



Community Opportunities Group, Inc.

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April 28, 2009

Lee Newman
Planning Director
Needham Town Hall
1471 Highland Avenue
Needham, MA 02492

Reference: Fiscal Impact of Needham Center Development Plan

Dear Lee:

You have requested a fiscal impact analysis of the recently completed Needham Center Development Plan (January 2009). As I understand it, the Needham Finance Committee has asked whether the town will realize enough tax revenue to offset the cost of various public improvements recommended in the Plan. Accordingly, we have prepared a report on the potential increases in tax revenue, municipal and school service costs, and debt service that Needham is likely to experience if the downtown area redevelops in accordance with the Needham Center Development Plan. If you have any questions, please contact me at (781) 834-7324.

Sincerely,

COMMUNITY OPPORTUNITIES GROUP, INC.

Judi Barrett
Director of Planning

INTRODUCTION

At the request of the Needham Planning Department, Community Opportunities Group, Inc., has prepared a fiscal impact analysis of zoning proposals contained in the new Needham Center Development Plan (NCDP). The proposals call for the creation of three overlay districts in Needham Center – the Needham Center Overlay District, the Lower Chestnut Street Overlay District, and the Garden Street Overlay District – as set forth in Articles 3-8 on the Annual Town Meeting Warrant. The overlay districts are designed to encourage redevelopment of existing properties in Downtown Needham by providing intensity of use, building height, and other regulatory incentives in exchange for a developer’s agreement to comply with design guidelines prepared for the town as part of the NCDP. Property owners will retain their existing zoning rights because the overlay districts do not change any provisions or requirements of the underlying Center Business and Chestnut Street Business Districts.

The NCDP also includes capital improvement recommendations for the downtown area, notably traffic safety, parking, and streetscape improvements. The purpose of this fiscal impact analysis is to determine whether redevelopment of downtown properties will generate enough tax revenue to pay for the associated cost of municipal services and contribute funds for the capital improvements. We wish to acknowledge the invaluable assistance we received from several town department heads during our work on this report: Lee Newman, Planning Director; David Davison, Assistant Town Manager/Director of Finance; Chip Davis, Administrative Assessor; Richard P. Merson, Director of Public Works; Anthony Del Gaizo, P.E., Town Engineer; Thomas J. Leary, Chief of Police; and Paul Buckley, Fire Chief.

BACKGROUND

In 2006, the Needham Planning Board and Downtown Study Committee initiated work on a comprehensive plan for Needham Center. The fifty-four acre study area includes three of the town’s zoning districts – the Center Business District, the Chestnut Street Business District, and the Business District on Highland Avenue – and a combined total of 131 parcels. The planning process was guided by a series of community-defined goals, but the “umbrella” goal was to promote Downtown Needham’s vitality through new investment and a coordinated, coherent approach to the built environment and the public realm. The Needham Center Development Plan (NCDP) describes numerous tasks that need to be addressed, some by the town and others by private property owners, over a period of many years. However, the first step toward facilitating investments in private property requires “unlocking” the redevelopment potential of downtown parcels. This requires amendments to the Zoning Bylaw, which will be presented to Town Meeting in May. Other near-term steps include an analysis of the town’s options to address downtown parking needs, and this is currently underway.

The NCDP is not Needham’s first effort to bring attention to the downtown area. Needham commissioned downtown parking and circulation studies in the late 1970s and 1980s, and the town’s Master Plan, *Needham Planning Studies* (1983), included an area plan for Needham Center. In the late 1980s, the Needham Planning Board retained a team led by Wallace, Floyd, Associates, Inc. to prepare a more detailed downtown plan, focusing on zoning, traffic and

circulation. Thereafter, the Planning Board hired Goody Clancy to develop design guidelines for all of the business districts (1995), and this led the town to begin funding streetscape improvements through the five-year Capital Improvements Plan (CIP). Since 2000, Needham has completed a *Community Development Plan*, a downtown parking study, and a parking meter inventory, and also worked with MIT graduate students on a strategic plan for the center of town. Town boards and departments have taken steps to implement these plans, and Town Meeting has continued to approve capital projects to improve downtown parking, circulation, and the public realm. Throughout the town’s prior planning work, Needham has focused on making the downtown operationally safe, visually attractive, and economically vibrant for residents. A challenge for past plans, and even for the NCDP, involved reaching agreement about how much additional development should be promoted in the downtown area. Until the NCDP planning process, the town found it very difficult to achieve consensus. As a result, the zoning for Needham Center remains largely as it was twenty years ago.

The Downtown Study Committee debated the downtown’s capacity to absorb growth by considering physical constraints such as circulation and parking, special qualities of the built environment that future development should preserve and enhance, and impacts on adjacent neighborhoods. Excluding public buildings, Downtown Needham currently supports a total of 1,241,480 sq. ft. of floor area, most of it occupied by commercial uses. Many meetings were devoted to the matter of “how much,” and ultimately the Downtown Study Committee agreed to a plan with realistic incentives for 207,000 sq. ft. of additional floor space. If the properties that stand to benefit from the proposed overlay districts redevelop over the next ten to twenty years – the timeline estimated in the NCDP market analysis – the probable buildout would constitute a seventeen percent increase over existing conditions. Although the proposed zoning could foster as much as 690,500 sq. ft. of new floor space, it is very unlikely that the town will witness this much activity. Accordingly, we have used 207,000 sq. ft., or thirty percent of the legally attainable buildout, as the metric for estimating future tax revenue.

Table 1 reports the estimated buildout of Downtown Needham if the town implemented all of the zoning recommendations of the NCDP. We note that amendments to the Business District are not on the May 2009 Town Meeting warrant, but to be consistent with the NCDP report and other literature distributed about the planning process, we have included the Business District in our table. The potentially developable floor space in the Business District represents less than five percent of the study area’s growth potential under the zoning proposals in the NCDP.

Table 1
Needham Center: Existing Conditions and Potential Buildout under Proposed Zoning

District (Existing Zoning)	Existing Floor Area (Sq. Ft.)	Anticipated Buildout: Proposed Zoning	% Change at Anticipated Buildout
Business District	117,009	125,600	7.3%
Center Business District	568,324	632,524	11.3%
Chestnut Street Business District	556,147	690,498	24.2%
Total	1,241,480	1,448,622	16.7%

Source: Needham Center Development Plan

TAX REVENUE FROM REAL PROPERTY IMPROVEMENTS

Consistent with choices made by many communities in the early years of Proposition 2 ½, Needham instituted a split tax rate in Fiscal Year (FY) 1988. By applying different tax rates to residential property on one hand and commercial, industrial, and personal property (CIP) on the other hand, communities effectively shift a larger share of the tax levy to CIP taxpayers. Needham has retained a split tax rate policy since 1988, and currently uses a “CIP shift” factor of 1.750. Today, commercial, industrial, and personal property accounts for 12.7 percent of Needham’s total assessed valuation and 22.1 percent of the tax levy.¹

Downtown Needham currently generates about \$2 million in tax revenue, including ninety-six percent at the FY 2009 commercial tax rate of \$19.56 and four percent at the residential rate of \$9.96.² Using the same tax rates (rounded), the 207,000 sq. ft. of additional floor area made possible by the proposed overlay districts would result in a net increase in tax revenue of \$440,345 to \$660,518, depending on the uses of the floor area and assumptions about the average tax revenue yield for each class of use. Since all three overlay districts provide for upper-story residential uses and one district also provides for free-standing multi-family uses, the mix of uses proposed by developers and approved by the Planning Board will play an important role in determining the actual increase in revenue.

We asked Chip Davis, Needham’s Administrative Assessor, to review two “before-and-after” examples of recent projects in Needham Center and to assist with forecasting the future revenue from 207,000 additional sq. ft. of space. The “before-and-after” case studies include the Rinaldi property at 1110 Great Plain Avenue, recently redeveloped for ground-floor retail and service businesses and upper-story housing, and the Petrini building at 392 Chestnut Street, a new medical office building. Before redevelopment, the assessed value of the Rinaldi building was \$1,062,100 (FY 2006). At the time, it consisted of an auto repair business and office space. Today, the building is assessed at \$2,487,700. The Petrini building occupies a parcel formerly used for a gas station and a dwelling. In FY 2006, the combined value of the gas station and house was \$1,124,100. By contrast, the value of the new building is \$2,650,800. These examples illustrate that redevelopment can more than double the value of built assets. Of the many assumptions used to calculate the density regulations in the overlay districts, one was that in order to be effective, zoning incentives would need to facilitate for post-redevelopment values of up to three times the existing condition on a lot. The case studies suggest that this is true.

Table 2 provides a breakdown of the attainable real estate tax revenue following the addition of 207,000 sq. ft. of floor area in Needham Center. To provide a range of outcomes for the town’s review, we have reported the tax revenue for 207,000 sq. ft. of floor area in three redevelopment scenarios: seventy percent commercial uses and thirty percent residential uses, fifty percent commercial and fifty percent residential, and 100 percent commercial. Ironically, both the lowest and highest revenue projections assume that all of the space is used for commercial purposes. The difference is that one scenario is based on an average rent of \$20 per sq. ft. and the other, \$30 per sq. ft. These are generally representative of the range of rents in Needham Center today for office and retail uses.

Table 2
Tax Revenue: 207,000 Sq. Ft. Additional Floor Area, Downtown Needham (2009 Dollars)

Redevelopment Scenario	Commercial Uses		Residential Uses		Total Revenue
	Rents @ \$20/sq. ft.	Taxes @ \$20/\$1,000	Assessed @ \$310/sq. ft.	Taxes @ \$10/\$1000	
100% Commercial	\$22,017,000	\$440,000	\$0	\$0	\$440,000
70% Commercial, 30% Residential	\$15,412,000	\$308,000	\$192,251,000	\$193,000	\$501,000
50% Commercial, 50% Residential	\$11,009,000	\$220,000	\$32,085,000	\$321,000	\$541,000
Redevelopment Scenario	Rents @ \$30/sq. ft.	Taxes @ \$20/\$1,000	Assessed @ \$310/sq. ft.	Taxes @ \$10/\$1000	Total Revenue
100% Commercial	\$33,026,000	\$661,000	\$0	\$0	\$661,000
70% Commercial, 30% Residential	\$23,118,000	\$462,000	\$192,251,000	\$193,000	\$655,000
50% Commercial, 50% Residential	\$16,513,000	\$330,000	\$32,085,000	\$321,000	\$651,000

Sources: Chip Davis, Administrative Assessor, and Lee Newman, Planning Director, Town of Needham; and Community Opportunities Group, Inc.
 Numbers may not total due to rounding.

Notes:

*Commercial property value assumptions:

Gross income from rents = \$20/sq. ft. or \$30/sq. ft. depending on class of use

Less 5% vacancy

Less 35% operating expenses

Assessed value = net operating income (NOI) capitalized at 11%

Tax rate assumptions:

\$10/\$1,000 for residential uses; \$9.96 (FY 2009) rounded

\$20/\$1,000 for commercial uses; \$19.56 (FY 2009) rounded

COST OF COMMUNITY SERVICES

The redevelopment of properties in Needham Center will provide additional tax revenue, but commercial growth may also require more services from the town. Moreover, the NCDP promotes *mixed-use development*, which means that in the future, developers may find it more attractive to include multi-family housing in their projects. Analyzing the fiscal impact of the NCDP would be incomplete, and possibly misleading, if this report considered only whether Needham will realize enough new revenue to pay for traffic and streetscape improvements.

Commercial Uses

Nonresidential development places different demands on municipal services depending on the class of use. For example, retail uses usually demand more from public safety personnel than any other municipal department, but industrial uses tend to require higher expenditures for public works. Food service establishments also require periodic inspections by the health department, and uses ranging from nursing homes and day care centers to performing arts centers require semiannual or more frequent inspections by health, fire, and building authorities. In some communities, nonresidential development of all types places demands on services traditionally thought of as “residential,” including public libraries. When a community invests in water works and sewer system improvements, the benefits are often shared to some degree by residential and nonresidential ratepayers.

Recognizing that each class of use has both unique needs and needs common to all uses, fiscal impact analysts have developed models to identify, estimate, and assign service costs to various types of development. The most widely used model for estimating the cost to serve nonresidential land uses is known as *proportional valuation*. This two-part model embraces a long-standing fiscal impact principle: the cost of nonresidential municipal services can be inferred from the relationship between nonresidential real property values and the total value of real property in a community, *adjusted for type of community and size of tax base*. After establishing the approximate share of nonresidential expenditures under existing conditions, analysts can use a similar process to estimate the cost of services that will be used by new growth. Like the fiscal impact analysis in Needham’s New England Business Center (NEBC) study in 2001, we have used proportional valuation to estimate Needham’s present cost of nonresidential services and the likely future cost of services in the downtown area for 207,000 sq. ft. of additional floor area.

Under present conditions, commercial and industrial development in Needham accounts for about thirty-six percent of the town’s municipal expenditures (*excluding* public schools) and nine percent of all general fund expenditures (*including* schools). Since commercial, industrial and personal properties generate 22.1 percent of the town’s entire tax levy, residents clearly benefit from Needham’s dual tax rate policy. Table 3 provides a summary of the first part of the proportional valuation study prepared for this report. Since a proportional valuation analysis requires actual year-end financial data, not current-year appropriations and revenue projections, the information in Table 3 is based on Needham’s FY 2008 year-end financial report to the Massachusetts Department of Revenue (DOR) and associated data from DOR’s online

Municipal Data Bank. Absent a major change in budget policy, the overall relationship between nonresidential uses and service costs would not be expected to change much from year to year.

Table 3
Proportional Valuation: Estimate of Current Nonresidential Municipal Service Costs
(FY 2008)

Code	Model Component	Amount	Notes & Assumptions
A	Total General Fund Expenditures	\$92,352,000	<i>Excludes capital outlays</i>
1	General Government	\$4,657,000	<i>Source of expenditures data: Town of Needham FY 2008 Schedule A Report.</i>
2	Public Safety	\$11,432,000	
3	Education	\$45,374,000	
4	Public Works	\$4,404,000	
5	Health & Human Services	\$853,000	
6	Culture & Recreation	\$1,757,000	
7	Debt Service	\$7,273,000	
8	Fixed Costs	\$15,059,000	
9	Other	\$1,542,000	
B	Estimate of Municipal Expenditures		
1	School Operating Budget	\$45,374,000	B1 = A3
2	55% Debt Service	\$4,000,000	<i>Estimates based on Schedule A, Part X; and FY09 Budget Message.</i>
3	65% Fixed Costs	\$9,788,000	
C	Municipal Expenditures	\$33,190,000	C = A-B1-B2-B3
	Proportional Valuation Analysis		
D	Non-Residential Real Property Value	\$744,247,000	<i>Tax Recap Sheet</i>
E	Total Real Property Assessed Value	\$7,083,039,000	<i>Tax Recap Sheet</i>
F	Ratio	0.11	F = D/E
G	Non-Residential Parcels	416	<i>Tax Recap Sheet</i>
H	Total Parcels	9,967	<i>Tax Recap Sheet</i>
I	Average Value: Non-Residential Parcel	\$1,789,000	I = D/G
J	Average Value: All Parcels	\$711,000	J = E/H
K	Ratio	2.52	K = I/J
L	Refinement Coefficient	2.50	<i>Proportional Valuation</i>
M	Nonresidential Expenditures	\$8,718,000	M = C * F * L
N	Residential Expenditures	\$24,471,000	N = C-M

Additional Notes:

- (1) Values shown for (D) and (E) exclude the assessed value of personal property
- (2) Source of proportional valuation "refinement coefficient" in L: Robert Burchell and David Listokin, *Fiscal Impact Handbook*.

To estimate the town’s additional cost of nonresidential services for 207,000 sq. ft. of commercial space, we applied the second part of the proportional valuation model, as shown in Table 4. Here, the model assumes that the relationship between the value of new growth and the value of existing nonresidential property is an indicator of new service costs, *adjusted for scale*. As in Table 3, the adjustment for scale is made with a refinement coefficient. The resulting municipal service costs of fifty-two to sixty cents per sq. ft. of commercial space is consistent with what we have found in other maturely developed, high-end suburbs. Actual costs typically range from about forty cents to seventy-five cents per sq. ft. depending on the type of commercial use.

Table 4
Proportional Valuation: Estimate of New Nonresidential Service Costs (FY 2008)

Code	Model Component	Additional 207,000 sq. ft.		
		100% Commercial	70% Commercial	50% Commercial
O	Assessed Value (Estimated)	\$33,026,000	\$23,118,000	\$16,513,000
P	Proportion to Total Nonresidential Value	0.04	0.03	0.02
Q	Proportion to Average Nonresidential Value	\$18.46	\$12.92	\$9.23
R	Refinement Coefficient	0.28	0.31	0.33
S	Estimated Cost of Services	\$108,000	\$84,000	\$62,000
T	Average Cost of Services/Sq. Ft.	0.52	0.58	0.60

Sources and Notes:

- (1) Estimated value of each redevelopment scenario based on rents @ \$30/sq. ft. from Table 2; values rounded.
- (2) Total Nonresidential Value = (D) and Average Nonresidential Value = (I) from Table 3.

Residential Uses

The proposed overlay districts provided for mixed-use developments that include housing. The most common methodology for estimating new residential service costs – the per capita model – offers the advantage of simplicity and the disadvantage of exaggerating near-term growth in expenditures. Since the model tends to generate high cost projections, we decided to use it in this analysis so that our estimate of the NCDP’s total cost of community services would result in a conservative net (surplus) revenue estimate.

The proportional valuation analysis indicates that Needham currently spends about ninety percent of its general fund operating budget on residential services, including schools. The per capita cost of municipal services is approximately \$1,000,³ and the educational cost per student, net of Chapter 70 aid, is \$10,500 (“Actual Net School Spending”).⁴ If thirty percent of the 207,000 sq. ft. of attainable floor area includes housing, the 62,100 sq. ft. of residential floor area would most likely support fifty-two units at an average of 1,200 sq. ft. per unit. Similarly, if fifty percent of the floor area includes housing, the 103,500 sq. ft. of residential floor area would most likely support eighty-six units. While the revenue estimate for residential space in Table 2 is based on an average value per sq. ft., the cost of residential services must be correlated with

the number of housing units. This is because the per capita cost of services model hinges on assumptions about the number, size, and composition of households.

To estimate downtown’s new household population, we relied upon two sources of data: the American Community Survey (ACS) 2005-2007, and our own multi-family housing database. Since 2003, we have monitored the number of school-age children in thirty-two multi-family developments in Eastern Massachusetts. More recently, we began to study household composition in mixed-use developments because the character of the housing is so different from that of traditional multi-family developments. The household size and school-age children assumptions used in this report are shown in Table 5. For each component – household population, and number of school-age children – we used the higher average number from the sources we considered. If multi-family units are developed in the overlay districts, they will probably include a mix of one-, two-, and three-bedroom units, but primarily one- and two-bedroom units. These multipliers assume that on average, the mixed-use dwelling units would be two-bedroom units.

Table 5
Estimate of Household Population and School-Age Children
Needham Center Mixed-Use Developments

	American Community Survey	COG Database	Used in This Report	For 52 Units	For 86 Units
Household Size	2.34	2.26	2.34	122	201
School-Age Children	0.18	0.22	0.22	11	19

Source: U.S. Bureau of the Census, American Community Survey 2005-2007 Three-Year Estimates, Needham, Massachusetts and PUMS Data; and Community Opportunities Group, Inc.

The cost of residential services to support the new population and school students is reported in Table 6.

Table 6
Estimate of New Residential Service Costs (FY 2008)

	Household Population & School-Age Children	Cost Basis Per Person/Per Student	Total Cost of Services
52 Housing Units			
Municipal Services	122	1,000	\$122,000
School Services	11	10,500	\$116,000
Total			\$238,000
86 Housing Units			
Municipal Services	201	1,000	\$201,000
School Services	19	10,500	\$200,000
Total			\$401,000

FISCAL IMPACT

Municipal and School Services

Table 7 compiles the real estate tax revenue projections in Table 2 and the service cost projections in Tables 4 and 6 (adjusted to FY 2009 values at 5.9 percent),⁵ and reports the estimated *net revenue* for each development scenario. However, Table 7 provides a more complete picture of revenues generated by future redevelopment in Needham Center because it includes personal property taxes for the additional commercial space and motor vehicle excise taxes for the dwelling units. Personal property tax revenue represents 1.5% of real estate tax revenue,⁶ and motor vehicle excise taxes have been calculated on a per capita basis at \$135 per person. For comparison, Needham's total motor vehicle excise tax revenue in FY 2008, \$4,392,444, represents an average of \$155 per capita.⁷ The net revenue and cost-revenue ratios in Table 7 illustrate that the types of development encouraged in the overlay districts would have a favorable fiscal impact on the town.

Table 7
Estimate of Total New Revenues and Service Costs

Fiscal Impact Component	Additional 207,000 sq. ft.		
	100% Commercial	70% Commercial	50% Commercial
I. Total Tax Revenue			
Commercial Uses, Rents @ \$30/sq. ft.	\$661,000	\$462,000	\$330,000
Personal Property Taxes	\$10,000	\$7,000	\$5,000
Residential Uses	\$0	\$193,000	\$321,000
Motor Vehicle Excises	\$0	\$16,000	\$27,000
Total Revenues	\$671,000	\$678,000	\$683,000
II. Total Service Costs			
Commercial Uses	\$114,000	\$89,000	\$66,000
Residential Uses	\$0	\$252,000	\$425,000
Total Service Costs	\$114,000	\$341,000	\$491,000
III. Fiscal Impact			
Net Revenue	\$557,000	\$337,000	\$192,000
Cost-Revenue Ratio	0.17	0.50	0.72
IV. Alternative Outcome			
Commercial Uses, Rents @ \$20/sq. ft.	\$440,000	\$308,000	\$220,000
Personal Property Taxes	\$7,000	\$5,000	\$3,000
Adjusted Total Revenue	\$447,000	\$522,000	\$571,000
V. Adjusted Fiscal Impact			
Adjusted Net Revenue	\$333,000	\$181,000	\$80,000
Adjusted Cost-Revenue Ratio	0.26	0.65	0.86

PUBLIC IMPROVEMENTS

The NCDP recommends numerous capital improvements in order to encourage private investment and make the downtown area even more appealing to local and regional patrons of the district's stores and restaurants. For public safety reasons, some of the improvements are critical. The NCDP calls attention to them, but it would not be accurate to characterize the NCDP as the genesis of these recommendations. Other improvements are essential to achieving the urban design and economic development goals of the NCDP, but like many capital projects carried out by the town, they will depend on local policy decisions, competing priorities, the availability of town funds, and access to infrastructure and streetscape grants offered by the state.

Traffic and Circulation Improvements

The critical improvements require upgrading traffic signals with a traffic-responsive "closed loop system" that can override scheduled signal cycles according to actual traffic demand on the street. In the next two years, these improvements need to be made at four intersections: May Street/Highland Avenue, Dedham Avenue/Highland Avenue, Chapel Street/Great Plain Avenue, and School Street/Chestnut Street. As we understand it, Needham installed new traffic signals in the downtown area in the early 1990s. Unfortunately, the system has not worked properly and the Department of Public Works (DPW) was already planning to replace it. The Level of Service (LOS) at three of the affected intersections is currently below "D," which means they routinely experience significant or excessive delays, traffic jams, very long queues, and cycle failures. Upgrading the traffic signals as already intended by the Needham DPW and reinforced by recommendations of the NCDP will improve the four signalized intersections that currently have LOS designations of "D" or below.

The estimated cost of upgrading the traffic signals in all four locations, including design and construction, is \$2.0 million. This estimate is based on services provided by BETA Group, Inc., for the NCDP. We understand that Public Works Director Richard Merson agrees with BETA Group's estimate.

Signage

The NCDP identifies needs for improved signage at Linden Street/Great Plain Avenue, Junction Street/Chestnut Street, and Garden Street/Great Plain Avenue. The report also recommends developing a traffic management plan to reduce school-generated traffic.

The estimated cost of installing improved signage in these three locations is \$7,500. This estimate also is based on services provided by BETA Group, Inc.

Streetscape Improvements

Like Needham's previous planning work in the downtown area, the NCDP recommends a streetscape improvements program. The proposed improvements involve four streets – Highland Avenue, Great Plain Avenue, Chestnut Street, and Chapel Street – with a combined total of 7,740 linear feet. In some cases, the NCDP promotes improvements that are very similar to improvements identified in previous plans but which, for various reasons, the town has not

been able to implement or has implemented only in part. In other cases, notably the treatment of sidewalks, the NCDP's recommendations are different.

Today, land use and transportation planners recognize that many of the "improvements" promoted in the 1960s and early 1970s to accommodate cars have compromised pedestrian safety and made central business districts less inviting to foot traffic. However, foot traffic is precisely what downtown retailers need in order for their businesses to thrive. More than forty years ago, it became fashionable to reduce the width of downtown sidewalks and widen roadway lanes to keep pace with growth in traffic volumes, but ideas about the environmental and quality-of-life impacts of auto dependency have changed. Further, the Americans with Disabilities Act of 1990, as amended (ADA), has sensitized both professionals and the public to the ways in which earlier urban design plans unwittingly increased mobility barriers for people with disabilities.

The streetscape program identified in the NCDP ranges from installing street lights and widening sidewalks to planting street trees, providing disposal containers for solid waste and recyclables, providing benches, replacing curbing and signs, resurfacing streets, and improving crosswalks with decorative accent paving in order to improve safety for pedestrians. Some of these improvements will most likely be made on a project-by-project basis by developers, who have a direct interest in the appearance and functionality of Needham Center. Toward this end, the proposed overlay district regulations create an opportunity for the Planning Board to negotiate with developers for public amenities as part of the site plan review process. In the past, Needham developers have helped the town with some public improvements when there was a mutual benefit to their projects and the surrounding area, so there is no reason to think this will not happen again in the future. Still, it is impossible to determine how much of the proposed streetscape program will be carried out with private resources, in part because development of 207,000 sq. ft. of additional floor area will not happen at once. In fact, it could take more than a decade to achieve the economic benefits of the overlay districts.

Since the NCDP is a concept plan for the downtown area, it does not include detailed, "bid-ready" plans and specifications. As a result, the cost estimate for future streetscape improvements needs to account both for engineering and landscape architectural services as well as construction.

<p>The estimated cost of the complete streetscape program, including design and construction, is \$7.4 million. This estimate was prepared by Needham's Town Engineer, Anthony L. Del Gaizo, P.E. Table 8 provides the specifications and assumptions used to generate the cost estimate.</p>

Table 8
Estimated Cost of Needham Center Streetscape Improvements

Type of Improvement	Cost/Linear Foot (LF)	Total Cost	Notes & Assumptions
Pedestrian Street Lights	\$137	\$1,060,380	2 per 44 linear feet
Conduit	\$60	\$464,400	
Concrete Sidewalks	\$133	\$1,029,420	Average width 10 feet
Granite Curb	\$120	\$928,800	
Street Pavement Overlay	\$84	\$650,160	\$120/ton
Pavement Markings	\$42	\$325,080	
Casting Adjustments	\$25	\$193,500	\$200/each
Decorative Accent Pavers	\$150	\$1,161,000	4 locations
Barrels, Benches	\$20	\$154,800	\$4,000 each
Signs	\$2	\$15,480	\$120/each
Miscellaneous Special Features	\$40	\$309,600	\$4,000 each
Street Trees	\$10	\$77,400	2 per 100 linear feet
Miscellaneous	\$10	\$77,400	
Subtotal Construction Cost		\$6,447,420	
Design Services @ 15%		\$968,000	
Total Estimated Cost (Rounded)		\$7,420,000	

Source: Anthony L. Del Gaizo, P.E., Town of Needham, 24 April 2009.

Capacity to Support Debt Service for Downtown Improvements

The net revenues reported in Table 7 can be used to estimate the capacity of redevelopment to help finance the debt service for capital improvements in the downtown area. Table 9 presents the total amount of debt that could be carried by the net revenue from each scenario, using a working assumption of 20-year general obligation bonds at 4.75 percent interest.

Table 9
Long-Term Debt Supportable by Net Revenues

Net Revenue Scenario	100% Commercial	70% Commercial	50% Commercial
Commercial Uses @ \$30/sq. ft.	\$557,000	\$337,000	\$192,000
Maximum Long-Term Debt	\$7,630,000	\$4,620,000	\$2,630,000
Commercial Uses @ \$20/sq. ft.	\$333,000	\$181,000	\$80,000
Maximum Long-Term Debt	\$4,560,000	\$2,480,000	\$1,100,000

In light of the commitments developers have made in the past to making the downtown a better place for everyone, it is very unlikely that Needham will have to carry the entire cost of the streetscape program at public expense. However, even under the lowest net revenue projection for fifty percent commercial space and fifty percent residential space, Table 9 shows that there is clearly enough to support a phased capital improvements plan for Needham Center.

END NOTES

¹ Commonwealth of Massachusetts, Department of Revenue, Division of Local Services, "Levies by Class," 1986-2009, and "Tax Burden Shift from Residential and Open Space Municipal Data Bank, <http://www.dls.state.ma.us/mdm.htm>.

² Town of Needham FY 2009 Assessor's Parcel Database [Electronic Version].

³ The calculation of municipal costs per capita excludes the portion of fixed costs attributed to public schools in Table 3. This is because the Department of Education's formula for computing Actual Net School Spending (Actual NSS) includes factors for employee benefits, school property insurance, and so forth. However, Actual NSS does not include the town's debt service for school construction bonds, so the entire residential share of debt service is included in the per capita cost multiplier for municipal services.

⁴ Massachusetts Department of Education, Chapter 70 Profile: Needham Public Schools, 1993-2009, <http://www.doe.mass.edu/>.

⁵ Expenditures were adjusted by 5.9 percent because the overall operating budget increased by 5.9 percent between FY 2008 and FY 2009. Source: Town of Needham, "Budget in Brief: Practices, Priorities, Process," *Fiscal Year 2009 Proposed Budget*, 1-3.

⁶ Assumption of 1.5 percent multiplier for personal property taxes confirmed with David Davison, Assistant Town Manager/Finance Director, on 8 April 2009.

⁷ Town of Needham, FY 2009 Tax Rate Recapitulation Sheet.