

## STANDING COMMITTEE MEETINGS

Educational Support Center  
Board Meeting Room  
3600-52<sup>nd</sup> Street  
Kenosha, WI 53144

October 13, 2020

5:00 P.M. – Curriculum/Program Committee

6:00 P.M. – Personnel Committee

7:00 P.M. – Audit/Budget/Finance Committee

8:00 P.M. – Planning/Facilities Committee

# Curriculum/Program Committee Meeting

*October 13, 2020 / 5:00 P.M. | ESC Boardroom*

		Members: Mary Modder, Chair/School Board Member Tony Garcia, School Board Member Dan Wade, School Board Member Bridget Heimstead, Community Member Andrew Levine, Community Member Todd Price, Community Member Avery Everman, Student Member Juan Gomez-Solis, Student Member Elizabeth Beere, Staff Member Annie Masters, Staff Member
Meeting called by	Mary Modder	
Type of meeting	Curriculum/Program	
Facilitator	Mary Modder	
Note taker	Stacy Busby	
Timekeeper	To be determined	
		Please read: Committee Membership Document Please bring:

## Agenda Items

Topic and Presenter		Outcome	Time allotted
1.	Welcome/Review of Operating Principles (see page 2)	Sharing	8 Minutes
2.	Seclusion and Restraint Educational Presentation*	Learning/Discussion	27 Minutes
3.	7 Commitments Reactor Group*	Sharing	5 Minutes
4.	Evaluation of Operating Principles <ul style="list-style-type: none"><li>Fist to Five</li><li>Were we successful in achieving the stated outcomes for the meeting?</li></ul>	Evaluating	5 Minutes

## Other Information

Observers:

Resources:

Special notes:

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Next Meeting: February 9, 2021

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**Our Vision:**

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**Operating Principles****Straight Talk**

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**Use of Our Time**

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**Listening**

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## **Accomplishment and Optimism**

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## 2020-2021 Curriculum/Program Standing Committee Member Info Sheet

<b>Name</b>	<b>Email Address</b>	<b>Quick Facts</b>
Mary Modder	mmodder@kUSD.edu	Chairperson of committee, KUSD school board member
Tony Garcia	tgarcia@kUSD.edu	KUSD school board member
Dan Wade	dwade@kUSD.edu	KUSD school board member
Bridget Heimstead		Community member , Senior Appraiser with the Village of Pleasant Prairie, KUSD parent
Andrew Levine	ahlevin@gmail.com	Community member, social studies teacher in another WI district, eight years teaching experience
Todd Price	tprice@nl.edu	Community member, Director of the Curriculum, Advocacy, and Policy major at National Louis University, PhD in Curriculum and Instruction
Avery Everman	aeverman86@students.kUSD.edu	KUSD student, grade 12, ITHSA
Juan Gomez-Solis	kgomez-s05@students.kUSD.edu	KUSD student, grade 12, Tremper
Elizabeth Beere	ebeere@kUSD.edu	KUSD staff member, Instructional Coach, Brass
Annie Masters	amasters@kUSD.edu	KUSD staff member, Reading Specialist/Intervention, Tremper
<b>Administration</b>		
Sue Savaglio-Jarvis	ssavagli@kUSD.edu	Superintendent of Schools
Julie Housaman	jhousama@kUSD.edu	Chief Academic Officer

# Personnel Committee Meeting

*October 13, 2020 / 6:00 P.M. | ESC Boardroom*

		<b>Members:</b> Tom Duncan, Chair/School Board Member Yolanda Adams, School Board Member Rebecca Stevens, School Board Member Dale Nixon, Community Member Michelle Tucker, Community Member Lucas Steplyk, Student Member Summer Zilisch, Student Member Kristine Coshun, Staff Member Martica Davis, Staff Member  <b>Please read:</b> Committee Membership Document <b>Please bring:</b>
Meeting called by	Tom Duncan	
Type of meeting	Personnel	
Facilitator	Tom Duncan	
Note taker	Stacy Busby	
Timekeeper	To be determined	

## Agenda Items

Topic and Presenter		Outcome	Time allotted
1.	Welcome/Review of Operating Principles (see page 2)	Sharing	8 Minutes
2.	New Strategic Goals Reactor Group*	Learning/Feedback	22 Minutes
3.	UnitedHealthCare Nurse Liaison Update	Sharing	5 Minutes
4.	7 Commitments Reactor Group*	Sharing	5 Minutes
5.	Evaluation of Operating Principles <ul style="list-style-type: none"><li>Fist to Five</li><li>Were we successful in achieving the stated outcomes for the meeting?</li></ul>	Evaluating	5 Minutes

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Observers:

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Special notes:

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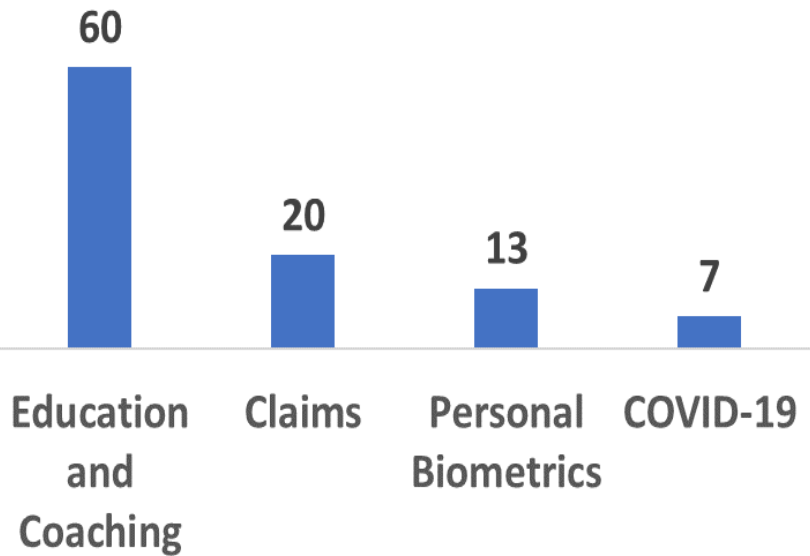
# Kenosha Unified School District

## Sue Nurse Liaison, Health & Well-Being Engagement Snapshot

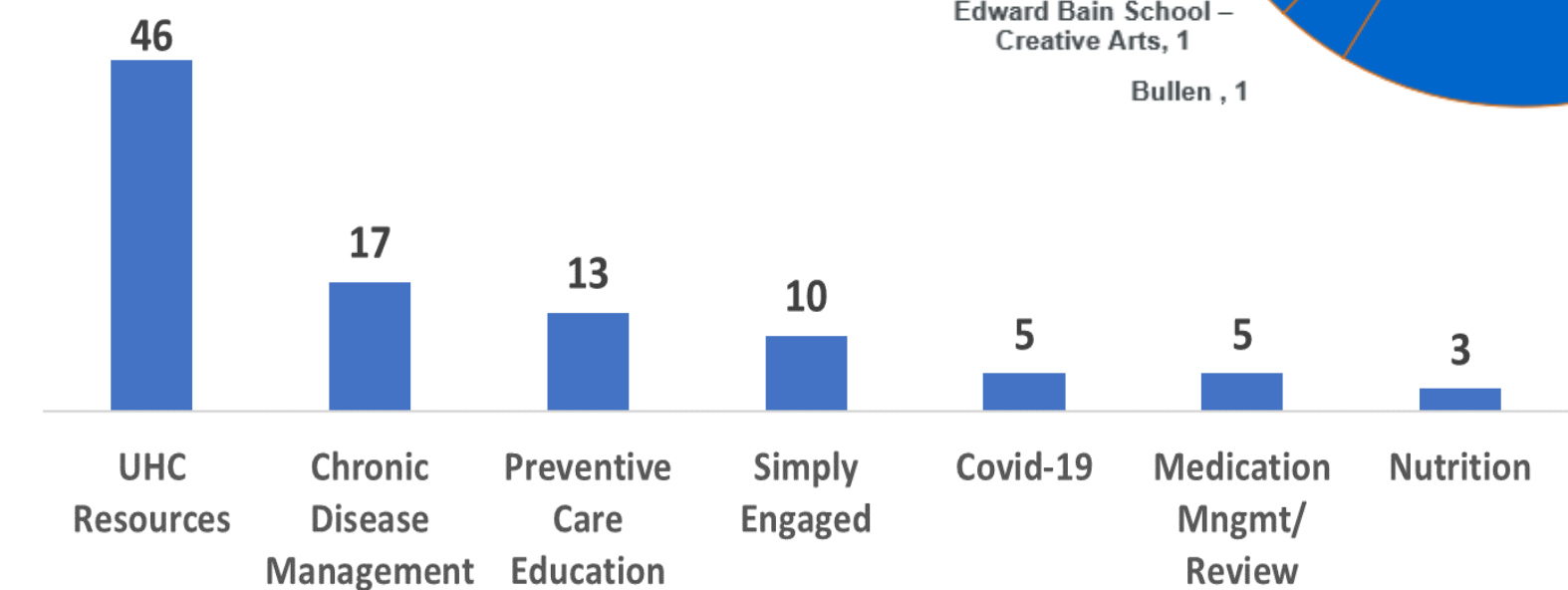
September 2020



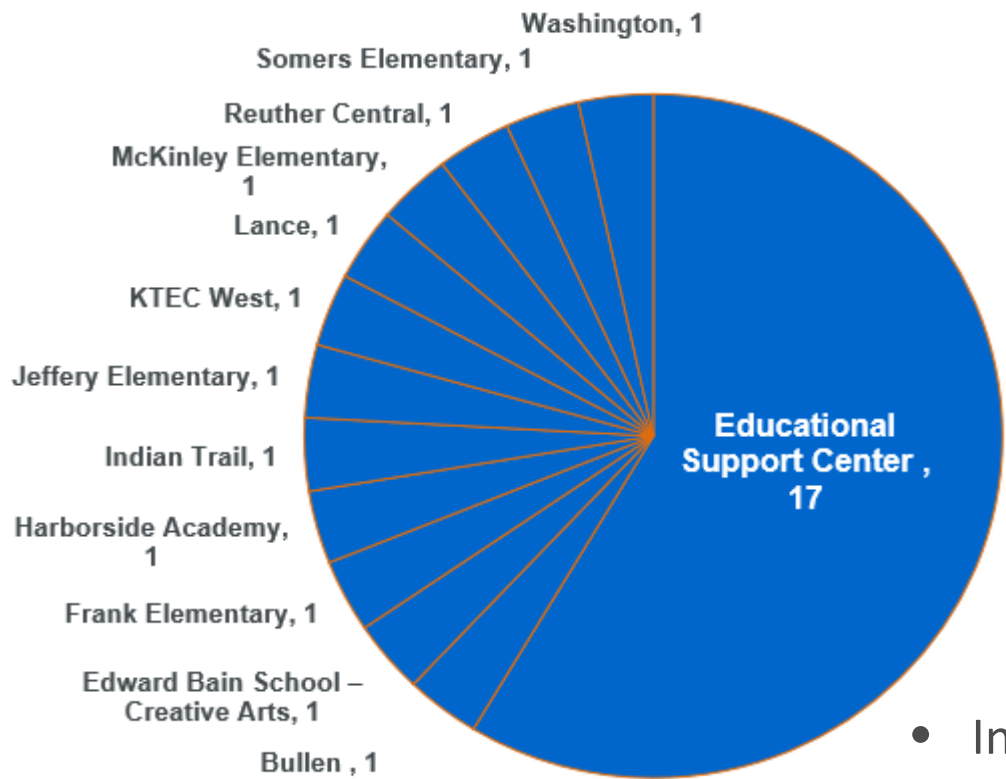
### Engagement Activity by %



### Top Coaching Focus By %



### Staff Participation by Location



### Sue's Engagements

Individual Sessions	Wellness Committee Meetings
29	1

### Highlights

- Introduced to KUSD leadership team August 10, 2020
- Began onsite at Educational Support Center Sep. 2, 2020
- Initial communication regarding Nurse Liaison role and contact information, as well as a brief piece on wellness, was sent to all staff via the Torch newsletter
- Research of options for flu shot clinics and promotion of KUSD/KVNA drive-up flu shot event
- Review of KUSD wellness survey results, from Spring 2020, to begin strategic planning of wellness promotion

## 2020-2021 Personnel Standing Committee Member Info Sheet

<b>Name</b>	<b>Email Address</b>	<b>Quick Facts</b>
Tom Duncan	tduncan@kUSD.edu	Temporary Chairperson of committee, KUSD school board member
Yolanda Adams	yadams@kUSD.edu	KUSD school board member
Rebecca Stevens	rstevens@kUSD.edu	KUSD school board member
Dale Nixon	dalernixon3@gmail.com	Community member, three years experience with current employer on hiring and training team, KUSD parent
Michelle Tucker	ms.m.tucker@gmail.com	Community member, Support Services Manager with the Village of Germantown, Masters Degree in Public Administration, KUSD parent
Lucas Steplyk	lsteplyk96@students.kUSD.edu	KUSD student, grade 12, Lakeview
Summer Zilisch	szilisch90@students.kUSD.edu	KUSD student, grade 11, Tremper
Kristine Coshun	kcoshun@kUSD.edu	KUSD staff member, grade 7 English Language Arts Teacher - Washington
Martica Davis	martica.davis@gmail.com	KUSD staff member, Special Education Teacher, Brass
<b>Administration</b>		
Sue Savaglio-Jarvis	ssavagli@kUSD.edu	Superintendent of Schools
Kevin Neir	kneir@kUSD.edu	Interim Chief Human Resource Officer

# Audit/Budget/Finance Committee Meeting

October 13, 2020 / 7:00 P.M. | ESC Boardroom

		<b>Members:</b> Yolanda Adams, Chair/School Bd. Member Todd Battle, School Board Member Tony Garcia, School Board Member Elizabeth Baker, Community Member Stanley Washington, Community Member Rachel Wickersheim, Community Member Peter Wilson, Community Member Dayanara Espinoza Student Member Quentin Smith, Student Member Anthony Jordan, Staff Member Eric Santos, Staff Member  <b>Please read:</b> Committee Membership Document <b>Please bring:</b>
Meeting called by	Yolanda Adams	
Type of meeting	Audit/Budget/Finance	
Facilitator	Yolanda Adams	
Note taker	Stacy Busby	
Timekeeper	To be determined	

## Agenda Items

Topic and Presenter		Outcome	Time allotted
1.	Welcome/Review of Operating Principles (see page 2)	Sharing	8 Minutes
2.	Fund 80 Review	Sharing/Discussion	27 Minutes
3.	7 Commitments Reactor Group*	Sharing	5 Minutes
4.	Evaluation of Operating Principles <ul style="list-style-type: none"><li>Fist to Five</li><li>Were we successful in achieving the stated outcomes for the meeting?</li></ul>	Evaluating	5 Minutes

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Kenosha Unified School District  
Kenosha, Wisconsin

October 13, 2020  
Audit/Budget/Finance Committee

**Fund 80 Review**

**Community Services Fund Definition**

Public school education budgets in Wisconsin are primarily controlled (capped) by the Wisconsin revenue limit formula which has existed since 1993. This formula sets the maximum revenue (income) that school districts are allowed each year from their primary funding sources. Those sources are general state aid (equalization aid), state aid for high poverty, state aid for exempt computers, state aid for exempt personal property, and local property tax levies. In order to exceed the revenue limit, school districts must get permission from their stakeholders to approve additional tax levies for such things as referendum approved debt and community programs and services.

Wisconsin statute 120.13(19) allows for the establishment and maintenance of community education, training, recreational, cultural or athletic programs and services, outside the regular curricular and extracurricular programs for pupils, under such terms and conditions as the school board prescribes.

The Wisconsin Department of Public Instruction (DPI) has designated Fund 80 to be used to account for activities such as adult education, community recreation programs such as evening swimming pool operation and softball leagues, elderly food service programs, non-special education preschool, day care services and other programs which are not elementary and secondary educational programs but have the primary function of serving the community. Access to Community Service Fund activities cannot be limited to pupils enrolled in the district's K-12 educational programs. Other funds, such as the General Fund and Special Projects Fund, carry out the day-to-day K-12 educational operations of the district. All activities associated with a well-rounded curriculum (curricular and extra-curricular activities) are to be accounted for in these funds and the Pupil Activity Fund (Fund 60).

**KUSD Fund 80 History**

The Kenosha Unified School District Community Services Programs have a long, rich, history that precedes its very existence. While the programs have evolved over time to our current offerings (Attachment A), the catalyst for the establishment of our Fund 80 was the Department of Recreation and the Kenosha Senior Citizens Center as evidenced in historical research performed by Denise Jacob, current Program Director of the Kenosha Senior Citizens Center (Attachment B).

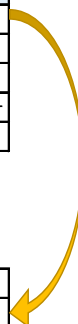
**Tax Levy**

The proposed tax levy of \$1,500,000 for the 2020-21 fiscal year is broken down as follows:

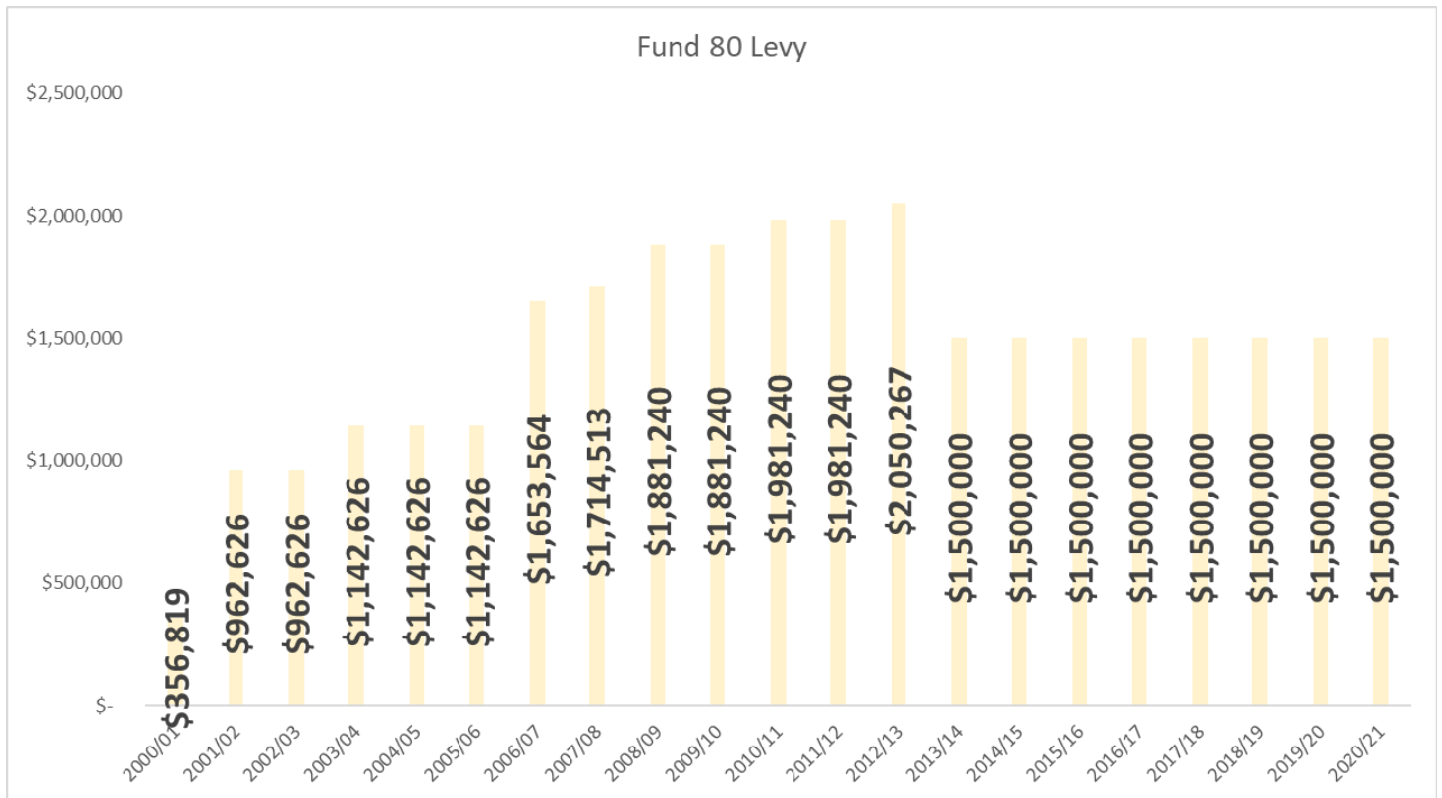
Budget	Fund	Notes
500,000.00	81	Rec and Senior Center
725,662.00	83	Community Programs
53,060.00	86	KYPAC
204,278.00	87	Black Watch and Rambler
17,000.00	88	Summer Theatre

<b>1,500,000.00</b>	<b>Total F80 Levy</b>
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Rec	310,000.00	62%
Senior	190,000.00	38%
Rec and Senior	500,000.00	100%



Based on available records, a twenty year review of the Fund 80 tax levy adopted by KUSD is as follows:



### Three-Year Financial Analysis

A three-year financial analysis of both the revenues and expenditures attributed to the individual funds which are combined to make up the KUSD Fund 80 has been performed and can be reviewed in Attachment C.

Dr. Sue Savaglio-Jarvis  
Superintendent of Schools

Tarik Hamdan  
Chief Financial Officer

# Community Service Funds (Fund 80)

## Community and Parent Programs

- Family Education
- Safety Trainings
- Parenting Skills Development
- Alcohol and Other Drug Awareness (AODA)
- Community Outreach
- Boys & Girls Club Programs
  - Gang Prevention
- Adult Education
  - GED Programs
  - ESL
  - Even Start Literacy
- Building Our Future

## Recreation Department

- Adult Sports
  - Softball
  - Volleyball
  - Basketball
- Youth Summer Programs
- Swimming
- Kenosha Youth Performing Arts Company (KYPAC)
- Fine Arts Recreation Programs
  - Summer Classics
- Marching Bands
  - Black Watch
  - Rambler

## Kenosha Senior Center

- Wide variety of popular recreational, educational and social activities
- Open to all seniors in our community age 55 and up
- Founded in 1970
- 1,300 members plus volunteers



## Kenosha Senior Citizens Center

Denise Jacob  
Program Director

2717 – 67<sup>th</sup> Street  
Kenosha, WI 53143

Phone 262-359-6260  
Fax 262-359-6044

### **An Overview of the History of the Department of Public Recreation and the Kenosha Senior Citizens Council**

#### **1913**

Through the efforts of Mary D. Bradford, and many leading citizens, plans were begun for an official recreation department for the city of Kenosha.

*From: History of Recreation in Kenosha - May 10, 1935*

#### **June 10, 1913**

The Board of Education went on record approving the plan for a recreation department giving the Wider Use Committee of the Board of Education power to carry out the plan. This board appropriated money from time to time to carry on the program and David O. Fogwell was selected as the first Recreation Director of the city of Kenosha.

*From: History of Recreation in Kenosha - May 10, 1935*

#### **February 7, 1916**

*Kenosha Common Council Proceedings – Item 10*

“ A petition was presented from the Board of Education, by William J. Threinen, President, and Chas. A. Pofahl, Secy., requesting that a referendum upon the question of levying and collecting of a special tax for the support of public recreational activities, be submitted to the people at the next regular spring election.

On motion of Ald. Goodman, the request of the Board of Education was complied with.”

#### **February 21, 1916**

*Kenosha Common Council Proceedings – Item 38*

A resolution is unanimously adopted to submit to a referendum the question of a special tax to be levied for public recreational activities as provided by Section 435(e) of the Wisconsin Statutes for 1915.

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### **April 6, 1916**

*Common Council Proceedings (page 393)*

“The whole number of votes cast for Question No.1 and No.6 ‘Shall the City of Kenosha levy and collect a direct annual tax not to exceed two-tenths of a mill in each year upon the taxable property in the City of Kenosha for Public Recreational Activities?’  
Yes = 1514, No = 1425, Majority for = 89 ”

### **Spring 1918**

The first moneys raised through the referendum approved tax become available and  
“Recreation now for the first time in the city was placed on a firm financial foundation that would guarantee its continuance.”

*From: History of Recreation in Kenosha - May 10, 1935*

### **1945-1946**

A recreation referendum to increase the two-tenths of a mill tax levy to eight-tenths of a mill was begun. No change to the tax levy had been made since 1916, even though the State Legislature authorized an increase from two-tenths to four-tenths of a mill in 1919, and then authorized another increase from four-tenths to eight-tenths of a mill in 1940. In Kenosha it is necessary to put these increases to a vote of the people before they can be put into effect.

*From: Board of Education Recreation Referendum Citizens Committee,  
Edward J. Reutz, Chairman  
(No increase was approved.)*

### **Summer 1950**

The “Golden Age Club” for women over 60 years of age, and the “60 and Over Club” for men, were organized by the Kenosha Council of Social Agencies. Both groups met for the first time at a picnic given for them.

*From: Recreation and Leisure-Time Program for the Aging - January 18, 1956*

### **Summer 1952**

The “Golden Age Club” and the “60 and Over Club” were both turned over the to the Department of Public Recreation with the understanding the department would provide paid leadership and facilities for meeting.

*From: Recreation and Leisure-Time Program for the Aging - January 18, 1956*

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### 1956

A recommendation for a combined male and female senior citizens group is made by the Kenosha Elder Citizens Study, Committee on Recreation.

The recommendation is made by:

Dr. R.E.Sternloff, Director of Health, Physical Education, & Public Recreation, Chairman

Mr. James J. Trebbin, Assistant Director of Public Recreation

Mrs. Helen Bach, Supervisor, Golden Age Club

Mr. Otto Bacher, Supervisor, Sixty and Over Club

Mr. Fred Jensen, President, Sixty and Over Club

Mrs. Hazel Shields, President, Golden Age Club

Mr. Carol Rikli, Recreation Director, P.Y.C.

*From the report: Recreation and Leisure-Time Program for the Aging, January 18, 1956*

### April 1963

“The responsibility of the Recreation Department

(leaders, instructors, supervisors, administrators) is to:

1. Provide programs, facilities and expert guidance
2. For people of all ages
3. So that the essential needs and requirements unsatisfied in self-maintaining and vocational time are satisfied in socially desirable ways during leisure time.” Also:

“Although the Department is under the jurisdiction of the Board of Education, it is city-wide in scope and offers an opportunity for all individuals to take part in one or more of the phases of the program.”

*From the report: RECREATION*

*Department of Public Recreation*

*Board of Education*

*Kenosha, Wisconsin*

*April 1, 1963*

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### December 1966

The Kenosha Common Council requests a legal opinion as to what procedure would be required to transfer the activities of the Public Recreation Department from the jurisdiction and control of the Board of Education to that of the Park Commission and City Council. City Attorney Burton A. Scott requested a written opinion from Robert V. Baker, Corporation Counsel. Robert Baker concluded (and Burton Scott agreed) that:

1. The Board of Education cannot on its own initiative divert itself of the Department of Public Recreation, or the control thereof.
2. The Common Council on its own initiative, or by its own motion to refer it to a referendum, cannot transfer or abolish the Department.
3. The Department as it presently exists can in no way be transferred to the jurisdiction of the Common Council and Mayor. Nor can it be abolished except by referendum initiated solely by petition of 10% of the electors of the Joint School District.

*From the letter To: The Honorable Common Council, City of Kenosha*

*From: Burton A. Scott, City Attorney*

*Re: Transfer of Recreation Department from Board of Education to City Council*

*January 4, 1967*

### 1967

The Kenosha Unified School District was formed bringing the schools from Kenosha, Pleasant Prairie and Somers together into one district.

### 1968

“With the formation of the Unified School District, the towns of Pleasant Prairie and Somers agreed to pay a recreation tax so that the Recreation Department could offer services to the entire Unified School District.”

*From: “Why and What in Recreation” June 14, 1971*

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### 1970

The Kenosha Senior Citizens Council unanimously votes to incorporate and to seek sponsorship under the Recreation Department. They elect officers and make Mr. James J. Trebbin, Director of Public Recreation, the Council's Treasurer.

### October 27, 1970

*From: Official Proceedings - of the Kenosha Unified School Board*

"The Board recessed at 10:04 pm and reconvened at 10:19 pm.

It was agreed that the report of the Department of Public Recreation be discussed at this time. The report set forth the following proposed relationship of the Department of Public Recreation with the Kenosha Senior Citizens Council, Inc.:

'The Director of Public Recreation with the approval of the Unified School Board would agree to have the Kenosha Senior Citizens Council, Inc. become an affiliate of the Recreation Department.

With this affiliation, the Director of Public Recreation shall be included on the Board of Directors and be the Treasurer of the organization. The Treasurer shall have custody of all the funds and securities of the organization which may come into his hands; and deposit the same or invest the same as directed by the Board of Directors in the name of the organization; he shall pay all bills subject to the approval of the Board of Directors; he shall make an annual report to the organization which report shall be examined and certified by an auditing committee appointed by the President; and shall perform all acts incident to the position of Treasurer or which are properly required of him by the Board of Directors.

The Director of Public Recreation would assist in the program planning and provide leadership for activities within the limitations of the allocated budget. Any additional program activities or personnel would have to be provided through Federal Funds or be incorporated into the Recreation Budget in the ensuing years.'

Dr. Capelli moved approval of the relationship of the Department of Public Recreation with the Kenosha Senior Citizens Council, Inc. as proposed in the report. Mr. Lepp seconded the motion. Unanimously approved. A member of the Senior Citizens Council expressed appreciation for the action taken by the Board."

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**November 10, 1970** The Kenosha Senior Citizens Council, Inc. files Articles of Incorporation with the state of Wisconsin and receives its Certificate of Incorporation from Robert Zimmerman, Wisconsin Secretary of State.

Items of note in the Articles of Incorporation:

1. The Senior Citizens Council is a without stock and not for profit organization.
2. The period of existence shall be perpetual.
3. The purpose of the corporation is exclusively charitable and no activities of the corporation may ever be used to influence legislation.
4. All members in good standing are entitled to one vote at membership meetings.
5. In the event of the dissolution of the corporation all property and assets of the corporation shall be transferred and distributed to the Department of Public Recreation of the Unified School District No.1, Kenosha, Wisconsin and shall be used for recreational facilities for senior citizens.

**1972** The City of Kenosha purchased the building at 2717 – 67<sup>th</sup> Street (which had formerly housed the Kenosha County Welfare Department) for \$67,500 and began renting it to the Kenosha Senior Citizens Council, Inc. for the amount of \$1.00 per year.

**November 13, 1972** “The week of November 13, the Recreation Department will move into the Senior Citizens Center building located at 2717 – 67<sup>th</sup> Street. The program activities at the Center will be under the direction of recreation department personnel.”  
From: A Review of 1971-72 Recreational Activities, November 7, 1972  
(The Recreation Department had previously been housed at the Deming Instructional Center at 18<sup>th</sup> Avenue and 62<sup>nd</sup> Street and then at the Hannan Administration Annex at 4001 – 60<sup>th</sup> Street.)

*From the Department of Public Instruction report titled “What’s Your Pleasure?”*

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- 1975** Seniors conducted a fund drive and raised \$68,000 to pay for an addition to the Senior Center building at 2717 – 67<sup>th</sup> Street in Kenosha.
- 1980** From 1980-81 Recreation Department Goals
1. To offer additional activities for women.
    - a. Increased participation of women's teams in municipal basketball leagues.
    - b. Summer weight training and basketball instruction for junior and senior high school girls.
  2. To provide opportunities for adults 60 years and over to attend the Senior Citizens Center; to continue and expand program to meet the needs and interests of the senior citizens; to offer counseling and make information available to the senior citizens pertaining to their welfare; to implement the programs as designed utilizing regularly scheduled activities and programs.
  3. To assist community recreational organizations and other interest groups in their recreational endeavors.
  4. To establish and implement policies of the Recreation Department sponsorship of community activities.
- 1981** The Kenosha Senior Citizens Council, Inc. received a Community Development Block Grant in the amount of \$102,271 for a second addition to the building at 2717 – 67<sup>th</sup> Street, in Kenosha. The Seniors contributed \$7,871 toward the cost of the addition.
- 1982** The Senior Citizens Council, Inc. purchased the house at 6704 – 27<sup>th</sup> Avenue for \$43,000.
- 1982** The Senior Citizens Council, Inc. paid \$975 to have the house at 6704 – 27<sup>th</sup> Avenue razed to increase the size of the parking lot of the Senior Citizens Center.

## Kenosha Senior Citizens Center

Denise Jacob  
Program Director

2717 – 67<sup>th</sup> Street  
Kenosha, WI 53143

Phone 262-359-6260  
Fax 262-359-6044

**October 1, 1982**

Items numbered 7 and 15 of the lease between the Kenosha Senior Citizens Council, Inc. and the City of Kenosha, for the building located at 2717 – 67<sup>th</sup> Street, state the following:

(In this contract the Kenosha Senior Citizens Council is referred to as  
CORPORATION and the City of Kenosha is referred to as CITY.)

**7. PROTECTION OF CORPORATION 'S INVESTMENT:** The CORPORATION has, since 1972, invested approximately One Hundred Eighty-Seven Thousand Three Hundred Forty-Six (\$187,346.00) Dollars in improvements to the leased premises and in the procuring of land and the razing of buildings for additional parking to serve the leased premises, and CORPORATION may make additional improvements to the leased premises in the future at its expense. Should the CORPORATION lose this lease or fail to produce renewal thereof through no fault of CORPORATION, CITY agrees, at the option of the CORPORATION, to either:

- a. Relocate CORPORATION at a comparable facility; or
- b. Pay the CORPORATION for the actual cost of improvements to the leased premises, with due consideration for any appreciation in the value of said improvements, made by CORPORATION at CORPORATION'S expense, less any depreciation thereof, if applicable, and less any setoff for damages to the premises, if any, over and above normal wear and tear.

**15. ASSIGNMENT, SUBLEASE:** CORPORATION may not assign its rights under this lease or sublease all or any part of the leased premises without the prior approval of the Common Council, except that the Recreation Department operated by the Kenosha Unified School District No.1 may maintain offices in the building being part of the leased premises. Any assignee or sub lessee must respect the terms of this lease to which their rights are subordinate.

(This lease is renewed every few years.

The current extension of this lease is in effect until September 30, 2009.)



## Kenosha Senior Citizens Center

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Program Director

2717 – 67<sup>th</sup> Street  
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### **Fall 2002**

The Kenosha Senior Citizens Center building at 2717 – 67<sup>th</sup> Street needed to have the old roof torn off and a new roof installed. The roof was installed by Winding Roofing of Milwaukee, WI.

The City of Kenosha paid:	\$69,000.00
The Kenosha Senior Citizens Council paid:	<u>+15,634.00</u>
For a total cost of:	\$84,634.00

### **March 2010**

The Kenosha Senior Citizens Center building at 2717 – 67<sup>th</sup> Street needed repairs and some maintenance done to the roof. Van's Roofing, Inc. of Kenosha did the repairs at a cost of \$1,916.05 which was paid by the Kenosha Senior Citizens Council, Inc.

### **Fall 2010**

The Kenosha Senior Citizens Center building at 2717 – 67<sup>th</sup> Street needed masonry repairs, mold remediation and painting done to the exterior east wall of the building. An architectural plan was required before the project could begin. Insite Consulting Architects of Madison was hired, by recommendation of the Kenosha Unified School District, to plan the wall project. This service cost \$4,000. Van's Roofing was hired to remove the roof scuppers so the wall repairs could be done, and then reinstall the scuppers after the wall repairs were completed. The payment to Van's Roofing was \$4,000. The wall repairs were done by Bane-Nelson of Kenosha at a cost of \$23,000. This made the entire project come to a total cost of \$31,000. It was paid for in the following way:

City of Kenosha Block Grant was obtained and paid:	\$20,000
The Kenosha Senior Citizens Council, Inc. paid:	<u>+11,000</u>
For a total cost of:	\$31,000

## Kenosha Senior Citizens Center

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<u>Year</u>	<u>Date</u>	<u>Paid to</u>	<u>Work Done</u>	<u>Amount</u>
1975			Sr. Fund drive for new addition to building	\$68,000.00
1981			Sr. Council contribution toward cost of addition	\$7,871.00
1982			Purchased house at 6704-27th Ave to add to parking lot	\$43,000.00
1982			House razed at 6704-27th Ave to use as parking lot	\$975.00
1990	10/4	Electrical Contractors	Electrical work	\$4,339.82
1993	9/2	Nemcheck & Assoc.	Barrel roof derbigum	\$13,725.00
1994	1/3	Zirbel Electric	Ceiling fans	\$1,575.00
1995	5/25	Camosy Construction	Remodeling Fitness Room	\$4,831.00
1995	7/20, 9/8	Wieske Heating	Furnaces	\$4,300.00
1996	9/4	Wieske Heating	AC replacement	\$3,100.00
1998	10/19	Zirbel Electric	Ceiling fans	\$1,500.00
2000	12/1	Chimney Dr.	Chimney/Roof repair	\$780.00
2001	7/1	Kaelber Plumbing	Pipe replacement	\$5,000.00
2001	8/2	Kaelber Plumbing	Pipe replacement	\$5,672.00
2002	Fall	Winding Roofing	New Roof	\$15,634.00
2004	9/15	Wieske Heating	Furnace/computer room	\$1,850.00
2005	1/20	Wieske Heating	Exhaust fans	\$1,430.00
2006	2/22	KUSD	Toilet replacement	\$1,038.00
2006	6/16	Wieske Heating	Humidifiers	\$1,120.00
2007	1/10	Wieske Heating	Replace 3 furnaces	\$8,825.00
2007	9/4	Bane Nelson	Replace 3 Doors on East side of building	\$6,075.00
2010	3/23	Van's Roofing	Scupper & Roof Leak Repairs	\$1,916.05
2010	5/4	Insite Consulting Serv.	Architectural Exterior Wall Rehab Plan	\$4,000.00
2010		Van's Roofing	Scupper Work Necessary for Wall Rehab	\$4,000.00
2010		Bane Nelson	Wall Rehab Project (Senior Center Portion)	\$3,000.00
Total				\$213,556.87

The Kenosha Senior Citizens Center operates under the auspices of the  
Department of Athletics, Health, Phy.Ed. & Recreation – Kenosha Unified School District

Updated February 8, 2017

Coordinator – Bryan Mogensen

## KUSD Community Services and Programs (Fund 80) 3-Year Financial Analysis

Sum of Actual		TYPE	
FY	Full Fund	REVENUE	EXPENSE
<b>2017-18</b>	81-Recreation Services Program & Senior Center	569,120.00	509,193.50
	83-Community Services Program	725,662.00	750,213.78
	85-CLC After School Program		2,360.30
	86-KYPAC	71,292.52	72,479.58
	87-Marching Bands (Black Watch, Rambler)	374,182.06	308,382.15
	88-Fine Arts Recreation Programs (Summer Classics)	17,000.00	1,297.68
<b>2017-18 Total</b>		<b>1,757,256.58</b>	<b>1,643,926.99</b>
<b>2018-19</b>	81-Recreation Services Program & Senior Center	518,202.00	484,967.63
	83-Community Services Program	725,662.00	744,461.92
	85-CLC After School Program		2,465.45
	86-KYPAC	76,048.17	99,349.95
	87-Marching Bands (Black Watch, Rambler)	286,372.87	218,550.68
	88-Fine Arts Recreation Programs (Summer Classics)	17,000.00	6,472.00
<b>2018-19 Total</b>		<b>1,623,285.04</b>	<b>1,556,267.63</b>
<b>2019-20</b>	81-Recreation Services Program & Senior Center	513,330.50	463,663.61
	83-Community Services Program	726,907.61	720,192.89
	85-CLC After School Program		1,245.61
	86-KYPAC	75,901.50	67,521.37
	87-Marching Bands (Black Watch, Rambler)	220,036.50	69,517.73
	88-Fine Arts Recreation Programs (Summer Classics)	17,000.00	8,310.90
<b>2019-20 Total</b>		<b>1,553,176.11</b>	<b>1,330,452.11</b>

Actual (+/-)	% Spent	FY
59,926.50		
-24,551.78		
-2,360.30		
-1,187.06		
65,799.91		
15,702.32		
<b>113,329.59</b>	<b>94%</b>	<b>2017-18</b>
33,234.37		
-18,799.92		
-2,465.45		
-23,301.78		
67,822.19		
10,528.00		
<b>67,017.41</b>	<b>96%</b>	<b>2018-19</b>
49,666.89		
6,714.72		
-1,245.61		
8,380.13		
150,518.77		
8,689.10		
<b>222,724.00</b>	<b>86%</b>	<b>2019-20</b>

## 2020-2021 Audit/Budget/Finance Standing Committee Info Sheet

Name	Email Address	Quick Facts
Yolanda Adams	yadams@kUSD.edu	Chairperson of committee, KUSD school board member
Todd Battle	tbattle@kUSD.edu	KUSD school board member
Tony Garcia	tgarcia@kUSD.edu	KUSD school board member
Elizabeth (Beth) Baker	bbaker@pleasantprairiewi.gov	Community member , Senior Appraiser with the Village of Pleasant Prairie, KUSD parent
Stanley Washington	coclivingproof@yahoo.com	Community member, Associates Degree of Accounting, Financial Secretary at 23rd Avenue Church of Christ, Inc., Owner of Base-line Accounting, Tax & Consulting
Rachel Wickersheim	rachael.wickersheim@gmail.com	Community member, Finance Degree, Associate Director of Business Operations at IQVIA, experience in pharmaceutical finance audits, KUSD parent
Peter Wilson	pwilsoncpa@aol.com	Community member, Certified Public Accountant, B.S. Business Management, Treasurer of two small non-profit organizations
Dayanara Espinoza	despinoz61@students.kUSD.edu	KUSD student, grade 11, ITHSA
Quentin Smith	qsmith42@students.kUSD.edu	KUSD student, grade 11, Bradford
Anthony Jordan	ajordan@teachers.kUSD.edu	KUSD staff member, 11/12 Math Teacher, Harborside
Eric Santos	esantos@kUSD.edu	KUSD staff member, Medicaid Billing Specialist, ESC
<b>Administration</b>		
Sue Savaglio-Jarvis	ssavagli@kUSD.edu	Superintendent of Schools
Tarik Hamdan	thamdan@kUSD.edu	Chief Financial Officer

# Planning/Facilities Committee Meeting

*October 13, 2020 / 8:00 P.M. | ESC Boardroom*

		Members: Dan Wade, Chair/School Board Member Mary Modder, School Board Member Rebecca Stevens, School Board Member Cathryn Bothe, Community Member Johnathon George Student Member Kameron Jester, Student Member Matt St. Martin, Staff Member Duane Sturino, Staff Member  Please read: Committee Membership Document Please bring:
Meeting called by	Dan Wade	
Type of meeting	Planning/Facilities	
Facilitator	Dan Wade	
Note taker	Stacy Busby	
Timekeeper	To be determined	

## Agenda Items

Topic and Presenter		Outcome	Time allotted
1.	Welcome/Review of Operating Principles (see page 2)	Sharing	8 Minutes
2.	Capital Project Update	Sharing	18 Minutes
3.	2019-20 Year-End Energy Summary	Sharing	9 Minutes
4.	7 Commitments Reactor Group*	Sharing	5 Minutes
5.	Evaluation of Operating Principles <ul style="list-style-type: none"><li>Fist to Five</li><li>Were we successful in achieving the stated outcomes for the meeting?</li></ul>	Sharing	5 Minutes

## Other Information

Observers:

Resources:

Special notes:

\*For your awareness, this agenda item has no document attached to this packet. Please know, there may be a presentation shared on screen or talking points for sharing/discussing.

Next Meeting: February 9, 2021

**Our Mission:**

Provide excellent, challenging learning opportunities and experiences that prepare each student for success.

**Our Vision:**

To be Wisconsin's top performing urban school district that is highly regarded for continuously exceeding all expectations.

### **Operating Principles**

**Straight Talk**

We believe that we will not get as much out of our joint experience if we don't use straight talk. We also believe that trust is a key element in straight talk.

**Therefore, we will be open and honest with each other and use straight talk to increase clarity and focus.**

**Use of Our Time**

The time of each member is a valued resource. We are committed to being efficient and productive in our use of time.

We believe that time is a critical component of our success, good use of time keeps us focused with no needless digression and that time is a non-renewable resource so we must use it wisely.

**Therefore, we commit to:**

- 1. Start on time and end on time.**
- 2. Assure that purposes for our meetings and interactions are clear with a timeframe in mind**
- 3. Structure our meetings effectively to ensure that we stay on track**

**Listening**

Each participant brings a unique background, set of experiences, expertise and perspective. Our effectiveness as team members depends on our ability to access and leverage our diversity.

**Therefore, we will actively solicit others' ideas/perspectives and listen to each other with the intent of understanding and learning.**

## **Accomplishment and Optimism**

It is easy to get caught in the trap of problems, breakdowns and what is not working. This trap has the power to make us feel overburdened and discouraged.

**Therefore, agree to interrupt the negativity by periodically:**

- **Acknowledging and identifying barriers without fixating on them.**
- **Noting what is working**
- **Speaking what we have accomplished**
- **Acknowledging the contributions and accomplishments of others.**

## **Responsibility for Self**

It is easy to allow past stories, interpretations and relationships to interfere with our present effectiveness.

**Therefore, we agree to:**

- **Check our alliances, disagreements, unhelpful stories at the door**
- **Assume a positive predisposition towards one another**
- **Be open to discussing how things are going with each other within the meeting**
- **Commit to our own participation**

KENOSHA UNIFIED SCHOOL DISTRICT  
Kenosha, Wisconsin

October 13, 2020  
Planning & Facilities Standing Committee

**CAPITAL PROJECT UPDATE**

**Background:**

This evening we will provide a PowerPoint showing before and after pictures associated with the capital projects completed this spring, summer and early fall. There are three main categories of projects which will be summarized below. We were able to complete more work than in a typical summer break because of the extended time that students and staff were not in the buildings, and so for sake of staying on schedule this evening we will show some representative project pictures for certain types of work such as asphalt/concrete projects, roofing, and other infrastructure items.

**Major Maintenance Projects:**

This year was a big year for major maintenance projects due in large part to the shutdown of in-person learning in March. A little over \$5MM in projects were completed between March and July with another \$1MM plus from July 1<sup>st</sup> through the start of the school year. A total of 24 schools had at least one project completed, and several schools had multiple projects performed at them. Because of the short duration in which the funding could be used, the projects selected were not only based on need and priority, but also on whether the project could be completed by July 1<sup>st</sup>. In addition to the major maintenance projects a handful of other projects were completed using other funding sources such as the new welding labs at Bradford and Tremper, the new special education suite at Bradford, replacement exterior stairwells at KTEC-West, and new instrument storage for the music department at Harborside.

**Energy Efficiency Projects:**

At the April 25, 2016, School Board meeting, the Board approved a proposal to implement a Phase 2 series of energy efficiency projects using the energy revenue limit exemption based on the provisions in 2011 Wisconsin Act 32 and subsequent legislation. Furthermore, the Board approved an Initial Resolution on May 10, held a Public Hearing on the projects on May 24, and formally approved the selection of the performance contractors on June 28, 2016. The scope of work for Phase 2 were large projects at Bullen Middle School, Lance Middle School, Tremper High School and Bradford High School. The Bullen and Lance projects were completed



in 2018. The Tremper project was a three-year project that will be complete this fall, and the Bradford project is a four-year project that will be completed in the fall of 2022.

**School Security Projects:**

On June 1, 2018, KUSD was awarded \$888,788 from the State of Wisconsin Department of Justice (DOJ) to implement school security related improvements and training programs. An additional \$1,194,499 was awarded at the end of September 2018 and was later increased by the DOJ to \$1,234,499. All of the work with the first grant was completed last year, and the work with the second grant will be completed by December 31, 2020.

**2021-22 Capital Plan Timeline:**

Board Policy 3711 requires that a major maintenance project list be developed annually by the Department of Facilities Services and that the list be reviewed and approved by the School Board for action no later than April 1 of each year. We generally bring the plan before this Committee prior to forwarding to the Board, so that will happen when we meet next in February 2021.

Dr. Sue Savaglio-Jarvis  
Superintendent of Schools

Mr. Patrick Finnemore, PE  
Director of Facilities

KENOSHA UNIFIED SCHOOL DISTRICT  
Kenosha, Wisconsin

October 13, 2020  
Planning & Facilities Standing Committee

**2019-20 YEAR-END ENERGY SUMMARY**

**Background:**

The purpose of this report is to provide a summary of the year-end data related to utility expenditures as well as energy consumption data associated with our operational energy program in the district. In addition, information related to the savings associated with the completed energy savings projects is also provided.

**Utilities Budget Update:**

The following is a brief summary of the costs incurred for natural gas, electricity, and the entire utilities budget for the 2019-20 school year.

- We spent \$175,644 less on natural gas in 2019-20 as compared to previous year.
- We spent \$281,932 less on electricity in 2019-20 as compared to previous year.
- We spent 76% of the overall utility budget as compared to 87% the previous year.

The primary reason for significant savings was the shutdown of in-person learning in all of our schools in March. Other contributing factors were not holding in-person summer school and the reduced number of staff in the buildings as operations at the schools was limited to maintenance, custodial, and capital projects until mid-summer.

**Operational Energy Program Update:**

The table on the following page is a brief summary of the amount of energy saved as part of the Operational Energy Program for the 2019-20 school year. Two attachments are provided related to this program. The first is a school by school listing of savings for the 2019-20 school year, and the second is a five-year summary of the savings associated with this program.

	2018-19	2019-20
Electricity Saved (KWh)	8,381,188	11,388,507
Gas Saved (Therms)	523,793	511,998
<b>Dollars Saved</b>	<b>\$1,149,868</b>	<b>\$1,479,815</b>

### **Energy Saving Project Savings Summary:**

KUSD implemented two phases of energy savings performance contract projects using the energy revenue limit exemption based on the provisions in 2011 Wisconsin Act 32 and subsequent legislation. The first phase included projects at nine elementary schools in 2014 and 2015. The nine schools were:

- Bose Elementary School
- Forest Park Elementary School
- Grant Elementary School
- Grewenow Elementary School
- Harvey Elementary School
- Jefferson Elementary School
- Jeffery Elementary School
- Roosevelt Elementary School
- Vernon Elementary School

The third attachment to this report is a detailed summary of the savings related to the phase 1 projects which has consistently been excellent. The measured annual electric and gas savings for the phase 1 projects was \$153,568 this past year which continues a trend of outperforming the estimated savings for these projects. This savings takes into account all of the operational factors including the Covid-19 related closures last spring, so it is a true measure of the success of these projects.

The phase 2 projects are still in progress, but two of the schools have now been complete for one full year. Those two schools are Bullen and Lance Middle Schools. The fourth attachment to this report is the measured savings related to the first full year of operation of these schools after the projects were completed. The measured annual savings for these two projects was \$77,678 which is a very promising start and greater than the estimated amount of savings associated with these projects. As we continue to monitor and measure the energy usage at these two schools, we will look for ways to optimize energy savings as long as those changes do not adversely affect the operations of the schools.

Dr. Sue Savaglio-Jarvis  
Superintendent of Schools

Mr. Patrick Finnemore, PE  
Director of Facilities

# Monthly Energy Efficiency Program Tracking Summary

UTILITY INFORMATION (13 months of gas and electric data)

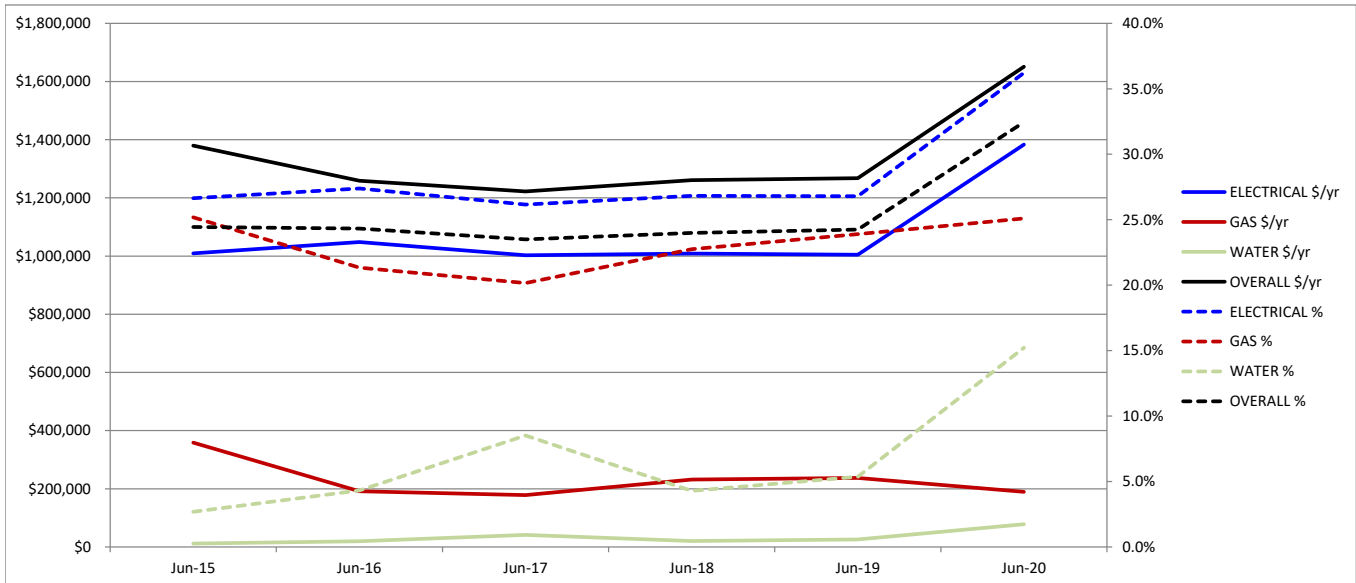
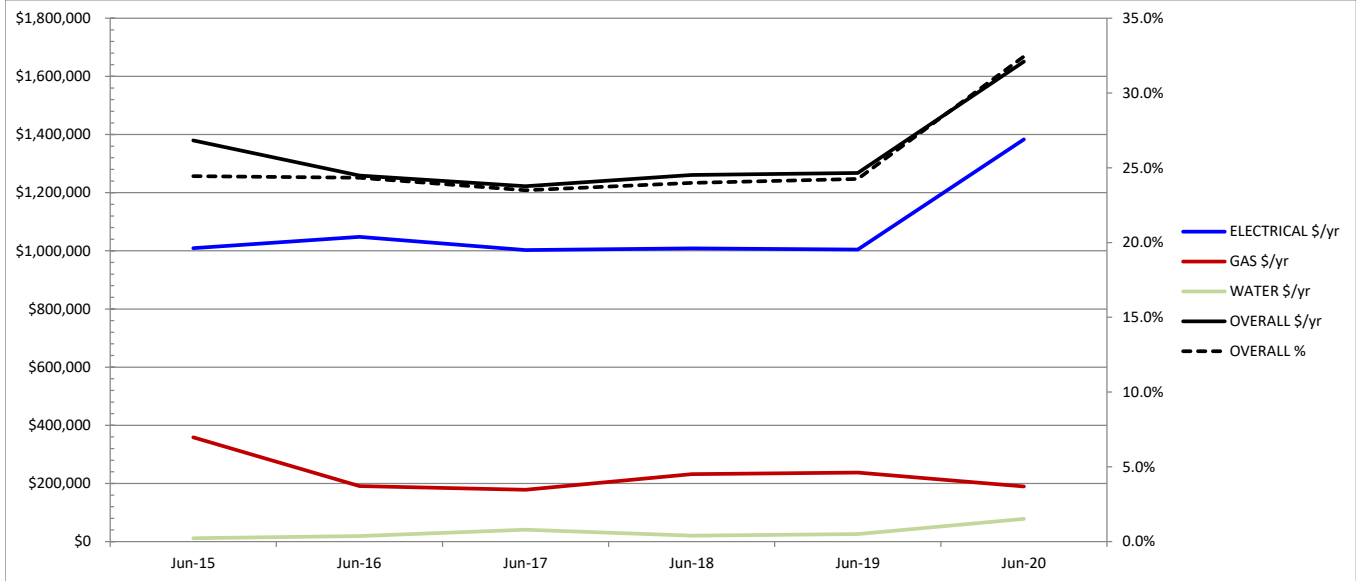
September 2019 through June 2020

End of FY -	Jun-20	Current Month:					Degree Days (Sep-Jun) Last Year: HTG 6956.5: CLNG 215							Degree Days (Sep-Jun) This Year: HTG 6356: CLNG 321						
BUILDING	ACTUAL USE FY2020						Last Year FY2019 SAVINGS*							FY2020 SAVINGS*						
	kWh	kW	therms	CCF	\$		kWh	kW	therms	CCF	\$	% Savings	kWh	kW	therms	CCF	\$	% Savings		
Bradford	1,737,120	4,849	118,312	3,218	\$272,161		901,514	1,965	45,366	1,105	\$103,271	24.3%	1,204,133	3,313	52,654	683	\$139,648	33.9%		
Hillcrest	65,160	-	13,290	207	\$18,979		18,694	-	1,228	62	\$3,530	14.3%	27,276	0	780	(44)	\$4,067	17.6%		
Indian Trail	2,358,400	7,808	99,042	2,717	\$362,851		1,173,039	5,415	5,346	(1,709)	\$151,239	26.1%	1,707,229	6,847	10,015	(1,680)	\$212,095	36.9%		
LakeView Tec	258,240	960	7,067	195	\$44,645		363,675	465	2,712	(98)	\$29,820	35.2%	426,407	785	3,264	(3)	\$39,005	46.6%		
Reuther	590,220	2,537	122,719	1,385	\$131,186		206,253	935	18,027	(213)	\$33,102	17.0%	347,330	1,203	23,892	(213)	\$50,016	27.6%		
Tremper	1,418,232	4,360	129,654	2,026	\$235,375		723,764	1,293	52,243	2,427	\$89,218	23.2%	1,123,659	2,025	62,162	2,732	\$122,367	34.2%		
HS Total:	6,427,372	20,514	490,084	9,748	\$1,065,197		3,386,939	10,073	124,922	1,464	\$410,180	24.2%	4,836,034	14,172	152,767	1,475	\$567,197	34.7%		
Bullen	356,366	1,769	33,600	1,200	\$80,933		524,468	328	50,812	(141)	\$56,744	38.0%	589,122	638	48,267	75	\$63,276	43.9%		
Lance	352,800	1,961	38,054	771	\$81,121		148,172	142	7,488	587	\$13,008	11.2%	257,904	275	22,951	747	\$30,161	27.1%		
Lincoln Middle	525,860	2,588	76,355	716	\$111,142		330,163	555	19,320	(306)	\$35,243	21.1%	470,821	959	8,868	2	\$45,396	29.0%		
Mahone	927,600	4,035	52,868	627	\$152,352		339,647	611	32,685	(56)	\$42,543	19.2%	529,024	1,287	31,127	340	\$65,047	29.9%		
KTEC West	256,200	837	54,825	714	\$58,198		212,228	996	12,858	(485)	\$32,583	28.0%	364,017	1,416	15,311	117	\$53,055	47.7%		
Washington	252,074	1,236	56,463	537	\$63,819		167,737	749	(9,498)	(22)	\$18,887	18.4%	287,455	1,034	(6,109)	77	\$32,719	33.9%		
MS Total:	2,670,900	12,426	312,165	4,565	\$547,565		1,722,415	3,379	113,665	(423)	\$199,009	22.8%	2,498,343	5,609	120,415	1,358	\$289,654	34.6%		
Bain School C	467,700	2,400	35,670	508	\$94,124		186,262	750	13,696	180	\$30,330	23.3%	252,168	800	8,335	233	\$33,708	26.4%		
Bose	140,800	450	20,559	501	\$32,757		189,687	523	19,379	617	\$35,999	49.6%	189,636	596	14,784	593	\$34,148	51.0%		
Brass	284,400	1,126	20,371	722	\$54,173		122,302	592	13,569	(363)	\$20,575	24.7%	161,001	928	10,733	(360)	\$26,808	33.1%		
Dimensions of	58,224	-	20,754	243	\$19,657		4,322	-	(1,777)	(15)	(\$746)	-3.1%	15,964	0	(2,647)	33	\$619	3.1%		
Forest	119,690	461	16,623	419	\$31,254		68,001	101	32,881	(37)	\$25,033	40.2%	90,577	255	29,278	144	\$28,124	47.4%		
Frank	470,600	1,550	30,242	554	\$77,995		231,876	596	(782)	38	\$24,906	22.7%	246,236	830	885	1	\$29,405	27.4%		
Grant	103,560	396	15,557	204	\$24,023		32,079	208	20,147	226	\$16,920	37.4%	46,909	251	17,961	251	\$16,499	40.7%		
Grewenow	121,680	454	20,911	464	\$29,508		152,580	361	24,823	(46)	\$28,653	44.5%	169,954	406	23,143	(90)	\$28,008	48.7%		
Harvey	108,785	455	18,744	521	\$29,315		91,710	272	22,550	922	\$27,704	43.6%	111,470	349	21,857	637	\$26,518	47.5%		
Jefferson	124,590	347	20,232	291	\$30,671		85,153	236	20,848	1,196	\$31,411	44.9%	109,489	325	18,752	1,388	\$37,199	54.8%		
Jeffery	145,501	557	14,122	434	\$31,551		145,718	418	8,534	87	\$23,395	39.0%	172,494	539	6,983	3	\$24,950	44.2%		
KTEC	155,200	530	25,950	704	\$36,709		(3,309)	123	2,271	(77)	\$1,612	3.8%	21,480	291	(3,959)	(197)	\$2,044	5.3%		
McKinley Eler	118,560	449	25,633	330	\$26,806		33,498	83	3,411	3	\$5,631	15.2%	44,853	175	1,523	89	\$9,277	25.7%		
Charles Nash	264,480	1,094	16,817	329	\$55,182		86,149	302	19,066	60	\$19,646	22.1%	163,004	825	21,140	121	\$32,752	37.2%		
Pleasant Prai	419,680	1,549	27,274	507	\$82,502		129,818	(1)	1,431	25	\$8,212	8.3%	202,481	395	(1,006)	250	\$18,656	18.4%		
Prairie Lane	236,100	933	22,924	459	\$48,265		107,510	120	6,839	49	\$15,460	22.9%	101,197	139	3,494	283	\$15,300	24.1%		
Roosevelt	123,480	486	19,633	509	\$31,221		81,539	266	13,730	(152)	\$16,701	31.5%	94,923	308	12,012	39	\$18,397	37.1%		
Somers	304,160	1,062	30,712	-	\$54,382		147,702	279	7,238	-	\$16,976	21.5%	172,994	587	4,207	0	\$21,494	28.3%		
Southport	167,520	742	31,090	648	\$41,082		76,618	161	(224)	372	\$10,317	17.5%	114,334	424	(4,343)	98	\$13,342	24.5%		
Stocker	301,920	1,224	23,493	425	\$61,411		216,668	553	(5,037)	157	\$20,957	23.7%	268,984	743	(3,916)	251	\$27,916	31.3%		
Strange	164,728	730	18,974	1,347	\$40,819		139,016	184	(7)	624	\$17,022	24.2%	194,109	392	6,453	506	\$25,956	38.9%		
Vernon	294,662	947	50,656	1,106	\$64,290		160,446	578	35,649	(268)	\$32,803	29.3%	200,903	792	35,433	8	\$36,930	36.5%		
Whittier	240,840	1,140	22,504	1,365	\$61,833		310,417	1,090	964	1,830	\$50,623	44.6%	368,462	1,220	(1,110)	1,118	\$47,320	43.4%		
Wilson	101,400	447	34,070	269	\$32,464		74,585	210	5,583	121	\$12,106	24.2%	93,499	300	2,750	112	\$14,302	30.6%		
ELEM Total:	5,038,260	19,529	583,515	12,858	\$1,091,992		2,870,347	8,006	264,782	5,550	\$492,247	28.2%	3,607,121	11,868	222,742	5,511	\$569,674	34.3%		
Cesar Chavez	156,560	464	6,748	199	\$26,539		42,859	114	2,706	86	\$6,571	17.2%	61,261	194	2,456	105	\$8,752	24.8%		
ESC	912,240	3,043	41,550	780	\$136,879		337,957	660	17,874	453	\$39,039	21.8%	355,405	809	13,941	661	\$40,371	22.8%		
Recreation	51,575	-	7,032	89	\$10,845		20,671	-	(156)	47	\$2,823	17.5%	30,343	0	(323)	76	\$4,167	27.8%		
Other Total:	1,120,375	3,507	55,330	1,068	\$174,264		401,487	774	20,424	586	\$48,433	20.8%	447,009	1,003	16,074	842	\$53,290	23.4%		
Totals:	15,256,907	55,976	1,441,094	28,239	\$2,879,017		8,381,188	22,232	523,793	7,177	\$1,149,868	25.3%	11,388,507	32,652	511,998	9,186	\$1,479,815	33.9%		

\* Savings are based on the comparison of actual billed use to the baseline model. The model is based on utility data from calendar year 2003 (typically) and adjusts for weather, occupancy and school year data.

## District SAVINGS

sf 3,596,539		ELECTRICAL						GAS				WATER				OVERALL			
FY Ending		kWh/yr	%	kW/yr	%	\$/yr	%	Th/yr	%	\$/yr	%	CCF/yr	%	\$/yr	%	mmBTU/yr	%	\$/yr	%
5 Jun-15		9,395,992	30.6%	22,351.7	21.3%	\$1,009,253	26.6%	610,722	27.0%	\$358,587	25.2%	3,951	8.6%	\$11,610	2.7%	93,141	12.1%	\$1,379,451	24.4%
6 Jun-16		9,879,711	31.3%	24,616.8	22.9%	\$1,048,402	27.4%	406,020	21.7%	\$191,329	21.3%	3,256	7.1%	\$19,382	4.3%	74,321	11.8%	\$1,259,112	24.3%
7 Jun-17		9,721,787	30.4%	23,846.3	21.9%	\$1,002,697	26.2%	360,119	20.1%	\$178,259	20.2%	2,881	6.3%	\$41,249	8.5%	69,192	11.1%	\$1,222,205	23.5%
8 Jun-18		9,727,320	30.9%	24,454.0	22.9%	\$1,008,610	26.8%	469,039	22.6%	\$231,960	22.7%	5,552	12.1%	\$20,418	4.3%	80,103	11.3%	\$1,260,989	24.0%
9 Jun-19		9,439,016	30.0%	25,586.6	24.1%	\$1,004,369	26.8%	529,573	24.4%	\$237,120	23.9%	6,416	14.0%	\$25,997	5.4%	85,173	11.3%	\$1,267,486	24.3%
10 Jun-20		12,651,072	40.0%	36,423.9	34.1%	\$1,383,267	36.2%	522,699	26.3%	\$189,475	25.1%	7,876	18.4%	\$78,110	15.2%	95,448	17.7%	\$1,650,852	32.4%



# GUARANTEED ENERGY SAVINGS CONTRACT



# Performance Services

**KENOSHA UNITED SCHOOL DISTRICT**

Annual Report

**YEAR 5**

January 2019 - December 2019



**Performance Services, Inc.**

9779 S. Franklin Dr., Suite 104 | Franklin, WI 53132

p: (414) 367-5066

[www.performanceservices.com](http://www.performanceservices.com)



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## Executive Summary

In 2013 Kenosha Unified School District entered into a partnership with Performance Services to utilize performance contracting to renovate nine of their Elementary School Buildings. The objectives of the project were to improve the mechanical systems, lighting and building envelope issues. In order to get the most value of their budget Kenosha utilized Act 32.

The project was completed over the next two years with the first phase finishing in 2014. This first phase included work at Bose Elementary, Forest Park Elementary, Grant Elementary, Grewenow Elementary and Harvey Elementary. In 2015, work at Jefferson Elementary, Jeffery Elementary, Roosevelt Elementary and Vernon Elementary was completed. The project improvements include:

- Replaced window air conditioning units with a more efficient and effective DX cooling system
- inefficient steam heating was replaced with a low-temp hot water system
- Building control systems were upgraded to an open protocol Tridium system
- Constant volume classroom units were replaced with variable air volume systems
- Fan powered relief fans were installed to help increase fresh air ventilation
- Inefficient T-12 fixtures were replaced with high efficiency T-8 fixtures
- Parking lot fixtures were replaced with LED fixtures
- Exterior metal HID fixtures were replaced with LED fixtures
- Roofs were replaced
- Window walls systems at Harvey Elementary were replaced
- Masonry tuck pointed at Grant Elementary
- Vestibules were added to the main entries at Bose and Harvey Elementary Schools.

Following this Executive Summary please find the Year 5 Annual Guarantee report. This report contains the savings results for the period of time between January 1, 2019 and December 31, 2019 for both phases of work that were completed in 2015. This report is intended to provide an update on the savings performance to date and to help uncover potential issues.

### ENERGY SAVINGS:

Calculated Savings:	\$ \$75,829 (electric)
	<u>\$ \$77,739</u> (gas)
	<b>\$153,568</b>
Guarantee Savings (12 months)	<b>\$138,777</b>



Calculated energy savings for the fifth guarantee year exceeded guaranteed energy savings by \$14,791 after adjusting for utility rate changes, operating schedule variations, and owner overrides. The Energy Savings Report is based on a combination of measured, verified, and calculated savings that are the most accurate methods of determining actual savings.

**NEXT REPORT:**

We will provide the Year 6 Annual Energy Savings Report in March 2021. Please feel free to contact us at 888-390-2700 with any questions or comments.

**CONTACTS:**

- Abby Vaal, Performance Assurance Administrator
- Mike Lindsey, Performance Assurance & Energy Leadership Manager
- Chris Rainey, Engineering Manager
- Scott Morris, Operations Vice President
- Scott Zigmond, Sales and Marketing Vice President
- Tim Thoman, President
- Office: 888-390-2700

<b>Annual Guaranteed Savings Report Summary</b> <b>Year 5 (January 1, 2019 - December 31, 2019)</b>			
Description	Guaranteed Savings	Calculated Savings	Net Difference
<b>ENERGY SAVINGS</b>			
<b>Bose Elementary School</b>			
* Electric	\$13,806	\$15,340	\$1,534
* Gas	\$8,855	\$9,839	\$984
<b>Sub-Total</b>	<b>\$22,661</b>	<b>\$25,179</b>	<b>\$2,518</b>
<b>Forest Park Elementary School</b>			
* Electric	\$7,231	\$7,963	\$732
* Gas	\$10,495	\$11,661	\$1,166
<b>Sub-Total</b>	<b>\$17,726</b>	<b>\$19,625</b>	<b>\$1,899</b>
<b>Grant Elementary School</b>			
* Electric	\$4,349	\$4,821	\$472
* Gas	\$5,633	\$6,258	\$625
<b>Sub-total</b>	<b>\$9,982</b>	<b>\$11,079</b>	<b>\$1,097</b>
<b>Grewenow Elementary School</b>			
* Electric	\$7,637	\$8,466	\$829
* Gas	\$5,052	\$5,613	\$561
<b>Sub-Total</b>	<b>\$12,689</b>	<b>\$14,079</b>	<b>\$1,390</b>
<b>Harvey Elementary School</b>			
* Electric	\$1,776	\$1,896	\$120
* Gas	\$6,534	\$7,260	\$726
<b>Sub-Total</b>	<b>\$8,310</b>	<b>\$9,157</b>	<b>\$847</b>
<b>Jefferson Elementary School</b>			
* Electric	\$4,447	\$4,933	\$486
* Gas	\$6,001	\$6,668	\$667
<b>Sub-Total</b>	<b>\$10,448</b>	<b>\$11,601</b>	<b>\$1,153</b>
<b>Jeffery Elementary School</b>			
* Electric	\$5,813	\$6,182	\$369
* Gas	\$4,024	\$4,519	\$495
<b>Sub-Total</b>	<b>\$9,837</b>	<b>\$10,702</b>	<b>\$865</b>
<b>Roosevelt Elementary School</b>			
* Electric	\$7,708	\$8,475	\$767
* Gas	\$7,366	\$8,185	\$819
<b>Sub-Total</b>	<b>\$15,074</b>	<b>\$16,660</b>	<b>\$1,586</b>
<b>Vernon Elementary School</b>			
* Electric	\$16,088	\$17,752	\$1,664
* Gas	\$15,962	\$17,735	\$1,773
<b>Sub-Total</b>	<b>\$32,050</b>	<b>\$35,487</b>	<b>\$3,437</b>
<b>All Building Energy Savings</b>	<b>\$138,777</b>	<b>\$153,568</b>	<b>\$14,791</b>

<b>Detailed Energy Savings Summary</b> <b>Year 5 (January 1, 2019 - December 31, 2019)</b>									
Improvements	Electric Savings			Gas Savings			Total Savings		
	Guaranteed Ytd	Calculated Ytd	Difference Ytd	Guaranteed Ytd	Calculated Ytd	Difference Ytd	Guaranteed Ytd	Calculated Ytd	Difference Ytd
<b>BOSE ELEMENTARY SCHOOL</b>									
* Savings due to VFD installation	\$5,596	\$6,218					\$5,596	\$6,218	
* Savings due to replacement of old boilers with high efficiency units				\$4,674	\$5,194		\$4,674	\$5,194	
* Savings due to updating and replacement of old lighting systems	\$8,210	\$9,122					\$8,210	\$9,122	
* Savings due to roof replacement				\$4,181	\$4,645		\$4,181	\$4,645	
<b>Grand Total for Bose Elementary School</b>	<b>\$13,806</b>	<b>\$15,340</b>	<b>\$1,534</b>	<b>\$8,855</b>	<b>\$9,839</b>	<b>\$984</b>	<b>\$22,661</b>	<b>\$25,179</b>	<b>\$2,518</b>
<b>FOREST PARK ELEMENTARY SCHOOL</b>									
* Savings due to VFD installation	\$1,453	\$1,543					\$1,453	\$1,543	
* Savings due to replacement of old boilers with high efficiency units				\$7,609	\$8,454		\$7,609	\$8,454	
* Savings due to updating and replacement of old lighting systems	\$5,778	\$6,420					\$5,778	\$6,420	
* Savings due to roof replacement				\$2,886	\$3,207		\$2,886	\$3,207	
<b>Grand Total for Forest park Elementary School</b>	<b>\$7,231</b>	<b>\$7,963</b>	<b>\$732</b>	<b>\$10,495</b>	<b>\$11,661</b>	<b>\$1,166</b>	<b>\$17,726</b>	<b>\$19,625</b>	<b>\$1,899</b>
<b>GRANT ELEMENTARY SCHOOL</b>									
* Savings due to VFD installation	\$233	\$248					\$233	\$248	
* Savings due to replacement of old boilers with high efficiency units				\$4,496	\$4,995		\$4,496	\$4,995	
* Savings due to updating and replacement of old lighting systems	\$4,116	\$4,573					\$4,116	\$4,573	
* Savings due to roof replacement				\$1,137	\$1,263		\$1,137	\$1,263	
<b>Grand Total for Grant Elementary</b>	<b>\$4,349</b>	<b>\$4,821</b>	<b>\$472</b>	<b>\$5,633</b>	<b>\$6,258</b>	<b>\$625</b>	<b>\$9,982</b>	<b>\$11,079</b>	<b>\$1,097</b>
<b>GREWENOW ELEMENTARY SCHOOL</b>									
* Savings due to VFD installation	\$403	\$428					\$403	\$428	
* Savings due to replacement of old boilers with high efficiency units				\$4,489	\$4,987		\$4,489	\$4,987	
* Savings due to updating and replacement of old lighting systems	\$7,234	\$8,038					\$7,234	\$8,038	
* Savings due to roof replacement				\$563	\$626		\$563	\$626	
<b>Grand Total for Grewenow Elementary School</b>	<b>\$7,637</b>	<b>\$8,466</b>	<b>\$829</b>	<b>\$5,052</b>	<b>\$5,613</b>	<b>\$561</b>	<b>\$12,689</b>	<b>\$14,079</b>	<b>\$1,390</b>
<b>HARVEY ELEMENTARY SCHOOL</b>									
* Savings due to VFD installation	\$1,551	\$1,646					\$1,551	\$1,646	
* Savings due to replacement of old boilers with high efficiency units				\$6,534	\$7,260		\$6,534	\$7,260	
* Savings due to updating and replacement of exterior wall pack lighting	\$225	\$250					\$225	\$250	
<b>Grand Total for Harvey Elementary School</b>	<b>\$1,776</b>	<b>\$1,896</b>	<b>\$120</b>	<b>\$6,534</b>	<b>\$7,260</b>	<b>\$726</b>	<b>\$8,310</b>	<b>\$9,157</b>	<b>\$847</b>
<b>JEFFERSON ELEMENTARY SCHOOL</b>									
* Savings due to VFD installation	\$171	\$182					\$171	\$182	
* Savings due to replacement of old boilers with high efficiency units				\$4,558	\$5,065		\$4,558	\$5,065	
* Savings due to updating and replacement of old lighting systems	\$4,276	\$4,751					\$4,276	\$4,751	
* Savings due to roof replacement				\$1,443	\$1,603		\$1,443	\$1,603	
<b>Jefferson Elementary Total</b>	<b>\$4,447</b>	<b>\$4,933</b>		<b>\$6,001</b>	<b>\$6,668</b>		<b>\$10,448</b>	<b>\$11,601</b>	<b>\$1,153</b>
<b>JEFFERY ELEMENTARY SCHOOL</b>									
* Savings due to VFD installation	\$5,588	\$5,932					\$5,588	\$5,932	
* Savings due to replacement of old boilers with high efficiency units				\$3,333	\$3,743		\$3,333	\$3,743	
* Savings due to updating and replacement of exterior wall pack lighting	\$225	\$250					\$225	\$250	
* Savings due to roof replacement				\$691	\$776		\$691	\$776	
<b>Jeffery Elementary School Total</b>	<b>\$5,813</b>	<b>\$6,182</b>		<b>\$4,024</b>	<b>\$4,519</b>		<b>\$9,837</b>	<b>\$10,702</b>	<b>\$865</b>
<b>ROOSEVELT ELEMENTARY SCHOOL</b>									
* Savings due to VFD installation	\$1,838	\$1,952					\$1,838	\$1,952	
* Savings due to replacement of old boilers with high efficiency units				\$5,262	\$5,847		\$5,262	\$5,847	
* Savings due to updating and replacement of old lighting systems	\$5,870	\$6,523					\$5,870	\$6,523	
* Savings due to roof replacement				\$2,104	\$2,338		\$2,104	\$2,338	
<b>Roosevelt Elementary School Total</b>	<b>\$7,708</b>	<b>\$8,475</b>		<b>\$7,366</b>	<b>\$8,185</b>		<b>\$15,074</b>	<b>\$16,660</b>	<b>\$1,586</b>
<b>VERNON ELEMENTARY SCHOOL</b>									
* Savings due to VFD installation	\$3,506	\$3,771					\$3,506	\$3,771	
* Savings due to replacement of old boilers with high efficiency units				\$14,377	\$15,974		\$14,377	\$15,974	
* Savings due to updating and replacement of old lighting systems	\$12,582	\$13,980					\$12,582	\$13,980	
* Savings due to roof replacement				\$1,585	\$1,761		\$1,585	\$1,761	
<b>Vernon Elementary Total</b>	<b>\$16,088</b>	<b>\$17,752</b>		<b>\$15,962</b>	<b>\$17,735</b>		<b>\$32,050</b>	<b>\$35,487</b>	<b>\$3,437</b>
<b>Grand Total for All Buildings</b>	<b>\$68,855</b>	<b>\$75,829</b>	<b>\$6,974</b>	<b>\$69,922</b>	<b>\$77,739</b>	<b>\$7,817</b>	<b>\$138,777</b>	<b>\$153,568</b>	<b>\$14,791</b>

## Actual Equipment Runtimes Quarter 1 Year 5 - Quarter 1 (January 1, 2019 - March 31, 2019)

Building	System ID	January			February			March			Quarterly Runtime Savings		
		Guar. (Hours)	Actual (Hours)	Saved (Hours)	Guar. (Hours)	Actual (Hours)	Saved (Hours)	Guar. (Hours)	Actual (Hours)	Saved (Hours)	Guaranteed (Hours)	Actual (Hours)	Saved (Hours)
								31					
Bose Elementary School	Classroom Unit (AHU-1)	193	662	(469)	193	528	(335)	193	535	(342)	579	1,725	(1,146)
Bose Elementary School	Gymnasium Unit (AHU-2)	193	370	(177)	193	269	(76)	193	276	(83)	579	916	(337)
Bose Elementary School	Multi-Purpose Room Unit	193	353	(160)	193	252	(59)	193	257	(64)	579	862	(283)
Bose Elementary School	Library Unit	193	272	(79)	193	244	(51)	193	255	(62)	579	771	(192)
Forest Park Elementary School	Classroom (AHU-1)	173	359	(186)	173	329	(156)	173	223	(50)	519	910	(391)
Forest Park Elementary School	Gym (AHU-2)	173	338	(165)	173	324	(151)	173	264	(91)	519	925	(406)
Forest Park Elementary School	Multi-Purpose (AHU-3)	173	343	(170)	173	329	(156)	173	269	(96)	519	941	(422)
Forest Park Elementary School	Uv_1	173	373	(200)	173	340	(167)	173	270	(97)	519	983	(464)
Forest Park Elementary School	Uv_2	173	330	(157)	173	292	(119)	173	208	(35)	519	830	(311)
Forest Park Elementary School	Uv_3	173	333	(160)	173	295	(122)	173	210	(37)	519	839	(320)
Forest Park Elementary School	Uv_4	173	398	(225)	173	360	(187)	173	275	(102)	519	1,033	(514)
Grant Elementary School	Gym Unit (AHU-1)	173	241	(68)	173	195	(22)	173	191	(18)	519	626	(107)
Grant Elementary School	Classroom Unit Vents	173	380	(207)	173	260	(87)	173	236	(63)	519	876	(357)
Grewenow Elementary School	Gym Unit (AHU-1)	173	346	(173)	173	276	(103)	173	334	(161)	519	957	(438)
Grewenow Elementary School	Classroom Unit Vents	173	317	(144)	173	233	(60)	173	241	(68)	519	791	(272)
Harvey Elementary School	Classroom Unit (AHU-1)	173	384	(211)	173	314	(141)	173	282	(109)	519	980	(461)
Harvey Elementary School	Classroom Unit (AHU-2)	173	352	(179)	173	314	(141)	173	282	(109)	519	947	(428)
Harvey Elementary School	Gym Unit (AHU-3)	173	349	(176)	173	323	(150)	173	301	(128)	519	973	(454)
Harvey Elementary School	Multi-Purpose Room (AHU-4)	173	360	(187)	173	293	(120)	173	269	(96)	519	922	(403)
Jefferson Elementary School	Gym Unit (AHU-1)	215	342	(127)	215	252	(37)	215	258	(43)	645	852	(207)
Jefferson Elementary School	Classroom Units Vents	173	337	(164)	173	242	(69)	173	229	(56)	519	808	(289)
Jeffery Elementary School	Classroom Unit (AHU-1)	173	328	(155)	173	232	(59)	173	230	(57)	519	790	(271)
Jeffery Elementary School	Gymnasium Unit (AHU-2)	173	703	(530)	173	608	(435)	173	677	(504)	519	1,988	(1,469)
Jeffery Elementary School	Multi-Purpose Unit (AHU-3)	173	313	(140)	173	218	(45)	173	212	(39)	519	742	(223)
Jeffery Elementary School	Library Unit (AHU-4)	173	561	(388)	173	401	(228)	173	395	(222)	519	1,357	(838)
Roosevelt Elementary School	Classroom Unit (AHU-1)	173	376	(203)	173	297	(124)	173	298	(125)	519	970	(451)
Roosevelt Elementary School	Classroom Unit Vents	173	361	(188)	173	268	(95)	173	268	(95)	519	897	(378)
Vernon Elementary School	Classroom Unit (AHU-1)	173	354	(181)	173	307	(134)	173	247	(74)	519	908	(389)
Vernon Elementary School	Classroom Unit (AHU-2)	173	570	(397)	173	402	(229)	173	326	(153)	519	1,298	(779)
Vernon Elementary School	Classroom Unit (AHU-3)	173	744	(571)	173	672	(499)	173	743	(570)	519	2,158	(1,639)
Vernon Elementary School	Gym Unit (AHU-4)	173	317	(144)	173	262	(89)	173	198	(25)	519	778	(259)
Vernon Elementary School	Multi-Purpose Room (AHU-5)	173	320	(147)	173	269	(96)	173	202	(29)	519	790	(271)
Vernon Elementary School	Pool Unit (AHU-6)	728	321	407	728	267	461	728	208	520	2,184	796	1,388
Vernon Elementary School	Brompton Office Unit (AHU-7)	173	744	(571)	173	672	(499)	173	743	(570)	519	2,158	(1,639)
Vernon Elementary School	Brompton Café Unit (AHU-8)	173	331	(158)	173	288	(115)	173	238	(65)	519	857	(338)

## Actual Equipment Runtimes Quarter 2

### Year 5 - Quarter 2 (April 1, 2019 - June 30, 2019)

Building	System ID	April			May			June			Quarterly Runtime Savings		
		Guar. (Hours)	Actual (Hours)	Saved (Hours)	Guar. (Hours)	Actual (Hours)	Saved (Hours)	Guar. (Hours)	Actual (Hours)	Saved (Hours)	Guar. (Hours)	Actual (Hours)	Saved (Hours)
Bose Elementary School	Classroom Unit (AHU-1)	193	425	(232)	193	336	(143)	172	243	(71)	558	1,005	(447)
Bose Elementary School	Gymnasium Unit (AHU-2)	193	372	(179)	193	274	(81)	172	240	(68)	558	886	(328)
Bose Elementary School	Multi-Purpose Room Unit	193	358	(165)	193	260	(67)	172	222	(50)	558	839	(281)
Bose Elementary School	Library Unit	193	293	(100)	193	241	(48)	172	220	(48)	558	754	(196)
Forest Park Elementary School	Classroom (AHU-1)	173	150	23	173	179	(6)	155	179	(24)	501	508	(7)
Forest Park Elementary School	Gym Unit (AHU-2)	173	210	(37)	173	268	(95)	155	245	(90)	501	723	(222)
Forest Park Elementary School	Multi-Purpose (AHU-3)	173	210	(37)	173	260	(87)	155	239	(84)	501	710	(209)
Forest Park Elementary School	Uv_1	173	193	(20)	173	235	(62)	155	162	(7)	501	590	(89)
Forest Park Elementary School	Uv_2	173	155	18	173	206	(33)	155	169	(14)	501	531	(30)
Forest Park Elementary School	Uv_3	173	155	18	173	164	9	155	169	(14)	501	489	12
Forest Park Elementary School	Uv_4	173	211	(38)	173	256	(83)	155	169	(14)	501	635	(134)
Grant Elementary School	Gym Unit (AHU-1)	173	165	8	173	203	(30)	155	168	(13)	501	536	(35)
Grant Elementary School	Classroom Unit Vents	173	185	(12)	173	223	(50)	155	179	(24)	501	587	(86)
Grewenow Elementary School	Gym Unit (AHU-1)	173	282	(109)	173	358	(185)	155	320	(165)	501	960	(459)
Grewenow Elementary School	Classroom Unit Vents	173	217	(44)	173	165	8	155	178	(23)	501	561	(60)
Harvey Elementary School	Classroom Unit (AHU-1)	173	231	(58)	173	304	(131)	155	252	(97)	501	787	(286)
Harvey Elementary School	Classroom Unit (AHU-2)	173	231	(58)	173	293	(120)	155	251	(96)	501	776	(275)
Harvey Elementary School	Gym Unit (AHU-3)	173	230	(57)	173	313	(140)	155	250	(95)	501	794	(293)
Harvey Elementary School	Multi-Purpose Room (AHU-4)	173	218	(45)	173	293	(120)	155	250	(95)	501	761	(260)
Jefferson Elementary School	Gym Unit (AHU-1)	215	219	(4)	214	379	(165)	46	230	(184)	475	829	(354)
Jefferson Elementary School	Classroom Units Vents	173	182	(9)	173	237	(64)	155	219	(64)	501	638	(137)
Jeffery Elementary School	Classroom Unit (AHU-1)	173	178	(5)	173	213	(40)	155	92	63	501	483	18
Jeffery Elementary School	Gymnasium Unit (AHU-2)	173	624	(451)	173	267	(94)	155	104	52	501	995	(494)
Jeffery Elementary School	Multi-Purpose Unit (AHU-3)	173	165	8	173	210	(37)	155	107	48	501	482	19
Jeffery Elementary School	Library Unit (AHU-4)	173	226	(53)	173	227	(54)	155	93	62	501	546	(45)
Roosevelt Elementary School	Classroom Unit (AHU-1)	173	248	(75)	173	301	(128)	155	247	(92)	501	796	(295)
Roosevelt Elementary School	Classroom Unit Vents	173	218	(45)	173	280	(107)	155	240	(85)	501	737	(236)
Vernon Elementary School	Classroom Unit (AHU-1)	173	203	(30)	173	249	(76)	155	206	(51)	501	658	(157)
Vernon Elementary School	Classroom Unit (AHU-2)	173	210	(37)	173	252	(79)	155	210	(55)	501	671	(170)
Vernon Elementary School	Classroom Unit (AHU-3)	173	720	(547)	173	743	(570)	155	720	(565)	501	2,183	(1,682)
Vernon Elementary School	Gym Unit (AHU-4)	173	154	19	173	186	(13)	155	158	(3)	501	498	3
Vernon Elementary School	Multi-Purpose Room (AHU-5)	173	166	7	173	204	(31)	155	179	(24)	501	549	(48)
Vernon Elementary School	Pool Unit (AHU-6)	728	172	556	728	213	515	728	184	544	2,184	569	1,615
Vernon Elementary School	Brompton Office Unit (AHU-7)	173	720	(547)	173	744	(571)	155	720	(565)	501	2,183	(1,682)
Vernon Elementary School	Brompton Café Unit (AHU-8)	173	198	(25)	173	254	(81)	155	220	(65)	501	672	(171)

## Actual Equipment Runtimes Quarter 3 Year 5 - Quarter 3 (July 1, 2019 - September 30, 2019)

Building	System ID	July			August			September			Quarterly Runtimes Savings		
		Guar. (Hours)	Actual (Hours)	Saved (Hours)	Guar. (Hours)	Actual (Hours)	Saved (Hours)	Guar. (Hours)	Actual (Hours)	Saved (Hours)	Guar. (Hours)	Actual (Hours)	Saved (Hours)
		31			30			31					
Bose Elementary School	Classroom Unit (AHU-1)	172	322	(150)	172	307	(135)	193	310	(117)	537	938	(401)
Bose Elementary School	Gymnasium Unit (AHU-2)	172	320	(148)	172	330	(158)	193	294	(101)	537	944	(407)
Bose Elementary School	Multi-Purpose Room Unit (AHU-3)	172	288	(116)	172	283	(111)	193	290	(97)	537	862	(325)
Bose Elementary School	Library Unit (AHU-4)	172	274	(102)	172	280	(108)	193	299	(106)	537	853	(316)
Forest Park Elementary School	Classroom (AHU-1)	155	227	(72)	155	203	(48)	173	165	9	483	594	(111)
Forest Park Elementary School	Gym Unit (AHU-2)	155	297	(142)	155	272	(117)	173	241	(68)	483	809	(326)
Forest Park Elementary School	Multi-Purpose (AHU-3)	155	309	(154)	155	279	(124)	173	243	(70)	483	830	(347)
Forest Park Elementary School	Uv_1	155	223	(68)	155	194	(39)	173	163	10	483	580	(97)
Forest Park Elementary School	Uv_2	155	223	(68)	155	194	(39)	173	163	10	483	580	(97)
Forest Park Elementary School	Uv_3	155	223	(68)	155	194	(39)	173	163	10	483	580	(97)
Forest Park Elementary School	Uv_4	155	223	(68)	155	194	(39)	173	163	10	483	580	(97)
Grant Elementary School	Gym Unit (AHU-1)	155	215	(60)	155	226	(71)	173	182	(9)	483	623	(140)
Grant Elementary School	Classroom Unit Vents	155	232	(77)	155	220	(65)	173	185	(12)	483	637	(154)
Grewenow Elementary School	Gym Unit (AHU-1)	155	370	(215)	155	284	(129)	173	254	(81)	483	908	(425)
Grewenow Elementary School	Classroom Unit Vents	155	264	(109)	155	258	(103)	173	226	(53)	483	748	(265)
Harvey Elementary School	Classroom Unit (AHU-1)	155	316	(161)	155	307	(152)	173	218	(45)	483	841	(358)
Harvey Elementary School	Classroom Unit (AHU-2)	155	316	(161)	155	307	(152)	173	218	(45)	483	841	(358)
Harvey Elementary School	Gym Unit (AHU-3)	155	314	(159)	155	311	(156)	173	222	(49)	483	847	(364)
Harvey Elementary School	Multi-Purpose Room (AHU-4)	155	308	(153)	155	307	(152)	173	222	(49)	483	837	(354)
Jefferson Elementary School	Gym Unit (AHU-1)	46	307	(261)	46	274	(228)	215	666	(451)	307	1,247	(940)
Jefferson Elementary School	Classroom Units Vents	155	276	(121)	155	262	(107)	173	234	(61)	483	772	(289)
Jeffery Elementary School	Classroom Unit (AHU-1)	155	37	118	155	16	139	173	220	(47)	483	273	211
Jeffery Elementary School	Gymnasium Unit (AHU-2)	155	9	146	155	37	118	173	306	(133)	483	352	131
Jeffery Elementary School	Multi-Purpose Unit (AHU-3)	155	7	148	155	59	96	173	247	(74)	483	312	171
Jeffery Elementary School	Library Unit (AHU-4)	155	171	(16)	155	195	(40)	173	258	(85)	483	624	(141)
Roosevelt Elementary School	Classroom Unit (AHU-1)	155	308	(153)	155	296	(141)	173	242	(69)	483	846	(363)
Roosevelt Elementary School	Classroom Unit Vents	155	294	(139)	155	284	(129)	173	234	(61)	483	813	(330)
Vernon Elementary School	Classroom Unit (AHU-1)	155	246	(91)	155	236	(81)	173	212	(39)	483	694	(211)
Vernon Elementary School	Classroom Unit (AHU-2)	155	279	(124)	155	240	(85)	173	203	(30)	483	723	(240)
Vernon Elementary School	Classroom Unit (AHU-3)	155	572	(417)	155	744	(589)	173	720	(547)	483	2,036	(1,553)
Vernon Elementary School	Gym Unit (AHU-4)	155	171	(16)	155	211	(56)	173	182	(9)	483	564	(81)
Vernon Elementary School	Multi-Purpose Room (AHU-5)	155	241	(86)	155	228	(73)	173	209	(36)	483	678	(195)
Vernon Elementary School	Pool Unit (AHU-6)	728	219	509	728	205	523	728	187	541	2,184	612	1,572
Vernon Elementary School	Brompton Office Unit (AHU-7)	155	744	(589)	155	744	(589)	173	720	(547)	483	2,207	(1,724)
Vernon Elementary School	Brompton Café Unit (AHU-8)	155	286	(131)	155	270	(115)	173	234	(61)	483	790	(307)



## Actual Equipment Runtimes Quarter 4

### Year 5 - Quarter 4 (October 1, 2019 - December 31, 2019)

Building	System ID	October			November			December			Quarterly Runtimes Savings			Annual Runtime Savings		
		Guar. (Hours)	Actual (Hours)	Saved (Hours)	Guar. (Hours)	Actual (Hours)	Saved (Hours)	Guar. (Hours)	Actual (Hours)	Saved (Hours)	Guar. (Hours)	Actual (Hours)	Saved (Hours)	Guar. (Hours)	Actual (Hours)	Saved (Hours)
Bose Elementary School	Classroom Unit (AHU-1)	193	396	(203)	193	605	(412)	192	687	(495)	578	1,687	(1,109)	2,252	5,355	(3,103)
Bose Elementary School	Gymnasium Unit (AHU-2)	193	294	(101)	193	255	(62)	192	455	(263)	578	1,003	(425)	2,252	3,749	(1,497)
Bose Elementary School	Multi-Purpose Room Unit	193	296	(103)	193	234	(41)	192	455	(263)	578	984	(406)	2,252	3,547	(1,295)
Bose Elementary School	Library Unit	193	296	(103)	193	229	(36)	192	452	(260)	578	977	(399)	2,252	3,355	(1,103)
Forest Park Elementary School	Classroom (AHU-1)	173	211	(38)	173	181	(8)	173	179	(6)	519	571	(52)	2,022	2,583	(561)
Forest Park Elementary School	Gym Unit (AHU-2)	173	279	(106)	173	239	(66)	173	193	(20)	519	711	(192)	2,022	3,167	(1,145)
Forest Park Elementary School	Multi-Purpose (AHU-3)	173	288	(115)	173	248	(75)	173	199	(26)	519	735	(216)	2,022	3,216	(1,194)
Forest Park Elementary School	Ulv_1	173	228	(55)	173	273	(100)	173	271	(98)	519	772	(253)	2,022	2,924	(902)
Forest Park Elementary School	Ulv_2	173	204	(31)	173	185	(12)	173	171	3	519	559	(40)	2,022	2,500	(478)
Forest Park Elementary School	Ulv_3	173	205	(32)	173	187	(14)	173	176	(3)	519	568	(49)	2,022	2,475	(453)
Forest Park Elementary School	Ulv_4	173	218	(45)	173	249	(76)	173	238	(65)	519	705	(186)	2,022	2,952	(930)
Grant Elementary School	Gym Unit (AHU-1)	173	202	(29)	173	200	(27)	173	140	33	519	542	(23)	2,022	2,327	(305)
Grant Elementary School	Classroom Unit Vents	173	276	(103)	173	252	(79)	173	232	(59)	519	760	(241)	2,022	2,860	(838)
Grewenow Elementary School	Gym Unit (AHU-1)	173	309	(136)	173	243	(70)	173	230	(57)	519	782	(263)	2,022	3,606	(1,584)
Grewenow Elementary School	Classroom Unit Vents	173	282	(109)	173	218	(45)	173	184	(11)	519	684	(165)	2,022	2,783	(761)
Harvey Elementary School	Classroom Unit (AHU-1)	173	261	(88)	173	230	(57)	173	173	0	519	663	(144)	2,022	3,271	(1,249)
Harvey Elementary School	Classroom Unit (AHU-2)	173	261	(88)	173	229	(56)	173	173	1	519	662	(143)	2,022	3,226	(1,204)
Harvey Elementary School	Gym Unit (AHU-3)	173	251	(78)	173	199	(26)	173	150	23	519	600	(81)	2,022	3,213	(1,191)
Harvey Elementary School	Multi-Purpose Room (AHU-4)	173	229	(56)	173	173	0	173	124	49	519	525	(6)	2,022	3,045	(1,023)
Jefferson Elementary School	Gym Unit (AHU-1)	215	292	(77)	215	235	(20)	215	195	20	645	722	(77)	2,072	3,650	(1,578)
Jefferson Elementary School	Classroom Units Vents	185	262	(77)	185	241	(56)	185	196	(11)	555	699	(144)	2,058	2,916	(858)
Jeffery Elementary School	Classroom Unit (AHU-1)	173	221	(48)	173	273	(100)	173	212	(39)	519	706	(187)	2,022	2,251	(229)
Jeffery Elementary School	Gymnasium Unit (AHU-2)	173	285	(112)	173	645	(472)	173	692	(519)	519	1,621	(1,102)	2,022	4,956	(2,934)
Jeffery Elementary School	Multi-Purpose Unit (AHU-3)	173	234	(61)	173	204	(31)	173	164	9	519	602	(83)	2,022	2,138	(116)
Jeffery Elementary School	Library Unit (AHU-4)	173	260	(87)	173	497	(324)	173	434	(261)	519	1,191	(672)	2,022	3,717	(1,695)
Roosevelt Elementary School	Classroom Unit (AHU-1)	173	242	(69)	173	266	(93)	173	214	(41)	519	722	(203)	2,022	3,333	(1,311)
Roosevelt Elementary School	Classroom Unit Vents	173	234	(61)	173	245	(72)	173	194	(21)	519	673	(154)	2,022	3,120	(1,098)
Vernon Elementary School	Classroom Unit (AHU-1)	173	265	(92)	173	218	(45)	173	180	(7)	519	663	(144)	2,022	2,923	(901)
Vernon Elementary School	Classroom Unit (AHU-2)	173	265	(92)	173	237	(64)	173	356	(183)	519	857	(338)	2,022	3,550	(1,528)
Vernon Elementary School	Classroom Unit (AHU-3)	173	743	(570)	173	721	(548)	173	744	(571)	519	2,208	(1,689)	2,022	8,584	(6,562)
Vernon Elementary School	Gym Unit (AHU-4)	173	197	(24)	173	182	(9)	173	149	25	519	527	(8)	2,022	2,367	(345)
Vernon Elementary School	Multi-Purpose Room (AHU-5)	173	217	(44)	173	197	(24)	173	156	17	519	571	(52)	2,022	2,587	(565)
Vernon Elementary School	Pool Unit (AHU-6)	728	231	497	728	203	525	728	165	563	2,184	599	1,585	8,736	2,576	6,160
Vernon Elementary School	Brompton Office Unit (AHU-7)	173	743	(570)	173	721	(548)	173	744	(571)	519	2,207	(1,688)	2,022	8,755	(6,733)
Vernon Elementary School	Brompton Café Unit (AHU-8)	173	260	(87)	173	234	(61)	173	195	(22)	519	689	(170)	2,022	3,009	(987)



Fan Motor Savings Adjustment									
Description	Quantity	Full Load Power		Average Fan Speed	Average kW Usage (kWh)	Additional Operating Hours	Additional Usage (kWh)	Composite Consumption Rate (\$)	Electric Cost Adjustment (\$)
		(HP)	(kW)						
Bose Elementary School									
Classroom Unit	1	25.00	17.553	75%	7.41	(3,103)	(22,975)	\$0.151	-\$3,462
Gymnasium Unit	1	5.00	3.511	50%	0.44	(1,497)	(657)	\$0.151	-\$99
Multi-Purpose Room Unit	1	5.00	3.511	50%	0.44	(1,295)	(568)	\$0.151	-\$86
Library Unit	1	5.00	3.511	75%	1.48	(1,103)	(1,633)	\$0.151	-\$246
Subtotal							(25,833)		-\$3,893
Forest Park Elementary									
AHU-1	1	30.00	21.064	75%	8.89	(561)	(4,981)	\$0.144	-\$718
AHU-2	1	7.50	5.266	75%	2.22	(1,145)	(2,545)	\$0.144	-\$367
AHU-3	1	5.00	3.511	75%	1.48	(1,194)	(1,769)	\$0.144	-\$255
UV_1	2	0.25	0.176	75%	0.15	(902)	(134)	\$0.144	-\$19
UV_2	2	0.25	0.176	75%	0.15	(478)	(71)	\$0.144	-\$10
UV_3	1	0.25	0.176	75%	0.07	(453)	(34)	\$0.144	-\$5
UV_4	1	0.25	0.176	75%	0.07	(930)	(69)	\$0.144	-\$10
Subtotal							(9,532)		-\$1,383
Grant Elementary School									
Classroom Unit Ventilators	19	0.75	0.527	75%	4.22	(305)	(1,288)	\$0.139	-\$179
Gym Unit	1	10.00	7.021	50%	0.88	(838)	(736)	\$0.139	-\$102
Subtotal							(2,024)		-\$282
Grewenow Elementary									
Classroom Unit Ventilators	28	0.25	0.176	75%	2.07	(1,584)	(3,285)	\$0.180	-\$593
Gym Unit	1	1.50	1.053	50%	0.13	(761)	(100)	\$0.180	-\$18
Subtotal							(3,385)		-\$611
Harvey Elementary School									
AHU-1	1	5.00	3.511	75%	1.48	(1,249)	(1,850)	\$0.152	-\$282
AHU-2	1	5.00	3.511	75%	1.48	(1,204)	(1,783)	\$0.152	-\$272
AHU-3	1	1.50	1.053	50%	0.13	(1,191)	(157)	\$0.152	-\$24
AHU-4	1	1.00	0.702	50%	0.09	(1,023)	(90)	\$0.152	-\$14
Subtotal							(3,880)		-\$591
Jefferson Elementary									
Gym Unit	2	0.75	0.527	75%	0.61	(1,578)	(963)	\$0.145	\$139
Subtotal							(963)		\$139
Jeffery Elementary School									
Gym Unit	1	25.00	17.553	75%	10.15	(229)	(2,327)	\$0.168	\$390
Classroom Unit	1	5.00	3.511	50%	3.07	(2,934)	(9,011)	\$0.168	\$1,510
Gym Unit	1	5.00	3.511	50%	3.07	(116)	(358)	\$0.168	\$60
Multi-Purpose Room Unit	1	5.00	3.511	75%	2.03	(1,695)	(3,441)	\$0.168	\$577
Subtotal							(15,136)		\$2,537
Roosevelt Elementary									
AHU1	1	15.00	10.532	75%	6.09	(1,311)	(7,985)	\$0.146	\$1,169
Classroom Unit	1	2.00	1.404	75%	0.81	(1,098)	(892)	\$0.146	\$131
Subtotal							(8,876)		\$1,299
Vernon Elementary School									
Gymnasium Unit	3	5.00	3.511	75%	6.09	(901)	(5,485)	\$0.137	\$751
Multi-Purpose Room Unit	1	1.50	1.053	50%	0.92	(1,528)	(1,408)	\$0.137	\$193
Library Unit	1	1.00	0.702	50%	0.61	(6,562)	(4,031)	\$0.137	\$552
Classroom Unit	1	1.50	1.053	50%	0.92	(345)	(338)	\$0.137	\$46
Gym Unit	1	3.00	2.106	50%	1.84	(565)	(1,041)	\$0.137	\$143
Classroom Unit	1	1.00	0.702	50%	0.61	6,160	3,784	\$0.137	-\$518
Subtotal							(8,519)		\$1,167
Subtotal							(78,149)		-\$1,617





Outside Air Heating Costs Resulting From Increased Fan Runtime						
Description	Quantity	Additional Heating Hours	Current OA (CFM)	Energy Cost (BTU)	Gas Rate (\$/Therm)	Gas Cost Adjustment (\$)
<b>Bose Elementary School</b>						
Classroom Unit	1	1,241	6,959	(337,325,562.13)	\$0.590	\$ 2,140
Gymnasium Unit	1	599	2,624	(61,340,883)	\$0.590	\$ 389
Multi-Purpose Room Unit	1	518	2,031	(41,088,923)	\$0.590	\$ 261
Library Unit	1	441	805	(13,871,526)	\$0.590	\$ 88
<b>Subtotal</b>				(453,626,894)		<b>\$ 2,877</b>
<b>Forest Park Elementary</b>						
AHU-1	1	224	4,200	(36,780,458)	\$0.527	\$ 208
AHU-2	1	458	1,530	(27,380,466)	\$0.527	\$ 155
AHU-3	1	478	1,320	(24,628,799)	\$0.527	\$ 139
UV_1	2	361	200	(5,637,139)	\$0.527	\$ 32
UV_2	2	191	200	(2,984,809)	\$0.527	\$ 17
UV_3	1	181	200	(1,415,222)	\$0.527	\$ 8
UV_4	1	372	200	(2,906,689)	\$0.527	\$ 16
<b>Subtotal</b>				(101,733,582)		<b>\$ 576</b>
<b>Grant Elementary School</b>						
Gym Unit	1	122	1,819	(8,672,609)	\$0.568	\$ 53
Classroom Unit Ventilators	19	335	250	(62,214,833)	\$0.568	\$ 380
<b>Subtotal</b>				(62,214,833)		<b>\$ 433</b>
<b>Grewenow Elementary</b>						
Gym Unit	1	634	1,750	(43,320,665)	\$0.567	\$ 264
Classroom Unit Ventilators	28	481	200	(105,220,429)	\$0.567	\$ 641
<b>Subtotal</b>				(105,220,429)		<b>\$ 905</b>
<b>Harvey Elementary School</b>						
AHU-1	1	663	2,590	(67,082,777)	\$0.560	\$ 404
AHU-2	1	629	2,832	(69,589,733)	\$0.560	\$ 419
AHU-3	1	592	1,040	(24,028,150)	\$0.560	\$ 145
AHU-4	1	454	1,124	(19,914,600)	\$0.560	\$ 120
<b>Subtotal</b>				(492,885,781)		<b>\$ 1,087</b>

## ROOF REPLACEMENT SAVINGS

### Bose Elementary School

Existing Roof "U" Value:		New Roof "U" Value:	
R=	7.5	R=	35
U=	0.133	U=	0.029
Total Occupied Hours per Heating Season:		Total Unoccupied Hours per Heating Season	
Heating Season Weeks =	36	Heating Season Weeks =	36
Hours/Week Occupied =	50	Hour/Week Unoccupied =	118
Total Occupied Hours =	1800	Total Unoccupied Hours =	4248
Average Occupied Space Temp. =	72	Avg. Unoccupied Space Temp. =	60
Average Winter Temp. =		39.7	
Roof Area (Square Feet) =		48,419	
Exist. Roof Occ. Heat Loss =	375,344,088	BTU/YR	
Exist. Roof Unocc. Heat Loss =	556,717,788	BTU/YR	
Total Exist. Roof Heat Loss =	932,061,876	BTU/YR	
New Roof Occ. Heat Loss =	80,430,876	BTU/YR	
New Roof Unocc. Heat Loss =	119,296,669	BTU/YR	
Total New Roof Heat Loss =	199,727,545	BTU/YR	
New Roof Energy Savings =	732,334,332	BTU/YR	
Existing Heating Plant Efficiency =	0.93		
Cost of Fuel =	0.5899	Per Therm	
Fuel Energy Content =	100,000	BTU/Therm	
<b>Total Annual Savings =</b>		<b>\$4,645</b>	

## ROOF REPLACEMENT SAVINGS

### Forest Park Elementary School

Existing Roof "U" Value:		New Roof "U" Value:	
R=	10	R=	35
U=	0.100	U=	0.029
Total Occupied Hours per Heating Season:		Total Unoccupied Hours per Heating Season	
Heating Season Weeks =	36	Heating Season Weeks =	36
Hours/Week Occupied =	50	Hour/Week Unoccupied =	118
Total Occupied Hours =	1800	Total Unoccupied Hours =	4248
Average Occupied Space Temp. =	72	Avg. Unoccupied Space Temp. =	60
Average Winter Temp. =		39.7	
Roof Area (Square Feet) =		54,924	
Exist. Roof Occ. Heat Loss =	319,328,136	BTU/YR	
Exist. Roof Unocc. Heat Loss =	473,633,819	BTU/YR	
Total Exist. Roof Heat Loss =	792,961,955	BTU/YR	
New Roof Occ. Heat Loss =	91,236,610	BTU/YR	
New Roof Unocc. Heat Loss =	135,323,948	BTU/YR	
Total New Roof Heat Loss =	226,560,558	BTU/YR	
New Roof Energy Savings =	566,401,396	BTU/YR	
Existing Heating Plant Efficiency =	0.93		
Cost of Fuel =	0.5266	Per Therm	
Fuel Energy Content =	100,000	BTU/Therm	
<b>Total Annual Savings =</b>		<b>\$3,207</b>	

## ROOF REPLACEMENT SAVINGS

### Grant Elementary School

Existing Roof "U" Value:		New Roof "U" Value:	
R=	9.5	R=	35
U=	0.105	U=	0.029
Total Occupied Hours per Heating Season:		Total Unoccupied Hours per Heating Season	
Heating Season Weeks =	36	Heating Season Weeks =	36
Hours/Week Occupied =	50	Hour/Week Unoccupied =	118
Total Occupied Hours =	1800	Total Unoccupied Hours =	4248
Average Occupied Space Temp. =	72	Avg. Unoccupied Space Temp. =	60
Average Winter Temp. =		39.7	
Roof Area (Square Feet) =		18,695	
Exist. Roof Occ. Heat Loss =	114,413,400	BTU/YR	
Exist. Roof Unocc. Heat Loss =	169,700,222	BTU/YR	
Total Exist. Roof Heat Loss =	284,113,622	BTU/YR	
New Roof Occ. Heat Loss =	31,055,066	BTU/YR	
New Roof Unocc. Heat Loss =	46,061,489	BTU/YR	
Total New Roof Heat Loss =	77,116,555	BTU/YR	
New Roof Energy Savings =	206,997,067	BTU/YR	
Existing Heating Plant Efficiency =	0.93		
Cost of Fuel =	0.5675	Per Therm	
Fuel Energy Content =	100,000	BTU/Therm	
<b>Total Annual Savings =</b>		<b>\$1,263</b>	

## ROOF REPLACEMENT SAVINGS

### Grewenow Elementary School

Existing Roof "U" Value:		New Roof "U" Value:	
R=	8	R=	35
U=	0.125	U=	0.029
Total Occupied Hours per Heating Season:		Total Unoccupied Hours per Heating Season	
Heating Season Weeks =	36	Heating Season Weeks =	36
Hours/Week Occupied =	50	Hour/Week Unoccupied =	118
Total Occupied Hours =	1800	Total Unoccupied Hours =	4248
Average Occupied Space Temp. =	72	Avg. Unoccupied Space Temp. =	60
Average Winter Temp. =		39.7	
Roof Area (Square Feet) =		7,376	
Exist. Roof Occ. Heat Loss =	53,605,080	BTU/YR	
Exist. Roof Unocc. Heat Loss =	79,508,117	BTU/YR	
Total Exist. Roof Heat Loss =	133,113,197	BTU/YR	
New Roof Occ. Heat Loss =	12,252,590	BTU/YR	
New Roof Unocc. Heat Loss =	18,173,284	BTU/YR	
Total New Roof Heat Loss =	30,425,874	BTU/YR	
New Roof Energy Savings =	102,687,323	BTU/YR	
Existing Heating Plant Efficiency =	0.93		
Cost of Fuel =	0.5668	Per Therm	
Fuel Energy Content =	100,000	BTU/Therm	
<b>Total Annual Savings =</b>		<b>\$626</b>	

## ROOF REPLACEMENT SAVINGS

### Jefferson Elementary School

Existing Roof "U" Value:		New Roof "U" Value:	
R=	9.5	R=	35
U=	0.105	U=	0.029
Total Occupied Hours per Heating Season:		Total Unoccupied Hours per Heating Season	
Heating Season Weeks =	36	Heating Season Weeks =	36
Hours/Week Occupied =	50	Hour/Week Unoccupied =	118
Total Occupied Hours =	1800	Total Unoccupied Hours =	4248
Average Occupied Space Temp. =	72	Avg. Unoccupied Space Temp. =	60
Average Winter Temp. =		39.7	
Roof Area (Square Feet) =		24,059	
Exist. Roof Occ. Heat Loss =	147,241,080	BTU/YR	
Exist. Roof Unocc. Heat Loss =	218,390,887	BTU/YR	
Total Exist. Roof Heat Loss =	365,631,967	BTU/YR	
New Roof Occ. Heat Loss =	39,965,436	BTU/YR	
New Roof Unocc. Heat Loss =	59,277,527	BTU/YR	
Total New Roof Heat Loss =	99,242,963	BTU/YR	
New Roof Energy Savings =	266,389,005	BTU/YR	
Existing Heating Plant Efficiency =		0.93	
Cost of Fuel =		0.5597 Per Therm	
Fuel Energy Content =		100,000 BTU/Therm	
<b>Total Annual Savings =</b>		<b>\$1,603</b>	



# LIGHTING RETROFIT SAVINGS

## Bose Elementary School

US Lamp Current Consumption:	54,348	Watts
US Lamp Proposed Consumption:	26,833	Watts
Savings	27,515	Watts

Annual Operating Hours: 2,200

kWh Saved = 60,533 kWh

Average Electric Rate: \$0.151 /kWh

Savings = \$9,122
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## LIGHTING RETROFIT SAVINGS

### Forest Park Elementary School

US Lamp Current Consumption:	46,823	Watts
US Lamp Proposed Consumption:	26,571	Watts
Savings	20,252	Watts

Annual Operating Hours: 2,200

kWh Saved = 44,554 kWh

Average Electric Rate: \$0.144 /kWh

<b>Savings =</b>	<b>\$6,420</b>
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## LIGHTING RETROFIT SAVINGS

### Grant Elementary School

US Lamp Current Consumption:	33,880	Watts
US Lamp Proposed Consumption:	18,935	Watts
Savings	14,945	Watts

Annual Operating Hours: 2,200

kWh Saved = 32,879 kWh

Average Electric Rate: \$0.139 /kWh

<b>Savings =</b>	<b>\$4,573</b>
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## LIGHTING RETROFIT SAVINGS

### Grewenow Elementary School

US Lamp Current Consumption:	46,823	Watts
US Lamp Proposed Consumption:	26,571	Watts
Savings	20,252	Watts

Annual Operating Hours: 2,200

kWh Saved = 44,554 kWh

Average Electric Rate: \$0.180 /kWh

<b>Savings =</b>	<b>\$8,038</b>
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## LIGHTING RETROFIT SAVINGS

### Jefferson Elementary School

US Lamp Current Consumption:	33,880	Watts
US Lamp Proposed Consumption:	18,935	Watts
Savings	14,945	Watts

Annual Operating Hours: 2,200

kWh Saved = 32,879 kWh

Average Electric Rate: \$0.145 /kWh

Savings =	<b>\$4,751</b>
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### BOILER REPLACEMENT SAVINGS Bose Elementary School

#### *Existing (Base Year) Boiler Data*

* Burner manufacturer, age, model number:	Cleaver Brooks
* Burner size:	2,511,000 btuh
* Number of boilers:	2
* Estimated combustion efficiency:	75%
* Estimated jacket losses (radiation & convection):	5%
* Estimated firing rate losses:	10%
* Average seasonal efficiency	<hr/> 60%
* Base Year cost of fuel:	\$0.5899 / therm
* Fuel conversion factor:	100,000 BTU / therm
* Base Year total natural gas usage:	26,313 therms
* Base Year domestic hot water fuel usage:	1,500 therms
* Base Year building heating costs:	<hr/> 24,813 therms
* Base Year building heating requirement (boiler input):	2,481,300,000 BTU / year
* Base Year building heating requirement (boiler output):	1,488,780,000 BTU / year

#### *Proposed Boiler Data*

* Number of boilers:	2
* Proposed boiler seasonal heating efficiency:	93%
* Proposed building heating requirement (boiler input):	1,600,838,710 BTU / year
* Proposed heating system savings:	880,461,290 BTU / year

<b>Boiler replacement savings:</b>	<b>\$5,194 / year</b>
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### STEAM TO HOT WATER CONVERSION SAVINGS Forest Park Elementary School

#### *Existing (Base Year) Boiler Data*

* Burner manufacturer, age, model number:	Hurst
* Burner size:	4,200 btuh
* Number of boilers:	2
* Estimated combustion efficiency:	80%
* Estimated jacket losses (radiation & convection):	5%
* Estimated steam losses:	5%
* Estimated firing rate losses:	10%
* Average seasonal efficiency	<hr/> 60%
* Base Year cost of fuel:	\$0.5266 / therm
* Fuel conversion factor:	100,000 BTU / therm
* Base Year total natural gas usage:	46,349 therms
* Base Year domestic hot water fuel usage:	1,500 therms
* Base Year building heating costs:	<hr/> 44,849 therms
* Base Year building heating requirement (boiler input):	4,484,900,000 BTU / year
* Base Year building heating requirement (boiler output):	2,677,933,790 BTU / year

#### *Proposed Boiler Data*

* Number of boilers:	2
* Proposed boiler seasonal heating efficiency:	93%
* Proposed building heating requirement (boiler input):	2,879,498,699 BTU / year
* Proposed heating system savings:	1,605,401,301 BTU / year

<b>Boiler replacement savings:</b>	<b>\$8,454 / year</b>
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### STEAM TO HOT WATER CONVERSION SAVINGS Grant Elementary School

#### *Existing (Base Year) Boiler Data*

* Burner manufacturer, age, model number:	Cleaver Brooks
* Burner size:	3,350 btuh
* Number of boilers:	2
* Estimated combustion efficiency:	80%
* Estimated jacket losses (radiation & convection):	5%
* Estimated steam losses:	5%
* Estimated firing rate losses:	10%
* Average seasonal efficiency	<hr/> 60%
* Base Year cost of fuel:	\$0.5675 / therm
* Fuel conversion factor:	100,000 BTU / therm
* Base Year total natural gas usage:	26,306 therms
* Base Year domestic hot water fuel usage:	1,500 therms
* Base Year building heating costs:	<hr/> 24,806 therms
* Base Year building heating requirement (boiler input):	2,480,600,000 BTU / year
* Base Year building heating requirement (boiler output):	1,488,360,000 BTU / year

#### *Proposed Boiler Data*

* Number of boilers:	2
* Proposed boiler seasonal heating efficiency:	93%
* Proposed building heating requirement (boiler input):	1,600,387,097 BTU / year
* Proposed heating system savings:	880,212,903 BTU / year

<b>Boiler replacement savings:</b>	<b>\$4,995 / year</b>
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### STEAM TO HOT WATER CONVERSION SAVINGS Harvey Elementary School

#### *Existing (Base Year) Boiler Data*

* Burner manufacturer, age, model number:	Cleaver Brooks
* Burner size:	2,940,000 btuh
* Number of boilers:	2
* Estimated combustion efficiency:	75%
* Estimated jacket losses (radiation & convection):	5%
* Estimated steam losses:	5%
* Estimated firing rate losses:	10%
* Average seasonal efficiency	55%
* Base Year cost of fuel:	\$0.5597 / therm
* Fuel conversion factor:	100,000 BTU / therm
* Base Year total natural gas usage:	33,247 therms
* Base Year domestic hot water fuel usage:	1,500 therms
* Base Year building heating costs:	31,747 therms
* Base Year building heating requirement (boiler input):	3,174,700,000 BTU / year
* Base Year building heating requirement (boiler output):	1,746,085,000 BTU / year

#### *Proposed Boiler Data*

* Number of boilers:	2
* Proposed boiler seasonal heating efficiency:	93%
* Proposed building heating requirement (boiler input):	1,877,510,753 BTU / year
* Proposed heating system savings:	1,297,189,247 BTU / year

<b>Boiler replacement savings:</b>	<b>\$7,260 / year</b>
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### STEAM TO HOT WATER CONVERSION SAVINGS Jefferson Elementary School

#### **Existing (Base Year) Boiler Data**

* Burner manufacturer, age, model number:	Cleaver Brooks
* Burner size:	3,350,000 btuh
* Number of boilers:	2
* Estimated combustion efficiency:	80%
* Estimated jacket losses (radiation & convection):	5%
* Estimated steam losses:	5%
* Estimated firing rate losses:	10%
* Average seasonal efficiency	<hr/> 60%
* Base Year cost of fuel:	\$0.5597 / therm
* Fuel conversion factor:	100,000 BTU / therm
* Base Year total natural gas usage:	27,001 therms
* Base Year domestic hot water fuel usage:	1,500 therms
* Base Year building heating costs:	<hr/> 25,501 therms
* Base Year building heating requirement (boiler input):	2,550,100,000 BTU / year
* Base Year building heating requirement (boiler output):	1,530,060,000 BTU / year

#### **Proposed Boiler Data**

* Number of boilers:	2
* Proposed boiler seasonal heating efficiency:	93%
* Proposed building heating requirement (boiler input):	1,645,225,806 BTU / year
* Proposed heating system savings:	904,874,194 BTU / year

<b>Boiler replacement savings:</b>	<b>\$5,065 / year</b>
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### BOILER REPLACEMENT SAVINGS Jeffery Elementary School

#### *Existing (Base Year) Boiler Data*

* Burner manufacturer, age, model number:	Cleaver Brooks
* Burner size:	2,511,000 btuh
* Number of boilers:	2
* Estimated combustion efficiency:	75%
* Estimated jacket losses (radiation & convection):	5%
* Estimated firing rate losses:	10%
* Average seasonal efficiency	<hr/> 60%
* Base Year cost of fuel:	\$0.5657 / therm
* Fuel conversion factor:	100,000 BTU / therm
* Base Year total natural gas usage:	20,148 therms
* Base Year domestic hot water fuel usage:	1,500 therms
* Base Year building heating costs:	<hr/> 18,648 therms
* Base Year building heating requirement (boiler input):	1,864,800,000 BTU / year
* Base Year building heating requirement (boiler output):	1,118,880,000 BTU / year

#### *Proposed Boiler Data*

* Number of boilers:	2
* Proposed boiler seasonal heating efficiency:	93%
* Proposed building heating requirement (boiler input):	1,203,096,774 BTU / year
* Proposed heating system savings:	661,703,226 BTU / year

<b>Boiler replacement savings:</b>	<b>\$3,743 / year</b>
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### STEAM TO HOT WATER CONVERSION SAVINGS Roosevelt Elementary School

#### *Existing (Base Year) Boiler Data*

* Burner manufacturer, age, model number:	Cleaver Brooks
* Burner size:	6,277,000 btuh
* Number of boilers:	2
* Estimated combustion efficiency:	80%
* Estimated jacket losses (radiation & convection):	5%
* Estimated steam losses:	5%
* Estimated firing rate losses:	10%
* Average seasonal efficiency	<u>60%</u>
* Base Year cost of fuel:	\$0.5671 / therm
* Fuel conversion factor:	100,000 BTU / therm
* Base Year total natural gas usage:	30,556 therms
* Base Year domestic hot water fuel usage:	1,500 therms
* Base Year building heating costs:	<u>29,056 therms</u>
* Base Year building heating requirement (boiler input):	2,905,600,000 BTU / year
* Base Year building heating requirement (boiler output):	1,743,360,000 BTU / year

#### *Proposed Boiler Data*

* Number of boilers:	2
* Proposed boiler seasonal heating efficiency:	93%
* Proposed building heating requirement (boiler input):	1,874,580,645 BTU / year
* Proposed heating system savings:	1,031,019,355 BTU / year

<b>Boiler replacement savings:</b>	<b>\$5,847 / year</b>
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### STEAM TO HOT WATER CONVERSION SAVINGS Vernon Elementary School

#### *Existing (Base Year) Boiler Data*

* Burner manufacturer, age, model number:	Cleaver Brooks
* Burner size:	6,280,000 btuh
* Number of boilers:	2
* Estimated combustion efficiency:	75%
* Estimated jacket losses (radiation & convection):	5%
* Estimated steam losses:	5%
* Estimated firing rate losses:	10%
* Average seasonal efficiency	<hr/> 55%
* Base Year cost of fuel:	\$0.5932 / therm
* Fuel conversion factor:	100,000 BTU / therm
* Base Year total natural gas usage:	67,404 therms
* Base Year domestic hot water fuel usage:	1,500 therms
* Base Year building heating costs:	<hr/> 65,904 therms
* Base Year building heating requirement (boiler input):	6,590,400,000 BTU / year
* Base Year building heating requirement (boiler output):	3,624,720,000 BTU / year

#### *Proposed Boiler Data*

* Number of boilers:	2
* Proposed boiler seasonal heating efficiency:	93%
* Proposed building heating requirement (boiler input):	3,897,548,387 BTU / year
* Proposed heating system savings:	2,692,851,613 BTU / year

<b>Boiler replacement savings:</b>	<b>\$15,974 / year</b>
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## Constant Volume to Variable Speed Fan Conversion

### Electric Fan Savings

Description	Quantity	Full Load Power		Fan Speed		Average kW Savings (kWh)	Future Operating Hours	Savings (kWh)	Composite Consumption Rate (\$)	Utility Savings (\$)
		(HP)	(kW)	Current Average Amount	Future Average Amount					
Bose Elementary School										
Classroom Unit	1	25.00	17.553	100%	75%	10.15	2,252	22,853	\$0.151	\$3,444
Gymnasium Unit	1	5.00	3.511	100%	50%	3.07	2,252	6,918	\$0.151	\$1,042
Multi-Purpose Room Unit	1	5.00	3.511	100%	50%	3.07	2,252	6,918	\$0.151	\$1,042
Library Unit	1	5.00	3.511	100%	75%	2.03	2,252	4,571	\$0.151	\$689
Subtotal								41,259		\$6,218
Forest Park Elementary										
MZU-A	2	0.75	0.527	100%	75%	0.61	1,932	1,176	\$0.144	\$170
MZU-B	2	0.75	0.527	100%	75%	0.61	1,932	1,176	\$0.144	\$170
MZU-C	1	0.75	0.527	100%	75%	0.30	1,932	588	\$0.144	\$85
MZU-D	1	0.50	0.351	100%	75%	0.20	1,932	392	\$0.144	\$57
MZU-E	1	0.75	0.527	100%	50%	0.46	1,932	890	\$0.144	\$128
MZU-F	1	1.50	1.053	100%	50%	0.92	1,932	1,780	\$0.144	\$257
MZU-G	3	0.33	0.234	100%	75%	0.41	1,932	783	\$0.144	\$113
AHU-1	1	5.00	3.511	100%	75%	2.03	1,932	3,921	\$0.144	\$565
Subtotal								10,708		\$1,543
Grant Elementary School										
Gym Unit	2	0.75	0.527	100%	50%	0.92	1,932	1,780	\$0.139	\$248
Subtotal								1,780		\$248
Grewenow Elementary										
Gym Unit	1	2.00	1.404	100%	50%	1.23	1,932	2,374	\$0.180	\$428
Subtotal								2,374		\$428
Harvey Elementary School										
Classroom Unit	2	5.00	3.511	100%	75%	4.06	1,932	7,842	\$0.152	\$1,194
Gym Unit	1	1.50	1.053	100%	50%	0.92	1,932	1,780	\$0.152	\$271
Multi-Purpose Room Unit	1	1.00	0.702	100%	50%	0.61	1,932	1,187	\$0.152	\$181
Subtotal								10,810		\$1,646

## Constant Volume to Variable Speed Fan Conversion

### Electric Fan Savings

Description	Quantity	Full Load Power		Fan Speed		Average kW Savings (kWh)	Future Operating Hours	Savings (kWh)	Composite Consumption Rate (\$)	Utility Savings (\$)
		(HP)	(kW)	Current Average Amount	Future Average Amount					
<b>Jefferson Elementary</b>										
Gym Unit	2	0.75	0.527	100%	75%	0.61	2,072	1,262	\$0.145	\$182
<b>Subtotal</b>								1,262		\$182
<b>Jeffery Elementary School</b>										
Classroom Unit	1	25.00	17.553	100%	75%	10.15	1,932	19,606	\$0.168	\$3,286
Gymnasium Unit	1	5.00	3.511	100%	50%	3.07	1,932	5,935	\$0.168	\$995
Multi-Purpose Room Unit	1	5.00	3.511	100%	50%	3.07	1,932	5,935	\$0.168	\$995
Library Unit	1	5.00	3.511	100%	75%	2.03	1,932	3,921	\$0.168	\$657
<b>Subtotal</b>								35,396		\$5,932
<b>Roosevelt Elementary</b>										
Classroom Unit	1	15.00	10.532	100%	75%	6.09	1,932	11,763	\$0.146	\$1,722
Gym Unit	1	2.00	1.404	100%	75%	0.81	1,932	1,568	\$0.146	\$230
<b>Subtotal</b>								13,332		\$1,952
<b>Vernon Elementary School</b>										
Classroom Unit	3	5.00	3.511	100%	75%	6.09	1,932	11,763	\$0.137	\$1,612
Gym Unit	1	1.50	1.053	100%	50%	0.92	1,932	1,780	\$0.137	\$244
Multi-Purpose Room Unit	1	1.00	0.702	100%	50%	0.61	1,932	1,187	\$0.137	\$163
Pool Unit	1	1.50	1.053	100%	50%	0.92	8,736	8,050	\$0.137	\$1,103
Brompton Office Unit	1	3.00	2.106	100%	50%	1.84	1,932	3,561	\$0.137	\$488
Brompton Cafeteria Unit	1	1.00	0.702	100%	50%	0.61	1,932	1,187	\$0.137	\$163
<b>Subtotal</b>								27,529		\$3,771
<b>TOTAL</b>								51,967		\$21,921

Lance and Bullen Middle Schools  
Kenosha Unified School District

Year 1 Performance Contract Energy Savings Report

**nexus**  
SOLUTIONS®

*Submitted August 20, 2020*





# Year 1 Energy Savings Report

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## Year 1 Energy Savings Report

### Executive Summary

Kenosha Unified School District and Nexus Solutions entered into a Performance Contract totaling \$28.5 million on January 24<sup>th</sup>, 2017 to renovate Lance and Bullen Elementary Schools. As part of the contract, processes were put in place to measure and verify the performance. This report summarizes the year 1 performance period which spans from August 2019 to July 2020.

The year 1 guaranteed utility savings of **\$74,207** were estimated using standard calculations. The verified savings are calculated using the measurement and verification process identified in the Performance Contract. The following table breaks down the year 1 verified utility savings of **\$77,678**.

Energy Efficiency Measure	Verified Year 1 Utility Cost Savings
Bullen Middle School - Building Envelope Improvements	\$1,430
Bullen Middle School - Electrical Infrastructure Improvements	\$32,828
Bullen Middle School - Environmental System Upgrades	\$3,336
Bullen Middle School - Plumbing Improvements	\$841
Lance Middle School - Building Envelope Improvements	\$1,022
Lance Middle School - Electrical Infrastructure Improvements	\$34,960
Lance Middle School - Environmental System Upgrades	\$2,384
Lance Middle School - Plumbing Improvements	\$876
<b>Total</b>	<b>\$77,678</b>

Utility savings related project work completed over 3 years included the following systems at both schools:

- > Roofs and Wall Cladding upgrades and sealing of select exterior joints
- > Windows, Doors, and Vestibules upgrades
- > Extensive Building Automation System and HVAC upgrades
- > Replacement of bathroom plumbing fixtures and water heaters with more efficient units
- > Interior and exterior lighting replacements with energy efficient LEDs

The following sections detail the methods and results of measurement and verification process for each energy efficiency measure. This report will be updated annually to reflect the savings performance.



## Year 1 Energy Savings Report

### Electrical Infrastructure Upgrades

As part of the scope that falls in this energy efficiency measure, the PA System and Fire Alarm were upgraded at both schools and (20) electrical distribution sub-panels were updated with new panels and breakers at Lance Middle School. But all the energy savings in this measure came from more energy efficient interior and exterior lighting fixtures. The following section details the measurement and verification process.

### Interior Lighting

The following power consumption rates (Watts/sq. ft. or W/sf) were used to calculate the guaranteed and verified energy savings.

- > **Pre-Retrofit W/sf** – Based on the original lighting fixture.
- > **Estimated Post-Retrofit W/sf** – Based on industry practices. Used to develop the guaranteed savings.
- > **Verified Post-Retrofit W/sf** – Calculated using fixtures that were actually installed
- > **Verified W/sf savings** = (Pre-Retrofit W/sf) – (Verified Post-Retrofit W/sf)

Power Consumption	Bullen (W/sf)	Lance (W/sf)
Pre-Retrofit	1.20	1.20
Estimated Post-Retrofit	.60	.60
Verified Post-Retrofit	.332	.462
Verified Savings	.867	.737
Square Footage (sf)	121,962	137,290
Annual Verified kWh Savings	232,853	222,821
<b>Annual Verified Utility \$ Savings</b>	<b>\$30,806</b>	<b>\$31,460</b>

The details behind the Verified W/sf calculation can be found in *Appendix A*.

### Exterior Lighting

The difference between the Pre and Verified Post-Retrofit watts/fixture were used to calculate the verified energy savings.

Power Consumption	Bullen	Lance
Pre-Retrofit Annual kWh	21,382	30,430
Verified Post-Retrofit Annual kWh	6,094	5,640
Annual Verified kWh Savings	15,289	24,791
<b>Annual Verified Utility \$ Savings</b>	<b>\$2,023</b>	<b>\$3,500</b>

The details behind the Verified Post-Retrofit Annual kWh calculation can be found in *Appendix B*.

## Year 1 Energy Savings Report

### Verified Savings

The following is the total verified savings realized due to more energy efficient lighting.

<b>Annual Verified Utility \$ Savings</b>	<b>Bullen</b>	<b>Lance</b>
Interior	\$32,828	\$34,960
Exterior	\$2,023	\$3,500
<i>School Sub Total</i>	<i>\$34,851</i>	<i>\$38,460</i>
<b><i>Total</i></b>	<b><i>\$73,311</i></b>	

## Year 1 Energy Savings Report

### Plumbing Improvements

This scope included installation of new low-flow fixtures and re-tuning of existing fixtures to reduce water use. This water conservation measures were implemented in the bathrooms in both schools. The following sections detail the measurement and verification process.

#### Urinal and Water Closet Savings

- > **GPF** – Gallons per flush
- > **Annual Flushes per Year** – Determined using industry standards based on number of staff and students
- > **WC** – Water Closet
- > **UR** – Urinal

Fixture Type	Bullen			Lance	
	WC-1/1a	UR-1	UR-2	WC-1	UR-3
Quantity	25	2	8	19	12
Pre-Retrofit GPF	2.95	1	1	2.95	1
Verified Post-Retrofit GPF	1.28	0.25	0.125	1.28	0.125
Verified GPF Savings	1.67	0.75	0.875	1.67	0.875
Annual Flushes per Year	85,589	8,559	34,235	83,478	41,739
Annual Verified Gallon Savings	142,933	6,419	29,956	139,409	36,522
<b>Annual Verified Utility \$ Savings</b>	<b>\$640</b>	<b>\$29</b>	<b>\$134</b>	<b>\$663</b>	<b>\$174</b>

#### Sink Faucet Savings

- > **GPM** – Gallons per minute
- > **Annual Usage, min** – Determined using industry standards based on number of staff and students
- > **LWS** – Lavatory Wash System

Fixture Type	Bullen		Lance
	LAV-1	LWS-1	LWS-1
Quantity	9	10	4
Pre-Retrofit GPM	1.3	1.3	1.3
Verified Post-Retrofit GPM	0.5	0.5	0.5
Verified GPM Savings	0.8	0.8	0.8
Annual Usage, min	5,349	5,349	10,435
Annual Verified Gallon Savings	4,279	4,279	8,348
<b>Annual Verified Utility \$ Savings</b>	<b>\$19</b>	<b>\$19</b>	<b>\$40</b>

## Year 1 Energy Savings Report

### Verified Savings

The following is the total verified savings realized due low flow plumbing fixtures.

<b>Annual Verified Utility \$ Savings</b>	<b>Bullen</b>	<b>Lance</b>
Urinal and Water Closet	\$803	\$837
Sink Faucets	\$39	\$40
<i>School Sub Total</i>	<i>\$841</i>	<i>\$876</i>
<b><i>Total</i></b>	<b><i>\$1,718</i></b>	

## Year 1 Energy Savings Report

### Building Envelope and Environmental System Upgrades

This scope items under these measures provide gas savings. The energy savings are verified using utility bill analysis. The results of the analysis for each building follows.

- > **Baseline Therms** – Projected energy consumption based on Pre-Retrofit equipment and operating conditions. The energy the building would have used if no changes were made.
- > **Actual Therms** – Actual utility consumption based listed on the utility bills
- > **Verified Therm Savings** = *(Baseline Therms) – (Actual Therms)*

#### Bullen Middle School

Utility Bill End Date	Baseline Therms	Actual Therms	Verified Therm Savings
8/1/2019	203	85	118
9/1/2019	203	91	112
10/1/2019	196	137	59
11/1/2019	2,190	2,590	-400
12/1/2019	6,916	5,477	1,439
1/1/2020	6,769	5,809	960
2/1/2020	7,743	6,355	1,388
3/1/2020	7,883	6,124	1,759
4/1/2020	4,777	3,515	1,262
5/1/2020	3,575	2,409	1,166
6/1/2020	1,364	1,065	299
7/1/2020	196	119	77
Annual Verified Therm Savings			8,239
<b>Annual Verified Utility \$ Savings</b>			<b>\$4,766</b>

#### Lance Middle School

Utility Bill End Date	Baseline Therms	Actual Therms	Verified Therm Savings
8/1/2019	282	66	216
9/1/2019	282	92	190
10/1/2019	273	228	45
11/1/2019	2,586	2,947	-361
12/1/2019	7,086	5,675	1,411
1/1/2020	6,970	5,879	1,091
2/1/2020	7,880	7,277	603
3/1/2020	7,969	7,160	809
4/1/2020	5,110	4,140	970
5/1/2020	3,949	3,596	353
6/1/2020	1,658	1,083	575
7/1/2020	282	69	213
Annual Verified Therm Savings			6,115
<b>Annual Verified Utility \$ Savings</b>			<b>\$3,406</b>

## Year 1 Energy Savings Report

## Verified Savings

The following is the total verified savings realized due reduction of gas consumption through more efficient equipment and control strategies.

School	Annual Verified Utility \$ Savings
Bullen	\$4,766
Lance	\$3,406
<b>Total</b>	<b>\$8,172</b>

## Year 1 Energy Savings Report

## APPENDIX A – Post-Retrofit Interior Lighting Fixtures

Bullen Middle School

Lamp Type	Lamp Watts	Quantity	Total Watts
A2	35	152	5320
A3	43	232	9976
B2	38	73	2774
C1	20	42	840
C1D	20	34	680
C2	33	23	759
C3	45	68	3060
C3D	45	18	810
D2	22	2	44
D4	41	97	3977
F1	20	21	420
F3D	45	5	225
K1	17	14	238
K4	15	16	240
KP	15	2	30
H1	21	7	147
J8	230	25	5750
I16	160	4	640
I24	240	4	960
M1	20	50	1000
M2	35	3	105
M3	20	7	140
M3D	20	2	40
M4	45	20	900
PA	35.8	1	35.8
PB	50.2	2	100.4
PC	78.8	3	236.4
P2	32	3	96
R5	77	1	77
R6	77	0	0
S1	3	4	12
T3	22	0	0
T4	22	40	880

## Year 1 Energy Savings Report

Lance Middle School

Lamp Type	Lamp Watts	Quantity	Total Watts
A2	35	175	6125
A3	43	450	19350
B2	38	130	4940
B3	45	9	405
C1	20	18	360
C1D	20	18	360
C2	33	84	2772
C3	45	75	3375
C3D	45	30	1350
D4	41	117	4797
F1	20	26	520
F2	35	4	140
F3	43	11	473
F4	20	2	40
H1	21	14	294
H2	18	5	90
H4	21	17	357
I16	160	3	480
I20	200	6	1200
J1	104	48	4992
K2	21	6	126
KP	15	35	525
L4	13.1	12	157.2
L8	26.2	8	209.6
M1	20	48	960
M1D	20	30	600
M2	35	12	420
M3	33	9	297
M4	45	104	4680
M5	43	18	774
P5	96.8	1	96.8
R5	77	3	231
SC	23	2	46
W1	16	13	208
W4	49	13	637
W8	98	3	294
W16	196	1	196
W20	245	1	245
W28	343	1	343



## Year 1 Energy Savings Report

### APPENDIX B – Exterior Lighting Fixtures

#### Bullen Middle School

Location	Pre-Retrofit Fixture	Qty	Pre-Retrofit Watts	Post-Retrofit Fixture	Qty	Post-Retrofit Watts
20 ft Poles	CH 250W MH	9	300	F-100W-LEDCH-CR-D	9	26
20 ft Poles	CH 250W MH	9	300	F-100W-LEDCH-CR	9	100
Door 15	100W INC	2	100	F-36W-LED CNP	2	36
15 ft Poles	CH 150W MH	3	180	F-67W-LEDCH	3	67
Door 1	100W INC	5	100	F-36W-LED CNP	5	36
Door 2	100W INC	2	100	F-36W-LED CNP	2	36
Door 3	100W INC	1	100	F-36W-LED CNP	1	36
Door 10	100W INC	2	100	F-36W-LED CNP	2	36
Door 6	100W INC	3	100	F-36W-LED CNP	3	36
Door 4	100W INC	2	100	F-36W-LED CNP	2	36
Door 14	100W INC	2	100	F-36W-LED CNP	2	36

#### Lance Middle School

Location	Pre-Retrofit Fixture	Qty	Pre-Retrofit Watts	Post-Retrofit Fixture	Qty	Post-Retrofit Watts
Door 2	1X1 GT 100W HID	2	123	F-36W-LED CNP	2	36
Front Entrance	8 RC HC 100 w MH	16	130	RRC13.5WLED-TR-K (HC)	16	14
25 ft Poles	CH 250W MH	15	300	F-100W-LEDCH-CR-D	15	26
Door 11	1X1 GT 100W HID	1	123	F-36W-LED CNP	1	36
Door 13	1X1 GT 100W HID	1	123	F-36W-LED CNP	1	36
Door 16	1X1 GT 100W HID	1	123	F-36W-LED CNP	1	36
Door 17	1X1 GT 100W HID	1	123	F-36W-LED CNP	1	36
25 ft Poles	CH 250W MH	15	300	F-100W-LEDCH-CR	15	100

## 2020-2021 Planning/Facilities Standing Committee Member Info Sheet

<b>Name</b>	<b>Email Address</b>	<b>Quick Facts</b>
Dan Wade	dwade@kUSD.edu	Chairperson of committee, KUSD school board member
Mary Modder	mmodder@kUSD.edu	KUSD school board member
Rebecca Stevens	rstevens@kUSD.edu	KUSD school board member
Cathryn Bothe	c.bothe@bothe.com	Community member, local business owner, long time committee member, KUSD grandparent
Johnathon George	jgeorge17@students.kUSD.edu	KUSD student, grade 12, Tremper
Kameron Jester	kjester26@students.kUSD.edu	KUSD student, grade 12, ITHSA
Matt St. Martin	mstmarti@kUSD.edu	KUSD staff member, Assistant Principal, ITHSA
Duane Sturino	dsturino@kUSD.edu	KUSD staff member, Assistant Principal, ITHSA
<b>Administration</b>		
Sue Savaglio-Jarvis	ssavagli@kUSD.edu	Superintendent of Schools
Patrick Finnermore	pfinnemo@kUSD.edu	Chief Financial Officer