

Ipswich Elementary School Building Project

Tri Board- May 12, 2016

Taxes for Median Home - FY11 to FY16

Fiscal Year	Tax rate	Median Home Value	% yearly increase in Median Home Value	Tax Bill	% yearly increase from previous year for Median Home
FY16	\$14.85	\$414,100	1.8%	\$6,149.39	11.8%
FY15	\$13.51	\$406,900	3.9%	\$5,497.22	4.5%
FY14	\$13.43	\$391,600	3.5%	\$5,259.19	4.5%
FY13	\$13.30	\$378,300	-1.5%	\$5,031.39	2.5%
FY12	\$12.77	\$384,400	-3.3%	\$4,908.79	2.8%
FY11	\$12.00	\$397,800		\$4,773.60	

Data provided by Assessor's Office.

Existing Town/School Exempt Bonds

Exempt Bond	FY Bond retires	Tax impact per \$1000	Taxes on FY16 Median Home
Library Addition	FY17	\$0.01	\$4.14
Open Space	FY18	\$0.03	\$12.42
HS/MS Bond	FY20	\$0.45	\$186.36
Town Hall	FY21	\$0.10	\$41.41
Open Space	FY22	\$0.10	\$41.41
Open Space	FY25	\$0.02	\$8.30
Open Space	FY27	\$0.03	\$12.42
Open Space	FY30	\$0.06	\$24.85
FY16 total exempt bond costs		\$0.80/\$1000	\$331.28

Taxes based on a FY16 \$414,100 median home value. FY16 - Exempt bond debt service is approx. 5.4% of the tax bill. Data provided by Town treasurer.

Building projects - \$0.56/\$1000 or \$231.89

Open Space - \$0.24/\$1000 or \$99.39

New Exempt Bonds Over Next 10 Years

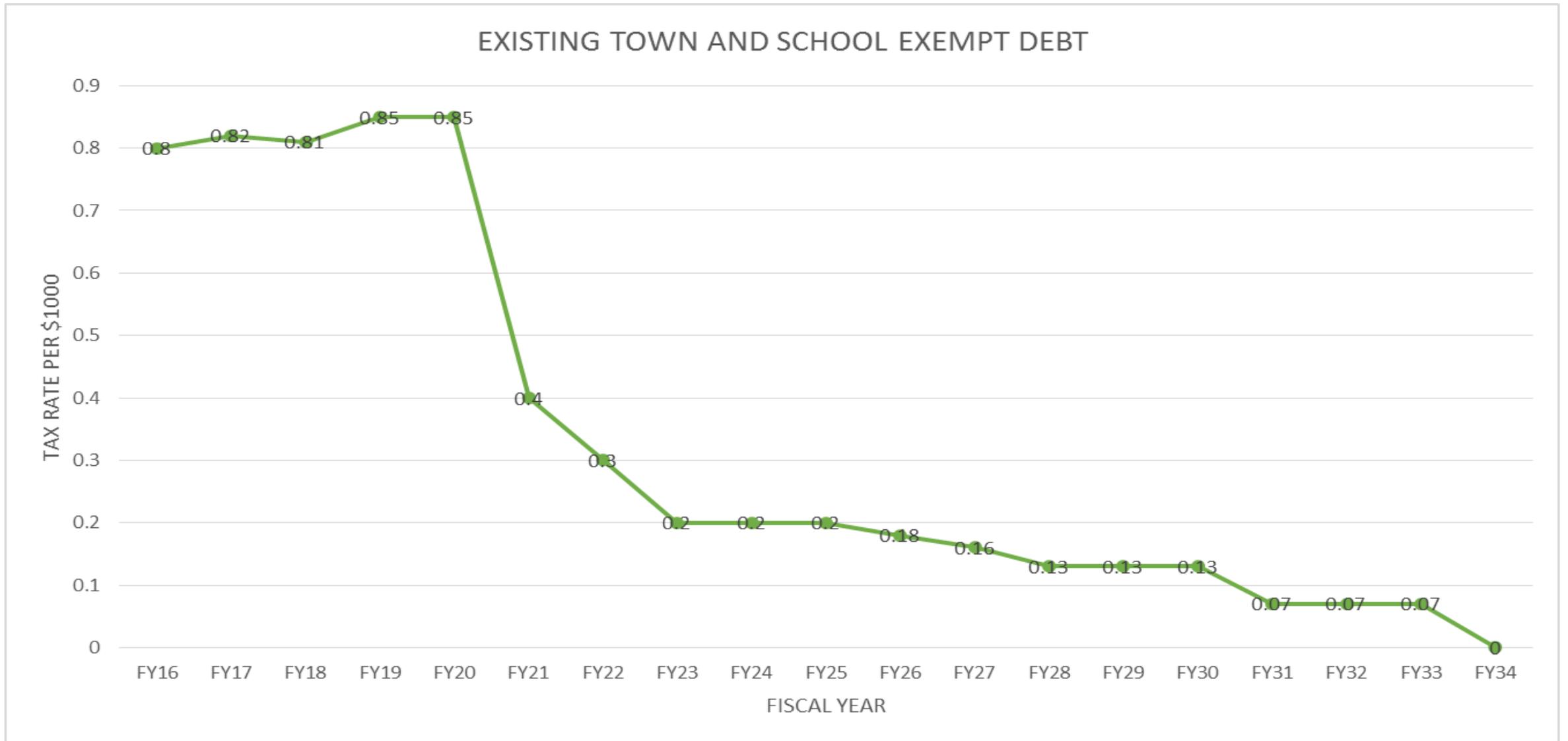
Exempt Bond	FY Bond Starts	FY Bond retires	Tax impact per \$1000	Taxes on \$414,100 Median Home
Linebrook - \$400K	FY17	FY26	\$0.02	\$8.28
Linebrook - \$2.6M	FY19	FY33	\$0.07	\$28.98

Note: There is approx. \$6.385M Open Space bond funding available. The next Open Space project is unknown.

Currently, there are no plans for a public safety building. Using the Winthrop site, the earliest a public safety building would be completed would be FY24 and bond repayment starting in FY25.

Taxes based on a \$414,100 median home value. Data provided by Town treasurer.

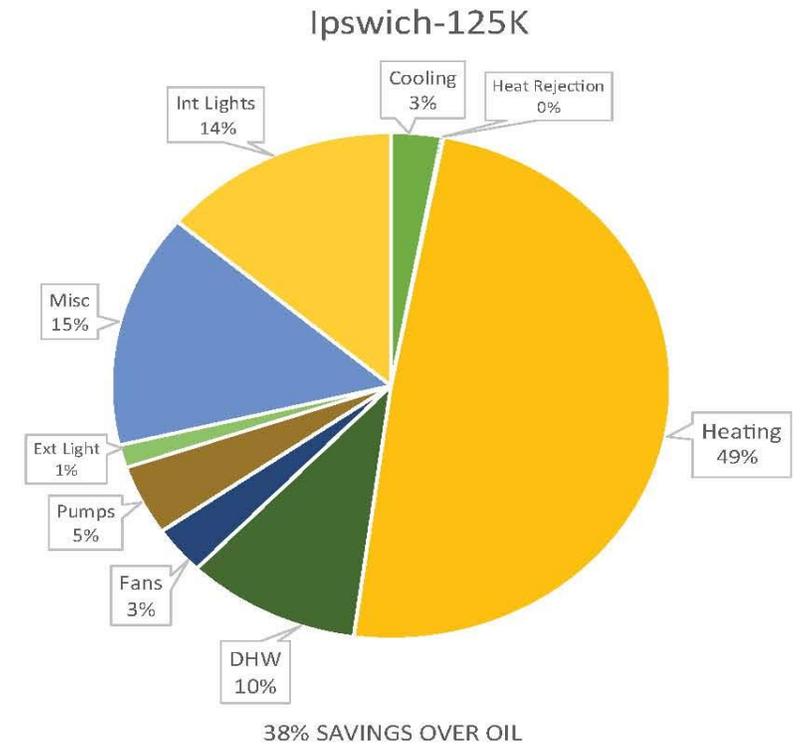
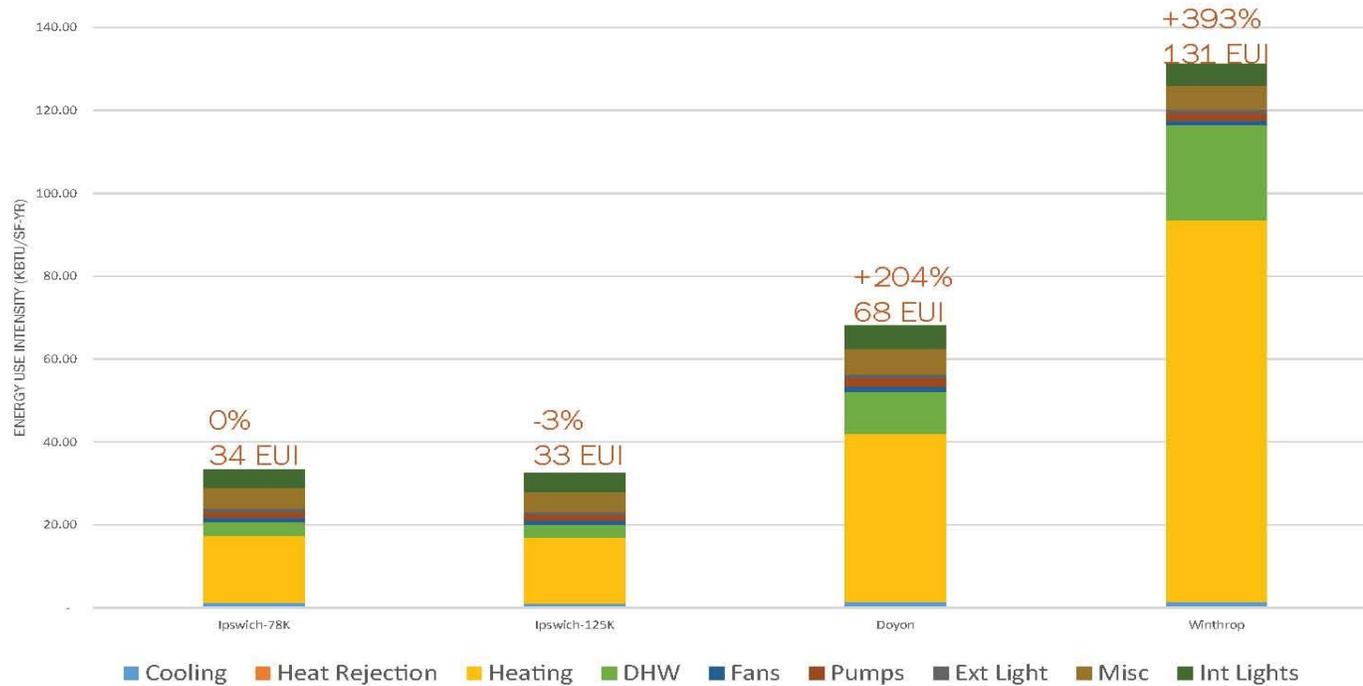
Existing and New Exempt Bonds



Operating Expenses

	Energy Costs	Water/ Sewer	Maint. Costs	Ops & Maint Supplies	Telephone/ Comm	Cust.	Busing costs
Existing – FY17 Budget	\$165,000	\$14,000	\$149,876 plus 5 yr capital projects	\$35,952	\$8,000	5	Eight buses
New Winthrop Ex. Doyon	\$185,973	TBD	TBD	\$38,185	\$8,000 Est.	5.5	Eight buses
775 Building	\$147,762 Nat. Gas	TBD	TBD	TBD	TBD	5	Eight buses
775 Building	\$172,695 Oil	TBD	TBD	TBD	TBD	5	Add up to two buses - \$54K per bus

Notes: Energy costs – Oil, gas and electric. Custodial staffing based on study of three other school projects and NESDEC study recommendations. Est. energy costs based on the Bancroft School in Andover. Maintenance costs will be developed during equipment and material selection during the DD/CD Phases. Energy modeling will be performed during the DD/CD Phases, will provide detailed energy, supplies and maintenance costs.



○ EUI: TOTAL ENERGY USE kBTU PER SQ. FT. PER YEAR

○ WINTHROP & DOYON ARE NOT AIR CONDITIONED, THOMPSON, BANCROFT & WOOD ARE AIR CONDITIONED

FACILITY	STUDENT POPULATION	SF	SF PER PUPIL	OIL	GAS	ELECTRICITY	SUPPLIES	CUST. FTE	E	G	O	PER PUPIL
DOYON (51,500)	414	49,924	121	\$39,177.77		\$34,628.80	\$20,000.00	2.5	\$0.69	\$0.00	\$0.78	\$518.49
WINTHROP (48,000)	407	50,485	124		\$60,846.82	\$32,181.21	\$15,952.00	2.5	\$0.64	\$1.21	\$0.00	\$415.19
THOMPSON / ARLINGTON	380	57,614	152		\$13,848.00	\$47,203.00	\$15,000.00	2	\$0.82	\$0.24	\$0.00	\$454.55
BANCROFT / ANDOVER	680	106,904	157		\$32,374.00	\$94,164.00	\$13,788.00	5	\$0.88	\$0.30	\$0.00	\$561.80
WOOD/FAIRHAVEN	370	77,871	210		\$21,476.00	\$66,175.00	\$18,185.00	3	\$0.85	\$0.28	\$0.00	\$677.98

ENERGY AND OPERATIONS COST, ELEMENTARY SCHOOLS, IPSWICH, MA

WINTHROP SCHOOL

DATE: 03/31/2016

Perkins Eastman | DPC

Operating Expenses – back up

ENERGY CONSUMPTION COSTS						
FACILITY	SF	OIL	GAS	ELEC	BLDG ENERGY	TOTAL ENERGY
Existing						
DOYON	49,924	\$58,500	\$3,000	\$38,000	\$99,500	
WINTHROP	50,485		\$30,500	\$35,000	\$65,500	\$165,000
Two Building						
DOYON	49,924	\$58,500	\$3,000	\$38,000	\$99,500	
WINTHROP	73,282		\$21,985	\$64,488	\$86,473	\$185,973
One Building	125,222		\$37,567	\$110,195	\$147,762	\$147,762
One Building	125,222	\$62,500		\$110,195	\$172,695	\$172,695
COMPARSION OLD vs. NEW BUILDINGS						
	SF	OIL/SF	GAS/SF	ELEC/SF		
THOMPSON	54,614		\$0.24	\$0.82		
BANCROFT	106904		\$0.30	\$0.88	Used in calcs	
WOOD	77871	\$0.00	\$0.28	\$0.85		
DOYON	49,924	\$1.17	\$0.06	\$0.69		
WINTHROP	50,485	\$0.00	\$0.60	\$0.64		

Building Costs Being Reviewed

- Winthrop – 775 Base renovation/addition – Must be included in MSBA submittal – Repair of the existing Winthrop – Existing walls remain – No education upgrade. Plus 73,500 SF addition**
- Winthrop - 420 K-5 Building**
- Bialek – 490 K-3 Building**
- Bialek – 775 K-5 Building**
- Doyon – 775 K-5 Building**
- Doyon – 775 K-5 Building Extended Site with land purchase**

Construction Method Used in Cost Estimates

- **Ch. 149 - Design Bid Build (D-B-B) – Both Bialek projects, Doyon with land purchase**
 - **Bialek – No existing structure**
 - **Doyon – Land purchase allows separation between construction site and Doyon**
 - **Dedicated construction access road**
 - **Separates construction site from Doyon and the fields**
- **Ch. 149A – CM at Risk (CMR) – Both Winthrop projects and Doyon without land purchase**
 - **These options require construction of a new building in very close proximity to the students/staff and a fire station (Winthrop). Safety, Traffic and Construction Phasing are the major concerns that add complexity and cost.**
- **CM at Risk – The contractor becomes a “partner” with the Owner, OPM and Design Team to solve issues during design before they become construction phase problems. More coordination/support from Contractor but at an added costs of 5% to 8% of construction costs.**

Estimated Project Costs

Options	K-5 775 Winthrop Reno/Add (CMR)	K-5 420 Winthrop (CMR)	K-3 490 Bialek (D-B-B)	K-5 775 Bialek (D-B-B)	K-5 775 Doyon (CMR)	K-5 775 Doyon Expanded Site (D-B-B)
Estimated Total Project Costs	\$ 56.7M	\$ 41.7M	\$ 43.7M	\$ 59.3M	\$ 64.0M	\$ 61.2M
Estimated MSBA Grant	\$ 24.4M	\$ 15.8M	\$ 16.7M	\$ 24.6M	\$ 25.3M	\$ 25.2M
Estimated Town Share	\$ 32.3M	\$ 25.9M	\$ 27.0M	\$ 34.7M	\$ 38.7M	\$ 36.0M

Doyon Expanded site includes estimated land acquisition costs
 Both Doyon projects include 100% of cost to extend gas service to the site.

Estimated Tax Impact – FY21 – 30 Year Bond

Options	K-5 775 Winthrop Reno/Add	K-5 420 Winthrop	K-3 490 Bialek	K-5 775 Bialek	K-5 775 Doyon	K-5 775 Doyon Expanded
Estimated MAXIMUM TOWN SHARE	\$ 32.3M	\$ 25.9M	\$ 27.0M	\$ 34.7M	\$ 38.7M	\$ 36.0M
Estimated TAX IMPACT	\$0.82 per \$1000	\$0.66 per \$1000	\$0.68 per \$1000	\$0.88 per \$1000	\$0.98 per \$1000	\$0.91 per \$1000
Estimated ANNUAL IMPACT FY21	\$339.56	\$273.30	\$281.59	\$364.41	\$405.82	\$376.83

Based on a \$414,100 median home value.
 30 Year option. 4.5% Interests rate. 2 year BAN and 28 Bond

Estimated Tax Impact over existing HS/MS Bond – 30 Year Bond

Options	K-5 775 Winthrop Reno/Add	K-5 420 Winthrop	K-3 490 Bialek	K-5 775 Bialek	K-5 775 Doyon	K-5 775 Doyon Expanded
Estimated MAXIMUM TOWN SHARE	\$ 32.3M	\$ 25.9M	\$ 27.0M	\$ 34.7M	\$ 38.7M	\$ 36.0M
Estimated TAX IMPACT	\$0.82/1000 Minus <u>\$0.45/1000</u> \$0.37/1000	\$0.66/1000 Minus <u>\$0.45/1000</u> \$0.21/1000	\$0.68/1000 Minus <u>\$0.45/1000</u> \$0.23/1000	\$0.88/1000 Minus <u>\$0.45/1000</u> \$0.43/1000	\$0.98/1000 Minus <u>\$0.45/1000</u> \$0.53/1000	\$0.91/1000 Minus <u>\$0.45/1000</u> \$0.46/1000
Estimated ANNUAL IMPACT FY21	\$153.21	\$86.96	\$95.24	\$178.06	\$219.47	\$190.48

HS/MS Bond retires in FY20 – Town share: \$1,144,200 or \$0.45/\$100. New bond repayment starts in FY21
Based on a \$414,100 median home value

DOYON - Options

- **MSBA – Three Programs**

- **Core Building – Renovating or replacing buildings that do not meet the City/Town’s educational program.**

Or

- **Base Repair – For existing buildings that meet the City/Town’s educational program but the base building systems require upgrade to extend building life.**

Or

- **Accelerated Repair - Streamlined program to repair roofs, windows and boilers. One system at a time.**

- **MSBA reimbursement available**

- **Must select one program. One building cannot participate in Base Repair and Core Bldg.**
- **If Base Repair is selected, MSBA then determines building meets Educational program.**
- **If a second MSBA project replaces equipment MSBA funded within 20 years, MSBA will reduce funding to the second project.**

Doyon – Cost Estimates

	BASE REPAIR No Education Program	BASE REPAIR W/ 8,700 SF Education Addition	NEW DOYON K-5 (355)
Estimated TOTAL PROJECT COSTS	\$ 10.9M	\$ 15.3M	\$ 40M
Estimated MAXIMUM TOWN SHARE	\$ 10.9M	\$ 15.3M	\$ 40M

Base Repair – Replace MEP systems in kind, no AC or central ventilation system. Upgrade kitchen, building finishes, structural and ADA compliance. No educational space upgrades

Base Repair plus 8,700 SF Educational Addition – Enlarges gymnasium, cafeteria and media center. Adds two SPED classrooms. Does not increase size of classrooms or any other educational spaces.

New Doyon – Replaces Doyon but does not include land acquisition.

Present Day Values – Construction starts in 2018. Town does not receive MSBA funding for Doyon

Present Day Value – K-5 420 at Winthrop – Doyon

Options	Winthrop K-5 Plus DOYON BASE RENO	Winthrop K-5 Plus DOYON RENO w/ 8,700 SF ADD	Winthrop K-5 Plus NEW DOYON	K-5 775 BUILDING BIALEK	K-5 775 BUILDING DOYON	K-5 775 BUILDING DOYON Expanded Site
Estimated WINTHROP SHARE	\$ 25.9M	\$ 25.9M	\$ 25.9M	\$ 34.7M	\$ 38.7M	\$ 36.0M
Estimated DOYON SHARE	\$ 10.9M	\$ 15.3M	\$ 40M			
Estimated POTENTIAL TOTAL TOWN SHARE	\$ 36.8M	\$ 41.2M	\$ 65.9M	\$ 34.7M	\$ 38.7M	\$ 36.0M

Present Day Values – Construction starts in 2018

If Winthrop site is selected, there could be potential up to \$2M added cost for Public Safety Building land acquisition. Not included estimates above.

Total Potential Costs – FY26 – K-5 420 at Winthrop – Doyon

Options	Winthrop K-5 Plus DOYON BASE RENO	Winthrop K-5 Plus DOYON RENO w/ 8,700 SF ADD	Winthrop K-5 Plus NEW DOYON	K-5 775 BUILDING BIALEK	K-5 775 BUILDING DOYON	K-5 775 BUILDING DOYON Expanded Site
Estimated WINTHROP SHARE	\$ 25.9M	\$ 25.9M	\$ 25.9M	\$ 34.7M	\$ 38.7M	\$ 36.0M
FY26 Est. DOYON SHARE	\$ 9.3M	\$12.5M	\$31.4M			
Estimated POTENTIAL TOTAL TOWN SHARE	\$ 35.2M	\$ 38.4M	\$ 57.3M	\$ 34.7M	\$ 38.7M	\$ 36.0M

Assumes escalation of 3.16% per year (3.16% is average for 2006-2016)

US inflation 10 Yr. avg. is 1.76% per year

Assumes the same 49.05% (40% net) MSBA reimbursement rate in FY26

If Winthrop site is selected, there could be potential up to \$2M added cost for Public Safety Building land acquisition. Not included in these estimates above.

Total Potential Costs – FY30 – K-5 420 at Winthrop – Doyon

Options	Winthrop K-5 Plus DOYON BASE RENO	Winthrop K-5 Plus DOYON RENO w/ 8,700 SF ADD	Winthrop K-5 Plus NEW DOYON	K-5 775 BUILDING BIALEK	K-5 775 BUILDING DOYON	K-5 775 BUILDING DOYON Expanded Site
Estimated WINTHROP SHARE	\$ 25.9M	\$ 25.9M	\$ 25.9M	\$ 34.7M	\$ 38.7M	\$ 36.0M
FY30 Est. DOYON SHARE	\$ 10.9M	\$ 14.6M	\$ 36.6M			
Estimated POTENTIAL TOTAL TOWN SHARE	\$ 36.8M	\$ 40.5M	\$ 62.5M	\$ 34.7M	\$ 38.7M	\$ 36.0M

Assumes escalation of 3.16% per year (3.16% is average for 2006-2016)

US inflation 10 Yr. avg. is 1.76% per year

Assumes the same 49.05% (40% net) MSBA reimbursement rate in FY26

If Winthrop site is selected, there could be potential up to \$2M added cost for Public Safety Building land acquisition. Not included in these estimates above.

Total Potential Costs Comparison – K-5 420 at Winthrop – Doyon

Options	Winthrop K-5 Plus DOYON BASE RENO	Winthrop K-5 Plus DOYON RENO w/ 8,700 SF ADD	Winthrop K-5 Plus NEW DOYON	K-5 775 BUILDING BIALEK	K-5 775 BUILDING DOYON	K-5 775 BUILDING DOYON Expanded Site
Estimated Potential Present Day Costs	\$ 36.8M	\$ 41.2M	\$ 65.9M	\$ 34.7M	\$ 38.7M	\$ 36.0M
FY26 Est. Potential Costs	\$ 35.2M	\$ 38.4M	\$ 57.3M	\$ 34.7M	\$ 38.7M	\$ 36.0M
FY30 Est. Potential Costs	\$ 36.8M	\$ 40.5M	\$ 62.5M	\$ 34.7M	\$ 38.7M	\$ 36.0M

Assumes escalation of 3.16% per year (3.16% is average for 2006-2016)

US inflation 10 Yr. avg. is 1.76% per year

Assumes the same 49.05% (40% net) MSBA reimbursement rate in FY26

If Winthrop site is selected, there could be potential up to \$2M added cost for Public Safety Building land acquisition. Not included in these estimates above.

Doyon – Tax Impact FY26

	BASE REPAIR No Education Program	BASE REPAIR W/ Education Addition	NEW DOYON K-5 (355) In FY26
Estimated TAX IMPACT	\$0.25 per 1000	\$0.32 per 1000	\$0.79 per 1000
Est. ANNUAL IMPACT FY26 for \$414,100 Home	\$103.52	\$132.51	\$327.14
Est. ANNUAL IMPACT FY26 for \$447,000 Home	\$111.75	\$143.04	\$327

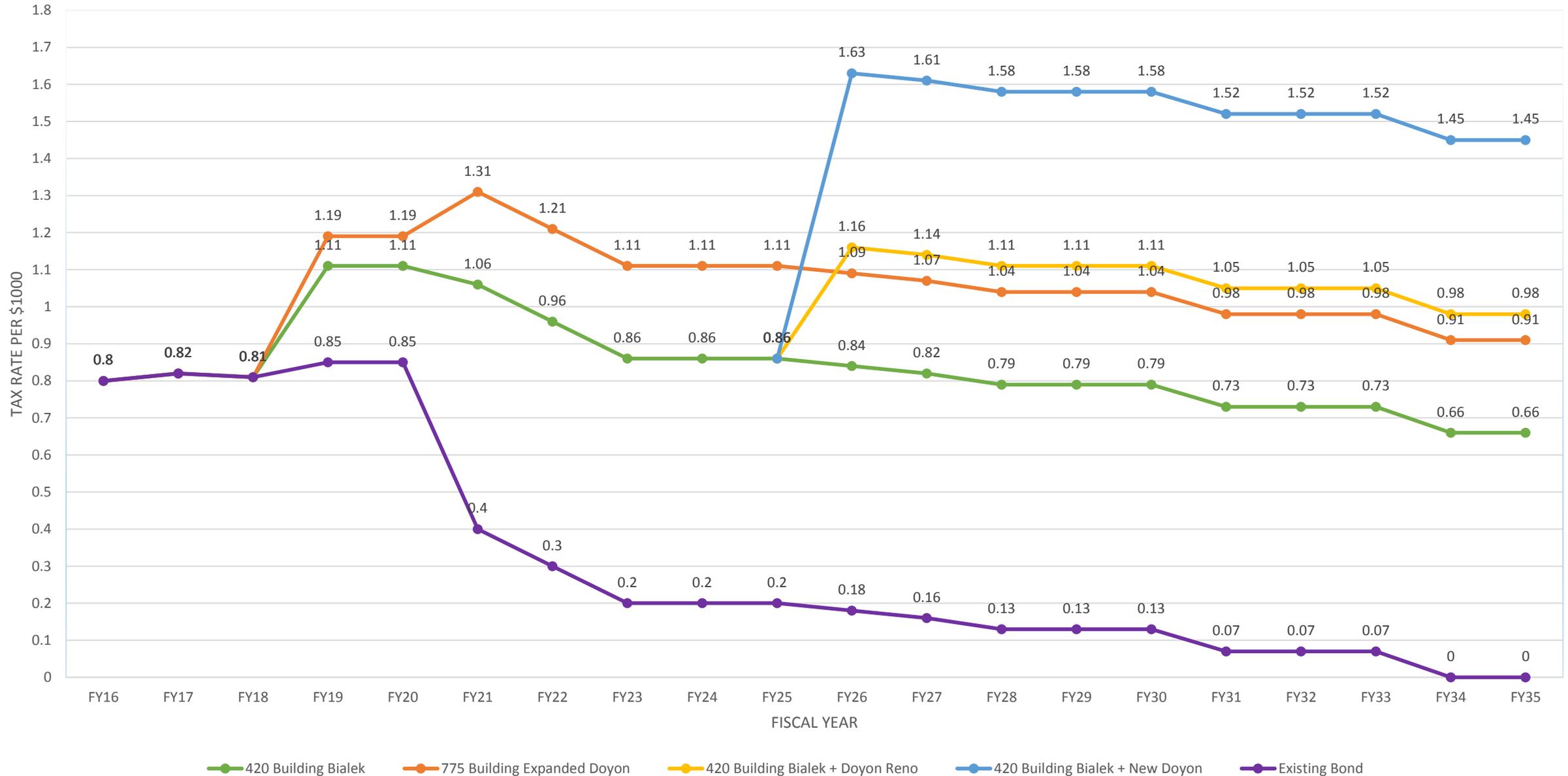
Home value increase between FY11 and FY16 is 4%. \$447,000 is based on 8% increase over 10 years.

Doyon – Tax Impact FY30

	BASE REPAIR No Education Program	BASE REPAIR W/ Education Addition	NEW DOYON K-5 (355) In FY26
Estimated TAX IMPACT	\$0.28 per 1000	\$0.37 per 1000	\$0.93 per 1000
Est. ANNUAL IMPACT FY30 for \$414,100 Home	\$115.95	\$153.22	\$385.11
Est. ANNUAL IMPACT FY30 for \$463,800 Home	\$129.86	\$171.60	\$431.33

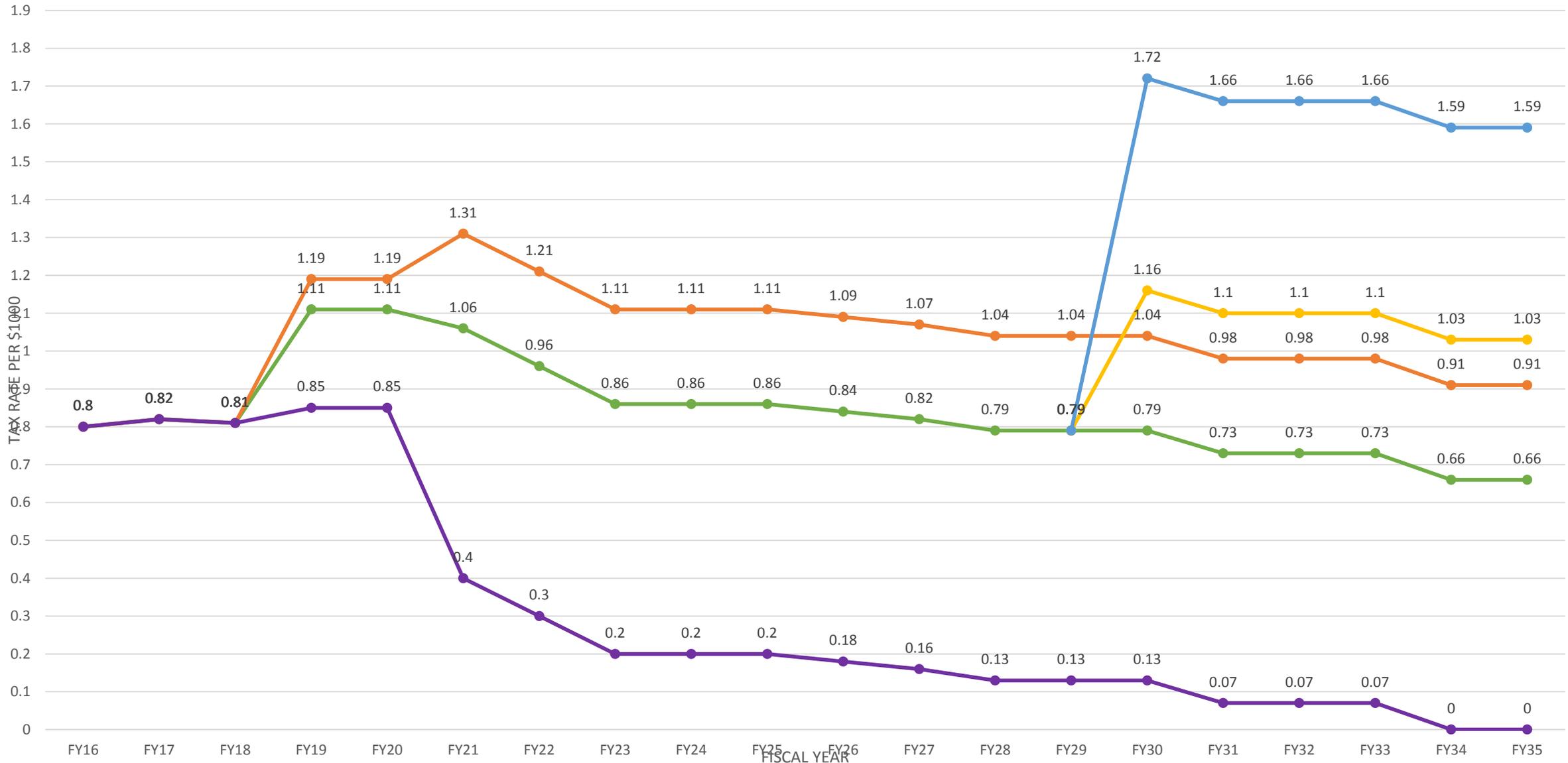
Home value increase between FY11 and FY16 is 4%. \$447,000 is based on 12% increase over 15 years.

Existing Town/School and Proposed School Exempt Bond – Doyon FY26



Existing Town/School and Proposed School Exempt Bond – Doyon FY30

● 420 Building Bialek
 ● 775 Building Expanded Doyon
 ● 420 Building Bialek + Doyon Reno
 ● 420 Building Bialek + New Doyon
 ● Existing Bond



Estimated Tax Impact – 20, 25, 30 Year Bonds

Options	K-5 775 Winthrop Reno/Add	K-5 420 Winthrop	K-3 490 Bialek	K-5 775 Bialek	K-5 775 Doyon	K-5 775 Doyon Expanded
Estimated 30 Yr Bond Tax Impact	\$0.82 per \$1000	\$0.66 per \$1000	\$0.68 per \$1000	\$0.88 per \$1000	\$0.98 per \$1000	\$0.91 per \$1000
Estimated 25 Yr Bond Tax Impact	\$0.87 per \$1000	\$0.70 per \$1000	\$0.73 per \$1000	\$0.93 per \$1000	\$1.04 per \$1000	\$0.97 per \$1000
Estimated 20 Yr Bond Tax Impact	\$0.99 per \$1000	\$0.80 per \$1000	\$0.83 per \$1000	\$1.06 per \$1000	\$1.18 per \$1000	\$1.10 per \$1000

4.5% Interests rate

30 Yr Option – 2 Yr BAN and 28 Yr Bond

25 Yr Option – 25 Yr Bond

20 Yr Option – 20 Yr Bond

Doyon – What Does \$700,000 buy?

- **Doyon value \$2,482,000 – AAB value \$744,780. Spending over this limit in any three year period requires ADA and seismic structural compliance.**
- **Adding or relocating walls would trigger Building Code Ch. 34 compliance for upgrading systems to meet present day codes.**
- **Base renovation estimates:**
 - **New Flooring – \$800,000 (includes Hazmat removal)**
 - **New Electrical System – \$1,300,000**
 - **New Fire Alarm System - \$200,000**
 - **New Sprinkler System - \$325,000**
 - **Replace 30 HVAC UVs - \$250,000**
 - **New Plumbing - \$900,000 (includes new ADA toilet rooms with HVAC, electrical)**
 - **New Kitchen Equipment - \$350,000 (includes HVAC, Fire Alarm, Electrical, Ansul System)**
 - **Clean, repair and repoint exterior brick - \$300,000**
 - **8,700 SF Educational space addition - \$4,000,000**