

## Memorandum

To: Brookline Select Board  
Melvin Kleckner -Town Administrator  
Alison Steinfeld - Director of Planning & Community Development

Cc: Planning Board  
Housing Advisory Board  
Advisory Committee Chair and Co-Chair  
Former Brookline Fiscal Advisory Committee  
School Committee Chair and Vice Chair  
Chair of School Finance Subcommittee  
Rachid Belhocine - Acting Chief Assessor  
Feng Yang – Acting Chief Information Officer  
Joseph Viola – Assistant Director for Community Planning

Fr: Economic Development Advisory Board (EDAB)  
Kara Brewton- Economic Development Director

**Re: Brookline Fiscal Impact Model**

Date: December 7, 2020

---

### **Executive Summary**

This memorandum provides an update on, and recommendations for the enhancement and use of, a fiscal impact model developed by the Harvard College Consulting Group (HCCG) that was presented to EDAB and other Town board and committee representatives at EDAB's June 1, 2020 meeting.

The HCCG fiscal impact model (FIM) was developed as follow up to one recommendation made by the Brookline Fiscal Advisory Committee (BFAC), namely, that in order to encourage economic development that will increase the Town's revenue base and economic vibrancy, the Town evaluate potential amendments to its Zoning By-Law to incentivize new development in designated areas. The FIM allows the user to test the fiscal impact of increased floor area ratio (FAR) for a mix of commercial and residential development within a designated area within Brookline. The model compares the net fiscal impact of hypothetical redevelopment scenarios against the fiscal contributions of existing buildings, using the Town Assessor's database.

Over the past few months an EDAB Subcommittee<sup>1</sup> has evaluated the HCCG FIM to determine ways to enhance the model's capacity to forecast the fiscal impact of redevelopment scenarios. The Subcommittee conducted due diligence to better understand current methodology for fiscal impact analysis, including reviewing several existing studies and holding discussions with consultants and officials from other

---

<sup>1</sup>The EDAB Fiscal Impact Model Subcommittee consisted of EDAB Co-Chair Paul Saner and EDAB members Carol Levin, Ken Lewis, and Cliff Brown.

municipalities. Ultimately the Subcommittee focused on expanding and refining the FIM data inputs to encompass a broader range of property types and provide a more comprehensive basis for projecting the municipal costs associated with new development. Additional feedback was provided at two public meetings hosted by the subcommittee. The result of this work by the Subcommittee is summarized on the attached draft Data Input Spreadsheet (Exhibit D to this memo), which is intended to customize data inputs for key variables used in the HCCG FIM. The body of this memo (see Detailed Discussion below) outlines considerations addressed by the Subcommittee in development of the draft Data Input Spreadsheet; Preliminary Conclusions based on placeholder assumptions used in the Spreadsheet; and recommended Next Steps for the refinement and utilization of the FIM.

**EDAB recommends that the fiscal impact model serve as a long-range land use planning tool to be used as part of analyses of zoning options for Brookline and planning for growth over the next decade.** The model should be further enhanced and refined based on the Subcommittee's studies described in this memo. An FIM that is appropriately customized for Brookline would provide a tool to estimate, in the form of ballpark projections, incremental municipal revenues and expenses for various up-zoning scenarios (including alternative land uses and density) for corridors or areas of Brookline under broad assumptions. Use of such a tool should be part of a broader planning analysis and complement other development evaluation criteria in the formulation of land use and zoning regulations for the Town. EDAB recognizes that fiscal impact is but one of several criteria to evaluate new development and recommends that the FIM be used in conjunction with other important evaluation factors such as neighborhood compatibility (scale and use), public safety, traffic and circulation, walkability, open space, architectural quality, housing affordability, climate sustainability, and commercial area vitality.

As noted by the Subcommittee and further described below, the FIM has some key limitations. The model does not attempt to quantify the broad range of local economic impacts associated with new development such as increased customers for local businesses or miscellaneous tax revenue such as meals tax and parking fees. The FIM uses broad assumptions for a designated corridor or area and as such should not substitute for detailed fiscal analysis of a specific development proposal for a specific site. Finally, the FIM does not attempt to project the capital costs of new facilities for the Public Schools of Brookline which incorporate several factors in addition to new development such as demographic trends (e.g., family size) and PSB policies (e.g., classroom size, K-8 school boundaries).

### **Detailed Discussion**

On behalf of EDAB we want to thank Arthur Segel and his students comprising the HCCG for creating the initial redevelopment FIM. We are hopeful the model will become a valuable tool to assist Town boards in quantifying the estimated fiscal impact of alternative zoning scenarios for key commercial and mixed-use corridors in Brookline.

The fiscal impact model represents a logical next step to the recent BFAC report that recommended evaluation of zoning changes to incentivize new development and encourage increased density in designated areas so as to generate additional property

tax revenues and otherwise support the Town's revenue growth and economic vibrancy. This tool could especially be useful with regards to promoting a full public understanding of the implications of proposed Town Meeting rezoning approvals. Consideration of the FIM as a planning resource appears timely as various Town boards and committees are evaluating the potential benefits of increased density to achieve community goals, including increasing affordable housing and promoting sustainable design. It is recommended the FIM (with further enhancements and refinements as discussed below) be used as part of the planning analyses to be undertaken in updating the Town's Housing Production Plan scheduled for 2021 and by land use study committees charged with assessing options for the Route 9 corridor and other mixed-use corridors.

For reference, the HCCG Data Inputs and Assumptions Summary is attached as Exhibit A, and an executive summary of the HCCG fiscal impact model (FIM) is attached as Exhibit B. The HCCG draft FIM was designed to provide estimates for increases in property taxes and municipal expenses for commercial and residential development based on increased permitted density for a selected area. The model allows parcels within a specified area to be screened for their feasibility for redevelopment by establishing minimum square foot and FAR thresholds that are sufficient to support new construction.

During the past few months EDAB members appointed to a Fiscal Impact Model Subcommittee have taken steps to more fully understand the FIM and to identify additional variables and data that should be added to enhance the model's accuracy and compatibility for realistic development scenarios within Brookline. The Subcommittee identified some specific factors that are recommended be incorporated in the model, and additional refinements to be considered that will require further investigation and analysis. Particular factors to include in the HCCG FIM model have been incorporated in the Data Input Spreadsheet that was developed to supplement the HCCG FIM (see below and attached Exhibit D).

### **Limitations and Qualifications of the FIM**

The following limitations and qualifications of the FIM should be noted:

- **Site Specific Analysis:** The FIM does not provide and should not substitute for detailed fiscal impact analysis of a specific development proposal on a specific site. Known components of a development plan should be incorporated into site specific analysis, including factors such as proposed use, scale, parking ratios, and where applicable, the unit mix of a multi-family building.
- **PSB Capital Costs:** The FIM incorporates projections of annual public education operating costs associated with new development but does not include estimates of the incremental capital costs for the Public Schools of Brookline (PSB). It should be noted that "fully loaded" annual costs include debt service for bonding of school related projects. Once present bonds are paid off there is theoretical capacity for additional capital borrowings. Facility plans for the PSB incorporate several factors in addition to new development, including demographic trends (i.e., birth rates, household size), immigration patterns, and PSB policies (i.e., classroom size, staffing plans, district boundaries for K-8 schools).

- Economic Impact Analysis: The FIM does not attempt to quantify the broader economic impact of new development including the potential benefits of additional residents and workers on local businesses and the generation of miscellaneous Town revenues (i.e., parking meter fees, meals tax).
- Tax Exempt Property: The FIM is based on projecting property taxes by applying the Residential or Commercial tax rate to the full assessed valuation of new building gross square feet in a designated area. It does not incorporate new development or an acquisition by tax exempt institutions that may enter into Payments in Lieu of Taxes (PILOT) agreements. Note that if a property is deemed to be tax exempt due to nonprofit ownership and an exempt use, the tax that would otherwise be paid is shifted to the other taxpayers within the same property class.
- Age Restricted Housing: The data input spreadsheet includes projected municipal cost for multi-family housing that incorporates an estimate of school age children (SAC) per household. The model can be adjusted to incorporate housing restricted to residents age 55+ by reducing the SAC assumption to zero. A corresponding increase to the estimate for public safety costs (EMT calls, etc.) may be warranted.
- Renovation of Property: The FIM projects the fiscal impact of net new residential and commercial square feet built within a designated corridor resulting from an increase in the maximum allowable FAR. The FIM as currently configured is not able to project the fiscal impact of substantial renovation and/or upgrading of existing buildings within the designated corridor being studied.

## **Due Diligence**

As part of our process EDAB subcommittee members reviewed several fiscal impact studies from other municipalities (see Exhibit B), and held, along with Roger Blood and Kara Brewton, a Zoom conference with Judi Barrett, a highly respected consultant on municipal fiscal impact analysis, economic development, and affordable housing. In addition, EDAB Co-Chairs had discussions with members of Newton's Economic Development Commission regarding their recent experience with fiscal impact analysis for large mixed-use development projects.

Ms. Barrett is Principal of Barrett Planning LLC ([barrettplanningllc.com](http://barrettplanningllc.com)). She was formerly the Economic Development Director for the Plymouth Regional Economic Development Foundation. In addition, Judi previously served as Director of Municipal Services for RKG Associates, Inc., a nationally recognized development consulting firm. At RKG Ms. Barrett served as a consultant to Brookline for preparation of the Town's 2016 Housing Production Plan. She also took a lead role in preparation of the fiscal impact studies for Marlborough and Newton noted in Exhibit C.

## Key Issues and Model Enhancements

Following are key issues identified by the Subcommittee for the Town to consider in developing and employing a fiscal impact forecasting model in its assessment of potential zoning changes. The Brookline Planning staff and EDAB members, with assistance from the Town Assessor and land use study committees, have considerable experience in evaluating potential tax benefits for proposed commercial and mixed-use projects in Town that required amendments to the zoning by-law and tax certainty agreements; thus, much of the discussion below addresses assumptions and metrics for proposed multi-family residential development and mixed commercial/residential development

**Model Time Frame:** It is recommended that a ten-year time frame be assumed in formulating redevelopment scenarios for selected corridors (with acknowledgement that the Housing Production Plan is for five years). Annual adjustments would be made for key assumptions such as the assessed valuations per gross square foot (GSF) for various property types, and the applicable residential and commercial tax rates. In addition, annual updates can be made for evolving metrics in new development such as parking ratios. The ten-year time period is consistent with the long lead time often required between adoption of zoning reform and for new development to achieve stabilized occupancy. It should also be noted that in a mature community like Brookline the development life cycle is often extended by the requirement for multi-parcel site assembly. The proposed time frame deemphasizes the near-term disruptive impacts of the COVID-19 pandemic, including its impact on capital markets, selective commercial uses, parking ratios and mass transit utilization. Longer timeframes introduce much greater uncertainty related to changes in technology, demographics, and capital markets.

**Property Types:** The HCCG model allows for designation of new development as either Residential or Commercial use. The assessed value assumptions are based on averages for new development, incorporating a broad range of specific uses and scale within the property category. The applicable Commercial or Residential tax rate is then applied to the assessed values. Recognizing that there are significant distinctions in value and demand for municipal services within the broad categories of residential and commercial uses we formulated a Data Input Spreadsheet to include six residential and five commercial categories of new development; these include condominiums (low-rise 2-3 floors, mid-rise 4-6 floors, and high-rise 7+ floors), rental apartments (low, mid and high rise), general office, medical office, life science, retail/restaurant, and hotels. (Other property types of residential and commercial property types could also be incorporated.) Assessed valuations per GSF can be determined from comparable properties within the Assessor's database, recent comparable sale transactions, and available development pro forma for recent projects. The tested scenarios would specify a percentage of property types for future mixed-use development in a designated area.

**Fair Housing Law:** In evaluating the fiscal impact of zoning regulations related to multi-family housing development Town Boards and Commissions must be sensitive to conformance with the federal Fair Housing Law. Judi Barrett provided helpful guidance on this issue noting that the Town's fiscal impact analysis should include a range of land

uses and not focus solely on multi-family and its potential impact on generating net additional school age children. The data input spreadsheet incorporates the Town's inclusionary zoning requirements for the provision of Affordable Housing Units as a percentage of total units, not as a separate category. Finally, as noted previously, fiscal impacts are but one dimension of evaluating alternative zoning scenarios for the Town.

**Public Schools of Brookline (PSB) Cost Assumptions:** Education represents approximately sixty percent (60%) of the Town's total annual operating budget. Quantifying the impact of new development on public schools is a key focus of fiscal impact studies. Three key metrics are critical in forecasting this major cost component:

- **Fully Loaded Budget Number:** The HCCG fiscal impact model only uses the PSB annual operating budget as a placeholder for multi-family incremental municipal cost; this is calculated as the total annual operating budget divided by total existing residential square feet. The PSB cost assumption for the model should be the so-called fully loaded number that includes all expenditures on behalf of the schools regardless of where the funds are allocated in the Town's operating statements; this number includes allocations from non-PSB departments, building improvements, debt service for school projects, and OPEB contributions. This comprehensive approach is consistent with the method used by the Massachusetts Department of Elementary and Secondary Education to calculate and report school expenses and has been integrated into the Data Input Spreadsheet.
- **School Age Children (SAC) Per Unit Ratio:** In fiscal impact studies SAC ratios applied to new residential development are typically based on surveys of comparable local properties. The ratios are usually adjusted for unit mix (i.e., number of studio, 1, 2, 3, and 4-bedroom units), condominium vs. rental apartments, location (with focus on proximity to K-8 schools), affordable housing requirements, and age restrictions (if any). In Brookline the proximity of K-8 schools in most mixed-use corridors decreases the need for location specific assumptions. It is recommended that determination of different SAC ratios for condominiums and rental apartments based on updated school student enrollments from PSB that includes new multi-family development (including properties developed under MGL 40B). These SAC assumptions should be cross checked with ratios from new developments in nearby communities, with the recognition that Brookline's unique proximity to Boston, major universities, and the LMA will likely result in a demographic profile that is markedly different from other "suburbs".

**Average vs. Marginal Costs:** Fiscal impact studies use either the average or marginal cost approach in projecting the annual cost per additional student generated by new residential development. Some studies report both to show a range of potential costs; this is the approach we recommend be ultimately incorporated into the Brookline FIM. While it is preferable to use a range of average and marginal costs it is noted that over an extended period of time they will tend to converge. We have used the average cost per student and derived that by dividing the fully loaded cost per student by the forecasted number of K-12 students for the 20-21 school year shown in the report prepared for the PSB by Cropper GIS last year. We recommend that users of the

model work with the PSB to formulate an updated estimate of marginal annual costs. This analysis would focus on determining so-called "fixed" department cost that are independent of school enrollment.

**School Enrollment Forecasts:** The recent forecast report prepared by Cropper GIS for the PSB notes that public school enrollment is influenced by several factors separate from the total number of residential units (existing and proposed) in a municipality. These include the mix of housing types and sizes, demographic trends (e.g., birth rates, persons per household), the macroeconomic environment (interest rates, employment) and immigration policies. Accordingly, one should not assume that any SAC per unit estimates incorporated into the FIM would be strictly additive to the overall school age population and school cost structure. For example, additional student enrollment generated from new multi-family development may offset total enrollment that would otherwise have decreased due to demographic trends such as smaller average household size.

**Allocation and Projection of Non-School Municipal Costs:** Fiscal impact studies reviewed by EDAB subcommittee typically used one of two approaches in forecasting incremental non-school municipal costs for new development. These include allocating costs by property classification, then estimating the average (or if available marginal) cost for new development on a GSF basis. Alternatively, some studies focus on the specific correlation between new development and service calls for police, fire, and emergency medical technicians. (The latter is especially relevant for senior housing.) We recommend the model inputs be based on the former approach that provides a more comprehensive analysis of costs. Some municipal costs should clearly be allocated 100% to residential use, including PSB, recreation, and the public library. EDAB recommends other municipal costs be allocated based on gross square feet from the Assessor's database. These other municipal costs would therefore be allocated based on the ratio of residential, commercial and institutional building square feet to total square feet of buildings in Town. This approach has been incorporated into the Data Input Spreadsheet. As noted previously in regard to PSB cost projections, the FIM would be enhanced by providing an estimate of both marginal and average cost for all municipal services. This would necessitate analysis of Town department budgets to determine which line-item costs are fixed and which vary by changes in the Town's population.

**Criteria for Screening Potential Redevelopment Sites:** The current version of the HCCG FIM allows the user to designate an area for up-zoning by parcel address from the Assessor's database. The feasibility for redevelopment of specific parcels can be screened by setting minimum thresholds for FAR and square feet needed to support new construction (see Exhibit B). Further refinement of the screens built into the FIM is recommended to identify parcels feasible for redevelopment. Specifically, it is recommended the model be revised to allow the user to stipulate a minimum percentage difference between the existing built FAR and the maximum FAR allowed under a hypothetical up-zoning scenario. For example, the user could specify that the proposed FAR must exceed existing FAR by a minimum of 50% in order to provide sufficient financial incentives for redevelopment over the next decade. The model could also benefit from screens that eliminate parcels that are too small to support new

development unless they are directly adjacent to parcels that otherwise meet the redevelopment thresholds (i.e., to accommodate site assembly).

### **Data Input Spreadsheet**

Attached as Exhibit D is the aforementioned draft Data Input Spreadsheet designed to customize data inputs for key variables used in the HCCG FIM.

The spreadsheet incorporates assumptions for alternative up-zoning scenarios, including a percentage mix of residential and commercial property types. It also accommodates alternative assumptions for key fiscal impact metrics including average assessed value per GSF by the eleven property types previously noted, associated parking ratios, average residential unit sizes, motor vehicle excise tax, occupancy excise tax, personal property tax, school age children (SAC) per unit, annual cost per student (option for average or marginal), and the allocation of non-school municipal costs.

To provide compatibility between commercial and residential property all per unit metrics are translated into gross square feet.

***Please note the assumptions in the draft Data Input Spreadsheet are illustrative for format only and subject to further review and input.***

### **Preliminary Conclusions**

Based on the placeholder assumptions used in the Spreadsheet we would note the following preliminary conclusions which are consistent with expectations for new development:

Multi-family residential development with a mix of market rate and Affordable units would generate a modest net positive fiscal impact to the Town. Greater fiscal benefit would be generated from condominiums vs. apartments (despite the higher SAC ratio assumed for condominiums), and from high-rise vs. mid-rise buildings (given the presumed higher sale prices and rents required to off-set increased construction cost to meet high-rise building codes).

Commercial development would generate substantially higher tax revenues and lower municipal expenses per GSF than multi-family residential. The net fiscal benefit per GSF of commercial development would under most scenarios exceed multi-family residential by over 400%. This is an obvious structural result of the Commercial tax rate that is currently 1.64 times the Residential tax rate and zero allocation of incremental school costs to new commercial development.

### **Next Steps – Near Term Utilization**

- **Transfer the User Interface for the FIM to a Town-Managed Server:** The user interface for this model is temporarily available through the HCCG group at <http://brookline-calc.herokuapp.com/>. For utilization purposes, the program should be based on a Town-managed server with a public user interface limited



to data input and assumptions. Control of the software and its integration with Town budgets, tax rates, and the Assessor's database should be retained within the Department of Planning & Community Development.

- **Update SAC Ratios:** The Chair of the Housing Advisory Board has indicated interest in utilizing this FIM for updating the Housing Production Plan, and the Economic Development Director believes this model could be a helpful analysis tool in the Boylston Street Corridor Study Committee. ***Prior to utilization, we recommend the SAC enrollment data be updated for multi-family buildings built within the last decade.***
- **Comp Research:** Users of the FIM should identify and analyze comparable properties developed over the past decade to refine assumptions for the Data Input Spreadsheet.
- **Marginal Cost Analysis:** Users of the FIM should work with staff and boards/committees of PSB and other Town departments to formulate estimates of marginal cost for various municipal services that are directly correlated to changes in school enrollment and Town population.

#### Next Steps – Future Enhancements

- **Integration of the Data Input Spreadsheet and HCCG FIM:** A consolidated screen should be created to provide a single-entry platform for input of user assumptions that are included in the Data Input Spreadsheet (see Exhibit D) into the HCCG FIM.
- **Parcel Screening Criteria:** The FIM program should be revised to permit the user to add screens for selecting parcels that are feasible for redevelopment within a specified area based on minimum size and percentage changes in FAR between existing hypothetical up-zoning scenario.
- **Integration of Geographic Information System:** Ideally the FIM should be linked to or integrated with GIS applications to make it easier to select study parcels and to visually evaluate possible zoning changes.

Promoting the right mix of property types and density to balance fiscal impact with other community goals will be a challenge for Brookline going forward. We look forward to further collaboration on this model.

**List of Exhibits**

- A HCCG Data Inputs & Assumptions Summary
- B HCCG Fiscal Impact Model Executive Summary & Data Inputs Screens
- C Fiscal Impact Related Studies & Reports – Due Diligence Review
- D Data Input Spreadsheet

### Data Inputs & Assumptions

**Background:** The Harvard College Consulting Group (HCCG) Fiscal Impact Model (FIM) allows the user to project the fiscal impact of alternative redevelopment (AKA "up-zoning") scenarios for a designated area within the Town of Brookline MA. The FIM uses the Assessor's data base to input parcel addresses, parcel sizes, and existing building gross square feet (GSF). The user can assign a new maximum floor area (FAR) ratio for the designated area, determine the feasibility of redevelopment based on minimum FAR and SF thresholds, and designate a percentage allocation between commercial and residential property type for new development. The user would also input assumptions for the assessed valuation, tax rates, and municipal service costs for newly developed commercial and residential property. The FIM calculates the net difference in tax revenue between existing properties and potential redevelopment.

The Data Input Spreadsheet is intended to supplement the HCCG FIM data inputs for assessed valuation (A/V) and municipal service cost by property type, incorporating weighted average assumptions based on a designated percentage mix of various residential and commercial property types as described below. To provide compatibility with the HCCG FIM and between commercial and residential property, all metrics have been translated into gross square feet.

**Assessed Valuation Per GSF of Residential Space:** The user can specify the projected A/V per GSF for six different multi-family residential categories: Condominium Low-Rise (e.g., attached townhouses or garden apartments comprising 2 - 3 floors), Condominium Mid-Rise ("stick on podium" buildings 4 - 6 floors), and Condominium High-Rise (buildings 7 floors + / > 75 feet in height subject to Mass. High Rise Building Code), Apartment Low-Rise, Apartment Mid-Rise, and Apartment High-Rise. Adjustments can be made for unit size, common area factor, percentage and income category of Affordable Housing Units (based on the HUD Area Median Index schedule), associated parking requirements, and motor vehicle excise tax revenue. The current Residential tax rate is \$9.45 per \$1,000 of A/V.

**Assessed Valuation Per GSF of Commercial Space:** The user can specify the projected A/V per GSF for five different commercial property types including general office, medical office, life science, retail/restaurant, and hotel. Adjustments can be made for associated parking ratios, personal property tax revenue, and in the case of hotels, the room occupancy excise tax. The current Commercial tax rate is \$15.53 per \$1,000 of A/V.

**Municipal Cost Per GSF of Residential Space:** The user can specify the projected cost per GSF of Town services for new residential development incorporating assumptions of school age children per unit, annual cost per student (net of Ch. 70 State aid), and other municipal services. Data is based on the Town's "fully loaded" annual budget for FY21 and enrollment data from the Cropper Report. The cost of Education, Library and Recreation services are allocated 100% to Residential property. The fully loaded budget allocates certain debt service, capital improvements, and retirement system payments to Town departments.

**Municipal Cost Per GSF of Commercial Space:** The user can specify the projected cost per GSF of Town services for new commercial development. Data is based on Town's fully loaded annual budget for FY21.

### Data Inputs & Assumptions

Study Area: Parcel Starting & Ending Addresses  
 Floor Area Ratio (Proposed FAR)  
 Plot Utilization Ratio  
 Tax Rate - Residential Property  
 Tax Rate - Commercial Property  
 Residential / Commercial Mix of New Development (%)  
 Average Assessed Value Per GSF of Residential Property  
 Average Assessed Value Per GSF of Commercial Property  
 Town Cost Per GSF of Residential Property  
 Town Costs Per GSF of Commercial Property  
 Minimum New GSF to Develop Parcel  
 Minimum New FAR to Develop Parcel

### Source

Direct Input Assumption for HCCG Fiscal Impact Model  
 Direct Input Assumption for HCCG Fiscal Impact Model  
 Direct Input Assumption for HCCG Fiscal Impact Model  
 Direct Input Assumption for HCCG Fiscal Impact Model  
 Direct Input Assumption for HCCG Fiscal Impact Model  
 Direct Input Assumption for HCCG Fiscal Impact Model  
 Data Input Spreadsheet (see above)  
 Data Input Spreadsheet (see above)  
 Data Input Spreadsheet (see above)  
 Data Input Spreadsheet (see above)  
 Direct Input Assumption for HCCG Fiscal Impact Model  
 Direct Input Assumption for HCCG Fiscal Impact Model



# **Brookline Potential Tax Revenue Model**

**Executive Summary (DRAFT – 4/29/20 5:00 PM)**

## I. Model Overview

HCCG created a model ([brookline-calc.herokuapp.com](http://brookline-calc.herokuapp.com)) to calculate the **potential increase in tax revenues** for the Town of Brookline due to increased property values after redevelopment. This **model can be applied for any part of Brookline**, with adjustable values for Floor Area Ratio (FAR), utilization rate, land value, tax rate, costs (incurred by the Town of Brookline), addresses, and zoning use types (residential or commercial only). Costs mainly stem from increases in educational spending due to growth in the school-age population. Finally, it is important to note that this model shows the maximum **potential** square footage of development and is **not a prediction for how much will actually be developed**.

To calculate the increase in tax revenues, the model considers all plots of land on the selected street(s). For each plot, the **total developable area** (in square feet) is calculated by multiplying the land area by the selected hypothetical **FAR**, and then subtracting the square footage that is **currently developed**. Next, this developable area is split between residential and commercial use types and multiplied by the per-square-foot **property value** and by the **current tax rate** of each respective use type to calculate the total increase in tax revenue from a **single plot**. This is completed for every plot in the specified area, and the results are summed together to obtain the **total potential gross increase in tax revenues**. Lastly, costs incurred are calculated for each use type based on the total developed area, and this number is subtracted from the potential gross increase to obtain the **total potential net increase in tax revenues**.

## II. Example Results: Beacon Street Transit Corridor

The results presented below use the **Beacon Street Transit Corridor as an example** – with the corridor consisting of Beacon Street itself, one block on each side, and the major cross streets such as Harvard Street. **FAR values of 5 and 10** were tested, and the model was applied to both the **entire corridor** and **commercial properties only**. The parameter estimates used for this example are detailed below.

### Results:

Developable Area (millions square feet)

|        | Commercial | Entire Corridor |
|--------|------------|-----------------|
| FAR 5  | 2.07       | 12.91           |
| FAR 10 | 3.81       | 29.55           |

Annual Net Tax Revenue (millions USD)

|        | Commercial | Entire Corridor |
|--------|------------|-----------------|
| FAR 5  | 13.96      | 53.7            |
| FAR 10 | 26.33      | 125.86          |

### Parameter Estimates for Beacon Street Transit Corridor Example

| Parameter                                 | HCCG Estimate | Reasoning  | Source(s)   |
|---|---------------|--|---|
| Plot Utilization Rate                     | 100%          | To calculate <b>maximum potential</b> increase, assume development of <b>all</b> land parcels.   |   |
| Residential Proportion of New Development | 100%          | For new development, <b>implying 84% and 87% residential use under FAR 5 and FAR 10</b> . Scaled-up from current distributions, assuming | Andy Martineau, Pam McKinney, Steve Heikin, <a href="#">Brookline Assessor's Office</a> |

|  |                                  |   |   |
|--|----------------------------------|---|---|
|  |                                  | proportions remain similar post-FAR increase and commercial becomes residential/commercial mixed-use. Model assumes commercial proportion of 100% minus residential ratio.  | <a href="#">Property Database</a> , <a href="#">Brookline's Coolidge Corner Study Committee</a>   |
| Average Residential Value                  | \$600/ft <sup>2</sup>            | Rough average of various estimates: <b>\$500-600</b> (projected tax revenue divided by tax rate for market rate residential in Coolidge Corner), <b>\$300-400</b> (projected tax revenue divided by tax rate for affordable residential in Coolidge Corner), <b>\$880</b> (average assessed value for market-rate condos in "very good" and "excellent" condition sold in last year), and <b>\$241</b> (RKG Associates' estimation for Newton Northland development). | <a href="#">Brookline's Coolidge Corner Study Committee</a> , <a href="#">Brookline Assessor's Office Property Database</a> , <a href="#">BFAC report</a> , Pam McKinney, <a href="#">Newton Northland case study</a> |
| Average Commercial Value                   | \$580/ft <sup>2</sup>            | Rough average of various estimates: <b>\$530-590</b> (projected tax revenue divided by tax rate for commercial in Coolidge Corner) and <b>\$630</b> (averaged assessed value for all retail stores on Beacon Street).   | <a href="#">Brookline's Coolidge Corner Study Committee</a> , <a href="#">Brookline Assessor's Office Property Database</a> , <a href="#">BFAC report</a> , Pam McKinney, <a href="#">Newton Northland case study</a> |
| Residential Tax Rate                       | 0.945%                           | Brookline FY20 residential tax rate.  | <a href="#">Brookline Assessor's Office</a>   |
| Commercial Tax Rate                        | 1.553%                           | Brookline FY20 commercial tax rate.   | <a href="#">Brookline Assessor's Office</a>   |
| Town Cost to Serve Residential Development | \$1.35/ft <sup>2</sup> developed | Current total school budget divided by total residential square footage in the town.  | <a href="#">Brookline Assessor's Office Property Database</a>   |
| Town Cost to Serve Commercial Development  | \$0/ft <sup>2</sup> developed    | Model defaults to only costs incurred from residential development (due to schools).  |   |

### III. Methodology

HCCG conducted **expert interviews** with urban studies experts, urban studies professors, developers, and Brookline town officials to identify the types of development to incorporate into the model. HCCG also conducted **primary data analysis** of the Brookline Assessor's Office Property Database to estimate parameter values across the town. Lastly, HCCG conducted a series of **case studies** on nearby developments – including Waldo/Durgin in Brookline and past projects in Newton and Fenway Park – to gain insight into parameter estimates for the Beacon Street Corridor example.

DRAFT

## Harvard College Consulting Group

# Brookline Potential Economic Development

[Potential Revenue Calculator](#)[Details](#)[Report](#)

## Description of Input Terms

### **FAR - Floor Area Ratio**

FAR stands for floor area ratio. This value is equivalent to the total allowable developed area of a land plot divided by the land area of the plot. Generally speaking, floor area ratio describes the average number of floors of a property developed on the specified piece of land. The inputted FAR in our model represents the cap on development, as cities commonly have restrictions on the number of floors in a building. A FAR of 5, for example, would roughly represent a cap on development at 5 floors.

### **Plot Utilization Rate**

This rate (between 0% and 100%) represents the percentage of developable area that would be turned into finished area by developers. In a high-demand market, this would be expected to be a value close to 1. A low-demand market, on the other hand, would be expected to have a lower plot utilization rate.

### **Residential/Commercial Proportion of New Development**

The residential proportion of new development (between 0% and 100%) represents the proportion of new development that will be dedicated to residential purposes. The commercial proportion is assumed to be the residential proportion subtracted from 100% (since all new development is either residential or commercial in this model).

### **Average Value: Residential/Commercial (\$/sqft)**

This value describes the average value per finished square foot of new residential/commercial development, as it would be measured by the Assessor's Office.

### **Tax Rate**

This value describes the tax rate on the development based on the development's assessed value. The total amount a development is taxed is the tax rate multiplied by its assessed value.

### **Town Cost to Serve Residential/Commercial Development (\$/sqft)**

The increase in costs to the Town of Brookline per square foot of new development. These costs mainly stem from increases in educational spending to accommodate for increases in school-age population.



proportion is assumed to be the residential proportion subtracted from 100% (since all new development is either residential or commercial in this model).

**Average Value: Residential/Commercial (\$/sqft)**

This value describes the average value per finished square foot of new residential/commercial development, as it would be measured by the Assessor's Office.

**Tax Rate**

This value describes the tax rate on the development based on the development's assessed value. The total amount a development is taxed is the tax rate multiplied by its assessed value.

**Town Cost to Serve Residential/Commercial Development (\$/sqft)**

The increase in costs to the Town of Brookline per square foot of new development. These costs mainly stem from increases in educational spending to accommodate for increases in school-age population.

**Starting Address Number/Ending Address Number**

This allows users to enter additional streets to apply the economic development to, from the starting address to the ending address. They will be included in addition to any neighborhoods selected.

**Minimum New Area to Develop (sqft)**

This allows users to determine that a property will not be developed upon unless the net amount of square feet is greater than the minimum new area to develop.

**Minimum New FAR to Develop**

This allows users to determine that a property will not be developed upon unless the net FAR change is greater than the minimum new FAR to develop.

**Residential Tax Value After Property Owner Exemption (%)**

This allows users to determine what the tax value of residential land is after accounting for the property owner exemption. The default value is the average tax value of residential property after the exemption for Brookline in FY 2020.

**Fixed Costs (\$)**

This allows users to set a fixed cost under a redevelopment proposal.

**Disclaimer**

This model shows the potential square footage and potential revenues of economic development for any area of Brookline. This model is not a prediction for how much will be actually developed. This model shows the maximum allowable development under economic development situations. Actual development will be contingent on many factors not accounted for in this model.

# Brookline Potential Economic Development

[Potential Revenue Calculator](#)[Details](#)[Report](#)

## Calculator

This model shows the potential square footage and potential revenues of economic development for any area of Brookline. This model is not a prediction for how much will be actually developed. This model shows the maximum allowable development under economic development situations. Actual development will be contingent on many factors not accounted for in this model.

Prefilled values are default values for Beacon Street, backed by research detailed under the ["Report" section \(/static/Executive%20Summary.pdf\)](/static/Executive%20Summary.pdf), though these values can be changed as the user sees fit.

### Parameters

FAR

**10**

---

Average Value: Residential (\$/sq. ft.)

**600**

---

Average Value: Commercial (\$/sq. ft.)

**580**

---

### SHOW/HIDE ADVANCED PARAMETERS

Plot Utilization Rate (%)

Average Value: Commercial (\$/sq. ft.)

**580**

---

### SHOW/HIDE ADVANCED PARAMETERS

Plot Utilization Rate (%)

**100**

---

Residential Proportion of New Development (%)

Commercial Proportion = 100% - Residential

**100**

---

Residential Tax Rate (%)

**0.945**

---

Commercial Tax Rate (%)

**1.553**

---

Town Cost to Serve Residential Development (\$/sq. ft.)

**1.35**

---

Town Cost to Serve Commercial Development (\$/sq. ft.)

**0**

---

Minimum New Area to Develop (sq. ft.)

**0**

---

Minimum New FAR Needed to Develop

**0**

---

Residential Tax Value After Property Owner Exemption (

**87.4**

---

Fixed Costs (\$)

**0**

---

0

---

Residential Tax Value After Property Owner Exemption (

87.4

---

Fixed Costs (\$)

0

---

Select Areas to apply model (not mutually exclusive):

- Beacon Street (Entire Corridor)
- Coolidge Corner
- St. Mary's
- Washington Square
- Cleveland Circle
- Boston University/Commonwealth Ave.
- Brookline Village
- Chestnut Hill
- JFK Crossing

Select zones to apply model:

- Residential
- Commercial

Add Custom Addresses (optional)

ADD CUSTOM ADDRESS RANGE

SUBMIT

## **Exhibit C**

### **Fiscal Impact Related Studies & Reports – Due Diligence Review**

#### **Brookline Studies & Reports**

*Town of Brookline FY 2021 Financial Plan*

*Public Schools of Brookline (PSB) Demographic Study Report  
Cropper GIS; 2019*

*Public Schools of Brookline 2017-18 Enrollment Projection Report  
Brookline Enrollment Working Group; April 2018*

*Report to the Select Board of the 2017 Override Study Committee  
April 2018*

*Tall Building Survey Student Generation Ratios – Brookline MA  
Dept. of Planning & Community Development & PSB – February 2017*

*Fiscal Impact Analysis Mixed Use Waldo Street Brookline MA  
Chestnut Hill Realty Consultant - July 2016*

*The Economic Impact of Enrollment Growth on the Brookline Public Schools  
Override Study Subcommittee Report; Lee Selwyn; 2014*

#### **Other Municipal Fiscal Impact Reports**

*Multifamily Market and Fiscal Analysis City of Marlborough, MA  
RKG Associates - June 2017*

*Fiscal Impact Analysis Northland Newton Lower Falls Development  
Fougere Planning & Development, Inc. - August 2018  
Peer Review – RKG Associates - December 2018*

*Fiscal Impact Analysis Multi-Family Development 20 Corporate Drive Burlington MA  
Connery Associates - July 2015*

*“The Governor’s Dilemma” Harvard Business School Case Study re Affordable Housing  
Charles Wu, et. al. - May 2020*

*Fiscal Impact Analysis: Methods, Cases, and Intellectual Debate  
Zenja Kotval & John Mullin; Lincoln Institute of Land Policy - 2006*

**DATA INPUT SPREADSHEET**

This spreadsheet is designed to provide data inputs for the Fiscal Impact Model developed by the Harvard College Consulting Group (HCCG). The assumptions in this draft spreadsheet are illustrative for format only and subject to further review and input.

**Background:** The HCCG Fiscal Impact Model (FIM) allows the user to project the fiscal impact of alternative redevelopment (AKA "up-zoning") scenarios for a designated area within the Town of Brookline MA. The FIM uses the Assessor's data base to input parcel addresses, parcel sizes, and existing building gross square feet (GSF). The user can assign a new maximum floor area (FAR) ratio for the designated area, determine the feasibility of redevelopment based on minimum FAR and SF thresholds, and designate a percentage allocation between commercial and residential property type for new development. The user would also input assumptions for the assessed valuation, tax rates, and municipal service costs for newly developed commercial and residential property. The FIM calculates the fiscal contributions of potential new development net of existing buildings.

This spreadsheet is intended to supplement the HCCG FIM data inputs for assessed valuation (A/V) and municipal service cost by property type, incorporating weighted average assumptions based on a designated percentage mix of various residential and commercial property types as described below. To provide compatibility with the HCCG FIM and between commercial and residential property, all metrics have been translated into gross square feet.

**Assessed Valuation Per GSF of Residential Space:** The user can specify the projected A/V per GSF for six different multi-family residential categories: Condominium Low-Rise (e.g., attached townhouses or garden apartments comprising 2 - 3 floors), Condominium Mid-Rise ("stick on podium" buildings 4 - 6 floors), and Condominium High-Rise (buildings 7 floors + / > 75 feet in height subject to Mass. High Rise Building Code), Apartment Low-Rise, Apartment Mid-Rise, and Apartment High-Rise. Adjustments can be made for unit size, common area factor, percentage and income category of Affordable Housing Units (based on the HUD Area Median Index schedule), associated parking requirements, and motor vehicle excise tax revenue. The current Residential tax rate is \$9.45 per \$1,000 of A/V.

**Assessed Valuation Per GSF of Commercial Space:** The user can specify the projected A/V per GSF for five different commercial property types including general office, medical office, life science, retail/restaurant, and hotel. Adjustments can be made for associated parking ratios, personal property tax revenue, and in the case of hotels, the room occupancy excise tax. The current Commercial tax rate is \$15.53 per \$1,000 of A/V.

**Municipal Cost Per GSF of Residential Space:** The user can specify the projected cost per GSF of Town services for new residential development incorporating assumptions of school age children per unit, annual cost per student (net of Ch. 70 State aid), and other municipal services. Data is based on the Town's "fully loaded" annual budget for FY21 and enrollment data from the Cropper GIS Report. The cost of Education, Library and Recreation services are allocated 100% to Residential property. The fully loaded budget allocates certain debt service, capital improvements, and retirement system payments to Town departments.

**Municipal Cost Per GSF of Commercial Space:** The user can specify the projected cost per GSF of Town services for new commercial development. Data is based on Town's fully loaded annual budget for FY21.

**Worksheets Attached:**

- Assessed Valuation Assumptions - Residential
- Assessed Valuation Assumptions - Commercial
- Municipal Cost Assumptions - Residential
- Municipal Cost Assumptions - Commercial
- Summary Matrix - Fiscal Model Data Inputs
- Up-Zoning Mixed-Use - Sample Scenario
- Budget Worksheet
- Building Square Feet Summary by Tax Classification

## BROOKLINE MA FISCAL IMPACT MODEL

### Limitations and Qualifications - updated December 1, 2020

This spreadsheet is intended to supplement the Harvard College Consulting Group Fiscal Impact Model (HCCG FIM) by refining data inputs for assessed valuation and municipal service cost by property type. The spreadsheet allows the user to generate weighted average assumptions based on a designated percentage mix of various residential and commercial property types that encompass a range of valuation and municipal costs.

The HCCG FIM and this spreadsheet are designed to be used as a long-range land use planning tool to analyze zoning options for Brookline over the next decade. As such, the model can provide “ballpark” projections for incremental municipal revenues and expenses for various up-zoning scenarios, including alternative land uses and density for designated areas of Brookline.

The following limitations and qualifications of the FIM should be noted:

**Development Evaluation Criteria:** Fiscal impact analysis is one of several criteria that should be used in the evaluation of redevelopment options and zoning policy within the Town. Other factors include neighborhood compatibility (scale and use), public safety, vehicle / bicycle / pedestrian traffic circulation, open space, architectural quality, housing affordability, shadow impacts, climate sustainability, and commercial area vitality.

**Economic Impact Analysis:** The FIM does not attempt to quantify the overall impact of new development on the Town’s economy, including job creation, the benefit of additional customers for local businesses, and increased miscellaneous Town revenues such as meals tax or parking meter fees.

**Site Specific Analysis:** The FIM is not intended to project the fiscal impact of a specific development proposal on a specific site. The estimated fiscal impact of a specific redevelopment proposal should incorporate known components of the development plan, including the proposed use, scale, and parking ratios; and for residential development the unit mix of proposed multi-family building(s).

**Public Schools of Brookline (PSB) Facilities Plans:** The FIM incorporates an estimate of annual municipal costs for new multi-family development based in part on the projected school age children per household (the so-called “SAC” ratio). However, it does not include projected incremental capital costs for new or expanded facilities for the PSB. Total operating budgets and facilities plans for the PSB incorporate several factors in addition to new development; these include demographic trends such as birth rates and household size; immigration patterns influenced by federal policies; and PSB policies related to classroom size, district boundaries for K-8 schools, staffing plans, and collective bargaining agreements. At this time data for SAC ratios in Brookline is limited; further research is needed to confirm the appropriate ratios specific to the Town’s multi-family housing inventory.

**Tax Exempt Institutions and PILOT Agreements:** Buildings that are owned and occupied by non-profit organizations such as universities and hospitals are exempt from local property tax. Excluding Town owned facilities, approximately 8% of total building gross square feet in Brookline is classified as Exempt (see attached Building SF Summary work sheet). The FIM is based on projecting property taxes by applying the Residential or Commercial tax rate to the full assessed valuation of new building GSF in the designated area. It does not incorporate new development or an acquisition by tax exempt institutions that may enter into Payments in Lieu of Taxes (PILOT) agreements. Note that if a property is deemed to be tax exempt due to nonprofit ownership and an exempt use, the tax that would otherwise be paid is shifted to the other taxpayers within the same property class.

**Affordable Housing:** This spreadsheet allows the user to designate the percentage of total units and the depth of subsidy of Affordable Housing Units (AHUs) in projecting a weighted average assessed valuation for multi-family housing. The categories for AHU’s are based on affordability schedules created by the Department of Housing & Urban Development (HUD) and the Massachusetts Housing Partnership (MHP). These schedules provide maximum rents and sale prices for various levels of household Area Median Income (AMI), as adjusted by utility allowances published by the Brookline Housing Authority. This spreadsheet assumes new development of apartments will include 15% of units rented at the 50% AMI schedule, and 15% of condominium units would be sold at the 80% AMI price schedule. This formula is based on a recent revision to the Brookline Inclusionary Zoning By-Law (IZBL), as authorized under MGL Chapter 40A. (The new formula in the IZBL alternatively allows a developer to provide Work Force Housing priced at the 120% AMI schedule in concert with a contribution to the Town’s Affordable Housing Trust Fund; this option is not incorporated into the FIM). The formula for multi-family housing built under MGL Chapter 40B provides for a higher percent of AHU’s.

**Age Restricted Housing:** This spreadsheet includes projected municipal cost for multi-family housing that incorporates an estimate of school age children (SAC) per household. The model can be adjusted to incorporate housing restricted to residents age 55+ by reducing the SAC assumption to zero. A corresponding increase to the estimate for public safety costs (EMT calls, etc.) may be warranted.

**BROOKLINE MA FISCAL IMPACT MODEL**

**Data Input Assumptions - HCCG Fiscal Impact Model**

Note: Cells in Blue = User Assumptions; Cells in Black = Calculated Values

**Assessed Valuations - Residential**

**Property Type - Multi-Family Residential**

**Condominium**

**Condo Low Rise (5)**      **Condo Mid Rise (6)**      **Condo High Rise (7)**  
 (2 - 3 Floors)      (4 to 6 Floors)      (7 Floors +)

**A Assessed Valuation Per GSF**

|                                  |                      |       |       |       |
|----------------------------------|----------------------|-------|-------|-------|
| Average Unit Size With Parking   |                      |       |       |       |
| Useable SF Per Unit              |                      | 1,800 | 1,300 | 1,300 |
| Common Area Add-On Factor        |                      | 1.10  | 1.23  | 1.23  |
| Gross Square Feet (GSF) Per Unit |                      | 1,980 | 1,600 | 1,600 |
| Parking Space # Per Unit         | <u>GSF Per Space</u> | 1.50  | 1.50  | 1.50  |
| Parking Space GSF Per Unit       | 300                  | 450   | 450   | 450   |
| Total GSF Per Unit               |                      | 2,430 | 2,050 | 2,050 |

|   |                      |                       |              |              |              |
|---|----------------------|-----------------------|--------------|--------------|--------------|
| Assessed Value Per GSF Primary Use (1)  | <u>% Total Units</u> | <u>AV % of Market</u> |              |              |              |
| Market Rate Units                       | 85.0%                | 100.0%                | \$700        | \$750        | \$800        |
| Affordable Units @ 100% AMI             | 0.0%                 | 75.0%                 | \$525        | \$525        | \$525        |
| Affordable Units @ 80% AMI              | 15.0%                | 50.0%                 | \$350        | \$350        | \$350        |
| Affordable Units @ 50% AMI              | 0.0%                 | 25.0%                 | \$175        | \$175        | \$175        |
| Weighted Average AV Per GSF Primary Use | <u>100.0%</u>        |                       | <u>\$648</u> | <u>\$690</u> | <u>\$733</u> |

|   |  |       |       |       |
|---|--|-------|-------|-------|
| Assessed Value Per GSF Parking Area (2) |  | \$216 | \$230 | \$244 |
|---|--|-------|-------|-------|

|                             |  |              |              |              |
|-----------------------------|--|--------------|--------------|--------------|
| Weighted Average AV Per GSF |  | <u>\$568</u> | <u>\$589</u> | <u>\$625</u> |
|-----------------------------|--|--------------|--------------|--------------|

**B Residential Exemption Adjustment**

|  |              |              |              |
|--|--------------|--------------|--------------|
| Percentage of Owner Occupants Principal Residence (3)    | 57.60%       | 57.60%       | 57.60%       |
| Residential Exemption Amount Per Unit (3)                | \$292,060    | \$292,060    | \$292,060    |
| Avg. Residential Exemption Adjusting for Owner Occupancy | \$168,227    | \$168,227    | \$168,227    |
| Average Reduction in Assessed Value Per GSF (4)          | See footnote | See footnote | See footnote |

**C Motor Vehicle Excise Tax**

|                                   |                |                |                |
|-----------------------------------|----------------|----------------|----------------|
| Motor Vehicles Per Unit           | 1.50           | 1.50           | 1.50           |
| Average Taxable Value Per Vehicle | \$20,000.00    | \$20,000.00    | \$20,000.00    |
| Tax Rate (\$25 Per \$1,000 Value) | 2.50%          | 2.50%          | 2.50%          |
| MV Excise Tax Per Unit            | \$750.00       | \$750.00       | \$750.00       |
| MV Excise Tax Per GSF             | \$0.31         | \$0.37         | \$0.37         |
| Residential Tax Rate Per \$1,000  | 9.45           | 9.45           | 9.45           |
| Assessed Value Add On Per GSF     | <u>\$32.66</u> | <u>\$38.71</u> | <u>\$38.71</u> |

**D Adjusted Weighted Average AV Per GSF**

|  |              |              |              |
|--|--------------|--------------|--------------|
|  | <u>\$600</u> | <u>\$628</u> | <u>\$664</u> |
|--|--------------|--------------|--------------|

Footnotes

- 1 Assumes 15% Affordable Housing Units per proposed amended Inclusionary Zoning By-Law
- 2 Parking area assessed value as percent of primary use = 33%
- 3 Residential exemption per unit FY20 set by Board of Assessors; five year average of eligible condominium units = 57.60%
- 4 Residential exemption reductions in AV are off-set by an increase (shift) within the Residential tax rate; total Town revenues are not affected by the residential exemption.
- 5 Low rise buildings such as attached single family townhouses or garden apartments; could be a transitional section of mixed-use project adjacent to residential area
- 6 Stick on podium style buildings
- 7 Mass. High Rise Building Code applies to buildings >75 feet in height



**Apartment**

|  |   |   |
|--|---|---|
| <b>Apt. Low Rise (5)</b><br>(2 - 3 Floors) | <b>Apt. Mid Rise (6)</b><br>(4 to 6 Floors) | <b>Apt. High Rise (7)</b><br>(7 Floors +) |
|--|---|---|

|       |       |       |
|-------|-------|-------|
| 1,800 | 900   | 900   |
| 1.10  | 1.22  | 1.22  |
| 1,980 | 1,100 | 1,100 |
| 1.50  | 1.00  | 1.00  |
| 450   | 300   | 300   |
| 2,430 | 1,400 | 1,400 |

|                      |                       |  |  |  |
|----------------------|-----------------------|--|--|--|
| <u>% Total Units</u> | <u>AV % of Market</u> |  |  |  |
|----------------------|-----------------------|--|--|--|

|               |        |              |              |              |
|---------------|--------|--------------|--------------|--------------|
| 85.0%         | 100.0% | \$600        | \$650        | \$700        |
| 0.0%          | 75.0%  | \$525        | \$525        | \$525        |
| 0.0%          | 50.0%  | \$350        | \$350        | \$350        |
| 15.0%         | 25.0%  | \$175        | \$175        | \$175        |
| <u>100.0%</u> |        | <u>\$536</u> | <u>\$579</u> | <u>\$621</u> |

|       |       |       |
|-------|-------|-------|
| \$179 | \$193 | \$207 |
|-------|-------|-------|

|       |       |       |
|-------|-------|-------|
| \$470 | \$496 | \$532 |
|-------|-------|-------|

|                |                |                |
|----------------|----------------|----------------|
| Not Applicable | Not Applicable | Not Applicable |
|----------------|----------------|----------------|

|             |             |             |
|-------------|-------------|-------------|
| 1.50        | 1.00        | 1.00        |
| \$10,000.00 | \$10,000.00 | \$10,000.00 |
| 2.50%       | 2.50%       | 2.50%       |
| \$375.00    | \$250.00    | \$250.00    |
| \$0.15      | \$0.18      | \$0.18      |
| 9.45        | 9.45        | 9.45        |

|         |         |         |
|---------|---------|---------|
| \$16.33 | \$18.90 | \$18.90 |
|---------|---------|---------|

|              |              |              |
|--------------|--------------|--------------|
| <b>\$486</b> | <b>\$515</b> | <b>\$551</b> |
|--------------|--------------|--------------|

**BROOKLINE MA FISCAL IMPACT MODEL**

**Data Input Assumptions - HCCG Fiscal Impact Model**

Note: Cells in Blue = User Assumptions; Cells in Black = Calculated Values

**Assessed Valuations - Commercial**

**Property Type - Commercial**

|  | General Office | Medical Office | Life Science   | Retail / Restaurant (3) | Hotel (4) |
|--|----------------|----------------|----------------|-------------------------|-----------|
| <b>A Parking Ratios &amp; GSF</b>              |                |                |                |                         |           |
| Gross SF Per Required Parking Space            | 1,000          | 1,000          | 1,000          | 1,000                   | 1,000     |
| Parking Space Per 1,000 GSF                    | 2.50           | 3.00           | 2.00           | 2.00                    | 0.77      |
| Parking Space GSF Per 1,000 SF Primary Use     | 300            | 900            | 600            | 600                     | 231       |
| Total GSF - Primary Use + Parking Area         | 1,750          | 1,900          | 1,600          | 1,600                   | 1,231     |
| <b>B. Assessed Valuation</b>                   |                |                |                |                         |           |
| Assessed Value Per GSF Primary Use             | \$750          | \$800          | \$900          | \$800                   | \$750     |
| Assessed Value Per GSF Parking Area (1)        | \$248          | \$264          | \$297          | \$264                   | \$248     |
| <b>Weighted Average A/V Per GSF</b>            | \$535          | \$546          | \$674          | \$599                   | \$656     |
| <b>C Personal Property Tax Add On</b>          |                |                |                |                         |           |
| Personal Property (FF&E) Per GSF (2)           | \$10           | \$15           | \$20           | \$20                    | \$30      |
| <b>D Occupancy Excise Tax Add On (4)</b>       |                |                |                |                         |           |
| Assessed Value Occupancy Tax Add-On            | Not Applicable | Not Applicable | Not Applicable | Not Applicable          | \$372     |
| <b>D Adjusted Weighted Average A/V Per GSF</b> | \$545          | \$561          | \$694          | \$619                   | \$1,058   |

Footnotes

- 1 Parking area A/V as percent of primary use = 33%
- 2 Personal property tax rate same as commercial tax rate
- 3 Includes grade level direct entry tenants - retail, restaurants, professional services, personal services, and medical offices.
- 4 Assumptions below; assumes limited service hotel brand

Hotel Occupancy Excise Tax

|                                      |          |   |
|--------------------------------------|----------|---|
| Rooms & Parking Spaces Per 1,000 GSF |          | <u>Comments</u>   |
| Common Area Factor                   | 1.4      | Includes lobbies, corridors, stairs, elevators, fitness, offices, laundry, utilities, storage, etc. |
| Useable SF Per 1,000 GSF             | 714      |   |
| Average Room Size                    | 325      |   |
| Number of Rooms Per 1,000 GSF        | 2.2      |   |
| Parking Spaces Per Room              | 0.35     |   |
| Parking Spaces Per 1,000 GSF         | 0.77     |   |
| Revenue & Excise Tax Per GSF         |          | Includes seasonal variations of rack rate, frequent guest awards, corporate rates, etc.             |
| Average Daily Room Rate              | \$200    |   |
| Occupancy Rate                       | 60.0%    |   |
| Revenue Per Available Room (RevPAR)  | \$120    |   |
| Daily Room Revenue Per 1,000 GSF     | \$264    |   |
| Annual Room Revenue Per 1,000 GSF    | \$96,264 |   |
| Occupancy Excise Tax Rate            | 6.0%     |   |
| Occupancy Excise Tax Per 1,000 GSF   | \$5,776  |   |
| Occupancy Excise Tax Per GSF         | \$5.78   |   |
| Occupancy Tax A/V Add-On Factor      |          |   |
| Occupancy Excise Tax Per GSF         | \$5.78   |   |
| Commercial Tax Rate Per \$1,0000     | 15.53    |   |
| Assessed Value Occupancy Tax Add-On  | \$372    |   |

**BROOKLINE MA FISCAL IMPACT MODEL**

**Data Input Assumptions - HCCG Fiscal Impact Model**

Note: Cells in Blue = User Assumptions; Cells in Black = Calculated Values; see Budget Worksheet

**Municipal Expenses - Multi-Family Residential**

| Property Type                                      | Condominium                          |                                       |                                     | Apartment                           |                                      |                                |
|--|--------------------------------------|---------------------------------------|-------------------------------------|-------------------------------------|--------------------------------------|--------------------------------|
|  | Condo Low Rise (4)<br>(2 - 3 Floors) | Condo Mid Rise (5)<br>(4 to 6 Floors) | Condo High Rise (6)<br>(7 Floors +) | Apt. Low Rise (4)<br>(2 - 3 Floors) | Apt. Mid Rise (5)<br>(4 to 6 Floors) | Apt. High Rise<br>(7 Floors +) |
| <b>A Public School Expenses</b>                    |                                      |                                       |                                     |                                     |                                      |                                |
| Useable SF Per Unit                                | 1,800                                | 1,300                                 | 1,300                               | 1,500                               | 900                                  | 900                            |
| Common Area Add-On Factor                          | 1.10                                 | 1.23                                  | 1.23                                | 1.22                                | 1.22                                 | 1.22                           |
| Gross SF Per Unit                                  | 1,980                                | 1,600                                 | 1,600                               | 1,833                               | 1,100                                | 1,100                          |
| Parking Space Per Unit                             | 1.50                                 | 1.50                                  | 1.50                                | 1.50                                | 1.00                                 | 1.00                           |
| Parking Space GSF Per Unit                         | 450                                  | 450                                   | 450                                 | 450                                 | 300                                  | 300                            |
| Total GSF Per Unit                                 | 2,430                                | 2,050                                 | 2,050                               | 2,283                               | 1,400                                | 1,400                          |
| School Age Children (SAC) Per Unit                 | 0.30                                 | 0.20                                  | 0.20                                | 0.15                                | 0.10                                 | 0.10                           |
| Annual Cost Per Student (1)                        | \$22,745                             | \$22,745                              | \$22,745                            | \$22,745                            | \$22,745                             | \$22,745                       |
| Annual Cost Per Unit                               | \$6,824                              | \$4,549                               | \$4,549                             | \$3,412                             | \$2,275                              | \$2,275                        |
| <b>Annual Cost Per GSF</b>                         | <b>\$2.81</b>                        | <b>\$2.22</b>                         | <b>\$2.22</b>                       | <b>\$1.49</b>                       | <b>\$1.62</b>                        | <b>\$1.62</b>                  |
| <b>B Non-School Municipal Expenses (2)</b>         |                                      |                                       |                                     |                                     |                                      |                                |
| Cultural Resources - Recreation & Library (3)      | \$0.10                               | \$0.10                                | \$0.10                              | \$0.10                              | \$0.10                               | \$0.10                         |
| General Government                                 | \$0.13                               | \$0.13                                | \$0.13                              | \$0.13                              | \$0.13                               | \$0.13                         |
| Public Works                                       | \$0.25                               | \$0.25                                | \$0.25                              | \$0.25                              | \$0.25                               | \$0.25                         |
| Public Safety                                      | \$0.59                               | \$0.59                                | \$0.59                              | \$0.59                              | \$0.59                               | \$0.59                         |
| Town Collective Bargaining                         | \$0.04                               | \$0.04                                | \$0.04                              | \$0.04                              | \$0.04                               | \$0.04                         |
| Reserves   | \$0.10                               | \$0.10                                | \$0.10                              | \$0.10                              | \$0.10                               | \$0.10                         |
| Non-School Debt                                    | \$0.10                               | \$0.10                                | \$0.10                              | \$0.10                              | \$0.10                               | \$0.10                         |
| Non-School Benefits                                | \$0.62                               | \$0.62                                | \$0.62                              | \$0.62                              | \$0.62                               | \$0.62                         |
| Community Services                                 | \$0.05                               | \$0.05                                | \$0.05                              | \$0.05                              | \$0.05                               | \$0.05                         |
| <b>Subtotal</b>                                    | <b>\$1.97</b>                        | <b>\$1.97</b>                         | <b>\$1.97</b>                       | <b>\$1.97</b>                       | <b>\$1.97</b>                        | <b>\$1.97</b>                  |
| <b>C Combined Total Municipal Expenses Per GSF</b> | <b>\$4.78</b>                        | <b>\$4.19</b>                         | <b>\$4.19</b>                       | <b>\$3.47</b>                       | <b>\$3.60</b>                        | <b>\$3.60</b>                  |

Footnotes:

- 1 Average Cost per student based on FY21 budget divided by total enrollment; Marginal Cost per student TBD - requires input from PSB SC and executive staff
- 2 Excludes Water & Sewer fees paid through enterprise fund
- 3 Allocated 100% to Residential; total cost excludes golf course expenses paid through enterprise fund and Recreation Dept. revolving fund
- 4 Attached single family townhouses
- 5 Stick on podium style buildings
- 6 Mass. High Rise Building Code applies to buildings >75 feet in height

**BROOKLINE MA FISCAL IMPACT MODEL****Data Input Assumptions - HCCG Fiscal Impact Model**

Note: Cells in Blue = User Assumptions; Cells in Black = Calculated Values; see Budget Worksheet

**Municipal Expenses - Commercial**

| <b>Property Type</b>                          | <b>General Office</b> | <b>Medical Office</b> | <b>Life Science</b> | <b>Retail / Restaurant</b> | <b>Hotel</b>  |
|---|-----------------------|-----------------------|---------------------|----------------------------|---------------|
| <b>Municipal Expenses (1)</b>                 |                       |                       |                     |                            |               |
| Education (2)                                 | \$0.00                | 0.00                  | 0.00                | \$0.00                     | \$0.00        |
| Cultural Resources - Recreation & Library (2) | \$0.00                | 0.00                  | 0.00                | \$0.00                     | \$0.00        |
| General Government                            | \$0.02                | 0.02                  | 0.02                | \$0.02                     | \$0.02        |
| Public Works                                  | \$0.03                | 0.03                  | 0.03                | \$0.03                     | \$0.03        |
| Public Safety                                 | \$0.08                | 0.08                  | 0.08                | \$0.08                     | \$0.08        |
| Town Collective Bargining                     | \$0.01                | 0.01                  | 0.01                | \$0.01                     | \$0.01        |
| Reserves                                      | \$0.01                | 0.01                  | 0.01                | \$0.01                     | \$0.01        |
| Non-School Debt                               | \$0.01                | 0.01                  | 0.01                | \$0.01                     | \$0.01        |
| Non-School Benefits                           | \$0.08                | 0.08                  | 0.08                | \$0.08                     | \$0.08        |
| Community Services                            | \$0.01                | 0.01                  | 0.01                | \$0.01                     | \$0.01        |
| <b>Total Per GSF</b>                          | <b>\$0.24</b>         | <b>\$0.24</b>         | <b>\$0.24</b>       | <b>\$0.24</b>              | <b>\$0.24</b> |

Footnotes:

1 Excludes Water & Sewer fees paid through enterprise fund

2 Allocated 100% to Residential; total cost excludes golf course expenses paid through enterprise fund and Recreation Dept. revolving fund

**BROOKLINE MA FISCAL IMPACT MODEL****Data Inputs for Harvard College Consulting Group Fiscal Impact Model - Summary Matrix**

Note: Cells in Blue = User Assumptions; Cells in Black = Calculated Values; see AV and Budget Worksheets

**Revenue Assumptions**

| <b>Property Type - Multi-Family Residential</b> | <b>Adjusted A/V Per GSF (1)</b> | <b>Tax Rate</b> | <b>Tax Revenue Per GSF</b> |
|---|---------------------------------|-----------------|----------------------------|
| Condominium Low Rise (2 - 3 Floors)             | \$600                           | 0.945%          | \$5.67                     |
| Condominium Mid Rise (4 - 6 Floors)             | \$628                           | 0.945%          | \$5.93                     |
| Condominium High Rise (7 Floors +)              | \$664                           | 0.945%          | \$6.27                     |
| Apartment Low Rise (2 - 3 Floors)               | \$486                           | 0.945%          | \$4.60                     |
| Apartment Mid Rise (4 - 6 Floors)               | \$515                           | 0.945%          | \$4.87                     |
| Apartment High Rise (7 Floors +)                | \$551                           | 0.945%          | \$5.21                     |

  

| <b>Property Type - Commercial</b> | <b>Adjusted A/V Per GSF (1)</b> | <b>Tax Rate</b> | <b>Tax Revenue Per GSF</b> |
|-----------------------------------|---------------------------------|-----------------|----------------------------|
| General Office                    | \$545                           | 1.553%          | \$8.46                     |
| Medical Office                    | \$561                           | 1.553%          | \$8.71                     |
| Life Science                      | \$694                           | 1.553%          | \$10.78                    |
| Retail / Restaurant               | \$619                           | 1.553%          | \$9.61                     |
| Hotel                             | \$1,058                         | 1.553%          | \$16.43                    |

| <b>Municipal Cost Assumptions</b>               | <b>School Costs Per GSF</b> | <b>Other Municipal Costs / GSF</b> | <b>Total Cost Per GSF</b> |
|---|-----------------------------|------------------------------------|---------------------------|
| <b>Property Type - Multi-Family Residential</b> |                             |                                    |                           |
| Condominium Low Rise (3 Floors)                 | \$2.81                      | \$1.97                             | \$4.19                    |
| Condominium Mid Rise (4 - 6 Floors)             | \$2.22                      | \$1.97                             | \$4.19                    |
| Condominium High Rise (7 Floors +)              | \$2.22                      | \$1.97                             | \$3.47                    |
| Apartment Low Rise (3 Floors)                   | \$1.49                      | \$1.97                             | \$3.60                    |
| Apartment Mid Rise (4 - 6 Floors)               | \$1.62                      | \$1.97                             | \$3.60                    |
| Apartment High Rise (7 Floors +)                | \$1.62                      | \$1.97                             | \$3.60                    |
| <b>Property Type - Commercial</b>               |                             |                                    |                           |
| General Office                                  | \$0.00                      | \$0.24                             | \$0.24                    |
| Medical Office                                  | \$0.00                      | \$0.24                             | \$0.24                    |
| Life Science                                    | \$0.00                      | \$0.24                             | \$0.24                    |
| Retail / Restaurant                             | \$0.00                      | \$0.24                             | \$0.24                    |
| Hotel   | \$0.00                      | \$0.24                             | \$0.24                    |

**Net Fiscal Impact Per GSF (1)**

|   |                    |
|---|--------------------|
| <b>Property Type - Multi-Family Residential</b> | <b>Net Per GSF</b> |
| Condominium Low Rise (2 - 3 Floors)             | \$1.48             |
| Condominium Mid Rise (4 - 6 Floors)             | \$1.74             |
| Condominium High Rise (7 Floors +)              | \$2.81             |
| Apartment Low Rise (2 - 3 Floors)               | \$1.00             |
| Apartment Mid Rise (4 - 6 Floors)               | \$1.27             |
| Apartment High Rise (7 Floors +)                | \$1.61             |
| <b>Property Type - Commercial</b>               | <b>Net Per GSF</b> |
| General Office                                  | \$8.22             |
| Medical Office                                  | \$8.48             |
| Life Science                                    | \$10.54            |
| Retail / Restaurant                             | \$9.38             |
| Hotel   | \$16.19            |

**Footnotes:**

1 Gross square feet includes primary use and associated parking; A/V adjusted for applicable personal property and excise taxes

**BROOKLINE MA FISCAL IMPACT MODEL**

**Data Inputs for HCCG Fiscal Impact Model**

Note: Cells in Blue = User Assumptions; Cells in Black = Calculated Values; see AV and Budget Worksheets

**Up-Zoning Mixed-Use Scenario: Life Science Work - Live District**

| Property Type - Multi-Family Residential        | % of New Development | % of Residential | Adjusted A/V Per GSF (1) | Tax Rate      | Tax Revenue Per GSF | Municipal Cost Per GSF | Net Fiscal Impact Per GSF |
|---|----------------------|------------------|--------------------------|---------------|---------------------|------------------------|---------------------------|
| Condominium Low Rise (2 - 3 Floors)             | 0.0%                 | 0.0%             | \$600                    | 0.945%        | \$5.67              | \$4.78                 | \$0.89                    |
| Condominium Mid Rise (4 - 6 Floors)             | 10.0%                | 25.0%            | \$628                    | 0.945%        | \$5.93              | \$4.19                 | \$1.74                    |
| Condominium High Rise (7 Floors +)              | 10.0%                | 25.0%            | \$664                    | 0.945%        | \$6.27              | \$4.19                 | \$2.08                    |
| Apartment Low Rise (2 - 3 Floors)               | 0.0%                 | 0.0%             | \$486                    | 0.945%        | \$4.60              | \$3.47                 | \$1.13                    |
| Apartment Mid Rise (4 - 6 Floors)               | 10.0%                | 25.0%            | \$515                    | 0.945%        | \$4.87              | \$3.60                 | \$1.27                    |
| Apartment High Rise (7 Floors +)                | 10.0%                | 25.0%            | \$551                    | 0.945%        | \$5.21              | \$3.60                 | \$1.61                    |
| Subtotal  | 40.0%                | 100.0%           |                          |               |                     |                        |                           |
| <b>Weighted Average Residential Development</b> |                      |                  | <b>\$589</b>             | <b>0.945%</b> | <b>\$5.57</b>       | <b>\$3.89</b>          | <b>\$1.68</b>             |
| Property Type - Commercial                      | % of New Development | % of Commercial  |                          |               |                     |                        |                           |
| General Office                                  | 5%                   | 8.3%             | \$545                    | 1.553%        | \$8.46              | \$0.24                 | \$8.22                    |
| Medical Office                                  | 10%                  | 16.7%            | \$561                    | 1.553%        | \$8.71              | \$0.24                 | \$8.48                    |
| Life Science                                    | 40%                  | 66.7%            | \$694                    | 1.553%        | \$10.78             | \$0.24                 | \$10.54                   |
| Retail / Restaurant                             | 5%                   | 8.3%             | \$619                    | 1.553%        | \$9.61              | \$0.24                 | \$9.38                    |
| Hotel   | 0%                   | 0.0%             | \$1,058                  | 1.553%        | \$16.43             | \$0.24                 | \$16.19                   |
| Subtotal  | 60%                  | 100.0%           |                          |               |                     |                        |                           |
| <b>Weighted Average Commercial Development</b>  |                      |                  | <b>\$653</b>             | <b>1.553%</b> | <b>\$10.14</b>      | <b>\$0.24</b>          | <b>\$9.90</b>             |

Footnotes:

1 Gross SF includes primary use and associated parking; A/V adjusted for applicable personal property and excise taxes

**BROOKLINE MA FISCAL IMPACT MODEL**

**Data Input Assumptions - HCCG Fiscal Impact Model**

Note: Cells in Blue = User Assumptions; Cells in Black = Calculated Values

**Municipal Expenses - Town Budget Worksheet**

**Expense Allocation**

| Property Type   | Building SF       | % of Total    |
|---|-------------------|---------------|
| Residential   | 43,786,469        | 81.6%         |
| Commercial & Industrial                               | 5,558,648         | 10.4%         |
| Exempt (Institutional Excluding Town Owned Buildings) | 4,340,636         | 8.1%          |
| <b>Total</b>  | <b>53,685,753</b> | <b>100.0%</b> |

Source: Brookline Assessor's Office - August 2020

**TOWN OF BROOKLINE FULLY ALLOCATED FY2021 GENERAL FUND OPERATING BUDGET**

Source: Town of Brookline FY2021 Financial Plan Section II Budget Summaries & Town Meeting Approved Budget

| Total General Fund Operating Budget           | \$316,861,658        |                | Allocation Per GSF To: |                    |                   |                      |
|---|----------------------|----------------|------------------------|--------------------|-------------------|----------------------|
|   |                      |                | Residential            | Commercial         | Institutional     |                      |
| <b>Allocations</b>                            | <b>Amount</b>        | <b>% Total</b> | <b>Cost Per GSF</b>    | <b>Residential</b> | <b>Commercial</b> | <b>Institutional</b> |
| Education (3)                                 | \$188,532,687        | 59.5%          | \$3.512                | \$3.512            | \$0.000           | \$0.000              |
| Cultural Resources - Recreation & Library (3) | \$5,386,648          | 1.7%           | \$0.100                | \$0.100            | \$0.000           | \$0.000              |
| General Government                            | \$8,872,126          | 2.8%           | \$0.165                | \$0.135            | \$0.017           | \$0.013              |
| Public Works                                  | \$16,159,945         | 5.1%           | \$0.301                | \$0.246            | \$0.031           | \$0.024              |
| Public Safety                                 | \$38,973,984         | 12.3%          | \$0.726                | \$0.592            | \$0.075           | \$0.059              |
| Town Collective Bargaining                    | \$2,851,755          | 0.9%           | \$0.053                | \$0.043            | \$0.006           | \$0.004              |
| Reserves                                      | \$6,337,233          | 2.0%           | \$0.118                | \$0.096            | \$0.012           | \$0.010              |
| Non-School Debt                               | \$6,337,233          | 2.0%           | \$0.118                | \$0.096            | \$0.012           | \$0.010              |
| Non-School Benefits                           | \$40,558,292         | 12.8%          | \$0.755                | \$0.616            | \$0.078           | \$0.061              |
| Community Services                            | \$3,168,617          | 1.0%           | \$0.059                | \$0.048            | \$0.006           | \$0.005              |
| <b>Total Allocations (1)</b>                  | <b>\$317,178,520</b> | <b>100.1%</b>  | <b>\$5.91</b>          | <b>\$5.48</b>      | <b>\$0.24</b>     | <b>\$0.19</b>        |
|   |                      |                | Less PSB Costs (2)     | <b>-\$3.51</b>     | \$0.00            | \$0.00               |
|   |                      |                | Non-School Costs       | <b>\$1.97</b>      | <b>\$0.24</b>     | <b>\$0.19</b>        |

Footnotes:

- Variance due to rounding in Financial Plan pie chart
- PSB cost estimate based on Student Age Children (SAC) generated by new MF residential development; see Municipal Expenses worksheet
- Allocated 100% to Residential

Average Cost Per Student FY21

|  |               |
|--|---------------|
| Total Education Cost                         | \$188,532,687 |
| Total K-12 Student Enrollment in PSB (1)     | 7,615         |
| Average Education Expenditure Per Student    | \$24,758      |
| Less: Mass. Ch. 70 State Aid Per Student (2) | (\$2,013)     |
| Adjusted Average Education Cost Per Student  | \$22,745      |

Marginal Cost Per Student FY21 (3)

|  |     |
|--|-----|
| Estimated Marginal to Average Cost Ratio | TBD |
| Estimated Marginal Cost                  | TBD |

Footnotes:

- Public Schools of Brookline Demographic Study Report 2019 - Cropper GIS
- Brookline Financial Plan FY21; estimate of Chapter 70 aid
- Marginal cost per student TBD; requires input from PSB SC & executive staff

**TOWN OF BROOKLINE MA**

| BUILDING SQUARE FEET BY TAX CLASSIFICATION  | Total Without Town Owned Bldgs. |               | Total With Town Owned Bldgs. |               |
|---|---------------------------------|---------------|------------------------------|---------------|
|   | Classification                  | Building SF   | % Of Total SF                | Building SF   |
| Residential                                 | 42,384,769                      | 78.9%         | 42,384,769                   | 76.2%         |
| Mixed Use Residential (1)                   | 1,401,700                       | 2.6%          | 1,401,700                    | 2.5%          |
| <b>Residential Subtotal</b>                 | <b>43,786,469</b>               | <b>81.6%</b>  | <b>43,786,469</b>            | <b>78.7%</b>  |
| Commercial & Industrial                     | 4,682,271                       | 8.7%          | 4,682,271                    | 8.4%          |
| Industrial                                  | 69,708                          | 0.1%          | 69,708                       | 0.1%          |
| Mixed Use Commercial (1)                    | 806,669                         | 1.5%          | 806,669                      | 1.4%          |
| <b>Commercial Subtotal</b>                  | <b>5,558,648</b>                | <b>10.4%</b>  | <b>5,558,648</b>             | <b>10.0%</b>  |
| Exempt (2)                                  | 3,951,550                       | 11.0%         | 5,913,101                    | 10.6%         |
| Mixed Use Exempt (1)                        | 389,086                         | 0.7%          | 389,086                      | 0.7%          |
| <b>Exempt Subtotal</b>                      | <b>4,340,636</b>                | <b>8.1%</b>   | <b>6,302,187</b>             | <b>11.3%</b>  |
| <b>Total Excluding Town Owned Buildings</b> | <b>53,685,753</b>               | <b>100.0%</b> | <b>55,647,304</b>            | <b>100.0%</b> |

Source: Town of Brookline Mass. - Assessor's Office - August 2020

Footnotes:

- (1) Mixed use buildings include majority occupancy of principal use with minor occupancy of secondary use (e.g., apartment building with ground level retail)
- (2) Buildings owned and occupied by non-profit organizations including private schools, churches, synagogues, etc.
- (3) Town owned buildings (schools, Town Hall, police, fire, etc.) total square feet = 1,961,551