 2,700,000	\$ 24,300,000	\$ 29,000,000
3A	Half Geothermal	\$ 16,100,000	25.0	\$ 1.38	\$ 169,000	\$ 35,000	\$ 2,200,000	\$ 24,000,000	\$ 26,600,000
4A	Air Source	\$ 15,900,000	30.0	\$ 1.65	\$ 203,000	\$ 36,000	\$ 2,900,000	\$ 25,500,000	\$ 25,500,000
5A	Chiller/Boiler	\$ 18,500,000	38.1	Elec– 0.88	\$ 150,000	\$ 38,000	\$ 2,900,000	\$ 26,700,000	\$ 26,700,000
				Gas – 0.34					

CUMULATIVE LIFE CYCLE COST COMPARISON – with IRA



CUMULATIVE LIFE CYCLE COST COMPARISON – without IRA



HVAC OPTIONS WITH ROOFOTOP SOLAR PV

SOLAR PV

Today's Discussion:

- Impact on HVAC system selection of adding 185kW Solar Rooftop Array

Jan. 22 SBC:

- Site Solar Capacity
- Total Estimated Load
- PV Options and Costs
- Payback Period
- RMLD ownership option



COSTS WITH 185 kW ROOFTOP SOLAR ARRAY

		A.	B.	C.	D.	E. =B-C-E
		HVAC System Construction Cost w/ Solar PV	HVAC Town Share	MSBA Grant Value	IRA Incentive Value	Town Share Less Incentives & Grants
1B	Full Geothermal <i>60 wells</i>	\$ 22,100,000	\$ 22,100,000	INCL	\$ (6,500,000)	\$ 15,600,000
2B	Hybrid Geothermal <i>40 wells</i>	\$ 20,800,000	\$ 20,800,000	INCL	\$ (4,900,000)	\$ 15,900,000
3B	Half Geothermal <i>44 wells</i>	\$ 19,400,000	\$ 19,400,000	INCL	\$ (2,800,000)	\$ 16,600,000
4B	Air-Source <i>all-electric</i>	\$ 16,600,000	\$ 16,600,000	INCL	\$ (200,000)	\$ 16,400,000
5B	Chiller-Boiler <i>gas-fired</i>	\$ 16,800,000	\$ 16,800,000	INCL	\$ (200,000)	\$ 16,600,000

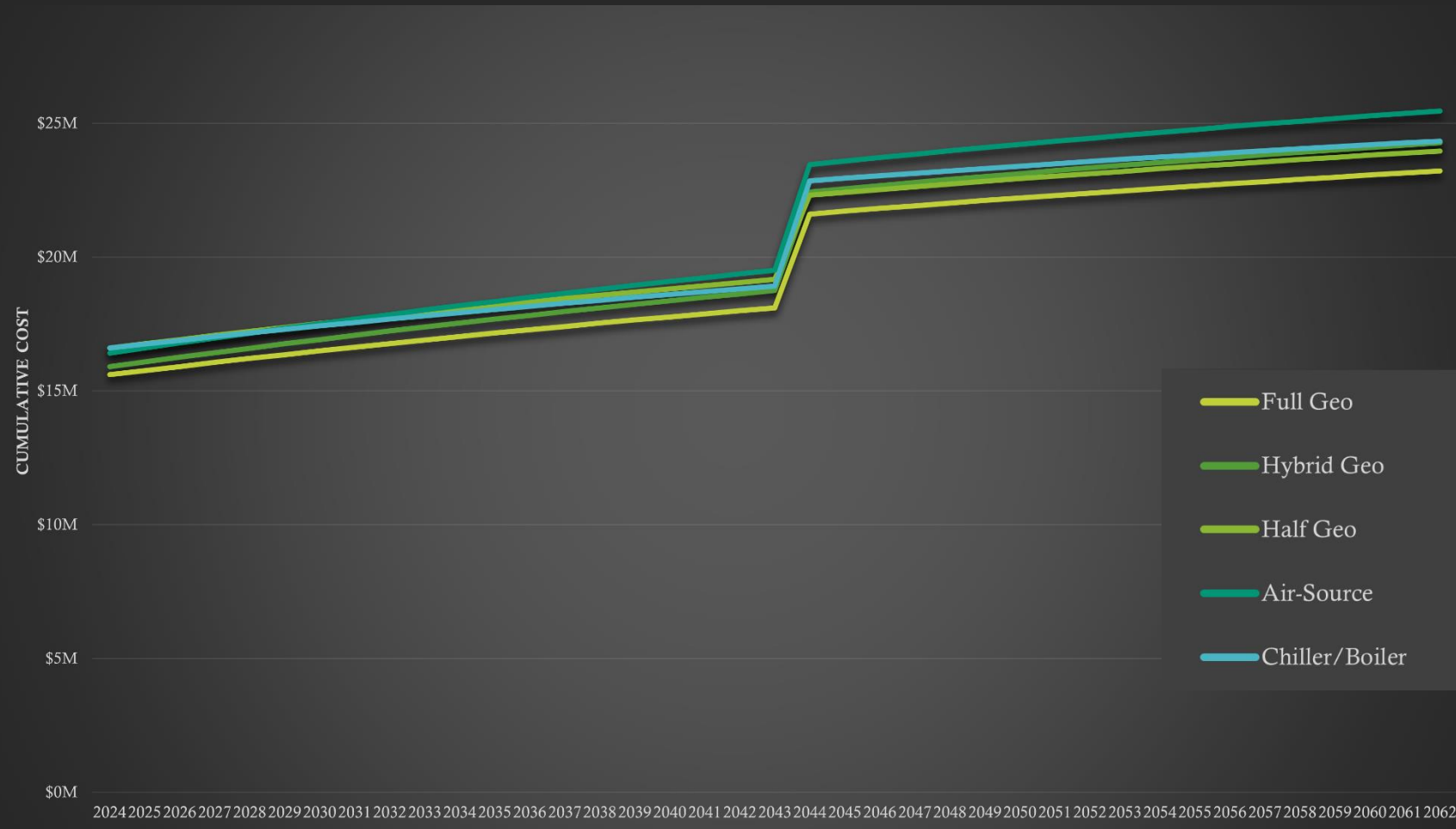
LCCA w/ 185 kW ROOFTOP SOLAR ARRAY

Electrical Rate	0.19 \$/kWh	0.064 \$/kBTU
Gas Rate	15.52 \$/ccf	0.016 \$/kBTU

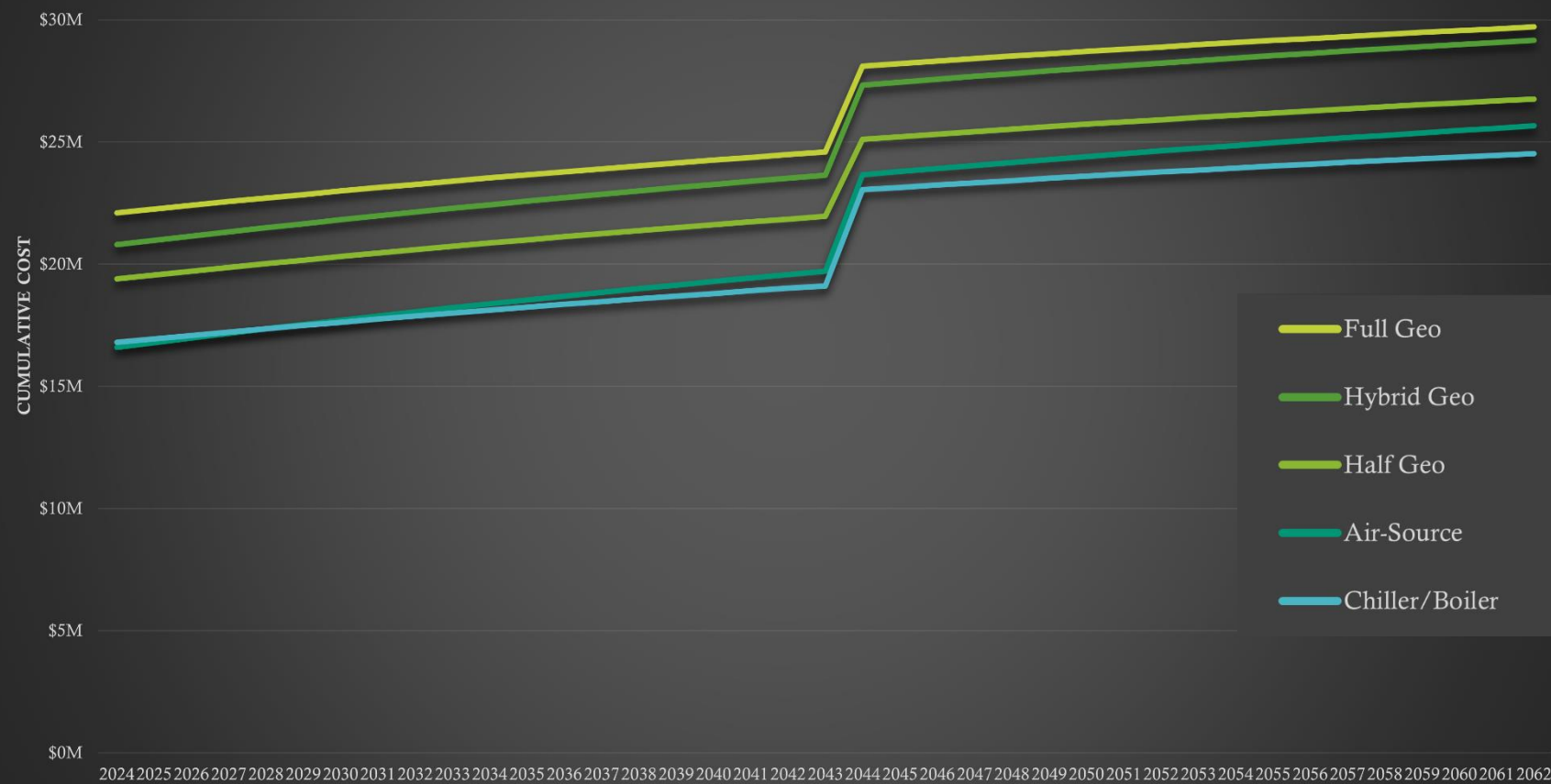


	HVAC System Description	HVAC Town Share Less Incentives & Grants (\$)	Energy Cost			Annual Maint. Cost (\$/yr)	20-year Replacement Cost Present \$	[40] Year Life-Cycle Cost Present Worth	[40] Year Life-Cycle Cost Without IRA Present Worth
			Baseline EUI (kBtu/sf/yr)	Energy Rate (\$/sf/yr)	\$/yr w/ PV				
1B	Full Geothermal	\$ 15,600,000	24.4	\$ 1.34	\$ 118,000	\$ 41,000	\$ 3,200,000	\$ 23,400,000	\$ 29,900,000
2B	Hybrid Geothermal	\$ 15,900,000	26.5	\$ 1.46	\$ 132,000	\$ 50,000	\$ 3,300,000	\$ 24,400,000	\$ 29,300,000
3B	Half Geothermal	\$ 16,600,000	25.0	\$ 1.38	\$ 122,000	\$ 41,000	\$ 2,900,000	\$ 24,100,000	\$ 26,900,000
4B	Air Source	\$ 16,400,000	30.0	\$ 1.65	\$ 156,000	\$ 42,000	\$ 3,600,000	\$ 25,600,000	\$ 25,800,000
5B	Chiller/Boiler	\$ 16,600,000	38.1	Elec - 0.88	\$ 103,000	\$ 44,000	\$ 3,600,000	\$ 24,500,000	\$ 24,700,000
				Gas - 0.33					

CUMULATIVE LIFE CYCLE COST COMPARISON – with IRA



CUMULATIVE LIFE CYCLE COST COMPARISON – without IRA

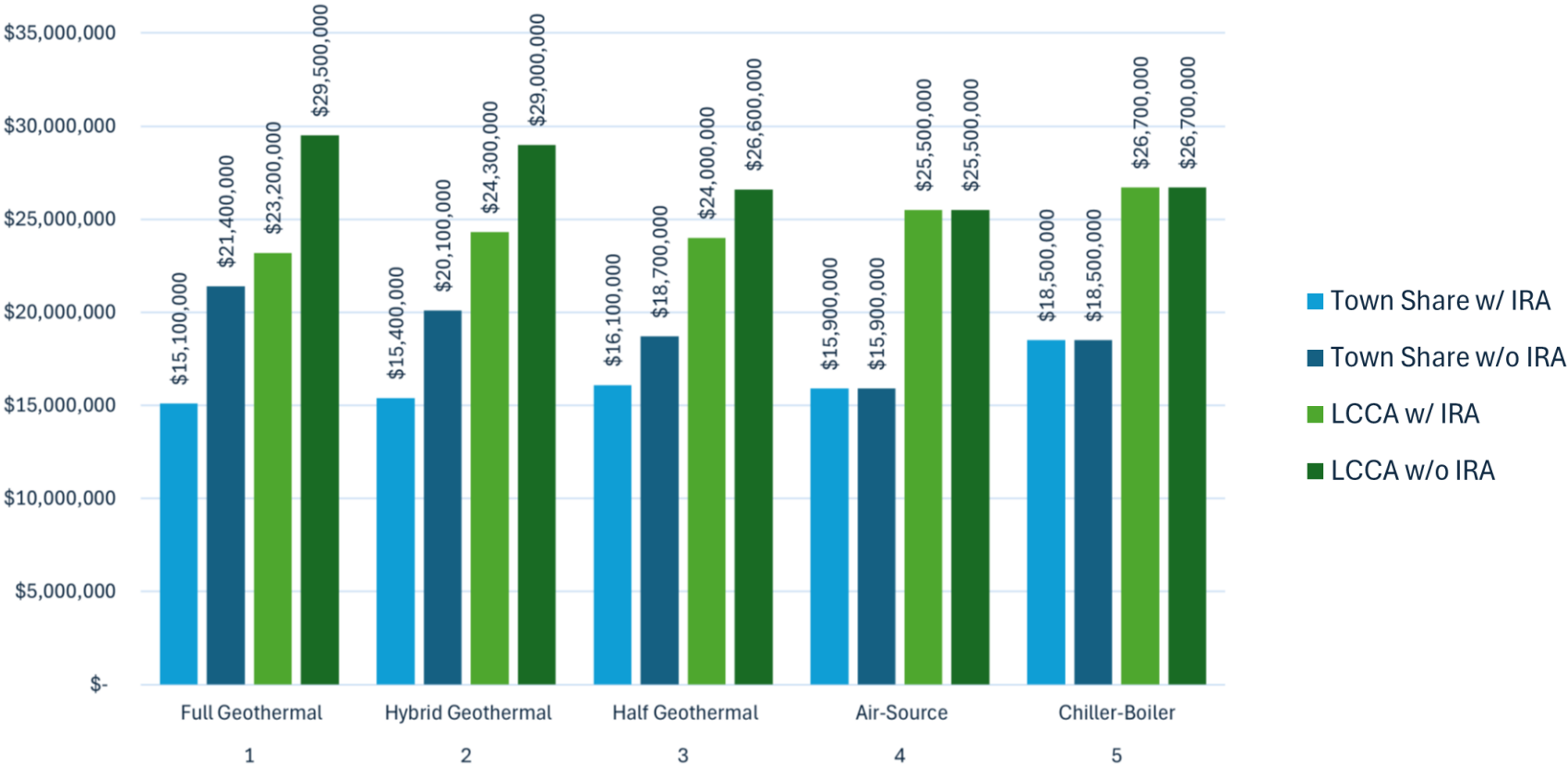


SUMMARY COMPARISON

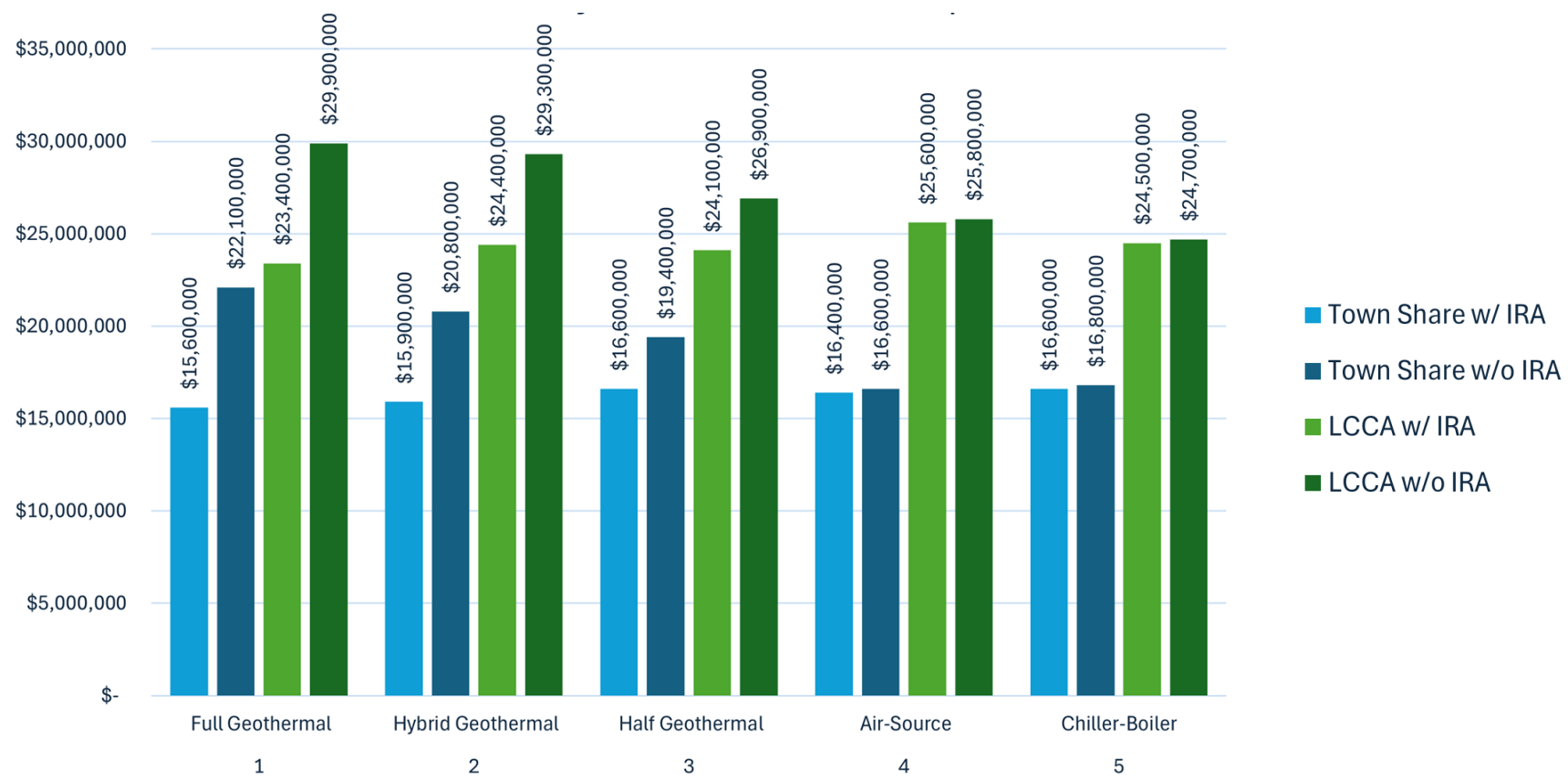
SUMMARY

		No Solar PV				With Solar PV			
		With IRA		Without IRA		With IRA		Without IRA	
		Town Share Less Incentives & Grants	Life Cycle Cost (40 year)	Town Share Less Incentives & Grants	Life Cycle Cost (40 year)	Town Share Less Incentives & Grants	Life Cycle Cost (40 year)	Town Share Less Incentives & Grants	Life Cycle Cost (40 year)
1	Full Geothermal 60 wells	\$ 15,100,000	\$ 23,200,000	\$ 21,400,000	\$ 29,500,000	\$ 15,600,000	\$ 23,400,000	\$ 22,100,000	\$ 29,900,000
2	Hybrid Geothermal 40 wells	\$ 15,400,000	\$ 24,300,000	\$ 20,100,000	\$ 29,000,000	\$ 15,900,000	\$ 24,400,000	\$ 20,800,000	\$ 29,300,000
3	Half Geothermal 44 wells	\$ 16,100,000	\$ 24,000,000	\$ 18,700,000	\$ 26,600,000	\$ 16,600,000	\$ 24,100,000	\$ 19,400,000	\$ 26,900,000
4	Air-Source all-electric	\$ 15,900,000	\$ 25,500,000	\$ 15,900,000	\$ 25,500,000	\$ 16,400,000	\$ 25,600,000	\$ 16,600,000	\$ 25,800,000
5	Chiller-Boiler gas-fired	\$ 18,500,000	\$ 26,700,000	\$ 18,500,000	\$ 26,700,000	\$ 16,600,000	\$ 24,500,000	\$ 16,800,000	\$ 24,700,000

HVAC System Cost Comparison *without rooftop PV*



HVAC System Cost Comparison *with rooftop PV*



SUSTAINABILITY WORKING GROUP RECOMMENDATION:

Half Geothermal

- Balances the risk of the IRA funding being discontinued. Half Geothermal is a good option in either scenario.
- Less complex than the hybrid geothermal option; less equipment and simpler to maintain.
- Redundant systems improve the building's resiliency because if one system fails, the building can still operate.
- Optimal energy performance; reduces operational carbon.

THANK YOU



December 12, 2024

Town of Reading

Killam Elementary School

Project Budget and Cost Summary



Project Leaders

A	C	D (Bud. Adj. Tab)	E (C+D)	F (Com. Cost tab)	G (E-F)	H (Forecast. tab, >G)	I (F+G+H)	J (Invoice Tab)	K (I-J)
Description	BUDGET			COST				CASH FLOW	
	PFA Approved	Authorized Changes	Approved Budget	Committed Costs	Uncommitted Costs	Forecast Costs	Total Project Costs	Expenditures to Date	Balance To Spend
20 Construction									
Construction		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Change Orders		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Subtotal	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
30 Architectural & Engineering									
Design Development		\$0	\$0	\$0	\$0	\$725,000	\$725,000	\$0	\$725,000
Construction Documents		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Bidding / Negotiations		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Closeout		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Basic Services		\$0	\$0	\$0	\$0	\$65,000	\$65,000	\$0	\$65,000
A&E Feasibility Study	\$800,000	\$50,000	\$850,000	\$850,000	\$0	\$0	\$850,000	\$647,500	\$202,500
Subtotal	\$800,000	\$50,000	\$850,000	\$850,000	\$0	\$790,000	\$1,640,000	\$647,500	\$992,500
40 Administrative Costs									
OPM Feasibility Study	\$280,000	\$15,500	\$295,500	\$295,500	\$0	\$30,000	\$325,500	\$267,111	\$58,389
OPM Design Development		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
OPM Construction Contract Documents		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
OPM Bidding		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
OPM Construction Contract Admin		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
OPM Closeout		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Environmental & Site (FS/SD)	\$500,000	\$0	\$500,000	\$305,834	\$194,166	\$0	\$500,000	\$136,043	\$363,958
Other Project Costs (FS/SD)	\$620,000	-\$65,500	\$554,500	\$9,374	\$545,126	\$0	\$554,500	\$5,420	\$549,080
Subtotal	\$1,400,000	-\$50,000	\$1,350,000	\$610,708	\$739,292	\$30,000	\$1,380,000	\$408,573	\$971,427
50 Furniture, Fixtures and Equipment									
Furniture, Fixtures and Equipment		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Technology		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Subtotal	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Project Sub-Total	\$2,200,000	\$0	\$2,200,000	\$1,460,708	\$739,292	\$820,000	\$3,020,000	\$1,056,073	\$1,963,927
70 Project Contingency									
Construction Contingency (Hard Cost)	\$0	\$0	\$0		Current Contingency	Potential Risk	Potential Contingency		\$0
Owner's Contingency (Soft Cost)	\$0	\$0	\$0		\$0	-\$820,000	-\$820,000		-\$820,000
Subtotal	\$0	\$0	\$0		\$0	-\$820,000	-\$820,000		-\$820,000
Project Total	\$2,200,000	\$0	\$2,200,000	\$1,460,708	\$739,292	\$0	\$2,200,000	\$1,056,073	\$1,143,927

Town of Reading
Killam Elementary School
12/12/24



Project Budget Adjustments

Adjustment Item	BRR	Adjusted Amount	Date Approved	CODE	Comments
Move to OPM FS to SC Contingency		\$20,000.00	07/19/23	40-010	Moved \$20k to cover OPM FS/SD Cost
From SC Cont to OPM FS		(\$20,000.00)	07/19/23	70-500	Moved \$20k to cover OPM FS/SD Cost
Move to A/E FS from SC Contingency		\$110,000.00	12/12/23	30-290	Moved \$110k to Cover A/E FS/SD Cost
From SC Cont to A/E FS		(\$110,000.00)	12/12/23	70-500	Moved \$110k to Cover A/E FS/SD Cost
Move back SC Contingency form OPM FS		(\$20,000.00)	07/19/23	40-010	Moved \$20k to cover OPM FS/SD Cost
From OPM FS to SC Cont		\$20,000.00	07/19/23	70-500	Moved \$20k to cover OPM FS/SD Cost
Move A/E FS back to SC Contingency		(\$60,000.00)	12/12/23	30-290	Moved \$110k to Cover A/E FS/SD Cost
To SC Cont from A/E FS		\$60,000.00	12/12/23	70-500	Moved \$110k to Cover A/E FS/SD Cost
Move to Other Project Costs from SC Cont		\$269.67	03/11/24	40-810	Moved to cover Design Services Advertisement
From SC Cont to Other Project Costs		(\$269.67)	03/11/24	70-500	Moved to cover Design Services Advertisement
Move to Other Project Costs from SC Cont		\$2,750.00	05/29/24	40-810	Move to cover LBA Amd 7
From SC Cont to Other Project Costs		(\$2,750.00)	05/29/24	70-500	Move to cover LBA Amd 7
Move to Other Project Costs from SC Cont		\$3,600.00	06/11/24	40-810	Move to Cover Kartoon
From SC Cont to Other Project Costs		(\$3,600.00)	06/11/24	70-500	Move to Cover Kartoon
Move from Other Project Cost to SC Cont		(\$50,000.00)	10/21/24	40-810	Adjustment to coordinate to MSBA Propay System (No Cont Line)
To SC Cont from Other Project Cost		\$50,000.00	10/21/24	70-500	Adjustment to coordinate to MSBA Propay System (No Cont Line)
Move to Other Project Costs from SC Cont		(\$269.67)	10/21/24	40-810	Adjustment to coordinate to MSBA Propay System (No Cont Line)
From SC Cont to Other Project Costs		\$269.67	10/21/24	70-500	Adjustment to coordinate to MSBA Propay System (No Cont Line)
Move to Other Project Costs from SC Cont		(\$2,750.00)	10/21/24	40-810	Adjustment to coordinate to MSBA Propay System (No Cont Line)
From SC Cont to Other Project Costs		\$2,750.00	10/21/24	70-500	Adjustment to coordinate to MSBA Propay System (No Cont Line)
Move to Other Project Costs from SC Cont		(\$3,600.00)	10/21/24	40-810	Adjustment to coordinate to MSBA Propay System (No Cont Line)
From SC Cont to Other Project Costs		\$3,600.00	10/21/24	70-500	Adjustment to coordinate to MSBA Propay System (No Cont Line)
Move to OPM FS to Other Project Cost		(\$15,500.00)		40-810	Moved \$15,500 to Cover Opm SD Cost Estimate
From Other Project Cost to OPM FS		\$15,500.00		40-010	Moved \$15,500 to Cover Opm SD Cost Estimate
Total Approved Adjustments to Date		\$0.00		\$	-

Town of Reading
Killam Elementary School
12/12/24



Committed Cost (Contracts/Pos)

VENDOR	AMOUNT	ISSUE DATE	SIGNED/ RETURN DATE	ENCUM (PO)	CODE	MSBA	Notes
Colliers Project Leaders	\$280,000.00	6/22/2023	07/19/23	CPL Contract	40-010	0001-0000	CPL Base Contract Excluding Estimating
Lavallee Brensinger Architects	\$400,000.00	12/12/2023	12/12/2023	LBA Contract	30-290	0002-0000	LBA Base Contract for FS (Excluding Extra Services)
Lavallee Brensinger Architects	\$450,000.00	12/12/2023	12/12/2023	LBA Contract	30-290	0002-0000	LBA Base Contract for SD (Excluding Extra Services)
Lavallee Brensinger Architects	\$26,400.00	12/14/2023	12/23/23	LBA Amd 01	40-800	0003-0000	LBA Amd 01 - Land Surveying (Samioles)
Lavallee Brensinger Architects	\$120,450.00	12/14/2023	12/23/23	LBA Amd 02	40-800	0003-0000	LBA Amd 02 - Traffic Study (GPI)
Lavallee Brensinger Architects	\$4,950.00	12/18/2024	12/23/23	LBA Amd 03	40-800	0003-0000	LBA Amd 03 - Haz Mat Consulting (UEC)
Lavallee Brensinger Architects	\$14,520.00	12/18/2024	12/23/23	LBA Amd 04	40-800	0003-0000	LBA Amd 04 - Phase 1 ESA & Soil Sampling (FS Engineers)
Lavallee Brensinger Architects	\$41,800.00	1/3/2024	01/25/24	LBA Amd 05	40-800	0003-0000	LBA Amd 05 - Geotech Services (LGCI)
Daily Times Chronicle	\$269.67	9/14/2023	02/29/24	PO NA	40-810	0004-0000	District advertising for Designer Services
Lavallee Brensinger Architects	\$2,750.00	5/29/2024	06/17/24	LBA Amd 06	40-800	0003-0000	LBA Amd 6 - Soil Testing for Stormwater System Locations
Lavallee Brensinger Architects	\$2,750.00	5/29/2024	06/17/24	LBA Amd 07	40-810	0004-0000	LBA Amd 7 - Additional Cost Estimating HVAC systems
Kartoon EDU	\$3,600.00	5/7/2024	06/10/24	Contract	40-810	0004-0000	Pillars @ \$600/each - Video Information
Lavallee Brensinger Architects	\$16,500.00	8/30/2024	09/10/24	LBA Amd 08	40-800	0003-0000	LBA Amd 8 - "TEDI" Energy Modeling
Lavallee Brensinger Architects	\$2,753.94	9/12/2024	10/15/24	LBA Amd 09	40-810	0004-0000	LBA Amd 9 - Additional services for printing delivery boards
Lavallee Brensinger Architects	\$10,000.00	11/13/2024	11/20/24	LBA Amd 10	40-800	0003-0000	LBA Amd 10 - reimbursable expenses
Colliers Project Leaders	\$15,500.00	12/12/2024		CPL Amd 01	40-010	0001-0000	CPL Amd 01 - SD Cost Estimating
Lavallee Brensinger Architects	\$1,540.00	12/12/2024		LBA Amd 11	40-800	0003-0000	LBA Amd 11 - cost estimating of an additional HVAC option
Lavallee Brensinger Architects	\$66,924.00	12/12/2024		LBA Amd 12	40-800	0003-0000	LBA Amd 12 - additional services for geothermal test well
TOTAL	\$1,460,707.61						\$1,460,707.61

Town of Reading
Killam Elementary School
12/12/24



Expenditures - Invoices/Requisitions

Invoice Amount	Vendor	Invoice Number	Invoice Date	Approval Date	CODE	Propay Code	Propay Subm. #	Description
\$20,031.00	Colliers Project Leaders	937330	04/08/24	05/09/24	40-010	0001-0000	02	CPL Services Mar 2024 - FS/SD
\$52,000.00	Lavallee Brensinger Architects	19969	04/10/24	05/09/24	30-290	0002-0000	02	LBA Services Mar 2024 - FS
\$9,240.00	Lavallee Brensinger Architects	19969	04/10/24	05/09/24	40-800	0003-0000	02	LBA Services Mar 2024 - A&E Environmental & Site - Amd 1
\$57,816.00	Lavallee Brensinger Architects	19969	04/10/24	05/09/24	40-800	0003-0000	02	LBA Services Mar 2024 - A&E Environmental & Site - Amd 2
\$2,904.00	Lavallee Brensinger Architects	19969	04/10/24	05/09/24	40-800	0003-0000	02	LBA Services Mar 2024 - A&E Environmental & Site - Amd 4
\$13,964.50	Colliers Project Leaders	945141	05/07/24	06/17/24	40-010	0001-0000	03	CPL Services Apr 2024 - FS/SD
\$40,000.00	Lavallee Brensinger Architects	20157	05/22/24	06/17/24	30-290	0002-0000	03	LBA Services Apr 2024 - FS
\$20,232.50	Colliers Project Leaders	953651	06/07/24	06/17/24	40-010	0001-0000	04	CPL Services May 2024 - FS/SD
\$60,000.00	Lavallee Brensinger Architects	20369	06/17/24	08/05/24	30-290	0002-0000	03	LBA Services May 2024 - FS
\$3,960.00	Lavallee Brensinger Architects	20369	06/17/24	08/05/24	40-800	0003-0000	03	LBA Services May 2024 - A&E Environmental & site - Survey
\$2,409.00	Lavallee Brensinger Architects	20369	06/17/24	08/05/24	40-800	0003-0000	03	LBA Services May 2024 - A&E Environmental & site - Traffic
\$11,616.00	Lavallee Brensinger Architects	20369	06/17/24	08/05/24	40-800	0003-0000	03	LBA Services May 2024 - A&E Environmental & site - Environmental
\$18,810.00	Lavallee Brensinger Architects	20369	06/17/24	08/05/24	40-800	0003-0000	03	LBA Services May 2024 - A&E Environmental & site - Geotech
\$21,812.00	Colliers Project Leaders	961796	07/10/24	08/05/24	40-010	0001-0000	03	CPL Services June 2024 - FS/ SD
\$48,000.00	Lavallee Brensinger Architects	20516	07/18/24	08/05/24	30-290	0002-0000	03	LBA Services June 2024 - FS
(\$10,924.10)	Lavallee Brensinger Architects	20516	07/18/24	08/05/24	40-800	0003-0000	03	LBA Services June 2024 - A&E Environmental & site - Traffic
(\$1,210.00)	Lavallee Brensinger Architects	20516	07/18/24	08/05/24	40-800	0003-0000	03	LBA Services June 2024 - A&E Environmental & site - Geotech
\$2,400.00	Kartoon EDU	000072	07/25/24	08/05/24	40-810	0004-0000	04	Promotional Video - Pillars 4 of 6
\$52,000.00	Lavallee Brensinger Architects	20640	08/19/24	09/30/24	30-290	0002-0000	05	LBA Services July 2024 - FS
\$2,750.00	Lavallee Brensinger Architects	20640	08/19/24	09/30/24	40-810	0004-0000	05	LBA Services July 2024 - HVAC Cost Estimate
\$24,954.00	Colliers Project Leaders	969708	08/13/24	09/30/24	40-010	0001-0000	05	CPL Services July 2024 - FS/ SD
\$26,197.00	Colliers Project Leaders	978642	09/06/24	09/30/24	40-010	0001-0000	05	CPL Services August 2024 - FS/ SD
\$40,000.00	Lavallee Brensinger Architects	20830	09/17/24	09/30/24	30-290	0002-0000	05	LBA Services August 2024 - FS
\$67,500.00	Lavallee Brensinger Architects	20830	09/17/24	09/30/24	30-290	0002-0000	05	LBA Services August 2024 - SD
\$5,846.60	Lavallee Brensinger Architects	20830	09/17/24	09/30/24	40-800	0003-0000	05	LBA Services August 2024 - A&E Environmental & site - Traffic
\$412.50	Lavallee Brensinger Architects	20830	09/17/24	09/30/24	40-800	0003-0000	05	LBA Services August 2024 - A&E Environmental & site - Soil Testing
\$16,870.00	Colliers Project Leaders	988260	10/04/24	10/21/24	40-010	0001-0000	05	CPL Services September 2024 - FS/ SD
\$67,500.00	Lavallee Brensinger Architects	20910	10/11/24	10/21/24	30-290	0002-0000		LBA Services September 2024 - SD
\$2,187.80	Lavallee Brensinger Architects	20910	10/11/24	10/21/24	40-800	0003-0000		LBA Services September 2024 - A&E Environmental & site - Traffic
\$1,925.00	Lavallee Brensinger Architects	20910	10/11/24	10/21/24	40-800	0003-0000		LBA Services September 2024 - A&E Environmental & site - Soil Testing
\$23,026.00	Colliers Project Leaders	996167	11/06/24	11/20/24	40-010	0001-0000		CPL Services October 2024 - FS/ SD
\$112,500.00	Lavallee Brensinger Architects	21043	11/11/24		30-290	0002-0000		LBA Services October 2024 - SD
\$442.20	Lavallee Brensinger Architects	21043	11/11/24		40-800	0003-0000		LBA Services October 2024 - A&E Environmental & site - Traffic
\$412.50	Lavallee Brensinger Architects	21043	11/11/24		40-800	0003-0000		LBA Services October 2024 - A&E Environmental & site - Soil Testing
\$26,444.00	Colliers Project Leaders	1005306	12/05/24		40-010	0001-0000		CPL Services November 2024 - FS/ SD
\$1,056,073.42 Total Spent to Date								\$1,056,073.42

December 12, 2024

Killam Elementary School Estimated Project Cash Flow Sheet



Month		OPM	Designer & Consultants	FF&E & Misc	Construction	Contingency	Estimated Outlay	Actual outlay	Est Cum	Act Cum
Feasibility Study Period	1	Aug-23	\$8,203				\$8,203	\$620	\$8,203	\$620
	2	Sep-23	\$15,096				\$15,096	\$11,903	\$23,299	\$12,523
	3	Oct-23	\$15,096				\$15,096	\$8,303	\$38,395	\$20,825
	4	Nov-23	\$15,096				\$15,096	\$7,433	\$53,491	\$28,258
	5	Dec-23	\$14,025				\$14,025	\$0	\$67,516	\$28,258
	6	Jan-24	\$14,584	\$20,000			\$34,584	\$32,431	\$102,100	\$60,689
	7	Feb-24	\$14,584	\$50,000			\$64,584	\$60,074	\$166,684	\$120,763
	8	Mar-24	\$14,584	\$75,000	\$30,000		\$119,584	\$0	\$286,268	\$120,763
	9	Apr-24	\$14,584	\$75,000	\$50,000		\$139,584	\$91,282	\$425,852	\$212,045
	10	May-24	\$14,584	\$75,000	\$50,000		\$139,584	\$141,991	\$565,436	\$354,036
	11	Jun-24	\$14,584	\$75,000	\$50,000		\$139,584	\$74,197	\$705,020	\$428,233
	12	Jul-24	\$14,584	\$75,000	\$75,000		\$164,584	\$0	\$869,604	\$428,233
Schematic Design	13	Aug-24	\$14,584	\$75,000	\$75,000		\$164,584	\$156,873	\$1,034,188	\$585,106
	14	Sep-24	\$14,584	\$75,000	\$75,000		\$164,584	\$219,660	\$1,198,772	\$804,766
	15	Oct-24	\$14,584	\$75,000	\$75,000		\$164,584	\$88,483	\$1,363,356	\$893,249
	16	Nov-24	\$14,584	\$75,000	\$75,000		\$164,584	\$23,026	\$1,527,940	\$916,275
	17	Dec-24	\$14,584	\$75,000	\$75,000		\$164,584	\$0	\$1,692,524	
	18	Jan-25	\$15,174	\$75,000	\$75,000		\$165,174	\$0	\$1,857,698	
	19	Feb-25	\$17,245	\$75,000	\$50,000		\$142,245	\$0	\$1,999,943	
	20	Mar-25	\$2,580	\$75,000	\$50,000		\$127,580	\$0	\$2,127,523	
	21	Apr-25	\$2,477	\$13,120	\$50,000		\$65,597	\$0	\$2,193,120	
	22	May-25	\$0		\$6,880		\$6,880	\$0	\$2,200,000	
		\$2,200,000	\$280,000	\$1,058,120	\$861,880	\$0	\$0	\$2,200,000	\$916,275	

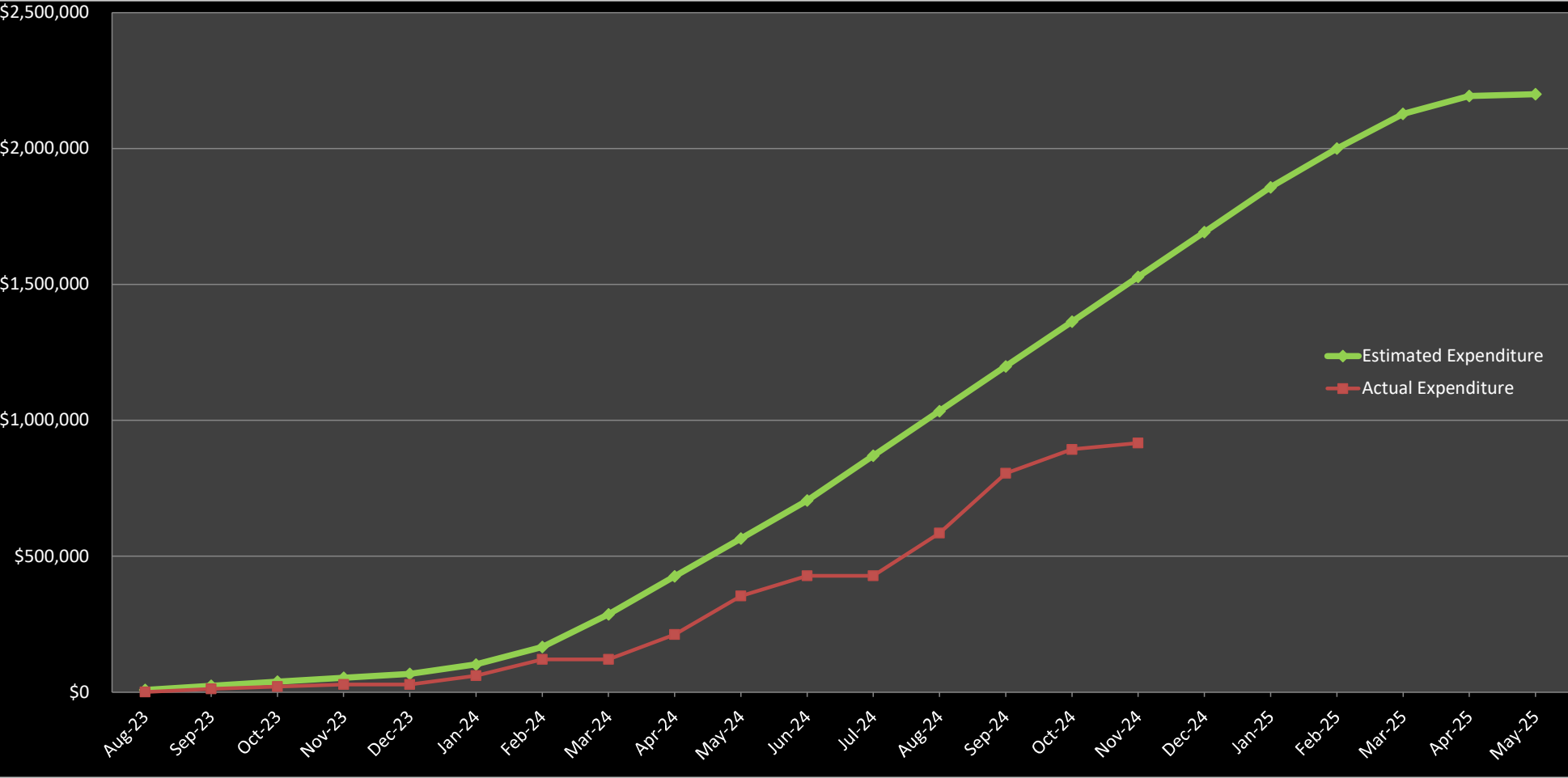


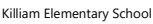
Town of Reading
Killam Elementary School
Estimated Project Cash Flow Graph



Project Leaders

December 12, 2024





Project: 2023 09-18 Reading Ki

Date: Thu 12/12/24

Task

Milestone

Summary

Page 1

December 12, 2024

Matthew Kraunelis
Town Manager
Town of Reading
16 Lowell St
Reading, MA 01867

Re: OPM Contract Amendment 01

Dear Mr. Kraunelis:

Attached is Collier Project Leader's Contract Amendment Number 01 for J. Warren Killam Elementary School Project.

This amendment includes a proposal from AM Fogarty for cost estimating services for the Schematic Design Phase.

Please note this will be applied to MSBA Propay code 0001-0000 and is within the budget already allocated to this line.

As OPM work is ongoing, we respectfully request that the District execute this agreement at the earliest opportunity. Please let us know if you have any questions.

Sincerely,



Shirley Ng
Project Manager

cc: Mike Carroll, Colliers Project Leaders
Tom Milaschewski, Superintendent
Carla Nazzaro, School Building Committee Chair

Propay Code: 0001-0000

A.M. Fogarty
& Assoc., Inc.

175 Derby St., Suite 5, Hingham, MA 02043
TEL: (781) 749-7272 FAX: (781) 740-2652
ptim@amfogarty.com

"Construction Cost Consultants"

August 13, 2024

Shirley Ng
Colliers Project Leaders
100 Federal Street – 13 Floor
Boston, MA 02110

RE: J. Warren Killam Elementary School – Reading, MA

Dear Shirley:

A.M. Fogarty and Associates proposes to provide cost estimating services for the above referenced project as follows:

FEE SCHEDULE:

Schematic Cost Estimate	\$ 15,500
-------------------------	-----------

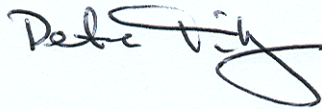
*Our Professional Liability Coverage is \$1,000,000

Our work will entail providing quantity surveys and pricing for all civil, architectural, structural, mechanical and electrical work. We will provide an estimate in the **CSI Master Format and/or Uniformat** including sub-totals by division.

Our fees includes assistance with Value Engineering, if appropriate.

If this proposal is acceptable, please sign below and return to our office.

Sincerely,



Peter T. Timothy
President

PTT/bkr



Accepted By: _____
Colliers Project Leaders

Date: 12/12/2024

ATTACHMENT B

CONTRACT FOR PROJECT MANAGEMENT SERVICES

AMENDMENT NO. 01

WHEREAS, the Town of Reading (“Owner”) and Colliers Project Leaders, USA NE, LLC, (the “Owner’s Project Manager”) (collectively, the “Parties”) entered into a Contract for Project Management Services for the J. Warren Killam Elementary School Project (Project Number 202102460017) at the J. Warren Killam Elementary on July 19th, 2023 “Contract”; and

WHEREAS, effective as of December 16th, 2024, the Parties wish to amend the Contract, as amended:

NOW, THEREFORE, in consideration of the promises and the mutual covenants contained in this Amendment, and other good and valuable consideration, the receipt and legal sufficiency of which are hereby acknowledged, the Parties, intending to be legally bound, hereby agree as follows:

1. The Owner hereby authorizes the Owner’s Project Manager to perform services for the Design Development Phase, the Construction Phases, and the Final Completion Phase of the Project, pursuant to the terms and conditions set forth in the Contract, as amended.
2. For the performance of services required under the Contract, as amended, the Owner’s Project Manager shall be compensated by the Owner in accordance with the following Fee for Basic Services:

Fee for Basic Services:	Original Contract	After this Amendment
Feasibility Study Phase	<u>\$ 280,000</u>	<u>\$ 280,000</u>
Schematic Design Phase	<u>\$ included in FS</u>	<u>\$ included in FS</u>
FS/ SD Cost Estimating	<u>\$ 0</u>	<u>\$ 15,500</u>
Design Development Phase	<u>\$</u>	<u>\$</u>
Construction Document Phase	<u>\$</u>	<u>\$</u>
Bidding Phase	<u>\$</u>	<u>\$</u>
Construction Phase	<u>\$</u>	<u>\$</u>
Completion Phase	<u>\$</u>	<u>\$</u>
Total Fee	<u>\$ 280,000</u>	<u>\$ 295,500</u>

This Amendment is a result of: Providing Owner’s Cost Estimating Services for Schematic Design Phase as proposed in A.M. Fogarty’s proposal dated August 13th, 2024, and as approved by the J. Warren Killam Elementary School Building Committee on December 16th, 2024

3. The Construction Budget shall be as follows:

Original Budget: \$ TBD _____

Amended Budget \$ TBD _____

4. The Project Schedule shall be as follows:

Original Schedule: TBD _____

Amended Schedule TBD _____

5. The Authority's standard OPM Contract Amendment for *[DBB OR CM RISK]*, which is attached hereto and incorporated by reference herein, is made a part of the Contract in its entirety.

6. This Amendment contains all of the terms and conditions agreed upon by the Parties as amendments to the original Contract, as amended. No other understandings or representations, oral or otherwise, regarding amendments to the original Contract, as amended, shall be deemed to exist or bind the Parties, and all other terms and conditions of the Contract, as amended, remain in full force and effect.

IN WITNESS WHEREOF, the Owner, with the prior approval of the Authority, and the Owner's Project Manager have caused this Amendment to be executed by their respective authorized officers.

OWNER

(print name)

(print title)

By _____
(signature)

Date _____

OWNER'S PROJECT MANAGER

(print name)

(print title)

By _____
(signature)

Date _____

December 12, 2024

Matthew Kraunelis
Town Manager
Town of Reading
16 Lowell St
Reading, MA 01867

Subject: J. Warren Killam Elementary School Designer Amendment #11

Dear Mr. Kraunelis:

Colliers Project Leaders has reviewed and recommend the approval of Lavallee Brensinger Architects' Contract Amendment #11 for the J. Warren Killam Elementary School project.

Lavallee Brensinger Architects' Contract Amendment #11 is for additional services for cost estimating of an additional HVAC option for a total of *One Thousand Four Hundred and forty 00/100 Dollars (\$1,540.00)*. (ProPay Code: 0003-0000)

As design work is ongoing, we respectfully request execution of this agreement at the earliest opportunity. Please let us know if you have any questions.

Sincerely,



Shirley Ng.
Project Manager

cc: Mike Carroll, Colliers Project Leaders
Tom Milaschewski, Superintendent
Carla Nazzaro, School Building Committee Chair

December 11, 2024

Mr. Matthew Kraunelis
Town Manager
Town of Reading, MA
16 Lowell St.
Reading, MA 01867
E-Mail: mkraunelis@ci.reading.ma.us

Re: Killam Elementary School
Owner-Architect Contract Amendment No. 11

Dear Mr. Kraunelis,

Please find attached Amendment No. 11 to the Owner-Architect Contract. This Amendment includes Additional Services for additional cost estimating of an additional HVAC option. This cost estimating effort will provide the Killam School Building Committee with information they need to make an informed decision about the type of HVAC system to pursue. This is not typically included in basic services

This Amendment includes the following:

- HVAC System Comparison Cost Estimate – \$1,400.00
- Administrative 10% Markup – \$140.00

The total value of this contract amendment is \$1,540.00

Please refer to the attachments for additional information.

Sincerely,



Leigh S. Sherwood, AIA, LEED AP, NCARB
Principal

Attachments:

- Attachment F – Contract for Designer Services Amendment No.11
- Consultant Proposal – PM&C proposal dated 11-1-24

Cc:
Michael Carroll, Colliers Project Leaders
File



Partnering for quality

November 1, 2024

Jenni Katajamaki, RA
Lavallee Brensinger Architects
99 Bedford Street
Boston, MA 02111

Re: Killam Elementary School Additional HVAC Option, Reading, MA

Dear Jenni,

Thank you for the opportunity to submit this proposal for additional services for the Killam Elementary School project.

We understand the scope is an additional HVAC Options.

Our fee for cost estimating services is as follows:

Study Estimate: \$1,400

Thank you again for asking PM&C to submit a proposal on this project.

If this proposal is agreeable, please sign and send it back to this office.

Sincerely,

Accepted By:

A handwritten signature in black ink that reads 'Peter O. Bradley'.

Peter Bradley BSC Q.S.; LEED AP
President

Name

Date

ATTACHMENT F

CONTRACT FOR DESIGNER SERVICES

AMENDMENT NO. 11

WHEREAS, the Town of Reading ("Owner") and Lavallee Brensinger Architects (the "Designer") (collectively, the "Parties") entered into a Contract for Designer Services for the Killam Elementary School Project at the Killam Elementary School on the 12th day of December in the year Two-Thousand Twenty-three ("Contract"); and

WHEREAS, effective as of December 11, 2024, the Parties wish to amend the Contract:

NOW, THEREFORE, in consideration of the promises and the mutual covenants contained in this Amendment, and other good and valuable consideration, the receipt and legal sufficiency of which are hereby acknowledged, the Parties, intending to be legally bound, hereby agree as follows:

1. The Owner hereby authorizes the Designer to perform services for the Design Development Phase, the Construction Phases, and the Final Completion Phase of the Project, pursuant to the terms and conditions set forth in the Contract, as amended.
2. For the performance of services required under the Contract, as amended, the Designer shall be compensated by the Owner in accordance with the following Fee for Basic Services:

Fee for Basic Services:	Original Contract Including Amd 1-10	After this Amendment 11
Feasibility Study Phase	<u>\$ 400,000.00</u>	<u>\$ 400,000.00</u>
Schematic Design Phase	<u>\$ 450,000.00</u>	<u>\$ 450,000.00</u>
Design Development Phase	<u>\$</u>	<u>\$</u>
Construction Document Phase	<u>\$</u>	<u>\$</u>
Bidding Phase	<u>\$</u>	<u>\$</u>
Construction Phase	<u>\$</u>	<u>\$</u>
Completion Phase	<u>\$</u>	<u>\$</u>
Extra Services Over the Basic	<u>\$ 232,873.94</u>	<u>\$ 234,413.94</u>
Total Fee	<u>\$ 1,082,873.94</u>	<u>\$ 1,084,413.94</u>

This Amendment is a result of: Additional Service – HVAC System Comparison Cost Estimate

3. The Construction Budget shall be as follows:

Original Budget: \$ TBD _____

Amended Budget \$ TBD _____

4. The Project Schedule shall be as follows:

Original Schedule: \$ TBD _____

Amended Schedule \$ TBD _____

5. This Amendment contains all of the terms and conditions agreed upon by the Parties as amendments to the original Contract. No other understandings or representations, oral or otherwise, regarding amendments to the original Contract shall be deemed to exist or bind the Parties, and all other terms and conditions of the Contract remain in full force and effect.

IN WITNESS WHEREOF, the Owner, with the prior approval of the Authority, and the Designer have caused this Amendment to be executed by their respective authorized officers.

IN WITNESS WHEREOF, the Owner, with the prior approval of the Authority, and the Designer have caused this Amendment to be executed by their respective authorized officers.

OWNER

(print name)

(print title)

By _____
(signature)

Date _____

DESIGNER

Lance Whitehead, AIA _____
(print name)

Managing Principal _____
(print title)

By _____
(signature)

Date 12/11/24 _____

December 12, 2024

Matthew Kraunelis
Town Manager
Town of Reading
16 Lowell St
Reading, MA 01867

Subject: J. Warren Killam Elementary School Designer Amendment #12

Dear Mr. Kraunelis:

Colliers Project Leaders has reviewed and recommend the approval of Lavallee Brensinger Architects' Contract Amendment #12 for the J. Warren Killam Elementary School project.

Lavallee Brensinger Architects' Contract Amendment #12 is for additional services for a geothermal test well for a total of *Sixty-Six Thousand Nine Hundred and twenty-four 00/100 Dollars (\$66,924.00)*.
(ProPay Code: 0003-0000)

As design work is ongoing, we respectfully request execution of this agreement at the earliest opportunity. Please let us know if you have any questions.

Sincerely,



Shirley Ng.
Project Manager

cc: Mike Carroll, Colliers Project Leaders
Tom Milaschewski, Superintendent
Carla Nazzaro, School Building Committee Chair

December 11, 2024

Mr. Matthew Kraunelis
Town Manager
Town of Reading, MA
16 Lowell St.
Reading, MA 01867
E-Mail: mkraunelis@ci.reading.ma.us

Re: Killam Elementary School
Owner-Architect Contract Amendment No. 12

Dear Mr. Kraunelis,

Please find attached Amendment No. 12 to the Owner-Architect Contract. This Amendment includes Additional Services for a geothermal test well. This is not typically included in basic services.

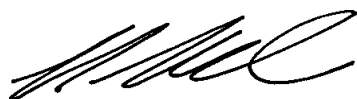
This Amendment includes the following:

- Geothermal Test Well – \$60,840.00
- Administrative 10% Markup – \$6,084.00

The total value of this contract amendment is \$66,924.00

Please refer to the attachments for additional information.

Sincerely,



Leigh S. Sherwood, AIA, LEED AP, NCARB
Principal

Attachments:

- Attachment F – Contract for Designer Services Amendment No.12
- Consultant Proposal – Brightcore proposal dated 8-12-24

Cc:
Michael Carroll, Colliers Project Leaders
File

August 12, 2024

Jenni Katajamaki
Senior Project Manager
Lavallee Brensinger Architects
99 Bedford Street Suite 501. Boston, MA 02111

RE: GEOTHERMAL TEST WELL PRICING – KILLAM ELEMENTARY SCHOOL

We sincerely appreciate your continued interest in Brightcore Energy's innovative turnkey geothermal solutions. We are excited to work with Lavallee Brensinger Architects (LBA), and intend to earn the privilege of serving your organizations, partnering on sustainability projects. Brightcore Energy LLC ("Brightcore") is pleased to provide our estimate pricing for a Geothermal Test Well at *333 Charles St, Reading, MA 01867*.

INTRODUCTION

As a leading turnkey renewable energy contractor, we specialize in the design and implementation of Geothermal, Solar, LED Lighting and Controls, and Energy Storage systems.

Brightcore's leadership brings over 100 years of aggregated geothermal/drilling experience to the table. Brightcore maintains a fleet of state-of-the-art drill rigs, specifically designed/modified for geothermal operations. Our high-capacity team includes a staff of highly qualified drillers, inclusive of several nationally licensed master drillers, International Ground Source Heat Pump Association (IGSHPA) accredited installers, and certified geothermal inspectors. Given Brightcore's advanced design and drilling capabilities, Brightcore brings a unique perspective to every geothermal project.

Our team developed the following pricing schedules based on the specifications provided by LBA and Colliers. After a careful review of site geology, our recommendation is Air Rotary drilling as the most cost-effective and practical drilling solution.

Please note that turnkey Solar and LED Lighting solutions (for example) are offered by Brightcore to complement the geothermal system, and could be added to the scope of work upon the Customer's request, but is not included here.

SCOPE OF WORK (SOW)

Our offer allows for the following scope of works:

- Supply and Install one (1) 800ft test bore with an HDPE heat exchanger to full depth.
- We allowed for Air Rotary drilling, with up to 50ft of Permanent steel casing.
- The cut-off elevation of the wells shall be elevated above Natural Ground Level (NGL).

SCHEDULE OF VALUES (SOV)

The following table shows an itemized breakdown of rates and allowances for this estimate.

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
1	BASE-QUANTITIES ALLOWED FOR IN QUOTE				
1.1	Mobilization to and from site	1	Sum	\$12,000	\$12,000.00
1.2	Install standard 6" (6-5/8" OD) steel casing. Includes pre-drilling an 8 3/4" socket hole.	50	ft	\$85	\$4,250.00
1.3	Drill 6" nominal diameter bore to final depth	750	ft	\$24	\$18,000.00
1.4	Supply and install ground loop heat exchanger to final depth. (HDPE 4710, SDR11, 1.5" diameter)	1	Each	\$4,800	\$4,800.00
1.5	Supply, mix, and cast grout via tremie method (Thermal Conductivity = 1.2 Btu/hr.ft.°F)	28	Batch	\$280	\$7,840.00
1.6	Flush, flow, and hydrostatic pressure test.	1	Each	\$1,800	\$1,800.00
1.7	Thermal Conductivity Test, 48 hours, Powered by Generator. Includes report	1	Each	\$11,000	\$11,000.00
2	EXTRA-OVER ITEM 1, AS NEEDED OR REQUESTED				
2.1	Install additional 6" diameter steel casing & socket hole	0	ft	\$85.00	\$0.00
2.2	Cast additional grout in case of overconsumption	0	Batch	\$280	\$0.00
2.3	Perform Dewatering for flow rate up to 25gpm	0	Each	\$15,000	\$0.00
2.4	Recess well and install standard irrigation box	1	Each	\$900	\$900.00
2.5	Recess well and install cemented road box	0	Each	\$3,200	\$0.00
2.6	Install Perimeter Fencing	0	Month	\$6,000	\$0.00
2.7	Sound Attenuation (<i>Pricing upon Request</i>)	0	Month	\$0	\$0.00
2.8	Local Well Permit	1	Each	\$250.00	250.00
2.9	Track mats for platforms with low bearing capacity	0	Week	\$1,800	\$0.00
3.0	Ground Penetrating Radar 20'x20'	0	Each	\$2,800	\$0.00
TOTAL (Sales Tax to be added at time of billing)					\$60,840.00

SOV NOTES:

Dewatering: *If drill spoil water cannot be discharged to the ground and must be containerized.*

Perform dewatering operations for flow rates not exceeding 25gpm. A safe and practical discharge location to be located within 200ft of dewatering well. We have allowed for up to twenty (20) inline paper filter bags to reduce sediment. No additional filtration is included in the offer. All spoils from dewatering clean out to remain on site. Groundwater discharge permits to be applied for and provided by others, prior to mobilization, at no cost to Brightcore.

Recessing well to cut-off level below grade: *Well head left above grade unless requested to be recessed.*

Excavate around well-location to a depth not exceeding 3ft.

Option 1: Install standard irrigation box over well. (See Item 2.4) (suitable in grass)

Option 2: Install cement road box through paved surface. (See Item 2.5) (pavement)

Overconsumption of Grout: Some geologic formations consume more grout than others. We have allowed for 10% overconsumption. Thus, if the formation consumes more than 110% of the theoretical grout volume, an extra-over rate applies. The volume for a single batch is approximately 37 gallons.

Perimeter Fencing: Time-related rate for installing 6ft high temporary perimeter fencing around an 80ft x 80ft drilling platform. This excludes supply and installation of scrim.

Measurement Units: The unit “Each” generally refers to “Per Well” in the context of this SOV.

PROPOSED TEST WELL LOCATION

The following extract shows a satellite view of the site and a proposed test well location. The proposed drilling platform is also outlined in the extract.



Figure 1: Satellite View of Project Location and Boundaries.

LEGEND FOR FIGURE 1

The following legend indicates the applicable areas and locations referenced above.

-  Proposed Test Well Location
-  Proposed Drilling Platform
-  Proposed Laydown Area (If Applicable)

ASSUMPTIONS & EXCLUSIONS

Services not explicitly indicated in the base scope are excluded in this offer. This offer is remeasurable, and the following assumptions are made in the priced scope of works:

Prevailing Wage or Union Wages: Are not included in this quotation, pre-vailing provided upon request.

Drilling Platform: The surface (drilling platform) on which the drill rig will be set up for each individual well shall be level, free-draining, and have a bearing capacity exceeding 150psi. Platform shall be prepared and maintained by others. In the interest of safety, track mats shall be used when the drill rig shows signs of settlement during setup or drilling operations. In the event that the drilling platform is located on existing pavement, Brightcore has not allowed for the cutting and removal of said paving.

Access: Continuous, uninterrupted access to and from the drilling platform, and between individual well locations is required for the duration of the project.

Water Supply: A water supply source to be located within 200ft of the drilling platform. Water source to supply potable water at a flow rate exceeding 5gpm (gallons per minute).

Water Discharge: We have not allowed for water quality testing or any additional water filtration, extra-over those explicitly specified in the Schedule of Values (SOV).

Permits: Town Well permit will be obtained by Brightcore. Water discharge permits, and any other applicable permits to be acquired by others.

Setting Out: Unless otherwise agreed in writing, surveying and setting out (staking) of individual well locations, fencing perimeters, laydown areas, etc. to be provided by others. Brightcore may provide pricing to perform this service if needed, upon request. An approximate test well location can also be agreed upon.

Underground Utilities: In the interest of safety and compliance with local/federal regulation, every test well shall undergo a complete Dig Safe inspection and Ground Penetrating Radar (GPR) inspection. Unless otherwise agreed in writing, the GPR inspection and Dig Safe inspection shall be provided by others.

Site Restoration: Stockpiling, containerizing and carting away excavated material (also known as cuttings and/or spoil), and general site restoration, shall be performed by others. Upon request, Brightcore can provide pricing for this task.

Fencing and Sound Attenuation: Unless included in the Schedule of Values (SOV) and agreed in writing, sound attenuation and construction fencing to be provided by others. Fencing and sound attenuation is not always needed.

Underground Obstructions: We have not allowed for drilling through unconsolidated formations that require specialized reinforcement measures or underground obstructions such as timber, steel, reinforced concrete.

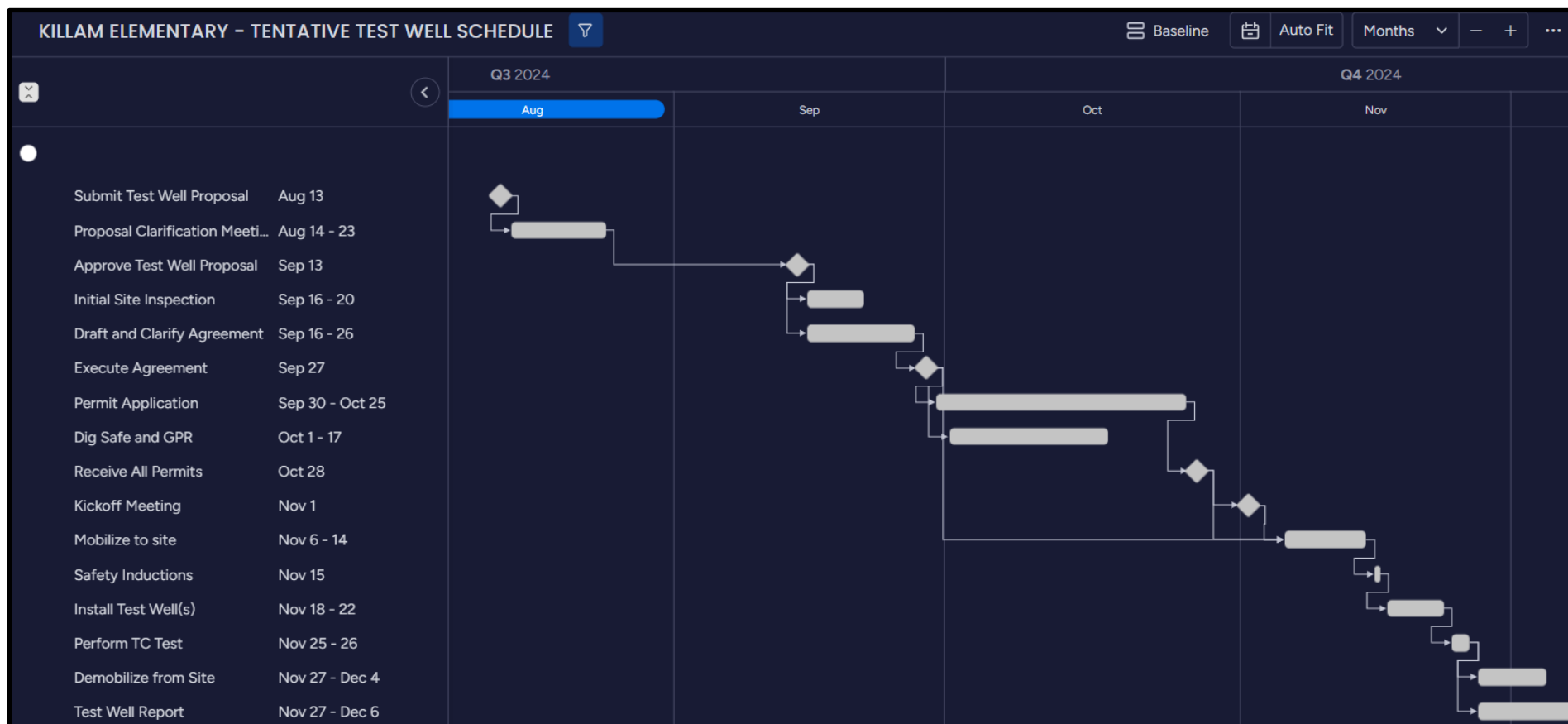
Vibration Monitoring: We have not allowed for vibration monitoring during drilling operations.

Charging Loops: We have not allowed for charging the ground loop heat exchanger with Glycol-based fluid.

Ground Improvement: We have not allowed for any overburden stabilization or soil improvement prior to, during, or subsequent to drilling operations.

TENTATIVE SCHEDULING

The following Gantt chart shows the proposed/tentative scheduling to meet the Customer's scheduling needs. There is much opportunity to accelerate the contracting phase of the project. Conversely, the time required for permit application is a function of the efficiency of the relevant local authorities.



PAYMENT TERMS

Please note that all prices are quoted in United States Dollars (USD), unless noted otherwise in writing. Standard payment terms include a 50% down payment prior to mobilization and/or permit application, and the balance shall be due within 30 calendar days of the final invoice. The final invoice shall be submitted within one week of delivering the Test Well Report.

CONCLUSION & NEXT STEPS

We believe that the KILLAM ELEMENTARY SCHOOL project is a great candidate for geothermal heating and cooling, and that the implementation of a full geothermal system will provide significant savings to the Customer, and go a long way in meeting your sustainability goals.

For immediate ***Next Steps*** we propose the following:

1. Customer to evaluate this Test Well Proposal.
2. Proposal clarification meeting between Brightcore and the Customer.
3. Upon approval of the proposal, we will schedule an immediate site inspection to verify assumptions.
4. Then, let's accelerate contract execution to commence permit application as soon as possible.

Thank you for considering Brightcore Energy for your renewable energy needs. Our world-class staff look forward to delivering a premium service, supporting and de-risking your geothermal project needs.

Please feel free to reach out with any further questions/suggestions.

Thank you,

Thomas Cronje



Director, Business Development

Email: Thomas.cronje@brightcoreenergy.com

Mobile: 208-488-8816

ATTACHMENT F

CONTRACT FOR DESIGNER SERVICES

AMENDMENT NO. 12

WHEREAS, the Town of Reading ("Owner") and Lavallee Brensinger Architects (the "Designer") (collectively, the "Parties") entered into a Contract for Designer Services for the Killam Elementary School Project at the Killam Elementary School on the 12th day of December in the year Two-Thousand Twenty-three ("Contract"); and

WHEREAS, effective as of December 11, 2024, the Parties wish to amend the Contract:

NOW, THEREFORE, in consideration of the promises and the mutual covenants contained in this Amendment, and other good and valuable consideration, the receipt and legal sufficiency of which are hereby acknowledged, the Parties, intending to be legally bound, hereby agree as follows:

1. The Owner hereby authorizes the Designer to perform services for the Design Development Phase, the Construction Phases, and the Final Completion Phase of the Project, pursuant to the terms and conditions set forth in the Contract, as amended.
2. For the performance of services required under the Contract, as amended, the Designer shall be compensated by the Owner in accordance with the following Fee for Basic Services:

Fee for Basic Services:	Original Contract Including Amd 1-11	After this Amendment 12
Feasibility Study Phase	<u>\$ 400,000.00</u>	<u>\$ 400,000.00</u>
Schematic Design Phase	<u>\$ 450,000.00</u>	<u>\$ 450,000.00</u>
Design Development Phase	<u>\$</u>	<u>\$</u>
Construction Document Phase	<u>\$</u>	<u>\$</u>
Bidding Phase	<u>\$</u>	<u>\$</u>
Construction Phase	<u>\$</u>	<u>\$</u>
Completion Phase	<u>\$</u>	<u>\$</u>
Extra Services Over the Basic	<u>\$ 234,413.94</u>	<u>\$301,337.94</u>
Total Fee	<u>\$ 1,084,413.94</u>	<u>\$1,151,337.94</u>

This Amendment is a result of: Additional Service – Geothermal Test Well

3. The Construction Budget shall be as follows:

Original Budget: \$ TBD _____

Amended Budget \$ TBD _____

4. The Project Schedule shall be as follows:

Original Schedule: \$ TBD _____

Amended Schedule \$ TBD _____

5. This Amendment contains all of the terms and conditions agreed upon by the Parties as amendments to the original Contract. No other understandings or representations, oral or otherwise, regarding amendments to the original Contract shall be deemed to exist or bind the Parties, and all other terms and conditions of the Contract remain in full force and effect.

IN WITNESS WHEREOF, the Owner, with the prior approval of the Authority, and the Designer have caused this Amendment to be executed by their respective authorized officers.

IN WITNESS WHEREOF, the Owner, with the prior approval of the Authority, and the Designer have caused this Amendment to be executed by their respective authorized officers.

OWNER

(print name)

(print title)

By _____
(signature)

Date _____

DESIGNER

Lance Whitehead, AIA
(print name)

Managing Principal
(print title)

By _____
(signature)

Date 12/11/24

December 04, 2024

Matthew Kraunelis
Town Manager
Town of Reading
16 Lowell St
Reading, MA 01867

**Subject: J Warren Killam Elementary School Designer Services
Invoice #21043**

Dear Mr. Kraunelis:

Colliers Project Leaders has reviewed the attached invoice and finds that the invoice is in compliance with the contract and the amount is appropriate for the scope of services delivered during this time period.

The referenced invoice is #21043 for Lavallee Brensinger Architects, for the Month of October 2024. The total recommended Payment is \$113,354.70.

We recommend payment of this amount, using the following ProPay Codes and Breakdowns.

Invoice Number	Task	Request This Period	ProPay Code
21043	A&E - Schematic Design	\$112,500.00	0002-0000
21043	A&E - Other - Traffic	\$442.20	0003-0000
21043	A&E - Other - Soil testing	\$412.50	0003-0000

Please feel free to contact me at (617) 987-4859 if you have any questions concerning this invoice.

Sincerely,



Shirley Ng
Project Manager

Cc: A. Michael Carroll III, Colliers Project Leaders

Attachment: 2024 10 LBA Inv#21043

LAVALLEE BRENSINGER ARCHITECTS

155 Dow Street, Suite 400
Manchester, NH 03101

Matthew Kraunelis
Town of Reading MA
16 Lowell Street
Reading, MA 01867

November 11, 2024
Project No: 23-106-00
Invoice No: 21043
Customer PO # 23004647-001

Invoice Total: \$113,354.70

Project 23-106-00 Reading Killam Elementary School

Professional Services from October 1, 2024 to October 31, 2024

Task	025	Feasibility Study		
Fee				
Total Fee		400,000.00		
Percent Complete		100.00	Total Earned	400,000.00
			Previous Fee Billing	400,000.00
			Current Fee Billing	0.00
			Total Fee	0.00
			Total this Task	0.00
Task	026	Reimbursable Expenses		
			Total this Task	0.00
Task	100	Basic Services		
Phase	002	Schematic Design		
Fee				
Total Fee		450,000.00		
Percent Complete		55.00	Total Earned	247,500.00
			Previous Fee Billing	135,000.00
			Current Fee Billing	112,500.00
			Total Fee	112,500.00
			Total this Phase	\$112,500.00
			Total this Task	\$112,500.00
Task	101	Reimbursable Expenses - Basic		
			Total this Task	0.00
Task	200	Add Services		
Phase	001	Amendment #1 - Survey		
Fee				
Total Fee		26,400.00		
Percent Complete		100.00	Total Earned	26,400.00
			Previous Fee Billing	26,400.00
			Current Fee Billing	0.00

Project	23-106-00	Reading Killam Elementary School	Invoice	21043
Total Fee				0.00
Total this Phase				0.00
Phase	002	Amendment #2 - Traffic		
Fee				
Total Fee	120,450.00			
Percent Complete	57.968	Total Earned	69,822.50	
		Previous Fee Billing	69,380.30	
		Current Fee Billing	442.20	
Total Fee				442.20
Total this Phase				\$442.20
Phase	003	Amendment #3 - HazMat		
Fee				
Total Fee	4,950.00			
Percent Complete	100.00	Total Earned	4,950.00	
		Previous Fee Billing	4,950.00	
		Current Fee Billing	0.00	
Total Fee				0.00
Total this Phase				0.00
Phase	004	Amendment #4 - Environmental		
Fee				
Total Fee	14,520.00			
Percent Complete	100.00	Total Earned	14,520.00	
		Previous Fee Billing	14,520.00	
		Current Fee Billing	0.00	
Total Fee				0.00
Total this Phase				0.00
Phase	005	Amendment #5 - GeoTech		
Fee				
Total Fee	41,800.00			
Percent Complete	42.1053	Total Earned	17,600.00	
		Previous Fee Billing	17,600.00	
		Current Fee Billing	0.00	
Total Fee				0.00
Total this Phase				0.00
Phase	006	Amendment #6 - Soil Testing		
Fee				
Total Fee	2,750.00			
Percent Complete	100.00	Total Earned	2,750.00	
		Previous Fee Billing	2,337.50	
		Current Fee Billing	412.50	
Total Fee				412.50
Total this Phase				\$412.50

Project	23-106-00	Reading Killam Elementary School	Invoice	21043
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Phase 007 Amendment #7 - HVAC Cost Estimate

Fee

Total Fee	2,750.00			
Percent Complete	100.00	Total Earned	2,750.00	
		Previous Fee Billing	2,750.00	
		Current Fee Billing	0.00	
		Total Fee		0.00
		Total this Phase		0.00

Phase 008 Amendment #8 - SD Energy Modeling

Fee

Total Fee	16,500.00			
Percent Complete	0.00	Total Earned	0.00	
		Previous Fee Billing	0.00	
		Current Fee Billing	0.00	
		Total Fee		0.00
		Total this Phase		0.00
		Total this Task		\$854.70
		Total this Invoice		\$113,354.70

	Current	Prior	Total
Billings to Date	113,354.70	672,937.80	786,292.50

[Your mission inspires us. Our creativity and knowledge empower you. Together we achieve excellence.](#)

Thank you for your business. Our standard payment terms are thirty (30) days from invoice date. Any amounts remaining unpaid beyond thirty (30) days are subject to interest at a rate of 1.0% per month, 12% per annum or at the legal prevailing rate.



Lavallee Brensinger Architects
99 Bedford Street
Boston, MA 02111

October 14, 2024

Invoice No: 0397652

Project NEX-2300326.00 Reading, MA - J. Warren Killiam Elementary School MSBA Project (sub LBPA)

LBA Project No: 23-106-00

Services Rendered Include: Attended schematic design kick-off meeting on 9/19/24.

Professional Services from August 24, 2024 to September 20, 2024

Task 00001 Feasibility Study

Fee					
Billing Phase		Percent Fee Complete	Fee Earned	Prior Earned	Current Earned
Feasibility Study	29,800.00	100.00	29,800.00	29,800.00	0.00
Total Fee	29,800.00		29,800.00	29,800.00	0.00
Total Fee				0.00	
		Total this Task		0.00	

Task 00002 Schematic Design

Fee					
Billing Phase		Percent Fee Complete	Fee Earned	Prior Earned	Current Earned
Schematic Design	66,300.00	31.9955	21,213.00	21,213.00	0.00
Total Fee	66,300.00		21,213.00	21,213.00	0.00
Total Fee				0.00	
		Total this Task		0.00	

Task 00003 Meetings

Fee					
Billing Phase		Percent Fee Complete	Fee Earned	Prior Earned	Current Earned
Meetings	13,400.00	93.00	12,462.00	12,060.00	402.00
Total Fee	13,400.00		12,462.00	12,060.00	402.00
Total Fee				402.00	
		Total this Task		\$402.00	
		Total this Invoice		\$402.00	

Billings to Date

	Current	Prior	Total
Fee	402.00	63,073.00	63,475.00
Totals	402.00	63,073.00	63,475.00

Invoice

Approved As Is
by Jenni Katajamaki
on 11/7/2024 at 9:29 AM



Samiotes Consultants, Inc.
Civil Engineering + Land Surveying
20 A Street
Framingham, MA 01701
T 508.877.6688
www.samiotes.com

Lavallee Brensinger PLLC
dba Lavallee Brensinger Architects
Jenni Katajamaki, RA, LEED, AP, MCPPO
99 Bedford Street, Suite 501
Boston, MA 02111

October 23, 2024
Project No: 53086.00
Invoice No: 22822

Project 53086.00 J Warren Killam Elementary School - Reading

Email invoice to: apcon@lbpa.com

LBA Project No. 23-106-00**Professional Services from September 1, 2024 to September 30, 2024**

Task	Contract Amount	Percent Complete	Billings to Date	Previously Billed	Current Fee Billing
Preliminary Soil Testing T21	2,500.00	100.00	2,500.00	2,125.00	375.00
Total Fee					
	Total Fee				375.00
			Total this Invoice		\$375.00

Outstanding Invoices

Number	Date	Balance
22620	8/21/2024	375.00
22689	9/18/2024	1,750.00
Total		2,125.00

Terms: DUE UPON RECEIPT. 1.5% Service charge on past due amounts over 30 Days

Billing Backup

Samiotes Consultants, Inc.

Hold
by Jenni Katajamaki
Invoice 22822 Dated 10/23/2024
to 11/11/2023 at 4:05 PM

Wednesday, October 23, 2024

1:00:50 PM

Project	53086.00	J Warren Killam Elementary School - Reading
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Professional Personnel

Hours

Director of Engineering		
Director of Engineering		
3 - Powers, Stephen	9/18/2024	.25
discuss soil testing		
Soil Evaluator		
Soil Evaluator		
12 - Zirolli, Matthew	9/11/2024	1.50
review & send soil logs		
Project Engineer II		
Project Engineer II		
35 - Ponce de Leon, Claudia	9/18/2024	.25
Sending out Soil Logs		
Totals		2.00

December 10, 2024

Matthew Kraunelis
Town Manager
Town of Reading
16 Lowell St
Reading, MA 01867

Subject: J Warren Killam Elementary School Project Management Services
Invoice #0001005306

Dear Mr. Kraunelis:

Attached please find Colliers Project Leaders (CPL) invoice #0001005306, in the amount of \$26,444.00 for Owner Project Manager services as authorized in Contract for the J Warren Killam Elementary School Project, during the month of November 2024.

In the period of November 1 - 30, 2024, the specific tasks undertaken and billed to this invoice include:

- Prepare and attend in person School Building Committee meeting for November.
- Attend School Committee Meeting for November.
- Attend and prepared agendas for XLT Meetings.
- Attend Communications group meetings.
- Review Architect invoice.
- Attend Select Board meeting.
- Attend sustainability group meeting.

Please take note of our new remit to address; 101 Crawfords Corner Road Suite 3400, Holmdel, New Jersey 07733. Please feel free to contact me at (508) 215-6050 if you have any questions concerning this invoice.

Sincerely,



Shirley Ng
Project Manager

Cc: Mike Carroll, Colliers Project Leaders

Attachement : 2024 11 Colliers Invoice #1005306

\$ 26,444.00- ProPay Code: 0001-0000



Project
Leaders

A Division of Colliers Engineering & Design

101 Crawfords Corner Road, Suite 3400
Holmdel, NJ 07733
732 383 1950

Town of Reading
Attn: Matt Kraunelis
16 Lowell St
Reading, MA 01867

Invoice : 0001005306
Invoice Date : 12/5/2024

Project : 23010425A
Project Manager: Osterman, Derek
Project Name : Reading MA/ OPM - J. Warren
Killam Elementary School

For Professional Services Rendered Through 11/30/2024

	Fee	Remaining Fee	% Complete	Billings		
				To Date	Previous	Current
Feasibility Study / Schematic Design Phase	280,000.00	12,888.75	95.40	267,111.25	240,667.25	26,444.00
Subtotal:	280,000.00	12,888.75	95.40	267,111.25	240,667.25	26,444.00
Current Billings						<u>26,444.00</u>
Amount Due This Bill						<u>26,444.00</u>

mike.carroll@collierseng.com
shirley.ng@Collierseng.com

In accordance with our business terms and conditions, acceptance of this invoice is implied unless Colliers Project Leaders USA NE, LLC is notified by 14 days from the date of this invoice. If timely payment cannot be made due to any discrepancy, please E-mail a brief explanation to Billing@colliersengineering.com and we will reply as soon as possible.
EFT/ACH PAYMENT INFO: Colliers Engineering & Design, Inc. | JP Morgan Chase | Routing 021000021 | Account# 836759092

REMIT TO: Colliers Project Leaders USA NE, LLC 101 Crawfords Corner Road, Suite 3400 | Holmdel, NJ 07733
Phone: 877-627-3772 | Fax: 732-383-1980

PM02 - Feasibility Study / Schematic Design Phase

Labor			
Rate Labor			
Class	Hours	Rate	Amount
Assistant Project Manager	11.00	167.0000	1,837.00
Financial Specialists	3.00	162.0000	486.00
Project Director	29.00	328.0000	9,512.00
	1.00	479.0000	479.00
Total Project Director	30.00		9,991.00
Project Manager	50.00	192.0000	9,600.00
Subject Matter Expert	15.00	302.0000	4,530.00
Total Rate Labor			26,444.00
Total Labor			26,444.00
Total Bill Task: PM02 - Feasibility Study / Schematic Design Phase			26,444.00



Town of Reading Meeting Minutes

2016-09-22 LAG

Board - Committee - Commission - Council:

Permanent Building Committee

Killam School Building Committee

Date: 2024-11-20

Time: 7:00 PM

Building: Reading Town Hall

Location: Select Board Meeting Room

Address: 16 Lowell Street

Session: Open Session

Purpose: General Business

Version: Draft

Attendees: **Members - Present:**

Chair Carla Nazzaro, Vice Chair Pat Tompkins (remote), Shawn Brandt (remote), John Coote, Chris Haley, Ed Ross, Greg Stepler, Nancy Twomey

Members - Not Present:

Kirk McCormick

Others Present:

Town Manager Matt Kraunelis, Assistant Town Manager Jayne Wellman, School Superintendent Thomas Milaschewski (remote), Killam Principal Lindsey Fulton (remote), Facilities Director Joe Huggins (remote), Assistant Facilities Director Kevin Cabuzzi (remote), Chief Financial Officer Sharon Angstrom (remote), Colliers Project Manager Shirly Ng, Colliers Project Director Mike Carroll, LBA Project Manager Jenni Katajamaki, LBA Architect Leigh Sherwood (remote), CES Consultant Waseem Khoury, CES Consultant Matt Couceiro, Thornton Tomasetti Consultant Vamshi Gooje (remote), Colliers Consultant James Miller (remote), Jack (remote 7:56pm)

Minutes Respectfully Submitted By: Jacquelyn LaVerde

Topics of Discussion:

This meeting was held in-person in the Town Hall Select Board Meeting Room and remotely via Zoom.

Call to order:

Chair Carla Nazzaro called the meeting to order at 7:00 pm.

Roll call attendance: Pat Tompkins (remote), Shawn Brandt (remote), John Coote, Chris Haley, Ed Ross, Greg Stepler, Nancy Twomey, Carla Nazzaro.

Not present: Kirk McCormick.

Public Comment:

There was no comment from the public.

Liaison Reports:

Carla Nazzaro shared that she attended a geothermal conference at Pine Hill Elementary School in Westwood last Friday. She reviewed several action items she took away from the conference including having discussions on operable windows, hiring a tax consultant to help with Inflation Reduction Act (IRA) claims, having an energy policy, having a bid spec for on-call vendors for building maintenance, incorporating staff training requirements into bargaining agreements, and addressing other things that can be done during the design phase to help increase reimbursement numbers. Other topics addressed at the conference

include the IRA and its filing requirements and deadlines, lessons learned with geothermal wells, and building management systems.

OPM Update:

Financial

Colliers Project Manager Shirley Ng reviewed the project's budget and cost summary, highlighting that the budget is in good shape with no new changes. As mentioned at the last meeting, MSBA recommended adding a line item for LBA reimbursable expenses and removing them from the contingency line item. Ms. Ng also presented the latest invoice from Colliers in the amount of \$23,600, and noted that LBAs invoices were just received, and will be presented at the next meeting. Cash flow is still projecting in the positive.

On a motion by Nancy Twomey, seconded by Ed Ross, the Killam School Building Committee voted 8-0-0 to add a \$10,000 line item to cash flow expenditures.

Roll call vote: Pat Tompkins – Yes, Shawn Brandt – Yes, John Coote – Yes, Chris Haley – Yes, Ed Ross – Yes, Greg Stepler – Yes, Nancy Twomey – Yes, Carla Nazzaro – Yes.

On a motion by Nancy Twomey, seconded by Ed Ross, the Killam School Building Committee voted 8-0-0 to approve Colliers invoice 996167 in the amount of \$23,026.

Roll call vote: Pat Tompkins – Yes, Shawn Brandt – Yes, John Coote – Yes, Chris Haley – Yes, Ed Ross – Yes, Greg Stepler – Yes, Nancy Twomey – Yes, Carla Nazzaro – Yes.

Schedule

Ms. Ng. noted that the project is progressing into the Schematic Design (SD) phase. Mr. Coote questioned an apparent schedule change to the end date for the construction phase. Ms. Ng and Mr. Carroll clarified that this change was likely due to a spreadsheet calculation error, not an extension of the project timeline. They will investigate this error further and provide clarification at the next meeting.

Designer Update:

LBA Project Manager Jenni Katajamaki was joined by Consulting Engineering Services (CES) Mechanical Engineer Waseem Khoury, CES Electrical Engineer/Project Manager Matt Couceiro, Energy Sustainability Consultant Vamshi Gooje of Thornton Tomasetti (remotely on Zoom), and LBA Architect Leigh Sherwood (remotely on Zoom).

Community Meetings Update

Ms. Katajamaki noted that the Community Meetings for Site and Community Use, and Traffic went well. Because there is a lot to discuss this evening with HVAC, a more detailed update will be presented at the next meeting.

Energy Feasibility Study

Ms. Katajamaki presented an update on the project goals, coordination with site utilities, system options, reliability and operating costs, first costs and incentives, life cycle cost analysis, and potential addition of a solar rooftop array.

She presented a preliminary well plan with all site utilities included. Everything will fit, and should be doable. The Committee discussed the impact on learning during drilling and construction, and timing of the construction project, with a focus on minimizing noise during school hours.

Ms. Katajamaki presented a comparison of the five HVAC system options: full geothermal with 60 wells (1A), hybrid geothermal with 40 wells (2A), half geothermal with 44 wells (3A), all electric air-source (4A), and traditional gas-fired chiller-boiler (5A). Mr. Gooje outlined the Energy Use Intensity (EUI) of each system, and noted that the lower the number, the better the performance. The full geothermal ranks the best at 24.4, hybrid geothermal scored 26.5, half geothermal scored 25, air source scored 30, and traditional

gas-boiler scored 40.1. Waseem Khoury provided an overview of the operating efficiency of each different option and noted that there is less maintenance needed on the systems with fewer components.

Ms. Katajamaki presented the construction costs of the five different HVAC systems, and eligibility criteria. She outlined the many different MSBA policies and codes and IRA rebates that can be considered, which could increase the reimbursement of eligible costs. She also provided an analysis of the town's share of costs after considering the MSBA grants and IRA incentives. Mr. Tompkins expressed concern that the town's share calculations may not accurately reflect the MSBA reimbursement cap. The design team agreed to revisit the numbers, with and without the IRA incentives, as the MSBA reimbursement amount will likely remain the same regardless of which HVAC option is chosen.

The life cycle cost formula takes into account first cost, operating cost, energy costs, and maintenance costs. Ms. Katajamaki provided an estimate of the overall 40-year life cycle cost of each HVAC system option and noted that based on the updated numbers previously discussed, the analyses will need to be run again. The preliminary numbers showed the full geothermal system having the lowest annual maintenance cost, and overall life cycle cost of the all-electric options. Ms. Katajamaki also reviewed costs for adding solar PV, and the impact on the EUI of each option.

Following a lengthy discussion on the lifecycle costs, some Committee members favored full geothermal, some were undecided. Mr. Tompkins stated that he was leaning toward the hybrid geothermal system, but he would continue to ponder whether 60 wells for full geothermal would be feasible. The Committee will wait to vote on their HVAC selection at the next meeting, as they would like to see the updated numbers, and get a recommendation from the Sustainability Working Group. The design team will send the corrected numbers to the Committee as soon as possible.

Chapter 149 vs 149A Follow up:

The discussion will be carried over to the next meeting.

Meeting Minutes:

Greg Stepler noted that the roll call vote needed to be added to the first motion approving invoices.

On a motion by Ed Ross, seconded by Greg Stepler, the Killam School Building Committee voted 8-0-0 to approve the meeting minutes of October 21, 2024 as amended.

Roll call vote: Pat Tompkins – Yes, Shawn Brandt – Yes, John Coote – Yes, Chris Haley – Yes, Ed Ross – Yes, Greg Stepler – Yes, Nancy Twomey – Yes, Carla Nazzaro – Yes.

Next KSBC Meeting – December 16th, 2024:

The next Killam School Building Committee Meeting is scheduled for December 16th. The next Community Meeting, scheduled for December 9th, was intended to be held after the vote on HVAC systems. The Communications Working Group will discuss whether to change the topic or the timing of the Community Meeting.

Adjourn:

On a motion by Ed Ross, seconded by Greg Stepler, the Killam School Building Committee voted 8-0-0 to adjourn at 9:37 pm.

Roll call vote: Pat Tompkins – Yes, Shawn Brandt – Yes, John Coote – Yes, Chris Haley – Yes, Ed Ross – Yes, Greg Stepler – Yes, Nancy Twomey – Yes, Carla Nazzaro – Yes.