# MEMORANDUM

for

# THE CITY OF CAMBRIDGE

**Regarding Financial Analysis for the Alewife Zoning Petition**

Draft Memo 2/3/2021

## EXECUTIVE SUMMARY

**ZONING PETITION.** On February 28, 2020, a zoning petition was submitted by over 10 registered Cambridge voters to amend zoning provisions in the Alewife Quadrangle Northwest Overlay District (AOD-1). The petition is supported by Cabot, Cabot & Forbes Development Co., Inc. (CC&F), a major owner of approximately 16.3 acres of property in the district affected by the zoning change.

Among other changes, the petition would:

- increase the maximum allowable height of any non-residential building from the existing fifty-five (55) feet to eighty-five (85) feet by special permit from the Planning Board;
- allow an incremental increase in FAR of 0.25 for any lot in exchange for construction of a pedestrian/bicycle bridge crossing of the railroad tracks to the Alewife Triangle Overlay District (AOD-6), which is allowable in current zoning if the bridge connects from AOD-2 or AOD-4 but not from AOD-1;
- authorize the above FAR increase for "contribution of funding towards the construction, operation, maintenance, or repair of this bridge connection" in addition to construction and conveyance of property interests for the bridge construction; and
- exclude light industrial use(s) and/or consumer-facing business(es) on the ground floor of a non-residential building from the Gross Floor Area (GFA) calculations.

The petition would make the above changes subject to special permit approval by the Planning Board, which would have to find the proposal generally consistent with the Alewife District Plan.

An economic analysis was conducted to assess the potential change in property value enabled by the petition because it would increase the allowable gross floor area (GFA) on land owned by CC&F by more than 50,000 square feet. Since many factors impact the final project value - factors that may change before the final project is complete - the estimates used in this memo are indicative of the magnitude of the zoning petition's impact and should not be construed as a precise determination of this impact.

**METHODOLOGY.** The analysis herein presents the results of a financial model used to estimate the project value to a developer by calculating the additional Gross Floor Area (GFA) provided on the CC&F-owned land by the extra 0.25 FAR bonus square footage that would accompany the construction or funding and potential subsequent cost for operations and management of a pedestrian/bicycle bridge. To determine the maximum potential increase in project value, a single scenario was analyzed in which all of the additional 0.25 FAR is devoted to office/lab space. This reflects current market conditions in which office/lab development has higher value than residential development.

**IMPACT ON NET PROJECT VALUE.** This impact is determined from the combination of two components: (1) additional rental income from the additional office/lab space built with the 0.25 FAR bonus; and (2) the increase in project costs to build the additional building space. The 0.25 FAR bonus provided by the AOD-1 zoning petition, when applied to office/lab development on land owned by CC&F, is estimated to result in increased net project value of up to $32.5 million.

**DEVELOPER COST FOR BENEFIT COMMITMENTS:** CC&F has not yet made a specific commitment to either construct the pedestrian/bicycle bridge or provide a financial contribution toward its construction and maintenance. Therefore, these exact values remain uncertain. Three potential public benefits may accompany the zoning petition:

1. construction or other financial contributions toward building a pedestrian/bicycle bridge across the railroad tracks connecting the Alewife Triangle and Quadrangle area with the bridge construction cost estimated at $32.3 million;
2. payment of ongoing operation and maintenance cost for the pedestrian/bicycle bridge, estimated at $543,000 in 2020 dollars for maintenance over a 15-year period.
3. $2.6 million in payments into the Transportation Infrastructure Fund, based on a $5 PSF contribution.

## INTRODUCTION

In 2019, the City Council adopted a Policy Order requesting an economic analysis of rezoning petitions that increase the development potential of sites by more than 50,000 square feet (SF). The goal of this analysis is to assesses the potential change in property value from the zoning petition and estimate the value of public benefits to be delivered in tandem with new development allowed by the petition. In 2020, Cambridge hired Karl F. Seidman Consulting Services and Karp Strategies (together, the Consulting Team) as an independent third-party to prepare this analysis.

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Among other changes, the petition would:
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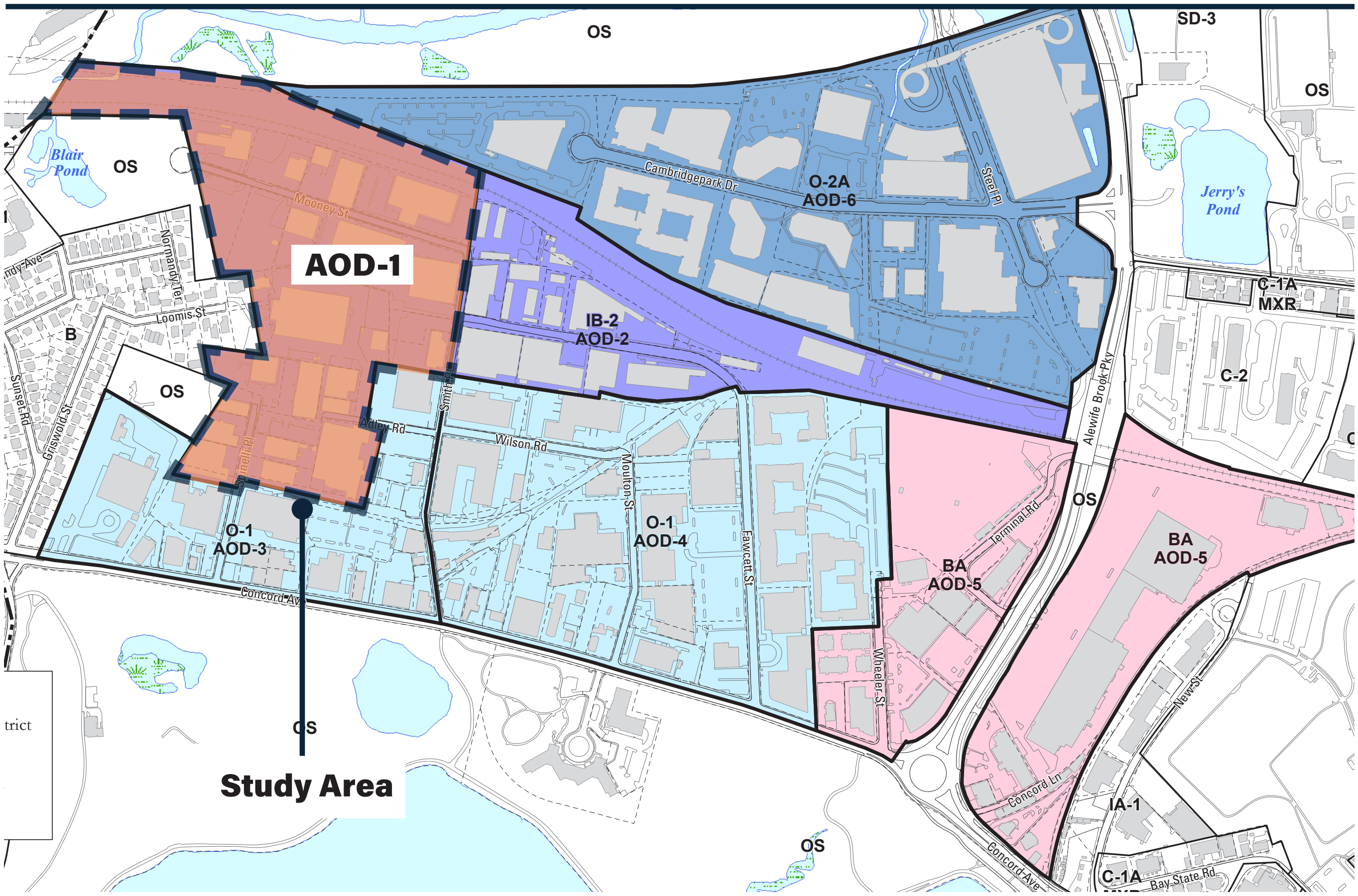
The petition would make the above changes subject to special permit approval by the Planning Board, which would have to find the proposal generally consistent with the Alewife District Plan.

An economic analysis was conducted to assess the potential change in property value enabled by the petition because it would increase the allowable gross floor area (GFA) on land owned by CC&F by more than 50,000 square feet. Since many factors impact the final project value - factors that may change before the final project is complete - the estimates used in this memo are indicative of the magnitude of the zoning petition's impact and should not be construed as a precise determination of this impact.

When the petition was originally filed, CC&F controlled 11.9 acres of land in the affected zoning district. On September 30, 2020, CC&F announced their acquisition of a 4.4-acre parcel adjacent to "The Quad", bringing CC&F's holdings in the district affected by this petition to a total of 16.3 acres. Although CC&F has not indicated that the newly acquired parcel would be part of a development plan for the area, the proposed zoning would allow the 0.25 FAR bonus to be applied across an entire development parcel, potentially enabling the FAR to be used even if there is no redevelopment of that site. Therefore, the financial analysis was adjusted to include the additional parcel. Similar increases could occur if additional sites in the AOD-1 district were acquired in the future; conversely, the value of the 0.25 FAR bonus would decrease if the land controlled by the development entity were reduced. Figure 1 presents the area covered by the zoning petition.

## Figure 1. Map of Alewife Quadrangle Northwest District AOD-1



CC&F is planning to undertake a mixed-used development on their property within the AOD-1 district that includes housing, office/lab space and ground floor light industrial and/or retail uses (which may be exempt from FAR limitations). The proposed increase in height of commercial buildings, from 55 to 85 feet, does not directly affect the amount of allowable square footage but it increases the vertical physical "envelope" for the construction of commercially marketable technical office/lab space, which may enable more of the allowable FAR on the site to be devoted to that use.

The zoning petition provision that directly impacts the change in the amount of allowable built gross floor area is the 0.25 FAR bonus. Therefore, the economic analysis conducted for this memo addresses this additional development space allowed under the 0.25 FAR bonus on land owned by CC&F, and estimates the maximum economic impact of this additional space on net project value.

This memo summarizes the methodology and results of the economic analysis conducted to assess new development enabled by the zoning petition.

## METHODOLOGY AND DATA SOURCES

To complete its analysis, the Consultant Team employed the following four-step methodology:

STEP 1

In conjunction with City staff, **the impact of the zoning petition on future development potential and corresponding development scenarios was determined**. These scenarios are presented in the next section. The additional type and scale of this additional development with the petition, along with the resulting change in development revenue and costs, formed the basis for estimating the petition's economic impact on project value. This initial step also identified the pedestrian/bicycle bridge and other public benefit commitments expected as part of the zoning petition that required valuation.

STEP 2

**The key financial parameters needed to complete the economic analysis of development scenarios were identified and estimated**. Examples of these parameters included rental and vacancy rates for the new construction housing and office/lab space in Alewife, construction and other development costs, the financial returns for comparable development projects, and costs associated with providing public benefits. To estimate these parameters, the consultants reviewed real estate market reports from Costar and other firms, City of Cambridge reports, and conducted fifteen interviews. These interviews included commercial real estate brokers and developers with experience in Alewife, and general contractors with local experience. The consultant team also had discussions with CC&F on their development plans and potential public benefits. Detailed information on the financial parameters used in the analysis are provided in an appendix.

STEP 3

**A financial model was prepared** and used to estimate the net operating income, project development costs ("development costs") and resulting project value for the additional development scenarios enabled by the zoning petition.

a. **Project Value**: The project value for a scenario was estimated based on dividing its projected net income by a required rate of return threshold for the type of project. A developer will only undertake or buy a project if it meets their standard for an investment return and they will fund a project based on this rate or return. For example, a developer with a 10% annual rate of return threshold will invest $10 million to build a project that is expected to generate $1 million in net income annually ($1 million/.10) since the project will provide the developer income equal to 10% of its total investment each year. Similarly, investors acquiring a completed project determine its purchase price (value) based on dividing its income by their required rate of return. More explanation of these return thresholds is provided below.

b. **Project Development Costs**: In addition to the project value, the total project development costs were estimated based on data about construction and project soft costs (i.e., legal, engineering, design, insurance, taxes, fees, etc.) gained for comparable projects and from interviews.

c. **Net Value Increase**: The net impact of the zoning petition was calculated as the difference between the change in project value and the change in total project development costs for the additional development allowed under the zoning petition.

STEP 4

**The cost for developer benefit commitments was estimated** using information and financial parameters obtained from the City of Cambridge, CC&F and other sources.

## RETURN THRESHOLDS

As noted above, return thresholds were used to estimate the project value for different development scenarios. Project developers face considerable financial risk when undertaking a project. Risks faced by developers include delays in obtaining project permitting, securing financing, and obtaining tenants for the project, which increase development costs and delay the receipt of income, all of which reduce investment returns. Another risk is unexpected changes in construction, financing or other costs which can increase development costs and lower actual returns. Finally, obtaining lower rents than expected due to changes in demand for space or increased competition from other developments will reduce project income and investment return.

Due to the time and risk involved in development, developers have a high return threshold, currently in the 6 to 7% range for Cambridge, depending on the development type and location. Investors, on the other hand, would acquire a property after it is built, leased and occupied, with the future income - at least over the lease terms - already established. Consequently, investors face less financial risk and have a lower return threshold, currently in the 4% to 5% range for Cambridge. The return threshold for a project developer was used for this analysis since it reflects the current status and risk for the project with CC&F as the site developer still at an early stage of development in which it faces considerable risks to complete the project with the projected costs and rental income.

## RESULTS

The results from this research and financial model analysis are presented below, beginning with an explanation of the development scenarios analyzed, and followed by the estimates for the zoning petition's impact on the financial value of the development and the cost for the proposed public benefits. All valuations and cost estimates are as of Third Quarter, 2020.

Since many factors impact the actual final project value, and they may change before the final project is completed, the estimates in this memo represent approximations based on current market and cost conditions. They are indicative of the general magnitude of the zoning petition's impact - not a precise determination of this impact.

## DEVELOPMENT SCENARIOS

The Consultant Team and City staff concluded that the extra 0.25 FAR bonus square footage accompanying the construction or funding of a pedestrian/bicycle bridge is the zoning petition change that has the most direct and measurable effect on the quantity and value of new development. As noted earlier, the increase in allowed height for commercial buildings will help to physically enable that additional FAR to be utilized for commercially marketable office/lab development, in addition to supporting development goals of the City's Alewife District Plan. If the allowable height is increased, then the amount of additional square footage will still be constrained by the FAR limitations.

Since rents and property values in the Alewife district are highest for office/lab developments, a single scenario in which the 0.25 FAR bonus is devoted to office/lab space was analyzed. This represents the maximum economic value that CC&F can generate from the zoning petition density bonus. The additional Gross Floor Area (GFA) provided by this bonus for the site area under CC&F control was used to estimate changes in project value, development costs and net project value. The land area under CC&F control, including the newly acquired site, totals 707,466 SF. Therefore, the amount of additional office/lab space that can be built under the 0.25 FAR bonus is 176,866 SF.

The development scenario is summarized in Table 1.

**Table 1. Development Scenarios Used for Analysis**

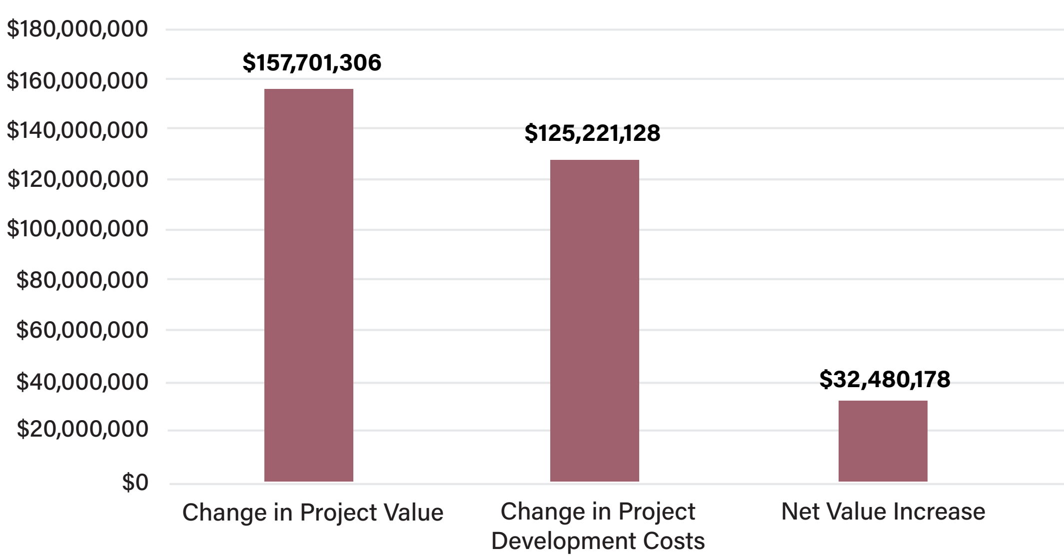
| | |
|---|---|
| Developer-Controlled Land in AOD-1 District | 707,466 SF |
| Allowable Density Bonus with Zoning Petition | 0.25 FAR |
| Additional Office/Lab Development Potential with Zoning Petition | 176,866 SF |

## ZONING PETITION IMPACT ON PROJECT VALUE

Figure 2 shows the estimated increase in project value, increase in project costs and the resulting net value increase for all office/lab development with the 0.25 FAR bonus. Two components determine the magnitude of this value: (1) additional rental income from the additional office/lab space built with the bonus; and (2) the increase in project costs to build the additional building space. The combination of these two changes yields the estimated net value increase from the zoning petition.

Based on developer return requirements, the zoning petition results in an estimated net value increase of up to $32.5 million. This represents the maximum net value increase, based on the full density bonus used to build additional office/lab space. If CC&F chooses to use part of 0.25 FAR bonus for housing, then the impact on net project value would be less. Also, if the developer's land holdings were to increase or decrease, that would affect the value of the 0.25 FAR bonus.

**Figure 2. Impact on Zoning Petition, in $ Millions Developer Returns**



Several factors impact, and may ultimately change, the net increase in project value that actually occurs.

- **One factor is the actual rent achieved in project leases.** This analysis assumes $73 per SF in annual office/lab rent, reflecting current market rents for the Alewife neighborhood. If Alewife office/lab rents decline due to lower demand or competition from other development projects in the neighborhood and competing locations, then the net value changes will be lower. On the other hand, stronger demand for Alewife lab space and delays with other projects will result in higher rents for the CC&F Quadrangle project, and the change in project value from the petition will be higher.
- **A second factor impacting net value is development cost**. If construction or other development costs are higher than estimated due to unexpected costs incurred, accelerated construction cost growth, delays in securing development approvals, financing or leasing up the completed project, then actual development costs will be higher, resulting in a lower net value change. Savings in development costs, on the other hand, will result in a higher increase in net project value.
- **Additionally, capital market changes may alter required returns for developers and investors** – and, ultimately, how the increase in rental income with the zoning petition is valued by owners and investors. For example, continued low interest rates and low stock market returns may increase investor interest in real estate assets and lower their return threshold. Within real estate assets, if other property types perform poorly and become less favored by investors, Cambridge lab space may become a more desirable asset with lower than current return thresholds. In these situations, investors may be willing to pay more to acquire a completed office/lab project even if its income stream does not change.
- **Covid-19 impacts**. The future impacts of the Covid-19 pandemic are unknown at this time but could alter the project value and development costs. Long-term changes in the demand for office space, lab space and multifamily apartments may affect the rents achieved and the resulting project value. Changes in construction practices, material and labor costs could alter construction costs while new legal, regulatory or financial issues and processes can add to non-construction project soft costs.
- **Finally, the type of tenant and lease terms at a completed office/lab project alters its financial risks, and thus the desired return and value of the income stream**. If the additional office/lab space is fully leased to financially strong tenants with 15-20 year leases, then investors will reduce their expected rate of return and pay more for the stabilized property than if it has financially riskier tenants and shorter leases.

## COST OF POTENTIAL DEVELOPER BENEFIT COMMITMENTS

As of the beginning of February, CC&F has neither filed a written public benefit commitment nor made a specific commitment to either construct the pedestrian/bicycle bridge or provide a financial contribution toward its construction and maintenance.

Therefore it is not possible to provide an exact calculation of the cost of committed benefits. For the purpose of this analysis, the potential costs associated with a pedestrian/bicycle bridge have been assessed in the following three ways:

1. Funds required to construct a pedestrian and bicycle bridge across the railroad tracks connecting the Alewife Triangle and Quadrangle areas;
2. Funds required for ongoing maintenance of the pedestrian and bicycle bridge; or
3. A $5 PSF payment into a Transportation Infrastructure Fund for the total GFA of commercial space built, which is the contribution rate recommended by the City's 2019 Alewife District Plan for all new commercial development in the area.

Cost estimates for these public benefits are presented in Table 2. The $32.2 million figure for the pedestrian/bicycle bridge is based on a $25 million cost estimate provided to the City of Cambridge by the engineering firm HDR in June 2015, adjusted to 2020 based on 3.5% annual increases in construction costs. Since this estimate was based on a different bridge location and particular design, it is possible that a future bridge built at a location in the AOD-1 district will have lower or higher costs. Also, the feasibility of a bridge that would carry vehicles, such as shuttles, has not been determined and could have very different costs. Annual maintenance costs of $50,000 are based on an estimate provided to Cambridge by HDR in September 2020. A figure for the maintenance cost over a 15-year period in 2020 dollars is included in this estimate. Transportation Infrastructure Fund contributions are based on the contribution amount in the petition ($5 PSF) and the amount of office/lab space that CC&F plans to build with the zoning petition under a preliminary master plan scheme provided by the developer.

**Table 2. Estimated Value of Potential Public Benefits Related to AOD-1 Zoning Petition**

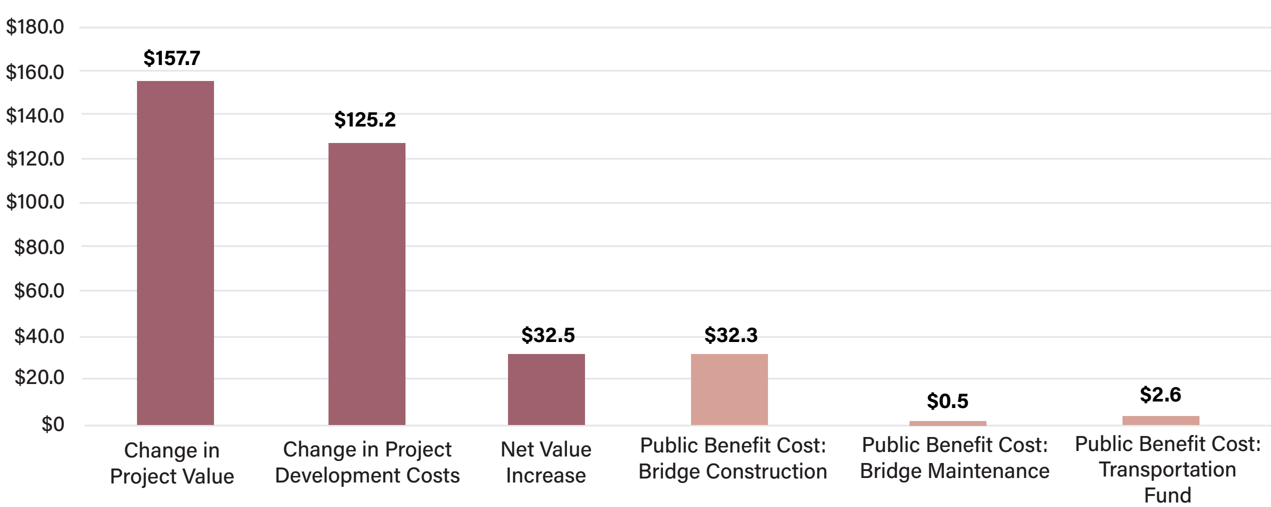
| Public Benefit | Cost Estimate |
|---|---|
| Pedestrian/Bicycle Bridge-Construction | $32,300,000 |
| Pedestrian/Bicycle Bridge-Maintenance, 15 years | $543,000 |
| Transportation Infrastructure Fund | $2,600,000 |

## CONCLUSIONS

Approval of the AOD-1 zoning petition will enable an additional 176,866 SF of gross floor area on land currently controlled by CC&F in the district in conjunction with construction or financial support for a new pedestrian/bicycle bridge. The maximum impact of this additional density occurs with office/lab space development, which will provide an estimated increase of $32.5 million in net project value. These estimates reflect the risk and investment return thresholds for a developer undertaking the project from conception through completion. That value is subject to variability based on how market rents, development costs and other factors change between 2020 and the project's completion and occupancy. A lower net project value may also occur if CC&F decides to use part of the density bonus under the petition for residential development or other allowed uses.

The cost for developer-provided value public benefits from CC&F investments made in conjunction with the zoning petition are uncertain at this time as no specific commitments related to construction of a pedestrian and bicycle bridge have been made. The estimated cost to construct such a bridge is approximately $32.2 million, based on past estimates provided to the City, but could be lower if constructed in a different location. Maintenance costs over a 15-year period would total approximately $543,000. If a Transportation Infrastructure Fund contribution were made at a rate of $5 per square foot of total commercial development, the total contribution would be up to $2.6 million.

**Figure 3. Comparison of Net Value Change and Public Benefit Costs, in $ Millions**



## APPENDIX A | DEVELOPMENT ASSUMPTIONS FOR FINANCIAL MODEL
## OFFICE LAB DEVELOPMENT SCENARIO

| Parameter | Assumed Value for Analysis |
|---|---|
| Development Costs | |
| **Total Development Costs** | |
| Land Costs including Site Clean-Up | Not included, scenario is for added building space on existing land |
| Construction - Core Building | $400 per SF, GFA |
| Construction - Tenant Improvement Allowance | $200 per SF, GFA |
| Soft Costs | 20% of construction |
| | |
| **Revenue** | |
| Lab Rent, NNN Annual PSF | $73 |
| Vacancy Rate | 10% |
| Leasable Space/GFA | .95% |
| | |
| Financing | |
| Developer Return Threshold | 7.0% |
| Investor Return Threshold | 5.7% |