



Spencer-East Brookfield Regional School District

Office of the Superintendent
306 Main Street, Spencer, Massachusetts 01562
Telephone (508) 885-8500 * Fax (508) 885-8504

Paul S. Haughey, Ed.D.
Superintendent of Schools

May 21, 2019

Town of East Brookfield
Board of Selectmen
122 Connie Mack Drive
East Brookfield, MA 01515

Dear Members of the Board,

On April 11, 2019, the Spencer-East Brookfield Regional School Committee voted to enter into a Performance Contract with Siemens (the Energy Management Service Company-ESCO) to improve infrastructure, reduce energy consumption and increase operational efficiencies throughout the district. Siemens was chosen pursuant to the procedures outlined in 225 CMR 19.00.

In March 2019, Siemens provided the District with the results of the Investment Grade Audit, which included guaranteed energy savings calculations along with the scope and cost of the various projects. A copy of their calculations is included with this letter.

The School Committee voted to move forward in the following categories throughout the entire district:

1. Lighting upgrades
2. Plug loads
3. Building envelope
4. Energy management systems
5. Kitchen Hood Controls
6. Boilers

The cost of the improvements will be no greater than \$4,092,946. The District will finance the construction costs using Siemens Financial Services. The length of the financing will be ten (10) years and the financing mechanism is a lease/purchase agreement and not a debt issue. The estimated costs to the town are included on the attached calculation sheets.

Since this is not a debt issue, the regulations are unclear as to the notification/approval process to the member communities. However, we want to provide each town with a formal notice of our intent to proceed with the project as voted by the School Committee on April 11th.

Concerning the notification process, the Business Manager along with the East Brookfield School Committee representatives met with the Finance Committee on April 24th. The details of the

proposed improvements were discussed. A member of the Board of Selectmen was also present at that meeting. All agreed to move forward with the project as presented.

We are now at the point of signing a contract with Siemens. I am respectfully requesting a vote of the Board of Selectmen demonstrating their approval of the project and thus, allowing the District to enter into the contract and begin the work. Since time is of the essence and equipment and materials need to be ordered in order to complete work over the summer, a quick response would be greatly appreciated.

I would be happy to answer any additional questions you may have in order to move the project forward.

Sincerely,



Gary D. Suter
Business Administrator

cc: Paul Haughey, Superintendent

Enclosures: Project Narrative
Proposed Performance Contract Projects and Financing

SBERSD Project Narrative

Lighting and Lighting Controls Upgrade

Throughout each school, existing light fixtures will be replaced with new flat panel LED fixtures. Many spaces (classrooms, cafeteria, offices) shall have a control system that allow the fixture to be automatically turn on and off when occupied/unoccupied, adjust the brightness, and automatically dim to maintain a set brightness based on how much daylight is entering the room from the windows. This control system will communicate wirelessly and collect energy usage data. Gymnasiums and exterior lights will be replaced with LED fixtures as well. The Administration building will have the fixtures replaced and occupancy sensors installed.

Plug Load Controls

Each School and the administration building will have plug load controller modules installed on outlets that serve non-critical loads. Equipment such as printers, copiers, water dispensers, projectors, and non-refrigerated vending machines shall be turned off when the area has been unoccupied for a set amount of time. Critical or sensitive loads such as computers and refrigerators will not be included as they cannot be shut off based on occupancy.

Building Envelope Improvements

Each school and the administration building have gaps around their windows, doors, and roof-wall joints. These areas will be caulked, weather-stripped, and spray-foamed to create an air seal to prevent unconditioned outdoor air from infiltrating.

Energy Management Systems

The schools have varying levels of automation systems already installed. This work will standardize and upgrade the front-end software, replace aged operator workstations, and allow for remote monitoring and alarm notification. Some areas will also become demand-control ventilated, where the space carbon dioxide level (CO₂ is exhaled by occupants) is monitored, and when it increases, additional fresh air is brought into the space.

Kitchen Hood Controls

Currently, the kitchen exhaust hoods are turned on and run full speed all day. These controls will sense when the cooking area is being used and will turn down the fan speed when not in use.

Walk-In Cooler and Freezer Controls

These controls vary the fan speed of each cooler and freezer to maintain a steadier temperature while reducing energy use. The door heaters and electric defrost is also precisely controlled. If temperatures should stray out of range, an alarm is generated and sent out to the appropriate person.

Boiler and HW Pump Replacements

The boilers at each building are at the end of their useful life, some have failed. We will replace each boiler with a high efficiency, gas-fired condensing boiler. Water temperatures will be reset based on outdoor air temperatures to reduce overheating in occupied spaces. Pumps and in some cases, domestic hot water heaters will be replaced as well.

Spencer-East Brookfield Regional School District
Proposed Performance Contract Projects and Financing
4/24/2019

	Project Costs-Less Potential Rebates			
	Total	District	E. Brookfield	Spencer
1 Lighting	1,395,472	640,987	314,138	440,347
2 Plug Loads	22,615	15,145	2,075	5,395
3 Building Envelope	115,905	90,129	11,092	14,684
4 Energy Management Systems	580,924	294,620	192,174	94,130
5 Kitchen Hood Controls	125,132	72,543	28,703	23,886
6 Walk-in Cooler Controls	84,670	42,956	23,497	18,217
7 Boilers	1,768,228	1,097,891	287,588	382,749
Sub-Total Project Costs	4,092,946	2,254,271	859,267	979,408
Financing Costs @ 3.5	711,027	393,755	149,399	167,873
Performance Assurance Costs	210,565	129,111	37,054	44,400
Total Costs	5,014,538	2,777,137	1,045,720	1,191,681
	Guaranteed Savings (Over 10 Years)			
1 Lighting	1,293,893	669,644	246,569	377,680
2 Plug Loads	24,351	19,135	1,687	3,529
3 Building Envelope	106,076	82,104	8,298	15,674
4 Energy Management Systems	159,836	51,904	88,924	19,007
5 Kitchen Hood Controls	64,520	32,781	13,136	18,603
6 Walk-in Cooler Controls	73,543	33,423	20,732	19,387
7 Boilers	462,335	450,695	4,961	6,679
Total Guaranteed Savings	2,184,554	1,339,688	384,307	460,559
	Net (Negative) Cash Flow Cost of Projects			
1 Lighting	(101,579)	28,657	(67,569)	(62,667)
2 Plug Loads	1,736	3,990	(388)	(1,866)
3 Building Envelope	(9,829)	(8,025)	(2,794)	990
4 Energy Management Systems	(421,088)	(242,716)	(103,250)	(75,123)
5 Kitchen Hood Controls	(60,612)	(39,762)	(15,567)	(5,283)
6 Walk-in Cooler Controls	(11,127)	(9,533)	(2,765)	1,170
7 Boilers	(1,305,893)	(647,196)	(282,627)	(376,070)
Financing Costs @ 3.5%	(711,027)	(393,755)	(149,399)	(167,873)
Performance Assurance Costs	(210,565)	(129,111)	(37,054)	(44,400)
Total Negative Cash Flow	(2,829,984)	(1,437,449)	(661,413)	(731,122)
Cash Flow Financing Plan:				
Capital Assessments:				
East Brookfield (Over 10 Yrs)	661,413		661,413	
Spencer (Over 10 Yrs)	731,122			731,122
Use of E&D (Over 10 Yrs)	1,437,449	1,437,449		
Total Cash Flow Financing	2,829,984	1,437,449	661,413	731,122