



Bonus Height/Affordable Housing
Financial Analysis
Charlottesville, Virginia

Prepared for
Charlottesville Neighborhood Development Services

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Executive Summary

This analysis uses financial models to determine how many affordable units the City of Charlottesville could require a developer to provide in exchange for the right to build a taller building. The modeling is intended to inform the Form-Based Code provisions currently being prepared for the Strategic Investment Area (SIA). The analysis was prepared with inputs from and review by a Steering Committee of individuals representing private and non-profit developers, low-income residents, the Charlottesville Redevelopment and Housing Authority and the City of Charlottesville.

The financial models evaluated development scenarios on five different prototypical sites – the Strategic Investment Area (SIA), Downtown and U.S. 29 North Corridor – at different heights and different levels of affordability, testing for the potential return on investment. Developers and their investors make their decisions on whether or not to develop or invest in a housing project based on whether that return is at least equal to their “threshold” or “hurdle” rate of return. When faced with a potential return below the threshold return, the developer and investor will seek different investments or different development locations with higher rents, lower costs and/or lower risks.

Development costs are impacted by several factors, but most significant are the style of construction and the type of parking. Height has a direct impact on costs with lower-cost wood-frame construction limited to four stories. A fifth story can be added if the first floor is constructed in concrete rather than wood. Above five stories, most apartment buildings are constructed on concrete or steel and concrete at a much higher cost per square foot.

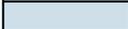
Parking is a major cost factor, averaging \$5,000 per surface space, \$20,000 per space in an above-ground parking structure and \$32,000 per space in a below-ground structure. Surface parking is the least expensive option, by far, but it consumes a great deal of land. The model assumed up to four stories of development would be served by surface parking with taller buildings requiring structured parking.

Conclusions

The financial analysis indicates an opportunity to secure 15 percent of incremental new units committed to rents affordable to households making up to 60 percent of Area Median Income (AMI) or 10 percent of incremental new units affordable at 50 percent of AMI without additional compensation.

The analysis also suggests a limited ability for height bonuses to secure committed affordable housing units. Generally speaking, Charlottesville rents do not support the construction of mid- to high-rise residential buildings with the exception of student housing adjacent to the University of Virginia grounds, high-end condominiums and possible niche products such as luxury senior housing. Five-story structures are feasible only at the higher rents achievable in Downtown neighborhoods.

Feasible Building Heights at Different Sites								
Number of Stories / Site	Downtown			SIA				US 29 North
	1/2 Acre with 1.0 Parking Space per Unit	1/2 Acre with 0.5 Parking Space per Unit	1/4 Acre with 0.5 Parking Space per Unit	1 Acre with 1.0 Structured Parking Space per Unit	1 Acre with 1.0 Surface Parking Space per Unit	3 Acres with 1.0 Structured Parking Space per Unit	3 Acres with 1.0 Surface Parking Space per Unit	1/2 Acre with 1.0 Parking Space per Unit
11								
10								
9								
8								
7								
6								
5								
4								
3								
2								
1								

Feasible  Meets or exceeds the threshold Return on Investment.
Infeasible  Does not meet the threshold Return on Investment.

Given the limited number and relatively small size of Charlottesville properties available for residential development (generally a half-acre or smaller) and a financial limit of not more than five stories, the potential new buildings will be small as well – roughly 50 units in a five-story building on a half-acre site. That translates into an increment of 24 units over what could be developed in a three-story building on the same site. In most cases, the developer could commit not more than 10 to 20 percent of incremental units at affordable rents – two to five units per building. At four stories, the increment is just 3 to 20 units above the three-story base.

The following table summarizes the number of affordable units that can be supported at each level of affordability (measured as the household’s income as a percent of the Area Median Income (AMI)) for each scenario. The affordable units are set as a share of the incremental units above a base of three stories. Renters at higher incomes (e.g., 80 percent of AMI) pay higher rents and require less cross-subsidy from the market-rate units, so the number of affordable units that can be supported increases with the income levels being

served. At 20 percent of AMI, the annual rent does not cover operating expenses. At 30 percent of AMI, the annual rent covers operating expenses but does not contribute to the cost of construction.

Supportable Affordable Units by Scenario and AMI Level						
Scenario	AMI Level					
	20%	30%	40%	50%	60%	80%
Downtown Half-Acre at 1.0 Parking Space per Unit						
At Four Stories	1 unit/25%	1 unit/25%	1 unit/25%	1 unit/25%	2 units/60%	2 units/60%
At Five Stories	0 units/0%	0 units/0%	0 units/0%	0 units/0%	0 units/0%	2 units/10%
Downtown Half-Acre at 0.5 Parking Space per Unit						
At Four Stories	1 units/15%	1 units/15%	1 units/15%	2 units/25%	2 units/25%	2 units/25%
At Five Stories	3 units/10%	3 units/10%	5 units/15%	6 units/20%	6 units/20%	13 units/40%
Downtown Quarter-Acre at 0.5 Parking Space per Unit						
At Four Stories	1 unit/10%	2 unit/20%	2 units/20%	2 units/20%	3 units/30%	5 units/50%
At Five Stories	0 units/0%	0 units/0%	2 units/10%	2 units/10%	3 units/15%	4 units/20%
SIA One-Acre at 1.0 Parking Space per Unit						
At Four Stories	0 units/0%	0 units/0%	0 units/0%	1 units/15%	1 units/15%	2 units/25%
At Five Stories	Development not feasible.					
SIA Three-Acre at 1.0 Parking Space per Unit						
At Four Stories	0 units/0%	0 units/0%	2 units/10%	2 units/10%	3 units/15%	5 units/25%
At Five Stories	Development not feasible.					
US 29 North Half-Acre at 1.0 Parking Space per Unit						
At Four Stories	0 units/0%	0 units/0%	0 units/0%	0 units/0%	0 units/0%	0 units/0%
At Five Stories	Development not feasible.					

Note: Shows number of affordable units and the percent of incremental units above a three-story base.
Source: Partners for Economic Solutions, 2018.

Incentives

The City could encourage a property owner to build taller buildings by funding construction of a parking structure. However, any parking fees that could be collected would not be nearly enough to pay for the parking structure, so the City cost per affordable unit would be quite high – \$138,000 per affordable unit at 80 percent of AMI and \$415,000 per affordable unit at 40 percent of AMI.

Abatement of real property taxes for affordable units (estimated at \$1,700 per year) could help at the margin, but that amount of savings would not be sufficient to overcome the cost burdens of building affordable housing except at 60 (10 percent of incremental units) and 80 percent of AMI (20 percent).

At one parking space per unit, a five-story half-acre Downtown development could support two or 10 percent of the incremental units at 80 percent of AMI rents. Direct City contributions to development costs (cash grants or fee waivers) could offset the cost of

providing 10 percent of affordable units at lower AMI levels would range from \$0 to \$140,000 per unit depending on the level of affordability, as shown in the following table.

City Contribution Required to Support Two Affordable Units for a Five-Story Building on a Half-Acre Downtown Site with One Parking Space per Unit			
AMI Level	Supportable Affordable Units		Required City Contribution per Affordable Unit
	Number	Percent of Incremental Units	
All at 20%	2	10%	\$140,000
All at 30%	2	10%	\$110,000
All at 40%	2	10%	\$80,000
All at 50%	2	10%	\$50,000
All at 60%	2	10%	\$25,000
All at 80%	2	10%	\$0
1/3 at 20%, 1/3 at 40%, 1/3 at 60%	2	10%	\$100,000
1/3 at 30%, 1/3 at 60%, 1/3 at 60%	2	10%	\$80,000
1/2 at 40%, 1/2 at 60%	2	10%	\$55,000
1/2 at 50%, 1/2 at 60%	2	10%	\$40,000
1/2 at 60%, 1/2 at 80%	2	10%	\$10,000

Source: Partners for Economic Solutions, 2018.

If the affordable units were developed off-site using Low-Income Housing Tax Credits and the full range of other financial assistance tools, new affordable units could be developed at a City cost of around \$30,000 per unit. The potential for funding off-site units based on increased height for a new development depends on the project being able to support additional costs equal to \$30,000 per unit for 10 to 20 percent of all units. The scenarios tested indicate a potential to contribute \$20,000 to \$800,000 for off-site affordable housing depending on the project size and location.

Currently, the Affordable Dwelling Units section of the City’s Zoning Ordinance (Section 34-12) applies to projects receiving rezoning or a Special Use Permit for a density greater than or equal to 1.0 Floor Area Ratio¹ (FAR). Developers must provide on-site or off-site affordable dwelling units equal in square footage to at least 5.0 percent of the amount of the Gross Floor Area (GFA) exceeding 1.0 FAR. As an alternative, the developer can make a cash contribution to the City of Charlottesville Affordable Housing Fund in the amount of \$2.261 per GFA of the residential space. For a four-story development on a half-acre lot with one parking space per unit, that would translate into a payment of \$60,323.

¹ The ratio of building square feet divided by the square feet of land.

The following table summarizes the supportable contributions as compared to the cash contributions that would be required in exchange for a rezoning or Special Use Permit. Developments that proceed with matter-of-right zoning are not required to make any contribution to the Affordable Housing Fund.

Supportable Developer Contribution to Off-Site Affordable Units as Compared with Current Cash Contributions Under the Current Special Use Permit Process						
Development Site	At Four Stories		At Five Stories		Developer Cash Contribution with a Special Use Permit	
	Total Amount	Amount per Developable Unit	Total Amount	Amount per Developable Unit	At Four Stories	At Five Stories
Downtown Half-Acre at 1.0 Parking Space per Unit	\$80,000	\$2,800	\$160,000	\$3,000	\$60,323	\$104,006
Downtown Half-Acre at 0.5 Parking Space per Unit	\$100,000	\$2,500	\$800,000	\$12,000	\$83,205	\$135,208
Downtown Quarter-Acre at 0.5 Parking Space per Unit	\$300,000	\$8,300	\$300,000	\$7,000	\$73,256	\$91,571
SIA One-Acre at 1.0 Parking Space per Unit	\$130,000	\$2,200	\$0	\$0	\$124,807	\$239,214
SIA Three-Acre at 1.0 Parking Space per Unit	\$280,000	\$1,600	\$0	\$0	\$366,101	\$707,241
US 29 North Half-Acre at 1.0 Parking Space per Unit	\$20,000	\$700	\$0	\$0	\$60,323	\$104,006

Source: Partners for Economic Solutions, 2018.

I. Introduction

This analysis quantifies the trade-offs between allowable building height and the inclusion of affordable housing units. It uses financial models to determine how many affordable units the City could require a developer to provide in exchange for the right to build a taller building. The modeling is intended to inform the Form-Based Code provisions currently being prepared for the Strategic Investment Area (SIA).

The analysis was prepared with inputs from and review by a Steering Committee of individuals representing private and non-profit developers, low-income residents, the Charlottesville Redevelopment and Housing Authority and the City of Charlottesville, listed below.

Steering Committee Members

Name	Affiliation
Grant Duffield, Executive Administrator	Charlottesville Redevelopment and Housing Authority
Bernard Harkless, Development Manager	Fountainhead Properties
Sunshine Mathon, Executive Director	Piedmont Housing Alliance
Elaine Poon, Managing Attorney	Legal Aid Justice Center
Dan Rosensweig, President and CEO	Habitat for Humanity of Greater Charlottesville
Keith O. Woodard, President	Woodard Properties
Chris Engel, Director of Economic Development	City of Charlottesville
Alex Ikefuna, Director, Neighborhood Development Services	City of Charlottesville
Brenda Kelley, Redevelopment Manager	City of Charlottesville
Stacy R. Pethia, Housing Program Coordinator	City of Charlottesville

II. Framework

Under Virginia law, the inclusion of affordable housing depends on voluntary participation by private developers. The concept is that the City provides a benefit by allowing the developer to build more units in a taller building, thereby generating additional profits. In exchange, the developer makes a portion of the units affordable for a specified length of time, typically 20 to 40 years. The cost of providing that affordability should be roughly equivalent to the financial value created by the bonus height. The financial model developed for this analysis compares the costs of building to the potential revenues and value it creates as measured by return on investment.

To assure that the model reflects local realities, it tests six prototypical sites:

Location	Site Size	Parking Ratio
SIA	1 acre	1.0 space/unit
SIA	3 acres	1.0 space/unit
Downtown	1/2 acre	1.0 space/unit
Downtown	1/2 acre	0.5 space/unit
Downtown	1/4 acre	0.5 space/unit
US 29-North Corridor	1/2 acre	1.0 space/unit

Return on Investment

The value created by additional height reflects the potential return on investment, generated by the profits created over the costs of building, financing and operating the development. There are different ways to measure return on investment, including internal rate of return, which measures return over a number of years in comparison to costs. This analysis uses a simplified indicator – Return on Cost – equal to net operating revenues in the stabilized year (following lease-up) divided by the total development costs. Developers and their investors make their decisions on whether or not to develop or invest in a housing project based on whether that return is at least equal to their “threshold” or “hurdle” rate of return.

That specified threshold level of return changes as the economy changes, reflecting the possible returns from other investments, such as stocks or buying US Treasury bonds, and the relative level of risk associated with that investment. An investor will accept a much

lower return on an ultra-safe investment, such as Treasury bonds, than on a high-risk investment where the investor could lose the initial investment.

Real estate carries a large number of risks. Among them are:

- changes in economic and market conditions that lower demand and achievable rents;
- energy cost escalation increases operating expenses;
- unanticipated environmental or soil conditions that increase development costs;
- construction materials cost increases due to such exogenous forces such as a surge in demand from China or imposition of tariffs;
- new competition that lowers occupancy rates and/or rents; and
- many others.

Development projects are structured so that the lenders are protected against much of the risk while equity investors and the developer take the most risk. If a project is worth 10 percent less than anticipated, the bank or mortgage holder continues to receive its mortgage payments and is generally protected from losses. A mortgage interest rate of 4.0 to 5.0 percent may be sufficient to compensate the lender for those limited risks. The developer, on the other hand, may see no return and may lose his or her entire investment. As a result, real estate development typically requires a premium return over the cost of borrowing and the returns available on less risky investments. At this time in the local market, developers typically target returns of roughly 7.0 percent of total development costs.

Important to all investment returns is the time value of money. If you have to wait five years to receive a dollar, it is worth much less than a dollar in your hand today. This is due to both the direct cost of borrowing and the opportunity cost of what you could have earned with a dollar while you were waiting. Some of the most significant costs of development are incurred during the development approval process. In a six-month approval process, the total costs of borrowing, insurance and real estate taxes (sometimes referred to as “carry costs”) are much lower than in a drawn-out process of one to two years when the approval process is inefficient and impossible to predict. Architectural and engineering costs also mount quickly as multiple redesigns and submissions are required to secure approvals.

Undertaking a development is less risky and costly when the approvals process is quick and predictable. When the decision is inherently political and made by elected officials, it is

much less predictable and more risky, impacting a developer's willingness to pursue a project. When faced with great uncertainty about future approvals at the outset as a project is first designed, the developer may decide to forego construction of a larger building that needs a special permit and lengthy approval process in favor of a smaller project that can be built with by-right zoning that entails little risk or delay.

Operating Income

Revenues are a function of rents and occupancy. Achievable rents are set by the market and individual tenants as they choose a place to live, evaluating their personal trade-offs between location, unit size, age and condition, layout, amenities, finishes and parking versus the rent they are willing and able to pay. Do they choose a smaller unit close to work or a larger unit further away? Estimating potential rents involves assessing the current competitive rent levels, considering all of the current competition and what is known about future competition.

Project design impacts rents as well with decisions about how large the units are and what the mix should be among the different sizes and styles of units. Charging separately for parking is increasingly prevalent as a means to encourage renters to reduce their number of cars.

There are direct trade-offs between rents and occupancy levels. Overshooting the market – in other words, charging higher rents than the market is willing to pay – will result in lower occupancies. Charge low rents and you may not have enough revenue to make the mortgage payments and properly maintain the building.

Operating expenses include utilities for common areas not separately metered and paid by the tenants, administrative costs, maintenance costs for routine repairs, security, insurance, real estate taxes and management fees. They typically total \$5,200 per unit (including \$1,700 per unit for real estate taxes).

Vacancy and collection losses are typically about five percent to allow for fix-up and vacancies between tenants. Well-run developments also fund a replacement reserve to pay for big-ticket repairs that happen infrequently, e.g., a new roof or new hallway carpeting. These are estimated at \$350 per unit.

Rental revenue less operating expenses is referred to as Net Operating Income.

Development Costs

Development costs include “hard” costs (e.g., bricks and mortar), “soft” costs (e.g., architectural and engineering fees, real estate taxes, financing), land costs and return on investment. On the hard cost side, building costs are impacted by the type of construction, size, building efficiency, building height and the level of finishes. Beyond the actual square footage in individual units for which tenants pay rent, apartment buildings also include a range of common areas that do not generate rental revenues – lobbies, hallways, staircases, maintenance rooms, elevators, laundry rooms and amenity spaces such as community rooms or fitness rooms. In most apartment buildings, the rentable space in apartments equals roughly 85 percent of the total space.

Height has a direct impact on costs because it dictates the type of construction. Wood-frame or “stick-built” construction can be used up to four stories in most situations. A fifth story can be added if the first floor is constructed in concrete, providing a base or podium to support four stories of wood-frame construction. Above five stories, building codes typically require different types of construction and levels of fireproofing. (This height limitation is changing with engineered woods are developed that can bear heavier loads.)

Most apartment buildings over five stories are constructed of concrete or steel and concrete at a much higher cost per square foot. Other factors such as the number and type of elevators also change with height. High-rise buildings above 10 to 12 stories depend on steel construction at an even higher cost per square foot.

Costs also vary based on the level of finishes, e.g., siding versus wood, the grade of carpet, the quality of the appliances and energy efficiency.

For this analysis, the model assumes the following costs per square foot for each type of development:

Number of Stories	Type of Construction	Hard Cost per Square Foot
3-4	Stick-built	\$130
5	Stick-built over podium	\$138
6-11	Concrete	\$158

Parking is a major cost factor, averaging \$5,000 per surface space, \$20,000 per space in an above-ground parking structure, \$32,000 per space in a below-ground structure and even more when the underground parking goes more than two levels down. Due to the high cost of building parking spaces, developers try to limit the number of spaces to the lowest number that will meet tenant demand and allow them to lease the apartments. However, too few spaces can inhibit leasing when potential tenants have more cars than there are available spaces, so lenders are relatively conservative about reducing the number of spaces too low. In Charlottesville, zoning and the market require at least one parking space per unit where some tenants may have no cars and some may have two cars. To test the effect of this parking assumption, the model tested 0.5 spaces per unit for the two downtown sites.

This analysis assumes that surface parking is possible for three- and four-story developments with the exception of the quarter-acre lot near downtown. The small lot size in that scenario does not allow for an efficient above-ground structure, so the model assumes one to two levels of underground parking and a smaller parking ratio of 0.5 spaces per unit.

Site preparation and conditions can affect development costs depending on topography, nearby streams, soils, environmental conditions and/or existing structures that need to be removed. Site configuration and natural features can affect how much can be built on the site and how efficient the building and parking can be.

Soft costs include architectural and engineering fees, mortgage interest and financing fees, permit and tap fees, insurance, real estate taxes during development, legal and accounting fees, contingencies and other miscellaneous costs. The developer is compensated with a developer fee, typically set at a percentage of hard and soft development costs. Roughly 50 to 60 percent of that fee goes to cover salaries and the direct costs (e.g., office rent) of running a development company.

Land Costs

Several factors influence land costs. Fundamentally, land values reflect what and how much can be built given zoning, development regulations, the market and the returns from the ultimate development. Landowners seek as high a price as possible, while developers need to buy at a price that still allows them to achieve their threshold return on investment. Depending on the location, the land price may reflect its value for building

retail or office space rather than housing. Land prices should respond to changes in development regulations, but property owners' expectations can slow or prevent that adjustment process as owners refuse to sell at prices lower than they expected or those achieved in earlier sales. Developers note that several local property owners have unrealistic expectations as to the value of their properties, some of which are influenced by purchases by the University of Virginia Foundation for sites near the University grounds. This analysis assumes the following land prices for the prototypical sites:

Location	Price per Acre
SIA	\$700,000
Downtown	\$960,000
US 29 North Corridor	\$600,000

III. Model Inputs and Assumptions

The financial model is built on the following inputs and assumptions:

Table 1. Input Assumptions		
	Rental Apartments	
Return on Investment	7%	of total costs
Vacancy and Collection Loss	5%	% of revenues
Building Efficiency (Leaseable/Gross S.F.)	85%	percent
Residential Parking Spaces	1.0	per unit
Monthly Parking Fees	\$100	per space
Development Cost Assumptions		
Acquisition Cost		
SIA	\$700,000	per acre
Downtown	\$960,000	per acre
US 29 North Corridor	\$600,000	per acre
Infrastructure & Site Improvements	\$0	per acre
Hard Costs (Including General Conditions and Site Improvements)		
Low-Rise (1-4 Stories)	\$130	per g.s.f.
Stick-Built (5 Stories)	\$138	per g.s.f.
Mid-Rise (6-11 Stories)	\$158	per g.s.f.
Surface Parking Costs	\$5,000	per space
Above-Grade Parking Costs	\$20,000	per space
Structured 1/2-In-Ground Parking Costs	\$26,000	per space
Below-Grade Parking Costs (1-2 Levels)	\$32,000	per space
Soft Costs - For-Profit (Excl. Const. Fin.)	20%	of hard costs
Replacement Reserves	\$350	per unit
Construction Financing Costs	4.0%	% of hard, soft costs
Developer Fee	4.0%	% of hard, soft costs
Operating Costs (Excluding Taxes, Unit Utilities)	\$3,500	per unit
Average Assessed Value	\$175,000	per unit
Average Property Tax	\$1,700	per unit

Source: Partners for Economic Solutions, 2018.

Market and Affordable Rents

Market rents, unit sizes and unit mix, shown in Table 2, reflect the competitive offerings in existing buildings (summarized in Appendix Table A-1) with a premium for new construction and the potential location in the Strategic Investment Area (SIA), close-in to downtown or along US 29 north of the bypass.

Table 2. Market-Rate Residential Rents and Unit Size Assumptions					
Unit Size	Square Feet	Mix	Rent Per Sq Ft	Monthly Rents	
Downtown					
Efficiency	500 - 550	10%	\$2.50 - \$2.60	\$1,300 - \$1,375	
1 Bedroom	700 - 750	50%	\$2.13 - \$2.18	\$1,525 - \$1,600	
2 Bedroom	850 - 950	40%	\$2.00 - \$2.03	\$1,725 - \$1,900	
3 Bedroom	1,050 - 1,100	0%	\$2.00 - \$2.00	\$2,100 - \$2,200	
SIA					
Efficiency	500 - 550	10%	\$2.35 - \$2.40	\$1,200 - \$1,290	
1 Bedroom	700 - 750	50%	\$2.00 - \$2.10	\$1,470 - \$1,500	
2 Bedroom	850 - 950	40%	\$1.95 - \$1.98	\$1,680 - \$1,850	
3 Bedroom	1,050 - 1,100	0%	\$1.87 - \$1.90	\$1,960 - \$2,060	
US 29 North Corridor					
Efficiency	500 - 550	10%	\$2.30 - \$2.35	\$1,180 - \$1,270	
1 Bedroom	700 - 750	50%	\$1.95 - \$2.05	\$1,440 - \$1,460	
2 Bedroom	850 - 950	40%	\$1.90 - \$1.93	\$1,640 - \$1,810	
3 Bedroom	1,050 - 1,100	0%	\$1.80 - \$1.90	\$1,980 - \$2,000	
Source: Partners for Economic Solutions, 2018.					

The potential to commit units to affordable rents depends on three factors:

- the number of units;
- the level of affordability; and
- the mix of units by size.

The required affordable rents relate to the percent of the tenant household income's share of Area Median Income (AMI) and the family size. The base model assumes that the size mix of affordable units mirrors the total mix. Various AMI levels are tested from 20 to 80 percent. Affordable rents by unit size are shown in Table 3.

Table 3. Average Affordable Rents by Unit Size and Income Bracket

Unit Size / % of AMI	Gross Monthly Rents					
	20%	30%	40%	50%	60%	80%
Efficiency	\$270	\$400	\$540	\$670	\$810	\$1,070
1-Bedroom	\$310	\$460	\$610	\$770	\$920	\$1,230
2-Bedroom	\$360	\$550	\$730	\$910	\$1,090	\$1,460
3-Bedroom	\$380	\$580	\$770	\$960	\$1,150	\$1,530
	Net Monthly Rents ¹					
	20%	30%	40%	50%	60%	80%
Efficiency	\$210	\$340	\$480	\$610	\$750	\$1,010
1-Bedroom	\$235	\$385	\$535	\$695	\$845	\$1,155
2-Bedroom	\$270	\$460	\$640	\$820	\$1,000	\$1,370
3-Bedroom	\$270	\$470	\$660	\$850	\$1,040	\$1,420

Note: ¹Net of utility allowance (\$60 for efficiencies, \$75 for one-bedroom units, \$90 for two-bedroom units and \$110 for three-bedroom units).
Gross rents reflect HUD's affordability standard of 30 percent of income.
Source: HUD, 2017; Partners for Economic Solutions, 2018.

Development Programs

The model tests a base case of developing a three-story building with surface parking on each of the subject sites. The number of units built is determined based on calculating the amount of land required for parking and the land remaining for the building footprint after accounting for required setbacks and open space. Adding a fourth story requires a smaller building footprint so as to allow more land for surface parking. That results in a smaller increment of new units – three net new units on the half-acre site. At five stories, the parking shifts to an above-ground parking structure, allowing the building to cover more of the land. The building sizes and parking provisions are shown in Tables 4 to 8 for each of the parcel sizes. The parking assumptions for the quarter-acre Downtown lot vary from those for the larger sites due to the difficulties in accommodating a parking structure on such a small lot. Underground parking is provided at a rate of 0.5 spaces per unit in one to two stories below ground for that scenario. The half-acre Downtown lot model is run at both 0.5 and 1.0 parking spaces per unit.

Table 4. Building and Parking Quantities by Number of Stories for Half-Acre Site Near Downtown or on U.S. 29 North with One Parking Space per Unit

	Number of Stories									
	3	4	5	6	7	8	9	10	11	
Residential Building										
Footprint	7,360	6,440	9,480	9,480	9,480	9,480	9,480	9,480	9,480	9,480
Number of Units	26	29	50	60	70	80	90	100	110	110
Square Feet	23,920	26,680	46,000	55,200	64,400	73,600	82,800	92,000	101,200	101,200
Incremental Units		3	24	34	44	54	64	74	84	84
Parking (360 sf per space)										
Type	Surface	Surface	Structure							
Number of Spaces	26	29	64	64	80	80	96	112	112	112
Spaces per Floor	26	29	16	16	16	16	16	16	16	16
Footprint	9,360	10,440	5,760	5,760	5,760	5,760	5,760	5,760	5,760	5,760
Number of Stories	1	1	4	4	5	5	6	7	7	7
Square Feet	9,360	10,440	23,040	23,040	28,800	28,800	34,560	40,320	40,320	40,320
Setbacks (5', 5' and 4')	2,700	2,700	2,700	2,700	2,700	2,700	2,700	2,700	2,700	2,700
Open Space	580	420	2,060	2,060	2,060	2,060	2,060	2,060	2,060	2,060
Lot Coverage	84%	84%	76%	76%	76%	76%	76%	76%	76%	76%
Total Ground Square Feet	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000
Lot Size										
Dimensions	200' x 100'									
Square Feet	20,000									
Parking Garage										
Dimensions	60' x 96'									
Parking	1	space per unit								
Average Unit Size										
	781	nsf								
	920	gsf								

Table 5. Building and Parking Quantities by Number of Stories for Half-Acre Site Near Downtown with 0.5 Parking Space per Unit

	Number of Stories								
	3	4	5	6	7	8	9	10	11
Residential Building									
Footprint	10,120	9,200	11,960	11,960	11,960	11,960	11,960	11,960	11,960
Number of Units	33	40	65	78	91	104	117	130	143
Square Feet	30,360	36,800	59,800	71,760	83,720	95,680	107,640	119,600	131,560
Incremental Units		7	32	45	58	71	84	97	110
Parking (360 sf per space)									
Type	Surface	Surface	Structure						
Number of Spaces	17	20	36	48	48	60	60	72	72
Spaces per Floor	17	20	12	12	12	12	12	12	12
Footprint	5,940	7,200	4,320	4,320	4,320	4,320	4,320	4,320	4,320
Number of Stories	1	1	3	4	4	5	5	6	6
Square Feet	5,940	7,200	12,960	17,280	17,280	21,600	21,600	25,920	25,920
Setbacks (5', 5' and 4')	2,700	2,700	2,700	2,700	2,700	2,700	2,700	2,700	2,700
Open Space	1,240	900	1,020	1,020	1,020	1,020	1,020	1,020	1,020
Lot Coverage	80%	82%	81%	81%	81%	81%	81%	81%	81%
Total Ground Square Feet	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000
Lot Size									
Dimensions	200' x 100'								
Square Feet	20,000								
Parking Garage									
Dimensions	60' x 96'								
Parking	1 space per unit								
Average Unit Size									
	781	nsf							
	920	gsf							

Table 6. Building and Parking Quantities by Number of Stories for Quarter-Acre Site Near Downtown with 0.5 Parking Space per Unit

	Number of Stories								
	3	4	5	6	7	8	9	10	11
Residential Building									
Footprint	8,100	8,100	8,100	8,100	8,100	8,100	8,100	8,100	8,100
Number of Units	27	36	45	54	63	72	81	90	
Square Feet	24,300	32,400	40,500	48,600	56,700	64,800	72,900	81,000	
Incremental Units	-	9	18	27	36	45	54	63	
Parking (360 sf per space)									
Type	Surface	Under-Ground							
Number of Spaces	23	23	23	46	46	46	46	46	
Spaces per Floor	23	23	23	23	23	23	23	23	
Footprint	-	-	-	-	-	-	-	-	
Number of Stories	1	1	1	2	2	2	2	2	
Square Feet	9,200	9,200	9,200	18,400	18,400	18,400	18,400	18,400	
Setbacks (5', 5', 5' and 4')	1,810	1,810	1,810	1,810	1,810	1,810	1,810	1,810	
Open Space	90	90	90	90	90	90	90	90	
Lot Coverage	81%	81%	81%	81%	81%	81%	81%	81%	
Total Ground Square Feet	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	
Lot Size									
Dimensions	100' x 100'								
Square Feet	10,000								
Parking Space									
Size	0.5	per unit							
	400	gsf							
Average Unit Size									
	763	nsf							
	900	gsf							

Table 7. Building and Parking Quantities by Number of Stories for One-Acre Site in SIA

	Number of Stories									
	3	4	5	6	7	8	9	10	11	
Residential Building										
Footprint	15,640	13,800	21,160	21,160	21,160	21,160	21,160	21,160	21,160	
Number of Units	51	60	115	138	161	184	207	230	253	
Square Feet	46,920	55,200	105,800	126,960	148,120	169,280	190,440	211,600	232,760	
Incremental Units		9	64	87	110	133	156	179	202	
Parking (360 sf per space)										
Type	Surface	Surface	Structure							
Number of Spaces	51	60	120	120	150	150	180	210	210	
Spaces per Floor	51	60	30	30	30	30	30	30	30	
Footprint	18,360	21,600	10,800	10,800	10,800	10,800	10,800	10,800	10,800	
Number of Stories	1	1	4	4	5	5	6	7	7	
Square Feet	18,360	21,600	43,200	43,200	54,000	54,000	64,800	75,600	75,600	
Setbacks (5', 5' and 4')	3,710	3,710	3,710	3,710	3,710	3,710	3,710	3,710	3,710	
Open Space	2,290	890	4,330	4,330	4,330	4,330	4,330	4,330	4,330	
Lot Coverage	85%	89%	80%	80%	80%	80%	80%	80%	80%	
Total Ground Square Feet	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	
Lot Size										
Dimensions	200' x 200'		180							
Square Feet	40,000									
Parking Garage										
Dimensions	60' x 192'									
Parking	1 space per unit									
Average Unit Size										
	781	nsf								
	920	gsf								

Table 8. Building and Parking Quantities by Number of Stories for Three-Acre Site in SIA

	Number of Stories									
	3	4	5	6	7	8	9	10	11	
Residential Building(s)										
Footprint	47,840	40,480	62,560	62,560	62,560	62,560	62,560	62,560	62,560	
Number of Units	156	176	340	408	476	544	612	680	748	
Square Feet	143,520	161,920	312,800	375,360	437,920	500,480	563,040	625,600	688,160	
Incremental Units		20	184	252	320	388	456	524	592	
Parking (360 sf per space)										
Type	Surface	Surface	Structure							
Number of Spaces	156	176	342	456	570	570	684	684	798	
Spaces per Floor	156	176	114	114	114	114	114	114	114	
Footprint	56,160	63,360	41,040	41,040	41,040	41,040	41,040	41,040	41,040	
Number of Stories	1	1	3	4	5	5	6	6	7	
Square Feet	56,160	63,360	123,120	164,160	205,200	205,200	246,240	246,240	287,280	
Setbacks (5', 5' and 4')	3,710	3,710	3,710	3,710	3,710	3,710	3,710	3,710	3,710	
Open Space	22,290	22,450	22,690	22,690	22,690	22,690	22,690	22,690	22,690	
Lot Coverage	80%	80%	80%	80%	80%	80%	80%	80%	80%	
Total Ground Square Feet	130,000	130,000	130,000	130,000	130,000	130,000	130,000	130,000	130,000	
Lot Size										
Dimensions	325' x 400'									
Square Feet	130,000									
Parking Garage(s)										
Dimensions	180' x 228'									
Parking	1 space per unit									
Average Unit Size										
	781	nsf								
	920	gsf								

IV. Model Results

With the addition of each new floor, the model calculates the number of new units. It then solves for the share of those incremental units that could be committed at affordable rents while still achieving the 7.0-percent threshold return on investment. The number of affordable units that can be supported varies with the target AMI levels, which determine the net rents (excluding utilities).

Some scenarios result in infeasible developments that could not support any affordable housing. In some locations, the higher development costs of developing a five-story building with a concrete podium as well as the extraordinary costs of structured parking (\$20,000 per space) are too high to allow a return that meets the threshold of 7.0 percent of total development costs.

At six stories, the economics become even worse with the switch to concrete construction. The high construction costs associated with concrete are not offset by the ability to build just six stories. Typically, concrete construction requires nine stories before the economics begin to make sense. At nine or more stories, the large increase in the number of units lowers the per-unit cost of land, and there may be a rent premium for upper-level units benefitting from good views. Even then, only scenarios with the highest rents are feasible at heights above five stories.

The following graphic shows the limits on building heights for feasible developments that can yield the required return on investment.

Feasible Building Heights at Different Sites								
Number of Stories / Site	Downtown			SIA				US 29 North
	1/2 Acre with 1.0 Parking Space per Unit	1/2 Acre with 0.5 Parking Space per Unit	1/4 Acre with 0.5 Parking Space per Unit	1 Acre with 1.0 Structured Parking Space per Unit	1 Acre with 1.0 Surface Parking Space per Unit	3 Acres with 1.0 Structured Parking Space per Unit	3 Acres with 1.0 Surface Parking Space per Unit	1/2 Acre with 1.0 Parking Space per Unit
11								
10								
9								
8								
7								
6								
5								
4								
3								
2								
1								

Feasible  Meets or exceeds the threshold Return on Investment.
Infeasible  Does not meet the threshold Return on Investment.

Downtown Scenarios

The high rents achievable on near-downtown sites provide some support for affordable units with lower parking ratios. The four-story option with 0.5 parking spaces per unit on a half-acre lot would create three additional units. The cash flow would support committing one to two units at affordable rents. With a parking ratio of 0.5 spaces per unit, the five-story option (32 incremental units above the three-story base) would support commitment of three units (10 percent of incremental units) at rents affordable to households at 20 to 30 percent of AMI, five units (15 percent) at 40 percent of AMI, six units (20 percent) at 60 percent of AMI or 13 units (40 percent) at 80 percent of AMI, as shown in Table 9. The quarter-acre site at five stories with 0.5 parking spaces per unit could support two to three units at 40 to 60 percent of AMI or four units at 80 percent of AMI. Below 40 percent, the units require a deeper cross-subsidy from the market-rate units than would be possible at the supportable market rents.

The development of the quarter-acre site in downtown would entail a building with nine units per floor above a one floor of underground parking that provides 0.5 parking spaces per unit. At four stories, the project could support one affordable unit for households at the

lowest AMI level or up to five units for households at 80 percent of AMI. At five stories, the additional construction costs would allow commitment of two units at 40 to 60 percent of AMI or four units at 80 percent of AMI (Table 9).

Table 9. Supportable Affordable Units in a Five-Story Building on a Downtown Site with 0.5 Parking Space per Unit				
AMI Level	Supportable Affordable Units			
	Quarter-Acre Site		Half-Acre Site	
	Number	Percent of Incremental Units	Number	Percent of Incremental Units
All at 20%	0	0%	3	10%
All at 30%	0	0%	3	10%
All at 40%	2	10%	5	15%
All at 50%	2	10%	6	20%
All at 60%	3	15%	6	20%
All at 80%	4	20%	13	40%
1/3 at 20%, 1/3 at 40%, 1/3 at 60%	2	10%	5	15%
1/3 at 30%, 1/3 at 60%, 1/3 at 60%	2	10%	5	15%
1/2 at 40%, 1/2 at 60%	2	10%	5	15%
1/2 at 50%, 1/2 at 60%	2	10%	6	20%
1/2 at 60%, 1/2 at 80%	4	20%	8	25%

Source: Partners for Economic Solutions, 2018.

At one parking space per unit, which is probably a better reflection of today’s market, the five-story development would support construction of two units (10 percent of incremental units) only at 80 percent of AMI. The four-story option could support one to two of the incremental units at affordable rents.

Downtown rents do not support development of rental apartment buildings at six or more stories given the high costs of concrete construction and structured parking. Returns for these taller buildings range from 6.6 to 6.8 percent even with the lower parking ratio of 0.5 spaces per unit.

Strategic Investment Area Scenarios

The SIA scenarios assume one-acre and three-acre parcels. The results, summarized in Table 10, show that the one-acre development could support one affordable unit at four stories if keyed to affordability at the 50- to 60-percent AMI levels or two units at 80 percent of AMI. Below 50 percent, the units require a deeper cross-subsidy from the market-rate units than would be possible at the supportable market rents. The lower market rents achievable in the SIA relative to rents in Downtown neighborhoods provide less financial support for affordable units.

Table 11. Affordable Units Made Possible by City Funding of Parking Garage for a Five-Story Building on a One-Acre SIA Site with One Parking Space per Unit		
AMI Level	Supportable Affordable Units	
	Number	Percent of Incremental Units
All at 20%	2	10%
All at 30%	4	15%
All at 40%	4	15%
All at 50%	5	20%
All at 60%	7	30%
All at 80%	12	50%
1/3 at 20%, 1/3 at 40%, 1/3 at 60%	4	15%
1/3 at 30%, 1/3 at 60%, 1/3 at 60%	5	20%
1/2 at 40%, 1/2 at 60%	5	20%
1/2 at 50%, 1/2 at 60%	6	25%
1/2 at 60%, 1/2 at 80%	8	35%

Source: Partners for Economic Solutions, 2018.

The three-acre four-story development on three acres would perform similarly to the one-acre development supporting two units (10 percent) at 40 to 50 percent of AMI, three units (15 percent) at 60 percent of AMI or five units (20 percent) at 80 percent of AMI. It could not support units at 20 to 30 percent of AMI.

At five stories with structured parking, the returns are less than 6.3 percent, indicating that a developer or investor would seek another investment type or another location with higher rents or the possibility of surface parking. The projects do not “pencil out” and could not provide affordable units at any AMI level.

Given the larger parcel sizes, SIA developers have the option to build a five-story building with surface parking rather than with structured parking. The need for additional land to accommodate surface parking would mean that the apartment building would be smaller – 65 units versus 115 units with structured parking on the one-acre site and 210 versus 340 units on the three-acre site. To test the impact of structured parking on the project returns, the model tested the smaller development with surface parking. Even with surface parking, the higher costs of building over a concrete podium render the five-story development infeasible at this time.

For taller buildings, returns improve from about 5.8 percent at six stories to 6.1 percent at 11 stories but are still below the 7.0-percent threshold level.

U.S. 29 North Corridor Scenarios

As in the SIA, rents supportable in developments in the U.S. 29 North Corridor are not sufficient to warrant construction that requires structured parking. At four stories on a half-acre lot, the development could just achieve the threshold return on investment but could not support any affordable units among the three incremental units.

Appendix Table A-2 summarizes the bonus height modeling results.

Base of Five Stories

If the base level of matter-of-right development were set at five stories rather than three stories, none of the developments tested would take advantage of bonus height or provide affordable housing units.

Financial Analysis Conclusion

Based on the foregoing financial analysis, developers could afford to commit 15 percent of incremental units above a three-story base at rents affordable to households earning 60

percent of AMI or 10 percent affordable at 50 percent of AMI without additional compensation.

Incentives Analysis

To test whether certain investments or incentives provided by the City could change, the model tested City construction of structured parking. A five-story building near Downtown could commit seven or 30 percent of its incremental units at rents affordable to families at 60 percent of AMI if the City underwrote the \$1.6 million cost of building structured parking at the rate of one space per unit (Table 11). However, any parking fees that could be collected would not be nearly enough to pay for the parking structure, so the City cost per affordable unit would be quite high – \$138,000 per affordable unit at 80 percent of AMI and \$415,000 per affordable unit at 40 percent of AMI.

Table 11. Affordable Units Made Possible by City Funding of Parking Garage for a Five-Story Building on a One-Acre SIA Site with One Parking Space per Unit		
AMI Level	Supportable Affordable Units	
	Number	Percent of Incremental Units
All at 20%	2	10%
All at 30%	4	15%
All at 40%	4	15%
All at 50%	5	20%
All at 60%	7	30%
All at 80%	12	50%
1/3 at 20%, 1/3 at 40%, 1/3 at 60%	4	15%
1/3 at 30%, 1/3 at 60%, 1/3 at 60%	5	20%
1/2 at 40%, 1/2 at 60%	5	20%
1/2 at 50%, 1/2 at 60%	6	25%
1/2 at 60%, 1/2 at 80%	8	35%

Source: Partners for Economic Solutions, 2018.

Abatement of real property taxes for affordable units (estimated at \$1,700 per year) could help at the margin, but that amount of savings would not be sufficient to overcome the cost burdens of building affordable housing except at 60 (10 percent of incremental units) and 80 percent of AMI (20 percent). (See Table 12.)

Table 12. Affordable Units Made Possible by City Abatement of Property Taxes on Affordable Units for a Five-Story Building on a Half-Acre Downtown Site with One Parking Space per Unit		
	Supportable Affordable Units	
AMI Level	Number	Percent of Incremental Units
All at 20%	0	0%
All at 30%	0	0%
All at 40%	0	0%
All at 50%	0	0%
All at 60%	2	10%
All at 80%	5	20%
1/3 at 20%, 1/3 at 40%, 1/3 at 60%	0	0%
1/3 at 30%, 1/3 at 60%, 1/3 at 60%	0	0%
1/2 at 40%, 1/2 at 60%	0	0%
1/2 at 50%, 1/2 at 60%	2	10%
1/2 at 60%, 1/2 at 80%	2	10%

Source: Partners for Economic Solutions, 2018.

At one parking space per unit, a five-story half-acre Downtown development could support two or 10 percent of the incremental units at 80 percent of AMI rents. Direct City contributions to development costs (cash grants or fee waivers) could offset the cost of providing 10 percent of affordable units at lower AMI levels would range from \$0 to \$140,000 per unit depending on the level of affordability, as shown in Table 13.

Table 13. City Contribution Required to Support Two Affordable Units for a Five-Story Building on a Half-Acre Downtown Site with One Parking Space per Unit

AMI Level	Supportable Affordable Units		Required City Contribution per Affordable Unit
	Number	Percent of Incremental Units	
All at 20%	2	10%	\$140,000
All at 30%	2	10%	\$110,000
All at 40%	2	10%	\$80,000
All at 50%	2	10%	\$50,000
All at 60%	2	10%	\$25,000
All at 80%	2	10%	\$0
1/3 at 20%, 1/3 at 40%, 1/3 at 60%	2	10%	\$100,000
1/3 at 30%, 1/3 at 60%, 1/3 at 60%	2	10%	\$80,000
1/2 at 40%, 1/2 at 60%	2	10%	\$55,000
1/2 at 50%, 1/2 at 60%	2	10%	\$40,000
1/2 at 60%, 1/2 at 80%	2	10%	\$10,000

Source: Partners for Economic Solutions, 2018.

The base case assumes that the two affordable units supportable on the half-acre Downtown site with one parking space per unit are split evenly between one-bedroom units and two-bedroom units. To provide rents affordable at 60 percent of AMI under that mix, the City would need to contribute \$25,000 per unit. Adjusting the mix of units by size to provide additional family-sized units yields the required City contributions shown in Table 14. Shifting to a mix that was all two-bedroom units affordable at 60 percent of AMI would require a City contribution of \$30,000 per affordable unit.

Table 14. City Contribution Required to Support Two Affordable Units at Different Unit Sizes for a Five-Story Building on a Half-Acre Downtown Site with One Parking Space per Unit			
Percent of Units by Number of Bedrooms			Required City Contribution per Affordable Unit (60% AMI)
Efficiency	One Bedroom	Two Bedrooms	
10%	50%	40%	\$25,000
100%	0%	0%	\$0
50%	50%	0%	\$0
0%	100%	0%	\$10,000
0%	0%	100%	\$30,000

Source: Partners for Economic Solutions, 2018.

Appendix Tables A-3 through A-14 provide examples of the model for the five-story development on a half acre Downtown at parking ratios of 0.5 and 1.0 spaces per unit and varying levels of affordability. Appendix Tables A-15 through A-21 show the financial consequences of varying incentives – City-funded parking, no property tax on affordable units and direct City contributions.

V. Off-Site Affordable Housing

Development of affordable housing units on a separate parcel of land from the project receiving a height bonus could support more units than if developed on site. This is due to:

- the ability of non-profit developers to access multiple subsidy and financing sources;
- less expensive types of construction through lower density;
- cost savings through fewer building and unit amenities; and
- possibly lower land costs depending on the off-site location.

Most affordable housing is financed through multiple sources, drawing on Low-Income Housing Tax Credits (LIHTC), Virginia Housing Development Authority grants, City low-interest loans or grants, sustainability grants, foundation grants and even workforce training grants. Most of these subsidies are not available to private developers or mixed-income projects. LIHTC is structured to provide financial assistance to mixed-income developments with as little as 20 percent of the units for households at 50 percent of AMI or 40 percent of units at 60 percent of AMI. In practice, however, the competition for the credits has been dominated by all-affordable developments, typically with non-profit sponsors. Grants and other subsidies can be used to supplement funding from LIHTC investors, making it feasible to develop many more units than if the market-rate developer bore the full cost of funding the affordable units.

Other cost efficiencies are possible through less-intensive use of land in buildings of three to four stories supported by surface parking. Affordable housing need not include some of the high-end amenities being offered by luxury apartment buildings to attract high-income renters. Safe, sound and attractive affordable housing need not include rooftop decks, fire-pits and pools if it means that more families or families at lower incomes can be housed. While nice, the granite counter-tops and stainless steel appliances demanded by renters of luxury apartments increase construction costs unnecessarily.

Depending on the off-site location, land costs may be less expensive as well; however, the savings from developing on less-expensive properties that are less central must be balanced against tenants' need to be able to access transit, jobs and services and the goals of de-concentration of poverty. Restrictions can be placed on the selection of off-site locations to require proximity to the project receiving bonus height.

Development of affordable apartments using LIHTC equity investment typically requires additional below-market financing and/or subsidies. Judging by the projects supported by the Charlottesville Affordable Housing Fund, the funding gap ranges up to \$30,000 per unit once all other subsidies are tapped. The potential for funding off-site units based on increased height for a new development depends on the project being able to support additional costs equal to \$30,000 per unit for 10 to 20 percent of all units. The scenarios tested indicate a potential to contribute \$20,000 to \$800,000 for off-site affordable housing depending on the project size and location.

Currently, the Affordable Dwelling Units section of the City's Zoning Ordinance (Section 34-12) applies to projects receiving rezoning or a Special Use Permit for a density greater than or equal to 1.0 Floor Area Ratio² (FAR). Developers must provide on-site or off-site affordable dwelling units equal in square footage to at least 5.0 percent of the amount of the Gross Floor Area (GFA) exceeding 1.0 FAR. As an alternative, the developer can make a cash contribution to the City of Charlottesville Affordable Housing Fund in the amount of \$2.261 per GFA of the residential space. For a four-story development on a half-acre lot with one parking space per unit, that would translate into a payment of \$60,323.

Table 15 summarizes the supportable contributions as compared to the cash contributions that would be required in exchange for a rezoning or Special Use Permit. It should be noted that developments that proceed with matter-of-right zoning are not required to make any contribution to the Affordable Housing Fund.

² The ratio of building square feet divided by the square feet of land.

Table 15. Supportable Developer Contribution to Off-Site Affordable Units as Compared with Current Cash Contributions Under the Current Special Use Permit Process

Development Site	At Four Stories		At Five Stories		Developer Cash Contribution with a Special Use Permit	
	Total Amount	Amount per Developable Unit	Total Amount	Amount per Developable Unit	At Four Stories	At Five Stories
Downtown Half-Acre at 1.0 Parking Space per Unit	\$80,000	\$2,800	\$160,000	\$3,000	\$60,323	\$104,006
Downtown Half-Acre at 0.5 Parking Space per Unit	\$100,000	\$2,500	\$800,000	\$12,000	\$83,205	\$135,208
Downtown Quarter-Acre at 0.5 Parking Space per Unit	\$300,000	\$8,300	\$300,000	\$7,000	\$73,256	\$91,571
SIA One-Acre at 1.0 Parking Space per Unit	\$130,000	\$2,200	\$0	\$0	\$124,807	\$239,214
SIA Three-Acre at 1.0 Parking Space per Unit	\$280,000	\$1,600	\$0	\$0	\$366,101	\$707,241
US 29 North Half-Acre at 1.0 Parking Space per Unit	\$20,000	\$700	\$0	\$0	\$60,323	\$104,006

Source: Partners for Economic Solutions, 2018.

Appendix Tables

Competitive Multi-Family Rental Properties, Charlottesville

Project/Address	Number of Units	Floor Plans	Rental Rates	Square Feet	Rent per Sq. Ft.	Opening Date	Occupancy Rate
City Walk Apartments	175	1 Bedroom	\$1,185 - \$1,415	597 - 853	\$1.66 - \$1.98	2014	99%
1111 E Water Street	126	2 Bedrooms	\$1,645 - \$1,730	1,134 - 1,231	\$1.41 - \$1.45		
Charlottesville, VA 22902	301						
Wertland Square	24	2 Bedrooms	\$1,909 - \$2,474	887 - 947	\$2.15 - \$2.61	2007	100%
216 14th Street	26	4 Bedrooms	\$3,210 - \$3,579	1,365 - 1,460	\$2.36 - \$2.45		
Charlottesville, VA 22903	50						
Beacon on 5th	31	Efficiency	\$1,299 - \$1,399	675	\$2.00	2017	69%
100 Dalton Lane	31	1 Bedroom	\$1,504	881	\$1.71		
Charlottesville, VA 22903	60	2 Bedrooms	\$1,699 - \$2,159	1,150 - 1,713	\$1.26 - \$1.48		
	120	3 Bedrooms	\$2,199 - \$2,324	1,222 - 1,733	\$1.34 - \$1.61		
	242						
Carriage Hill Apartments	34	1 Bedroom	\$1,123 - \$1,273	831 - 954	\$1.33 - \$1.35	2000	99%
825 Beverley Drive	101	2 Bedrooms	\$1,368 - \$1,693	1,142 - 1,533	\$1.10 - \$1.27		
Charlottesville, VA 22911	36	3 Bedrooms	\$1,655 - \$1,655	1,627 -	\$1.02		
	171						
Jefferson Commons	21	4 Bedrooms	\$2,864 - \$2,864	1,200 - 1,577	\$1.82 - \$2.39	2008	100%
1620 Jefferson Park Avenue	21						
Charlottesville, VA 22903							
Avemore	160	1 Bedroom	\$862 - \$1,289	581 - 1,061	\$1.16 - \$1.76	2005	97%
1540 Avemore Lane	75	2 Bedrooms	\$1,273 - \$1,698	1,209 - 1,610	\$1.01 - \$1.06		
Charlottesville, VA 22911	45	3 Bedrooms	\$1,466 - \$1,620	1,479 - 1,655	\$0.98 - \$0.98		
	280						
Lakeside	110	1 Bedroom	\$1,095 - \$1,260	754	\$1.45 - \$1.67	1995	100%
200 Lake Club Court	187	2 Bedrooms	\$1,285 - \$1,485	1,040	\$1.24 - \$1.43		
Charlottesville, VA 22902	51	3 Bedrooms	\$1,500 - \$1,605	1,220	\$1.27 - \$1.32		
	348						

Competitive Multi-Family Rental Properties, Charlottesville (Continued)										
Project/Address	Number of Units	Floor Plans	Rental Rates		Square Feet		Rent per Sq. Ft.		Opening Date	Occupancy Rate
University Heights	104	1 Bedroom	\$855	- \$930	513	- 710	\$1.31	- \$1.67	1973	100%
250 Colonnade Drive	160	2 Bedrooms	\$970	- \$1,340	700	- 1,142	\$1.20	- \$1.45		
Charlottesville, VA 22903	81	3 Bedrooms	\$1,540	- \$1,590	1,187	- 1,496	\$1.06	- \$1.30		
	81	4 Bedrooms	\$1,620	- \$1,750	1,337	- 1,696	\$1.03	- \$1.21		
	426									
Ivy Gardens	231	1 Bedroom	\$975	- \$1,018	600	- 800	\$1.27	- \$1.46	1979	100%
100 Ivy Drive	209	2 Bedrooms	\$1,140	- \$1,245	900	- 1,100	\$1.13	- \$1.27		
Charlottesville, VA 22903	440									
Huntington Village-SHI	43	2 Bedrooms	\$1,093	- \$1,600	1,000	- 1,710	\$1.16	- \$1.25	1979	99%
133 Harvest Drive	22	3 Bedrooms	\$1,550	- \$1,600	1,810	- 1,200	\$0.86	- \$1.33		
Charlottesville, VA 22903	65									
Jefferson Ridge Apartments	104	1 Bedroom	\$1,099	- \$1,299	877	- 1,116	\$1.16	- \$1.25	2004	97%
810 Catalpa Court	104	2 Bedrooms	\$1,375	- \$1,385	1,360	- 1,381	\$0.99	- \$1.01		
Charlottesville, VA 22903	26	3 Bedrooms	\$1,675		1,601		\$1.05			
	234									
The Woodlands I	71	2 Bedrooms	\$1,380	- \$1,420	1,120	- 1,150	\$1.12	- \$1.12	2007	95%
1720 Treetop Drive	78	3 Bedrooms	\$1,640	- \$1,685	1,369	- 1,569	\$0.91	- \$1.00		
Charlottesville, VA 22903	149									
The Woodlands II	72	2 Bedrooms	\$1,380	- \$1,410	1,120	- 1,150	\$1.12	- \$1.13	2018	85%
1720 Treetop Drive	78	3 Bedrooms	\$1,640	- \$1,685	1,369	- 1,595	\$0.97	- \$1.10		
Charlottesville, VA 22903	150									

Sources: Axiometrics, 2018; Partners for Economic Solutions, 2018.

Table A-2. Scenario Results for On-Site Affordable Units with a Base of Three Stories (Continued)						
Height/% of AMI	Number of Stories	On-Site Affordable Units				
		1/3 @ 20%, 1/3 @ 40%, 1/3 @ 60%	1/3 @ 30%, 1/3 @ 50%, 1/3 @ 60%	1/2 @ 40%, 1/2 @ 60%	1/2 @ 50%, 1/2 @ 60%	1/2 @ 60%, 1/2 @ 80%
Downtown Half-Acre Site, 0.5 Parking Space/Unit						
Base of 3 stories	3	Base				
Add 1 story	4	2 units/25%	2 units/25%	2 units/25%	2 units/25%	2 units/25%
Add 2 stories	5	5 units/15%	5 units/15%	5 units/15%	6 units/20%	8 units/25%
Add 3-8 stories	6-11	Development not feasible - Return on Investment below 7.0 percent.				
Downtown Half-Acre Site, 1.0 Parking Space/Unit						
Base of 3 stories	3	Base				
Add 1 story	4	1 unit/25%	1 unit/25%	1 unit/25%	2 units/60%	2 units/60%
Add 2 stories	5	0 units/0%	0 units/0%	0 units/0%	0 units/0%	2 units/10%
Add 3-8 stories	6-11	Development not feasible - Return on Investment below 7.0 percent.				
Downtown Quarter-Acre Site, 0.5 Parking Space/Unit						
Base of 3 stories	3	Base				
Add 1 story	4	2 units/20%	2 units/20%	2 units/20%	3 units/30%	4 units/40%
Add 2 stories	5	2 units/10%	2 units/10%	2 units/10%	2 units/10%	4 units/20%
Add 3-7 story	6-10	Development not feasible - Return on Investment below 7.0 percent.				
SIA One-Acre Site, 1.0 Parking Space/Unit						
Base of 3 stories	3	Base				
Add 1 story	4	0 units/0%	0 units/0%	0 units/0%	1 units/15%	1 units/15%
Add 2-8 stories	5-11	Development not feasible - Return on Investment below 7.0 percent.				
SIA Three-Acre Site, 1.0 Parking Space/Unit						
Base of 3 stories	3	Base				
Add 1 story	4	0 units/0%	2 units/10%	2 units/10%	2 units/10%	4 units/20%
Add 2-8 stories	5-11	Development not feasible - Return on Investment below 7.0 percent.				
U.S. 29 North Corridor Half-Acre Site, 1.0 Parking Space/Unit						
Base of 3 stories	3	Base				
Add 1 story	4	0 units/0%	0 units/0%	0 units/0%	0 units/0%	0 units/0%
Add 2-8 stories	5-11	Development not feasible - Return on Investment below 7.0 percent.				

Source: Partners for Economic Solutions, 2018.

Table A-2. Scenario Results for On-Site Affordable Units with a Base of Three Stories

Height/% of AMI	Number of Stories	Parking	Construction Type	On-Site Affordable Units					
				All at 20% AMI	All at 30% AMI	All at 40% AMI	All at 50% AMI	All at 60% AMI	All at 80% AMI
Downtown Half-Acre Site, 0.5 Parking Space/Unit									
Base of 3 stories	3	Surface	Wood	Base					
Add 1 story	4	Surface	Wood	1 units/15%	1 units/15%	1 units/15%	2 units/25%	2 units/25%	2 units/25%
Add 2 stories	5	Structure	Wood, podium	3 units/10%	3 units/10%	5 units/15%	6 units/20%	6 units/20%	13 units/40%
Add 3-8 stories	6-11	Structure	Concrete	Development not feasible - Return on Investment is below 7.0 percent.					
Downtown Half-Acre Site, 1.0 Parking Space/Unit									
Base of 3 stories	3	Surface	Wood	Base					
Add 1 story	4	Surface	Wood	1 unit/25%	1 unit/25%	1 unit/25%	1 unit/25%	2 units/60%	2 units/60%
Add 2 stories	5	Structure	Wood, podium	0 units/0%	0 units/0%	0 units/0%	0 units/0%	0 units/0%	2 units/10%
Add 3-8 stories	6-11	Structure	Concrete	Development not feasible - Return on Investment is below 7.0 percent.					
Downtown Quarter-Acre Site, 0.5 Parking Space/Unit									
Base of 3 stories	3	Surface	Wood	Base					
Add 1 story	4	Surface	Wood	1 unit/10%	2 unit/20%	2 units/20%	2 units/20%	3 units/30%	5 units/50%
Add 2 stories	5	Structure	Wood, podium	0 units/0%	0 units/0%	2 units/10%	2 units/10%	3 units/15%	4 units/20%
Add 3-7 story	6-10	Below-Ground	Wood	Development not feasible - Return on Investment is below 7.0 percent.					
SIA One-Acre Site, 1.0 Parking Space/Unit									
Base of 3 stories	3	Surface	Wood	Base					
Add 1 story	4	Surface	Wood	0 units/0%	0 units/0%	0 units/0%	1 units/15%	1 units/15%	2 units/25%
Add 2-8 stories	5-11	Structure	Podium/Concrete	Development not feasible - Return on Investment is below 7.0 percent.					
SIA Three-Acre Site, 1.0 Parking Space/Unit									
Base of 3 stories	3	Surface	Wood	Base					
Add 1 story	4	Surface	Wood	0 units/0%	0 units/0%	2 units/10%	2 units/10%	3 units/15%	5 units/25%
Add 2-8 stories	5-11	Structure	Podium/Concrete	Development not feasible - Return on Investment is below 7.0 percent.					
U.S. 29 North Corridor Half-Acre Site, 1.0 Parking Space/Unit									
Base of 3 stories	3	Surface	Wood	Base					
Add 1 story	4	Surface	Wood	0 units/0%	0 units/0%	0 units/0%	0 units/0%	0 units/0%	0 units/0%
Add 2-8 stories	5-11	Structure	Podium/Concrete	Development not feasible - Return on Investment is below 7.0 percent.					

Source: Partners for Economic Solutions, 2018.

Table A-2. Scenario Results for On-Site Affordable Units with a Base of Three Stories (Continued)							
Height/% of AMI	Number of Stories	On-Site Affordable Units					
		1/3 @ 20%, 1/3 @ 40%, 1/3 @ 60%	1/3 @ 30%, 1/3 @ 50%, 1/3 @ 60%	1/2 @ 40%, 1/2 @ 60%	1/2 @ 50%, 1/2 @ 60%	1/2 @ 60%, 1/2 @ 60%	1/2 @ 80%
Downtown Half-Acre Site, 0.5 Parking Space/Unit							
Base of 3 stories	3	Base					
Add 1 story	4	2 units/25%	2 units/25%	2 units/25%	2 units/25%	2 units/25%	
Add 2 stories	5	5 units/15%	5 units/15%	5 units/15%	6 units/20%	8 units/25%	
Add 3-8 stories	6-11	Development not feasible - Return on Investment below 7.0 percent.					
Downtown Half-Acre Site, 1.0 Parking Space/Unit							
Base of 3 stories	3	Base					
Add 1 story	4	1 unit/25%	1 unit/25%	1 unit/25%	2 units/60%	2 units/60%	
Add 2 stories	5	0 units/0%	0 units/0%	0 units/0%	0 units/0%	2 units/10%	
Add 3-8 stories	6-11	Development not feasible - Return on Investment below 7.0 percent.					
Downtown Quarter-Acre Site, 0.5 Parking Space/Unit							
Base of 3 stories	3	Base					
Add 1 story	4	2 units/20%	2 units/20%	2 units/20%	3 units/30%	4 units/40%	
Add 2 stories	5	2 units/10%	2 units/10%	2 units/10%	2 units/10%	4 units/20%	
Add 3-7 story	6-10	Development not feasible - Return on Investment below 7.0 percent.					
SIA One-Acre Site, 1.0 Parking Space/Unit							
Base of 3 stories	3	Base					
Add 1 story	4	0 units/0%	0 units/0%	0 units/0%	1 units/15%	1 units/15%	
Add 2-8 stories	5-11	Development not feasible - Return on Investment below 7.0 percent.					
SIA Three-Acre Site, 1.0 Parking Space/Unit							
Base of 3 stories	3	Base					
Add 1 story	4	0 units/0%	2 units/10%	2 units/10%	2 units/10%	4 units/20%	
Add 2-8 stories	5-11	Development not feasible - Return on Investment below 7.0 percent.					
U.S. 29 North Corridor Half-Acre Site, 1.0 Parking Space/Unit							
Base of 3 stories	3	Base					
Add 1 story	4	0 units/0%	0 units/0%	0 units/0%	0 units/0%	0 units/0%	
Add 2-8 stories	5-11	Development not feasible - Return on Investment below 7.0 percent.					

Source: Partners for Economic Solutions, 2018.

Table A-3. Five-Story Rental Development on Downtown Half Acre with 0.5 Parking Space Per Unit Above a Three-Story Base, Affordable Units at 80% of AMI

Characteristics of Project	Total Project			Market-Rate			Affordable		
							Affordability	Mix	Units
Site Size (acres)	0.46						20% AMI	0%	
Future Project Density (DU/AC)	142						30% AMI	0%	
Base Project Size (Units)	65						40% AMI	0%	
Size at Three Stories	33						50% AMI	0%	
Number of Stories	5						60% AMI	0%	
Bonus Height Units	32						80% AMI	100%	
Affordable Units % of Incremental Units	40.0%								
Market-Rate Units	52			52			-		
Affordable Units	13			-			13		
Parking Ratio (Spaces per Unit)	0.5			0.5			0.5		
Residential Parking Spaces	36			36			-		
Surface	-			-			-		
Above Ground	36			36			-		
Partially Below Ground	-			-			-		
Below Ground (1-2 Levels)	-			-			-		
Total Rentable Square Feet	49,150			39,250			9,900		
Common Area	8,650			6,950			1,700		
Total Residential	57,800			46,200			11,600		
Average Unit Size (Square Feet)	756			755			762		
Unit Mix	Sq. Ft.	Mix	Units	Rents	Mix	Units	Rents	Mix	Units
Efficiency	525	15%	10	\$1,340	15%	8	\$1,010	15%	2
1 BR	725	50%	32	\$1,560	50%	26	\$1,160	50%	6
2 BR	900	35%	23	\$1,810	35%	18	\$1,370	35%	5
3 BR	1,075	0%	-	\$2,150	0%	-	\$1,420	0%	-
Average Monthly Rent				\$1,610			\$1,220		
Monthly Parking Rate	\$100			\$100			\$0		
Operating Expense per Unit				\$3,500			\$3,500		
Property Taxes per Unit				\$1,700			\$1,700		
Development Costs									
Land Acquisition	\$441,000			\$441,000			\$0		
Residential Unit Construction Cost	\$7,976,400			\$6,375,600			\$1,600,800		
Parking Construction Cost	\$720,000			\$720,000			\$0		
Soft Costs	\$1,739,300			\$1,419,100			\$320,200		
Developer Fee	\$417,400			\$340,600			\$76,800		
Construction Financing	\$417,400			\$340,600			\$76,800		
Total Development Costs	\$11,711,500	\$0	\$0	\$9,636,900			\$2,074,600		
<i>Total Development Costs/Unit</i>	\$180,200			\$185,300			\$159,600		
Development Feasibility									
Gross Residential Rent (100% Occupancy)	\$1,239,500			\$1,049,500			\$190,000		
Vacancy and Collection Loss	5.0%			5.0%			5.0%		
Gross Scheduled Rent	\$1,177,500			\$997,000			\$180,500		
Operating Expenses and Property Taxes	\$338,000			\$270,400			\$67,600		
Replacement Reserves	\$22,800			\$18,200			\$4,600		
Net Operating Income	\$816,700			\$708,400			\$108,300		
Return on Investment	7.0%			7.351%			5.220%		

Source: Partners for Economic Solutions, 2018.

Table A-4. Five-Story Rental Development on Downtown Half Acre with 0.5 Parking Space Per Unit Above a Three-Story Base, Affordable Units at 60% of AMI

Characteristics of Project	Total Project			Market-Rate			Affordable		
							Affordability	Mix	Units
Site Size (acres)	0.46						20% AMI	0%	
Future Project Density (DU/AC)	142						30% AMI	0%	
Base Project Size (Units)	65						40% AMI	0%	
Size at Three Stories	33						50% AMI	0%	
Number of Stories	5						60% AMI	100%	
Bonus Height Units	32						80% AMI	0%	
Affordable Units % of Incremental Units	20.0%								
Market-Rate Units	59			59			-		
Affordable Units	6			-			6		
Parking Ratio (Spaces per Unit)	0.5			0.5			0.5		
Residential Parking Spaces	36			36			-		
Surface	-			-			-		
Above Ground	36			36			-		
Partially Below Ground	-			-			-		
Below Ground (1-2 Levels)	-			-			-		
Total Rentable Square Feet	49,150			44,650			4,500		
Common Area	8,650			7,850			800		
Total Residential	57,800			52,500			5,300		
Average Unit Size (Square Feet)	756			757			750		
Unit Mix	Sq. Ft.	Mix	Units	Rents	Mix	Units	Rents	Mix	Units
Efficiency	525	15%	10	\$1,340	15%	9	\$750	15%	1
1 BR	725	50%	32	\$1,560	50%	29	\$850	50%	3
2 BR	900	35%	23	\$1,810	35%	21	\$1,000	35%	2
3 BR	1,075	0%	-	\$2,150	0%	-	\$1,040	0%	-
Average Monthly Rent				\$1,620			\$880		
Monthly Parking Rate	\$100			\$100			\$0		
Operating Expense per Unit				\$3,500			\$3,500		
Property Taxes per Unit				\$1,700			\$1,700		
Development Costs									
Land Acquisition	\$441,000			\$441,000			\$0		
Residential Unit Construction Cost	\$7,976,400			\$7,245,000			\$731,400		
Parking Construction Cost	\$720,000			\$720,000			\$0		
Soft Costs	\$1,739,300			\$1,593,000			\$146,300		
Developer Fee	\$417,400			\$382,300			\$35,100		
Construction Financing	\$417,400		Cash Subsidy per unit	\$382,300			\$35,100		
Total Development Costs	\$11,711,500	\$0	\$0	\$10,763,600			\$947,900		
<i>Total Development Costs/Unit</i>	<i>\$180,200</i>			<i>\$182,400</i>			<i>\$158,000</i>		
Development Feasibility									
Gross Residential Rent (100% Occupancy)	\$1,250,500			\$1,186,900			\$63,600		
Vacancy and Collection Loss	5.0%			5.0%			5.0%		
Gross Scheduled Rent	\$1,188,000			\$1,127,600			\$60,400		
Operating Expenses and Property Taxes	\$338,000			\$306,800			\$31,200		
Replacement Reserves	\$22,800			\$20,700			\$2,100		
Net Operating Income	\$827,200			\$800,100			\$27,100		
Return on Investment	7.1%			7.433%			2.859%		

Source: Partners for Economic Solutions, 2018.

Table A-5. Five-Story Rental Development on Downtown Half Acre with 0.5 Parking Space Per Unit Above a Three-Story Base, Affordable Units at 50% of AMI

Characteristics of Project	Total Project			Market-Rate			Affordable		
							Affordability	Mix	Units
Site Size (acres)	0.46						20% AMI	0%	
Future Project Density (DU/AC)	142						30% AMI	0%	
Base Project Size (Units)	65						40% AMI	0%	
Size at Three Stories	33						50% AMI	100%	
Number of Stories	5						60% AMI	0%	
Bonus Height Units	32						80% AMI	0%	
Affordable Units % of Incremental Units	20.0%								
Market-Rate Units	59			59			-		
Affordable Units	6			-			6		
Parking Ratio (Spaces per Unit)	0.5			0.5			0.5		
Residential Parking Spaces	36			36			-		
Surface	-			-			-		
Above Ground	36			36			-		
Partially Below Ground	-			-			-		
Below Ground (1-2 Levels)	-			-			-		
Total Rentable Square Feet	49,150			44,650			4,500		
Common Area	8,650			7,850			800		
Total Residential	57,800			52,500			5,300		
Average Unit Size (Square Feet)	756			757			750		
Unit Mix	Sq. Ft.	Mix	Units	Rents	Mix	Units	Rents	Mix	Units
Efficiency	525	15%	10	\$1,340	15%	9	\$610	15%	1
1 BR	725	50%	32	\$1,560	50%	29	\$700	50%	3
2 BR	900	35%	23	\$1,810	35%	21	\$820	35%	2
3 BR	1,075	0%	-	\$2,150	0%	-	\$850	0%	-
Average Monthly Rent				\$1,620			\$730		
Monthly Parking Rate	\$100			\$100			\$0		
Operating Expense per Unit				\$3,500			\$3,500		
Property Taxes per Unit				\$1,700			\$1,700		
Development Costs									
Land Acquisition	\$441,000			\$441,000			\$0		
Residential Unit Construction Cost	\$7,976,400			\$7,245,000			\$731,400		
Parking Construction Cost	\$720,000			\$720,000			\$0		
Soft Costs	\$1,739,300			\$1,593,000			\$146,300		
Developer Fee	\$417,400			\$382,300			\$35,100		
Construction Financing	\$417,400			\$382,300			\$35,100		
		Cash Subsidy per unit							
Total Development Costs	\$11,711,500	\$0	\$0	\$10,763,600			\$947,900		
<i>Total Development Costs/Unit</i>	\$180,200			\$182,400			\$158,000		
Development Feasibility									
Gross Residential Rent (100% Occupancy)	\$1,239,100			\$1,186,900			\$52,200		
Vacancy and Collection Loss	5.0%			5.0%			5.0%		
Gross Scheduled Rent	\$1,177,100			\$1,127,600			\$49,600		
Operating Expenses and Property Taxes	\$338,000			\$306,800			\$31,200		
Replacement Reserves	\$22,800			\$20,700			\$2,100		
Net Operating Income	\$816,300			\$800,100			\$16,300		
Return on Investment	7.0%			7.433%			1.720%		

Source: Partners for Economic Solutions, 2018.

Table A-6. Five-Story Rental Development on Downtown Half Acre with 0.5 Parking Space Per Unit Above a Three-Story Base, Affordable Units at 40% of AMI

Characteristics of Project	Total Project			Market-Rate			Affordable		
							Affordability	Mix	Units
Site Size (acres)	0.46						20% AMI	0%	
Future Project Density (DU/AC)	142						30% AMI	0%	
Base Project Size (Units)	65						40% AMI	100%	
Size at Three Stories	33						50% AMI	0%	
Number of Stories	5						60% AMI	0%	
Bonus Height Units	32						80% AMI	0%	
Affordable Units % of Incremental Units	15.0%								
Market-Rate Units	60			60			-		
Affordable Units	5			-			5		
Parking Ratio (Spaces per Unit)	0.5			0.5			0.5		
Residential Parking Spaces	36			36			-		
Surface	-			-			-		
Above Ground	36			36			-		
Partially Below Ground	-			-			-		
Below Ground (1-2 Levels)	-			-			-		
Total Rentable Square Feet	49,150			45,375			3,775		
Common Area	8,650			8,025			625		
Total Residential	57,800			53,400			4,400		
Average Unit Size (Square Feet)	756			756			755		
Unit Mix	Sq. Ft.	Mix	Units	Rents	Mix	Units	Rents	Mix	Units
Efficiency	525	15%	10	\$1,340	15%	9	\$480	15%	1
1 BR	725	50%	32	\$1,560	50%	30	\$540	50%	2
2 BR	900	35%	23	\$1,810	35%	21	\$640	35%	2
3 BR	1,075	0%	-	\$2,150	0%	-	\$660	0%	-
Average Monthly Rent				\$1,610			\$570		
Monthly Parking Rate	\$100			\$100			\$0		
Operating Expense per Unit				\$3,500			\$3,500		
Property Taxes per Unit				\$1,700			\$1,700		
Development Costs									
Land Acquisition	\$441,000			\$441,000			\$0		
Residential Unit Construction Cost	\$7,976,400			\$7,369,200			\$607,200		
Parking Construction Cost	\$720,000			\$720,000			\$0		
Soft Costs	\$1,739,200			\$1,617,800			\$121,400		
Developer Fee	\$417,400			\$388,300			\$29,100		
Construction Financing	\$417,400		Cash Subsidy per unit	\$388,300			\$29,100		
Total Development Costs	\$11,711,400		\$0	\$10,924,600			\$786,800		
<i>Total Development Costs/Unit</i>	<i>\$180,200</i>			<i>\$182,100</i>			<i>\$157,400</i>		
Development Feasibility									
Gross Residential Rent (100% Occupancy)	\$1,239,700			\$1,205,600			\$34,100		
Vacancy and Collection Loss	5.0%			5.0%			5.0%		
Gross Scheduled Rent	\$1,177,700			\$1,145,300			\$32,400		
Operating Expenses and Property Taxes	\$338,000			\$312,000			\$26,000		
Replacement Reserves	\$22,800			\$21,000			\$1,800		
Net Operating Income	\$816,900			\$812,300			\$4,600		
Return on Investment	7.0%			7.436%			0.585%		

Source: Partners for Economic Solutions, 2018.

Table A-7. Five-Story Rental Development on Downtown Half Acre with 0.5 Parking Space Per Unit Above a Three-Story Base, Affordable Units at 30% of AMI

Characteristics of Project	Total Project			Market-Rate			Affordable		
							Affordability	Mix	Units
Site Size (acres)	0.46						20% AMI	0%	
Future Project Density (DU/AC)	142						30% AMI	100%	
Base Project Size (Units)	65						40% AMI	0%	
Size at Three Stories	33						50% AMI	0%	
Number of Stories	5						60% AMI	0%	
Bonus Height Units	32						80% AMI	0%	
Affordable Units % of Incremental Units	10.0%								
Market-Rate Units	62			62			-		
Affordable Units	3			-			3		
Parking Ratio (Spaces per Unit)	0.5			0.5			0.5		
Residential Parking Spaces	36			36			-		
Surface	-			-			-		
Above Ground	36			36			-		
Partially Below Ground	-			-			-		
Below Ground (1-2 Levels)	-			-			-		
Total Rentable Square Feet	49,150			46,800			2,350		
Common Area	8,650			8,300			450		
Total Residential	57,800			55,100			2,800		
Average Unit Size (Square Feet)	756			755			783		
Unit Mix	Sq. Ft.	Mix	Units	Rents	Mix	Units	Rents	Mix	Units
Efficiency	525	15%	10	\$1,340	15%	10	\$340	15%	-
1 BR	725	50%	32	\$1,560	50%	30	\$390	50%	2
2 BR	900	35%	23	\$1,810	35%	22	\$460	35%	1
3 BR	1,075	0%	-	\$2,150	0%	-	\$470	0%	-
Average Monthly Rent				\$1,610			\$410		
Monthly Parking Rate	\$100			\$100			\$0		
Operating Expense per Unit				\$3,500			\$3,500		
Property Taxes per Unit				\$1,700			\$1,700		
Development Costs									
Land Acquisition	\$441,000			\$441,000			\$0		
Residential Unit Construction Cost	\$7,976,400			\$7,603,800			\$386,400		
Parking Construction Cost	\$720,000			\$720,000			\$0		
Soft Costs	\$1,742,100			\$1,664,800			\$77,300		
Developer Fee	\$418,000			\$399,500			\$18,500		
Construction Financing	\$418,000			\$399,500			\$18,500		
Cash Subsidy per unit									
Total Development Costs	\$11,715,500	\$0	\$0	\$11,228,600			\$500,700		
<i>Total Development Costs/Unit</i>	<i>\$180,200</i>			<i>\$181,100</i>			<i>\$166,900</i>		
Development Feasibility									
Gross Residential Rent (100% Occupancy)	\$1,258,300			\$1,243,400			\$14,900		
Vacancy and Collection Loss	5.0%			5.0%			5.0%		
Gross Scheduled Rent	\$1,195,400			\$1,181,200			\$14,200		
Operating Expenses and Property Taxes	\$338,000			\$322,400			\$15,600		
Replacement Reserves	\$22,800			\$21,700			\$1,100		
Net Operating Income	\$834,600			\$837,100			-\$2,500		
Return on Investment	7.1%			7.455%			-0.499%		

Source: Partners for Economic Solutions, 2018.

Table A-8. Five-Story Rental Development on Downtown Half Acre with 0.5 Parking Space Per Unit Above a Three-Story Base, Affordable Units at 20% of AMI

Characteristics of Project	Total Project			Market-Rate			Affordable		
							Affordability	Mix	Units
Site Size (acres)	0.46						20% AMI	100%	
Future Project Density (DU/AC)	142						30% AMI	0%	
Base Project Size (Units)	65						40% AMI	0%	
Size at Three Stories	33						50% AMI	0%	
Number of Stories	5						60% AMI	0%	
Bonus Height Units	32						80% AMI	0%	
Affordable Units % of Incremental Units	10.0%								
Market-Rate Units	62			62			-		
Affordable Units	3			-			3		
Parking Ratio (Spaces per Unit)	0.5			0.5			0.5		
Residential Parking Spaces	36			36			-		
Surface	-			-			-		
Above Ground	36			36			-		
Partially Below Ground	-			-			-		
Below Ground (1-2 Levels)	-			-			-		
Total Rentable Square Feet	49,150			46,800			2,350		
Common Area	8,650			8,300			450		
Total Residential	57,800			55,100			2,800		
Average Unit Size (Square Feet)	756			755			783		
Unit Mix	Sq. Ft.	Mix	Units	Rents	Mix	Units	Rents	Mix	Units
Efficiency	525	15%	10	\$1,340	15%	10	\$210	15%	-
1 BR	725	50%	32	\$1,560	50%	30	\$240	50%	2
2 BR	900	35%	23	\$1,810	35%	22	\$270	35%	1
3 BR	1,075	0%	-	\$2,150	0%	-	\$270	0%	-
Average Monthly Rent				\$1,610			\$250		
Monthly Parking Rate	\$100			\$100			\$0		
Operating Expense per Unit				\$3,500			\$3,500		
Property Taxes per Unit				\$1,700			\$1,700		
Development Costs									
Land Acquisition	\$441,000			\$441,000			\$0		
Residential Unit Construction Cost	\$7,976,400			\$7,603,800			\$386,400		
Parking Construction Cost	\$720,000			\$720,000			\$0		
Soft Costs	\$1,742,100			\$1,664,800			\$77,300		
Developer Fee	\$418,000			\$399,500			\$18,500		
Construction Financing	\$418,000		Cash Subsidy per unit	\$399,500			\$18,500		
Total Development Costs	\$11,715,500	\$0	\$0	\$11,228,600			\$500,700		
<i>Total Development Costs/Unit</i>	<i>\$180,200</i>			<i>\$181,100</i>			<i>\$166,900</i>		
Development Feasibility									
Gross Residential Rent (100% Occupancy)	\$1,252,400			\$1,243,400			\$9,000		
Vacancy and Collection Loss	5.0%			5.0%			5.0%		
Gross Scheduled Rent	\$1,189,800			\$1,181,200			\$8,600		
Operating Expenses and Property Taxes	\$338,000			\$322,400			\$15,600		
Replacement Reserves	\$22,800			\$21,700			\$1,100		
Net Operating Income	\$829,000			\$837,100			-\$8,100		
Return on Investment	7.1%			7.455%			-1.618%		

Source: Partners for Economic Solutions, 2018.

Table A-9. Five-Story Rental Development on Downtown Half Acre with One Parking Space Per Unit, Affordable Units at 80% of AMI

Characteristics of Project	Total Project			Market-Rate			Affordable		
							Affordability	Mix	Units
Site Size (acres)	0.46						20% AMI	0%	
Future Project Density (DU/AC)	109						30% AMI	0%	
Base Project Size (Units)	50						40% AMI	0%	
Size at Three Stories	26						50% AMI	0%	
Number of Stories	5						60% AMI	0%	
Bonus Height Units	24						80% AMI	100%	
Affordable Units % of Incremental Units	10.0%								
Market-Rate Units	48			48			-		
Affordable Units	2			-			2		
Parking Ratio (Spaces per Unit)	1.0			1.0			1.0		
Residential Parking Spaces	64			64			-		
Surface	-			-			-		
Above Ground	64			64			-		
Partially Below Ground	-			-			-		
Below Ground (1-2 Levels)	-			-			-		
Total Rentable Square Feet	37,800			36,175			1,625		
Common Area	6,700			6,425			275		
Total Residential	44,500			42,600			1,900		
Average Unit Size (Square Feet)	756			754			813		
Unit Mix	Sq. Ft.	Mix	Units	Rents	Mix	Units	Rents	Mix	Units
Efficiency	525	15%	8	\$1,340	15%	8	\$1,010	15%	-
1 BR	725	50%	24	\$1,560	50%	23	\$1,160	50%	1
2 BR	900	35%	18	\$1,810	35%	17	\$1,370	35%	1
3 BR	1,075	0%	-	\$2,150	0%	-	\$1,420	0%	-
Average Monthly Rent				\$1,610			\$1,270		
Monthly Parking Rate	\$100			\$100			\$0		
Operating Expense per Unit				\$3,500			\$3,500		
Property Taxes per Unit				\$1,700			\$1,700		
Development Costs									
Land Acquisition	\$441,000			\$441,000			\$0		
Residential Unit Construction Cost	\$6,141,000			\$5,878,800			\$262,200		
Parking Construction Cost	\$1,280,000			\$1,280,000			\$0		
Soft Costs	\$1,484,200			\$1,431,800			\$52,400		
Developer Fee	\$356,200			\$343,600			\$12,600		
Construction Financing	\$356,200	Cash Subsidy per unit		\$343,600			\$12,600		
Total Development Costs	\$10,058,600	\$0	\$0	\$9,718,800			\$339,800		
<i>Total Development Costs/Unit</i>	\$201,200			\$202,500			\$169,900		
Development Feasibility									
Gross Residential Rent (100% Occupancy)	\$1,035,600			\$1,005,200			\$30,400		
Vacancy and Collection Loss	5.0%			5.0%			5.0%		
Gross Scheduled Rent	\$983,800			\$954,900			\$28,900		
Operating Expenses and Property Taxes	\$260,000			\$249,600			\$10,400		
Replacement Reserves	\$17,500			\$16,800			\$700		
Net Operating Income	\$706,300			\$688,500			\$17,800		
Return on Investment	7.0%			7.084%			5.238%		

Source: Partners for Economic Solutions, 2018.

Table A-10. Five-Story Rental Development on Downtown Half Acre with One Parking Space Per Unit, Affordable Units at 60% of AMI

Characteristics of Project	Total Project			Market-Rate			Affordable		
							Affordability	Mix	Units
Site Size (acres)	0.46						20% AMI	0%	
Future Project Density (DU/AC)	109						30% AMI	0%	
Base Project Size (Units)	50						40% AMI	0%	
Size at Three Stories	26						50% AMI	0%	
Number of Stories	5						60% AMI	100%	
Bonus Height Units	24						80% AMI	0%	
Affordable Units % of Incremental Units	10.0%								
Market-Rate Units	48			48			-		
Affordable Units	2			-			2		
Parking Ratio (Spaces per Unit)	1.0			1.0			1.0		
Residential Parking Spaces	64			64			-		
Surface	-			-			-		
Above Ground	64			64			-		
Partially Below Ground	-			-			-		
Below Ground (1-2 Levels)	-			-			-		
Total Rentable Square Feet	37,800			36,175			1,625		
Common Area	6,700			6,425			275		
Total Residential	44,500			42,600			1,900		
Average Unit Size (Square Feet)	756			754			813		
Unit Mix	Sq. Ft.	Mix	Units	Rents	Mix	Units	Rents	Mix	Units
Efficiency	525	15%	8	\$1,340	15%	8	\$750	15%	-
1 BR	725	50%	24	\$1,560	50%	23	\$850	50%	1
2 BR	900	35%	18	\$1,810	35%	17	\$1,000	35%	1
3 BR	1,075	0%	-	\$2,150	0%	-	\$1,040	0%	-
Average Monthly Rent				\$1,610			\$930		
Monthly Parking Rate	\$100			\$100			\$0		
Operating Expense per Unit				\$3,500			\$3,500		
Property Taxes per Unit				\$1,700			\$1,700		
Development Costs									
Land Acquisition	\$441,000			\$441,000			\$0		
Residential Unit Construction Cost	\$6,141,000			\$5,878,800			\$262,200		
Parking Construction Cost	\$1,280,000			\$1,280,000			\$0		
Soft Costs	\$1,484,200			\$1,431,800			\$52,400		
Developer Fee	\$356,200			\$343,600			\$12,600		
Construction Financing	\$356,200	Cash Subsidy per unit		\$343,600			\$12,600		
Total Development Costs	\$10,058,600	\$0	\$0	\$9,718,800			\$339,800		
<i>Total Development Costs/Unit</i>	<i>\$201,200</i>			<i>\$202,500</i>			<i>\$169,900</i>		
Development Feasibility									
Gross Residential Rent (100% Occupancy)	\$1,027,400			\$1,005,200			\$22,200		
Vacancy and Collection Loss	5.0%			5.0%			5.0%		
Gross Scheduled Rent	\$976,000			\$954,900			\$21,100		
Operating Expenses and Property Taxes	\$260,000			\$249,600			\$10,400		
Replacement Reserves	\$17,500			\$16,800			\$700		
Net Operating Income	\$698,500			\$688,500			\$10,000		
Return on Investment	6.9%			7.084%			2.943%		

Source: Partners for Economic Solutions, 2018.

Table A-11. Five-Story Rental Development on Downtown Half Acre with One Parking Space Per Unit, Affordable Units at 50% of AMI

Characteristics of Project	Total Project			Market-Rate			Affordable		
							Affordability	Mix	Units
Site Size (acres)	0.46						20% AMI	0%	
Future Project Density (DU/AC)	109						30% AMI	0%	
Base Project Size (Units)	50						40% AMI	0%	
Size at Three Stories	26						50% AMI	100%	
Number of Stories	5						60% AMI	0%	
Bonus Height Units	24						80% AMI	0%	
Affordable Units % of Incremental Units	10.0%								
Market-Rate Units	48			48			-		
Affordable Units	2			-			2		
Parking Ratio (Spaces per Unit)	1.0			1.0			1.0		
Residential Parking Spaces	64			64			-		
Surface	-			-			-		
Above Ground	64			64			-		
Partially Below Ground	-			-			-		
Below Ground (1-2 Levels)	-			-			-		
Total Rentable Square Feet	37,800			36,175			1,625		
Common Area	6,700			6,425			275		
Total Residential	44,500			42,600			1,900		
Average Unit Size (Square Feet)	756			754			813		
Unit Mix	Sq. Ft.	Mix	Units	Rents	Mix	Units	Rents	Mix	Units
Efficiency	525	15%	8	\$1,340	15%	8	\$610	15%	-
1 BR	725	50%	24	\$1,560	50%	23	\$700	50%	1
2 BR	900	35%	18	\$1,810	35%	17	\$820	35%	1
3 BR	1,075	0%	-	\$2,150	0%	-	\$850	0%	-
Average Monthly Rent				\$1,610			\$760		
Monthly Parking Rate	\$100			\$100			\$0		
Operating Expense per Unit				\$3,500			\$3,500		
Property Taxes per Unit				\$1,700			\$1,700		
Development Costs									
Land Acquisition	\$441,000			\$441,000			\$0		
Residential Unit Construction Cost	\$6,141,000			\$5,878,800			\$262,200		
Parking Construction Cost	\$1,280,000			\$1,280,000			\$0		
Soft Costs	\$1,484,200			\$1,431,800			\$52,400		
Developer Fee	\$356,200			\$343,600			\$12,600		
Construction Financing	\$356,200	Cash Subsidy per unit		\$343,600			\$12,600		
Total Development Costs	\$10,058,600	\$0	\$0	\$9,718,800			\$339,800		
<i>Total Development Costs/Unit</i>	<i>\$201,200</i>			<i>\$202,500</i>			<i>\$169,900</i>		
Development Feasibility									
Gross Residential Rent (100% Occupancy)	\$1,023,400			\$1,005,200			\$18,200		
Vacancy and Collection Loss	5.0%			5.0%			5.0%		
Gross Scheduled Rent	\$972,200			\$954,900			\$17,300		
Operating Expenses and Property Taxes	\$260,000			\$249,600			\$10,400		
Replacement Reserves	\$17,500			\$16,800			\$700		
Net Operating Income	\$694,700			\$688,500			\$6,200		
Return on Investment	6.9%			7.084%			1.825%		

Source: Partners for Economic Solutions, 2018.

Table A-12. Five-Story Rental Development on Downtown Half Acre with One Parking Space Per Unit, Affordable Units at 40% of AMI

Characteristics of Project	Total Project			Market-Rate			Affordable		
							Affordability	Mix	Units
Site Size (acres)	0.46						20% AMI	0%	
Future Project Density (DU/AC)	109						30% AMI	0%	
Base Project Size (Units)	50						40% AMI	100%	
Size at Three Stories	26						50% AMI	0%	
Number of Stories	5						60% AMI	0%	
Bonus Height Units	24						80% AMI	0%	
Affordable Units % of Incremental Units	10.0%								
Market-Rate Units	48			48			-		
Affordable Units	2			-			2		
Parking Ratio (Spaces per Unit)	1.0			1.0			1.0		
Residential Parking Spaces	64			64			-		
Surface	-			-			-		
Above Ground	64			64			-		
Partially Below Ground	-			-			-		
Below Ground (1-2 Levels)	-			-			-		
Total Rentable Square Feet	37,800			36,175			1,625		
Common Area	6,700			6,425			275		
Total Residential	44,500			42,600			1,900		
Average Unit Size (Square Feet)	756			754			813		
Unit Mix	Sq. Ft.	Mix	Units	Rents	Mix	Units	Rents	Mix	Units
Efficiency	525	15%	8	\$1,340	15%	8	\$480	15%	-
1 BR	725	50%	24	\$1,560	50%	23	\$540	50%	1
2 BR	900	35%	18	\$1,810	35%	17	\$640	35%	1
3 BR	1,075	0%	-	\$2,150	0%	-	\$660	0%	-
Average Monthly Rent				\$1,610			\$590		
Monthly Parking Rate	\$100			\$100			\$0		
Operating Expense per Unit				\$3,500			\$3,500		
Property Taxes per Unit				\$1,700			\$1,700		
Development Costs									
Land Acquisition	\$441,000			\$441,000			\$0		
Residential Unit Construction Cost	\$6,141,000			\$5,878,800			\$262,200		
Parking Construction Cost	\$1,280,000			\$1,280,000			\$0		
Soft Costs	\$1,484,200			\$1,431,800			\$52,400		
Developer Fee	\$356,200			\$343,600			\$12,600		
Construction Financing	\$356,200	Cash Subsidy per unit		\$343,600			\$12,600		
Total Development Costs	\$10,058,600	\$0	\$0	\$9,718,800			\$339,800		
<i>Total Development Costs/Unit</i>	\$201,200			\$202,500			\$169,900		
Development Feasibility									
Gross Residential Rent (100% Occupancy)	\$1,019,400			\$1,005,200			\$14,200		
Vacancy and Collection Loss	5.0%			5.0%			5.0%		
Gross Scheduled Rent	\$968,400			\$954,900			\$13,500		
Operating Expenses and Property Taxes	\$260,000			\$249,600			\$10,400		
Replacement Reserves	\$17,500			\$16,800			\$700		
Net Operating Income	\$690,900			\$688,500			\$2,400		
Return on Investment	6.9%			7.084%			0.706%		

Source: Partners for Economic Solutions, 2018.

Table A-13. Five-Story Rental Development on Downtown Half Acre with One Parking Space Per Unit, Affordable Units at 30% of AMI

Characteristics of Project	Total Project			Market-Rate			Affordable		
							Affordability	Mix	Units
Site Size (acres)	0.46						20% AMI	0%	
Future Project Density (DU/AC)	109						30% AMI	100%	
Base Project Size (Units)	50						40% AMI	0%	
Size at Three Stories	26						50% AMI	0%	
Number of Stories	5						60% AMI	0%	
Bonus Height Units	24						80% AMI	0%	
Affordable Units % of Incremental Units	10.0%								
Market-Rate Units	48			48			-		
Affordable Units	2			-			2		
Parking Ratio (Spaces per Unit)	1.0			1.0			1.0		
Residential Parking Spaces	64			64			-		
Surface	-			-			-		
Above Ground	64			64			-		
Partially Below Ground	-			-			-		
Below Ground (1-2 Levels)	-			-			-		
Total Rentable Square Feet	37,800			36,175			1,625		
Common Area	6,700			6,425			275		
Total Residential	44,500			42,600			1,900		
Average Unit Size (Square Feet)	756			754			813		
Unit Mix	Sq. Ft.	Mix	Units	Rents	Mix	Units	Rents	Mix	Units
Efficiency	525	15%	8	\$1,340	15%	8	\$340	15%	-
1 BR	725	50%	24	\$1,560	50%	23	\$390	50%	1
2 BR	900	35%	18	\$1,810	35%	17	\$460	35%	1
3 BR	1,075	0%	-	\$2,150	0%	-	\$470	0%	-
Average Monthly Rent				\$1,610			\$430		
Monthly Parking Rate	\$100			\$100			\$0		
Operating Expense per Unit				\$3,500			\$3,500		
Property Taxes per Unit				\$1,700			\$1,700		
Development Costs									
Land Acquisition	\$441,000			\$441,000			\$0		
Residential Unit Construction Cost	\$6,141,000			\$5,878,800			\$262,200		
Parking Construction Cost	\$1,280,000			\$1,280,000			\$0		
Soft Costs	\$1,484,200			\$1,431,800			\$52,400		
Developer Fee	\$356,200			\$343,600			\$12,600		
Construction Financing	\$356,200	Cash Subsidy per unit		\$343,600			\$12,600		
Total Development Costs	\$10,058,600	\$0	\$0	\$9,718,800			\$339,800		
<i>Total Development Costs/Unit</i>	<i>\$201,200</i>			<i>\$202,500</i>			<i>\$169,900</i>		
Development Feasibility									
Gross Residential Rent (100% Occupancy)	\$1,015,400			\$1,005,200			\$10,200		
Vacancy and Collection Loss	5.0%			5.0%			5.0%		
Gross Scheduled Rent	\$964,600			\$954,900			\$9,700		
Operating Expenses and Property Taxes	\$260,000			\$249,600			\$10,400		
Replacement Reserves	\$17,500			\$16,800			\$700		
Net Operating Income	\$687,100			\$688,500			-\$1,400		
Return on Investment	6.8%			7.084%			-0.412%		

Source: Partners for Economic Solutions, 2018.

Table A-14. Five-Story Rental Development on Downtown Half Acre with One Parking Space Per Unit, Affordable Units at 20% of AMI

Characteristics of Project	Total Project			Market-Rate			Affordable		
							Affordability	Mix	Units
Site Size (acres)	0.46						20% AMI	100%	
Future Project Density (DU/AC)	109						30% AMI	0%	
Base Project Size (Units)	50						40% AMI	0%	
Size at Three Stories	26						50% AMI	0%	
Number of Stories	5						60% AMI	0%	
Bonus Height Units	24						80% AMI	0%	
Affordable Units % of Incremental Units	10.0%								
Market-Rate Units	48			48			-		
Affordable Units	2			-			2		
Parking Ratio (Spaces per Unit)	1.0			1.0			1.0		
Residential Parking Spaces	64			64			-		
Surface	-			-			-		
Above Ground	64			64			-		
Partially Below Ground	-			-			-		
Below Ground (1-2 Levels)	-			-			-		
Total Rentable Square Feet	37,800			36,175			1,625		
Common Area	6,700			6,425			275		
Total Residential	44,500			42,600			1,900		
Average Unit Size (Square Feet)	756			754			813		
Unit Mix	Sq. Ft.	Mix	Units	Rents	Mix	Units	Rents	Mix	Units
Efficiency	525	15%	8	\$1,340	15%	8	\$210	15%	-
1 BR	725	50%	24	\$1,560	50%	23	\$240	50%	1
2 BR	900	35%	18	\$1,810	35%	17	\$270	35%	1
3 BR	1,075	0%	-	\$2,150	0%	-	\$270	0%	-
Average Monthly Rent				\$1,610			\$260		
Monthly Parking Rate	\$100			\$100			\$0		
Operating Expense per Unit				\$3,500			\$3,500		
Property Taxes per Unit				\$1,700			\$1,700		
Development Costs									
Land Acquisition	\$441,000			\$441,000			\$0		
Residential Unit Construction Cost	\$6,141,000			\$5,878,800			\$262,200		
Parking Construction Cost	\$1,280,000			\$1,280,000			\$0		
Soft Costs	\$1,484,200			\$1,431,800			\$52,400		
Developer Fee	\$356,200			\$343,600			\$12,600		
Construction Financing	\$356,200	Cash Subsidy per unit		\$343,600			\$12,600		
Total Development Costs	\$10,058,600	\$0	\$0	\$9,718,800			\$339,800		
<i>Total Development Costs/Unit</i>	<i>\$201,200</i>			<i>\$202,500</i>			<i>\$169,900</i>		
Development Feasibility									
Gross Residential Rent (100% Occupancy)	\$1,011,300			\$1,005,200			\$6,100		
Vacancy and Collection Loss	5.0%			5.0%			5.0%		
Gross Scheduled Rent	\$960,700			\$954,900			\$5,800		
Operating Expenses and Property Taxes	\$260,000			\$249,600			\$10,400		
Replacement Reserves	\$17,500			\$16,800			\$700		
Net Operating Income	\$683,200			\$688,500			-\$5,300		
Return on Investment	6.8%			7.084%			-1.560%		

Source: Partners for Economic Solutions, 2018.

Table A-15. Five-Story Rental Development on Downtown Half Acre with One Parking Space Per Unit, City Pays for Parking, Affordable Units at 80 Percent of AMI

Characteristics of Project	Total Project			Market-Rate			Affordable		
							Affordability	Mix	Units
Site Size (acres)	0.46						20% AMI	0%	
Future Project Density (DU/AC)	109						30% AMI	0%	
Base Project Size (Units)	50						40% AMI	0%	
Size at Three Stories	26						50% AMI	0%	
Number of Stories	5						60% AMI	0%	
Bonus Height Units	24						80% AMI	100%	
Affordable Units % of Incremental Units	50.0%								
Market-Rate Units	38			38			-		
Affordable Units	12			-			12		
Parking Ratio (Spaces per Unit)	1.0			1.0			1.0		
Residential Parking Spaces	64			64			-		
Surface	-			-			-		
Above Ground	64			64			-		
Partially Below Ground	-			-			-		
Below Ground (1-2 Levels)	-			-			-		
Total Rentable Square Feet	37,800			28,800			9,000		
Common Area	6,700			5,100			1,600		
Total Residential	44,500			33,900			10,600		
Average Unit Size (Square Feet)	756			758			750		
Unit Mix	Sq. Ft.	Mix	Units	Rents	Mix	Units	Rents	Mix	Units
Efficiency	525	15%	8	\$1,340	15%	6	\$1,010	15%	2
1 BR	725	50%	24	\$1,560	50%	18	\$1,160	50%	6
2 BR	900	35%	18	\$1,810	35%	14	\$1,370	35%	4
3 BR	1,075	0%	-	\$2,150	0%	-	\$1,420	0%	-
Average Monthly Rent				\$1,620			\$1,210		
Monthly Parking Rate	\$0			\$0			\$0		
Operating Expense per Unit				\$3,500			\$3,500		
Property Taxes per Unit				\$1,700			\$1,700		
Development Costs									
Land Acquisition	\$441,000			\$441,000			\$0		
Residential Unit Construction Cost	\$6,141,000			\$4,678,200			\$1,462,800		
Parking Construction Cost	\$0			\$0			\$0		
Soft Costs	\$1,228,200			\$935,600			\$292,600		
Developer Fee	\$294,800			\$224,600			\$70,200		
Construction Financing	\$294,800	Cash Subsidy per unit		\$224,600			\$70,200		
Total Development Costs	\$8,399,800	\$0	\$0	\$6,504,000			\$1,895,800		
<i>Total Development Costs/Unit</i>	\$168,000			\$171,200			\$158,000		
Development Feasibility									
Gross Residential Rent (100% Occupancy)	\$911,000			\$737,500			\$173,500		
Vacancy and Collection Loss	5.0%			5.0%			5.0%		
Gross Scheduled Rent	\$865,500			\$700,600			\$164,800		
Operating Expenses and Property Taxes	\$260,000			\$197,600			\$62,400		
Replacement Reserves	\$17,500			\$13,300			\$4,200		
Net Operating Income	\$588,000			\$489,700			\$98,200		
Return on Investment	7.0%			7.529%			5.180%		

Source: Partners for Economic Solutions, 2018.

Table A-16. Five-Story Rental Development on Downtown Half Acre with One Parking Space Per Unit, No Property Tax on Affordable Units, Affordable Units at 80% of AMI

Characteristics of Project	Total Project			Market-Rate			Affordable		
							Affordability	Mix	Units
Site Size (acres)	0.46						20% AMI	0%	
Future Project Density (DU/AC)	109						30% AMI	0%	
Base Project Size (Units)	50						40% AMI	0%	
Size at Three Stories	26						50% AMI	0%	
Number of Stories	5						60% AMI	0%	
Bonus Height Units	24						80% AMI	100%	
Affordable Units % of Incremental Units	10.0%								
Market-Rate Units	48			48			-		
Affordable Units	2			-			2		
Parking Ratio (Spaces per Unit)	1.0			1.0			1.0		
Residential Parking Spaces	64			64			-		
Surface	-			-			-		
Above Ground	64			64			-		
Partially Below Ground	-			-			-		
Below Ground (1-2 Levels)	-			-			-		
Total Rentable Square Feet	37,800			36,175			1,625		
Common Area	6,700			6,425			275		
Total Residential	44,500			42,600			1,900		
Average Unit Size (Square Feet)	756			754			813		
Unit Mix	Sq. Ft.	Mix	Units	Rents	Mix	Units	Rents	Mix	Units
Efficiency	525	15%	8	\$1,340	15%	8	\$1,010	15%	-
1 BR	725	50%	24	\$1,560	50%	23	\$1,160	50%	1
2 BR	900	35%	18	\$1,810	35%	17	\$1,370	35%	1
3 BR	1,075	0%	-	\$2,150	0%	-	\$1,420	0%	-
Average Monthly Rent				\$1,610			\$1,270		
Monthly Parking Rate	\$100			\$100			\$0		
Operating Expense per Unit				\$3,500			\$3,500		
Property Taxes per Unit				\$1,700			\$0		
Development Costs									
Land Acquisition	\$441,000			\$441,000			\$0		
Residential Unit Construction Cost	\$6,141,000			\$5,878,800			\$262,200		
Parking Construction Cost	\$1,280,000			\$1,280,000			\$0		
Soft Costs	\$1,484,200			\$1,431,800			\$52,400		
Developer Fee	\$356,200			\$343,600			\$12,600		
Construction Financing	\$356,200	Cash Subsidy per unit		\$343,600			\$12,600		
Total Development Costs	\$10,008,600	\$50,000	\$25,000	\$9,718,800			\$339,800		
<i>Total Development Costs/Unit</i>	\$200,200			\$202,500			\$169,900		
Development Feasibility									
Gross Residential Rent (100% Occupancy)	\$1,035,600			\$1,005,200			\$30,400		
Vacancy and Collection Loss	5.0%			5.0%			5.0%		
Gross Scheduled Rent	\$983,800			\$954,900			\$28,900		
Operating Expenses and Property Taxes	\$256,600			\$249,600			\$7,000		
Replacement Reserves	\$17,500			\$16,800			\$700		
Net Operating Income	\$709,700			\$688,500			\$21,200		
Return on Investment	7.1%			7.084%			6.239%		

Source: Partners for Economic Solutions, 2018.

Table A-17. Five-Story Rental Development on Downtown Half Acre with One Parking Space Per Unit, City Cash Subsidy, Affordable Units at 60% of AMI

Characteristics of Project	Total Project			Market-Rate			Affordable		
							Affordability	Mix	Units
Site Size (acres)	0.46						20% AMI	0%	
Future Project Density (DU/AC)	109						30% AMI	0%	
Base Project Size (Units)	50						40% AMI	0%	
Size at Three Stories	26						50% AMI	0%	
Number of Stories	5						60% AMI	100%	
Bonus Height Units	24						80% AMI	0%	
Affordable Units % of Incremental Units	10.0%								
Market-Rate Units	48			48			-		
Affordable Units	2			-			2		
Parking Ratio (Spaces per Unit)	1.0			1.0			1.0		
Residential Parking Spaces	64			64			-		
Surface	-			-			-		
Above Ground	64			64			-		
Partially Below Ground	-			-			-		
Below Ground (1-2 Levels)	-			-			-		
Total Rentable Square Feet	37,800			36,175			1,625		
Common Area	6,700			6,425			275		
Total Residential	44,500			42,600			1,900		
Average Unit Size (Square Feet)	756			754			813		
Unit Mix	Sq. Ft.	Mix	Units	Rents	Mix	Units	Rents	Mix	Units
Efficiency	525	15%	8	\$1,340	15%	8	\$750	15%	-
1 BR	725	50%	24	\$1,560	50%	23	\$850	50%	1
2 BR	900	35%	18	\$1,810	35%	17	\$1,000	35%	1
3 BR	1,075	0%	-	\$2,150	0%	-	\$1,040	0%	-
Average Monthly Rent				\$1,610			\$930		
Monthly Parking Rate	\$100			\$100			\$0		
Operating Expense per Unit				\$3,500			\$3,500		
Property Taxes per Unit				\$1,700			\$1,700		
Development Costs									
Land Acquisition	\$441,000			\$441,000			\$0		
Residential Unit Construction Cost	\$6,141,000			\$5,878,800			\$262,200		
Parking Construction Cost	\$1,280,000			\$1,280,000			\$0		
Soft Costs	\$1,484,200			\$1,431,800			\$52,400		
Developer Fee	\$356,200			\$343,600			\$12,600		
Construction Financing	\$356,200	Cash Subsidy per unit		\$343,600			\$12,600		
Total Development Costs	\$10,008,600	\$50,000	\$25,000	\$9,718,800			\$339,800		
<i>Total Development Costs/Unit</i>	<i>\$200,200</i>			<i>\$202,500</i>			<i>\$169,900</i>		
Development Feasibility									
Gross Residential Rent (100% Occupancy)	\$1,027,400			\$1,005,200			\$22,200		
Vacancy and Collection Loss	5.0%			5.0%			5.0%		
Gross Scheduled Rent	\$976,000			\$954,900			\$21,100		
Operating Expenses and Property Taxes	\$260,000			\$249,600			\$10,400		
Replacement Reserves	\$17,500			\$16,800			\$700		
Net Operating Income	\$698,500			\$688,500			\$10,000		
Return on Investment	7.0%			7.084%			2.943%		

Source: Partners for Economic Solutions, 2018.

Table A-18. Five-Story Rental Development on Downtown Half Acre with One Parking Space Per Unit, City Cash Subsidy, Affordable Units at 50% of AMI

Characteristics of Project	Total Project			Market-Rate			Affordable		
							Affordability	Mix	Units
Site Size (acres)	0.46						20% AMI	0%	
Future Project Density (DU/AC)	109						30% AMI	0%	
Base Project Size (Units)	50						40% AMI	0%	
Size at Three Stories	26						50% AMI	100%	
Number of Stories	5						60% AMI	0%	
Bonus Height Units	24						80% AMI	0%	
Affordable Units % of Incremental Units	10.0%								
Market-Rate Units	48			48			-		
Affordable Units	2			-			2		
Parking Ratio (Spaces per Unit)	1.0			1.0			1.0		
Residential Parking Spaces	64			64			-		
Surface	-			-			-		
Above Ground	64			64			-		
Partially Below Ground	-			-			-		
Below Ground (1-2 Levels)	-			-			-		
Total Rentable Square Feet	37,800			36,175			1,625		
Common Area	6,700			6,425			275		
Total Residential	44,500			42,600			1,900		
Average Unit Size (Square Feet)	756			754			813		
Unit Mix	Sq. Ft.	Mix	Units	Rents	Mix	Units	Rents	Mix	Units
Efficiency	525	15%	8	\$1,340	15%	8	\$610	15%	-
1 BR	725	50%	24	\$1,560	50%	23	\$700	50%	1
2 BR	900	35%	18	\$1,810	35%	17	\$820	35%	1
3 BR	1,075	0%	-	\$2,150	0%	-	\$850	0%	-
Average Monthly Rent				\$1,610			\$760		
Monthly Parking Rate	\$100			\$100			\$0		
Operating Expense per Unit				\$3,500			\$3,500		
Property Taxes per Unit				\$1,700			\$1,700		
Development Costs									
Land Acquisition	\$441,000			\$441,000			\$0		
Residential Unit Construction Cost	\$6,141,000			\$5,878,800			\$262,200		
Parking Construction Cost	\$1,280,000			\$1,280,000			\$0		
Soft Costs	\$1,484,200			\$1,431,800			\$52,400		
Developer Fee	\$356,200			\$343,600			\$12,600		
Construction Financing	\$356,200	Cash Subsidy per unit		\$343,600			\$12,600		
Total Development Costs	\$9,958,600	\$100,000	\$50,000	\$9,718,800			\$339,800		
<i>Total Development Costs/Unit</i>	<i>\$199,200</i>			<i>\$202,500</i>			<i>\$169,900</i>		
Development Feasibility									
Gross Residential Rent (100% Occupancy)	\$1,023,400			\$1,005,200			\$18,200		
Vacancy and Collection Loss	5.0%			5.0%			5.0%		
Gross Scheduled Rent	\$972,200			\$954,900			\$17,300		
Operating Expenses and Property Taxes	\$260,000			\$249,600			\$10,400		
Replacement Reserves	\$17,500			\$16,800			\$700		
Net Operating Income	\$694,700			\$688,500			\$6,200		
Return on Investment	7.0%			7.084%			1.825%		

Source: Partners for Economic Solutions, 2018.

Table A-19. Five-Story Rental Development on Downtown Half Acre with One Parking Space Per Unit, City Cash Subsidy, Affordable Units at 40% of AMI

Characteristics of Project	Total Project			Market-Rate			Affordable		
	Affordability	Mix	Units	Affordability	Mix	Units	Affordability	Mix	Units
Site Size (acres)	0.46						20% AMI	0%	
Future Project Density (DU/AC)	109						30% AMI	0%	
Base Project Size (Units)	50						40% AMI	100%	
Size at Three Stories	26						50% AMI	0%	
Number of Stories	5						60% AMI	0%	
Bonus Height Units	24						80% AMI	0%	
Affordable Units % of Incremental Units	10.0%								
Market-Rate Units	48			48			-		
Affordable Units	2			-			2		
Parking Ratio (Spaces per Unit)	1.0			1.0			1.0		
Residential Parking Spaces	64			64			-		
Surface	-			-			-		
Above Ground	64			64			-		
Partially Below Ground	-			-			-		
Below Ground (1-2 Levels)	-			-			-		
Total Rentable Square Feet	37,800			36,175			1,625		
Common Area	6,700			6,425			275		
Total Residential	44,500			42,600			1,900		
Average Unit Size (Square Feet)	756			754			813		
Unit Mix	Sq. Ft.	Mix	Units	Rents	Mix	Units	Rents	Mix	Units
Efficiency	525	15%	8	\$1,340	15%	8	\$480	15%	-
1 BR	725	50%	24	\$1,560	50%	23	\$540	50%	1
2 BR	900	35%	18	\$1,810	35%	17	\$640	35%	1
3 BR	1,075	0%	-	\$2,150	0%	-	\$660	0%	-
Average Monthly Rent				\$1,610			\$590		
Monthly Parking Rate	\$100			\$100			\$0		
Operating Expense per Unit				\$3,500			\$3,500		
Property Taxes per Unit				\$1,700			\$1,700		
Development Costs									
Land Acquisition	\$441,000			\$441,000			\$0		
Residential Unit Construction Cost	\$6,141,000			\$5,878,800			\$262,200		
Parking Construction Cost	\$1,280,000			\$1,280,000			\$0		
Soft Costs	\$1,484,200			\$1,431,800			\$52,400		
Developer Fee	\$356,200			\$343,600			\$12,600		
Construction Financing	\$356,200	Cash Subsidy per unit		\$343,600			\$12,600		
Total Development Costs	\$9,898,600	\$160,000	\$80,000	\$9,718,800			\$339,800		
<i>Total Development Costs/Unit</i>	<i>\$198,000</i>			<i>\$202,500</i>			<i>\$169,900</i>		
Development Feasibility									
Gross Residential Rent (100% Occupancy)	\$1,019,400			\$1,005,200			\$14,200		
Vacancy and Collection Loss	5.0%			5.0%			5.0%		
Gross Scheduled Rent	\$968,400			\$954,900			\$13,500		
Operating Expenses and Property Taxes	\$260,000			\$249,600			\$10,400		
Replacement Reserves	\$17,500			\$16,800			\$700		
Net Operating Income	\$690,900			\$688,500			\$2,400		
Return on Investment	7.0%			7.084%			0.706%		

Source: Partners for Economic Solutions, 2018.

Table A-20. Five-Story Rental Development on Downtown Half Acre with One Parking Space Per Unit, City Cash Subsidy, Affordable Units at 30% of AMI

Characteristics of Project	Total Project			Market-Rate			Affordable			
	Affordability	Mix	Units							
Site Size (acres)	0.46							20% AMI	0%	
Future Project Density (DU/AC)	109							30% AMI	100%	
Base Project Size (Units)	50							40% AMI	0%	
Size at Three Stories	26							50% AMI	0%	
Number of Stories	5							60% AMI	0%	
Bonus Height Units	24							80% AMI	0%	
Affordable Units % of Incremental Units	10.0%									
Market-Rate Units	48			48				-		
Affordable Units	2			-				2		
Parking Ratio (Spaces per Unit)	1.0			1.0				1.0		
Residential Parking Spaces	64			64				-		
Surface	-			-				-		
Above Ground	64			64				-		
Partially Below Ground	-			-				-		
Below Ground (1-2 Levels)	-			-				-		
Total Rentable Square Feet	37,800			36,175				1,625		
Common Area	6,700			6,425				275		
Total Residential	44,500			42,600				1,900		
Average Unit Size (Square Feet)	756			754				813		
Unit Mix	Sq. Ft.	Mix	Units	Rents	Mix	Units	Rents	Mix	Units	
Efficiency	525	15%	8	\$1,340	15%	8	\$340	15%	-	
1 BR	725	50%	24	\$1,560	50%	23	\$390	50%	1	
2 BR	900	35%	18	\$1,810	35%	17	\$460	35%	1	
3 BR	1,075	0%	-	\$2,150	0%	-	\$470	0%	-	
Average Monthly Rent				\$1,610			\$430			
Monthly Parking Rate	\$100			\$100			\$0			
Operating Expense per Unit				\$3,500			\$3,500			
Property Taxes per Unit				\$1,700			\$0			
Development Costs										
Land Acquisition	\$441,000			\$441,000			\$0			
Residential Unit Construction Cost	\$6,141,000			\$5,878,800			\$262,200			
Parking Construction Cost	\$1,280,000			\$1,280,000			\$0			
Soft Costs	\$1,484,200			\$1,431,800			\$52,400			
Developer Fee	\$356,200			\$343,600			\$12,600			
Construction Financing	\$356,200	Cash Subsidy per unit		\$343,600			\$12,600			
Total Development Costs	\$9,838,600	\$220,000	\$110,000	\$9,718,800			\$339,800			
<i>Total Development Costs/Unit</i>	<i>\$196,800</i>			<i>\$202,500</i>			<i>\$169,900</i>			
Development Feasibility										
Gross Residential Rent (100% Occupancy)	\$1,015,400			\$1,005,200			\$10,200			
Vacancy and Collection Loss	5.0%			5.0%			5.0%			
Gross Scheduled Rent	\$964,600			\$954,900			\$9,700			
Operating Expenses and Property Taxes	\$256,600			\$249,600			\$7,000			
Replacement Reserves	\$17,500			\$16,800			\$700			
Net Operating Income	\$690,500			\$688,500			\$2,000			
Return on Investment	7.0%			7.084%			0.589%			

Source: Partners for Economic Solutions, 2018.

Table A-21. Five-Story Rental Development on Downtown Half Acre with One Parking Space Per Unit, City Cash Subsidy, Affordable Units at 20% of AMI

Characteristics of Project	Total Project			Market-Rate			Affordable		
							Affordability	Mix	Units
Site Size (acres)	0.46						20% AMI	100%	
Future Project Density (DU/AC)	109						30% AMI	0%	
Base Project Size (Units)	50						40% AMI	0%	
Size at Three Stories	26						50% AMI	0%	
Number of Stories	5						60% AMI	0%	
Bonus Height Units	24						80% AMI	0%	
Affordable Units % of Incremental Units	10.0%								
Market-Rate Units	48			48			-		
Affordable Units	2			-			2		
Parking Ratio (Spaces per Unit)	1.0			1.0			1.0		
Residential Parking Spaces	64			64			-		
Surface	-			-			-		
Above Ground	64			64			-		
Partially Below Ground	-			-			-		
Below Ground (1-2 Levels)	-			-			-		
Total Rentable Square Feet	37,800			36,175			1,625		
Common Area	6,700			6,425			275		
Total Residential	44,500			42,600			1,900		
Average Unit Size (Square Feet)	756			754			813		
Unit Mix	Sq. Ft.	Mix	Units	Rents	Mix	Units	Rents	Mix	Units
Efficiency	525	15%	8	\$1,340	15%	8	\$210	15%	-
1 BR	725	50%	24	\$1,560	50%	23	\$240	50%	1
2 BR	900	35%	18	\$1,810	35%	17	\$270	35%	1
3 BR	1,075	0%	-	\$2,150	0%	-	\$270	0%	-
Average Monthly Rent				\$1,610			\$260		
Monthly Parking Rate	\$100			\$100			\$0		
Operating Expense per Unit				\$3,500			\$3,500		
Property Taxes per Unit				\$1,700			\$0		
Development Costs									
Land Acquisition	\$441,000			\$441,000			\$0		
Residential Unit Construction Cost	\$6,141,000			\$5,878,800			\$262,200		
Parking Construction Cost	\$1,280,000			\$1,280,000			\$0		
Soft Costs	\$1,484,200			\$1,431,800			\$52,400		
Developer Fee	\$356,200			\$343,600			\$12,600		
Construction Financing	\$356,200	Cash Subsidy per unit		\$343,600			\$12,600		
Total Development Costs	\$9,778,600	\$280,000	\$140,000	\$9,718,800			\$339,800		
<i>Total Development Costs/Unit</i>	<i>\$195,600</i>			<i>\$202,500</i>			<i>\$169,900</i>		
Development Feasibility									
Gross Residential Rent (100% Occupancy)	\$1,011,300			\$1,005,200			\$6,100		
Vacancy and Collection Loss	5.0%			5.0%			5.0%		
Gross Scheduled Rent	\$960,700			\$954,900			\$5,800		
Operating Expenses and Property Taxes	\$256,600			\$249,600			\$7,000		
Replacement Reserves	\$17,500			\$16,800			\$700		
Net Operating Income	\$686,600			\$688,500			-\$1,900		
Return on Investment	7.0%			7.084%			-0.559%		

Source: Partners for Economic Solutions, 2018.



1152 15th Street, Suite 450
Washington, DC 20005
202-868-4103

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