

Introduction

The scope of this study includes the evaluation of programmatic requirements for the following Town departments (See Figure 2-1) which includes the following:

- Middle and Elementary Schools
- School Administration
- Emergency Operations Center (EOC)
- Department of Public Works (DPW)
- Department of Public Facilities
- Administration
- Community Development
- Community Services

A comprehensive approach has been taken to analyze and document current and future space needs, relationships with other departments and the frequency of public access.

This section is organized as follows:

- Overview
- Master Program Summary
- Department Programs
- Program Space Diagrams

Methodology

Programmatic requirements were developed based on data from several sources:

- Previous Studies - Programmatic requirements developed in Phase 1 of the 1998 Town wide Comprehensive Facilities Study were reviewed (See Inventory of Previous Studies, Volume 3 - Appendix).
- Enrollment Projections - Capacity requirements for middle school and elementary school are based on projected enrollments provided by the Needham School Department's Future School Needs Committee.
- Existing Drawings - Available drawings of existing facilities for town departments were reviewed and square footage calculations prepared to document existing space use. Existing floor plans are included in Part 3 - Existing Site & Building Evaluations.
- Direct Observation - A variety of existing spaces were observed during numerous site visits for both



Figure 1-1 Master Program

the adequacy of space available, and its functionality as well as qualitative considerations.

- User Interviews - Interviews with appropriate town staff were undertaken during the fall of 2005. These meetings are documented in Meeting Reports #2, 3, 4, 5, 6, 7 and 9 and are included in Volume 3 - Appendix.
- Equipment Inventory - Storage requirements for DPW vehicles and large equipment are based upon DPW Vehicles and Equipment Inventory (See Meeting Report #41 in Volume 3 - Appendix).
- Summary of Functional Requirements - Functional requirements for each department have been documented in department overviews.
- Organizational Charts - Department Organization

charts have been prepared showing existing staff and potential future staff.

- Program Net Square Footage (NSF) - The NSF for each department has been tabulated based upon existing staff and current needs with consideration of future expansion.
- Program Space Diagrams have been prepared based on the Program NSF tabulations.
- Area by Design and Building Gross Square Footage (GSF) - Area by Design and GSF requirements have been determined by actual layouts of Town Departments which include Shared Facilities (such as conference rooms, copy centers and departmental storage), Circulation and Building Services. These layouts are included in Part 4 - Options.

YEAR	1999/2000				00/01	01/02	02/03	03/04	04/05	05/06	06/07	07/08	08/09	09/10
BIRTHS*	368				386	350	340	372	315	352	352	352	352	352
SCHOOL YEAR	2005/2006				PROJ - 06/07	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16
GRADE	PROJECTED	ACTUAL	ACTUAL	ACTUAL										
K	405	414	(9)	447	400	393	428	362	405	405	405	405	405	405
1	449	429	20	423	457	409	402	437	370	414	414	414	414	414
2	406	406	0	433	427	461	412	405	441	373	417	417	417	417
3	414	409	5	416	443	437	472	422	415	452	382	427	427	427
4	373	367	6	411	418	446	440	475	424	417	455	384	429	429
5	361	365	(4)	367	411	418	446	440	475	424	417	455	384	384
6	372	373	(1)	371	373	418	425	453	447	483	431	424	463	463
7	356	343	13	368	366	368	412	419	447	441	476	425	418	418
8	373	374	(1)	341	366	364	366	410	417	445	439	474	423	423
9	350	345	5	389	354	380	378	380	426	433	462	456	493	493
10	371	374	(3)	340	384	349	375	373	375	420	427	455	450	450
11	348	351	(3)	367	333	376	342	367	366	367	412	418	446	446
12	337	329	8	340	356	323	365	332	356	355	356	400	405	405
TOTAL	4,915	4,879	36	5,013	5,088	5,142	5,263	5,275	5,364	5,429	5,493	5,554	5,574	5,574
K-5	2,408	2,390	18	2,497	2,556	2,564	2,600	2,541	2,530	2,485	2,490	2,502	2,476	2,476
6-8	1,101	1,090	11	1,080	1,105	1,150	1,203	1,282	1,311	1,369	1,346	1,323	1,304	1,304
9-12	1,406	1,399	7	1,436	1,427	1,428	1,460	1,452	1,523	1,575	1,657	1,729	1,794	1,794
TOTAL	4,915	4,879	36	5,013	5,088	5,142	5,263	5,275	5,364	5,429	5,493	5,554	5,574	5,574

* REFLECTS JULY 1 TO JUNE 30 BIRTHS
 Figure 1-2 Enrollment Projections by the Future School Needs Committee (November 2005)

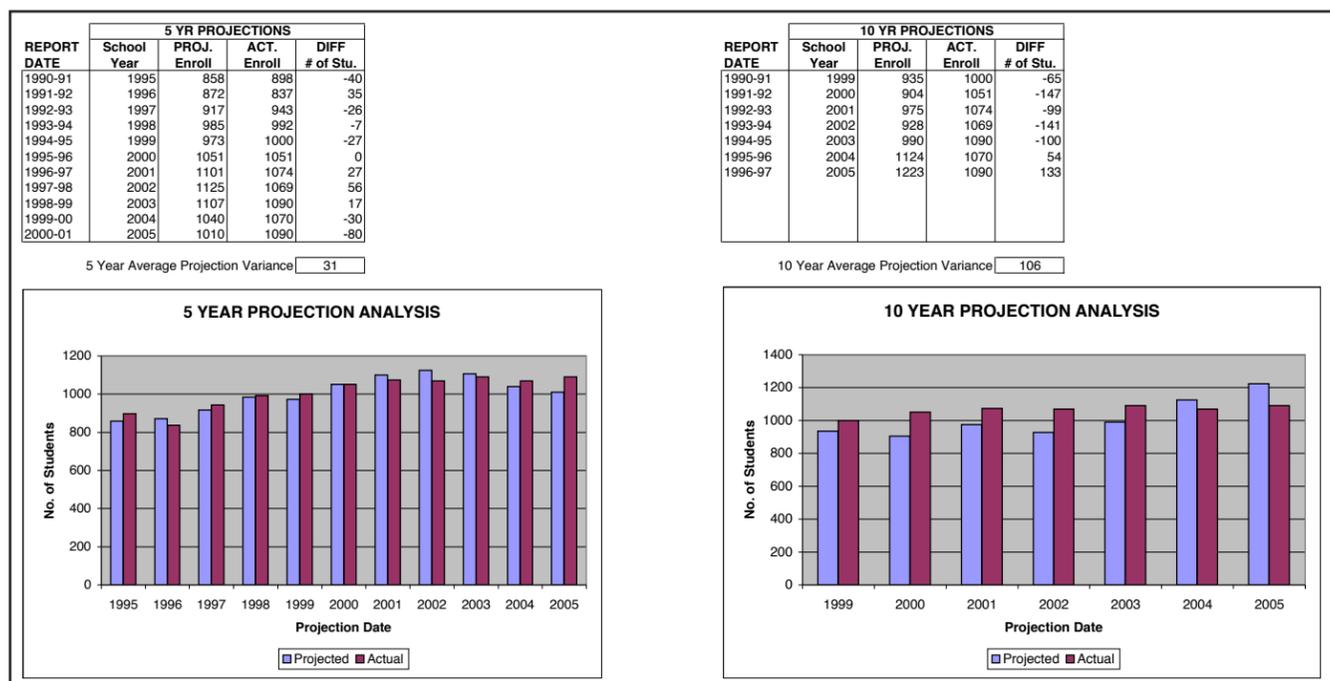


Figure 1-3 Middle School Enrollment Projections

Middle & Elementary Schools

Needham has five elementary schools, one middle school and one high school with enrollment totaling 3,566 students for the 2005 - 2006 school year. A review of enrollment projections and capacity requirements to meet the projected increased enrollment for middle and elementary schools is addressed in this section. The high school is not included in the scope of this study as it is currently undergoing a renovation / addition to address high school capacity and program requirements.

Educational needs include current overcrowding, future overcrowding, and the capacity of existing facilities. Program requirements also include consideration for equitable facilities across the school system. See the Schools data sheet for a detailed discussion of enrollment projections and capacity requirements.

Enrollment Projections

Enrollment projections have been prepared by the Future School Needs Committee (FSNC) during the past eleven years. The latest projection update will be released in November 2006.

The latest projections show (see Figure 1-2):

- Middle School (grades 6-8) enrollment peaking in the 2012 - 2013 school year at 1,369
- Elementary School enrollment (K-5) peaking in the 2009 - 2010 school year at 2,600.

Further, these projections do not include the impact of a proposed 350 unit residential development at New England Office Park, the resulting number of children (50 to 100) and the indirect consequence to single family "empty nester" residences.

Pollard Middle School

Pollard Middle School was built in 1958, added to in 1969, renovated in 1995 and expanded in 2002 with the addition of ten portable classrooms. It has the capacity for 800 students plus 200 students in portable classrooms. Today Pollard is already overcrowded at 1,080 students and by 2013 this number will grow to 1,369 students. Between 2006 and 2013 there will be a minimum shortfall of 369 students and possibly more. Simply stated there is no space for additional incoming students in 2008 and two more portable classrooms must be added in 2008 as a stop gap measure. It is reasonable and prudent to accept these projections and to plan accordingly.

Elementary Schools

Enrollment projections (Figure 1-2) for grades K-5 show a slight increase (approximately 100 students) which peaks in school year 2009-2010 and a slight decrease in the same

amount through 2015-2016.

The same chart shows declining births from 2000-2001 through 2004-2005. However, these trends are relatively minor and do not reflect immigration and changes in housing patterns such as new condominiums and the impact of empty nesters for Needham's sizable baby boomer population.

Further, existing elementary schools are at or near capacity with anticipated conversions of core spaces (art, music, computers, etc.) to regular classrooms. This does not consider the future possibility of full-session Kindergarten. All five elementary schools are at full capacity with no possibility for expansion except by the addition of portable classrooms or additions.

The validity and accuracy of the process and enrollment projections have been reviewed. These projections have been carefully evaluated for consistency and accuracy by comparing 5 year and 10 year projections to actual enrollments for the same time periods (See Figures 1-3 and 1-4).

Space Requirements

The additional space required for middle and elementary schools to meet the projected growing enrollment varies depending on the system wide approach to providing additional capacity. Factors impacting space requirements include:

- Existing Elementary School / Middle School Grade Structure of K-5 / 6-8 versus Alternative Grade Structure of K-4 / 5-8.
- Renovation / Addition of existing school(s) for additional capacity versus construction of new school(s).

For the purpose of determining space requirements, Grades Pre-K - 8 School Options include the requirements below. These requirements apply to existing schools as well as any proposed renovation / additions and / or new schools.

- Adequate classrooms to be provided for full day kindergarten.
- Elementary schools to have dedicated art and music classrooms.
- 20 students per elementary classroom.
- 22 students per middle school classroom.
- Existing portables are not including in calculating capacity unless otherwise noted.
- Adequate core spaces in all schools

School Administration

School Administration spaces under consideration include:

- Superintendent of Schools
- Financial Operations & Personnel
- Student Development
- Program Development

Most School Administration departments are located in the Emery Grover building while other departments are dispersed in other locations due to lack of space. See the School Administration data sheet in the following section and the existing floor plans in Part 3 - Existing Site & Building Evaluations.



Aerial Photograph provided by Needham DPW & Steven Hawes

Emergency Operations Center (EOC)

The EOC serves as command center in times of a local emergency where the Local Emergency Planning Committee (LEPC) staff gather to coordinate emergency responses. LEPC members include staff from the fire, police, health, schools, administration and DPW. Additional members include representatives from Olin College, Beth Israel Deaconess Hospital as well as broadcast and print media, and security representatives of industrial facilities.

The current location is in rented space which is inadequate for its functions.

Department of Public Works (DPW)

The DPW provides Town services for road maintenance and construction, water supply and distribution, sanitary and storm sewer construction and maintenance, solid waste disposal and recycling, traffic control, parks and forestry maintenance and snow removal. The DPW includes the following departments:

- Administrative Services
- Highway Division
- Garage Division
- Parks & Forestry Division
- Engineering Division
- Water & Sewer Division
- Recycling & Transfer Station (RTS)

All of the DPW staff are located at the DPW complex on Dedham Avenue with the exception of the following: Sewer Pump Station operators (located at the West Street pumping station), Water Treatment Facility Manager and Operators (located at the Chase River Treatment Facility) and the RTS staff (located at the RTS facility on Central Avenue).

Department of Public Facilities (DPF)

The Department of Public Facilities was recently created by the May 2005 Town Meeting. This restructuring combines the functions of the Permanent Public Building Committee (construction) and the Municipal Building Maintenance Department (Maintenance and Repair).

The Municipal Building Maintenance Department (MBMD) offices are located in the Emery Grover building with the school department. MBMD maintenance shop operations are located in the Daley Building.

Administrative space under the Permanent Public Building Committee is currently located with the DPW offices on Dedham Avenue.

Town Administration

Core town management functions include:

- Town Manager / Selectmen
- Town Clerk
- Finance
 - Treasurer / Tax Collector
 - Retirement Board
 - Assessor
 - Town Accountant
 - Information Technology
 - Parking Clerk
- Personnel

Community Development

Community Development departments include:

- Planning Board / Design Review Board
- Board of Appeals
- Conservation Commission
- Building Department

The Planning Board / Design Review Board is located in Town Hall while the other three departments are with the DPW offices on Dedham Avenue.

Community Services

Community Services departments include:

- Health Department
- Veterans Services
- Youth Services
- Park & Recreation
- Senior Center (Council on Aging)

The Senior Center is located in the basement of the Stephen Palmer Building. Other Community Services departments are located in Town Hall.

Master Program Summary

Department	Proposed Program				Existing		Comments
	NSF	Subtotals (NSF)	Grossing Factor	DGSF	Subtotals (DGSF)	DGSF	
SCHOOLS		-				-	
Middle School (s)							MS & ES program requirements vary dependent on PK - 8 School Option.
Elementary School (s)							
SCHOOL ADMINISTRATION		13,605				17,006	10,531
Superintendent of Schools	2,345		1.25	2,931			971
Financial Operations & Personnel	3,335		1.25	4,169			3,738
Student Development	2,695		1.25	3,369			1,613
Program Development	1,940		1.25	2,425			1,283
SUBTOTAL - DEPARTMENTAL SPACE		10,315				12,894	7,605
Shared Facilities							2,926
Building Services	3,290		1.25	4,113			
SUBTOTAL - SHARED FACILITIES		3,290				4,113	2,926
EMERGENCY OPERATIONS CENTER (EOC)		2,400				3,000	539
Emergency Operations Center	2,400		1.25	3,000			539
DEPARTMENT OF PUBLIC WORKS (DPW)		43,630				54,538	18,667
Administrative Division	1,430		1.25	1,788			1,000
Highway Division	1,055		1.25	1,319			1,835
Garage Division	31,715		1.25	39,644			3,700
Parks & Forestry Division	775		1.25	969			1,835
Engineering Division	3,725		1.25	4,656			2,740
Water & Sewer	1,180		1.25	1,475			4,300
SUBTOTAL - DEPARTMENTAL SPACE		39,880				49,850	15,410
Shared Facilities							
Shared Offices, Conference Rooms, Copy Centers	1,450		1.25	1,813			1,392
Department Storage	750		1.25	938			1,610
Toilets, Maintenance Office, Janitor's Closets	1,550		1.25	1,938			255
SUBTOTAL - SHARED FACILITIES		3,750				4,688	3,257
DEPARTMENT OF PUBLIC FACILITIES (DPF)						7,631	225
Permanent Public Building Committee (PPBC)	260		1.25	325			225
Municipal Building Maintenance Department (MBMD)	5,845		1.25	7,306			

Master Program Summary

Department	Proposed Program					Existing		Comments
	NSF	Subtotals (NSF)	Grossing Factor	DGSF	Subtotals (DGSF)	DGSF	Subtotals (DGSF)	
TOWN ADMINISTRATION		13,380			16,725		8,441	
Town Manager / Selectmen	1,105		1.25	1,381		964		
Town Clerk	965		1.25	1,206		775		
Finance								
Assistant Town Administrator - Finance	140		1.25	175		108		
Treasurer / Tax Collector	1,145		1.25	1,431		748		
Retirement	285		1.25	356		133		
Assessor	985		1.25	1,231		776		
Town Accountant	595		1.25	744		529		
Information Technology	1,050		1.25	1,313		1,464		
Parking	145		1.25	181		-		
Personnel	635		1.25	794		256		
SUBTOTAL - DEPARTMENTAL SPACE		7,050			8,813		5,753	
Shared Facilities								
"Customer Service" - Communications & Reception	250		1.25	313		-		
Mail Center & General Work Area	690		1.25	863		413		
Conference Rms, Offices, Copy Centers, Lunch Rms	1,620		1.25	2,025		650		
Department Storage	1,260		1.25	1,575		637		
Toilets, Maintenance Office, Janitor's Closets	2,510		1.25	3,138		988		
SUBTOTAL - SHARED FACILITIES		6,330		7,913		2,688		
COMMUNITY DEVELOPMENT		5,235			6,544		1,276	
Planning Department / Design Review Board	790		1.25	988		469		
Board of Appeals	190		1.25	238		150		
Conservation Commission	300		1.25	375		145		
Building Department	920		1.25	1,150		512		
SUBTOTAL - DEPARTMENTAL SPACE		2,200		2,750		1,276		
Shared Facilities								
Shared Offices, Conference Rooms, Copy Centers	1,155		1.25	1,444				
Department Storage	805		1.25	1,006				
Toilets, Maintenance Office, Janitor's Closets	1,075		1.25	1,344				
SUBTOTAL - SHARED FACILITIES		3,035		3,794		-		
COMMUNITY SERVICES		6,810			8,513		2,271	
Health Department	2,130		1.25	2,663		857		
Veterans' Services	295		1.25	369		258		
Youth Services	820		1.25	1,025		538		
Park & Recreation	1,200		1.25	1,500		618		
SUBTOTAL - DEPARTMENTAL SPACE		4,445		5,556		2,271		
Shared Facilities								
Shared Offices, Conference Rooms, Copy Centers	1,140		1.25	1,425				
Department Storage	550		1.25	688				
Toilets, Maintenance Office, Janitor's Closets	675		1.25	844				
SUBTOTAL - SHARED FACILITIES		2,365		2,956		-		
SENIOR CENTER		22,740			28,425		6,440	
Senior Center	22,740		1.25	28,425		6,440		