

Cost of Land Uses Fiscal Impact Analysis of the Proposed Somerville Zoning Code Overhaul

Prepared for:
City of Somerville, Massachusetts

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City of Somerville, Massachusetts

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EXECUTIVE SUMMARY

TischlerBise is under contract with the City of Somerville to conduct a fiscal impact analysis of the proposed zoning code overhaul. As part of this assignment, we've been asked to allocate the results from our 14-year fiscal analysis to individual "land use prototypes." This type of analysis is referred to as a *Cost of Land Use Fiscal Impact Analysis*. The Cost of Land Use Fiscal Impact Analysis evaluates the fiscal impact of specific types of land uses. In this type of analysis, the characteristics of various residential (i.e., single family, multifamily), nonresidential (i.e., retail, industrial, office), and mixed use "prototypes" are defined and a "snapshot" approach is used to determine the annual costs and revenues from each land use prototype to the jurisdiction. The factors used to define these prototypes typically include household size, market values, number of employees, and vehicle trips.

In general, a fiscal impact evaluation analyzes revenue generation and operating and capital costs to a jurisdiction associated with the provision of public services and facilities to serve development—residential, commercial, industrial, or other. A fiscal impact analysis is different from an economic impact analysis in that a fiscal impact analysis projects the cash flow to the *public* sector while an economic impact analysis projects the cash flow to the *private* sector, measured in income, jobs, output, indirect impacts, etc.

A Cost of Land Use Fiscal Impact Analysis seeks to answer the question, "***What type of development pays for itself?***" The results can assist the City with future land use and financial planning. Land use planning can be assisted by understanding the types of land uses that are more fiscally advantageous to the City's bottom line. While fiscal zoning is illegal, the analysis can help inform an appropriate mix of land uses knowing that some land uses are "contributors" while others may be "recipients." Second, the analysis can assist in long-term financial planning as well as identify the need for and type of additional revenue sources.

LAND USE PROTOTYPES

Residential prototype land uses included in the study are shown below. The prototypes are meant to represent a general sample of the types of residential development that exist in the City today. The residential prototypes in the study include:

1. Neighborhood Residential Units
2. Mixed Use Residential Units

Figure 1 outlines the residential prototypes and their associated characteristics such as average assessed values, average size of each unit, household size (persons per unit), pupil generation rates and vehicle trip factors.

Figure 1. Residential Land Use Prototypes

Residential Land Use Prototypes
Somerville Prototype Land Use Fiscal Analysis

Prototype	Persons per Housing Unit (1)	K-8 Pupil Generation (4)	9-12 Pupil Generation (4)	Assessed Value (2)	Vehicle Trips (3)	Trip Adj. Factor (3)
Neighborhood Residential Units	2.38	0.162	0.084	\$438,633	5.81	50%
Mixed Use Units	1.71	0.062	0.021	\$163,700	2.98	50%

- (1) U.S. Census Bureau, 2013 1-Year American Community Survey
 (2) Based on assessment data provided by the City. Neighborhood Residential Units are assumed to receive the \$235,339 residential exemption, which is applied to the assessed value shown in this table.
 (3) Trip Generation, Institute of Transportation Engineers, 2012.
 (4) TischlerBise estimate for Somerville using Census Bureau 1-Year 5% Public Use Microdata for Massachusetts PUMA 00507 (calibrated to Somerville enrollment)

The *nonresidential prototype land uses* described below represent a sample of existing types of nonresidential development in the City. Figure 2 outlines the relevant average characteristics of the nonresidential prototypes used in the analysis. Sources are indicated in the table.

Figure 2. Nonresidential Land Use Prototypes

Prototype	Employees 1,000 SF/Room	Assessed Value SF/Room (2)	Vehicle Trips (3)	Trip Adj. Factor (3)
Retail	2.00	\$340	48.22	36%
Office	3.63	\$340	9.32	50%
Hotel	0.33	\$290,000	6.33	50%

- (1) Square feet per employee calculated from trip rates except for Shopping Center data, which were derived from the Urban Land Institute's Development Handbook and Dollars and Cents of Shopping Centers.
 (2) Based on assessment data provided by the City.
 (3) Trip Generation, Institute of Transportation Engineers, 2012.

REVENUE

Figure 3 below shows annual revenue generated by the residential and nonresidential land use prototypes. Property tax revenue is the single largest revenue source for the City and therefore valuations indicate which land uses and groupings will generate the highest amount of revenue. The Hotel prototype generates a substantial amount of hotel excise tax revenue to City. For the residential prototypes, the Neighborhood Residential Unit generates the greatest revenue (\$4,696 per unit), followed by the Mixed Use Residential prototype (\$3,166 per unit).

The Hotel prototype generates the best result for the nonresidential prototypes, with revenue of \$9,107 per room. The Retail prototype generates slightly more revenue per 1,000 square feet of floor area (\$7,756 per 1,000 square feet) than the Office prototype (\$7,320 per 1,000 square feet).

Figure 3. Summary of Annual Revenue Per Prototype

**Revenue per Prototype
Somerville Prototype Land Use Fiscal Analysis**

Revenue	RESIDENTIAL		NONRESIDENTIAL		
	Neigh. Residential	Mixed Use Residential	Retail Per KSF	Office Per KSF	Hotel Per Room
Property Taxes	\$2,372	\$1,910	\$6,861	\$6,861	\$5,852
Excise Taxes	\$200	\$143	\$168	\$168	\$3,015
Penalties & Interest on Taxes	\$0	\$0	\$0	\$0	\$0
PILOT Payments	\$0	\$0	\$0	\$0	\$0
Charges - Trash	\$2	\$1	\$1	\$1	\$1
Fees	\$12	\$9	\$10	\$10	\$10
Rentals	\$0	\$0	\$0	\$0	\$0
Other Department Revenue	\$3	\$2	\$2	\$2	\$2
Licenses and Permits	\$211	\$151	\$111	\$111	\$111
Fines and Forfeits	\$106	\$56	\$602	\$166	\$114
Investment Income	\$0	\$0	\$0	\$0	\$0
Misc Recurring	\$0	\$0	\$0	\$0	\$0
State Revenue	\$1,790	\$893	\$0	\$0	\$0
Other Financing Source	\$0	\$0	\$0	\$0	\$0
TOTAL	\$4,696	\$3,166	\$7,756	\$7,320	\$9,107

EXPENDITURES

Figure 4 below shows annual expenditures generated by the residential and nonresidential land use prototypes. Given the average cost approach employed in this type of analysis, persons per housing unit and student generation rates drive many of the residential costs. Therefore, the Neighborhood Residential Unit, with its higher persons per household and student generation rate factors, generate the greatest annual expenditures (\$5,536 per unit). The Mixed Use Residential prototype generates annual expenditures of \$2,830 per unit.

The Retail prototype generates the greatest annual expenditures at \$6,404 per 1,000 square feet. This is due to the greater public safety costs associated with retail development. The Office prototype generates the second greatest annual expenditures at \$4,178 per 1,000 square feet. The Hotel prototype generates significantly lower annual expenditures, at \$1,143 per room.

Figure 4. Summary of Annual Expenditures per Prototype

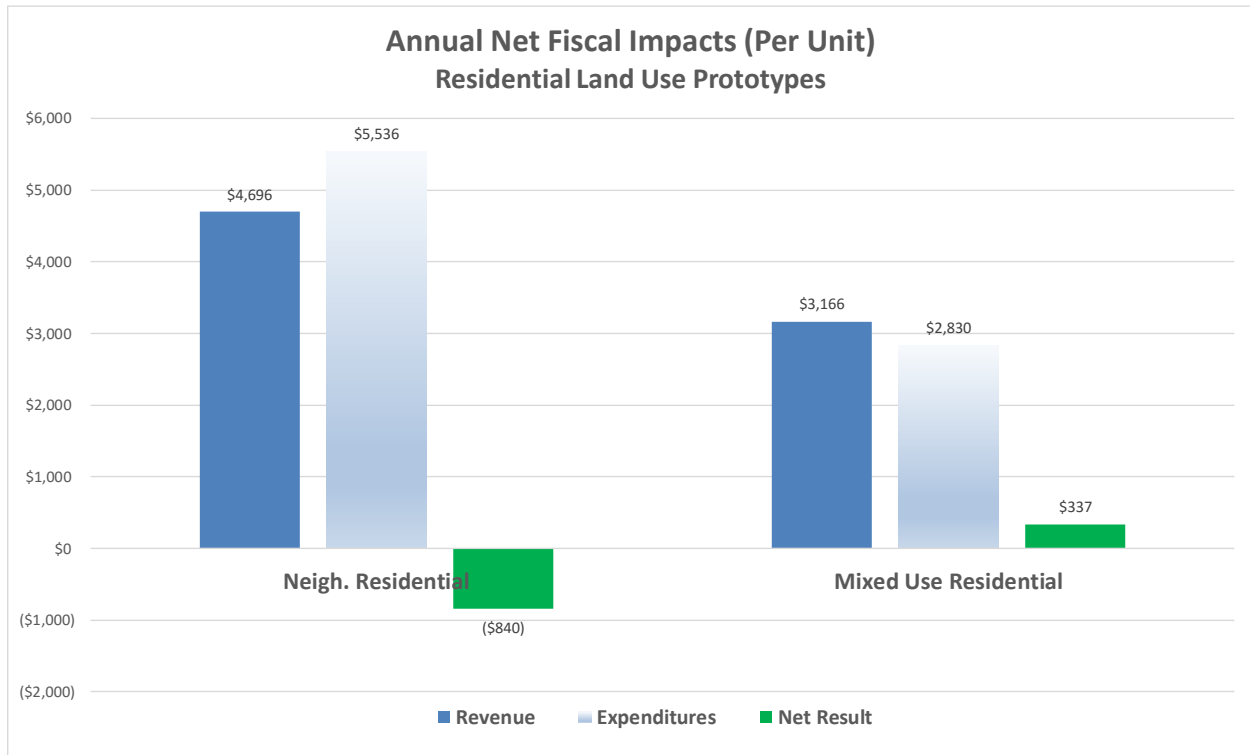
Expenditures per Prototype
Somerville Prototype Land Use Fiscal Analysis

Expenditures	RESIDENTIAL		NONRESIDENTIAL		
	Neigh. Residential	Mixed Use Residential	Retail Per KSF	Office Per KSF	Hotel Per Room
General Government	\$259	\$231	\$315	\$571	\$52
Public Safety	\$703	\$494	\$3,791	\$1,018	\$692
Culture & Recreation	\$97	\$69	\$0	\$0	\$0
Public Works	\$683	\$474	\$750	\$644	\$132
Other Items	\$1,244	\$704	\$1,548	\$1,945	\$267
Community Preservation Fund	\$0	\$0	\$0	\$0	\$0
Somerville Schools	\$2,551	\$857	\$0	\$0	\$0
TOTAL	\$5,536	\$2,830	\$6,404	\$4,178	\$1,143

FISCAL RESULTS

The Cost of Land Use fiscal impact results are discussed in terms of annual net results for each land use prototype. Figure 4 shows net fiscal results by type of land use for the residential prototypes considered in the study. Results are shown per residential unit. Data points above the \$0 line represent net surpluses; data points below the \$0 line represent net deficits.

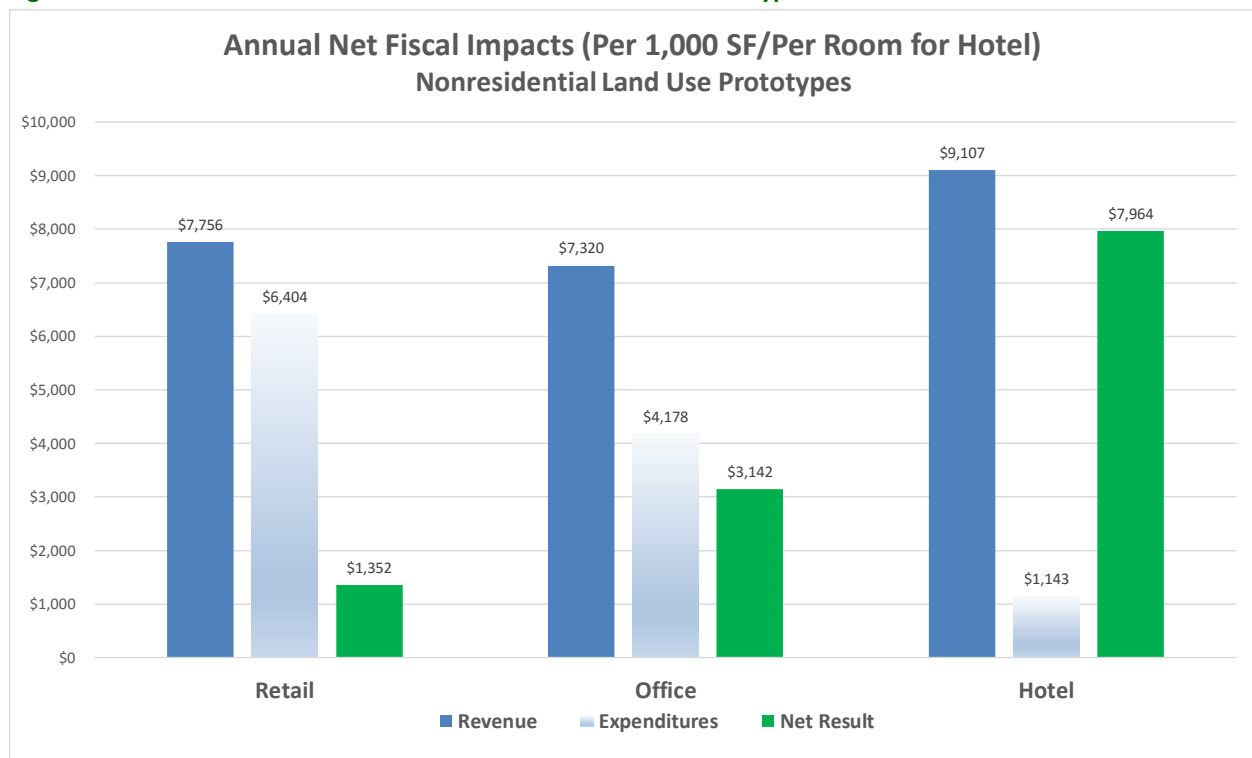
Figure 5. Annual Net Fiscal Results – Residential Land Use Prototypes



- Only the Mixed Use Residential Unit generates more revenues than expenditures—a net surplus. The results are due to the demographic factors associated with these types of unit, primarily low persons per housing unit factors and low pupil generation rates. This is consistent with our findings in in other communities across the country. This lower cost structure more than compensates for the lower assessed values with these units.
- The Neighborhood Residential Unit generates a net deficit of \$840 per unit. As discussed in the previous bullet point, this prototype receives the City’s residential exemption, as it is assumed to be primarily owner-occupied. The present residential exemption is \$235,339, which is deducted from the \$438,633 assessed value assumption, for a net assessed value of \$203,294.

Figure 6 shows net fiscal results by type of land use for the nonresidential prototypes considered in the study. Results are shown per 1,000 square feet of floor area for the Retail and Office land uses and per room for the Hotel prototype. Data points above the \$0 line represent net surpluses; data points below the \$0 line represent net deficits.

Figure 6. Annual Net Fiscal Results – Nonresidential Land Use Prototypes



- All three prototypes generate net surpluses. The Hotel prototype generates the largest surpluses due to it high revenue generation (property tax and hotel excuse tax) and low costs.
- The Office prototype generates the second best with a net surplus of \$3,142 per 1,000 square feet. Although this prototype generates the most employment per 1,000, public safety costs are much less than for the Retail prototype.

- The Retail prototype generates a net surplus of \$1,352 per 1,000 square feet. result with a development at a high enough property value tends to generate net surpluses.