

*Town of Concord*

*Report of the  
Facilities Planning  
Committee*



*June 25, 2003*

**Town of Concord  
Facilities Planning Committee Report  
June 25, 2003**

**Executive Summary**

The Committee was advised that as many as six major building projects may be requested over the next twenty years. We recommend that four of these projects be authorized at approximately five-year intervals, starting with the Thoreau School replacement in 2005. Such a schedule by itself will not cause real estate taxes to increase at a rate greater than the estimated 3% rate of inflation.

The Committee judges that maintenance of town facilities is inadequately funded, and that an increase of approximately \$500,000 per year may be required for the next several years to bring facilities to optimum condition. The report offers a number of specific recommendations as to how Concord's maintenance procedures might be improved with resulting economies.

The land and buildings owned by the town constitute a resource that should be utilized to the optimum extent. Every future building need must be evaluated in terms of existing owned property so that the resulting recommended program responds to the optimum long-term community spatial requirements and financial constraints. Every new building program should reflect usage flexibility, energy conservation, and efficient land utilization.

During the course of its studies it became increasingly apparent to the Committee that the ability to control real estate tax increases lies with fiscal prudence in establishing the operating costs for the schools and the town. Facilities costs, including those related to proposed new construction, are comparatively minor in the long run. We urge that the compounding effect of proposed Proposition 2 ½ overrides be clearly publicized and explained as such Articles are brought before future Town Meetings.

Pertinent information relative to this report was obtained through interviews with key school and town employees, and from financial information made available with respect to the owning and operating costs of the 24 buildings studied. The Committee believes that the information so obtained is sufficiently complete to support our recommendations.

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## **I. Introduction**

**A. Charge to the Committee.** The Facilities Planning Committee was established in January 2002 by the Board of Selectmen and given eighteen months to complete its work. The highlights of the charge to the Committee are outlined in the following sections of its charge:

**“Purpose:** To develop and recommend to the Board of Selectmen, and also for the use of the School Committee, a needs assessment, sequencing, and financing plan for the maintenance, upkeep, repair, reconstruction, additions, and new construction for all Town buildings, particularly School Buildings, and those projects not part of the Capital Plan, over the next twenty (20) years. This plan will take into account and coordinate with any and all expected capital expenditures over the same time period. The goal is to develop a timing and sequencing plan, including financing, which will adequately provide for the upkeep of Town buildings and their improvement as required, either by obsolescence or needs, most immediately school buildings, in such a manner as to minimize the impact on the Town's resources.”

**“Facilities to be Considered:** Any and all buildings and facilities owned by the Town of Concord, but excluding facilities which are funded by Enterprise Funds or are part of the Capital Plan.”

Among its thirteen members were two representatives each of the Board of Selectmen and of the School Committee. The other nine members included citizens of the Town with experience in financial planning, architecture, engineering, and project management. The members of the Committee were: Loretta Ho Sherblom and William J. Sweeney, Jr. (Co-chairs), William J. Dolan (Clerk), Warren F. Daniell, Jr. (Subcommittee Chair), Jean Paul Carlhian, James P. DiGiovanni [withdrew 2002], Richmond T. Edes, Margaret W. Gaudet, Thea Hahn, Ruth C. Lauer, Patrick J. Sinnott, Carl A. Prussing, David A. Peters, and David Bearg [joined 2003].

## **B. Acknowledgments**

The Facilities Planning Committee received extensive assistance from the Town Manager, the Town Treasurer, Town Department Heads and Building Managers, School Administrators, Jim Reynolds and the Long Range Planning Committee and many others. Without this assistance we could not possibly have completed our assignment. If errors appear in anything included in our report that we have obtained from these sources, we accept full responsibility.

## **C. Vision Statement**

The Facilities Planning Committee believes that the Town's facilities are among its most valuable assets and form a critical part of the Town's identity. The array of Town-owned facilities serves a diverse group of users and programs; performs essential public safety, educational, governmental and recreational functions; contributes to the quality of life in Concord; and represents a significant long-term investment. It can also represent a serious liability, requiring major investments and individual efforts.

For these reasons, the Facilities Planning Committee believes that the ongoing stewardship of our facilities must be supported by a comprehensive planning process that addresses existing facility conditions, program needs, schedules and budgets. While this process must recognize short-term financial trends and constraints, it must nonetheless provide a framework for the long-term maintenance, upgrading, expansion and new construction of facilities – facilities that the citizens of Concord will all be proud of.

The preparation of a twenty-year facilities plan is a useful step in understanding and projecting the costs that the Town is likely to incur in renovating or replacing its major facilities in the foreseeable future. For maximum benefit, the twenty-year facilities plan should be maintained as a planning tool of the Town. For that to be possible, the plan must be updated at regular intervals. The Facilities Planning Committee hopes that the study it has undertaken has not merely produced a one-time view of the future of the Town's facilities needs, but also has demonstrated the usefulness of its method of analysis for the future.

## **II. The First Tasks of the Committee**

Among its first activities in 2002, the Committee conducted an inspection of the condition of the Alcott School in the Spring of that year, and reviewed the architectural plans previously developed for the construction of a new Alcott School. The Committee recommended affirmative action on the Alcott School Warrant Article at the 2002 Town Meeting based on these two evaluations. The project was subsequently approved by Town Meeting.

The Committee also started a review of the School Building Assistance Bureau rules and regulations that might have affected the Town's plans for future school facilities. When the S.B.A.B. funding, programs, and rules were suspended at the state level, the study was discontinued. If the Commonwealth revives the S.B.A.B. program, or institutes a new program, the twenty-year facilities plan will need to be revised to reflect the new realities. Until that time the Town is unlikely to receive any state aid for its school facilities projects.

### **III. The Building Inventory**

An essential early task of the Committee was to prepare an inventory of Town buildings to provide the data necessary for the creation of a needs-based facilities plan. The Committee formed a Project Planning Subcommittee consisting of Thea Hahn, David Peters, Bill Dolan, and David Bearg, with Warren Daniell serving as Chair. The Subcommittee gathered data on twenty-four Town buildings including all schools but not including facilities funded by Enterprise Funds or which are part of the Capital Plan, as directed by the Committee's Charge.

The result of the Subcommittee's efforts is the attached Building Inventory spreadsheet. The Building Inventory identifies five buildings which are the direct responsibility of the Town Manager, three administered by the Recreation Department, five by Public Works, two by Public Safety, and seven by the School Department. Two buildings owned by the Town, but leased to self-supporting activities (Emerson Umbrella and "F.O.P.A.C."), are also included. The Hunt Gym, identified as one of the Recreation Department buildings, is partially self-supporting.

History, occupancy, condition and needs information for each of these buildings was obtained through interviews with the respective building managers. The interview methods and notes are described in the Appendix. Square foot areas of the buildings were obtained from Town records but were not confirmed by the Subcommittee. Approximate replacement costs were estimated by the Subcommittee, which utilized as a basis for these costs the "R.S. Means Square Foot Cost 2003 Edition" as well as personal experience. It is worth noting that the public schools represent approximately 75% of the replacement value of those buildings covered by this report. Insured values were also obtained from the Town, and are current as of August 2000.

During the course of its studies the Subcommittee met or talked with the Facilities Managers of Middlesex School and Emerson Hospital and with several facilities consultants, and discussed with them their procedures for estimating and funding maintenance and operating costs.

The Subcommittee analyzed the existing state of Town Buildings through informal inspections of all major buildings and through extensive interviews with Town personnel responsible for the operation and maintenance of each building.

Concord, Massachusetts Building Inventory

August 8, 2003

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	
	BUILDING & ADDRESS	BUILDING MANAGER & PHONE NUMBER	DATE BUILT	BUILDING USE	SQUARE FOOTAGE	INSURED VALUE 08/01/2000	REPLACEMENT COST 01/01/2003 (see note 1)	DATE OF MOST RECENT WORK	DESCRIPTION OF MOST RECENT WORK	KNOWN CODE COMPLIANCE ISSUES	OCCUPANCY PATTERNS	ANNUAL ENERGY COSTS 2004 BUDGETS	ENERGY COSTS PER SQUARE FOOT	WATER & SEWER COSTS	HVAC SYSTEMS	
Town Manager	01	Town House 22 Monument Square	Asst Town Manager 318-3000	1851	offices, meeting, storage	14,838	\$1,715,000	\$2,225,700	2002	restroom renovations	none	weekdays and weekends	\$28,352	\$1.91	\$2,235	Boiler & A/C new in 2001
	02	Visitors Information Center 58 Main Street	New Facility in 2002	2002	Visitor Info and Rest Rooms	1,120	Not on schedule 6/4/2003	\$400,000	2002	New Construction	none	7 days, during daylight hours	\$0	\$0.00		Sealed combustion gas with heat
	03	Harvey Wheeler Center 1276 Main Street	New Facility under construction	Expected to open 2004	Senior Citizen Center	18,000	\$2,049,000	\$3,600,000	2003	Complete Remodeling	none	Days & evenings, 7 days per wk	\$14,995	\$0.83	\$4,309	New 2003
	04	Gun House Lexington Road	Asst Town Manager 318-3000	1960	storage of Concord Battery	1,080	\$63,321	\$89,640	2001	wiring upgrade	none	constant storage, episodic	\$347	\$0.32	\$200	None
	05	Cemetery Building Court Lane	David Turocy 318-3221	pre-1900	office area & equipment storage	1,540	\$7,500	\$87,000	none		not ADA compliant	weekdays	\$1,200	\$0.78	\$500	New Boiler 2000. Oil fired, hot air
Recreation Department	06	Hunt Recreation Facility 90 Stow Street	Danner DeStephano 369-6460	1935	recreation	12,492	\$2,253,000	\$2,248,560	2002	fire alarm system replacement	none	daily 6am - 11pm	\$22,290	\$1.78	\$4,498	
	07	Hunt Pool & Shed 90 Stow Street	Danner DeStephano 369-6461	1991	summer swim	3,750	\$573,000	\$397,500	2002	painting pool shed	none	seasonal - daily -65 hours/week				none
	08	Field House Lawsbrook Road	Danner DeStephano 369-6461	1996	Public Toilets, Equipment Storage	600	\$62,000	\$61,800	2001	Lights Replaced	none	seasonal				none
Department of Public Works	09	Office, Garages & Storage 133 Keyes Road	William Edgerton David Turocy 318-3222		offices, garage	18,268	\$1,693,000	\$1,826,800	2002	partial roof replacement	none	weekdays	\$39,894	\$2.18	\$1,264	Natural Gas/Hot Water & Air
	10	Salt Shed 133 Keyes Road	William Edgerton David Turocy 318-3222		road salt storage	4,240	\$147,000	\$161,120			none	episodic	none			
	11	Water & Sewer Division 135 Keyes Road	William Edgerton David Turocy 318-3222		administration & garage	9,700	\$1,039,000	\$970,000	2002	partial roof replacement (EPDM)	no sprinklers, office or mech room	weekdays	\$21,783	\$2.25	\$854	natural gas heat, electric baseboard
	12	Planning/Land Management 141 Keyes Road	John Minty 318-3280	1904	offices	9,841	\$931,000	\$1,180,920	1994	Totally remodeled 1994	none	daily 7am - midnight	\$20,285	\$2.06	\$785	Gas heat, and A/C installed 1997.2boilers
	13	Earth Products Site Garage Rte. 126 at Rte. 2	William Edgerton David Turocy 318-3222	unknown	materials & equipment storage	1,280		\$106,240			none	episodic, seasonal				none
Public Safety	14	Police & Fire Station 219 Walden Street	Lt. Paul Macone 318-3406	1959	Police/Fire Offices, Living Garage	14,431	\$2,022,000	\$3,246,975	2002	Dispatch Center rehab	No access 2nd floor. (Inc in '05 Const.)	24 hours a day 7 days a week	\$38,156	\$2.64	\$3,750	Age of boilers unknown, New Burners
	15	West Concord Fire Station 1201 Main Street	Interim Fire Chief Mark Cotreau 318-3450	1932	office/garage, & living	5,204	\$570,000	\$1,170,900	1990	Building Rehab	yes	24 hours a day 7 days a week	\$15,567	\$2.99	\$1,527	system adequate
ol Department	16	CCHS 500 Walden Street	George Gower 318-1400	1961	School 9-12	242,027	\$25,420,000	\$36,304,050	2003	roof and wall repair	none	daily	\$380,250	\$1.57	\$50,000	New Boilers 1996
	17	Sanborn Middle School 835 Old Marlboro Rd	Karen Lane 318-1380	1969	School 6-8	101,072	\$7,646,000	\$13,644,720	2002	modular classroom, lighting	none	daily	\$139,370	\$1.38		Boilers - Installed 1969 Cleaver
	18	Peabody Middle School 1231 Old Marlboro Rd	James Halliday 318-1360	1970	School 6-8	68,911	\$4,123,000	\$9,313,785	2003	energy efficient lighting,	none	daily	\$98,670	\$1.43		Boilers installed 1970 should last 5
	19	Alcott School Laurel Street	Phil Benincasa 318-1300	1953	School K-5	59,832	\$4,154,602	\$8,077,320	2003	new school under construction	none	daily	\$125,000	\$2.09		New Boilers 2002 to be moved to

**Concord, Massachusetts Building Inventory**

August 8, 2003

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
	BUILDING & ADDRESS	BUILDING MANAGER & PHONE NUMBER	DATE BUILT	BUILDING USE	SQUARE FOOTAGE	INSURED VALUE 08/01/2000	REPLACEMENT COST 01/01/2003 (see note 1)	DATE OF MOST RECENT WORK	DESCRIPTION OF MOST RECENT WORK	KNOWN CODE COMPLIANCE ISSUES	OCCUPANCY PATTERNS	ANNUAL ENERGY COSTS 2004 BUDGETS	ENERGY COSTS PER SQUARE FOOT	WATER & SEWER COSTS	HVAC SYSTEMS
School	20	<b>Thoreau School</b> 20 Pleasant Street	Alexander Popp 318-1320	1958	School K-5	40,495	\$3,402,000	\$5,466,825	1995	10,500 sf addition	none	daily	\$93,500	\$2.31	Boilers good until 2015
	21	<b>Willard School</b> 185 Powder Mill Rd	P. Fernandes 318-1340		School K-5	47,248	\$3,764,000	\$6,378,480	2002	roof repairs -- 5 yr. Life	none	daily	\$84,000	\$1.78	Boilers 15 yrs old. Replacement
	22	<b>Ripley School</b> Merriam Road	Richard Barrett 318-1510	c.1958	School Admin.	56,230	\$4,123,000	\$7,591,050	2003	partial roof replacement	yes	daily	\$91,775	\$1.63	Boilers OK should be in FY'06 Budget
Leased	23	<b>Emerson Umbrella</b> 10 Stow Street	Property Leased to Emerson Umbrella			43,553	\$5,469,000	\$5,444,125				\$32,000	\$0.73		
	24	<b>FOPAC</b> 51 Walden Street	Leased to FOPAC Kathleen Chick	1887	Music Dance & Theater Performances	19,492	\$1,332,000	\$2,533,960	2001 & 2002	Restroom renovation, exterior paint	none	daily	\$12,500	\$0.64	Heating - ? No AC
<b>Column Totals</b>					795,244	\$72,558,423	\$112,527,470					\$1,259,934	\$1.58		

**Notes:**

1. Col G, replacement cost estimated using R S Means, cost estimating Manual 2003.
2. Committee recommendation regarding new fire station appears in text of final report



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	A	P	Q	R	S	T	U	V	W	X
	BUILDING & ADDRESS	ROOF SYSTEM	OTHER ISSUES 1	OTHER ISSUES 2	OTHER ISSUES 3	USER OPINION - MEETING CURRENT SPACE NEEDS?	EXPECTED WORK 2003-2008	EXPECTED WORK 2009-2013	EXPECTED WORK 2014-2018	EXPECTED WORK 2019-2023
01	<b>Town House</b> 22 Monument Square	5,100 sq ft new 2002; 500 sq ft new	Building should be protected by Sprinkler System	ongoing brownstone repairs		yes	roof, brownstone repairs, install sprinkler system			Replace chillers 2021. est cost \$40,000. Replace
02	<b>Visitors Information Center</b> 58 Main Street	Slate roof, 1590 sq ft				yes				
03	<b>Harvey Wheeler Center</b> 1276 Main Street	Tile Roof being repaired				yes				
04	<b>Gun House</b> Lexington Road	New roof 1999/2000				yes				Roof repairs or replacement 2023
05	<b>Cemetery Building</b> Court Lane	aging asphalt roof	structural - foundation failure	electrical & heating	Need Decision to Renovate, or Demolish and replace	yes				
06	<b>Hunt Recreation Facility</b> 90 Stow Street	Slate and Asphalt Shingles	has plans for addition but parking will not allow	ongoing slate roof repairs		Yes, but additional space would be an asset	replace HVAC system			
07	<b>Hunt Pool &amp; Shed</b> 90 Stow Street		fence replacement			yes	fence replacement			
08	<b>Field House</b> Lawsbrook Road					yes				
09	<b>Office, Garages &amp; Storage</b> 133 Keyes Road	EPDM	Int/Ext Painting, Sprinkler heads in offices	Garage - doors, weather stripping, lighting, tramway	repair concrete floors & columns.	no			Replace Heating System	Replace Air Handlers, Tile Flooring
10	<b>Salt Shed</b> 133 Keyes Road		minor wall repair required			yes				
11	<b>Water &amp; Sewer Division</b> 135 Keyes Road	low pitch EPDM	fenced enclosures - generator, storage	no fire sprinkler system	garage - doors, heating & lighting	no - need chemical storage room, and additional office				
12	<b>Planning/Land Management</b> 141 Keyes Road	3,500 sq ft, installed 1994	will require additional storage	simplify HVAC controls		Adequate for next decade				
13	<b>Earth Products Site Garage</b> Rte. 126 at Rte. 2	metal				yes				
14	<b>Police &amp; Fire Station</b> 219 Walden Street	approx. 1987, replace 2007-2012	Access 2nd floor, utilize space 3rd floor, ADA compliance	Upgrade lighting, wiring, generator, heating system	replace windows & doors	no	Design for access, etc., FY'04 and Build as designed	Replace roof 2008-2010	new fire station? (see note 2, below)	
15	<b>West Concord Fire Station</b> 1201 Main Street	scheduled for replacement FY2003	totally non compliant with ADA	inadequate living, garage, & office space, and plumbing	Building too small and not enough land available for expansion.	no	Driveway & Apron re-paving		move to present station 1? (see note 2 below)	
16	<b>CCHS</b> 500 Walden Street	230,000 sq ft	Majority of roof will have to be replaced in 3 to 5 years			no	Roof replacement 2008, portion may be included as	Phase I, Capital Construction Project FY2011,	New Boilers required 2016	
17	<b>Sanborn Middle School</b> 835 Old Marlboro Rd	90,000 sq ft. Replaced 1997 good				no	2004 replace floors, & add drop ceilings and new	New Boilers 2013	Roof replacement in 2017	
18	<b>Peabody Middle School</b> 1231 Old Marlboro Rd	56,000 sq ft Replaced 2002. Should				no	2004 replace floors, & add drop ceilings and new	Old Alcott Boilers to be installed in 2008 or 2009. Est		Roof replacement 2023
19	<b>Alcott School</b> Laurel Street	58,400 Sq ft				no	New School under construction. Expected			

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	<b>A</b>	<b>P</b>	<b>Q</b>	<b>R</b>	<b>S</b>	<b>T</b>	<b>U</b>	<b>V</b>	<b>W</b>	<b>X</b>
	BUILDING & ADDRESS	ROOF SYSTEM	OTHER ISSUES 1	OTHER ISSUES 2	OTHER ISSUES 3	USER OPINION - MEETING CURRENT SPACE NEEDS?	EXPECTED WORK 2003-2008	EXPECTED WORK 2009-2013	EXPECTED WORK 2014-2018	EXPECTED WORK 2019-2023
20	<b>Thoreau School</b> 20 Pleasant Street	53,700 sq ft 15 yrs old	Window wall needs to be replaced			no	Preparation of plans & bid specs for new school			
21	<b>Willard School</b> 185 Powder Mill Rd	53,000 sq ft. Repaired 2002. Should	Cafeteria needs renovation.			no	Playground areas to be resurfaced 2003. Roof			
22	<b>Ripley School</b> Merriam Road	Re-roofing to be completed FY'04. 20 yr	Parking area to be repaved 2003			yes	FY '06 replace boilers(est \$150,000), and			
23	<b>Emerson Umbrella</b> 10 Stow Street									
24	<b>FOPAC</b> 51 Walden Street	Slate & Asphalt Shingle				no				
<b>Column Totals</b>										

**Notes:**

1. Col G, replacement cc
2. Committee recommen

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A		Y	
BUILDING &	ADDRESS	NOTES	
01	<b>Town House</b> 22 Monument Square	Col L - includes Chiller @ \$7,843.	
02	<b>Visitors Information Center</b> 58 Main Street	Col E - does not include 720 sq ft porch. Col G - Construction cost \$400,000.	
03	<b>Harvey Wheeler Center</b> 1276 Main Street	Cost of Renovation \$2,900,000, Col E - includes 6,000 sq ft basement	
04	<b>Gun House</b> Lexington Road		
05	<b>Cemetery Building</b> Court Lane	Col L & N estimated. Based on annual operating costs of \$1,702	
06	<b>Hunt Recreation Facility</b> 90 Stow Street		
07	<b>Hunt Pool &amp; Shed</b> 90 Stow Street	Energy costs included w/Hunt Rec Facility	
08	<b>Field House</b> Lawsbrook Road	Energy costs included w/Hunt Rec Facility	
09	<b>Office, Garages &amp; Storage</b> 133 Keyes Road	Pole barn for vehicle storage - future desire	
10	<b>Salt Shed</b> 133 Keyes Road		
11	<b>Water &amp; Sewer Division</b> 135 Keyes Road		
12	<b>Planning/Land Management</b> 141 Keyes Road	No capital items required next 20 years, per John	
13	<b>Earth Products Site Garage</b> Rte. 126 at Rte. 2	Likely to be taken down in near future	
14	<b>Police &amp; Fire Station</b> 219 Walden Street	Present Plan is to design for items in Col Q, R & S in FY'04, and build in FY'05	
15	<b>West Concord Fire Station</b> 1201 Main Street	If new station, this building would no longer serve as fire station.	
16	<b>CCHS</b> 500 Walden Street		
17	<b>Sanborn Middle School</b> 835 Old Marlboro Rd	Col U, 2003 TM voted \$425,000 for similar work at Sanborn & Peabody Bldgs	
18	<b>Peabody Middle School</b> 1231 Old Marlboro Rd	Col U, 2003 TM voted \$425,000 for similar work at Sanborn & Peabody Bldgs	
19	<b>Alcott School</b> Laurel Street	All expenses, etc., based on existing building	

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<b>A</b>		<b>Y</b>	
	BUILDING & ADDRESS	NOTES	
20	<b>Thoreau School</b> 20 Pleasant Street	Expect Article to start building new Thoreau School in 2005, at 2004 Town Meeting	
21	<b>Willard School</b> 185 Powder Mill Rd		
22	<b>Ripley School</b> Merriam Road		
23	<b>Emerson Umbrella</b> 10 Stow Street		
24	<b>FOPAC</b> 51 Walden Street		
<b>Column Totals</b>			

**Notes:**

1. Col G, replacement cc
2. Committee recommen

#### **IV. Building Maintenance**

In addition to capital expenditures, the Town must appropriate funds annually for the maintenance of Town-owned buildings. Such expenditures are funded in two ways: Annual operating budgets for the Town, and separately for the schools, are prepared and generally approved with minimal debate and no changes at Town Meeting. However, significant maintenance items are part of the Town Manager's Capital Plan and appear as Warrant Articles at Town Meeting.

The costs of maintenance are discussed in depth in the document "Committing to the Cost of Ownership - Maintenance and Repair of Public Buildings" (Special Report #60, published by the Building Research Board, National Research Council, American Public Works Association). This document makes the following significant points:

"Underfunding is a widespread and persistent problem that undermines maintenance and repair (M&R) of public buildings."

"An appropriate budget allocation for routine M&R for a substantial inventory of facilities will typically be in the range of 2 to 4 percent of the aggregate current replacement value of those facilities."

"Periodic facilities assessment is an essential step in effective facilities management."

"Effective maintenance management is also required to realize the full benefit of funds made available."

"Widespread underfunding of maintenance in public facilities.....can affect public health and safety, reduce productivity of public employees, and cause long-term financial losses when buildings must be prematurely renewed or replaced."

It is the Committee's belief that the Town should, in the future, anticipate all maintenance costs, not just those subject to routine appropriation. It is our recommendation that the Town anticipate, in its annual budgeting, maintenance costs between 2.5% and 3.0% of the replacement value of its buildings. For those buildings studied by the Committee, and excluding Emerson Umbrella and F.O.P.A.C. because they are maintained by their tenants, this amounts to approximately \$2,565,000 for 2003. See Sheet M-1.

With regard to leased facilities, the Committee recommends that the Town be sure that its rental agreements specify the level of maintenance required and then conduct whatever inspections are needed to assure compliance.

In an attempt to determine past maintenance costs, the Committee has first studied those experienced by the Concord Public School System (C.P.S.) whose facilities include three elementary schools, two middle school buildings, and the Ripley School. C.P.S. has been selected for the following reasons. C.P.S. represents a significant portion (approximately 45%) of the replacement value of Town-owned property. The annual maintenance budget is well documented. Moreover, an excellent record of unbudgeted C.P.S. maintenance costs approved at Town Meetings is available.

The C.P.S. operating budget for 2003 includes an amount of \$566,860 for Maintenance. This amount does not include custodial labor, but otherwise includes all labor, materials and equipment necessary for C.P.S. maintenance. This amounts to \$1.52 per square foot of C.P.S. building area.

In addition, over the past twelve years the Town Meeting has authorized the expenditure an average of \$502,256 (present value; see Note at bottom of Sheet M-3) per year, or \$1.34 / SF, for C.P.S. maintenance. This amount includes some improvements, but does not include any costs related to building additions or replacement, including modular classrooms. (See Sheet M-2.)

The total of \$2.86 / SF translates to 2.12% of the replacement value of the buildings involved, an amount at the lower end of the 2% to 4% range utilized by others as a general maintenance guideline.

The time frame utilized for this C.P.S. analysis (1992 through 2003) does include some items that may be considered extraordinary. During this period a major roofing replacement program was completed on most of the schools. In addition, a one-time authorization of \$1,000,000 was made for Technology Wiring. The impact of these costs is represented in the analysis. Although it is not likely that the roofing expenditures over the past twelve years will be repeated over the next twelve, the future of technology-related expenditures is difficult to predict and they could well increase.

Past maintenance costs for other Town buildings are less easily determined. Concord-Carlisle High School (C.C.H.S.) has a well-planned annual maintenance budget, but the Town Meeting warrant articles, amounting to \$9,132,500 in 1992 and 1995, do not distinguish between necessary maintenance and curriculum-inspired renovations. Assuming that the amount authorized was divided 50/50 between these two activities, the comparable number for C.C.H.S. is 2.90% of replacement cost. (See Sheet M-3.)

History is equally obscure for Town buildings other than schools. However, if we assume that the recent costs associated with the Harvey Wheeler building are truly extraordinary and non-representative of ongoing expenditures, then that building should not be considered in any analysis of maintenance cost history. Under these conditions, maintenance cost for Town buildings other than schools – and this includes major improvements to the Keyes Road facilities – has amounted, on an annualized basis, to 3.19% of replacement cost. (See Sheet M-4.)

Sheet M-1 constitutes a worksheet application of this analysis. It shows that, when utilizing a "2.75% of replacement value" budget, Concord has been underfunding maintenance and renovations by approximately \$292,000 per year. Had this expenditure been made, the Town would not be in the maintenance catch-up mode that now exists. The Committee believes that improved maintenance practices will, in the long run, make for better-maintained and longer-lived buildings at a reduced annual cost to the Town.

The Committee has developed a number of recommendations with respect to the maintenance of Town buildings. These are itemized in Section VI. C. Recommended Improvements in Facilities Management, below.

CONCORD MAINTENANCE BUDGET WORKSHEET					SHEET M-1	
ITEM	VALUE	FPC NO.	BUILDING	AREA	REPL. VAL.	
1 CPS Buildings - Area (Square Feet)	373,868		CPS	373,868	\$50,472,180	
2 CPS Buildings - Replacement Value	\$50,472,180		CCHS (Concord 69%)	166,999	\$25,049,795	
3 CPS Buildings - 2004 Maintenance Budget	\$566,860	1	Town House	14,838	\$2,225,700	
4 CPS Buildings - 2004 Maint. Cost / SF	\$1.52	2	Visitors Info Ctr.	1,820	\$400,000	
5 CCHS Building - Area (Square Feet)	242,027	3	Harvey Wheeler	18,000	\$3,600,000	
6 CCHS Building - Replacement Value	\$36,304,050	4	Gun House	1,080	\$89,640	
7 CCHS Building - 2004 Maintenance Budget	\$355,453	5	Cemetery Building	1,540	\$87,000	
8 CCHS Building - 2004 Maint. Cost / SF	\$1.47	6	Hunt Gym	12,492	\$2,248,560	
9		7	Hunt Pool & Shed	3,750	\$397,500	
10 CCHS Area (Concord 69%)	166,999	8	Field House	600	\$61,800	
11 CCHS Replacement Value (Concord 69%)	\$25,049,795	9	Keyes Off., Gar., Stor.	18,268	\$1,826,800	
12 CCHS 2004 Maintenance Budget (Concord 69%)	\$245,263	10	Keyes Salt Shed	4,240	\$161,120	
13		11	Keyes Water & Sewer	9,700	\$970,000	
14 CPS + CCHS Building Area (Concord share)	540,867	12	Keyes Planning	9,841	\$1,180,920	
15 CPS + CCHS Replacement Value (Concord share)	\$75,521,975	13	Earth Products	1,280	\$106,240	
16 CPS + CCHS Maintenance Budget (Concord share)	\$812,123	14	Police & Fire	14,431	\$3,246,975	
17		15	West Concord Fire	5,204	\$1,170,900	
18 Recommended Maintenance % of Repl. Value	2.75%					
19 Recommended Concord Maint. Budget (2.75% x \$93,295,130)	\$2,565,616		Subtotal #1 through #15)	117,084	\$17,773,155	
20 CPS Maintenance Scheduled	\$566,860	23	Emerson Umbrella	43,553	\$5,444,125	
21 CCHS Maintenance Scheduled (Concord share)	\$245,263	24	FOPAC	19,492	\$2,533,960	
22						
23 Unscheduled Maintenance ((#19 - (#20+#21))	\$1,753,493		Subtotal Non-Schools	180,129	\$25,751,240	
24 CPS Warrant Article Maintenance (12 year average)	\$502,256		Subtotal Schools	540,867	\$75,521,975	
25 CCHS Warrant Article Maintenance (50% of 12 year average)	\$481,452					
26 Other Concord Bldg. Warrant Article Maint. (w/o Harvey Wheeler)	\$301,794		Total	720,996	\$101,273,215	
27 Other Concord Building Basic Maintenance @ \$1.50/sf	\$175,626		Total w/o E.U. & FOPAC	657,951	\$93,295,130	
28						
29 Deferred Maintenance Catchup ((#23- (#24+#25+#26+#27))	\$292,365					
<b>NOTE: Emerson Umbrella and FOPAC excluded from this analysis.</b>						



FACILITIES PLANNING COMMITTEE						SHEET M-2		
MAINTENANCE COST ANALYSIS								
<u>ALL CPS PROJECTS</u>								
A. SUMMARY OF TOWN MEETING SCHOOL BUILDING MAINT. ARTICLES 1992 THROUGH 2003								
FPC ID #	SCHOOL	PROJECT	COST	TOTAL COST	AREA (SF)	REPLACEMENT VALUE		
17	Sanborn	Improvements	\$240,000	\$547,500	101,072	\$13,644,720		
	Sanborn	Gym Floor Replacement	\$95,000					
	Sanborn	Renovations	\$212,500					
18	Peabody	Roof	\$480,000	\$1,238,315	68,991	\$9,313,785		
	Peabody	Roof Repairs	\$60,000					
	Peabody	Improvements	\$240,000					
	Peabody	ADA Renovations	\$245,815					
	Peabody	Renovations	\$212,500					
19	Alcott	Window Wall	\$350,000	\$757,500	59,832	\$8,077,320		
	Alcott	Floor Replacement	\$50,000					
	Alcott	Roof	\$357,500					
20	Thoreau	Parking Lot	\$150,000	\$617,500	40,495	\$5,466,825		
	Thoreau	Roof	\$60,000					
	Thoreau	Floor Replacement	\$50,000					
	Thoreau	Roof	\$357,500					
21	Willard	Roof	\$50,000	\$125,000	47,248	\$6,378,480		
	Willard	Resurface Playground	\$75,000					
22	Ripley	Roof	\$209,000	\$634,000	56,230	\$7,591,050		
	Ripley	Roof Repairs	\$395,000					
	Ripley	Parking Lot Paving	\$30,000					
	CPS	Roof Repair	\$515,000					\$1,615,000
	CPS	ADA	\$100,000					
	CPS	Technology Wiring	\$1,000,000					
		TOTAL						
	Present Value (See Note on Sheet M-3)			\$6,027,071				
	Present Value per Year			\$502,256				
<b>B</b>	<b>TOWN MEETING MAINTENANCE COSTS / SF (12 YEAR AVERAGE)</b>						<b>\$1.34</b>	
<b>C</b>	<b>CPS MAINTENANCE BUDGET / SF (2003-2004)</b>						<b>\$1.52</b>	
<b>D</b>	<b>TOTAL ANNUAL REQUIRED MAINTENANCE BUDGET / SF</b>						<b>\$2.86</b>	
<b>E</b>	<b>TOTAL ANNUAL PROJECTED MAINTENANCE COST (PRESENT VALUE)</b>						<b>\$1,070,535</b>	
<b>F</b>	<b>HISTORICAL ANNUAL MAINTENANCE BUDGET AS % OF REPLACEMENT COST</b>						<b>2.12%</b>	

FACILITIES PLANNING COMMITTEE						SHEET M-3	
MAINTENANCE COST ANALYSIS							
CCHS PROJECTS							
<b>A. ESTIMATE OF TOWN MEETING CCHS MAINTENANCE ARTICLES 1992 THROUGH 2003</b>							
FPC ID #	SCHOOL	PROJECT	COST	CONCORD COST	AREA (SF)	REPLACEMENT VALUE	
16	CCHS	Renovations (1992)	\$6,032,500	\$9,132,500	242,027	\$36,304,050	
		Renovations (1995)	\$3,100,000				
		Concord Share (Area and Replacement Value)	69%	\$9,132,500	166,999	\$25,049,795	
		Present Value (See Note Below)		\$11,554,845			
		Present Value per Year		\$962,904			
<b>B.1 TOWN MEETING WARRANT ARTICLE COSTS / SF (12 YEAR AVERAGE)</b>						<b>\$5.77</b>	
<b>B.2 ASSUMED MAINTENANCE PORTION OF "B" (50%)</b>				\$481,452		<b>\$2.88</b>	
<b>C. CCHS MAINTENANCE BUDGET / SF (2003)</b>						<b>\$1.47</b>	
<b>D. TOTAL ANNUAL REQUIRED MAINTENANCE BUDGET / SF</b>						<b>\$4.35</b>	
<b>E. TOTAL ANNUAL PROJECTED MAINTENANCE COST (PRESENT VALUE)</b>						<b>\$726,940</b>	
<b>F. HISTORICAL ANNUAL MAINTENANCE BUDGET AS % OF REPLACEMENT COST</b>						<b>2.90%</b>	
<b>NOTE: Present Value is obtained by utilizing the Building Cost Index History as calculated by ENR (Engineering News Record), a McGraw Hill publication. The amount for each of the applicable Warrant Articles is obtained by comparing the Index for 2003 with that of the Warrant Article year.</b>							

FACILITIES PLANNING COMMITTEE							SHEET M-4
MAINTENANCE COST ANALYSIS							
<b><i>ALL PROJECTS OTHER THAN SCHOOLS</i></b>							
<b>A. SUMMARY OF TOWN MEETING NON-SCHOOL BUILDING MAINTENANCE ARTICLES 1992 - 2003</b>							
FPC ID #	BUILDING	PROJECT	COST	TOTAL COST	AREA (SF)	REPLACEMENT VALUE	
1	Town House	HVAC	\$150,000	\$400,000	14,838	\$2,225,700	
	Town House	Renovations	\$250,000				
3	Harvey Wheeler	Renovations	\$1,750,000	\$1,750,000	18,000	\$3,600,000	
9 to 12	Keyes Road	Improvements	\$1,945,000	\$1,945,000	42,049	\$4,138,840	
15	Police and Fire	Remodeling	\$225,000	\$705,000	19,635	\$4,417,875	
	Police and Fire	Renovations	\$380,000				
	Police and Fire	Repairs	\$100,000				
	Subtotal		\$4,800,000	\$4,800,000	94,522	\$14,382,415	
2	Visitors Center				1,820	\$400,000	
4	Gun House				1,080	\$89,640	
5	Cemetery Building				1,540	\$87,000	
6	Hunt Gym				12,492	\$2,248,560	
7	Hunt Pool and Shed				3,750	\$397,500	
8	Field House				600	\$61,800	
13	Earth Products				1,280	\$106,240	
					117,084	\$17,773,155	
	Present Value (See Note on Sheet M-3)			\$5,430,532			
	Present Value per Year			\$452,544			
<b>B.1</b>	<b>TOWN MEETING MAINTENANCE COSTS / SF (12 YEAR AVERAGE)</b>						<b>\$3.87</b>
<b>C.1</b>	<b>MAINTENANCE COST FROM TOWN OPERATING BUDGET (Use CPS Figure)</b>						<b>\$1.52</b>
<b>D.1</b>	<b>TOTAL</b>			<b>\$630,512</b>			<b>\$5.39</b>
	<b>WITHOUT HARVEY WHEELER</b>			<b>\$3,050,000</b>	<b>\$3,050,000</b>	<b>98,844</b>	<b>\$14,173,155</b>
	Present Value (See Note on Sheet M-3)			\$3,621,527			
	Present Value per Year			\$301,794			
<b>B.2</b>	<b>TOWN MEETING MAINTENANCE COSTS / SF (12 YEAR AVERAGE)</b>						<b>\$3.05</b>
<b>C.2</b>	<b>MAINTENANCE COST FROM TOWN OPERATING BUDGET (Use CPS Figure)</b>						<b>\$1.52</b>
<b>D.2</b>	<b>TOTAL ANNUAL PROJECTED MAINTENANCE COST (PRESENT VALUE)</b>						<b>\$4.57</b>
<b>E</b>	<b>TOTAL ANNUAL PROJECTED MAINTENANCE COST (PRESENT VALUE)</b>						<b>\$452,037</b>
<b>F.</b>	<b>HISTORICAL ANNUAL MAINTENANCE BUDGET AS % OF REPLACEMENT COST</b>						<b>3.19%</b>

## **V. Financial Models.**

### **A. Introduction**

During the course of its studies the Committee prepared many “scenarios” or potential plans for Town facilities programs over the next twenty years. One by one, each was debated and most were discarded as being either inadequate to meet the Town’s most basic facilities needs or too costly under present financial constraints. The Committee verified needs arising from building and system deterioration, but was not in a position to verify programmatic needs arising from changes in educational programs in the schools.

Two different plans survived this process and are offered for consideration, together with two variants on each plan illustrating the impact of operating budget overrides. One model represents what we believe to be the least financially burdensome plan that still meets the Town’s minimum facilities needs: The “Five-Year Level Plan”. The other represents the maximum level of financial commitment that the Committee believes that the Town is likely to undertake: The “Ambitious Plan.”

The Five-Year Level Plan presents a schedule in which large projects are distributed at roughly five-year intervals over the next twenty years. The Ambitious Plan represents a relatively rapid schedule of work and would require higher levels of funding. Projects in this plan would commence at varying, but relatively short intervals.

The Committee voted overwhelmingly to recommend the “Five-Year Level” plan. This plan provides a generally consistent approach to large capital projects over the next twenty years without major spikes in the present value of the median real estate tax bill.

### **B. The Model**

The Committee thanks Jim Reynolds of the Long Range Planning Committee whose modeling concept and design were used by the Committee. He modified his spreadsheet model to help accommodate the Committee’s needs and gave generously of his time and expertise.

The assumptions included in all the tax impact worksheets included: 3% effective inflation, 3% effective construction inflation, 1.5% annual valuation growth, 4.5% Town Long Term borrowing rate and a 3% short term borrowing rate. All future costs are given in present dollar values. These values were established by Mr. Jim Reynolds of the Long Range Planning Committee in consultation with the Town Treasurer, Mr. Tony Logalbo.

In its models the Committee included five projects completed in the last ten years or still under way because their impact on the Town's stream of payments on Debt Exclusion items is substantial and defined.

These are:	“High School, 1990s”	Bonded at	\$5 million	Completed:	9/94
	“Mattison Field”	Bonded at	\$0.8 million	Completed:	5/98
	“School Designs”	Bonded at	\$2.75 million	Completed:	2/03
	“Harvey Wheeler”	Bonded at	\$1.2 million	To be done:	1/04
	“Alcott School”	Bonded at	\$16.9 million	To be done:	10/04

### 1. The Five-Year Level Plan (Models “U” and “V”)

The Five-Year Level Plan includes the following facilities projects with their starting dates :

<u>Year</u>	<u>Project</u>
2005	Thoreau School
2011	Phase I of C.C.H.S.
2016	Willard School
2021	Either: New Fire Station, or Middle School, or C.C.H.S. Phase II

Our intention was to develop a plan with the average spacing between projects of about five years. This would have shown the Thoreau School project starting in 2006 or 2007 since the Alcott Project started in 2002. A 2005 start for Thoreau provides the Concord Public Schools with more flexibility in housing students during construction, according to the Staging School Working Group report.

The start of Phase I of the High School approximately six years later in 2011 would “recover” the desired five year average spacing. Then Willard School would come in 2016.

The Five-Year Level Plan does not permit the Fire Station, Middle School and C.C.H.S. Phase II to all be completed over the next twenty years – only one of the three fits into twenty years of the Five-Year Level Plan. Early in 2003, the Committee recommended to the Selectmen that a working group with expertise in public safety be formed to evaluate the need for a possible new fire station in response to need stated during the building inventory.

The Project Assumptions charts and the Spreadsheets for Five-Year Level Model “U” and its variant “V” are on following pages. The Spreadsheet for Model “U” shows the impact of the Committee’s Five-Year Level 20 year facilities plan assuming a 3.64% operating override each year. (As 3.64% appeared to be the average override for the last two fiscal years it was considered reasonable as a projection.) Spreadsheet “V” shows the overall tax impact of the Committee’s Five-Year Level twenty-year facilities plan without an operating override.

## "FPC 5 yr Level" Project Assumptions for Worksheets "U" and "V"

Project Assumptions									
Project	Debt Exclusion Amount (FY 03 \$)	Start Date	BAN period extension / acceleration	BAN Period, months	Bond Issue Date	Bond term extension / acceleration, yrs	Bond term, yrs	Project Borrowing Premium	Project LT Borrowing Rate
<a href="#">High School, 1990s</a>	\$5,020,000	Sep-94			Sep-94		20		4.5%
<a href="#">Mattison Field</a>	\$840,000	May-98			May-98		10		4.4%
<a href="#">School Designs</a>	\$2,750,000	Feb-03			Feb-03		3		1.51%
<a href="#">Harvey Wheeler</a>	\$1,200,000	Jul-02	0	18	Jan-04	2	12	-0.5%	4.0%
<a href="#">Alcott School</a>	\$16,900,000	Oct-02	0	21	Oct-04	0	20	0.0%	4.5%
<a href="#">Thoreau School</a>	\$16,700,000	Jul-05	0	21	Apr-07	0	20	0.0%	4.5%
<a href="#">Willard School</a>	\$16,700,000	Jul-16	0	21	Apr-18	0	20	0.0%	4.5%
<a href="#">Middle School</a>	\$0	Jul-13	0	18	Jan-15	0	10	0.0%	4.5%
<a href="#">High School Phase I</a>	\$17,500,000	Jul-11	0	21	Apr-13	0	20	0.0%	4.5%
<a href="#">High School Phase II</a>	\$0	Jul-21	0	18	Jan-23	0	10	0.0%	4.5%
<a href="#">West Concord Fire/Police Station</a>	\$0	Jul-25	0	18	Jan-27	0	10	0.0%	4.5%
<a href="#">Waste Water Treatment</a>	\$0	Jan-04	0	18	Jul-05	0	10	0.0%	4.5%
<a href="#">HS II , MS or Fire Station</a>	\$15,400,000	Jul-21	0	21	Apr-23	0	20	0.0%	4.5%
<a href="#">Land Acquisition</a>	\$0	Jan-25	0	18	Jul-26	0	10	0.0%	4.5%

Only blue-shaded cells contain user inputs and may be edited.

**Notes:**

Alcott Design fees are included in the \$16.9 million cost. The project cost has been reduced as of Winter 2003 estimates.  
 Thoreau and Willard design fees are not included in the \$16.7 million cost estimates; they are captured in the School Designs project.  
 Estimates for Thoreau and Willard have not been reduced based upon the Alcott experience because these savings may be project-specific.  
 Amounts for Mattison and the 1990s High School projects reflect the balances as of the beginning of FY 2003, not the original balances.  
 Because the tool requires each project to have a Start Date, projects that are not currently in active discussions have been given start dates of January 2025, outside the planning horizon.

Thoreau, Willard and High School Phase I have later starts than the "Ambitious" plan  
 This plan only permits either High School Phase II, Middle School OR Fire Station in year 2021.

## "FPC 5 yr Level" with 3.64% Operating Override - Worksheet "U"

Property Tax Levy				FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
<b>Property Tax Levy</b>														
Previous Year Tax Levy				\$34,828	\$38,958	\$42,172	\$45,393	\$48,862	\$52,595	\$56,613	\$60,938	\$65,594	\$70,605	\$75,999
Prop 2 1/2 Increase				\$871	\$974	\$1,054	\$1,135	\$1,222	\$1,315	\$1,415	\$1,523	\$1,640	\$1,765	\$1,900
New Growth				\$1,010	\$761	\$633	\$681	\$733	\$789	\$849	\$914	\$984	\$1,059	\$1,140
Operating Override Percentage						3.64%	3.64%	3.64%	3.64%	3.64%	3.64%	3.64%	3.64%	3.64%
Operating Overrides				\$2,249	\$1,479	\$1,535	\$1,652	\$1,779	\$1,914	\$2,061	\$2,218	\$2,388	\$2,570	\$2,766
Subtotal: Levy w/o Debt Exclusion				\$38,958	\$42,172	\$45,393	\$48,862	\$52,595	\$56,613	\$60,938	\$65,594	\$70,605	\$75,999	\$81,806
Debt Exclusion Payments				\$842	\$713	\$1,994	\$2,392	\$3,303	\$2,721	\$3,765	\$3,630	\$3,348	\$3,227	\$3,144
<b>Total Property Tax Levy (000s)</b>				<b>\$39,800</b>	<b>\$42,885</b>	<b>\$47,388</b>	<b>\$51,253</b>	<b>\$55,897</b>	<b>\$59,334</b>	<b>\$64,703</b>	<b>\$69,224</b>	<b>\$73,953</b>	<b>\$79,227</b>	<b>\$84,950</b>
Tax / \$1000 Valuation				\$9.84	\$9.73	\$10.59	\$11.29	\$12.13	\$12.68	\$13.62	\$14.36	\$15.12	\$15.95	\$16.85
Median Tax Bill Share of Service on Debt Exclusion				\$110	\$95	\$260	\$308	\$419	\$340	\$463	\$440	\$400	\$380	\$364
<b>Total Median Tax Bill</b>				<b>\$5,208</b>	<b>\$5,684</b>	<b>\$6,188</b>	<b>\$6,594</b>	<b>\$7,085</b>	<b>\$7,409</b>	<b>\$7,960</b>	<b>\$8,390</b>	<b>\$8,831</b>	<b>\$9,321</b>	<b>\$9,847</b>
Present Value of Debt Exclusion Burden on Median Tax Bill				\$110	\$95	\$245	\$282	\$372	\$293	\$388	\$358	\$316	\$291	\$271
Present Value of Median Tax Bill				\$5,208	\$5,684	\$5,832	\$6,034	\$6,295	\$6,391	\$6,667	\$6,822	\$6,971	\$7,144	\$7,327
Percent Present Value Tax Increase						2.6%	3.5%	4.3%	1.5%	4.3%	2.3%	2.2%	2.5%	2.6%
Percent Debt Exclusion Burden on Median Tax Bill				2.1%	1.7%	4.2%	4.7%	5.9%	4.6%	5.8%	5.2%	4.5%	4.1%	3.7%
Overall Annual Tax Increase before Present Value Calculation						8.9%	6.6%	7.4%	4.6%	7.4%	5.4%	5.3%	5.5%	5.6%
Debt Exclusion Costs														
	Project Cost	Start Date	Finish Date	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
<a href="#">High School, 1990s</a>	\$5,020,000	Sep-94	Sep-94	\$461,200	\$429,164	\$411,724	\$388,316	\$290,815	\$276,204	\$250,349	\$228,799	\$134,362	\$96,672	-\$64,998
<a href="#">Mattison Field School Designs</a>	\$840,000	May-98	May-98	\$181,028	\$160,428	\$145,365	\$150,650	\$145,463	\$140,213	\$134,838	\$104,400	\$0	\$0	\$0
<a href="#">Harvey Wheeler</a>	\$2,750,000	Feb-03	Feb-03	\$152,000	\$20,763	\$958,192	\$944,350	\$930,508	\$0	\$0	\$0	\$0	\$0	\$0
<a href="#">Alcott School</a>	\$1,200,000	Jul-02	Jan-04	\$0	\$11,250	\$35,250	\$148,000	\$144,000	\$140,000	\$136,000	\$132,000	\$128,000	\$124,000	\$120,000
<a href="#">Thoreau School</a>	\$16,900,000	Oct-02	Oct-04	\$0	\$190,125	\$443,625	\$760,500	\$1,586,488	\$1,548,463	\$1,510,438	\$1,472,413	\$1,434,388	\$1,396,363	\$1,358,338
<a href="#">Willard School</a>	\$18,248,541	Jul-05	Apr-07	\$0	\$0	\$0	\$0	\$205,296	\$615,888	\$1,733,611	\$1,692,552	\$1,651,493	\$1,610,434	\$1,569,375
<a href="#">Middle School</a>	\$25,260,248	Jul-16	Apr-18	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<a href="#">High School Phase I</a>	\$0	Jul-13	Jan-15	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<a href="#">High School Phase II</a>	\$22,833,531	Jul-11	Apr-13	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$161,396
<a href="#">West Concord</a>	\$0	Jul-21	Jan-23	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<a href="#">Fire/Police Station</a>	\$0	Jul-25	Jan-27	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<a href="#">Waste Water Treatment</a>	\$0	Jan-04	Jul-05	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<a href="#">Another Big Construction Project</a>	\$27,003,993	Jul-21	Apr-23	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<a href="#">Land Acquisition</a>	\$0	Jan-25	Jul-26	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>TOTAL DEBT EXCLUSION PAYMENTS</b>				<b>\$794,228</b>	<b>\$811,730</b>	<b>\$1,994,155</b>	<b>\$2,391,816</b>	<b>\$3,302,569</b>	<b>\$2,720,767</b>	<b>\$3,765,236</b>	<b>\$3,630,164</b>	<b>\$3,348,243</b>	<b>\$3,227,468</b>	<b>\$3,144,110</b>
<b>Y/E TOTAL DEBT EXCLUSION BALANCE</b>				<b>\$6,630,000</b>	<b>\$16,905,000</b>	<b>\$20,685,000</b>	<b>\$24,293,333</b>	<b>\$23,538,333</b>	<b>\$22,521,667</b>	<b>\$25,583,802</b>	<b>\$29,129,270</b>	<b>\$32,191,406</b>	<b>\$36,653,541</b>	<b>\$35,153,541</b>

Note: CPI data pulled from [www.bls.gov](http://www.bls.gov) measures calendar year. Concord's Financial Year runs July 1 - June 30. The six-month offsets create mild distortions in the early years of projects, but these smooth out over time and are deemed insignificant for the purposes of this planning tool.

**"FPC 5 yr Level" with 3.64% Operating Override - Worksheet "U"**

FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
\$81,806	\$88,056	\$94,783	\$102,024	\$109,819	\$118,209	\$127,240	\$136,962	\$147,425	\$158,689	\$170,813	\$183,863
\$2,045	\$2,201	\$2,370	\$2,551	\$2,745	\$2,955	\$3,181	\$3,424	\$3,686	\$3,967	\$4,270	\$4,597
\$1,227	\$1,321	\$1,422	\$1,530	\$1,647	\$1,773	\$1,909	\$2,054	\$2,211	\$2,380	\$2,562	\$2,758
3.64%	3.64%	3.64%	3.64%	3.64%	3.64%	3.64%	3.64%	3.64%	3.64%	3.64%	3.64%
\$2,978	\$3,205	\$3,450	\$3,714	\$3,997	\$4,303	\$4,632	\$4,985	\$5,366	\$5,776	\$6,218	\$6,693
\$88,056	\$94,783	\$102,024	\$109,819	\$118,209	\$127,240	\$136,962	\$147,425	\$158,689	\$170,813	\$183,863	\$197,910
\$3,268	\$3,957	\$3,841	\$4,015	\$4,084	\$4,541	\$5,976	\$5,808	\$5,640	\$5,775	\$7,701	\$7,472
<b>\$91,323</b>	<b>\$98,740</b>	<b>\$105,866</b>	<b>\$113,834</b>	<b>\$122,293</b>	<b>\$131,781</b>	<b>\$142,938</b>	<b>\$153,233</b>	<b>\$164,329</b>	<b>\$176,588</b>	<b>\$191,563</b>	<b>\$205,381</b>

\$17.85	\$19.01	\$20.09	\$21.28	\$22.52	\$23.91	\$25.55	\$26.99	\$28.51	\$30.19	\$32.26	\$34.08
\$373	\$445	\$426	\$438	\$439	\$481	\$624	\$598	\$572	\$577	\$758	\$724
<b>\$10,429</b>	<b>\$11,109</b>	<b>\$11,735</b>	<b>\$12,432</b>	<b>\$13,158</b>	<b>\$13,970</b>	<b>\$14,929</b>	<b>\$15,767</b>	<b>\$16,659</b>	<b>\$17,637</b>	<b>\$18,850</b>	<b>\$19,911</b>

\$270	\$312	\$290	\$290	\$282	\$300	\$378	\$351	\$326	\$319	\$407	\$378
\$7,534	\$7,792	\$7,991	\$8,219	\$8,446	\$8,705	\$9,032	\$9,262	\$9,500	\$9,765	\$10,133	\$10,392
2.8%	3.4%	2.6%	2.9%	2.8%	3.1%	3.8%	2.5%	2.6%	2.8%	3.8%	2.6%
3.6%	4.0%	3.6%	3.5%	3.3%	3.4%	4.2%	3.8%	3.4%	3.3%	4.0%	3.6%
5.9%	6.5%	5.6%	5.9%	5.8%	6.2%	6.9%	5.6%	5.7%	5.9%	6.9%	5.6%

FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
-\$181,692	-\$288,950	-\$288,950	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$116,000	\$112,000	\$108,000	\$104,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$1,320,313	\$1,282,288	\$1,244,263	\$1,206,238	\$1,168,213	\$1,130,188	\$1,092,163	\$1,054,138	\$1,016,113	\$978,088	\$902,038	\$864,013
\$1,528,315	\$1,487,256	\$1,446,197	\$1,405,138	\$1,364,078	\$1,323,019	\$1,281,960	\$1,240,901	\$1,199,842	\$1,158,782	\$1,076,664	\$1,035,605
\$0	\$0	\$0	\$0	\$284,178	\$852,533	\$2,399,724	\$2,342,888	\$2,286,052	\$2,229,217	\$2,115,546	\$2,058,710
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$484,573	\$1,363,984	\$1,331,679	\$1,299,374	\$1,267,069	\$1,234,764	\$1,202,459	\$1,170,155	\$1,137,850	\$1,105,545	\$1,040,935	\$1,008,630
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$303,795	\$2,565,379	\$2,504,620
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>\$3,267,509</b>	<b>\$3,956,577</b>	<b>\$3,841,188</b>	<b>\$4,014,749</b>	<b>\$4,083,538</b>	<b>\$4,540,504</b>	<b>\$5,976,305</b>	<b>\$5,808,081</b>	<b>\$5,639,856</b>	<b>\$5,775,426</b>	<b>\$7,700,562</b>	<b>\$7,471,578</b>
<b>\$34,141,114</b>	<b>\$32,666,114</b>	<b>\$31,653,687</b>	<b>\$30,378,687</b>	<b>\$29,366,260</b>	<b>\$28,116,260</b>	<b>\$27,103,833</b>	<b>\$31,792,215</b>	<b>\$36,488,171</b>	<b>\$41,351,554</b>	<b>\$46,047,509</b>	<b>\$45,202,509</b>



## "FPC 5 yr Level" no Operating Override - Worksheet "V"

Property Tax Levy	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012			
<b>Property Tax Levy</b>														
Previous Year Tax Levy	\$34,828	\$38,958	\$42,172	\$45,393	\$47,209	\$49,098	\$51,061	\$53,104	\$55,228	\$57,437	\$59,735			
Prop 2 1/2 Increase	\$871	\$974	\$1,054	\$1,135	\$1,180	\$1,227	\$1,277	\$1,328	\$1,381	\$1,436	\$1,493			
New Growth	\$1,010	\$761	\$633	\$681	\$708	\$736	\$766	\$797	\$828	\$862	\$896			
Operating Override Percentage			3.64%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%			
Operating Overrides	\$2,249	\$1,479	\$1,535	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0			
Subtotal: Levy w/o Debt Exclusion	\$38,958	\$42,172	\$45,393	\$47,209	\$49,098	\$51,061	\$53,104	\$55,228	\$57,437	\$59,735	\$62,124			
Debt Exclusion Payments	\$842	\$713	\$1,994	\$2,392	\$3,303	\$2,721	\$3,765	\$3,630	\$3,348	\$3,227	\$3,144			
<b>Total Property Tax Levy (000s)</b>	<b>\$39,800</b>	<b>\$42,885</b>	<b>\$47,388</b>	<b>\$49,601</b>	<b>\$52,400</b>	<b>\$53,782</b>	<b>\$56,869</b>	<b>\$58,858</b>	<b>\$60,785</b>	<b>\$62,962</b>	<b>\$65,268</b>			
<hr/>														
Tax / \$1000 Valuation	\$9.84	\$9.73	\$10.59	\$10.92	\$11.37	\$11.49	\$11.97	\$12.21	\$12.42	\$12.68	\$12.95			
Median Tax Bill Share of Service on Debt Exclusion	\$110	\$95	\$260	\$308	\$419	\$340	\$463	\$440	\$400	\$380	\$364			
<b>Total Median Tax Bill</b>	<b>\$5,208</b>	<b>\$5,684</b>	<b>\$6,188</b>	<b>\$6,381</b>	<b>\$6,641</b>	<b>\$6,716</b>	<b>\$6,996</b>	<b>\$7,134</b>	<b>\$7,259</b>	<b>\$7,408</b>	<b>\$7,565</b>			
<hr/>														
Present Value of Debt Exclusion Burden on Median Tax Bill	\$110	\$95	\$245	\$282	\$372	\$293	\$388	\$358	\$316	\$291	\$271			
Present Value of Median Tax Bill	\$5,208	\$5,684	\$5,832	\$5,839	\$5,901	\$5,793	\$5,859	\$5,801	\$5,730	\$5,677	\$5,629			
Percent Present Value Tax Increase			2.6%	0.1%	1.1%	-1.8%	1.1%	-1.0%	-1.2%	-0.9%	-0.8%			
Percent Debt Exclusion Burden on Median Tax Bill	2.1%	1.7%	4.2%	4.8%	6.3%	5.1%	6.6%	6.2%	5.5%	5.1%	4.8%			
Overall Annual Tax Increase before Present Value Calculation			8.9%	3.1%	4.1%	1.1%	4.2%	2.0%	1.7%	2.1%	2.1%			
<hr/>														
Debt Exclusion Costs	Project Cost	Start Date	Finish Date	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
High School, 1990s	\$5,020,000	Sep-94	Sep-94	\$461,200	\$429,164	\$411,724	\$388,316	\$290,815	\$276,204	\$250,349	\$228,799	\$134,362	\$96,672	-\$64,998
Mattison Field	\$840,000	May-98	May-98	\$181,028	\$160,428	\$145,365	\$150,650	\$145,463	\$140,213	\$134,838	\$104,400	\$0	\$0	\$0
School Designs	\$2,750,000	Feb-03	Feb-03	\$152,000	\$20,763	\$958,192	\$944,350	\$930,508	\$0	\$0	\$0	\$0	\$0	\$0
Harvey Wheeler	\$1,200,000	Jul-02	Jan-04	\$0	\$11,250	\$35,250	\$148,000	\$144,000	\$140,000	\$136,000	\$132,000	\$128,000	\$124,000	\$120,000
Alcott School	\$16,900,000	Oct-02	Oct-04	\$0	\$190,125	\$443,625	\$760,500	\$1,586,488	\$1,548,463	\$1,510,438	\$1,472,413	\$1,434,388	\$1,396,363	\$1,358,338
Thoreau School	\$18,248,541	Jul-05	Apr-07	\$0	\$0	\$0	\$0	\$205,296	\$615,888	\$1,733,611	\$1,692,552	\$1,651,493	\$1,610,434	\$1,569,375
Willard School	\$25,260,248	Jul-16	Apr-18	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Middle School	\$0	Jul-13	Jan-15	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
High School Phase I	\$22,833,531	Jul-11	Apr-13	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$161,396
High School Phase II	\$0	Jul-21	Jan-23	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
West Concord														
Fire/Police Station	\$0	Jul-25	Jan-27	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Waste Water Treatment	\$0	Jan-04	Jul-05	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Another Big														
Construction Project	\$27,003,993	Jul-21	Apr-23	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Land Acquisition	\$0	Jan-25	Jul-26	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>TOTAL DEBT EXCLUSION PAYMENTS</b>	<b>\$794,228</b>			<b>\$794,228</b>	<b>\$811,730</b>	<b>\$1,994,155</b>	<b>\$2,391,816</b>	<b>\$3,302,569</b>	<b>\$2,720,767</b>	<b>\$3,765,236</b>	<b>\$3,630,164</b>	<b>\$3,348,243</b>	<b>\$3,227,468</b>	<b>\$3,144,110</b>
<b>Y/E TOTAL DEBT EXCLUSION BALANCE</b>	<b>\$6,630,000</b>			<b>\$6,630,000</b>	<b>\$16,905,000</b>	<b>\$20,685,000</b>	<b>\$24,293,333</b>	<b>\$23,538,333</b>	<b>\$22,521,667</b>	<b>\$25,583,802</b>	<b>\$29,129,270</b>	<b>\$32,191,406</b>	<b>\$36,653,541</b>	<b>\$35,153,541</b>

Note: CPI data pulled from [www.bls.gov](http://www.bls.gov) measures calendar year. Concord's Financial Year runs July 1 - June 30. The six-month offsets create mild distortions in the early years of projects, but these smooth out over time and are deemed insignificant for the purposes of this planning tool.

## 2. The Ambitious Plan (Models “S” and “W”)

The Ambitious Plan includes the following facilities projects with their starting dates:

<u>Year</u>	<u>Project</u>
2004	Thoreau School
2004	Phase I of C.C.H.S.
2007	Phase II of C.C.H.S.
2011	Willard School
2012	Fire/Police Station
2018	Middle School

Details of the projects and timing of the Ambitious Plan are included on the Project Assumptions sheet for Worksheets “S” and “W.” Worksheet “S” shows the tax impact of the Ambitious twenty-year facilities plan with a 3.64% operating override, while Worksheet “W” shows the Ambitious plan without an operating override.

The Assumptions Charts and Spreadsheets for these two models are on the following pages.

## Project Assumptions

Project	Debt Exclusion Amount (FY 03 \$)	Start Date	BAN period extension / acceleration	BAN Period, months	Bond Issue Date	Bond term extension / acceleration, yrs	Bond term, yrs	Project Borrowing Premium	Project LT Borrowing Rate
<a href="#">High School, 1990s</a>	\$5,020,000	Sep-94			Sep-94		20		4.5%
<a href="#">Mattison Field School Designs</a>	\$840,000	May-98			May-98		10		4.4%
<a href="#">Harvey Wheeler</a>	\$2,750,000	Feb-03			Feb-03		3		1.51%
<a href="#">Alcott School</a>	\$1,200,000	Jul-02	0	18	Jan-04	2	12	-0.5%	4.0%
<a href="#">Thoreau School</a>	\$16,900,000	Oct-02	0	21	Oct-04	0	20	0.0%	4.5%
<a href="#">Willard School</a>	\$16,700,000	Jul-04	0	21	Apr-06	0	20	0.0%	4.5%
<a href="#">Middle School</a>	\$16,700,000	Jul-11	0	21	Apr-13	0	20	0.0%	4.5%
<a href="#">High School Phase I</a>	\$27,000,000	Jun-18	0	21	Mar-20	0	20	0.0%	4.5%
<a href="#">High School Phase II</a>	\$17,500,000	Jun-04	0	21	Mar-06	0	20	0.0%	4.5%
<a href="#">West Concord Fire/Police Station</a>	\$15,400,000	Jan-07	0	21	Oct-08	0	20	0.0%	4.5%
<a href="#">Waste Water Treatment</a>	\$15,000,000	Jun-12	0	21	Mar-14	0	20	0.0%	4.5%
<a href="#">Another Big Construction Project</a>	\$0	Jan-04	0	18	Jul-05	0	10	0.0%	4.5%
<a href="#">Land Acquisition</a>	\$0	Jan-25	0	18	Jul-26	0	10	0.0%	4.5%
<a href="#">Another Big Construction Project</a>	\$0	Jan-25	0	18	Jul-26	0	10	0.0%	4.5%

Only blue-shaded cells contain user inputs and may be edited.

### Notes:

Alcott Design fees are included in the \$16.9 million cost. The project cost has been reduced as of Winter 2003 estimates.

Thoreau and Willard design fees are not included in the \$16.7 million cost estimates; they are captured in the School Designs project.

Estimates for Thoreau and Willard have not been reduced based upon the Alcott experience because these savings may be project-specific.

Amounts for Mattison and the 1990s High School projects reflect the balances as of the beginning of FY 2003, not the original balances.

Because the tool requires each project to have a Start Date, projects that are not currently in active discussions have been given start dates of January 2025, outside the planning horizon.

## "Ambitious" with 3.64% Operating Override - Worksheet "S"

Property Tax Levy	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012			
<b>Property Tax Levy</b>														
Previous Year Tax Levy	\$34,828	\$38,958	\$42,172	\$45,393	\$48,862	\$52,595	\$56,613	\$60,938	\$65,594	\$70,605	\$75,999			
Prop 2 1/2 Increase	\$871	\$974	\$1,054	\$1,135	\$1,222	\$1,315	\$1,415	\$1,523	\$1,640	\$1,765	\$1,900			
New Growth	\$1,010	\$761	\$633	\$681	\$733	\$789	\$849	\$914	\$984	\$1,059	\$1,140			
Operating Override Percentage			3.64%	3.64%	3.64%	3.64%	3.64%	3.64%	3.64%	3.64%	3.64%			
Operating Overrides	\$2,249	\$1,479	\$1,535	\$1,652	\$1,779	\$1,914	\$2,061	\$2,218	\$2,388	\$2,570	\$2,766			
Subtotal: Levy w/o Debt Exclusion	\$38,958	\$42,172	\$45,393	\$48,862	\$52,595	\$56,613	\$60,938	\$65,594	\$70,605	\$75,999	\$81,806			
Debt Exclusion Payments	\$842	\$713	\$2,044	\$2,840	\$4,184	\$5,099	\$5,117	\$5,274	\$5,505	\$5,232	\$5,197			
<b>Total Property Tax Levy (000s)</b>	<b>\$39,800</b>	<b>\$42,885</b>	<b>\$47,437</b>	<b>\$51,701</b>	<b>\$56,779</b>	<b>\$61,711</b>	<b>\$66,055</b>	<b>\$70,867</b>	<b>\$76,110</b>	<b>\$81,231</b>	<b>\$87,003</b>			
Tax / \$1000 Valuation	\$9.84	\$9.73	\$10.60	\$11.38	\$12.32	\$13.19	\$13.91	\$14.70	\$15.56	\$16.36	\$17.26			
Median Tax Bill Share of Service on Debt Exclusion	\$110	\$95	\$267	\$365	\$530	\$637	\$630	\$639	\$657	\$616	\$602			
<b>Total Median Tax Bill</b>	<b>\$5,208</b>	<b>\$5,684</b>	<b>\$6,194</b>	<b>\$6,651</b>	<b>\$7,196</b>	<b>\$7,706</b>	<b>\$8,126</b>	<b>\$8,590</b>	<b>\$9,089</b>	<b>\$9,557</b>	<b>\$10,085</b>			
Present Value of Debt Exclusion Burden on Median Tax Bill	\$110	\$95	\$252	\$334	\$471	\$549	\$527	\$520	\$519	\$472	\$448			
Present Value of Median Tax Bill	\$5,208	\$5,684	\$5,839	\$6,087	\$6,394	\$6,647	\$6,806	\$6,984	\$7,175	\$7,325	\$7,504			
Percent Present Value Tax Increase			2.7%	4.2%	5.0%	4.0%	2.4%	2.6%	2.7%	2.1%	2.4%			
Percent Debt Exclusion Burden on Median Tax Bill	2.1%	1.7%	4.3%	5.5%	7.4%	8.3%	7.7%	7.4%	7.2%	6.4%	6.0%			
Overall Annual Tax Increase before Present Value Calculation			9.0%	7.4%	8.2%	7.1%	5.5%	5.7%	5.8%	5.2%	5.5%			
<b>Debt Exclusion Costs</b>														
<b>Project Cost</b>		<b>Start Date</b>	<b>Finish Date</b>	<b>FY 2002</b>	<b>FY 2003</b>	<b>FY 2004</b>	<b>FY 2005</b>	<b>FY 2006</b>	<b>FY 2007</b>	<b>FY 2008</b>	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012</b>
<a href="#">High School, 1990s</a>	\$5,020,000	Sep-94	Sep-94	\$461,200	\$429,164	\$411,724	\$388,316	\$290,815	\$276,204	\$250,349	\$228,799	\$134,362	\$96,672	-\$64,998
<a href="#">Mattison Field</a>	\$840,000	May-98	May-98	\$181,028	\$160,428	\$145,365	\$150,650	\$145,463	\$140,213	\$134,838	\$104,400	\$0	\$0	\$0
<a href="#">School Designs</a>	\$2,750,000	Feb-03	Feb-03	\$152,000	\$20,763	\$958,192	\$944,350	\$930,508	\$0	\$0	\$0	\$0	\$0	\$0
<a href="#">Harvey Wheeler</a>	\$1,200,000	Jul-02	Jan-04	\$0	\$11,250	\$35,250	\$148,000	\$144,000	\$140,000	\$136,000	\$132,000	\$128,000	\$124,000	\$120,000
<a href="#">Alcott School</a>	\$16,900,000	Oct-02	Oct-04	\$0	\$190,125	\$443,625	\$760,500	\$1,586,488	\$1,548,463	\$1,510,438	\$1,472,413	\$1,434,388	\$1,396,363	\$1,358,338
<a href="#">Thoreau School</a>	\$17,717,030	Jul-04	Apr-06	\$0	\$0	\$0	\$199,317	\$597,950	\$1,683,118	\$1,643,255	\$1,603,391	\$1,563,528	\$1,523,665	\$1,483,801
<a href="#">Willard School</a>	\$21,789,712	Jul-11	Apr-13	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$245,134
<a href="#">Middle School</a>	\$43,327,074	Jun-18	Mar-20	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<a href="#">High School Phase I</a>	\$18,565,750	Jun-04	Mar-06	\$0	\$0	\$49,772	\$248,479	\$489,231	\$1,262,666	\$1,207,275	\$1,172,108	\$1,109,871	\$1,033,035	\$976,932
<a href="#">High School Phase II</a>	\$17,852,821	Jan-07	Oct-08	\$0	\$0	\$0	\$0	\$0	\$47,928	\$234,686	\$560,436	\$1,135,277	\$1,058,340	\$1,002,513
<a href="#">West Concord</a>														
<a href="#">Fire/Police Station</a>	\$20,158,746	Jun-12	Mar-14	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$75,595
<a href="#">Waste Water Treatment</a>	\$0	Jan-04	Jul-05	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<a href="#">Another Big</a>														
<a href="#">Construction Project</a>	\$0	Jan-25	Jul-26	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<a href="#">Land Acquisition</a>	\$0	Jan-25	Jul-26	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>TOTAL DEBT EXCLUSION PAYMENTS</b>	<b>\$794,228</b>			<b>\$811,730</b>	<b>\$2,043,928</b>	<b>\$2,839,612</b>	<b>\$4,184,454</b>	<b>\$5,098,591</b>	<b>\$5,116,841</b>	<b>\$5,273,546</b>	<b>\$5,505,426</b>	<b>\$5,232,074</b>	<b>\$5,197,316</b>	
<b>Y/E TOTAL DEBT EXCLUSION BALANCE</b>	<b>\$6,630,000</b>			<b>\$16,905,000</b>	<b>\$20,685,000</b>	<b>\$28,934,771</b>	<b>\$37,250,466</b>	<b>\$45,304,494</b>	<b>\$52,875,189</b>	<b>\$56,287,780</b>	<b>\$54,787,780</b>	<b>\$57,336,846</b>	<b>\$60,300,051</b>	

Note: CPI data pulled from [www.bls.gov](http://www.bls.gov) measures calendar year. Concord's Financial Year runs July 1 - June 30. The six-month offsets create mild distortions in the early years of projects, but these smooth out over time and are deemed insignificant for the purposes of this planning tool.

**"Ambitious" with 3.64% Operating Override - Worksheet "S"**

FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
\$81,806	\$88,056	\$94,783	\$102,024	\$109,819	\$118,209	\$127,240	\$136,962	\$147,425	\$158,689	\$170,813	\$183,863
\$2,045	\$2,201	\$2,370	\$2,551	\$2,745	\$2,955	\$3,181	\$3,424	\$3,686	\$3,967	\$4,270	\$4,597
\$1,227	\$1,321	\$1,422	\$1,530	\$1,647	\$1,773	\$1,909	\$2,054	\$2,211	\$2,380	\$2,562	\$2,758
3.64%	3.64%	3.64%	3.64%	3.64%	3.64%	3.64%	3.64%	3.64%	3.64%	3.64%	3.64%
\$2,978	\$3,205	\$3,450	\$3,714	\$3,997	\$4,303	\$4,632	\$4,985	\$5,366	\$5,776	\$6,218	\$6,693
\$88,056	\$94,783	\$102,024	\$109,819	\$118,209	\$127,240	\$136,962	\$147,425	\$158,689	\$170,813	\$183,863	\$197,910
\$5,741	\$7,213	\$8,190	\$8,251	\$7,923	\$7,862	\$8,288	\$8,877	\$11,144	\$10,823	\$10,180	\$9,859
<b>\$93,797</b>	<b>\$101,996</b>	<b>\$110,214</b>	<b>\$118,070</b>	<b>\$126,133</b>	<b>\$135,102</b>	<b>\$145,250</b>	<b>\$156,302</b>	<b>\$169,833</b>	<b>\$181,636</b>	<b>\$194,043</b>	<b>\$207,769</b>
\$18.33	\$19.64	\$20.91	\$22.07	\$23.23	\$24.51	\$25.96	\$27.53	\$29.47	\$31.05	\$32.68	\$34.48
\$656	\$812	\$908	\$901	\$853	\$833	\$866	\$913	\$1,130	\$1,081	\$1,002	\$956
<b>\$10,712</b>	<b>\$11,476</b>	<b>\$12,217</b>	<b>\$12,895</b>	<b>\$13,572</b>	<b>\$14,322</b>	<b>\$15,170</b>	<b>\$16,083</b>	<b>\$17,217</b>	<b>\$18,142</b>	<b>\$19,094</b>	<b>\$20,143</b>
\$474	\$569	\$618	\$596	\$547	\$519	\$524	\$537	\$644	\$599	\$539	\$499
\$7,738	\$8,049	\$8,319	\$8,525	\$8,711	\$8,925	\$9,178	\$9,447	\$9,819	\$10,045	\$10,264	\$10,512
3.1%	4.0%	3.4%	2.5%	2.2%	2.5%	2.8%	2.9%	3.9%	2.3%	2.2%	2.4%
6.1%	7.1%	7.4%	7.0%	6.3%	5.8%	5.7%	5.7%	6.6%	6.0%	5.2%	4.7%
6.2%	7.1%	6.5%	5.5%	5.2%	5.5%	5.9%	6.0%	7.1%	5.4%	5.3%	5.5%
FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
-\$181,692	-\$288,950	-\$288,950	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$116,000	\$112,000	\$108,000	\$104,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$1,320,313	\$1,282,288	\$1,244,263	\$1,206,238	\$1,168,213	\$1,130,188	\$1,092,163	\$1,054,138	\$1,016,113	\$978,088	\$902,038	\$864,013
\$1,443,938	\$1,404,075	\$1,364,211	\$1,324,348	\$1,284,485	\$1,244,621	\$1,204,758	\$1,164,895	\$1,125,031	\$1,085,168	\$1,005,441	\$965,578
\$735,403	\$2,070,023	\$2,020,996	\$1,971,969	\$1,922,942	\$1,873,915	\$1,824,888	\$1,775,862	\$1,726,835	\$1,677,808	\$1,579,754	\$1,530,727
\$0	\$0	\$0	\$0	\$0	\$162,477	\$812,383	\$1,624,765	\$4,116,072	\$4,018,586	\$3,823,614	\$3,726,128
\$951,443	\$925,176	\$898,909	\$872,642	\$846,375	\$820,109	\$793,842	\$767,575	\$741,308	\$715,041	\$662,508	\$636,241
\$978,053	\$952,794	\$927,536	\$902,278	\$877,020	\$851,762	\$826,503	\$801,245	\$775,987	\$750,729	\$700,213	\$674,954
\$377,976	\$755,953	\$1,915,081	\$1,869,724	\$1,824,366	\$1,779,009	\$1,733,652	\$1,688,295	\$1,642,938	\$1,597,581	\$1,506,866	\$1,461,509
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$5,741,433	\$7,213,358	\$8,190,046	\$8,251,198	\$7,923,401	\$7,862,080	\$8,288,189	\$8,876,774	\$11,144,284	\$10,823,000	\$10,180,434	\$9,859,151
\$62,849,118	\$65,837,323	\$63,923,184	\$61,755,543	\$59,841,404	\$57,698,763	\$55,784,624	\$59,319,411	\$67,892,386	\$76,641,860	\$85,214,835	\$88,516,880

## "Ambitious" no Operating Override - Worksheet "W"

Property Tax Levy				FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
<b>Property Tax Levy</b>														
Previous Year Tax Levy				\$34,828	\$38,958	\$42,172	\$45,393	\$47,209	\$49,098	\$51,061	\$53,104	\$55,228	\$57,437	\$59,735
Prop 2 1/2 Increase				\$871	\$974	\$1,054	\$1,135	\$1,180	\$1,227	\$1,277	\$1,328	\$1,381	\$1,436	\$1,493
New Growth				\$1,010	\$761	\$633	\$681	\$708	\$736	\$766	\$797	\$828	\$862	\$896
Operating Override Percentage						3.64%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Operating Overrides				\$2,249	\$1,479	\$1,535	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Subtotal: Levy w/o Debt Exclusion				\$38,958	\$42,172	\$45,393	\$47,209	\$49,098	\$51,061	\$53,104	\$55,228	\$57,437	\$59,735	\$62,124
Debt Exclusion Payments				\$842	\$713	\$2,044	\$2,840	\$4,184	\$5,099	\$5,117	\$5,274	\$5,505	\$5,232	\$5,197
<b>Total Property Tax Levy (000s)</b>				<b>\$39,800</b>	<b>\$42,885</b>	<b>\$47,437</b>	<b>\$50,049</b>	<b>\$53,282</b>	<b>\$56,160</b>	<b>\$58,221</b>	<b>\$60,502</b>	<b>\$62,943</b>	<b>\$64,967</b>	<b>\$67,321</b>
Tax / \$1000 Valuation				\$9.84	\$9.73	\$10.60	\$11.02	\$11.56	\$12.00	\$12.26	\$12.55	\$12.87	\$13.08	\$13.36
Median Tax Bill Share of Service on Debt Exclusion				\$110	\$95	\$267	\$365	\$530	\$637	\$630	\$639	\$657	\$616	\$602
<b>Total Median Tax Bill</b>				<b>\$5,208</b>	<b>\$5,684</b>	<b>\$6,194</b>	<b>\$6,439</b>	<b>\$6,753</b>	<b>\$7,013</b>	<b>\$7,163</b>	<b>\$7,333</b>	<b>\$7,516</b>	<b>\$7,643</b>	<b>\$7,803</b>
Present Value of Debt Exclusion Burden on Median Tax Bill				\$110	\$95	\$252	\$334	\$471	\$549	\$527	\$520	\$519	\$472	\$448
Present Value of Median Tax Bill				\$5,208	\$5,684	\$5,839	\$5,892	\$6,000	\$6,049	\$5,999	\$5,963	\$5,934	\$5,858	\$5,806
Percent Present Value Tax Increase						2.7%	0.9%	1.8%	0.8%	-0.8%	-0.6%	-0.5%	-1.3%	-0.9%
Percent Debt Exclusion Burden on Median Tax Bill				2.1%	1.7%	4.3%	5.7%	7.9%	9.1%	8.8%	8.7%	8.7%	8.1%	7.7%
Overall Annual Tax Increase before Present Value Calculation						9.0%	3.9%	4.9%	3.8%	2.1%	2.4%	2.5%	1.7%	2.1%
Debt Exclusion Costs				FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Project Cost	Start Date	Finish Date												
High School, 1990s	\$5,020,000	Sep-94	Sep-94	\$461,200	\$429,164	\$411,724	\$388,316	\$290,815	\$276,204	\$250,349	\$228,799	\$134,362	\$96,672	-\$64,998
Mattison Field School Designs	\$840,000	May-98	May-98	\$181,028	\$160,428	\$145,365	\$150,650	\$145,463	\$140,213	\$134,838	\$104,400	\$0	\$0	\$0
Harvey Wheeler	\$2,750,000	Feb-03	Feb-03	\$152,000	\$20,763	\$958,192	\$944,350	\$930,508	\$0	\$0	\$0	\$0	\$0	\$0
Alcott School	\$1,200,000	Jul-02	Jan-04	\$0	\$11,250	\$35,250	\$148,000	\$144,000	\$140,000	\$136,000	\$132,000	\$128,000	\$124,000	\$120,000
Thoreau School	\$16,900,000	Oct-02	Oct-04	\$0	\$190,125	\$443,625	\$760,500	\$1,586,488	\$1,548,463	\$1,510,438	\$1,472,413	\$1,434,388	\$1,396,363	\$1,358,338
Willard School	\$17,717,030	Jul-04	Apr-06	\$0	\$0	\$0	\$199,317	\$597,950	\$1,683,118	\$1,643,255	\$1,603,391	\$1,563,528	\$1,523,665	\$1,483,801
Middle School	\$21,789,712	Jul-11	Apr-13	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$245,134
High School Phase I	\$43,327,074	Jun-18	Mar-20	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
High School Phase II	\$18,565,750	Jun-04	Mar-06	\$0	\$0	\$49,772	\$248,479	\$489,231	\$1,262,666	\$1,207,275	\$1,172,108	\$1,109,871	\$1,033,035	\$976,932
West Concord	\$17,852,821	Jan-07	Oct-08	\$0	\$0	\$0	\$0	\$0	\$47,928	\$234,686	\$560,436	\$1,135,277	\$1,058,340	\$1,002,513
Fire/Police Station	\$20,158,746	Jun-12	Mar-14	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$75,595
Waste Water Treatment	\$0	Jan-04	Jul-05	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Another Big Construction Project	\$0	Jan-25	Jul-26	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Land Acquisition	\$0	Jan-25	Jul-26	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>TOTAL DEBT EXCLUSION PAYMENTS</b>				\$794,228	\$811,730	\$2,043,928	\$2,839,612	\$4,184,454	\$5,098,591	\$5,116,841	\$5,273,546	\$5,505,426	\$5,232,074	\$5,197,316
<b>Y/E TOTAL DEBT EXCLUSION BALANCE</b>				\$6,630,000	\$16,905,000	\$20,685,000	\$28,934,771	\$37,250,466	\$45,304,494	\$52,875,189	\$56,287,780	\$54,787,780	\$57,336,846	\$60,300,051

Note: CPI data pulled from [www.bls.gov](http://www.bls.gov) measures calendar year. Concord's Financial Year runs July 1 - June 30. The six-month offsets create mild distortions in the early years of projects, but these smooth out over time and are deemed insignificant for the purposes of this planning tool.

## "Ambitious" no Operating Override - Worksheet "W"

FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
\$62,124	\$64,609	\$67,193	\$69,881	\$72,676	\$75,583	\$78,607	\$81,751	\$85,021	\$88,422	\$91,959	\$95,637
\$1,553	\$1,615	\$1,680	\$1,747	\$1,817	\$1,890	\$1,965	\$2,044	\$2,126	\$2,211	\$2,299	\$2,391
\$932	\$969	\$1,008	\$1,048	\$1,090	\$1,134	\$1,179	\$1,226	\$1,275	\$1,326	\$1,379	\$1,435
0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$64,609	\$67,193	\$69,881	\$72,676	\$75,583	\$78,607	\$81,751	\$85,021	\$88,422	\$91,959	\$95,637	\$99,463
\$5,741	\$7,213	\$8,190	\$8,251	\$7,923	\$7,862	\$8,288	\$8,877	\$11,144	\$10,823	\$10,180	\$9,859
<b>\$70,350</b>	<b>\$74,407</b>	<b>\$78,071</b>	<b>\$80,928</b>	<b>\$83,507</b>	<b>\$86,469</b>	<b>\$90,039</b>	<b>\$93,898</b>	<b>\$99,566</b>	<b>\$102,782</b>	<b>\$105,818</b>	<b>\$109,322</b>
\$13.75	\$14.33	\$14.81	\$15.13	\$15.38	\$15.69	\$16.10	\$16.54	\$17.28	\$17.57	\$17.82	\$18.14
\$656	\$812	\$908	\$901	\$853	\$833	\$866	\$913	\$1,130	\$1,081	\$1,002	\$956
<b>\$8,034</b>	<b>\$8,372</b>	<b>\$8,654</b>	<b>\$8,838</b>	<b>\$8,985</b>	<b>\$9,166</b>	<b>\$9,404</b>	<b>\$9,662</b>	<b>\$10,094</b>	<b>\$10,266</b>	<b>\$10,413</b>	<b>\$10,599</b>
\$474	\$569	\$618	\$596	\$547	\$519	\$524	\$537	\$644	\$599	\$539	\$499
\$5,804	\$5,872	\$5,893	\$5,843	\$5,767	\$5,712	\$5,689	\$5,675	\$5,756	\$5,684	\$5,597	\$5,531
0.0%	1.2%	0.4%	-0.8%	-1.3%	-1.0%	-0.4%	-0.2%	1.4%	-1.3%	-1.5%	-1.2%
8.2%	9.7%	10.5%	10.2%	9.5%	9.1%	9.2%	9.5%	11.2%	10.5%	9.6%	9.0%
3.0%	4.2%	3.4%	2.1%	1.7%	2.0%	2.6%	2.7%	4.5%	1.7%	1.4%	1.8%
FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
-\$181,692	-\$288,950	-\$288,950	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$116,000	\$112,000	\$108,000	\$104,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$1,320,313	\$1,282,288	\$1,244,263	\$1,206,238	\$1,168,213	\$1,130,188	\$1,092,163	\$1,054,138	\$1,016,113	\$978,088	\$902,038	\$864,013
\$1,443,938	\$1,404,075	\$1,364,211	\$1,324,348	\$1,284,485	\$1,244,621	\$1,204,758	\$1,164,895	\$1,125,031	\$1,085,168	\$1,005,441	\$965,578
\$735,403	\$2,070,023	\$2,020,996	\$1,971,969	\$1,922,942	\$1,873,915	\$1,824,888	\$1,775,862	\$1,726,835	\$1,677,808	\$1,579,754	\$1,530,727
\$0	\$0	\$0	\$0	\$0	\$162,477	\$812,383	\$1,624,765	\$4,116,072	\$4,018,586	\$3,823,614	\$3,726,128
\$951,443	\$925,176	\$898,909	\$872,642	\$846,375	\$820,109	\$793,842	\$767,575	\$741,308	\$715,041	\$662,508	\$636,241
\$978,053	\$952,794	\$927,536	\$902,278	\$877,020	\$851,762	\$826,503	\$801,245	\$775,987	\$750,729	\$700,213	\$674,954
\$377,976	\$755,953	\$1,915,081	\$1,869,724	\$1,824,366	\$1,779,009	\$1,733,652	\$1,688,295	\$1,642,938	\$1,597,581	\$1,506,866	\$1,461,509
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$5,741,433	\$7,213,358	\$8,190,046	\$8,251,198	\$7,923,401	\$7,862,080	\$8,288,189	\$8,876,774	\$11,144,284	\$10,823,000	\$10,180,434	\$9,859,151
\$62,849,118	\$65,837,323	\$63,923,184	\$61,755,543	\$59,841,404	\$57,698,763	\$55,784,624	\$59,319,411	\$67,892,386	\$76,641,860	\$85,214,835	\$88,516,880

### **3. Analysis of Tax Rate Impact of Facilities Plans**

The three charts below, “X”, “Y” and “Z”, present a graphic representation of the impact on tax rates of the Five-Year Level facilities plan and the Ambitious Plan, both with and without override votes.

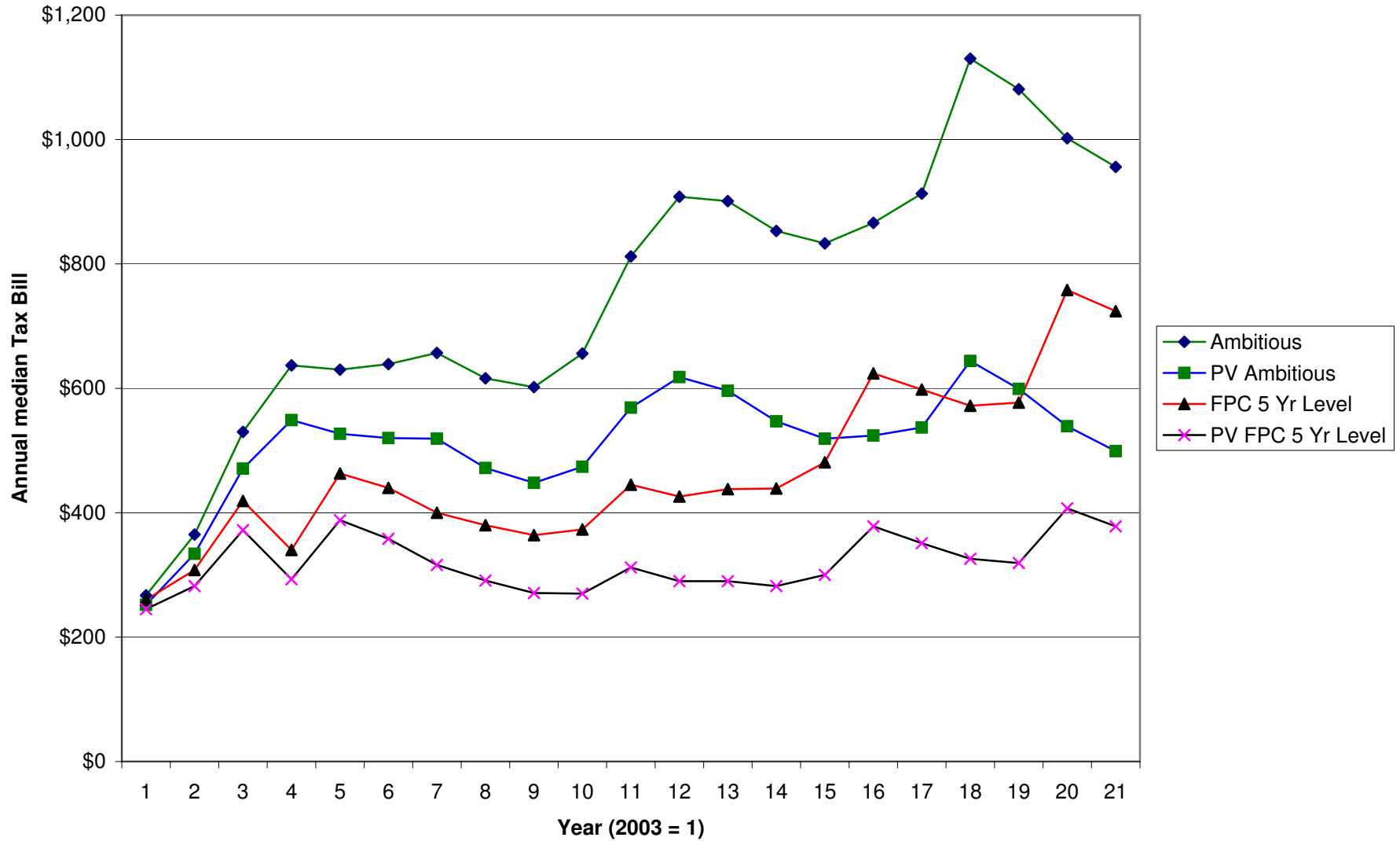
Chart X shows the actual and present debt exclusions values for the Ambitious and the Committee’s Five-Year Level plans. Note that the present value of the Committee’s Five-Year Level plan is consistently at or below the \$400 level except for \$407 in 2023. The present value of the Ambitious plan reaches a high of \$644 in 2021 and hovers around \$535 most years.

Charts Y and Z show the impact of the operating override on tax rates. Chart Y shows the Present Value tax impact of both the Ambitious and Five-Year Level plans with an average 3.64% operating override. The debt exclusion amounts are included in the overall taxation rates. The debt exclusion amounts are relatively insignificant compared with the overall tax rate. Compared in constant 2003 dollars, the annual median tax bill increases by 85% over 20 years.

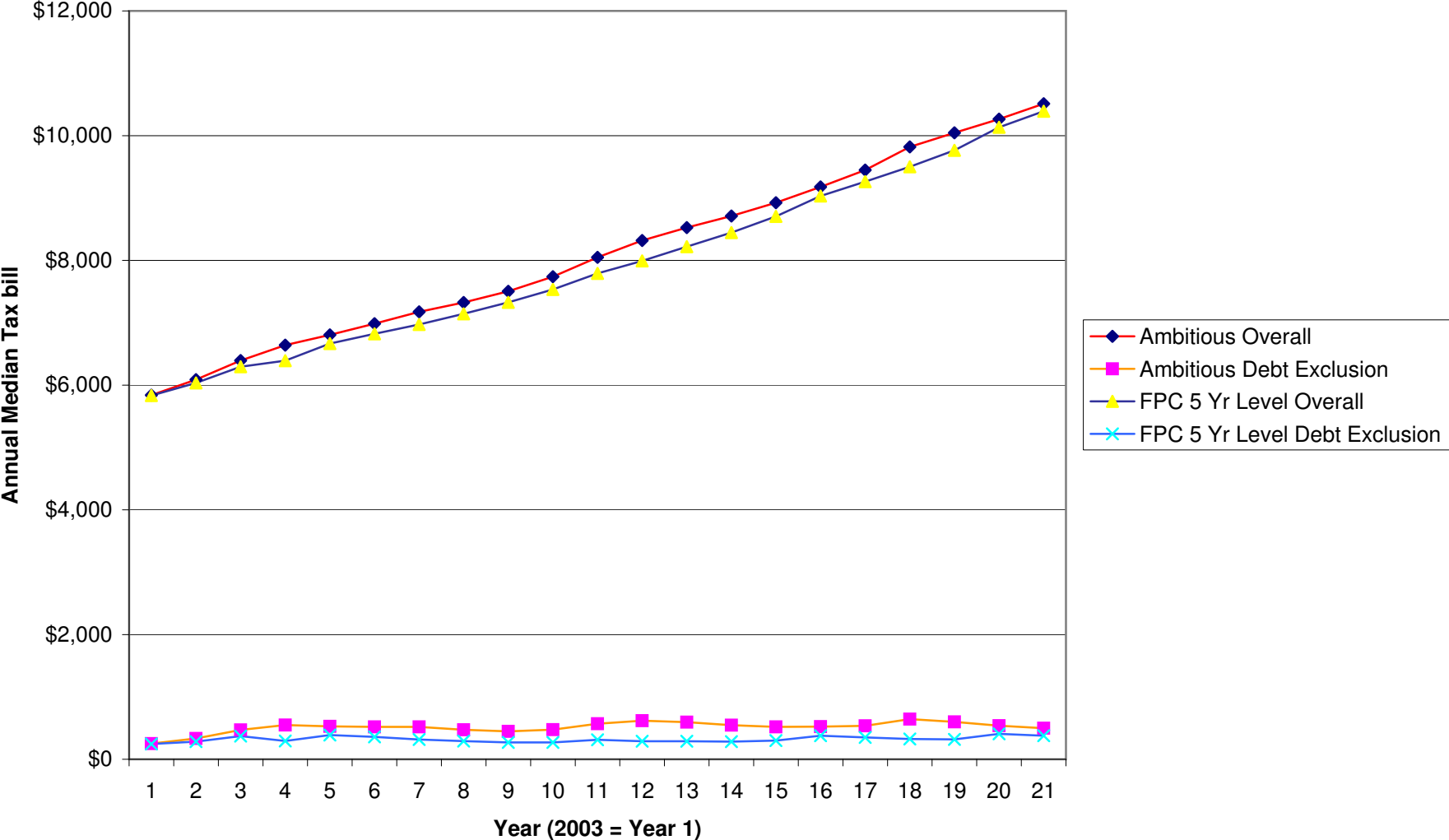
Chart Z shows the Ambitious and Five-Year Level plans without operating overrides. Since Proposition 2-1/2 limits tax increases to below the interest rate assumption in the worksheet, the present value of the annual median tax bill actually decreases over time.



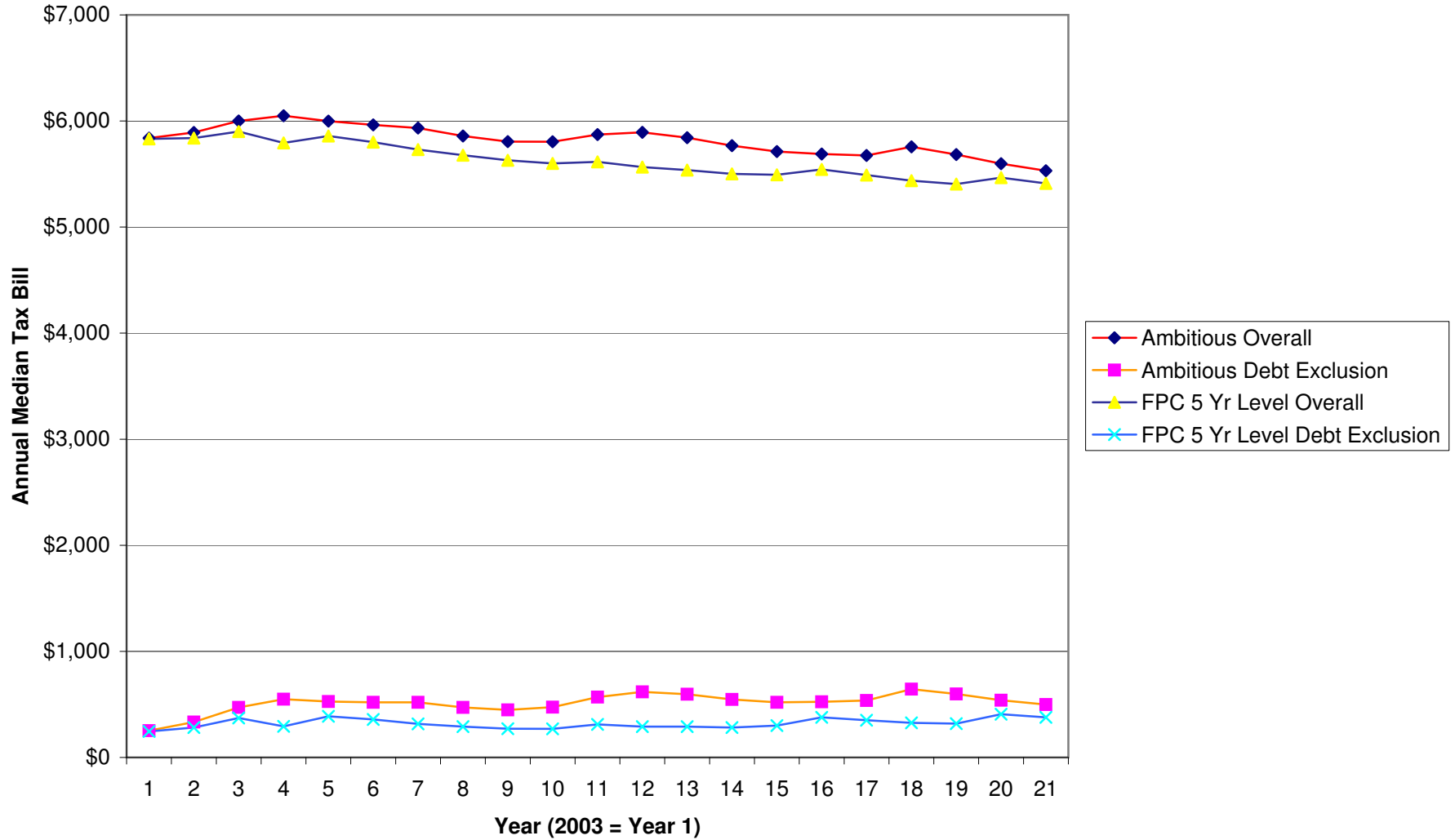
Actual and Present Values of Ambitious and FPC 5 yr Level Debt Exclusion - Chart "X"



**Present Values of "Ambitious" and "FPC 5 yr Level" Overall Taxation  
and Debt Exclusion with Override - Chart "Y"**



**Present Values of "Ambitious" and "FPC 5 yr Level" Overall Taxation  
and Debt Exclusion with no Operating Override - Chart "Z"**



## **VI. Major Findings and Recommendations**

### **A. Facilities Projects and Their Timing**

The Facilities Planning Committee, recommends what we have titled the “Five-Year Level” facilities plan described in Section III. B. 1. of our report. The Five-Year Level Plan includes the following facilities projects with their starting dates :

<u>Year</u>	<u>Project</u>
2005	Thoreau School
2011	Phase I of C.C.H.S.
2016	Willard School
2021	Either: New Fire Station, or Middle School, or C.C.H.S. Phase II

### **B. Improvements in the Facilities Planning Process**

Incidental to its data collection effort the Committee also learned something of the planning and decision processes that were involved in past facilities projects of the Town. It is clear that at times decisions have been made within very constrained limits that had long-term effects on the functionality, durability, and costs of operation, maintenance, and repair of the Town’s facilities. Such constraints included limited time for facilities planners to consider alternatives, a perception that initial construction cost was the most important, if not the only cost consideration, and lack of authority of planners to consider options beyond the particular building and site under consideration. Excessive constraints on the planning process may be efficient of the planners’ time but are unlikely to produce the best facilities plans and designs.

Of particular concern to the Committee was the Ripley School. It is now largely being used for a purpose for which it was not designed and is not appropriate – as office space for school administrative personnel. Major expenditures are made on an ad hoc basis from time to time for essential repairs - such as most recently a new roof.

The Committee offers the following observations and recommendations in this area.

#### **1. Major Facilities Planning Recommendations**

- The design of new construction projects should reflect a vision of the future, with creative, efficient and fully functional facilities – buildings with a true sense of place and the preservation of existing facilities should be given high priority in order to maintain the quality of the Town’s character.

- Proposed facility expansion and new construction projects should be implemented only after a thorough examination of needs, program, timing, costs and the potential for the reuse of existing facilities.

- Land is a precious asset in Concord and its availability is rapidly declining. Long-range planning for the Town should identify priority parcels of land suitable for future construction projects, as well as for swing space to accommodate users displaced during construction.

- We recommend that the data the Committee have prepared be updated at regular intervals.

The building survey and the financial model used by the Committee should be helpful to the Board of Selectmen and Town of Concord for this purpose.

- The Town should, on a regular schedule - though not necessarily yearly - appoint a Facilities Planning Committee with responsibility for reviewing the Town's facilities data and long range facilities plans. This Committee should include representatives from the engineering and architectural professions, as well as individuals with expertise in finance, planning and programming, and construction.

- From time to time the Town should engage consultants expert in Town and facilities planning to review the adequacy of the Town's land and facilities planning process and to recommend specific, practical improvements.

- The Town and the Schools should develop a plan - or a range of possible plans - for the future use of the Ripley School site and building. Without the guidance that a long-range plan could provide the Town is very unlikely to achieve the highest and best use of either the building or the land upon which it stands.

## **2. Other Facilities Planning Recommendations**

- The Town should require that designers of Town facilities explicitly consider L.E.E.D. ("Leadership in Energy & Environmental Design") standards when designing Town buildings.

- Facility expansion and new construction projects should attempt to optimize life-cycle and operating costs through the careful selection of building materials and building systems.

- The Town should set a standard for calculating the "payback" appropriate for tradeoffs between initial costs and long-term savings. The standard should be used to analyze energy cost tradeoffs, materials costs vs. maintenance cost savings, and the like. The Committee suggests a "ten-year simple payback" as appropriate. That is, a saving of \$100 per year would justify the expenditure of an additional \$1,000 in initial construction or installation cost.

- New facilities should be flexible and readily adaptable to changing requirements. Such flexibility should be reflected in building layouts by allowing for future changes (either additions or subtractions), in mechanical system and lighting designs, and in provisions for storage space.
- The Schools should be encouraged to consider grade configuration, redistricting, morning/afternoon kindergarten, year-round school and other programmatic decisions that affect facilities needs.
- Economies should be obtained from increased daily and yearly use of facilities, proper orientation of buildings to avoid excessive heat gain and to capture daylight for lighting, and the optimum configuration of building envelopes (exterior walls and roofs).
- Property insurance values should be reexamined on a regular basis to assure they bear a reasonable relationship to replacement costs.

### **C. Facilities Maintenance**

The Committee learned that the Town's funding of maintenance is below the norms for public buildings as published by the Building Research Board. The Board's data indicate that a range of 2% to 4% of replacement cost is typical for well-maintained public buildings. Various incomplete data indicate that the Town's maintenance budgets for its buildings are in the 2% to 3% which we believe is inadequate for older buildings that were not designed with low maintenance cost in mind.

The Committee noted that the maintenance of Town and School buildings is not comprehensively planned and managed. Variations in maintenance quality were observed between buildings.

The Committee believes that improvements both in funding and in management of maintenance would be desirable.

#### **1. Recommendations for Improved Maintenance of Facilities**

- The Committee found it difficult to obtain accurate information about the costs of maintenance of Town facilities other than its schools. Without accurate information it is not possible to accurately track the levels of funding of maintenance. Thus the Town cannot know whether such funding is adequate and consistent. We recommend action be taken to collect and analyze such data and that it be used for planning future maintenance budgeting and planning.

- Consideration should be given to utilizing a computerized maintenance software program, as is being done by Emerson Hospital and many other multi-building owners, both public and private. Properly utilized, this would assure that all equipment maintenance would be accomplished in accordance with manufacturer's recommendations.

- Routine maintenance and capital maintenance of Town facilities should be funded at a consistent rate capable of attaining a "State of Good Repair," or approximately 2.75% of replacement cost for its facilities maintenance as a matter of policy – approximately \$292,000 more than recently budgeted.

- The Building Inventory Sheet that accompanies this report identifies those major future maintenance items that were brought to the attention of the Committee. The Committee recommends that funds be set aside each year for the immediate future to work off such accumulated deferred maintenance. An additional 0.25% or \$200,000 may be required to accomplish this.

- The Committee supports the recommendation of the recent Joint School/Town Maintenance Study Committee report that maintenance of School facilities and other Town buildings be integrated. [See that report for details.]

- The possibility of outsourcing some maintenance activities should be explored, and accomplished if found to be to the Town's financial advantage.

- Interchange of necessary, but little-used, maintenance equipment between the Town, Middlesex School, and Emerson Hospital might avoid some otherwise anticipated equipment expenditures.

## APPENDIX

Document: Charge to the Committee from the Selectmen

Document: "Building Inventory Information Gathering Process"

Table: Funding Approvals by Recent Town Meetings



## Charge Facilities Planning Committee

**Purpose:** To develop and recommend to the Board of Selectmen, and also for the use of the School Committee, a needs assessment, sequencing, and financing plan for the maintenance, upkeep, repair, reconstruction, additions, and new construction for all Town buildings, particularly School Buildings, and those projects not part of the Capital Plan, over the next twenty (20) years. This plan will take into account and coordinate with any and all expected capital expenditures over the same time period. The goal is to develop a timing and sequencing plan, including financing, which will adequately provide for the upkeep of Town buildings and their improvement as required, either by obsolescence or needs, most immediately school buildings, in such a manner as to minimize the impact on the Town's resources.

**Membership:** To consist of 2 Selectmen, 2 School Committee members, and up to 7 members at large at the discretion of the Board of Selectmen, drawn from the general community, having experience, knowledge, or expertise in the areas mentioned above, along with a Finance Committee observer.

**Term:** To be appointed immediately by the Board of Selectmen for a term of 18 months, subject to reappointment if the tasks are not completed.

**Funding:** It is the intention of the Board of Selectmen to request a sum of money, at the first available Town Meeting. Said monies shall be used for planning assistance which could include, but is not limited to, professional assistance, a project manager, consultants, or others as recommended by the Committee to meet the needs of the Committee.

**Staff Support:** Requests for staff assistance will be made through the Town Manager and Superintendent of Schools who will endeavor to comply with reasonable requests.

**Framework and Assumptions:** The Facilities Planning Committee is charged with developing an ongoing Facilities Plan for the Town of Concord, consistent with, but not limited to, the following general assumptions:

1. It is necessary to have a long-term, flexible, and reviewable plan for sequencing and financing of the repair, maintenance and improvements, including replacement when required, for all of the Town buildings, but not including projects which are part of the annual Capital Plan.
2. It is appropriate to plan for such work so that when required it can be done in such a way as to not overtax the Town's resources.
3. As regards School buildings, major School Reconstruction projects are best taken on one at a time (see #2 above).

4. There is a need to do an inventory of all Town buildings as to their current status and need for work. In developing the inventory, the Committee shall review information, documentation, and research gathered and developed by the School Building Committee, and the Town Manager and Superintendent of Schools for capital planning purposes.
5. With regard to School Buildings, there is a need to understand the most recent rules and regulations of the School Building Assistance Bureau as they may impact the Town of Concord.
6. Among the School buildings, the Alcott and Thoreau Schools are perceived as having the most immediate needs both as a result of age and condition.
7. It is possible the School Committee and Board of Selectmen may present an article for voter consideration at a Town Meeting in 2002 to address needs at the Alcott School.
8. The Committee should, after performing an inventory, consider any recommendation for immediate action that it may wish to make as regards the Alcott School.
9. Projects should be considered and evaluated by the Committee to develop a Plan consistent with #1&2 above.
10. The Concord-Carlisle Regional School Committee is in the process of evaluation of space needs at the High School that will need to be incorporated into the Plan.
11. The Concord School Committee has voted to postpone consideration of renovation and reconstruction to be done at the Concord Middle School, but the Committee will need to include consideration of maintenance and capital needs of the Middle School in any Plan.
12. There exist design plans for the Alcott School, the Thoreau School, and the Middle School, as well as bid documents for the Alcott School and the Concord Middle School, Sanborn building. The Facilities Planning Committee should review design documents and bid documents created for the School Building Project in considering timing, sequencing and financing of School construction.

**Facilities to be Considered:** Any and all buildings and facilities owned by the Town of Concord, but excluding facilities which are funded by Enterprise Funds or are part of the Capital Plan.

**Role:** It is the role of the Facilities Planning Committee to develop a Facilities Plan as set forth above and by so doing make recommendation to the Board of Selectmen as to how to plan for the upkeep, maintenance, repair, renovation, reconstruction, and new construction of Town owned facilities. Such Plan will be shared with, and consultation sought from, the School Committee and the Regional School Committee, for incorporation into the Facilities Plan. The authorities and responsibilities of the Board of Selectmen and School Committee are not to be abridged in any fashion by the formation of this Committee and any recommendations it may make. Any actual construction will be the responsibility of a duly appointed Building Committee, which shall be responsible for design, planning and construction.

**Charge:** The Facilities Planning Committee shall develop a Facilities Plan for all Town owned buildings, which should include:

1. An inventory of all Town buildings including Schools.
2. Review of all current information and research gathered by the School Building Committee for evaluation and possible incorporation into the Plan.
3. Update of new School Building Assistance Bureau rules and regulations as they may apply to the Town of Concord for incorporation into any Plan.
4. Comment on status and condition of each property.
5. Recommendation as to action to be taken as to each property, including use of previously prepared designs where possible.
6. Recommendation of a sequencing plan.
7. Recommendation as to housing of students during School construction.
8. Recommendation of a financing plan.
9. Recommendation of a sequencing and financing plan for maintenance of all Town owned facilities.
10. The Committee is urged to consider, with all dispatch, the condition of the Alcott School and make recommendation as to that building at its earliest convenience, having evaluated the present sequencing and financing plans, and space for housing students during construction, and having due regard for integration into a comprehensive facilities plan and the assumptions set forth above.

**Other Considerations:** The Facilities Planning Committee is responsible for conducting its activities in a manner which is in compliance with all relevant State and local laws and regulations, including but not limited to the Open Meeting Law, Public Record Law, and Conflict of Interest Law. Copies of all minutes will be made available promptly to the Board of Selectmen, and submitted at year's end to the Town Clerk

5/28/03

**FACILITIES PLANNING COMMITTEE  
PROJECT PLANNING SUBCOMMITTEE**

**BUILDING INVENTORY INFORMATION GATHERING PROCESS**

The process used to gather the information included in the Building Inventory was discussed at various Facility Planning Committee meetings and, once decided, was followed throughout the preparation of the Building Inventory document.

In order to obtain consistent information, an interview form was prepared before the interview process began. Over the course of several meetings sample interview forms prepared by various committee members were reviewed and discussed. The final form was the one that committee members felt would be most helpful in preparing an inventory that would satisfy the assumptions listed in the committee's charge. It would also allow preparation of a Building Inventory document that would assist in projecting future capital expenditures for Town and School buildings, as well as building maintenance requirements.

Following approval of the final interview form, two members of the committee proceeded to interview each of the building managers. The managers were sent a letter of introduction and an interview form, along with a request that they provide as much of the information as possible prior to the interview. They were then contacted and an interview arranged. At the time of the interview, the committee members reviewed the form with the managers and toured the visited facility so as to personally observe building and equipment conditions.

Following each interview a summary of the meeting and of the conditions found was prepared. Information from the written summaries and the completed interview forms was then transcribed onto the Building Inventory form.

The completed Building Inventory form provides a single source document that summarizes each building's size and value, the conditions found, and some of the capital and/or maintenance actions that may be required during the next twenty years.

## Funding Approvals by Town Meeting 1992-2002

<u>Year</u>	<u>Article</u>	<u>Description</u>	<u>\$ Amount</u>
1992	31	CCHS renovations	\$6,032,500
	34	Keyes Road Bldg Improvements	\$945,000
			<b>\$6,977,500</b>
1993	23	Peabody School ADA renovations	\$245,815.36
1994	17	Alcott, Thoreau, Willard remodeling (additions)	\$2,200,000
1995	29	Alcott window wall	\$350,000
	30	CCHS renovations cont'd	\$3,100,000
	18	Keyes Rd Improvement (transfer from CMLP)	\$1,000,000
	19	Town House Renovations	\$100,000
			<b>\$4,550,000</b>
1996	30	Roof Repair at a CPS Bldg	\$515,000
	31	ADA renovations at a CPS Bldg	\$100,000
	37	Police and Fire Station Repairs	\$100,000
	32	Technology wiring for schools	\$1,000,000
			<b>\$1,715,000</b>
1997	30	Thoreau School Parking Study	\$15,000
	31	Thoreau Roof	\$60,000
	39	Police and Fire Remodeling	\$225,000
	40	Town House HVAC	\$150,000
	41	Rideout Playground Improvments	\$135,000
	34	Harvey Wheeler (transfer from H. Wright Trust)	\$200,000
			<b>\$785,000</b>
1998	30	Emerson Playground Renovations	\$200,000
	32	Thoreau Parking Lot	\$150,000
	33	Alcott and Thoreau roofs	\$715,000
	34	The CPS Bldg Study (Master Plan)	\$50,000
			<b>\$1,115,000</b>
1999	34	Town House Renovations	\$150,000
	35	Police and Fire Renovations	\$180,000
	40	School Bus Maint. Facility	\$350,000
	41	CPS Modulars	\$215,326
	42	Peabody Roof Repairs	\$60,000
	50	105 Everett Street Purchase	\$40,000
			<b>\$995,326</b>

## Funding Approvals by Town Meeting 1992-2002

2000	29	CPS Design Funds	\$5,000,000	
2001	44	Harvey Wheeler Renovations	\$1,150,000	
	45	105 Everett St Renovations	\$185,000	
	53	CPS Bldg Project		(\$68,437,000)
		Willard <i>amendment</i>		(\$73,037,000)
	56	Peabody Roof Phase II	\$130,000	
			<b>\$1,465,000</b>	
2002	38	Harvey Wheeler Renovations	\$400,000	
	40	Police and Fire Station Renovations	\$200,000	
	52	Willard Roof Repair	\$50,000	
	53	Peabody Roof Phase III	\$350,000	
	54	Ripley Roof Replacement Phase I	\$209,000	
	55	Modular Classroom Sanborn	\$180,000	
	56	Sanborn Gym Floor Replacement	\$120,000	
		(actual money spent was approx. \$60,000.)		
	57	Sanborn & Peabody Improvements	\$480,000	
	51	Alcott & Thoreau Floor Replacements	\$160,000	
		(actual money spent was approx. \$90,000.)		
	60	Alcott New building	\$20,000,000	
		Staging School Study Committee	\$40,000	
		Facilities Planning Committee	\$50,000	
			<b>\$22,239,000</b>	
		<b>TEN YEAR TOTAL:</b>	<b>\$ 64,890,467</b>	