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Executive Summary

No Property Development Inc. presents Green Tracks, our newest development project in Callowhill, Philadelphia. This 12-storeys residential-commercial mixed-use property with a total gross floor area of 368,146 square feet will add 270 apartment units, 155 parking spaces, 68,500 square feet retail space and 103,571 square feet office space to Center City. Green Tracks features a green lifestyle that we define as environmentally sustainable and healthy. Green Tracks will be a green building that meets LEED Platinum standards and will provide residents with direct access and unique view to the green space of the Rail Park next door.

Site selection

Our development site is located in the block bounded by 13th Street, Callowhill Street, 12th Street, and Noble Street in Callowhill, Philadelphia, PA. Callowhill is north to Chinatown and west to Northern Liberties, separated by the I-676 Highway to Philadelphia Center City. Callowhill is a vibrant neighborhood that used to be an industrial area but now sprout with good restaurants, live music, and independent art. Callowhill is a young neighborhood where the 20-34 age cohort makes up 47% of the total population of more than 3,000 residents. Callowhill is also comparatively wealthy compared to the rest of Philadelphia as Callowhill has a median household income 60% higher than that of Philadelphia. Callowhill has recently seen an increase in development especially in regard to projects in the pipeline and presents a good opportunity for our development.

Figure 1 Aerial View of target location

To zoom in to our development site, the site is within a 3-minute walking distance of two subway stations--Race Vine Station and Spring Garden Station--and several bus stations. The site has good accessibility through both transit and highway that defines Callowhill's boundary. Besides, our site is adjacent to the Rail Park, Philadelphia's version of the High

Line that turned the former railroad tracks into an elevated promenade. The site is right next to the beginning of the elevated section of the Rail Park and has a wonderful view of the park as well as the more distant green space from the undeveloped second phase of the Rail Park.

Figure 2 Surrounding transportation resources

Our site is composed of three parcels under the registry 003N190200, 003N190165, and 003N190176. The largest parcel is 34,625 sq ft large and adjacent to the Rail Park through its whole northern border, while the other two smaller parcels that are adjacent to 12th Street are each 7,704 sq ft and 19,840 sq ft large. The total size of the site is 62,169 square feet, and the perimeter is 1315 feet. Our site takes the whole block except for the southwest corner that is an industrial land currently used as a transformer substation. All three parcels of our site are zoned as Commercial Mixed-use 3 (CMX-3) and fit into CTR Center City Overlay District-Vine Street Area and Philadelphia's Federal Opportunity Zones. CMX-3 allows both residential and commercial development that the proposal will discuss in the later Zoning Analysis section.

All three parcels on our site are currently used as parking lots. The largest parcel 003N190200 is a parking lot in combination with a two-storey small building, and the other two parcels are plain parking lots without any construction. The site condition does not require large-scale demolition or landscaping and will result in a smoother development process with lower construction cost. Both parcel 003N190200 and parcel 003N190165 belong to Famell Limited Liability, and parcel 003N190176 belongs to Patriot Parking INC. The different ownership of parcels can potentially increase the difficulty of the land acquisition, but we believe we can achieve successful negotiations with both owners as our parcels of interest are only a small portion of all property that these two companies own.

Development Concept

As a public park on the West Side of Manhattan, NYC Highline Park has attracted attention from all New Yorkers and even the world. It successfully builds a health-orientated community, activates the along-side communities, and promotes the commerce and real estate development in the region and city levels.

Green Tracks will hopefully create the Philly's Highline experience with our mixed-used development that features a green lifestyle. Philadelphia needs a green living space. Philadelphia ranked the 25th most polluted metro area in the nation[1], and Center City with dense road networks suffers from air pollution year-round[2]. Green Tracks–a project that will be designed and constructed according to LEED Platinum standards–will become an exemplar of green development that hopefully can reduce pollution and create a more livable and healthier Philadelphia. Green Tracks intend to be green not only in its physical building structure, but also in its eco-friendly commercial types and its connections to other green spaces including the Rail Park.

Taking in consideration the zoning profile of the parcel, we are proposing a mixed-use development, with residential, commercial, office and community spaces. The retail space in the second floor with a plaza is expected to connect to the Rail Park directly so that people can walk directly into their favorite retail shops. It will not only be used as the outward swaying, but also be the spot of activities where residents can invite their friends to their party or where the rail park community can hold their events. The commercial area will also be activated by the Rail Park. The office space of our property is expected to create local job opportunities for the community and build a life loop for residents who might be able to work and live in this lovely community. Main renters will come from life science industry which Philadelphia has strong industrial support and its content corresponds with

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[1] PHILADELPHIA, P. A. | A. 21. (n.d.). Press releases. Press Releases | American Lung Association. Retrieved December 16, 2021, from https://www.lung.org/media/press-releases/state-of-the-air-philadelphia

[2] Kummer, F. (2021, June 4). Philly's air pollution soars in summer. this neighborhood has the worst of it. Retrieved December 16, 2021, from https://www.inquirer.com/science/climate/philadelphia-air-pollution-center-city-particulate-matter-20210524.html

Green Tracks development concept. Besides, the project will promote the vitality of the Rail Park community, reaching a win-win situation for both our development and for the park.

Graphics

The total FAR of our development will be 600% with the 100% FAR bonus for Green Building. With 68,500 square feet of commercial space, 103,571 square feet of office, and 170,500 square feet of residential units, the total gross floor area is 368,146 square feet, smaller than the 373,014 square feet of maximum building area. Total rentable area is 342,571 square feet and the circulation space will be 255,75 square feet, 15% of total residential area. The site size is 62,169 square feet in total, and the lot coverage is 80% of it, with a setback of 10 feet, reaching 49,559 square feet. The 30,904-parking space will be on the surface without enclosed walls, thus not counted as gross floor area. The parking lot can provide 155 parking spaces in total, fulfilling the 81 required parking spaces out of 270 residential units. The parking surplus will serve people who work in our building complex and visitors to the Rail Park.

Commercial spaces are divided into two types, retail (1-2 floor) which includes eco-shops, supermarkets, cafes, restaurants, galleries, and other eco-friendly retail shops. And offices (3-4 floor) which will be mainly rent to the life science industry. The plaza on the second floor is the entrance from the rail park to this building.

Floor 5-12 is residential apartments. The idea of green building is carried out by adding plenty of roof gardens, increasing the value of our apartments. And it also provides a great view outside the window towards the Rail Park.

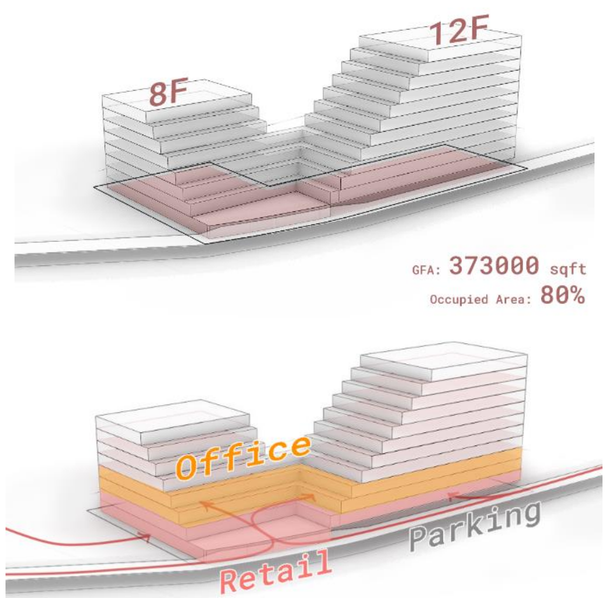

Figure 3 Function Distribution

Zoning

All three parcels of our site are zoned as Commercial Mixed-use 3 (CMX-3) and fall into CTR Center City Overlay District-Vine Street Area, Center City Residential District Control Area and Center City Commercial District Control Area. Our site is also located in Philadelphia's Federal Opportunity Zones. The maximum occupied area for intermediate CMX-3 lot is 75% of parcel size, and for corner lot is 80% of parcel size. Buildings that contain dwelling units need to have a minimum 8 feet side yard. The maximum Floor Area Ratio (FAR) for CMX-3 buildings is 500%, while buildings can gain bonus FAR through Mixed Income Housing or Green Building: buildings can get 150% bonus for Moderate Income Housing, 250% bonus for Low Income Housing, 50% bonus to LEED Gold Green Building and 100% for LEED Platinum Green Building. To be eligible for FAR bonus except Mixed Income Housing, buildings must have frontage on two streets at least 50 feet wide or three streets at least 20 feet wide and must be located in Center City Commercial District Control Area. Buildings can only gain additional FAR up to 250%. For parking requirements, CMX-3 buildings need to provide at least 3 parking spaces per 10 residential multi-family units, and no minimum required parking spaces apply to retail use and office use in CMX-3 zoning.

To conform to the zonings, our development will be a mixed-use development including retail, office, and multi-family residential units. For the retail area on the first and second floor, we plan to have local cafés, restaurants, organic grocery stores and other eco-friendly retail shops, all are permitted as of right under CMX-3 zoning. We plan to have office space on the third and fourth floor to create local job opportunities for the community and build a life loop for residents who might be able to work and live in this lovely community. This is also permitted as in zoning regulation. The multi-family residential structure above the retail and office space is again permitted as of right. Due to the unique location of our site with the north side against the wall of the elevated Rail Park, we plan to provide surface parking instead of underground parking for our residents, and surface parking in CMX-3 zones require special exception approval. We are confident that we can obtain a variance for surface parking because the parcels are currently used as parking lots and the communities around Green Tracks are lack of parking resource. Because we hope to build a direct access from our building to the Rail Park, we will also need a variance based on the agreement with the park. In return for direct access, we will solve the accessibility issue of the park that currently has no accessible entrance to Callowhill St. due to the elevation of the park; we will provide the public with accessible elevators to the elevated level of the park. We will also provide public bike racks for visitors to the park to solve the parking issue and to encourage sustainable transportation. Our commerce and office will bring more people to the Rail Park and potentially show investors of the Rail Park that the park has good development opportunities for future phases. Furthermore, a foundation will be built based on the profit of Green Tracks to help improve and further renovate the community area. Thus, we are confident that the Rail Park as well as the community will reach an agreement with us on the issue of variance.

Pro forma

The Building Program

Unit type	# of units	Sq ft
Residence: Studios	110	500
Residence: 1 BR	95	600
Residence: 2 BR	65	900
Commerce	/	68,500
Office	/	103,571
Parking	155	30,904

The building program for this proposal is a mix-used green building. There will be residential, commercial and office space in the property. The specific settings are listed in the table. Something needs to be mentioned is that we focus on providing small living units in this property, because in our market study, we find out that there are more and more younger generations, who live alone, coming into this area. And the small living unit is much more affordable for them. However, the housing type in this area is too simple, available units tend to be old and large housing units. There is a gap between the demand and supply in this area. Therefore, 110 studios, 95 One BR, and 65 Two BR are built and the area for these housing units are respectively: 500 sq ft for a studio, 600 sq ft for 1BR, 900 sq ft for 2BR. The area settings are based on the area of units provided by comparable housing projects in Philadelphia. Besides, around 68,500 sq ft commercial space and 103,571 sq ft office space will be added into this mixed-use development proposal for the purpose of building a sustainable life loop in this community. The tenants of these retail and office areas will come from life-health industries who can rent a retail store for their green-lifestyle products or rent an office for the office space. Also, around 30,904 sq ft area will be allocated as surface parking, providing around 155 units of parking. These, on the one hand, provide 3 parking out of 10 residential units into the community, on the other hand, offer extra parking to the community including tourists and citizens who come to this area for events.

Acquisition	$7,143,900
Hard costs in Total	$145,596,900
Demolition	$19,686

Site work	$19,686
Construction Cost per sf for Residence	$464
Construction Cost per sf for Commerce	$346
Construction Cost per sf for Office	$346
Construction Cost per sf for Parking	$5
Residential structure	$79,180,200
Commercial structure	$43,372,454
Office Structure	$16,095,283
Parking structure	$166,882
Hard contingency	$6,942,710
Green roof Grant	-$200,000
Soft costs in Total	$11,647,752
Developer Fee	$1,643,886
Total development cost	$166,032,438

The Construction

Our site is made up of three separate parking lots (411-19 N 13TH ST, 410-24 N 12TH ST, CALLOWHILL ST) owned by two companies, Famell Limited Liability, and Patriot Parking INC. According to the property values estimated by the Philadelphia government, these three lots' values are respectively $1,969,200, $4,399,500, and $775,200. Therefore, we assume the acquisition cost will be $7,143,900. Since there is one two-story building (3,764 sq ft) in the lot, $19,686 is estimated as the demolition cost (with the standard of $5.23 per sq ft). Besides, according to studies of construction projects within Philadelphia[3], we assume the construction costs for residence, commerce and office are respectively $430, $320, and $320. And since the proposal is to build a green building, the construction cost per sq sf averagely increase by 8%[4], reaching $464, $364, and $364. Doing so, the total costs for residential

[3] U.S. construction costs per square foot: Cumming insights - construction market analysis. Cumming Insights. (2021, September 17). Retrieved December 16, 2021, from https://ccorpinsights.com/costs-per-square-foot/

[4] Hu, M., & Skibniewski, M. (2021, August 27). Green Building Construction Cost Surcharge: An overview: Journal of architectural engineering: Vol 27, no 4. Journal of Architectural Engineering. Retrieved December 16, 2021, from https://ascelibrary.org/doi/full/10.1061/%28ASCE%29AE.1943-5568.0000506?src=recsys

structure, commercial structure, and office structure are respectively $79,180,200, $43,372,454, and $16,095,283. And the property with green roof will meet the requirement of Stormwater Grant, bringing a $200,000 grant to the project[5]. Moreover, parking of our property is designed as surface parking, the construction cost per sq sf is only $5, that is because the original lot is already used as surface parking lots. Little effort will be needed for the renovation. To some extent, the decreased cost by surface parking makes our proposal more feasible. And for the developer fee, only 1% will be taken, that is because we have an optimistic prediction on this development project and want to hold it in the long-term. A proportion of the profit gained during the property operation will eventually be given to the developer to make up low developer fees. And the soft cost, 8% of the hard cost, is included into the pro forma Combining all costs, total development cost is $166,032,438.

To meet such a huge amount of development cost, a construction loan has been introduced into the project. The 14-month construction loan is supposed to cover 80% of the construction cost, with an interest rate as 7%. The total construction loan will be $116,477,520. We refer the interest rate and drawdown factor based on finance products from two professional real estate finance lenders "BRIDGE INVEST"[6] and "LISC"[7]. And we believe 7% interest rate is reasonable for us to lend the loan because it is in the reasonable arrangement (5%-9%) and our huge loan amount will request a high interest rate. The concrete settings for the construction loan are listed below.

% Financed	80%
Term (months)	14
Drawdown factor	0.5
Interest rate	7%
Loan amount	$116,477,520

[5] Stormwater Grants Application Guide - Philadelphia. (n.d.). Retrieved December 16, 2021, from https://water.phila.gov/pool/files/stormwater-grants-application-guide.pdf
[6] Lending programs. BridgeInvest. (2021, November 11). Retrieved December 16, 2021, from https://bridgeinvest.com/lending-programs/#Construction
[7] Loans by type of product. Local Initiatives Support Corporation. (n.d.). Retrieved December 16, 2021, from https://www.lisc.org/our-model/lending/loan-products/loans-product-type/#construction

Refinance

Term (years)	30
Interest rate	4.20%
Debt service coverage ratio	1.39
Perm loan fees	1.5%
Net operating income	$9,276,394
Annual debt service	$6,673,665
Loan amount	$114,123,853
NPV Loan amount	$18,394,582

After the construction, the property will be used as collateral to lend the permanent loan. In the permanent loan, 1.39 is set as debt-service coverage ratio, 4.2% is set as interest rate and NOI is calculated as $9,276,394. In this way, we can lend $114, 123, 853 as the 30-year-permanent loan, and the annual debt service is $6,673,665. Even though the amount is huge, it is affordable for our NOI. The NPV of the loan is $18,394,582, which means in the end we will pay extra this much money to pay off the loan. It is the optimized outcome of the DSCR, load amount, and interest rate. The setting of the permanent loan is based on the setting of the local financial market product. 4.2% interest rate is acceptable, because of the huge amount of our permanent loan, compared to the average interest rate 3.77%[8]. And according to MeridianBank, the minimum DSCR[9] of the apartment's property is 1.2, we set it as 1.39 to leverage the risks of this permanent loan.

ESG Fund and NGO (The highline network)	$24,500,000
Patient Capital (Insurance Co.)	$27,500,000

[8] Gellerman, E. (2021, July 29). Average commercial real estate loan rates for 2021. ValuePenguin. Retrieved December 16, 2021, from https://www.valuepenguin.com/average-commercial-real-estate-loan-rates

[9] Real estate underwriting guidelines overview. (n.d.). Retrieved December 16, 2021, from https://www.meridianbanker.com/wp-content/uploads/2020/10/CRE-Guidelines_updated10.2020.pdf

The permanent loan cannot cover all the cost; therefore, two types of equity investors are also introduced into the project. The first type of investor is ESG Fund (ESG funds are portfolios of equities and/or bonds for which environmental, social and governance factors have been integrated into the investment process.) and NGO, such as "The Highline Network", who focus on the environment protection and urban renovation. The second type of investor is Insurance Company and other patient capital. They will invest respectively $24,500,000 and $27,500,000 into the project.

These patient capitals, looking for long-term-and-steady returns, are suitable for our project. Because they have strong capital reserves and focus on the steadiness of return instead of the high interest rate. Since the rail park is still developing its phase two, the local community is still in the formation process, instead of current, the project will become more convincing as time moves on. And this patient capital will bring sufficient patience into the project to let developers develop and cultivate the project. Eventually, the investment will yield $162,757,582as 30-year before-case-flow (present value, discounted by 3% discount rate), bringing yearly 7% payoff to the equity investors.

30-year-before cash flow (PV)	$162,757,582
Yearly Return Rate	7%

The operations

The operating expense is calculated referring to comparable projects in Philadelphia, the specific expense is listed below. The utility expense is estimated using the standards as $180 per housing unit per month as tenants are responsible for electricity and Internet and we pay for water and trash collection. However, since our building is a green building, which will decrease the utility expense during operations, the utility expense decreased by 20% reaching $466,560 in total. The management fee is $100 per housing unit per month which will mainly be used to pay off the service staffs of the property[10]. The average landlord's

[10] Home. All Property Management. (n.d.). Retrieved December 16, 2021, from https://www.allpropertymanagement.com/resources/ask-a-pro/posts/how-much-property-managers-charge/

insurance in the country is around $1400 per unit per year[11]. Yet, because Green Tracks will be a new building with safety devices and environmentally sustainable features that help to reduce the risk of damage or other potential issues, we believe that we can negotiate the annual insurance premium to $1200 per unit. Since our property is green building, we expect the maintenance cost is low so that 1% of before tax cash flow is reserved as replacement reserve. Because this reserve is relatively small and changes with annual NOI, we do not include it into the operating expenses when calculating the NOI. Based on the property value, the property taxes is $2,740,628 using the 1.4% Cap Rate and NOI to calculate. Our development can obtain a property tax abatement for the first ten years as new construction of residential property, so that we add the property taxes back to the cash flow for the first ten years in our pro forma[12].

Operating expenses	Total
Utility expenses	$466,560
Management fee	$324,000
Insurance	$324,000
Replacement reserves	$53,434
Annual expense increase	3%
Total Operating Expenses	$3,855,188
Property taxes	$2,740,628

The profitability

Since we want to hold and operate the property in the long term, our profitability mainly comes from the rents of residential units, commerce space and office. The specific renting price is listed below. The residential unit price ($1600, $1800, $2400 for studios, 1BR, and 2BR respectively) is set considering the rates of local surrounding living units and

[11] How much does landlord insurance cost? Steadily. (2021, December 13). Retrieved December 16, 2021, from https://www.steadily.com/faq/landlord/costs/what-does-it-cost/

[12]Get A property tax abatement: Services. City of Philadelphia. (n.d.). Retrieved December 16, 2021, from https://www.phila.gov/services/property-lots-housing/property-taxes/get-real-estate-tax-relief/get-a-property-tax-abatement/

the rates of comparable living units within the Philadelphia[13][14]. And the decreasing unit number from Studios to 2 BR also corresponds to the local market demand and demography analysis. For the commerce and office space, the rates are set as $3.5/sq ft. These rates refer to the rates of high-end commerce[15] and office[16] space surrounding our target property area. The total areas of Office and Commerce is 103,571 sq ft and 68,500 sq ft respectively. That is because we want to provide job opportunities in the local community on one hand to ensure the vitality, and on the other hand to establish a living loop for residents who can also work in one of our office spaces and consume in the commercial space. 155 surface parking units will be leased as $250 per month per unit. The surrounding rates for parking unit are in the range of $240 - $320[17]. And since the supply of parking units is low, we believe the rate of parking units is reasonable.

Unit type	# of units / Sq ft.	Rent (Per unit or per sq ft)
Studios	110 Units	$1,600
1 BR	95 Units	$1,800
2 BR	65 Units	$2,400
Commerce	68,500 Sq ft	$3.50
Parking	155 Units	$250
Office	103,571 Sq ft	$3.50

In the first year, with the estimated vacancy rate as 5%, this rent can bring around $13,041,583 to the project (Gross rental income subtract the vacancy). And the outdoor garden provided by our project will be rented as event places for green-lifestyle events. The rate of renting the event space is $2500 per hour for a 20,000 sq ft event place. Under the

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[13] Zillow, I. (n.d.). The lofts at the Wolf Building Apartment Rentals - Philadelphia, PA. Zillow. Retrieved December 16, 2021, from https://www.zillow.com/b/the-lofts-at-the-wolf-building-philadelphia-pa-9hJQRt/

[14] Zillow.com. (n.d.). Retrieved December 16, 2021, from https://www.zillow.com/

[15] LoopNet.com. (n.d.). 322-344 N broad st, Philadelphia, PA 19102 - high traffic location on North Broad St. LoopNet. Retrieved December 16, 2021, from https://www.loopnet.com/Listing/322-344-N-Broad-St-Philadelphia-PA/4366799/

[16] Yardi Systems, I. (n.d.). 1818 market street - office space availability. 1818 Market Street, Philadelphia - Office Space For Lease. Retrieved December 16, 2021, from https://www.propertyshark.com/cre/commercial-property/us/pa/philadelphia/1818-market-street-3/

[17] Get everywhere easier: Reserve parking and save. SpotHero. (n.d.). Retrieved December 16, 2021, from https://spothero.com/

assumption that this space will be rented for three hours per month, the rent will bring $90,000 in the first year. This is a conservative assumption, and as the property becomes more and more mature, the frequency of the event will rise, increasing the other income.

	Year 1	Year 10
Gross rental income	$13,727,982	$17,911,903
Vacancy	-$686,399	-$895,595
Other income	$90,000	$117,430
Effective gross income	$13,131,583	$17,133,737
Operating expenses	$3,855,188	$5,030,146
Net operating income	$9,276,394	$12,103,591
Annual debt service	-$6,673,665	-$6,673,665
Tax deduction	$2,740,628	$2,740,628
Before tax cash flow	$5,343,358	$8,170,554

After paying the operating expenses ($3,855,188) and annual debt service of the permanent loan ($6,673,665), the before tax case flow of the first year is $5,343,358, with the tax deduction for our property Assuming an annual rent increase of 3%, the before tax cash flow will reach $8,170,554 in the year 10. These profits will eventually bring 7% yearly-return to our equity investors, accumulating up to $162,757,582 in the 30-year term.

Sensitivity Test

Sensitivity Test: Less Income

The current vacancy rate of Callowhill where our project is located is 9%, while our Pro Forma assumes a 5% vacancy rate because we are confident in our development concept that meet the demand of the market and reach a lower vacancy rate. Yet, because the influx of young people has been driving the development of Callowhill, the COVID-19 pandemic has imposed high uncertainty on the future of migration into this neighborhood and the prospects of real estate development. Thus, we test the sensitivity of our project against a higher vacancy rate.

We first assume a vacancy rate of 8%, higher than the 5% vacancy rate in our Pro Forma. We then adjust our rents to remain attractive to the consumers even if the demand is lower than we project. We lower the rents by $100 per unit for studios and 1-BR units, and $150 per unit for 2-BR units. We also decrease the rents for commercial and office areas by $0.2 per sq ft. After the adjustment in rents, we expect the vacancy rate will decrease from 8% to 6%, slightly higher than the Pro Forma vacancy rate. Our mitigation strategies will restrain the rent loss due to vacancy to $777,121, significantly lower than the unmitigated loss of $1,098,239.

	Vacancy Rate	Rent Loss in Vacancy
Before Mitigation	8%	$1,098,239
After Mitigation	6%	$777,121

Unit type	Rent per unit or sq ft	Annual Rental Income
Studios	$1,500	$1,980,000
1 BR	$1,700	$1,938,000
2 BR	$2,250	$1,755,000
Commercial	$3.30	$4,969,760
Office	$3.30	$1,844,251

Our mitigation strategies will result in an annual rental income of $12,174,891, lower than the Pro Forma annual rental income, and the NOI will be reduced to $8,409,702. Thus, the permanent loan amount that we can borrow from the bank decreases to $103,461,281, and the total source cannot cover the total development costs of $166,032,438. Thus, we will find a third equity investor who will provide $12,000,000 investment besides the two equity investors that we have to increase the equity investment to $64,000,000 from $52,000,000. We are confident that we will find a third equity investor because our project is highly attractive in the long term when Philadelphia will eventually recover from the impacts of the pandemic and when the second phase of the Rail Park opens; we will offer a yearly return rate of 0.07 which is lucrative. Also, because our development site is in Philadelphia's Federal Opportunity zone, investing on our project can defer and possibly reduce the capital gain tax from investor's previous transactions of assets, and the tax incentives will attract more investors for our project [18]. With a third equity investor, the total source will be $167,461,281, enough to cover the total development costs. Thus, we believe our project is resistant to a potential increase in vacancy rate.

	Pro Forma	New
Annual Rental Income	$13,041,583	$12,174,891
NOI	$9,348,394	$8,409,702
Loan Amount	$114,188,144	$103,461,281
Equity Investment	$52,000,000	$64,000,000
Total Source	$166,123,853	$167,461,281

Sensitivity Test: Construction Cost

Due to the uncertainty of construction cost that can fluctuate due to multiple factors such as the supply of materials, labor, and transportation conditions, we test the sensitivity of our project against the increase in construction cost. Increased construction cost is a reasonable possibility because we plan to use environmentally sustainable construction

[18] Opportunity zones. Opportunity Zones. (n.d.). Retrieved December 16, 2021, from https://www.philaopportunityzones.org/

materials that meet the requirement of LEED standards, and such materials require a higher construction cost than normal materials by 7.43% to 9.43%. In the sensitivity test below, we examine the scenario that the construction cost of our green development increases more than the range to 10% higher than normal construction cost.

Construction Cost	Pro Forma Cost	New Cost
Construction Cost per sq ft. for Residential	$464	$473
Construction Cost per sq ft. for Office	$346	$352
Construction Cost per sq ft. for Commerce	$346	$352
Total Development Cost	$166,032,438	$168,973,160

The increased construction cost assumes construction costs for all space types will be 10% higher–instead of 8% higher—than non-green building construction cost, and the soft costs that we calculate as 8% of the hard costs will also increase accordingly. Thus, the total development cost will increase $3,000,000 to $168,973,160. In this case, the original $166,123,853 total source could not cover the increased development cost. To ensure the financial sustainability of our project, we will increase rents for both residential and commercial areas as the table below shows. We will increase the rent by $100 per unit for every residential unit type, and we will increase the rent by $0.1 per sq ft for commercial and office space.

Unit type	Rent per unit or sq ft	Annual Rental Income
Studios	$1,700	$2,244,000
1 BR	$1,900	$2,166,000
2 BR	$2,500	$1,950,000
Commercial	$3.60	$5,421,557
Office	$3.60	$2,011,910

Due to the increase in rents, we assume that the vacancy rate for our project will increase from 5% to 6.5%. After taking the increase in vacancy rate into consideration, the adjusted rents will increase the annual rental income to $13,331,667 and consequently the NOI of our development to $9,566,478, helping us to secure a higher amount of permanent loan so that the total source of the project will become $169,692,643, higher than the total development cost of $168,973,160. Thus, we believe that our project will be able to handle the increase of construction cost well.

	Pro Forma	New
Annual Rental Income	$13,041,583	$13,331,667
NOI	$9,276,394	$9,566,478
Loan Amount	$114,123,853	$117,692,643
Total Source	$166,123,853	$169,692,643

Sensitivity Test: Finance

Because of the uncertainty of the highly correlated global financial market, the financing circumstance market can be fickle these days. Such uncertainty can be seen clearly in 2020 because of the pandemic. The federal funds rate dropped to levels not seen since the financial crisis of 2008 in order to minimize the economic impact. In the post-pandemic era, we cannot assume that the current financial markets will remain unchanged over the years of development of the project. Therefore, sensitivity tests in finance are obviously necessary. Thus, we test the sensitivity of our project against a higher interest rate.

The funding for this project is from two equity investors, and a permanent mortgage. Among the reachable bankers, the initial mortgage plan is a 30-year-fixed-rate mortgage with an interest rate of 4.20%[19]. If home prices are still going to climb in the next few years,

	Interest rate	Loan amount
pro-forma	4.20%	$114,188,144
new	4.80%	$106,482,705

[19] Gellerman, E. (2021, July 29). Average commercial real estate loan rates for 2021. ValuePenguin. Retrieved December 16, 2021, from https://www.valuepenguin.com/average-commercial-real-estate-loan-rates#loan-type

interest rates will rise accordingly. Thus, we assume an interest rate of 4.8%, which is 0.6% higher than the initial interest rate.

After the increase of interest rate, the loan amount decreases from about 114 million to 106 million dollars, but the costs remain the same, which means there is a gap of about 8 million dollars, so the funding cannot afford the initial development budget. Our solution is to control the construction cost, a solution that is possible because we assume that we pay close attention to the market, so the construction cost can be adjusted before construction. We assume that the construction cost per sq ft for residential decreases about $20 from $464 to $443, and construction cost per sq ft for retail and office decreases about $20 from $346 to $324. Although the decrease in construction cost may affect the final quality of the building, we will make sure Green Tracks is still in good quality and believe that this project remains competitive because of its access to parks and great environment.

	Hard costs	Soft costs	Developer fee	Total development cost
pro-forma	$145,596,900	$11,647,752	$1,643,886	$166,032,438
new	$137,827,390	$11,026,191	$1,559,975	$157,557,456

Based on the above settings, the total hard costs decrease from around 145 million to 137 million dollars. And the soft costs decrease accordingly, which leads to the new total development cost of about 157 million dollars. Considering the two equity investors, the development cost can be covered by the funding, thus we believe that our project will be able to handle this circumstance.

Market study

Residence

Demand Studies

The target market for our residential units will be the Callowhill neighborhood. Considering that Callowhill, as part of the Central District of Philadelphia, has distinct demographic characteristics and consequential housing market compared to the rest of the city, we conduct a market study for the residential units that focuses on Callowhill with reference to nearby neighborhoods such as Chinatown and Northern Liberties and to the Greater Center City of Philadelphia.

Callowhill has experienced significant population growth with clear signals of young population, creating an expanding demand for housing. The total population of Callowhill grew by 62% from 2025 to 3287 between 2010 and 2019, significantly higher than the average 5% population growth rate of Philadelphia[20]. The increase in Callowhill population was mainly due to the influx of young people in the 20-35 age cohort, as the graph below shows. Millennials in the 20-34 age cohort made up 47% of the total population in Callowhill in 2019 and grew faster than any other age group with an absolute increase of more than 450 and a growth rate higher than 200% between 2010 and 2019. Compared to the population pyramid of Philadelphia, Callowhill is very skewed to young age cohorts.

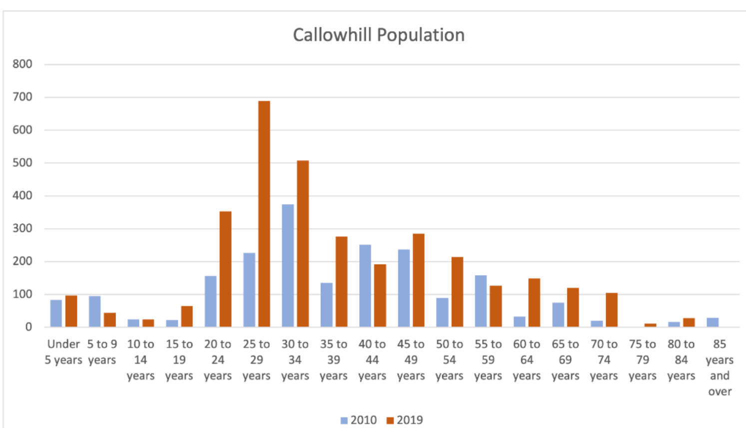
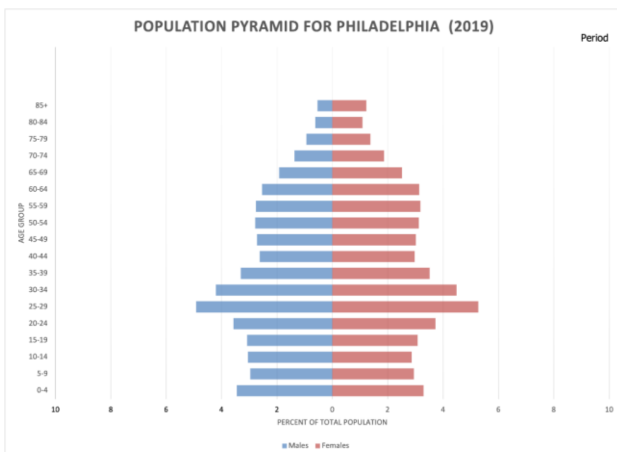


Figure 4 Callowhill Population Distribution

[20] Bureau, U. S. C. (2021, November 23). American Community Survey Data. Census.gov. Retrieved December 16, 2021, from https://www.census.gov/programs-surveys/acs/data.html

Young people who now dominate Callowhill tend to be single white-collar professionals. Callowhill has a plurality of unmarried residents who live alone; non-family households made up more than 70% of all households in Callowhill, and 45% of all householders live alone in 2019. The median household income in Callowhill was $75,098, 60% higher than the Philadelphia median household income of $45,927, and among the highest quintile of median household income for all Philadelphia Census Tracts. The comparatively high household income is likely due to the vibrant economic activities in Center City–as the Philadelphia 2035 Comprehensive Plan puts–where "Eds and Meds" (education and healthcare) as the pillar of employment create well-paid employment opportunities for people with higher education. Indeed, 20% of Callowhill residents worked in healthcare, the largest employment sector for the neighborhood, followed by 14% in Professional, Scientific, and Technical Services, and 10% in Educational Services.



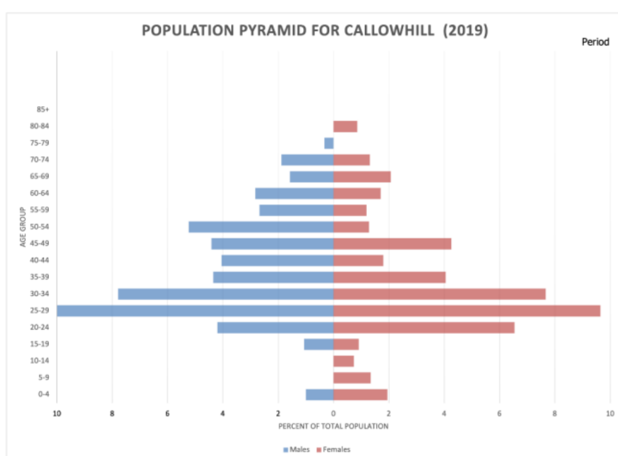


Figure 5 Population trend comparison

The population of Callowhill as well as Philadelphia's Central District is likely to continue increasing in the future 5 to 10 years, maintaining the high demand for housing units. Philadelphia 2035 projects that the total population of Central District will grow to 137,000 in 2035; considering that Central District already had a population of more than 130,000 in 2019, we are confident that the population growth will continue and even outnumber the projection. Callowhill as a part of Central District is also likely to grow, as its population has continued to increase without any downturns in the past ten years as the graph shows. If the current migration-in trend continues, Callowhill will have more young people that demand more housing units. Although the Central District has seen a decline of jobs in private, office-based sectors, we believe that the change in economy is unlikely to reduce the household income of our target population because "Eds and Meds," the main employment sectors for Callowhill population has remained the exception to Philadelphia's chronic job loss. Thus, the strong demand for high-end housing units is likely to last in the near future of Callowhill.

To accommodate the influx of the aforementioned young professionals, Callowhill housing market faces a growing demand for more and better housing units for single Millennials. The demographic changes suggest a surge in demand for high-end apartments that have smaller housing units for professional Millennials who live alone or cohabit with partners and have good accessibility to employment opportunities and leisure events.

Supply Studies

Nearly 60% of Callowhill housing units are multi-family housing structures with more than 20 units. To better understand the supply market, we collected data from comparable apartment buildings near our development site; specifically, we identified high end apartments with similar unit types of studios, 1BR and 2BR units that were constructed in recent years after 2010. The map below presents the locations of all buildings.

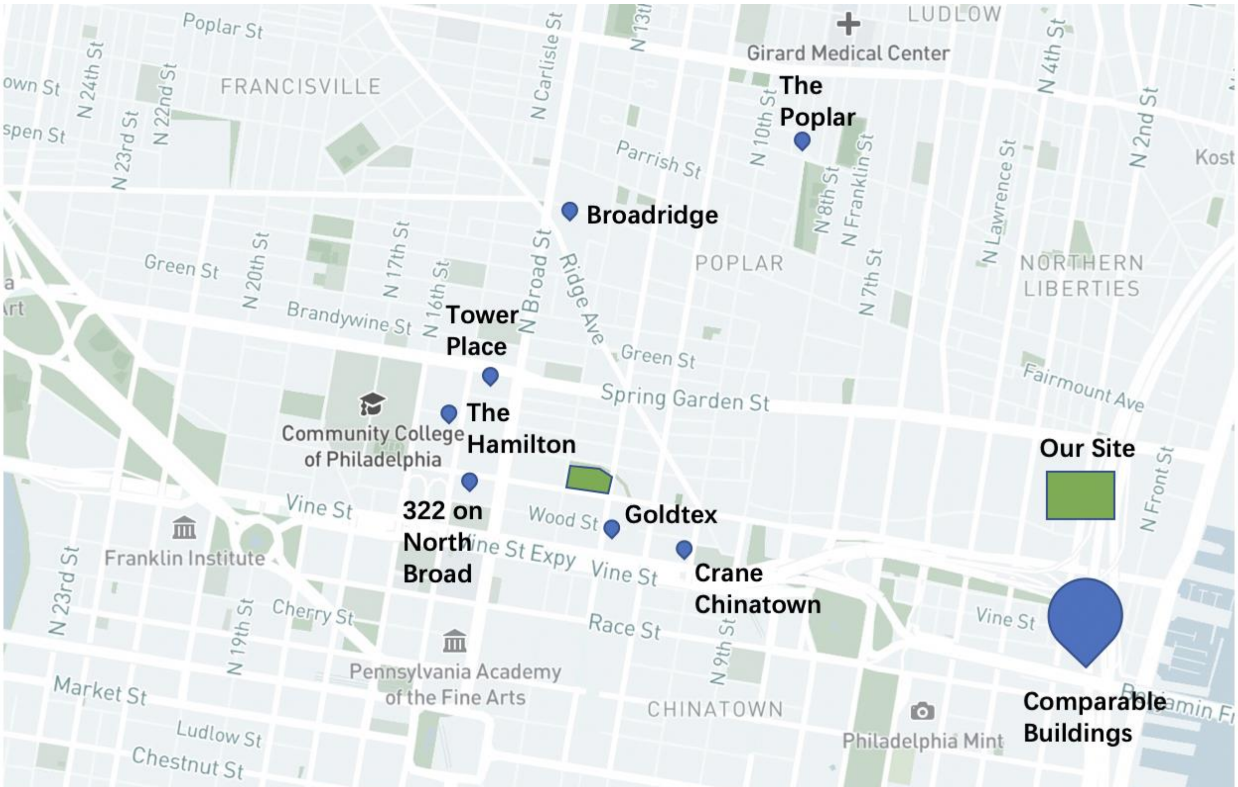


Figure 6 Comparable Projects: Location

Comparable	Studio		1B1B		2B2B	
	per unit	per sq ft	per unit	per sq ft	per unit	per sq ft
Goldtex	1850	3.3	2000	2.8	3400	2.65
Crane Chinatown	1700	3.2	2100	2.46	NA	NA
Tower Place	NA	NA	1750	2.33	2500	2.3
The Hamilton	1600	4.05	2000	3.73	2630	2.91
322 on North Broad	1640	3.01	2040	2.73	3180	2.69
The Poplar	1835	3.05	2215	3.21	3175	2.88
Broadridge	1500	3.16	1800	2.59	3070	2.73
Green Tracts	1600	3.2	1800	3	2400	2.66

Figure 7 Comparable Projects: Rent

The current housing supply for apartment buildings provides various unit types including studios, 1BR, 2BR, 3 BR and more. The form above lists the rent per unit and rent per square foot for all our comparable buildings. The average rents per unit differ greatly across buildings due to differences in floor plans and unit areas; yet the rents per square foot are more consistent. The average rent is $3.295 per square foot for studios, $2.85 per square foot for 1BR, and $2.69 per square foot for 2BR. The rents of our development match the average market rate of rents per square foot; on the other hand, the rents per unit at our development are lower than the market average rents per unit, giving us an advantage in attracting renters.

Comparable	Units	Completion Year	Retail	Parking	Amenities
Goldtex	163	2013	Elixr Coffee	Surface Lot, Garage	pool, hot tub, fitness center, basement garage, concierge, lounge, bike storage
Crane Chinatown	150	2019	Coffee Concierge	other	lounge, roof deck, fitness center
Tower Place	204	2013		Covered Off-site park	fitness center, penthouse lounge, theater room, bike storage
The Hamilton	576	2019		Garage	fitness center, fireplace lounge, study area, roof deck, movie room, bike storage
322 on North Broad	339	2018	Heart + Paw, Palm Tree Gourmet	Garage	bike storage, gas grills, on-site retail, outdoor fireplace, fitness center, conference room, courtyard
The Poplar	285	2020		Surface Lot, Garage	fitness center, spa, kids playroom, dog park, co-working, lounge
Broadridge	330	2021	ALDI	Covered parking, Ga	coworking, lounge, fitness center, screening room, sound studio, pet spa

Figure 8 Comparable Projects: Amenities

Most comparable buildings provide parking options in various forms for residents with charges. For amenities, all comparable buildings provide fitness centers and lounges; other popular amenities include roof decks, study solace and co-working space, and bike storage. About half of comparable buildings have retail space that offer coffee and grocery stores; however, the area retail space tends to be limited in comparable buildings, presumably because comparable buildings have good accessibility to off-site retail, however, around Green Tracks there are not many off-site retail options. Based on the supply studies of comparable buildings, we plan to include a fitness center, lounge, and bike storage into our circulation space. Green Tracks will have retail space much larger than comparable buildings because the site does not have many retail stores nearby.

Equilibrium Analysis

Callowhill has a boosting housing market with a growing demand and an inadequate supply that results in increasing rents. The median gross rent in Callowhill has increased by

19% from 2010 to 2019. After a small downturn in 2013 due to the economic fluctuation, the median gross rent has increased steadily since 2013, with a huge rise in 2018. The post-COVID housing market has performed well with strong signs of recovery in Philadelphia. Philadelphia's multifamily year-to-year rent growth rate was higher than 6% for the second quarter of 2021 and has steadily recovered since the outbreak of the pandemic[21].

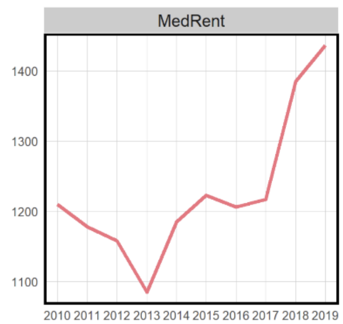


Figure 10 Median rent trend

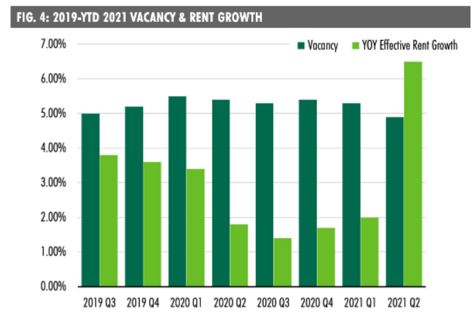


Figure 9 Vacancy & Rent growth

On the other hand, the vacancy rate of Callowhill has significantly decreased, suggesting a good absorption of previous developments and an unmet demand. The vacancy rate of Callowhill decreased from 21% in 2010 to 9% in 2019, suggesting a significant increase in housing demand despite the aforementioned comparable developments between 2010 and 2019. Thus, the market has absorbed previous development well without the danger of oversupply. In the post-COVID market, the vacancy rate slightly decreased in Philadelphia to lower than 5% for the second quarter of 2021. The table below shows the current vacancy rate for all comparable buildings. The average vacancy rate is 6.58%, which is likely overestimated because this rate includes all units on the market as vacancy while some of them are not currently available but available in one or two months. Thus, the actual

Comparable	vacancy
Goldtex	9.20%
Crane Chinatown	2.00%
Tower Place	3.98%
The Hamilton	8.85%
322 on North Broad	7.67%
The Poplar	5.26%
Broadridge	9.09%
Average	6.58%

Figure 11 Vacancy rate for surrounding communities

[21] Philadelphia region Multifamily Report H1 2021 | CBRE. (n.d.). Retrieved December 16, 2021, from https://www.cbre.us/research-and-reports/Philadelphia-Region-Multifamily-Report-H1-2021

vacancy rate for current Callowhill is likely to be around 5%. The low vacancy rate suggests an unmet demand for housing.

Building	Status	Units	Parking	Retail (sq. ft)
417-25 Callowhill St	Planned	219	71	
416-38 Spring Garden St.	Planned	329	87	15000
200 Spring Garden St.	Planned	360	83	21000
412 N. Second St	Under Construction	397	106	20400
1306-14 Callowhill Street	Planned	181	55	3208
1428-38 Callowhill Street	Under Construction	162		
1106-14 Spring Garden Street	Planned	79	27	17543
Total		1727	27	17543

Figure 12 Table: Pipelines for residential market

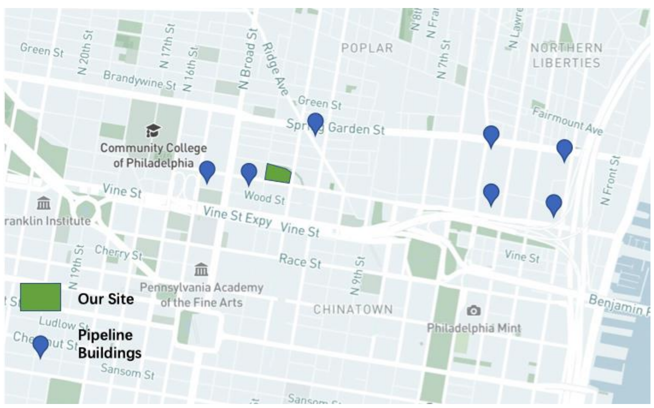


Figure 13 Map: Pipelines for residential market

Due to the growing demand for housing units and inadequate supply that the market currently provides, more development projects have been proposed for Callowhill and nearby neighborhoods. The table below lists development projects in the pipeline for high end apartments buildings. While Callowhill and nearby areas have many new development projects in the pipeline, most development projects are on the east side of Callowhill, away from our site. Also, pipeline projects will add 1,700 new housing units to the market, but it is unlikely to meet the growing demand of Callowhill and nearby areas. Thus, we believe that our project has a strong competitive advantage in the growing market as we provide what residents need–that is smaller housing units–-and more in our green life concept.

Office

Demand Analysis

Because of escalating vaccination rates, Philadelphia's unemployment rate has fallen from 15.0 percent at the height of the pandemic in April 2020 to 6.9 percent in July 2021.[22] The decreased unemployment rates also increase the demand in the office market. According to AVISION YOUNG[23], the demand for leasing in the Philadelphia MSA has been in the process of recovering, the number of executed leases to date in 2021 is 2.5 msf, up from 1.8 msf in 2020, even though post-COVID leasing activity has declined by 28.7 percent. During this process, class A properties accounted for 81.1%[24] of post-COVID leasing activity, which means flight-to-quality and market fundamental discrepancies between class A properties and other market segments were reinforced. Therefore, we have reasons to believe the market is recovering. And the pandemic rectified the Philadelphia office market; the demand for class A office property will keep increasing and the other class B properties will have a compressed market share in the future. That is a good news for our class A office space.

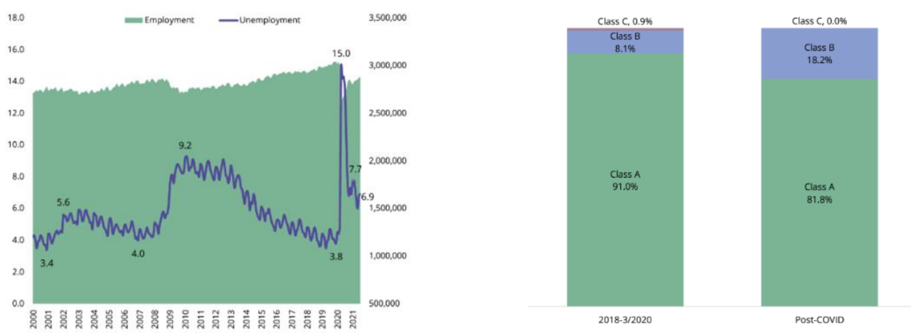


Figure 14 Demand Analysis for office

Supply Analysis

There are around 19 office properties, 3.3 msf, under construction. Most of them will be put into market before 2023. However, from the map, we can see that most of new office

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[22] U.S. Bureau of Labor Statistics. (2021, December 15). U.S. Bureau of Labor Statistics. Retrieved December 16, 2021, from https://www.bls.gov/

[23] Commercial real estate company: Avison Young US - united states - avison young. United States. (n.d.). Retrieved December 16, 2021, from https://www.avisonyoung.us/

[24] Commercial real estate company: Avison Young US - united states - avison young. United States. (n.d.). Retrieved December 16, 2021, from https://www.avisonyoung.us/

properties are to the west of city center[25]. There is not new property development to the north of Philadelphia city center. In terms of vacancy, the direct and sublease vacancy rates have decreased from 15% to 11.4% due to higher demand than in 2020. In the specific submarket of Market St East, the inventory of Grade A office is 5,930,330 sq ft. YTD total net absorption (% of stock) is -4.2% and the direct vacancy rate is 16.4%. Even though the vacancy rate of this submarket is high, we believe in the post-pandemic era, as the recovery of the pandemic accelerates, the tight supply in the other submarkets exaggerates, and business priorities toward rich amenity resources in the city center reinforces, this submarket will consume the inventory quickly and decrease the vacancy rate soon.

Figure 15 Pipeline locations

	Market St East	Market St West	The Navy Yard	University City
Inventory	5,930,330 sq ft	23,976,426 sq ft	777,365 sq ft	3,188,352 sq ft
Total net absorptio	-2,147 sq ft	-327,190 sq ft	0 sq ft	9959 sq ft
YTD total net absorption of stock	-4.2%	-3.1%	1.4%	2.6%
Direct vacancy	16.4%	12.4%	3.6%	2.0%
Total vacancy	18.6%	14.6%	4.2%	2.6%
Average direct asking rent	$34.33	$36.23	$46.74	$48.68

Figure 16 Submarket information

Matrix of Attributes

At the same time, attributes of different properties are compared. 1309 Noble St is the property that is closest to our project. It is typical for 1309 Noble St to stand for other property conditions in that area. Due to its building condition and class, its rent is only $20 per sq ft per year. This illustrates that the unsatisfying property conditions keep pushing down the rate in this area. The 100 Penn Sq E is the typical property in the city center and open to all industries. Its building condition is good, available leasing area is sufficient, and has 660 covered parking. However, its last renovation happened in 1991, which means the interior environment may not meet current business needs and its maintenance cost will be

[25] Commercial real estate company: Avison Young US - united states - avison young. United States. (n.d.). Retrieved December 16, 2021, from https://www.avisonyoung.us/

high. Therefore, the rent of this property is $37 per sq ft per year. The 601 Walnut St is the newly built property that mainly open to the life science industry. Its exterior and interior conditions are similar with our property. Besides, it includes 300 covered parking. The rent of this property is $50 per sq sf per year. This property tells that life-science industry has the ability to pay for the high rent as long as the property condition can meet their needs. And because the development theme of our property is related to eco-friendly, and health. Our construction standard for the office is high and it is in a potential development area for eco-friendly and health. And its rent is only $42 per sq ft per year. We believe our property is competitive in the local office market.

	Our project	**1309 Noble St**	**100 Penn Sq E**	**601 Walnut St**
Floor Plate Size	62,169	113,000	105,218	73,532
Available Leasing Area	103,571	116,064	618,112	88,014
Rate	$42/SF/YR	$20.00 /SF/YR	$37/SF/YR	$50.00 /SF/YR
Building Class	A	B	A	A
Condition	Partial Build-out	Shell Space	-	Partial Build-Out
Parking	155 Surface Parking	10 Surface Parking 30 Covered Parking	660 Covered Parking	300 Covered Parking
Year Built/Renovated	2023	2000	1991	2007
Availability	2023	Now	Now	Now

Figure 17 Comparable office properties

Rents price

In the office market of Philadelphia, Rents increased by 3.4% from Q3 2019 to Q3 2021[26], maintaining a steady upward trajectory despite the pandemic. This reflects a flight-to-quality tendency and landlords' reluctance to reprice their properties. The average rent rate for Market St East submarket is $34.33. Despite this, concessions have undeniably accelerated, landlords have offered additional concessions to tenants to entice them to

[26] Property investment: JLL. Commercial real estate. (n.d.). Retrieved December 16, 2021, from http://www.us.jll.com/

renew their leases. Normalized to a ten-year lease term, tenant improvement allowances are 15% higher than in 2019, and free rent is 25% higher than in 2019. Therefore, we set our office rent at $42 per sq ft per year. This setting meets its market strategy which focuses on providing top and green office environments to the high-end and high-profit offices and

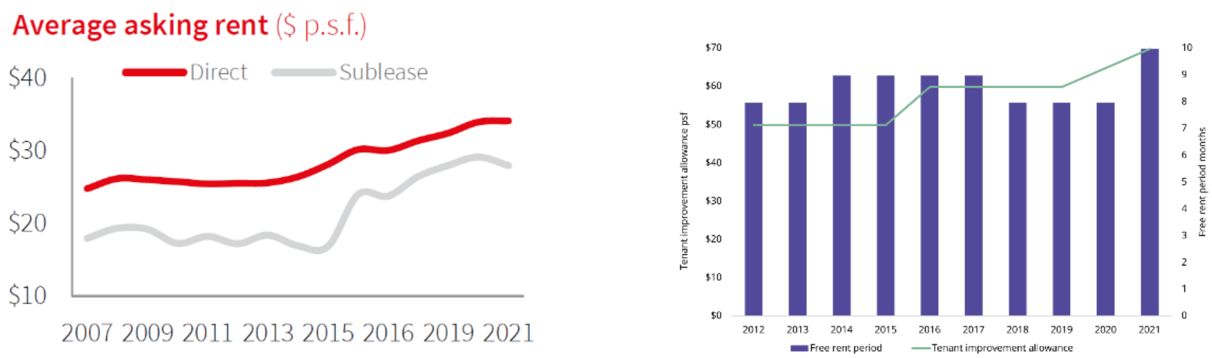
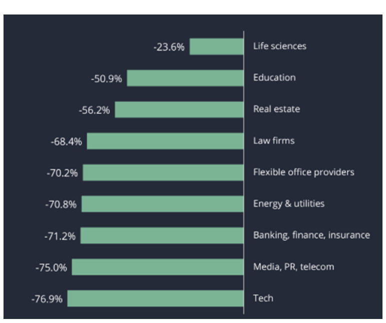


Figure 18 Office Rents and Concession

companies. And according to the market response, some concessions will be made case by case to attract suitable companies and offices to come to our properties.

Likely lead tenants[27]

The Philadelphia region continues to build upon its reputation as a center of medical and scientific innovation. With the Philadelphia metro area entering 2021 as the seventh-largest life sciences market in the country, the area is positioned to continue growing and developing. Nearly 2.1 million square feet were needed by businesses in the area at the end of H1 2021. Even though nearly 1.8 million square feet of construction, renovation, and conversion are underway, this will likely not be sufficient to meet the current demand. Additionally, life sciences companies have embraced flexible working arrangements and



Tenant	Approx. Sq. Ft.	Type	HQ Location
HelaPlex	100,000	Incubator	Philadelphia, PA
Cabaletta Bio	90,000	Lab	Philadelphia, PA

Figure 19 Potential Tenants

[27] CBRE Commercial Real Estate Services. Commercial Real Estate Services. (n.d.). Retrieved December 16, 2021, from http://www.cbre.us/

remote working. This has shown the smallest decline in average visitor volumes across U.S. gateway cities between March 2, 2020, and September 20, 2021.

At the same time, since our property is located next to the rail park, our property has a development concept that follows through the whole process. That is health and life. Our greening building not only will obtain the LEED certificate but also will possess a substantial outdoor garden area. And due to its proximity to the education resources (University of Pennsylvania and University of Temple), and to the amenity resources in the city center, we have reasons to believe leasing the office space to life science companies would be ideal.

Summarization

Although current national real estate markets are down, the recovery of Philadelphia market is fast. Decisions around return-to-office strategies remain front and center for many Philadelphia companies, particularly those with lease expirations in the next 18 months. These efforts have a substantial influence on long-term occupancy plans, and ultimately, office demand. And in the post-pandemic era, the office leasing demand for quality product is expected to incrementally rise as tenants are seeking relative value in amenity rich Center City assets. Class A property might experience a faster recovery rate compared to other class B properties. And because of Philadelphia's rich medical resources and people's awareness toward health after pandemics, life science industry will keeps booming in the Philadelphia area. The life science and health companies might become the prominent customers in the real estate market of Philadelphia. Future property development should focus more on the needs from these companies.

As for our property, it is in a low inventory market where is proximate to rich amenity resources. This rich amenity resources gain more and more attention by the market. Besides, it intervenes an ambitious community development in the early phase and has a development concept corresponding to the city's booming industry. We have reasons to believe this property has more opportunities to succeed in the property market in the future.

Retail

The market area for our retail will be the Central District of Philadelphia. According to the Philadelphia 2035 Comprehensive Plan, the Central District covers 5.67 square miles between the Delaware River and the Schuylkill River, north to Poplar Street and south to Washington Avenue. Our development site is in the central-north of the Central District.

Central District had a population of more than 130,000 in 2019, with a population growth rate of 11% from 2010, significantly higher than the 5% population growth rate of Philadelphia. The median household income of Central District was $78843, 70% higher than the $45,927 median household income of Philadelphia. As has been mentioned before, the population increase in this area was mainly due to the influx of young people in the 20-35 age cohort. We believe that the young generation will be the primary consumer.

Demand Analysis

The total retail area deliveries for 2021 in Philadelphia will fall short of last year's total by more than 40 percent, dropping below the 1 million square-foot mark for the first time in at least 15 years, which is reasonable because many constructions in 2020 has been delayed or even canceled, so there is a shortage on the supply side. The shortage of retail area can also be seen from the rent trends by Marcus & Millichap[28]. The total average of the retail rent has increased to 19.2$ per month per sq ft, with a population growth rate of 6% from 2020.

On the demand side, over 820,000 square feet of retail space was absorbed in the first half of 2021 in Philadelphia, offsetting a little over half of the space vacated last year. And in the past five years, the vacancy rate of retail space increased, reached the peak in 2020, and then dropped in 2021. So, it is reasonable to assume that the trend of vacancy rate with small fluctuations will continue over the next 5-10 years.

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[28] Philadelphia Retail Market Report. Real Estate Investment Services. (n.d.). Retrieved December 16, 2021, from https://www.marcusmillichap.com/research/market-report/philadelphia/philadelphia-3q21-retail-market-report

years, the vacancy rate of retail space increased, reached the peak in 2020, and then dropped in 2021. So, it is reasonable to assume that the trend of vacancy rate with small fluctuations will continue over the next 5-10 years.

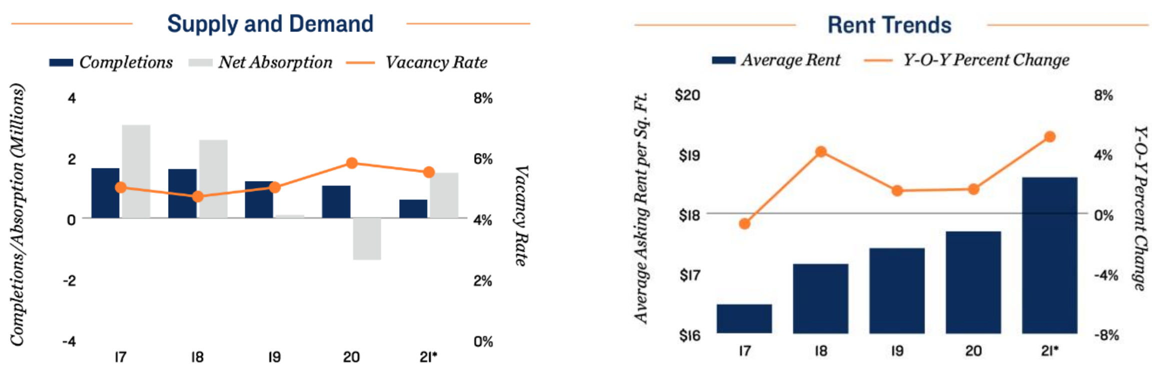


Figure 21 Supply & Demand Analysis and Rent Trends for Retail Market

Supply Analysis

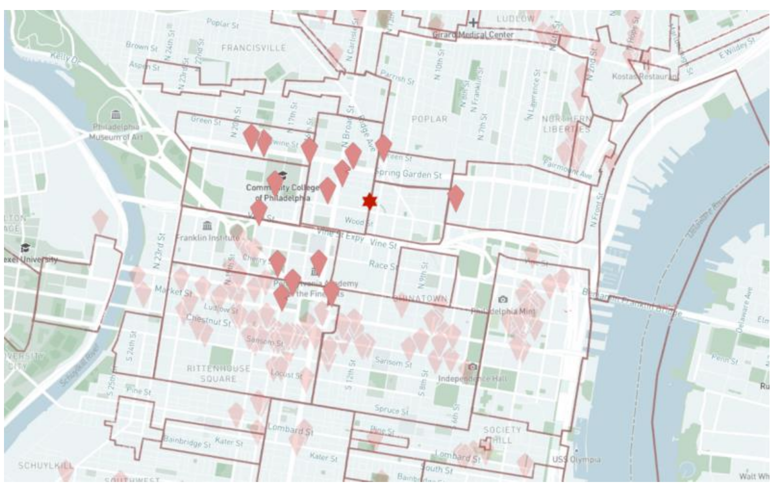


Figure 22 Comparable Projects' location

The site is in the Philadelphia Commercial Corridor, which is beneficial to neighborhood-based small businesses, and it has a very significant number of customers. Although this industry is recovering from the outbreak, we are confident that after the construction is finished, the overall retail market is positive. Besides, other nearby competitive retail is far from our site. The nearest one is 1,000 feet away from our project;

thus, the presence of a retail vacuum adds value to the project, providing scarce retail space for the surrounding residents as well as consumers.

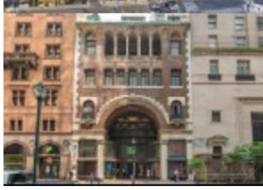
Picture	name	address	area	rent ($/month/sqft)	built year	floor
	Terminal Commerce Building	401 N Broad St	20,503 SF	/	1929/2016(renovated)	1
	/	322-344 N Broad St	958	3.75	2017	1
	/	417 N 8th St	20,037	1.92	1908/1991(renovated)	1
	One City	1401 Arch St	13,678	/	2020	1
	/	1600 Arch St	4849	2.5	2007	1
	Jacob Reed Building	1424-1426 Chestnut St	10,000	3.5	1903/1985	1

Figure 23 Comparable Projects' Information

From the Matrix of Competitive Projects, we can see that the rents vary from project to project. The maximum rent is $3.75 per month per square foot, and the minimum rent is $1.92. But compared to the built environment and surroundings, our site has a big advantage. Most of the nearby projects are very old in terms of architectural age, which is another advantage.

Likely lead tenants

As has been mentioned before, the population in this area was mainly young people. Thus, we believe that the demand for **Eco retail** will increase in the next 5-10 years, as the younger generations are generally more willing to pay for the Eco-Friendly lifestyle. Likely lend tenants are Made Trade, Eco Roots, Earth Hero, and Life Without Plastic. These tenants have high quality, ethically sourced products, and have great attraction to our green community. On the other hand, according to research[29], in 2021, two out of five US online consumers prefer to buy environmentally sustainable products. In particular, the young (the major group of the community) have been conscious about sustainability when it comes to their buying decisions. Comparatively, the eco industry is a new and rapidly growing industry, so we haven't got competitors with a certain scale. Thus, as a pioneer in this field, our project has the potential to become the heart of the central Philadelphia region.

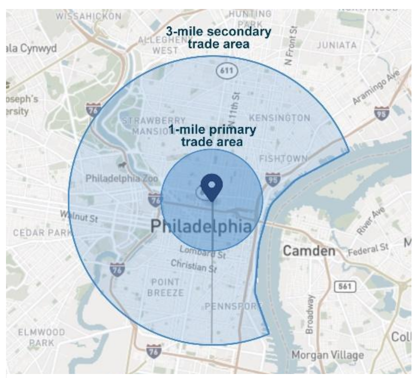


Figure 24Trade Area Analysis

Trade Area Analysis

For retail, the primary trade area is assumed to be a one-mile circular area around the site. As is shown in the plot, the primary trade area has covered most of the center city, so our retail the white collar or residents in the center city have great access to our site. And the three-mile secondary trade area covers a major area of central Philadelphia.

[29] Swerdlow, F., Rose, R., Haggstrom, E., & Mellen, A. (2021, October 29). Global Consumers Drive the market toward Sustainable Retail. Forrester. Retrieved December 16, 2021, from https://www.forrester.com/blogs/global-consumers-drive-the-market-towards-sustainable-retail/

Appendix

Secnario 1: Initiative Scenario

Property assumptions				
Unit type	**# of units**	**Sqft**	**Rent**	**Annual Rental Income**
Studios	110	500	$1,600	$2,112,000
1 BR	95	600	$1,800	$2,052,000
2 BR	65	900	$2,400	$1,872,000
Commercial	/	68500	$3.50	$2,877,000
Parking	155	30904	$250	$465,000
Office	/	103571	$3.50	$4,349,982
Total units	270		Annual rent increase	3%
Total Res SF	170,500			
Circulation space	25575			
Efficiency	93%			
Total GSF	**368,146**		Annual Gross Revenue	$13,727,982
max building area	373014		Vacancy (5%)	-686399
parcel area	62169		Annual Rental Income	$13,041,583

Development budget	
Acquisition	$7,143,900
Hard costs	$145,596,900
Demolition	$19,686
Site work	$19,686
Residential structure	$79,180,200
Construction Cost per sf for res	$464
Construction Cost per sf for parkin	$5
Parking structure	$166,882
Office Structure	$35,794,138
Construction Cost per sf for Office	$346
Construction Cost per sf for Comm	$346
commercial structure	$23,673,600
Hard contingency	$6,942,710
Green roof Grant	-$200,000
Soft costs	$11,647,752
Developer fee	$1,643,886
Total development cost	**$166,032,438**

Sources	
Equity investor A	24,500,000
Equity investor B	27,500,000
30 yrs before cash flow (NPV)	162,757,582
Yearly Return Rate	7.0%
Permanent mortgage	
Term (years)	30
Interest rate	4.20%
Debt service coverage ratio	1.39
Perm loan fees	1.5%
Net operating income	**$9,276,394**
Annual debt service	**$6,673,665**
Property value	**$203,876,802**
Loan amount	**$114,123,853**
NPV Loan amount	$18,394,582
Total sources	**$166,123,853**

Construction loan	
% Financed	80%
Term (months)	14
Drawdown factor	0.5
Interest rate	7%
Loan amount	**$116,477,520**

Operating expenses	**Total**
Utility expenses	$466,560
Management fee	$324,000
Insurance	$324,000
Annual expense increase	3%
Total Operating Expenses	$3,855,188
Property taxes	$2,740,628
Replacement reserves	$53,434
Effective Loan to Value (Cost)	
0.687358775	

PV	-$114,123,853	**NPV of taking on this debt**			
INT(YEARLY)	4.20%	**Discount Rate (YEARLY)**		3%	
N	30	**NPV**		$18,394,582	
PMT	$6,760,992.42				
Year	**Starting Balance**	**Payment**	**Interest**	**Principle**	**Ending Balance**
1	$114,123,853	$6,760,992	$4,793,202	$1,967,791	$112,156,062
2	$112,156,062	$6,760,992	$4,710,555	$2,050,438	$110,105,625
3	$110,105,625	$6,760,992	$4,624,436	$2,136,556	$107,969,068
4	$107,969,068	$6,760,992	$4,534,701	$2,226,292	$105,742,777
5	$105,742,777	$6,760,992	$4,441,197	$2,319,796	$103,422,981
6	$103,422,981	$6,760,992	$4,343,765	$2,417,227	$101,005,754
7	$101,005,754	$6,760,992	$4,242,242	$2,518,751	$98,487,003
8	$98,487,003	$6,760,992	$4,136,454	$2,624,538	$95,862,465
9	$95,862,465	$6,760,992	$4,026,224	$2,734,769	$93,127,696
10	$93,127,696	$6,760,992	$3,911,363	$2,849,629	$90,278,067
11	$90,278,067	$6,760,992	$3,791,679	$2,969,314	$87,308,753
12	$87,308,753	$6,760,992	$3,666,968	$3,094,025	$84,214,728
13	$84,214,728	$6,760,992	$3,537,019	$3,223,974	$80,990,755
14	$80,990,755	$6,760,992	$3,401,612	$3,359,381	$77,631,374
15	$77,631,374	$6,760,992	$3,260,518	$3,500,475	$74,130,899
16	$74,130,899	$6,760,992	$3,113,498	$3,647,495	$70,483,404
17	$70,483,404	$6,760,992	$2,960,303	$3,800,689	$66,682,715
18	$66,682,715	$6,760,992	$2,800,674	$3,960,318	$62,722,397
19	$62,722,397	$6,760,992	$2,634,341	$4,126,652	$58,595,745
20	$58,595,745	$6,760,992	$2,461,021	$4,299,971	$54,295,774
21	$54,295,774	$6,760,992	$2,280,422	$4,480,570	$49,815,204
22	$49,815,204	$6,760,992	$2,092,239	$4,668,754	$45,146,450
23	$45,146,450	$6,760,992	$1,896,151	$4,864,842	$40,281,608
24	$40,281,608	$6,760,992	$1,691,828	$5,069,165	$35,212,444
25	$35,212,444	$6,760,992	$1,478,923	$5,282,070	$29,930,374
26	$29,930,374	$6,760,992	$1,257,076	$5,503,917	$24,426,457
27	$24,426,457	$6,760,992	$1,025,911	$5,735,081	$18,691,376
28	$18,691,376	$6,760,992	$785,038	$5,975,955	$12,715,421
29	$12,715,421	$6,760,992	$534,048	$6,226,945	$6,488,476
30	$6,488,476	$6,760,992	$272,516	$6,488,476	$0

Operating accounts															
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15
Income															
Gross rental income	$13,727,982	$14,139,821	$14,564,016	$15,000,937	$15,450,965	$15,914,494	$16,391,928	$16,883,686	$17,390,197	$17,911,903	$18,449,260	$19,002,738	$19,572,820	$20,160,004	$20,764,805
Vacancy	($686,399)	($706,991)	($728,201)	($750,047)	($772,548)	($795,725)	($819,596)	($844,184)	($869,510)	($895,595)	($922,463)	($950,137)	($978,641)	($1,008,000)	($1,038,240)
Other income	$90,000	$92,700	$95,481	$98,345	$101,296	$104,335	$107,465	$110,689	$114,009	$117,430	$120,952	$124,581	$128,318	$132,168	$136,133
Effective gross income (EGI)	$13,131,583	$13,525,530	$13,931,296	$14,349,235	$14,779,712	$15,223,104	$15,679,797	$16,150,191	$16,634,696	$17,133,737	$17,647,749	$18,177,182	$18,722,497	$19,284,172	$19,862,697
Operating expenses	$3,855,188	$3,970,844	$4,089,969	$4,212,668	$4,339,049	$4,469,220	$4,603,297	$4,741,395	$4,883,637	$5,030,146	$5,181,051	$5,336,482	$5,496,577	$5,661,474	$5,831,318
Net operating income (NOI)	$9,276,394	$9,554,686	$9,841,327	$10,136,567	$10,440,664	$10,753,884	$11,076,500	$11,408,795	$11,751,059	$12,103,591	$12,466,698	$12,840,699	$13,225,920	$13,622,698	$14,031,379
Annual debt service	($6,673,665)	($6,673,665)	($6,673,665)	($6,673,665)	($6,673,665)	($6,673,665)	($6,673,665)	($6,673,665)	($6,673,665)	($6,673,665)	($6,673,665)	($6,673,665)	($6,673,665)	($6,673,665)	($6,673,665)
Before tax cash flow	$5,343,358	$5,621,650	$5,908,290	$6,203,530	$6,507,627	$6,820,847	$7,143,463	$7,475,758	$7,818,022	$8,170,554	$5,793,033	$6,167,034	$6,552,255	$6,949,033	$7,357,714
	Year 16	Year 17	Year 18	Year 19	Year 20	Year 21	Year 22	Year 23	Year 24	Year 25	Year 26	Year 27	Year 28	Year 29	Year 30
Income															
Gross rental income	$21,387,749	$22,029,381	$22,690,263	$23,370,970	$24,072,100	$24,794,263	$25,538,090	$26,304,233	$27,093,360	$27,906,161	$28,743,346	$29,605,646	$30,493,815	$31,408,630	$32,350,889
Vacancy	($1,069,387)	($1,101,469)	($1,134,513)	($1,168,549)	($1,203,605)	($1,239,713)	($1,276,905)	($1,315,212)	($1,354,668)	($1,395,308)	($1,437,167)	($1,480,282)	($1,524,691)	($1,570,431)	($1,617,544)
Other income	$140,217	$144,424	$148,756	$153,219	$157,816	$162,550	$167,427	$172,449	$177,623	$182,951	$188,440	$194,093	$199,916	$205,913	$212,091
Effective gross income (EGI)	$20,458,578	$21,072,336	$21,704,506	$22,355,641	$23,026,310	$23,717,099	$24,428,612	$25,161,471	$25,916,315	$26,693,804	$27,494,618	$28,319,457	$29,169,041	$30,044,112	$30,945,435
Operating expenses	$6,006,258	$6,186,446	$6,372,039	$6,563,200	$6,760,096	$6,962,899	$7,171,786	$7,386,940	$7,608,548	$7,836,804	$8,071,908	$8,314,066	$8,563,488	$8,820,392	$9,085,004
Net operating income (NOI)	$14,452,320	$14,885,890	$15,332,467	$15,792,441	$16,266,214	$16,754,200	$17,256,826	$17,774,531	$18,307,767	$18,857,000	$19,422,710	$20,005,391	$20,605,553	$21,223,720	$21,860,431
Annual debt service	($6,673,665)	($6,673,665)	($6,673,665)	($6,673,665)	($6,673,665)	($6,673,665)	($6,673,665)	($6,673,665)	($6,673,665)	($6,673,665)	($6,673,665)	($6,673,665)	($6,673,665)	($6,673,665)	($6,673,665)
Before tax cash flow	$7,778,655	$8,212,225	$8,658,802	$9,118,776	$9,592,549	$10,080,535	$10,583,161	$11,100,866	$11,634,102	$12,183,335	$12,749,045	$13,331,726	$13,931,888	$14,550,055	$15,186,766

Secnario 2: Lower Income

Property assumptions				
Unit type	**# of units**	**Sqft**	**Rent**	**Annual Rental Income**
Studios	110	500	$1,500	$1,980,000
1 BR	95	600	$1,700	$1,938,000
2 BR	65	900	$2,250	$1,755,000
Commercial	/	68500	$3.30	$2,712,600
Parking	155	30904	$250	$465,000
Office	/	103571	$3.30	$4,101,412
Total units	270		Annual rent increase	3%
Total Res SF	170,500			
Circulation space	25575			
Efficiency	93%			
Total GSF	**368,146**		Annual Gross Revenue	$12,952,012
max building area	373014		Vacancy (6%)	-777121
parcel area	62169		Annual Rental Income	$12,174,891

Development budget	
Acquisition	$7,143,900
Hard costs	$145,596,900
Demolition	$19,686
Site work	$19,686
Residential structure	$79,180,200
Construction Cost per sf for res	$464
Construction Cost per sf for parkin	$5
Parking structure	$166,882
Office Structure	$35,794,138
Construction Cost per sf for Office	$346
Construction Cost per sf for Comm	$346
commercial structure	$23,673,600
Hard contingency	$6,942,710
Green roof Grant	-$200,000
Soft costs	$11,647,752
Developer fee	$1,643,886
Total development cost	**$166,032,438**

Sources	
Equity investor A	24,500,000
Equity investor B	27,500,000
Equity investor C	12,000,000
30 yrs before cash flow (NPV	162,757,582
Yearly Return Rate	7.1%
Permanent mortgage	
Term (years)	30
Interest rate	4.20%
Debt service coverage ratio	1.39
Perm loan fees	1.5%
Net operating income	**$8,409,702**
Annual debt service	**$6,050,146**
Property value	**$184,828,626**
Loan amount	**$103,461,281**
NPV Loan amount	$18,394,582
Total sources	**$167,461,281**

Construction loan	
% Financed	80%
Term (months)	14
Drawdown factor	0.5
Interest rate	7%
Loan amount	**$116,477,520**

Operating expenses	**Total**
Utility expenses	$466,560
Management fee	$324,000
Insurance	$324,000
Annual expense increase	3%
Total Operating Expenses	$3,855,188
Property taxes	$2,740,628
Replacement reserves	$53,434

Effective Loan to Value (Cost)
0.623138961

Operating accounts															
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15
Income															
Gross rental income	$12,952,012	$13,340,572	$13,740,789	$14,153,013	$14,577,603	$15,014,931	$15,465,379	$15,929,341	$16,407,221	$16,899,437	$17,406,421	$17,928,613	$18,466,472	$19,020,466	$19,591,080
Vacancy	($777,121)	($800,434)	($824,447)	($849,181)	($874,656)	($900,896)	($927,923)	($955,760)	($984,433)	($1,013,966)	($1,044,385)	($1,075,717)	($1,107,988)	($1,141,228)	($1,175,465)
Other income	$90,000	$92,700	$95,481	$98,345	$101,296	$104,335	$107,465	$110,689	$114,009	$117,430	$120,952	$124,581	$128,318	$132,168	$136,133
Effective gross income (EGI)	$12,264,891	$12,632,838	$13,011,823	$13,402,177	$13,804,243	$14,218,370	$14,644,921	$15,084,269	$15,536,797	$16,002,901	$16,482,988	$16,977,477	$17,486,802	$18,011,406	$18,551,748
Operating expenses	$3,855,188	$3,970,844	$4,089,969	$4,212,668	$4,339,049	$4,469,220	$4,603,297	$4,741,395	$4,883,637	$5,030,146	$5,181,051	$5,336,482	$5,496,577	$5,661,474	$5,831,318
Net operating income (NOI)	$8,409,702	$8,661,994	$8,921,853	$9,189,509	$9,465,194	$9,749,150	$10,041,625	$10,342,873	$10,653,159	$10,972,754	$11,301,937	$11,640,995	$11,990,225	$12,349,932	$12,720,430
Annual debt service	($6,050,146)	($6,050,146)	($6,050,146)	($6,050,146)	($6,050,146)	($6,050,146)	($6,050,146)	($6,050,146)	($6,050,146)	($6,050,146)	($6,050,146)	($6,050,146)	($6,050,146)	($6,050,146)	($6,050,146)
Before tax cash flow	$5,100,185	$5,352,476	$5,612,336	$5,879,992	$6,155,677	$6,439,633	$6,732,107	$7,033,356	$7,343,642	$7,663,237	$5,251,791	$5,590,849	$5,940,079	$6,299,786	$6,670,284

	Year 16	Year 17	Year 18	Year 19	Year 20	Year 21	Year 22	Year 23	Year 24	Year 25	Year 26	Year 27	Year 28	Year 29	Year 30
Income															
Gross rental income	$20,178,812	$20,784,176	$21,407,702	$22,049,933	$22,711,431	$23,392,774	$24,094,557	$24,817,394	$25,561,915	$26,328,773	$27,118,636	$27,932,195	$28,770,161	$29,633,266	$30,522,264
Vacancy	($1,210,729)	($1,247,051)	($1,284,462)	($1,322,996)	($1,362,686)	($1,403,566)	($1,445,673)	($1,489,044)	($1,533,715)	($1,579,726)	($1,627,118)	($1,675,932)	($1,726,210)	($1,777,996)	($1,831,336)
Other income	$140,217	$144,424	$148,756	$153,219	$157,816	$162,550	$167,427	$172,449	$177,623	$182,951	$188,440	$194,093	$199,916	$205,913	$212,091
Effective gross income (EGI)	$19,108,300	$19,681,549	$20,271,996	$20,880,156	$21,506,560	$22,151,757	$22,816,310	$23,500,799	$24,205,823	$24,931,998	$25,679,958	$26,450,357	$27,243,867	$28,061,183	$28,903,019
Operating expenses	$6,006,258	$6,186,446	$6,372,039	$6,563,200	$6,760,096	$6,962,899	$7,171,786	$7,386,940	$7,608,548	$7,836,804	$8,071,908	$8,314,066	$8,563,488	$8,820,392	$9,085,004
Net operating income (NOI)	$13,102,042	$13,495,104	$13,899,957	$14,316,956	$14,746,464	$15,188,858	$15,644,524	$16,113,860	$16,597,275	$17,095,194	$17,608,049	$18,136,291	$18,680,380	$19,240,791	$19,818,015
Annual debt service	($6,050,146)	($6,050,146)	($6,050,146)	($6,050,146)	($6,050,146)	($6,050,146)	($6,050,146)	($6,050,146)	($6,050,146)	($6,050,146)	($6,050,146)	($6,050,146)	($6,050,146)	($6,050,146)	($6,050,146)
Before tax cash flow	$7,051,897	$7,444,958	$7,849,811	$8,266,810	$8,696,319	$9,138,712	$9,594,378	$10,063,714	$10,547,130	$11,045,048	$11,557,904	$12,086,145	$12,630,234	$13,190,645	$13,767,869

Secnario 3: Construction Cost

Property assumptions				
Unit type	**# of units**	**Sqft**	**Rent**	**Annual Rental Income**
Studios	110	500	$1,700	$2,244,000
1 BR	95	600	$1,900	$2,166,000
2 BR	65	900	$2,500	$1,950,000
Commercial	/	68500	$3.60	$2,959,200
Parking	155	30904	$250	$465,000
Office	/	103571	$3.60	$4,474,267
Total units	270		Annual rent increase	3%
Total Res SF	170,500			
Circulation space	25575			
Efficiency	93%			
Total GSF	**368,146**		Annual Gross Revenue	$14,258,467
max building area	373014		Vacancy (6.5%)	-926800
parcel area	62169		Annual Rental Income	$13,331,667

Development budget	
Acquisition	$7,143,900
Hard costs	$148,292,832
Demolition	$19,686
Site work	$19,686
Residential structure	$80,646,500
Construction Cost per sf for res	$473
Construction Cost per sf for parkin	$5
Parking structure	$166,882
Office Structure	$36,456,992
Construction Cost per sf for Office	$352
Construction Cost per sf for Comm	$352
commercial structure	$24,112,000
Hard contingency	$7,071,087
Green roof Grant	-$200,000
Soft costs	$11,863,427
Developer fee	$1,673,002
Total development cost	**$168,973,160**

Sources	
Equity investor A	24,500,000
Equity investor B	27,500,000
30 yrs before cash flow (NPV	162,757,582
Yearly Return Rate	7.1%
Permanent mortgage	
Term (years)	30
Interest rate	4.20%
Debt service coverage ratio	1.39
Perm loan fees	1.5%
Net operating income	**$9,566,478**
Annual debt service	**$6,882,359**
Property value	**$210,252,273**
Loan amount	**$117,692,643**
NPV Loan amount	$18,394,582
Total sources	**$169,692,643**

Construction loan	
% Financed	80%
Term (months)	14
Drawdown factor	0.5
Interest rate	7%
Loan amount	**$118,634,266**

Operating expenses	**Total**
Utility expenses	$466,560
Management fee	$324,000
Insurance	$324,000
Annual expense increase	3%
Total Operating Expenses	$3,855,188
Property taxes	$2,740,628
Replacement reserves	$53,434

Effective Loan to Value (Cost)
0.696516786

Operating accounts

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15
Income															
Gross rental income	$14,258,467	$14,686,221	$15,126,808	$15,580,612	$16,048,030	$16,529,471	$17,025,356	$17,536,116	$18,062,200	$18,604,066	$19,162,188	$19,737,053	$20,329,165	$20,939,040	$21,567,211
Vacancy	($926,800)	($954,604)	($983,243)	($1,012,740)	($1,043,122)	($1,074,416)	($1,106,648)	($1,139,848)	($1,174,043)	($1,209,264)	($1,245,542)	($1,282,908)	($1,321,396)	($1,361,038)	($1,401,869)
Other income	$90,000	$92,700	$95,481	$98,345	$101,296	$104,335	$107,465	$110,689	$114,009	$117,430	$120,952	$124,581	$128,318	$132,168	$136,133
Effective gross income (EGI)	$13,421,667	$13,824,317	$14,239,046	$14,666,218	$15,106,204	$15,559,390	$16,026,172	$16,506,957	$17,002,166	$17,512,231	$18,037,598	$18,578,726	$19,136,088	$19,710,170	$20,301,475
Operating expenses	$3,855,188	$3,970,844	$4,089,969	$4,212,668	$4,339,049	$4,469,220	$4,603,297	$4,741,395	$4,883,637	$5,030,146	$5,181,051	$5,336,482	$5,496,577	$5,661,474	$5,831,318
Net operating income (NOI)	$9,566,478	$9,853,473	$10,149,077	$10,453,549	$10,767,156	$11,090,170	$11,422,876	$11,765,562	$12,118,529	$12,482,084	$12,856,547	$13,242,243	$13,639,511	$14,048,696	$14,470,157
Annual debt service	($6,882,359)	($6,882,359)	($6,882,359)	($6,882,359)	($6,882,359)	($6,882,359)	($6,882,359)	($6,882,359)	($6,882,359)	($6,882,359)	($6,882,359)	($6,882,359)	($6,882,359)	($6,882,359)	($6,882,359)
Before tax cash flow	$5,424,748	$5,711,743	$6,007,347	$6,311,819	$6,625,426	$6,948,440	$7,281,145	$7,623,832	$7,976,798	$8,340,354	$5,974,188	$6,359,885	$6,757,152	$7,166,337	$7,587,798
	Year 16	**Year 17**	**Year 18**	**Year 19**	**Year 20**	**Year 21**	**Year 22**	**Year 23**	**Year 24**	**Year 25**	**Year 26**	**Year 27**	**Year 28**	**Year 29**	**Year 30**
Income															
Gross rental income	$22,214,227	$22,880,654	$23,567,074	$24,274,086	$25,002,309	$25,752,378	$26,524,949	$27,320,698	$28,140,319	$28,984,528	$29,854,064	$30,749,686	$31,672,176	$32,622,342	$33,601,012
Vacancy	($1,443,925)	($1,487,243)	($1,531,860)	($1,577,816)	($1,625,150)	($1,673,905)	($1,724,122)	($1,775,845)	($1,829,121)	($1,883,994)	($1,940,514)	($1,998,730)	($2,058,691)	($2,120,452)	($2,184,066)
Other income	$140,217	$144,424	$148,756	$153,219	$157,816	$162,550	$167,427	$172,449	$177,623	$182,951	$188,440	$194,093	$199,916	$205,913	$212,091
Effective gross income (EGI)	$20,910,520	$21,537,835	$22,183,970	$22,849,489	$23,534,974	$24,241,023	$24,968,254	$25,717,302	$26,488,821	$27,283,485	$28,101,990	$28,945,049	$29,813,401	$30,707,803	$31,629,037
Operating expenses	$6,006,258	$6,186,446	$6,372,039	$6,563,200	$6,760,096	$6,962,899	$7,171,786	$7,386,940	$7,608,548	$7,836,804	$8,071,908	$8,314,066	$8,563,488	$8,820,392	$9,085,004
Net operating income (NOI)	$14,904,262	$15,351,389	$15,811,931	$16,286,289	$16,774,878	$17,278,124	$17,796,468	$18,330,362	$18,880,273	$19,446,681	$20,030,081	$20,630,984	$21,249,913	$21,887,411	$22,544,033
Annual debt service	($6,882,359)	($6,882,359)	($6,882,359)	($6,882,359)	($6,882,359)	($6,882,359)	($6,882,359)	($6,882,359)	($6,882,359)	($6,882,359)	($6,882,359)	($6,882,359)	($6,882,359)	($6,882,359)	($6,882,359)
Before tax cash flow	$8,021,903	$8,469,031	$8,929,573	$9,403,931	$9,892,519	$10,395,766	$10,914,109	$11,448,003	$11,997,914	$12,564,322	$13,147,723	$13,748,625	$14,367,555	$15,005,052	$15,661,674

Secnario 4: Finance

Property assumptions				
Unit type	**# of units**	**Sqft**	**Rent**	**Annual Rental Income**
Studios	110	500	$1,600	$2,112,000
1 BR	95	600	$1,800	$2,052,000
2 BR	65	900	$2,400	$1,872,000
Commercial	/	68500	$3.50	$2,877,000
Parking	155	30904	$250	$465,000
Office	/	103571	$3.50	$4,349,982
Total units	270		Annual rent increase	3%
Total Res SF	170,500			
Circulation space	25575			
Efficiency	93%			
Total GSF	**368,146**		Annual Gross Revenue	$13,727,982
max building area	373014		Vacancy (5%)	-686399
parcel area	62169		Annual Rental Income	$13,041,583

Development budget	
Acquisition	$7,143,900
Hard costs	$137,827,390
Demolition	$19,686
Site work	$19,686
Residential structure	$75,497,400
Construction Cost per sf for res	$443
Construction Cost per sf for parkin	$5
Parking structure	$166,882
Office Structure	$33,557,004
Construction Cost per sf for Office	$324
Construction Cost per sf for Comm	$324
commercial structure	$22,194,000
Hard contingency	$6,572,733
Green roof Grant	-$200,000
Soft costs	$11,026,191
Developer fee	$1,559,975
Total development cost	**$157,557,456**

Sources	
Equity investor A	24,500,000
Equity investor B	27,500,000
30 yrs before cash flow (NP	162,757,582
Yearly Return Rate	7.1%
Permanent mortgage	
Term (years)	30
Interest rate	0.048
Debt service coverage ratio	1.4
Perm loan fees	0.015
Net operating income	**$9,276,394**
Annual debt service	**$6,625,996**
Property value	**$203,876,802**
Loan amount	**$105,662,590**
NPV Loan amount	$18,394,582
Total sources	**$157,662,590**

Construction loan	
% Financed	80%
Term (months)	14
Drawdown factor	0.5
Interest rate	7%
Loan amount	**$110,261,912**

Operating expenses	**Total**
Utility expenses	$466,560
Management fee	$324,000
Insurance	$324,000
Annual expense increase	3%
Total Operating Expenses	$3,855,188
Property taxes	$2,740,628
Replacement reserves	$53,434
Effective Loan to Value (Cost)	
0.670628943	

Operating accounts

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15
Income															
Gross rental income	$13,727,982	$14,139,821	$14,564,016	$15,000,937	$15,450,965	$15,914,494	$16,391,928	$16,883,686	$17,390,197	$17,911,903	$18,449,260	$19,002,738	$19,572,820	$20,160,004	$20,764,805
Vacancy	($686,399)	($706,991)	($728,201)	($750,047)	($772,548)	($795,725)	($819,596)	($844,184)	($869,510)	($895,595)	($922,463)	($950,137)	($978,641)	($1,008,000)	($1,038,240)
Other income	$90,000	$92,700	$95,481	$98,345	$101,296	$104,335	$107,465	$110,689	$114,009	$117,430	$120,952	$124,581	$128,318	$132,168	$136,133
Effective gross income (EGI)	$13,131,583	$13,525,530	$13,931,296	$14,349,235	$14,779,712	$15,223,104	$15,679,797	$16,150,191	$16,634,696	$17,133,737	$17,647,749	$18,177,182	$18,722,497	$19,284,172	$19,862,697
Operating expenses	$3,855,188	$3,970,844	$4,089,969	$4,212,668	$4,339,049	$4,469,220	$4,603,297	$4,741,395	$4,883,637	$5,030,146	$5,181,051	$5,336,482	$5,496,577	$5,661,474	$5,831,318
Net operating income (NOI)	$9,276,394	$9,554,686	$9,841,327	$10,136,567	$10,440,664	$10,753,884	$11,076,500	$11,408,795	$11,751,059	$12,103,591	$12,466,698	$12,840,699	$13,225,920	$13,622,698	$14,031,379
Annual debt service	($6,625,996)	($6,625,996)	($6,625,996)	($6,625,996)	($6,625,996)	($6,625,996)	($6,625,996)	($6,625,996)	($6,625,996)	($6,625,996)	($6,625,996)	($6,625,996)	($6,625,996)	($6,625,996)	($6,625,996)
Before tax cash flow	$5,391,027	$5,669,319	$5,955,959	$6,251,199	$6,555,296	$6,868,516	$7,191,132	$7,523,428	$7,865,691	$8,218,223	$5,840,702	$6,214,703	$6,599,924	$6,996,702	$7,405,383
	Year 16	**Year 17**	**Year 18**	**Year 19**	**Year 20**	**Year 21**	**Year 22**	**Year 23**	**Year 24**	**Year 25**	**Year 26**	**Year 27**	**Year 28**	**Year 29**	**Year 30**
Income															
Gross rental income	$21,387,749	$22,029,381	$22,690,263	$23,370,970	$24,072,100	$24,794,263	$25,538,090	$26,304,233	$27,093,360	$27,906,161	$28,743,346	$29,605,646	$30,493,815	$31,408,630	$32,350,889
Vacancy	($1,069,387)	($1,101,469)	($1,134,513)	($1,168,549)	($1,203,605)	($1,239,713)	($1,276,905)	($1,315,212)	($1,354,668)	($1,395,308)	($1,437,167)	($1,480,282)	($1,524,691)	($1,570,431)	($1,617,544)
Other income	$140,217	$144,424	$148,756	$153,219	$157,816	$162,550	$167,427	$172,449	$177,623	$182,951	$188,440	$194,093	$199,916	$205,913	$212,091
Effective gross income (EGI)	$20,458,578	$21,072,336	$21,704,506	$22,355,641	$23,026,310	$23,717,099	$24,428,612	$25,161,471	$25,916,315	$26,693,804	$27,494,618	$28,319,457	$29,169,041	$30,044,112	$30,945,435
Operating expenses	$6,006,258	$6,186,446	$6,372,039	$6,563,200	$6,760,096	$6,962,899	$7,171,786	$7,386,940	$7,608,548	$7,836,804	$8,071,908	$8,314,066	$8,563,488	$8,820,392	$9,085,004
Net operating income (NOI)	$14,452,320	$14,885,890	$15,332,467	$15,792,441	$16,266,214	$16,754,200	$17,256,826	$17,774,531	$18,307,767	$18,857,000	$19,422,710	$20,005,391	$20,605,553	$21,223,720	$21,860,431
Annual debt service	($6,625,996)	($6,625,996)	($6,625,996)	($6,625,996)	($6,625,996)	($6,625,996)	($6,625,996)	($6,625,996)	($6,625,996)	($6,625,996)	($6,625,996)	($6,625,996)	($6,625,996)	($6,625,996)	($6,625,996)
Before tax cash flow	$7,826,324	$8,259,894	$8,706,471	$9,166,445	$9,640,218	$10,128,204	$10,630,830	$11,148,535	$11,681,771	$12,231,004	$12,796,714	$13,379,395	$13,979,557	$14,597,724	$15,234,435