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## MEMORANDUM

To: Dr. Daniel Brenner, Superintendent of Schools  
Michael Feeney, Director of Finance and Operations

From: Michael Lynch, Director of Facilities

Subject: Summary of Anticipated Long-Term Capital Projects: 2018-19 through 2023-2024

Date: November 21, 2017

A summary of the anticipated long-term capital projects for 2018-19 through 2023-24 is attached for your review. The projects are scheduled for the year in which it is anticipated that they will be brought forward for consideration as Priority Level 1 projects in the annual Capital Projects Budget. The long-term plan will certainly change over time. School facilities are evaluated on an on-going basis and revisions to the long-term plan will be made as needed in order to accommodate changes in the following areas:

- Facility conditions.
- Existing programs and their needs or the addition of new programs.
- Enrollment.
- Regulatory requirements.
- The economic climate.

The first table provides a rubric used to determine if a project was Priority 1, 2 or 3. Page 3 shows the guidelines in a more traditional form. Page 4 through 11 are the tables which delineate the anticipated total district-wide expenditures from 2018-19 through 2023-24. Pages 12 through 14 then provide a brief description of the projects. Where multiple buildings are affected, they are identified that way.

I look forward to reviewing this long-term plan with you and the members of the Board of Education. In the meantime, please do not hesitate to contact me if you have any questions or require additional information

## Priority Rubric for Capital Planning

	Highest Priority 1	Second Priority 2	Third Priority 3
Code Compliance	Project is necessary to complete to ensure compliance with local, state, and federal code	Project is recommended to meet future codes	N/A
Safety and Health	Project is necessary to ensure the safety and health of students and staff	Project is designed to improve safety and health of students and staff	Project is designed to enhance the safety of the school buildings. Project may improve aesthetic quality of buildings
Instructional Need	Project is necessary to fulfill an existing instructional need	Project is designed to fulfill an impending instructional need	Project is designed to enhance the learning environment, but does not have immediate or essential educational benefit
Operational Efficiencies	Project would dramatically and immediately improve operational efficiency. Upgrades are essential to replace failing systems	Project would, over time, contribute to operational efficiency. This includes repairs or upgrades to aging, but not failing systems	Project is believe to bring an increased level of efficiency to operations, but needs additional study.

## Legend

 Highlights Priority 1 Projects

 Highlights the projects identified through the building conditions survey that have been included in the 2018-19 through 2023-2024 Long Term Capital Plan

### ANTICIPATED LONG-TERM CAPITAL PROJECTS: PER SCHOOL

2018-19 through 2023-24

#### Priority Level 1 Projects:

- Are required by code or for significant safety/health reasons.
- Will significantly improve the delivery of education or school programs.
- Will significantly increase operational efficiencies.
- Are essential replacements/upgrades of building systems or sites.
- Are cost effective.

#### Priority Level 2 Projects:

- Will improve the delivery of education or school programs if implemented.
- Will provide some increase in operational efficiencies.
- Are required in order to replace/upgrade aging, but not failing, building systems.

#### Priority Level 3 Projects:

- Are generally aesthetic or non-essential in nature.
- Provide little or no educational benefit.
- Could be deferred to a future budget year or require additional study.

**ANTICIPATED LONG-TERM CAPITAL PROJECTS: PER SCHOOL**  
**2018-2019 through 2023-2024**

**DARIEN HIGH SCHOOL**

Priority	Project:	Year of Anticipated Implementation and Estimated Cost							
		2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024		
1	Replace Turf Baseball Field	\$ 575,000							
1	Replace oil burners with Natural Gas Units	\$ 65,000							
2	Replace surface in lower gyms		\$ 70,000						
2	Rebuild Tennis Courts				\$ 300,000				
2	Provide new wireless clock system	\$ 103,051							
2	Upgrade existing digital control program		\$ 25,000						
2	New carpet in library	\$ 40,000							
3	Provide Bollards Around Propane Tank			\$ 31,708					
3	Install motorized shades in Library		\$ 50,000						
3	Provide sound attention in chiller room			\$ 158,539					
3	Provide access doors for VAV boxes, valves					\$ 82,440			
3	Change heads on pole lights				\$ 24,732				
3	Change heads on pole lights					\$ 25,000			
3	Resurface blacktop parking areas and roadways								
	<b>Totals:</b>	\$ 783,051	\$ 145,000	\$ 190,247	\$ 324,732	\$ 107,440	\$ 425,000		

MIDDLESEX MIDDLE SCHOOL

Priority	Project:	Year of Anticipated Implementation and Estimated Cost							
		2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024		
1	Gas meter piping through cafeteria ceiling	\$ 35,000							
1	Install new carpet in Main Office, Library, Music Rooms	\$ 45,000							
2	Re-lube boiler #1		\$ 50,000						
2	Re-lube boiler #2			\$ 50,000					
2	Supply & install self closers on classroom doors				\$ 47,321				\$ 82,440
3	Provide Cooling for Overheating Electric Rooms (main switchgear room and original building elec room)								
3	Replace Fire Pump								\$ 107,173
3	Upgrade Corridor and Classroom lighting (exclude ceiling) in 5-10 years								\$ 700,743
3	Install new auditorium lighting, border lights & Flood Lights controlled via dimming system								\$ 494,642
3	Replace broken glass block				\$ 37,098				
3	Provide new emergency lighting at each egress doors		\$ 60,977						\$ 350,000
3	New Roof, 1999 addition								
3	Overhaul air conditioning units in Library, offices			\$ 120,000					
3	Overhaul Air Conditioning unit, 3rd floor					\$ 150,000			
3	New Asphalt road and sidewalk, Bus Loop				\$ 140,000				
3	Add fire alarm visual strobes - all classrooms				\$ 74,196				
3	Replace Hot Water Heater					\$ 40,000			
	<b>Totals:</b>	\$ 80,000	\$ 110,977	\$ 170,000	\$ 298,615	\$ 540,000	\$ 1,384,998		

HINDLEY ELEMENTARY SCHOOL

Priority	Project:	Year of Anticipated Implementation and Estimated Cost									
		2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024				
1	Renovate rooms 101, 107, 108: cabinets, cubbies, ceilings, paint	\$ 75,000									
1	Replace windows in original building	\$ 167,649	\$ 167,649	\$ 167,649							
1	Upgrade original building pneumatic control to digital, Phase 2	\$ 150,000			\$ 95,000						
1	Replace sump pump	\$ 46,464				\$ 49,464					
2	Upgrade to digital controls, Phase 3		\$ 95,000								
2	Curb Sidewalk and blacktop replacement		\$ 131,762								
2	Window/Misc Door Projects										
2	Provide new emergency lighting at each egress doors	\$ 43,974									
2	Replace Hot water heater					\$ 40,000					
2	Provide new corridor and classroom PA speakers and PA wiring to Amp at server room.	\$ 95,276									
3	Boiler Upgrades (air system, vacuum pump, shutoff switches	\$ 55,000									
3	Provide new powered ventilation (energy recovery unit) for the main office and classrooms(16 classrooms)										\$ 1,319,046
3	Repoint & repair brick				\$ 13,190						
3	Provide new air handling unit with coils Gym				\$ 577,083						
3	Provide new air handling unit with coils Caf�				\$ 577,083						
3	Replace ceiling mounted unit ventilators in Library				\$ 65,952						
3	Provide corridor ventilation (Qty:3)				\$ 247,321						
3	Replace 1940's main distribution board with new; use existing board as splice box. Include temp generator for shutdown			\$ 110,977							
3	Thermal Test existing switchboard and panel boards and Megger Test primary and secondary feeders including existing feeders from MDB to all downstream panel boards.										
3	Upgrade Corridor lighting (exclude ceiling)			\$ 28,537							
3	Upgrade Cafeteria lighting (exclude ceiling), install new border lights + dimmers			\$ 79,270		\$ 164,881					
3	Add occupancy sensors in all classrooms and offices that currently do not have automatic shut off control				\$ 24,732						
3	New Roof on original building									\$ 180,000	
3	Replace Boilers, burners, pumps in boiler room					\$ 500,000					
3	Replace exterior doors		\$ 48,000								
3	Renovate & irrigate playing fields				\$ 60,000						
3	New roof on 1996 addition										
3	Replace plumbing fixtures in the original building (Qty:20)									\$ 160,000	
3	Add 6 convenient and 4 quad receptacles/room in 27 classrooms									\$ 164,881	
3	Provide new wireless clock system.									\$ 214,345	
										\$ 49,464	
	<b>Totals:</b>	\$ 633,363	\$ 442,411	\$ 536,433	\$ 1,680,361	\$ 1,343,035	\$ 1,499,046				

**HOLMES ELEMENTARY SCHOOL**

Priority	Project:	Year of Anticipated Implementation and Estimated Cost						
		2018-2019	2019-2020	2020-2021	2010-2022	2022-2023	2023-2024	
1	Replace skylight	\$ 124,592						
1	Areaway into basement needs new bulkhead and egress ladder	\$ 13,192						
1	Replace roof shingles and EPDM roof	\$ 879,471						
1	New backflow preventer	\$ 45,732						
2	Replace 1930's Wing Classroom Unit Ventilators- abatement not included	\$ 351,788						
2	Provide Ventilation for Staff Rooms and Offices in 1930's Wing	\$ 293,157						
2	Provide new emergency lighting at each egress doors	\$ 51,302	\$ 51,302					
2	Provide new corridor and classroom PA speakers and PA wiring to Amp at server room.		\$ 102,605					
3	Convert Existing Boilers from Steam to Hot Water							
3	Add Hot Water Pumps for 1930's Wing				\$ 164,881			
3	Upgrade Library Ventilation and Interior Computer Room				\$ 65,952			
3	Upgrade Gym Ventilation				\$ 412,202			
3	Change All 1930's Wing to Hot Water - New Piping Mains				\$ 412,202			
3	Replace 1930's Wing Toilet Room Fixtures				\$ 288,541		\$ 1,236,606	
3	Replace 1970's main distribution board with new; use existing board as splice box. Include temp generator for shutdown				\$ 115,417			
3	Thermal Test existing switchboard and panel boards and Megger Test primary and secondary feeders including existing feeders from MDB to all downstream panel boards.				\$ 29,679			
3	Add 6 convenient and 4 quad receptacles/room in 20 original classrooms					\$ 164,881		
3	Provide new wireless clock system.					\$ 49,464		
3	Build new parking lot on former Curtis property		\$ 85,000					
3	Install new roof on 1996 addition							
3	Misc Masonry restoration, sealant original building			\$ 55,000			\$ 150,000	
3	Install new electrical dist. Panel			\$ 120,000				
3	New roof on original building							
<b>Totals:</b>		\$ 1,759,234	\$ 187,605	\$ 226,302	\$ 1,258,041	\$ 400,000	\$ 2,231,784	

**OX RIDGE ELEMENTARY SCHOOL**

Priority	Project:	Year of Anticipated Implementation and Estimated Cost						
		2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	
1	Replace main distribution board with new, including new service and primary/secondary feeder work and pad mount transformer.	\$ 293,157						
2	Re-surface asphalt, replace light - front	\$ 125,000						
2	Replace single glazed windows with insulated glass	\$ 884,601						
2	Replace 1996 Steam Boiler Plant with Hot Water	\$ 732,892						
2	Replace 1966 Classroom Unit Ventilators with Energy Recover Units	\$ 659,603						
2	Replace Library Unit Ventilators with Energy Recovery Units	\$ 183,223						
2	Provide Ventilation and AC to Interior Student Occupied Areas in 1966 Wing	\$ 109,934						
2	Replace 1966 Wing Classroom Exhaust Fans	\$ 146,578						
2	Replace 1966 Wing Toilet Exhaust Fans	\$ 73,289						
2	Replace and/or retrofit panels that are original to the building construction.	\$ 38,110						
2	Upgrade Corridor Lighting (original building)	\$ 83,843						
2	Add occupancy sensors in classrooms and offices	\$ 21,987						
2	Provide Fire Damper in Gym Return Duct	\$ 38,110						
2	Replace Cafeteria Ventilation System	\$ 533,545						
3	Replace exterior doors in hallways, original building	\$ 65,000						
3	Replace Gym Ventilation System	\$ 396,348						
3	Upgrade fixtures in 1966 bathrooms	\$ 266,773						
3	Thermal Test existing switchboard and panel boards and Megger Test primary and secondary feeders including existing feeders from MDB to all downstream panel boards.				\$ 29,679			
3	Upgrade Cafeteria lighting (exclude ceiling), install new border lights + dimmers						\$ 164,881	
3	Provide new emergency lighting at each egress doors						\$ 98,920	
3	Add 6 convenient and 4 quad receptacles/room in 22 original classrooms						\$ 181,369	
3	Provide new corridor and classroom PA speakers and PA wiring to Amp at server room.						\$ 107,173	
3	Provide new wireless clock system.						\$ 49,464	
3	Install new Hot Water Heater				\$ 20,000			
3	Remove & re-install solar panels & replace roof on 1986 addition				\$ 280,000			
<b>Totals</b>		\$ 3,230,264	\$ 1,025,381	\$ 396,348	\$ 329,679	\$ -	\$ 601,815	



**ROYLE ELEMENTARY SCHOOL**

Priority	Project:	Year of Anticipated Implementation and Estimated Cost						
		2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	
1	Replace Boiler Room Sump Pump	\$ 51,302						
1	Add Backflow Preventers on Water Mains	\$ 109,934						
1	Window screens for all occupied spaces	\$ 45,000						
1	Upgrade Corridor lighting	\$ 51,302						
2	Provide Powered Ventilation to 1950's Classroom with Roof Energy Recovery Units	\$ 879,471						
2	Replace 1950's Wing Toilet Room Fixtures	\$ 256,512						
2	Provide new corridor and classroom PA speakers and PA wiring to Amp at server room.	\$ 87,947						
2	Provide new wireless clock system.	\$ 49,464						
2	Provide new emergency lighting at each egress doors	\$ 36,645						
2	Replace single glaze window in library		\$ 342,994					
3	Provide Powered Ventilation to 1950's Classroom with Unit Ventilators		\$ 548,790					
3	Upgrade Gym Ventilation (+ Hot Water)		\$ 381,104					
3	Upgrade Cafeteria Ventilation (+ Hot Water)		\$ 381,104					
3	Upgrade Common Room Ventilation (+ Hot Water)		\$ 381,104					
3	Replace 1950's Wing Classroom Exhaust and Toilet Exhaust		\$ 206,101					
3	Thermal Test existing switchboard and panel boards and Megger Test primary and secondary feeders including existing feeders from MDB to all downstream panel boards.		\$ 27,439					
3	Convert Existing Boilers from Steam to Hot Water					\$ 164,881		
3	Add Hot Water Pumps					\$ 164,881		\$ 340,000
3	Change All 1950's to Hot Water - New Piping Mains					\$ 65,952		
3	Add 6 convenient and 4 quad receptacles/room in 20 original classrooms					\$ 1,236,606		
3	Provide rooftop energy recovery units-1950 classrooms			\$ 164,881				
3	New roof on 1996 addition			\$ 140,000				
3	New roof on original building							\$ 340,000
	<b>Totals</b>	\$ 1,567,577	\$ 2,268,636	\$ 304,881	\$ 850,000	\$ 1,467,439	\$ 340,000	

**TOKENEKE ELEMENTARY SCHOOL**

Priority	Project:	Year of Anticipated Implementation and Estimated Cost						
		2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	
1	Correct boiler room piping	\$ 85,000						
2	Install Light Dimming Controls in hallways		\$ 20,000					
3	Re-surface gym floor			\$ 37,500				
	<b>Totals</b>	\$ 85,000	\$ 20,000	\$ 37,500	\$ -	\$ -	\$ -	\$ -

**CENTRAL OFFICE**

Priority Project:	Year of Anticipated Implementation and Estimated Cost				
	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023
2		\$ 70,000			
<b>Totals</b>	\$ -	\$ 70,000	\$ -	\$ -	\$ -

**DISTRICT-WIDE**

Priority Project:	Year of Anticipated Implementation and Estimated Cost				
	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023
<b>Vehicle replacement schedule</b>					
1	\$ 48,500				
2		\$ 48,500			
3			\$ 48,500		
2				\$ 49,000	\$ 49,000
3					\$ 50,000
<b>Totals</b>	\$ 48,500	\$ 48,500	\$ 48,500	\$ 49,000	\$ 49,000

TOTAL PER YEAR	Year of Anticipated Implementation and Estimated Cost				
	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023
\$	\$ 8,186,989	\$ 4,316,510	\$ 1,910,211	\$ 4,790,428	\$ 5,738,698

ALL PRIORITY 1 PROJECTS 2018-19	\$ 2,506,295
ALL PRIORITY 2 PROJECTS 2018-19	\$ 5,225,695
ALL PRIORITY 3 PROJECTS 2018-19	\$ 55,000

**Notes:**

- Potential State reimbursement is not reflected for any of the costs listed.
- Financing costs for bonded projects are not included in any of the costs.
- All anticipated costs are in today's dollars.
- All anticipated projects will be evaluated annually and revisions will be made in order to accommodate changes in facility conditions, changes in existing programs, the addition of new programs, enrollment changes and new regulatory/code requirements or overall district needs.

**DESCRIPTION OF INDIVIDUAL PROJECTS 2018-19**

Darien High School:

**Priority Level 1 Project:**

- *Replace Turf Baseball Field:* The Varsity Baseball Field has had major repair to worn out areas. It is near the end of it's useful life.
- *Replace Oil Burners with Natural Gas Units:* We have funding in the current Capital Plan for most of the work that will take place in the boiler room. This money will be used to pay for the remaining piping plus any piping needed to bring the gas from the meter into the building.

**Priority Level 2 Project:**

- *Provide New Wireless Clock System:* The existing clock system based on an older technology, which in a building this large is unreliable. We recently switched the Middle School to a wireless clock system with excellent results.

Middlesex Middle School:

**Priority Level 1 Project:**

- *Gas meter piping through the cafeteria ceiling:* Due to where Eversource is proposing to place the new gas meter, additional funds are needed to run the piping across the ceiling of the cafeteria..
- *Install new carpet in Main Office, Library and Music Rooms:* This carpeting is extremely worn out and has multiple tears where it has been worn down to the padding.

**Priority Level 2 Project:**

- None

Hindley School:

**Priority Level 1 Project:**

- *Renovate rooms 101,107, 108: new cabinets, cubbies, ceilings and paint.* These rooms are from the 1976 Library addition. Existing cabinets are in poor condition, the ceiling is exposed and the lighting is outdated.
- *Replace windows in original building:* This is the continuation of the existing program. We have finished the environmental testing and the specifications are almost ready to bid out. This will be a multi-phase project spread over several years.
- *Upgrade original building pneumatic controls to digital controls, Phase 2:* We currently have the main distribution valves and the boilers operating off digital controls. This phase will allow us to add the 1948 building to this system.
- *Replace sump pump:* There is a large sump pump, which is original to the building. It does not stay working for very long periods of time and we are constantly trying to keep it running. The engineers have recommended replacement.

**Priority Level 2 & 3 Project:**

- *Provide new emergency lighting at each egress door:* There is currently very limited emergency lighting in this building. This new lighting would be tied into the new generator.

- **Provide new corridor and classroom PA speakers and PA wiring to Amp at server room:** The existing speakers and wiring are not in very good condition. Every time we run any wiring in the hallway ceiling we have to check all the PA wiring and usually repair something.
- **Boiler Upgrades:** This would supply a powered fresh air system and upgrade the emergency shutoff switches.

**Holmes Elementary School:**

**Priority Level 1 Project:**

- **Replace Skylight:** This skylight in the gymnasium is covered with plastic due to leaks. It will be changed as part of the roofing project.
- **Areaway into basement needs new bulkhead door and egress ladder:** The existing bulkhead is rusting out. There is no egress ladder, and there should be one.
- **Replace roof shingles and EPDM roof:** The roof is 21 years old and it is starting to leak after most rain storms.
- **New backflow preventer:** There is no backflow preventer on the water main and it is required.

**Priority Level 2 Project:**

- **Replace 1930's wing Classroom Unit Ventilators - abatement not included:** The unit ventilators in the original building do not work and the repair parts are not available.
- **Provide Ventilation for staff rooms and offices in 1930's wing:** These areas are parts of former classrooms and have no positive ventilation.
- **Provide emergency lighting at each egress door:** There is currently very little emergency lighting in this building. These lights would be tied into the new generator.

**Ox Ridge Elementary School:**

**Priority Level 1 Project:**

- **Replace main distribution board new, including new service and primary/secondary feeder work and transformer:** This unit is obsolete, repair breakers are no longer available. The last two times it has tripped off, we have had a difficult time restoring power to it.

**Priority Level 2 Project:**

- **Resurface asphalt, replace light n front:** There are two lights in the front parking lot that need repair/replacement and the blacktop needs a new topcoat.
- **Replace single glaze windows with insulated glass:** All of the windows in the original building are single pane glass. This would convert the windows to insulated glass. This does not include any environmental testing or remediation.
- **Replace 1996 Steam Boiler plant with hot water:** The 1996 boiler is large enough to heat both old and new wings, but it is not piped correctly to be able to do this. We would install a smaller hot water boiler that would only heat the newer addition.
- **Replace 1966 classroom unit ventilators with energy recovery units:** These unit ventilators are over 50 years old and not very efficient. New units would increase the room comfort and lower operating costs.
- **Replace Library unit ventilators with Energy Recovery Unit:** Same reason as given for the classroom units.
- **Provide Ventilation and AC to interior Student Occupied Areas in 1966 Wing:** There are several interior areas that have limited ventilation and no air conditioning. This would eliminate that problem.

- **Replace 1966 Wing Classroom Exhaust Fans:** These fans are old units and it is difficult get repair parts for them.
- **Replace 1966 Wing Toilet Exhaust Fans:** Same reasons as the classroom fans.

**Royle Elementary School:**

**Priority Level 1 Project:**

- **Replace Boiler Room Sump Pump:** This pump is the same vintage and has the same issues as the pump at Hindley.
- **Install Backflow preventers on Water Mains:** These are required on domestic water lines and they are missing. They need to be installed.
- **Supply and install window screens:** The 1996 part of the building doesn't have any window screens. The staff cannot open the windows for fresh air.

**Priority Level 2 & 3 Project:**

- **Provide powered ventilation to 1950's classrooms with Roof top Energy Recovery Units:** There is no positive ventilation in the 1958 wing of the building. There is one exhaust fan for the bathrooms and one in the hallway. This would supply the classrooms with tempered fresh air.
- **Replace 1950's Wing Toilet Room Fixtures:** These fixtures are dated and worn, constantly being repaired.
- **Provide new corridor and classroom PA speakers and PA wiring to Amp in server room:** System is over 20 years old and prone to breakdowns, nearing the end of it's useful life.
- **Provide new wireless clock system:** The current master clock system is non-functioning. Most of the classrooms are using battery operated clocks.
- **Provide new emergency lighting at each egress door:** There is a lack of emergency lighting in this building. These emergency lights will be tied into the new generator.

**Tokeneke Elementary School:**

**Priority Level 1 Project:**

- **Correct Boiler Room Piping:** The Retro-Commissioning project revealed a deficiency in the piping of the two boilers. This work will correct the problem.

**Central Office:**

**Priority Level 1 Project:**

None at this time  
District Wide:

**Priority Level 1 Project:**

- **Vehicle Replacement Schedule:** Replace 93-DAR – This is a 192003 S-10 light duty truck in below average condition. This will be replaced with a ¾ ton pickup truck with a plow

**Darien Public Schools  
Capital Projects 2018-19, Priority 1**

The following descriptions and review of Priority 1 projects are broken down following this template of guidelines:

1. Problem/opportunity being address
2. Project goal
3. Options investigated to address the problem
  - a. Potential costs/benefits/negatives
4. Option selected and reasoning
5. Project plan
  - a. Estimated cost, start date, completion date, risks, other pertinent details
6. Project benefits
  - a. Hard and soft, how will benefits be measured, any paybacks

**Darien High School**

**Replace Turf Baseball Field: \$575,000**

1. The Varsity Baseball Field is nearing the end of its' useful life.
2. The goal is to replace the existing field with new artificial turf that is conducive to Baseball and Field Hockey.
3. The only other option would be to remove the field from service.
4. The option of installing new artificial turf was selected because the subsurface of the field is in great condition and we can recycle the existing turf and infill. It is not prudent to take no action.
5. Ideally, this work will be done in late June through early August. This would be the time when fall sports practice hasn't started.
6. The benefit of this project is that it would ensure the fall baseball and Field Hockey programs have the field available at the beginning of their season.

**Replace Oil Burners with Natural Gas Units: - \$65,000**

1. The Town is in contract with Eversource to have a gas main installed to the High School. As part of the installation agreement, when the gas main is completed the High School will switch from oil to gas for heat and hot water. The budget estimate and funding that was approved last year is not enough money to pay for all the required piping.
2. The goal is to have the boilers and hot water heaters converted to natural gas when the deadline for the changeover occurs.
3. The options looked at were to change just the burners, or change the complete boiler/burner units.

4. There was no reason to change the boilers out. These units are designed to run for 25-30 years and they are only 13 years old and in excellent condition.
5. The estimated cost was originally based on information supplied by the equipment manufacturer. The start date was to have been July 1, 2017. There is no firm date as of now. There is no real risk, we have three boilers and can operate one on oil while the other 2 are changed over to gas.
6. The Town and Eversource have established a payback as part of their contract. According to the that document, the payback will be 3.5 years.

### **Middlesex Middle School**

Install Gas Meter Piping through Cafeteria Ceiling: - \$35,000

1. This is the same opportunity being present by Eversource to the High School.
2. The goal is to make MMS ready to run on natural gas instead of oil.
3. The other option would be to route the gas main either over the roof of the cafeteria, or install piping underground.
4. We selected this option because the piping will not be exposed to the elements, will last longer and is the least expensive.
5. The plan is to run all the piping from the gas meter, through the cafeteria ceiling and into the boiler room. There is no real risk, we can convert when ready, and run on oil until then.
6. The benefit is outlined in the estimated payback developed by the Town and Eversource. According to that document, the payback should be 2 years.

Install new carpet in Main Office, Library and Music Rooms: - \$45,000

1. The carpeting in these areas is old and worn out. Several areas have received major repairs over the last
2. Project goal is to remove and install new carpeting.
3. There were no other options looked at to take care of this issue.
4. The option selected is the only way to correctly eliminate this problem.
5. This work will be done during the summer and each space should be completed in 5-7 working days.
6. The project benefit is safety from trip hazards and improved appearance.

### **Hindley Elementary School**

Renovate Rooms 101,107,108: cabinets, cubbies, ceilings, paint - \$75,000

1. The cubbies and cabinets are from 1976. They are in poor condition. There is no acoustic ceiling in these spaces.
2. Goal is to install new cubbies and cabinets, an acoustic drop ceiling and new energy efficient LED lights.

3. Options investigated were to try and repair/renovate the existing cubbies and cabinets, retrofit the existing lights
4. The time and money spent to update 42 year old cabinets and fixtures isn't worth the effort. Replacing is the best option for long term use.
5. This project will be designed and bid out, hopefully in conjunction with the window replacement program.
6. The benefit will be a better learning environment

**Window Replacement Program, Original Building: - \$167,649**

1. The windows in the original building were not replaced when the 1996 addition was built. These windows are not original to the building, but are at least 40 years old. Many are inoperable and parts are not available.
2. The goal is to retrofit new, energy efficient windows into the existing window frames.
3. Options investigated were to try and repair the existing, remove the complete windows and frames and replace, or remove the sash and hardware and replace with new.
4. The window frames are in good condition, there was no need to go through the expense of replacing them. The retrofit option will retain the look of the building while improving the interior environment.
5. The architect has been working on this project, and has a basic specification completed. This work is scheduled to run over the next few summers, being completed in 2019. Most of the work will be done during the summer.
6. The benefits will be windows that work correctly, are draft free and have screens so they can be opened in the spring and fall without worrying about flying insects.

**Upgrade original building pneumatic controls to digital: - \$150,000**

1. The temperature controls for the original building do not work accurately.
2. The goal is to upgrade the controls to match the digital controls and valves that we have been installing in the other buildings.
3. The options investigated were to try repairing what we currently have, or installing a different digital system.
4. This option was selected due to the success we have had at other locations when installing the Alerton system.
5. We can install this system in the summer, similar to what we have done at Royle and Ox Ridge.
6. The benefits for this project will be greater comfort and control of the temperature in the building.

**Replace sump pump: - \$46,464**

1. The sump in the boiler room is original to the building. It is broken and there are no repair parts available.
2. The goal is to install a new pump with a similar capacity to the original.



3. The options investigated were to try and repair the original pump. The parts are not available.
4. The option selected was the only choice, there is a high water table here and a pump is needed to keep the boiler room from flooding.
5. The school architect is designing the new pump installation and we hope to do the work either next summer or early fall.
6. The benefit is a dry boiler room, and the heating equipment will not be subject to damage.

### **Holmes Elementary School**

Replace Skylight: - \$124,592

1. The problem is that this skylight, in the gym, does not operate as intended. It leaks and is covered with a tarp. The glass is not insulated.
2. The goal is to install a new insulated skylight which retains the appearance of the original building.
3. The options investigated were to try and repair the existing skylight by replacing all the glass in the frame, or installing a new unit.
4. We selected this option of a new skylight because there is no practical way to upgrade and repair the existing unit.
5. The plan would be to replace the skylight as part of the roofing plan, which would take place during the summer of 2019.
6. There are no risks involved, we would hope to complete before school starts in August of 2019.
7. The benefits would be improved energy efficiency and natural light into the gym from the exterior.

Areaway into basement needs new bulkhead and egress ladder: - \$13,192

1. The existing Bilco door leading to the boiler room is rusting out, and difficult to open. There is no egress ladder from the boiler room up to the outside.
2. The goal is to replace the Bilco door and install a metal ladder from the boiler room to the exterior.
3. There aren't any alternatives for this project.
4. We selected this option because it is the only way to accomplish the work.
5. The plan would be to perform all the requests for pricing in the spring, and perform the work in the summer of 2018.
6. The benefit would be increased safety for people working in the boiler room. There are no paybacks for this type of work.

Replace roof shingles and EDPM roof: - \$879,471

1. The roof shingles and EDPM roof are over 20 years old, which is the expected life of these types of materials.
2. The goal would be to replace the roof at the same time that the gym skylight is replaced.
3. The only part optional on this type of project is how much insulation you can add to the roof after the old roof is stripped off.
4. It was decided to budget for a complete removal of the roofing, flashing and shingles, and install tapered insulation on the flat roof and insulating boards on the pitched roof.
5. This work, and the skylight, would be done during the summer of 2019.
6. This roof doesn't have active leaks right now, but it can be expected to develop leaks in the next few years if action is not taken. There is no payback for this type of project.

**New Backflow preventer: - \$45,732**

1. The problem is that there is no backflow preventer on the domestic water line.
2. The goal is to install the backflow preventer to help insure safe domestic drinking water.
3. The only option is to not install this unit.
4. Both the State Department of Health and our water provider require backflow preventers on new water services. They have asked customers with older services to bring their water systems into compliance.
5. The cost was estimated by an engineer working with the state DOH and Aquarian Water to come up with a scope of work. We hope to tie this project in with the other water meters and sump pump replacements and bid the work out this summer.
6. The benefit is a safer drinking water system. There is no payback for this type of work.

**Ox Ridge School:**

**Replace Main Distribution Panel with new, including new service, primary/secondary feeder work and transformer: - \$293,157**

1. The problem is that this panel is obsolete and repair parts are no longer available.
2. The goal would be to upgrade this with a panel that could be used no matter what the future plans were for Ox Ridge School.
3. There are no options for this work.
4. We have selected a plan which lets us address this problem and provides flexibility for the future.
5. The project could be completed in under 2 weeks, from start to finish. We would have to time this work during a vacancy between the Day Camp and the school year.
6. The benefit would be a safer electrical service running into the building. There is no payback for this type of work.

**Royle Elementary School**

**Replace Boiler Room Sump Pump: - \$51,302**

1. This is the same as the sump pump replacement at Hindley.

### Add Backflow Preventers on Water Mains - \$109,931

1. This is the same as the work at Holmes School, except there are 2 water mains at Royle

### Window Screens for Occupied Areas: - \$45,000

1. The problem is that none of the windows in the 1996 addition have screens, some of the windows in the original building are missing the screens. On warm days the staff is reluctant to open the windows due to the insects that enter the classrooms.
2. Goal is to provide screens for all the windows.
3. The options available were removable or fixed screens.
4. We chose fixed screens that can be removed for cleaning as opposed to screens that you install each time you open the window. Less chance of damage, and window can be opened a variety of heights.
5. The plan would be to purchase from a company that would make up the screens, we would handle the installation.
6. Benefit would be better ventilation, especially on the top floor.

### Upgrade Corridor Lighting: - \$51,302

1. The corridor lighting in the 1958 addition is barely adequate and in poor condition. We upgraded the lights adjacent to this hallway when we did the generator installation.
2. Goal is to improve lighting levels and appearance, and to change out the existing ceiling tiles.
3. The option investigated was to change only the lights, or to change the lights and ceiling and increase the number of fixtures.
4. We can increase the number of fixtures and still decrease our electrical use due to new LED technology. We have to change the ceiling tile grid to match up with the new fixtures. We will install new, reflective tiles at the same time.
5. We would start this work during the summer. The camp use or summer cleaning won't be affected. This work will take 2 weeks from start to finish.
6. There will be a drop in electrical usage, the appearance of the area will be brighter and cleaner looking. Not really a payback due to the number of fixtures being changed.

### Tokeneke School:

#### Correct Boiler Room Piping: - \$85,000

1. This problem was discovered during the retro commissioning. Last year we added a circulating pump so that both boilers would work. The goal with this piping is to allow the boilers to be able to operate automatically. Now we have to manually shut off and open certain valves to switch from one boiler to the other.
2. Goal is to allow for a fully automatic lead-lag system.
3. The only other option is to leave things as they are, which puts you at risk for a building freeze up.

4. We chose this option because we believe this is what the engineers originally intended, but never achieved.
5. The plan would be to bid this out so the work could be done when the heating season is over. The work would be completed over the summer
6. The benefit will be extending the useful life of each boiler. Right now, one boiler has been doing most of the work for the past 8 years. There is no payback on this type of project.

#### **Central Office**

Nothing is being requested this year

#### **District-Wide**

Replace 93-DAR, a 2003 S-10 Pick Up - \$48,500

1. The problem is that this truck is not meant for regular commercial work. It is a small truck and it has a tiny plow we don't install any longer. Truck is currently used by our painter.
2. Replace with a full sized vehicle that has a utility body and snow plow.
3. There aren't any viable options. Truck will be 15 years old, it has over 125,000 miles on it.
4. This is a continuation of our vehicle replacement program.
5. Plan is to order a vehicle off the state bid once the funding is allocated. We would like to have this vehicle in time for the start of the winter of 2018-19.
6. Benefit will be reliable safe vehicle for a member of the maintenance department.