DRAFT-B1

Economic Feasibility Analysis

Multi-Family Zoning District Compliance

Section 3A of the Zoning Act – MBTA Communities

Prepared for:

Town of Grafton, Massachusetts

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August 28, 2023

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Executive Summary

- On August 10, 2022, the Executive Office of Housing and Community Development issued final guidelines for one hundred and seventy-seven MBTA Communities to comply with Section 3A of the MGL. C. 40A ("The Zoning Act"). The new law requires that an MBTA Community must have at least one zoning district of reasonable size in which multi-family housing is permitted as of right and adheres to various criteria set forth in the Compliance Guidelines.

- The Town must determine if the MCMOD 3 area can support 20 percent Inclusionary Dwellings units at 80 percent of AMI, and in an individual project, and still be economically feasible. This Economic Feasibility Analysis was commissioned by the Town of Grafton to increase the understanding of impacts associated with different levels of affordable housing units in multi -family residential projects, as may be planned for development in the district in accordance with Section 3A of the Zoning Act.

- A proven feasibility methodology has been employed in this EFA, adapted to accommodate a range of factors and variables that are specific to multi-family housing. It also considers the policies that are either in-place or proposed that are designed to promote affordability and growth in the overall housing supply in the region. Inputs, outputs, findings, and observations are based on accepted economic and financial relationships within the development and operational environment.

- The EFA has been conducted pursuant to the Instructions for Economic Feasibility Analysis as set forth by the EOHLC, and prepared by Strategy 5 Consulting LLC, an urban economics firm based in Massachusetts with national experience in feasibility analysis. The methodology employed includes the use of Conceptual Development Programs (CDPs), and a series of pro forma that serve as tools in understanding the feasibility paradigm. The pro forma inputs, variables, and resultant outputs have been developed using the best available data and information from a variety of sources.

- The Compliance Guidelines require that 10% of units in the MBTA Zoning Districts be affordable. This EFA evaluates multi-family project performance at 10%, 20% and 25% affordability to understand the relative impacts on the bottom-line components of feasibility. Though 25% affordability in the new district may exceed the allowable percentage according to Section 3A of the Zoning Act, the analysis has included pro forma using this variable to help establish a trend line concerning affordability, feasibility, and profitability.

- This EFA employs the understanding and use of different subsets of feasibility that the reader should be cognizant of, including market feasibility, economic feasibility, financial feasibility, physical feasibility, and accounting feasibility.

- The six pro forma included in this EFA are accompanied by six Appendices that explain line-item details for the inputs and outputs of each. The pro forma and appendices together comprise the core of the EFA and illustrate a range of feasibility variables and their role in answering the essential feasibility questions posed by the EOHLC in the context of the Compliance Guidelines.

- The Town of Grafton, Massachusetts is strategically positioned at the nexus of several important economic and housing trends that are local, regional, and national in nature. Together, they have propelled Grafton into a market environment that supports private sector investment in housing of several types, most notably multi-family, and includes the demonstrated need for additional affordable living opportunities.

- The recently completed Housing Production Plan / Housing Needs Assessment Update includes Housing Trust goals designed to address local housing issues, while working to reach the state 40B affordable housing goal. The prioritization of funding to help develop affordable rental units to address Grafton's most critical local housing need and most vulnerable residents, the preservation of long-term affordability, and the creation of affordable home ownership opportunities, are also goals.

- The consultant asserts that the Town of Grafton Housing Production Plans, and other reports and data reviewed for this EFA, have sufficiently documented the demand for housing in general, the demand and need for affordable housing, and the policies and programs designed to leverage private sector investment to meet those needs, both now and for the foreseeable future. This includes the programmatic interface with Section 3A of the Zoning Act.

- To establish an analytical framework for use in the required Excel-based pro forma, six Conceptual Development Programs (CDPs) have been created. The CDPs are designed to reflect a reasonable approach to multi-family projects that enable the isolation of key affordability variables and their influence on the economic feasibility question. The CDPs conform to the proposed zoning district criteria, including density, height, parking supply, and other elements. The CDPs consist of:

  CDP 1 – 200 rental units at 10% affordability
  CDP 2 – 200 rental units at 20% affordability
  CDP 3 – 200 rental units at 25% affordability
  CDP 4 – 200 ownership units at 10% affordability
  CDP 5 – 200 ownership units at 20% affordability
  CDP 6 – 200 ownership units at 25% affordability

- Each CDP is the subject of a 10-year cash flow pro forma that includes estimates of annual operating revenues and expenses, net operating income, supportable debt, and equity, building costs, and residual land value. The key variables and their effect, including percentage of affordable units and resultant feasibility / profitability assessments, are isolated so the impacts can be clearly seen.

- Each CDP was found to meet or exceed accepted feasibility thresholds, although general levels of considered profitability were greater at the 10% affordability benchmark, decreasing at the 20% and 25% marks. Still, the CDPs were shown to be both feasible and profitable, with final outputs of the pro forma indicating theoretical levels of Residual Land Value estimated at approximately $7.4 million, $5.2 million, and $4.0 million for rental CDPs 1, 2 and 3 respectively. Ownership CDPs 4, 5 and 6 registered theoretical Residual Land Values of $18.9 million, $10.8 million, and $6.7 million respectively.

- The essential question posited by the EFA: "Are 20% of affordable units in a conceptual project planned for the proposed district economically feasible?" has been answered in the affirmative, according to the analysis conducted pursuant to the Compliance Guidelines.

- Profitability, a facet of feasibility, is also demonstrated to varying degrees by the six CDPs. Each demonstrates significant revenue generation, manageable fixed operating expenses, and positive Net Operating Income. These underpinnings of profitability are indicators that multi-family projects, even those with inclusionary affordable units, can be economically and financially viable.

- Variables associated with specific, real-time development projects, including changes in the market environment, individual design and development decisions, business management and operating decisions, site-specific land and building costs, funding and finance particulars, and other unforeseen future conditions may impact the forecast feasibility / profitability outcomes.

- The EFA supports the underlying policy goals of Section 3A of the Zoning Act, including the demonstrated ability of the market to support additional multi-family dwellings, coupled with demonstrated operational feasibility of conceptual development, can result in new housing opportunities that may help support livable communities.

Section 1: Introduction and Methodology

On August 10, 2022, the Executive Office of Housing and Community Development issued final guidelines for one hundred and seventy-seven MBTA Communities to comply with Section 3A of the MGL. C. 40A ("The Zoning Act"). An "MBTA Community" is defined in Section 1 of MGL. c. 161A as:

- One of the "14 cities and towns" that initially hosted MBTA service;
- One of the "51 cities and towns" that also host MBTA service but joined later;
- Other "served communities" that abut a city or town that hosts MBTA service; or
- A municipality that has been added to the MBTA under MGL. c. 161A, sec.6 or in accordance with any special law relative to the area constituting the authority.

The new law requires that an MBTA Community must have at least one zoning district of reasonable size in which multi-family housing is permitted as of right and: has a minimum gross density of 15 units per acre; is located not more than 0.5 miles from a commuter rail station, subway station, ferry terminal or bus station, if applicable; and does not have age restrictions and is suitable for families with children.

The Town of Grafton is considered an "Adjacent Community" under law and is not required to have a percentage of its zoning district located in the station area. As an Adjacent Community, the Town is required to adopt the new zoning regulations by December 31, 2024. Grafton is advantageously poised to achieve almost complete compliance through their underlying zoning. To achieve compliance, the Town has established an MBTA Communities Overlay District with five subdistricts: MCMOD 1, MCMOD 2, MCMOD 3, MCMOD 4, and MCMOD 5.

The Town has an inclusionary zoning requirement, requiring any multi-family development over eight units to have at least 25 percent affordable rental units or 20 percent affordable ownership units. Section 4.b of the Compliance Guidelines provide that the Executive Office of Housing and Livable Communities (EOHLC) will consider an affordability requirement consistent with as of right zoning as long as the zoning requires not more than 10 percent of the units in a project be affordable, and the cap on the income of eligible families or individuals to occupy the affordable units is not less than 80% of Area Median Income (AMI), the "Affordability Baseline"[1].

The EOHLC will not approve alternative affordability requirements that require more than 20 percent of units be affordable, except in a Smart Growth zoning district under Chapter 40R with a 25 percent affordability requirement adopted prior to August 8, 2023. Grafton's Subdistrict MCMOD 3 currently has a 25 percent affordability requirement for rental projects over eight units, which will be the focus of this report.

[1] Executive Office of Housing and Livable Communities' (EOHLC), *Details about the Economic Feasibility Analysis for compliance with Section 4.b. of the Compliance Guidelines for Multi-Family Zoning Districts Under Section 3A of the Zoning Act Compliance Guidelines, May 2023.*

The Compliance Guidelines require that 10% of units in the MBTA Zoning Districts be affordable. This EFA evaluates multi-family project performance at 10%, 20% and 25% affordability to understand the relative impacts on the bottom-line components of feasibility. Though 25% affordability in the new district may exceed the allowable percentage according to Section 3A of the Zoning Act, the analysis has included pro forma using this variable to help establish a trend line concerning affordability, feasibility, and profitability.

The Town must determine if the MCMOD 3 area can support 20 percent Inclusionary Dwellings units at 80 percent of AMI, and in an individual project, and still be economically feasible. This Economic Feasibility Analysis was commissioned by the Town of Grafton to increase the understanding of impacts associated with different levels of affordable housing units in multi - family residential projects, as may be planned for development in the district in accordance with Section 3A of the Zoning Act.

To accomplish this, a proven feasibility methodology has been employed, adapted to accommodate a range of factors and variables that are specific to multi-family housing. It also considers the policies that are either in-place or proposed that are designed to promote affordability and growth in the overall housing supply in the region. Inputs, outputs, findings, and observations are based on accepted economic and financial relationships within the development and operational environment.

A detailed explanation of these factors and variables, how answers and outputs were derived, and why, and what the outcomes of six different pro forma sensitivity runs are, may be found in this report. The reader is encouraged to delve into the complexity of the analysis by understanding the six Conceptual Development Programs (CDPs), the eighteen Excel pro forma tables that illustrate the operational and financial performance of the CDPs, and the bottom-line outputs from which relative feasibility measures emerge. The explanation of foundational detail used in the pro forma can be found principally in Appendices A-F, which include line items from the individual pro forma.

This Economic Feasibility Analysis (EFA) has been prepared in accordance with Section 3A of the Zoning Act, and the Compliance Guidelines for Multi-Family Zoning Districts, as commissioned by the Town of Grafton, Massachusetts. Specifically, the EFA will be submitted to the Executive Office of Housing and Livable Communities (EOHLC), and other state and local authorities, as required for Inclusionary Zoning that established for compliance with Section 3A MGL c40A, where the percentage of required affordable units exceeds 10% and/or where required units must be affordable to households with less than or equal to 80% of the Area Median Income (AMI).

The EFA has been conducted pursuant to the Instructions for Economic Feasibility Analysis as set forth by the EOHLC, and prepared by Strategy 5 Consulting LLC, an urban economics firm based in Massachusetts with national experience in feasibility analysis. The methodology employed includes the use of Conceptual Development Programs (CDPs), and a series of pro forma that serve as tools in understanding the feasibility paradigm. The pro forma inputs, variables, and resultant outputs have been developed using the best available data and information from a variety of sources.

These sources have included, but not necessarily been limited to: the Executive Office of Housing and Economic Development, the Executive Office of Housing and Livable Communities (EOHLC), the Massachusetts Bay Transportation Authority, the Massachusetts Department of Transportation, the U.S. Department of Housing and Urban Development (HUD), MassHousing, the Massachusetts Housing Partnership, the Metropolitan Area Planning Council (MAPC), the U.S. Census Bureau, the Bureau of Labor Statistics, the Bureau of Economic Research, online real estate agencies, professionals, and data providers, the Urban Land Institute, and the International Economic Development Council. Special thanks to the Town of Grafton staff and officials.

1.1 Feasibility Analysis – Overview Discussion

Feasibility – "*Capable of being done or carried out*." Miriam Webster's Dictionary

What feasibility analysis is, and is not; how it is performed, and why; and the reliability of findings and outcomes, are subject to a wide range of interpretations and practical applications of the technique. The EOHLC itself does not define the term "economic feasibility" although the hypothesis to be tested is clear: the possibility that increasing amounts of a required percentage of affordable units in a multi-family development project may negatively impact the viability of a private enterprise, potentially to a tipping point where the project becomes "infeasible".

The Compliance Guidelines require that 10% of units in the MBTA Zoning Districts be affordable. This EFA evaluates multi-family performance at 10%, 20% and 25% affordability to understand these relative impacts on the bottom-line components of feasibility. Though 25% affordability in the new district may exceed the allowable percentage according to Section 3A of the Zoning Act, the analysis has included pro forma using this variable to help establish a trend line concerning affordability, feasibility, and profitability.

This EFA employs the understanding and use of different subsets of feasibility that the reader should be cognizant of. Taken together, they provide a more holistic approach that strengthens the overall analysis. Briefly, these feasibility subsets include:

- **Market feasibility** – Determination of sufficient market support to drive operational sustainability of a project. This involves a mix of demand and supply variables that are in a constant energetic state. The nature of supply influences demand, markets can be induced to respond, and there are other factors that may impact feasibility. Projects "built to the market" will generally be more feasible.

- **Economic feasibility –** This subset overlaps with market feasibility, but further accounts for blanket influences such as national and international trends in population, technological advancement, climate, and economic growth or contraction. Interest rates, changes in the workplace, socioeconomic, and media/communication patterns, all may play a role in economic feasibility. In the case of this EFA, economic feasibility is seen as an umbrella category that includes the subsets noted herein.

- **Financial feasibility –** This EFA goes beyond the basics of market and economic feasibility, to include an evaluation of the operational and financial performance of Conceptual Development Program models based on a forecast of revenues and expenses, net operating income, supportable debt and equity, and residual land value. The Instructions for Economic Feasibility Analysis issued by the EOHLC reference elements of this subset, and the EFA is otherwise prepared in conjunction with this guide.

- **Physical feasibility –** Physical feasibility may involve topography, developability of land, density and height parameters, construction methods, building materials, transportation access and parking accommodations, and other factors. Zoning and development regulations may also affect the physical feasibility of a project.

- **Accounting feasibility** – The overall economic feasibility of a project will be impacted on a highly individualized basis by the business model of the developer/owner, their internal profit and loss thresholds, overall portfolio performance, financial capacity, and tax accounting procedures.

Understanding that all these subsets of feasibility analysis interrelate, overlap, or influence the conduct and findings of this EFA, leads to a further understanding that meeting an "economic feasibility" threshold, may not be the same as a private enterprise reaching a "profitability threshold" that will have financial and accounting considerations assuming greater weight in determination of project feasibility. The EFA seeks to balance these two concepts as part of the overall assessment.

The six pro forma included in this EFA are accompanied by six Appendices that explain line-item details for the inputs and outputs of each. The pro forma and appendices together comprise the core of the EFA and illustrate a range of feasibility variables and their role in answering the essential feasibility questions posed by the EOHLC in the context of the Compliance Guidelines.

The pro forma employ the use of constant 2023 dollars, as inflation, cost of living and other macro influences are considered to affect revenues and expenses equally over time. It also allows for greater clarity in the identification of the variable impacts of affordable unit inclusion at different levels.

Additional baseline information on development and operating assumptions is included in Section 3: Conceptual Development Programs and Feasibility Assessments. This material is in keeping with the EFA requirements and provides important context for the overall feasibility analysis and its implications for the Section 3A, MBTA Zoning District applications for the Town of Grafton.

1.2 Pro Forma / Feasibility Checks and Balances

In this type of analysis, it is understood that every assumption, input, output, or finding may be questioned. Too high, too low, too big, too small, too conservative, too aggressive, etc. The variables required to dimension the feasibility of a conceptual project are numerous, based on data from different sources, professional experience, and interpretation, and subject to the perspectives of the stakeholders involved. The methodology and pro forma models employed by the consultant for the EFA are purposefully constructed to include checks and balances that help ensure supportable findings relevant to the development and operation of conceptual projects.

Section 2: Housing Market Assessment

The Town of Grafton, Massachusetts is strategically positioned at the nexus of several important economic and housing trends that are local, regional, and national in nature. Together, they have propelled Grafton into a market environment that supports private sector investment in housing of several types, most notably multi-family, and includes the demonstrated need for additional affordable living opportunities.

Trends driving the housing market in Grafton include the high cost of housing in the greater Boston area, and the search for more affordable residential opportunities to the west of the city. An increasing population in the region, although not in every town, continues to spur demand. The shift in work and business habits to remote, work-from-home environments is a growing trend that is not likely to subside. Office vacancies are increasing steadily, brick and mortar retail is shrinking, e-commerce and virtual capabilities continue to expand. These macro changes in society and the economies they drive are having a direct impact on the Grafton housing market. In short, demand is exceeding supply.

The Town has responded to both the civic responsibility, and the opportunity, represented by the housing market through a series of Housing Production Plans, overseen by the EOHLC. The Plans have produced in-depth analyses of the housing ecosystem beyond that which is necessary for the valid conduct of this EFA. The recently completed Housing Production Plan / Housing Needs Assessment Update includes Housing Trust goals designed to address local housing issues, while working to reach the state 40B affordable housing goal. The prioritization of funding to help develop affordable rental units to address Grafton's most critical local housing need and most vulnerable residents, the preservation of long-term affordability, and the creation of affordable home ownership opportunities, are also goals.

In addition, the Metropolitan Area Planning Council (MAPC) has issued regular reports on the housing markets in Massachusetts which support the understanding that demand exceeds supply in the Worcester MSA (and elsewhere) www.housing.ma/grafton/report.

As a real-time cross check on broad housing market analysis completed by various organizations, departments, and institutions, a Status Report from the Town of Grafton in 2018 showed more than a dozen projects with affordable housing units either approved, in the development pipeline, or recently constructed. These projects accounted for about 850 residential units of different types being added to the housing supply mix. Since then, additional projects, including multi-family and affordable units, have continued to accrue. Still, the shortage of housing opportunities across income and economic levels has continued to persist. Currently, Grafton has about 1,700 housing units in the pipeline, consisting of market rate and affordable units. Of Grafton's 7,740 year-round leased units, 5.53%, or 428 are on the Subsidized Housing Inventory (SHI).

The consultant asserts that the Town of Grafton Housing Production Plans, and other reports and data reviewed for this EFA, have sufficiently documented the demand for housing in general, the demand and need for affordable housing, and the policies and programs designed to leverage private sector investment to meet those needs, both now and for the foreseeable future. This includes the programmatic interface with Section 3A of the Zoning Act.

Section 3:

Conceptual Development Programs and Pro Forma Feasibility Assessments

In order to establish an analytical framework for use in the required Excel-based pro forma, six Conceptual Development Programs (CDPs) have been created. The CDPs are designed to reflect a reasonable approach to multi-family projects that enable the isolation of key affordability variables and their influence on the economic feasibility question. The CDPs summarized in this section conform to the proposed zoning district criteria, including density, height, parking supply, and other elements.

When viewed as an aggregate data set, the six CDP pro forma illustrate a sliding scale of economic feasibility and profitability, depending on lease rates, sales values, building costs, and other particulars. The key variable designed to be highlighted by the analysis, inclusion of differing levels of affordable units, has the greatest effect in what is an otherwise consistent modeling framework. Not unexpectedly, the higher the percentage of affordable units, the lower are the overall profitability benchmarks. However, the interplay between considerations of economic feasibility, and the maximum profitability naturally sought be the private sector, require a closer look at individual CDP performance summaries set forth below.

Affordability Discussion

Data from several sources was sought and reviewed in determining affordability factors and values used in the pro forma. These factors include the average lease rate for affordable rental units, and sales values for affordable owned units. Specific data points varied from source to source, but the general rule of affordability tied to 80% of AMI, and 30% of income available for rent, was maintained.

The most reliable data on affordable rates was provided by MassHousing, with clear rent limits based on the HUD AMI figures and other factors, as shown in the table below. The rates were then used in the weighted average of 1, 2 and 3-bedroom units used in the CDPs, to arrive at an average affordable rent per unit of $2,000, rounded down from $2,072 to account for any utility adjustments that may apply.

		2023		
		Rent Limits		
		30% of 80% AMI		
MSA – HUD Metro	Studio	1 Bedroom	2 Bedroom	3 Bedroom
Eastern Worcester Co.	$1,657	$1,775	$2,130	$2,461

Source: MassHousing; Strategy 5 Consulting LLC.

The maximum sales price for condominium or other multi-family, owned units, is figured on a more complex basis. The full explanation may be found in Chapter 40B Sales Prices and Rents. In essence it involves a consideration of "affordable: sales price will be determined based on low, and moderate, income households spending no more than 30% of their income on housing costs. Housing costs include all payments made towards the principal and interest of any mortgages placed on the unit, property taxes, and insurance, as well as home ownership, neighborhood association or condominium fee. According to the EOHLC and Chapter 40B Sales Price and Rent guidelines, there is a 5% down payment assumption, and interest and financing variables including family or household size are considered.

Based on research that involved a review of for-sale multi-family dwellings currently on the market in the Worcester MSA generally, and the Town of Grafton specifically, as well as recent sales, the sales price of affordable units in the pro forma has been set, conservatively, at $200,000. This ensures that the impact of affordable units on for-sale multi-family will not be underestimated.

Market Rate Discussion

The converse of the affordable unit revenue streams employed in the pro forma, are the market rate revenues associated with rental and ownership dwellings. To establish conservative estimates of these rates and revenue levels, a real time review of recent real estate activity in the area was performed. Applying the weighted averaging approach based on the distribution of 1, 2 and 3-bedroom units, and employing other assumptions including an upper midscale quality level, a conservative market rental rate of $2,800 per month was established. A similar approach resulted in a conservative estimate of an average $600,000 sales price for market rate owned units.

Occupancy and Absorption

Based on a review of real-time occupancy of multi-family rental dwellings in the area, and assuming a quality operation and management of the property, vacancy rates are often at or below 1%. The Town of Grafton vacancy rate is approximately 0.03%. Therefore, occupancy as reflected in the pro forma is at functional full capacity, and no discounted value associated with a higher vacancy rate is used.

The sales rate or absorption of for-sale units is estimated at 100 units (of 200 total) sold in the first full year of operations, 50 units in the second year, and 25 units each in years 3 and 4. At this time, the project would be considered sold out. The rate of absorption could vary significantly based on the effectiveness of the pre-sales marketing effort, operations and management decisions, location, value, etc.

Individual CDPs and Feasibility Assessments

Following are a series of CDP summaries, with accompanying pro forma Excel spreadsheets that form 3-table workbooks. Line-item details may be found in the Appendices.

3.1 Conceptual Development Program 1 - Summary

This CDP is comprised of 200 rental apartments, consisting of 35% one-bedroom units, 45% two-bedroom units, and 20% three-bedroom units. The gross building area is estimated at 200,000 square feet, is of wood frame construction, and could be configured in various ways to fit a range of parcel sizes and dimensions.

The project would be considered upper-midscale quality in construction, materials, and fixtures, furnishings, and equipment. Parking supply is calculated based on 2 spaces per unit. The key variable assigned to this CDP is an affordable unit count equal to 10% of the total. For a complete breakdown of the CDP 1 assumptions and inputs to the pro forma, please see Appendix A.

3.1.1 Feasibility Assessment

CDP 1 displays significant gross annual revenue from the 200 rental units, including 90% leased at the market rate, and 10% leased at an affordable rate. Estimated annual expenses are based on percentages of revenue and are within industry norms. Net operating income is positive and is sufficient to generate debt and equity levels that could provide about $67 million in total supportable funds. This includes a provision for a required developer return and is based on input criteria shown in Appendix A.

Total building costs are estimated at about $60 million, resulting in a theoretical Residual Land Value of about $7.4 million. Based on these and other outputs and considerations detailed in the report, the analysis finds the project depicted in CDP 1 meets the economic feasibility threshold and may provide an attractive level of profitability to a private sector enterprise.

See Tables 1, 2 and 3.

Table 1

CDP 1 - 10-Year Cash Flow Pro Forma

200 Rental Units - 10% Afforable

Revenues	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**Year 8**	**Year 9**	**Year 10**
Total Dwellings	200	200	200	200	200	200	200	200	200	200
Market Rate Units @ 90%	180	180	180	180	180	180	180	180	180	180
Avrage Rent	$2,800	$2,800	$2,800	$2,800	$2,800	$2,800	$2,800	$2,800	$2,800	$2,800
Annual Revenues	$6,048,000	$6,048,000	$6,048,000	$6,048,000	$6,048,000	$6,048,000	$6,048,000	$6,048,000	$6,048,000	$6,048,000
Affordable Rate Units @ 10%	20	20	20	20	20	20	20	20	20	20
Average Rent	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000
Annual Revenues	$480,000	$480,000	$480,000	$480,000	$480,000	$480,000	$480,000	$480,000	$480,000	$480,000
Total Annual Gross Revenue	$6,528,000	$6,528,000	$6,528,000	$6,528,000	$6,528,000	$6,528,000	$6,528,000	$6,528,000	$6,528,000	$6,528,000
Expenses										
General & Administrative	$326,400	$326,400	$326,400	$326,400	$326,400	$326,400	$326,400	$326,400	$326,400	$326,400
Maintenance and Upkeep	$652,800	$652,800	$652,800	$652,800	$652,800	$652,800	$652,800	$652,800	$652,800	$652,800
Property Taxes	$630,000	$630,000	$630,000	$630,000	$630,000	$630,000	$630,000	$630,000	$630,000	$630,000
Total Annual Expenses	$1,609,200	$1,609,200	$1,609,200	$1,609,200	$1,609,200	$1,609,200	$1,609,200	$1,609,200	$1,609,200	$1,609,200
Net Operating Income										
Total Annual Revenues	$6,528,000	$6,528,000	$6,528,000	$6,528,000	$6,528,000	$6,528,000	$6,528,000	$6,528,000	$6,528,000	$6,528,000
Total Annual Expenses	$1,609,200	$1,609,200	$1,609,200	$1,609,200	$1,609,200	$1,609,200	$1,609,200	$1,609,200	$1,609,200	$1,609,200
Net Operating Income	$4,918,800	$4,918,800	$4,918,800	$4,918,800	$4,918,800	$4,918,800	$4,918,800	$4,918,800	$4,918,800	$4,918,800

Sources: U.S. Department of Housing and Urban Development; MassHousing; Massachusetts Housing Partnership; DHCD; EOHLC; Strategy 5 Consulting LLC.

Table 2

CDP 1 - Supportable Funds

Project Cash Flow		**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**Year 8**	**Year 9**	**Year 10**
Total Net Operating Income		$4,918,800	$4,918,800	$4,918,800	$4,918,800	$4,918,800	$4,918,800	$4,918,800	$4,918,800	$4,918,800	$4,918,800
Annual Debt Service		$4,099,000	$4,099,000	$4,099,000	$4,099,000	$4,099,000	$4,099,000	$4,099,000	$4,099,000	$4,099,000	$4,099,000
Annual Cash Flow		$819,800	$819,800	$819,800	$819,800	$819,800	$819,800	$819,800	$819,800	$819,800	$819,800
Supportable Funds											
Supportable Equity:											
Required Developer Return		17%									
Supportable Equity		$3,819,123									
Supportable Debt:											
NOI YEAR 4		$4,918,800									
Debt Coverage Ratio		1.2									
Debt Service		$4,099,000									
Interest Rate	5.0%										
Loan Term	30										
Supportable Debt		$63,630,696									
Total Supportable Funds											
Minimum Equity[1]		$3,819,123	6%								
Supportable Debt[2]		$63,630,696	94%								
Total Supportable Funds		$67,449,819	100%								

[1] The financial model employed in this table solves for a minimum equity requirement based on cash flow after supportable debt service. The actual financing package will likely include significantly greater developer equity which may be structured in the form of loaned capital equal to as much as 30% of the debt required.

[2] The financial model employed in this table uses conventional debt financing. The actual financing package would likely use a combination of short term construction loans, low-interest industrial or economic development loans, and debt that could be structured at more favorable terms within the 30-year span.

Sources: U.S. Department of Housing and Urban Development; MassHousing; Massachusetts Housing Partnership; DHCD; EOHLC; Strategy 5 Consulting LLC.

	Table 3			
	CDP 1			
Project Cost Summary / Residual Land Value				
Building Costs			**Supportable Funds**	
Gross Building Area	200,000		Minimum Equity	$3,819,123
Total Building Costs @ $300 sf	$60,000,000		Conventional Debt	$63,630,696
Land	$0		**Total Supportable Funds**	$67,449,819
Total Building Costs	$60,000,000		**Total Building Costs**	$60,000,000
Estimated Project Value	$60,000,000		**Residual Land Value**	$7,449,819
Sources: International Code Council; Strategy 5 Consulting LLC.				

3.2 Conceptual Development Program 2 – Summary

This CDP is comprised of 200 rental apartments, consisting of 35% one-bedroom units, 45% two-bedroom units, and 20% three-bedroom units. The gross building area is estimated at 200,000 square feet, is of wood frame construction, and could be configured in various ways to fit a range of parcel sizes and dimensions. The project would be considered upper-midscale quality in construction, materials, fixtures, furnishings, and equipment. Parking supply is calculated based on 2 spaces per unit. The key variable assigned to this CDP is an affordable unit count equal to 20% of the total. For a complete breakdown of the CDP 2 assumptions and inputs to the pro forma, please see Appendix B.

3.2.1 Feasibility Assessment

CDP 2 also displays significant gross annual revenue potential from the 200 rental units, including 80% leased at the market rate, and 20% leased at an affordable rate. Estimated annual expenses are based on percentages of revenue and are within industry norms. Net operating income is positive and is sufficient to generate debt and equity levels that could provide about $65 million in total supportable funds. This includes a provision for a required developer return and is based on input criteria shown in Appendix B. Total development costs are estimated at about $60 million, resulting in a theoretical Residual Land Value of about $5.2 million. Based on these and other outputs and considerations detailed in the report, the analysis finds the project depicted in CDP 2 meets the economic feasibility threshold and may provide an acceptable level of profitability to a private sector enterprise.

See Tables 4, 5 and 6.

Table 4

CDP 2 - 10-Year Cash Flow Pro Forma

200 Rental Units - 20% Affordable

Revenues	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**Year 8**	**Year 9**	**Year 10**
Total Dwellings	200	200	200	200	200	200	200	200	200	200
Market Rate Units @ 80%	160	160	160	160	160	160	160	160	160	160
Avrage Rent	$2,800	$2,800	$2,800	$2,800	$2,800	$2,800	$2,800	$2,800	$2,800	$2,800
Annual Revenues	$5,376,000	$5,376,000	$5,376,000	$5,376,000	$5,376,000	$5,376,000	$5,376,000	$5,376,000	$5,376,000	$5,376,000
Affordable Rate Units @ 20%	40	40	40	40	40	40	40	40	40	40
Average Rent	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000
Annual Revenues	$960,000	$960,000	$960,000	$960,000	$960,000	$960,000	$960,000	$960,000	$960,000	$960,000
Total Annual Gross Revenue	$6,336,000	$6,336,000	$6,336,000	$6,336,000	$6,336,000	$6,336,000	$6,336,000	$6,336,000	$6,336,000	$6,336,000
Expenses										
General & Administrative	$316,800	$316,800	$316,800	$316,800	$316,800	$316,800	$316,800	$316,800	$316,800	$316,800
Maintenance and Upkeep	$633,600	$633,600	$633,600	$633,600	$633,600	$633,600	$633,600	$633,600	$633,600	$633,600
Property Taxes	$630,000	$630,000	$630,000	$630,000	$630,000	$630,000	$630,000	$630,000	$630,000	$630,000
Total Annual Expenses	$1,580,400	$1,580,400	$1,580,400	$1,580,400	$1,580,400	$1,580,400	$1,580,400	$1,580,400	$1,580,400	$1,580,400
Net Operating Income										
Total Annual Revenues	$6,336,000	$6,336,000	$6,336,000	$6,336,000	$6,336,000	$6,336,000	$6,336,000	$6,336,000	$6,336,000	$6,336,000
Total Annual Expenses	$1,580,400	$1,580,400	$1,580,400	$1,580,400	$1,580,400	$1,580,400	$1,580,400	$1,580,400	$1,580,400	$1,580,400
Net Operating Income	$4,755,600	$4,755,600	$4,755,600	$4,755,600	$4,755,600	$4,755,600	$4,755,600	$4,755,600	$4,755,600	$4,755,600

Sources: U.S. Department of Housing and Urban Development; MassHousing; Massachusetts Housing Partnership; DHCD; EOHLC; Strategy 5 Consulting LLC.

Table 5

CDP 2 - Supportable Funds

Project Cash Flow		**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**Year 8**	**Year 9**	**Year 10**
Total Net Operating Income		$4,755,600	$4,755,600	$4,755,600	$4,755,600	$4,755,600	$4,755,600	$4,755,600	$4,755,600	$4,755,600	$4,755,600
Annual Debt Service		$3,963,000	$3,963,000	$3,963,000	$3,963,000	$3,963,000	$3,963,000	$3,963,000	$3,963,000	$3,963,000	$3,963,000
Annual Cash Flow		$792,600	$792,600	$792,600	$792,600	$792,600	$792,600	$792,600	$792,600	$792,600	$792,600
Supportable Funds											
Supportable Equity:											
Required Developer Return		17%									
Supportable Equity		$3,692,409									
Supportable Debt:											
NOI YEAR 4		$4,755,600									
Debt Coverage Ratio		1.2									
Debt Service		$3,963,000									
Interest Rate	5.0%										
Loan Term	30										
Supportable Debt		$61,519,504									
Total Supportable Funds											
Minimum Equity[1]		$3,692,409	6%								
Supportable Debt[2]		$61,519,504	94%								
Total Supportable Funds		$65,211,913	100%								

[1] The financial model employed in this table solves for a minimum equity requirement based on cash flow after supportable debt service. The actual financing package will likely include significantly greater developer equity which may be structured in the form of loaned capital equal to as much as 30% of the debt required.

[2] The financial model employed in this table uses conventional debt financing. The actual financing package would likely use a combination of short term construction loans, low-interest industrial or economic development loans, and debt that could be structured at more favorable terms within the 30-year span.

Sources: U.S. Department of Housing and Urban Development; MassHousing; Massachusetts Housing Partnership; DHCD; EOHED; Strategy 5 Consulting LLC.

	Table 6			
	CDP 2			
Project Cost Summary / Residual Land Value				
Building Costs			**Supportable Funds**	
Gross Building Area	200,000		Minimum Equity	$3,692,409
Total Building Costs @ $300 sf	$60,000,000		Conventional Debt	$61,519,504
Land	$0		**Total Supportable Funds**	$65,211,913
Total Building Costs	$60,000,000		**Total Building Costs**	$60,000,000
Estimated Project Value	$60,000,000		**Residual Land Value**	$5,211,913
Sources: International Code Council; Strategy 5 Consulting LLC.				

3.3 Conceptual Development Program 3 - Summary

This CDP is comprised of 200 rental apartments, consisting of 35% one-bedroom units, 45% two-bedroom units, and 20% three-bedroom units. The gross building area is estimated at 200,000 square feet, is of wood frame construction, and could be configured in various ways to fit a range of parcel sizes and dimensions. The project would be considered upper-midscale quality in construction, materials, fixtures, furnishings, and equipment. Parking supply is calculated based on 2 spaces per unit. The key variable assigned to this CDP is an affordable unit count of equal to 25% of the total. For a complete breakdown of the CDP 3 assumptions and inputs to the pro forma, please see Appendix C

3.3.1 Feasibility Assessment

CDP 3 displays substantial gross annual revenue potential from the 200 rental units, including 75% leased at the market rate, and 25% leased at an affordable rate. Estimated annual expenses are based on percentages of revenue and are within industry norms. Net operating income is positive and is sufficient to generate debt and equity levels that could provide about $64 million in total supportable funds. This includes a provision for a required developer return and is based on input criteria shown in Appendix C. Total development costs are estimated at about $60 million, resulting in a theoretical Residual Land Value of about $4 million. Based on these and other outputs and considerations detailed in the report, the analysis finds the project depicted in CDP 3 meets the economic feasibility threshold and may provide a minimum level of profitability to a private sector enterprise.

See Tables 7, 8 and 9.

Table 7

CDP 3 - 10-Year Cash Flow Pro Forma

200 Rental Units - 25% Affordable

Revenues	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**Year 8**	**Year 9**	**Year 10**
Total Dwellings	200	200	200	200	200	200	200	200	200	200
Market Rate Units @ 75%	150	150	150	150	150	150	150	150	150	150
Avrage Rent	$2,800	$2,800	$2,800	$2,800	$2,800	$2,800	$2,800	$2,800	$2,800	$2,800
Annual Revenues	$5,040,000	$5,040,000	$5,040,000	$5,040,000	$5,040,000	$5,040,000	$5,040,000	$5,040,000	$5,040,000	$5,040,000
Affordable Rate Units @ 25%	50	50	50	50	50	50	50	50	50	50
Average Rent	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000
Annual Revenues	$1,200,000	$1,200,000	$1,200,000	$1,200,000	$1,200,000	$1,200,000	$1,200,000	$1,200,000	$1,200,000	$1,200,000
Total Annual Gross Revenue	$6,240,000	$6,240,000	$6,240,000	$6,240,000	$6,240,000	$6,240,000	$6,240,000	$6,240,000	$6,240,000	$6,240,000
Expenses										
General & Administrative	$312,000	$312,000	$312,000	$312,000	$312,000	$312,000	$312,000	$312,000	$312,000	$312,000
Maintenance and Upkeep	$624,000	$624,000	$624,000	$624,000	$624,000	$624,000	$624,000	$624,000	$624,000	$624,000
Property Taxes	$630,000	$630,000	$630,000	$630,000	$630,000	$630,000	$630,000	$630,000	$630,000	$630,000
Total Annual Expenses	$1,566,000	$1,566,000	$1,566,000	$1,566,000	$1,566,000	$1,566,000	$1,566,000	$1,566,000	$1,566,000	$1,566,000
Net Operating Income										
Total Annual Revenues	$6,240,000	$6,240,000	$6,240,000	$6,240,000	$6,240,000	$6,240,000	$6,240,000	$6,240,000	$6,240,000	$6,240,000
Total Annual Expenses	$1,566,000	$1,566,000	$1,566,000	$1,566,000	$1,566,000	$1,566,000	$1,566,000	$1,566,000	$1,566,000	$1,566,000
Net Operating Income	$4,674,000	$4,674,000	$4,674,000	$4,674,000	$4,674,000	$4,674,000	$4,674,000	$4,674,000	$4,674,000	$4,674,000

Sources: U.S. Department of Housing and Urban Development; MassHousing; Massachusetts Housing Partnership; DHCD; EOHED; Strategy 5 Consulting LLC.

Table 8

CDP 3 - Supportable Funds

Project Cash Flow		**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**Year 8**	**Year 9**	**Year 10**
Total Net Operating Income		$4,674,000	$4,674,000	$4,674,000	$4,674,000	$4,674,000	$4,674,000	$4,674,000	$4,674,000	$4,674,000	$4,674,000
Annual Debt Service		$3,895,000	$3,895,000	$3,895,000	$3,895,000	$3,895,000	$3,895,000	$3,895,000	$3,895,000	$3,895,000	$3,895,000
Annual Cash Flow		$779,000	$779,000	$779,000	$779,000	$779,000	$779,000	$779,000	$779,000	$779,000	$779,000
Supportable Funds											
Supportable Equity:											
Required Developer Return		17%									
Supportable Equity		$3,629,052									
Supportable Debt:											
NOI YEAR 4		$4,674,000									
Debt Coverage Ratio		1.2									
Debt Service		$3,895,000									
Interest Rate	5.0%										
Loan Term	30										
Supportable Debt		$60,463,908									
Total Supportable Funds											
Minimum Equity[1]		$3,629,052	6%								
Supportable Debt[2]		$60,463,908	94%								
Total Supportable Funds		$64,092,960	100%								

[1] The financial model employed in this table solves for a minimum equity requirement based on cash flow after supportable debt service. The actual financing package will likely include significantly greater developer equity which may be structured in the form of loaned capital equal to as much as 30% of the debt required.

[2] The financial model employed in this table uses conventional debt financing. The actual financing package would likely use a combination of short term construction loans, low-interest industrial or economic development loans, and debt that could be structured at more favorable terms within the 30-year span.

Sources: U.S. Department of Housing and Urban Development; MassHousing; Massachusetts Housing Partnership; DHCD; EOHED; Strategy 5 Consulting LLC.

	Table 9			
	CDP 3			
Project Cost Summary / Residual Land Value				
Building Costs			**Supportable Funds**	
Gross Building Area	200,000		Minimum Equity	$3,629,052
Total Building Costs @ $300 sf	$60,000,000		Conventional Debt	$60,463,908
Land	$0		**Total Supportable Funds**	$64,092,960
Total Building Costs	$60,000,000		**Total Building Costs**	$60,000,000
Estimated Project Value	$60,000,000		**Residual Land Value**	$4,092,960
Sources: International Code Council; Strategy 5 Consulting LLC.				

3.4 Conceptual Development Program 4 – Summary

This CDP is comprised of 200 owned apartments (condominiums) consisting of 35% one-bedroom units, 45% two-bedroom units, and 20% three-bedroom units. The gross building area is estimated at 260,000 square feet, is of wood frame construction, and could be configured in various ways to fit a range of parcel sizes and dimensions. The project would be considered upper-midscale quality in construction, materials, fixtures, furnishings, and equipment. Parking supply is calculated based on 2 spaces per unit. The key variable assigned to this CDP is an affordable unit count of equal to 10% of the total. For a complete breakdown of the CDP 4 assumptions and inputs to the pro forma, please see Appendix D.

3.4.1 Feasibility Assessment

CDP 4 is represented by a sales model, rather than a leasing model, and adheres to a different timeframe for recapture of an initial investment. The conceptual project displays substantial gross annual revenue potential from the 200 for-sale units, including 90% sold at the market rate, and 10% sold at an affordable rate. Estimated annual expenses are based on percentages of revenue and are within industry norms. Net operating income is positive and sufficient to generate debt and equity levels that could provide about $110 million in total supportable funds. This includes a provision for a required developer return and is based on input criteria shown in Appendix D.

Total building costs are estimated at about $91 million, reflecting the assumption of larger dwellings and a higher unit cost for development accorded to owned rather than rented units. The supportable debt / development cost relationship results in a theoretical Residual Land Value of about $19 million. Based on these and other outputs and considerations detailed in the report, the analysis finds the project depicted in CDP 4 meets the economic feasibility threshold and may provide a high level of profitability to a private sector enterprise.

See Tables 10, 11 and 12.

Table 10

CDP 4 - 10-Year Cash Flow Pro Forma

200 Owned Units - 10% affordable

Revenues	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**Year 8**	**Year 9**	**Year 10**
Total Dwellings Sold	100	50	25	25	0	0	0	0	0	0
Market Rate Units @ 90%	90	45	23	23	0	0	0	0	0	0
Avrage Sales Value	$600,000	$600,000	$600,000	$600,000	$0	$0	$0	$0	$0	$0
Annual Revenues	$54,000,000	$27,000,000	$13,500,000	$13,500,000	$0	$0	$0	$0	$0	$0
Affordable Rate Units @ 10%	10	5	3	3	0	0	0	0	0	0
Average Sales Value	$200,000	$200,000	$200,000	$200,000	$0	$0	$0	$0	$0	$0
Annual Revenues	$2,000,000	$1,000,000	$500,000	$500,000	$0	$0	$0	$0	$0	$0
Total Annual Gross Revenue	$56,000,000	$28,000,000	$14,000,000	$14,000,000	$0	$0	$0	$0	$0	$0
Expenses										
General & Administrative	$1,120,000	$560,000	$280,000	$280,000	$0	$0	$0	$0	$0	$0
Maintenance and Upkeep	$2,800,000	$1,400,000	$700,000	$700,000	$0	$0	$0	$0	$0	$0
Property Taxes	$630,000	$630,000	$630,000	$630,000	$0	$0	$0	$0	$0	$0
Total Annual Expenses	$4,550,000	$2,590,000	$1,610,000	$1,610,000	$0	$0	$0	$0	$0	$0
Net Operating Income										
Total Annual Revenues	$56,000,000	$28,000,000	$14,000,000	$14,000,000	$0	$0	$0	$0	$0	$0
Total Annual Expenses	$4,550,000	$2,590,000	$1,610,000	$1,610,000	$0	$0	$0	$0	$0	$0
Net Operating Income	$51,450,000	$25,410,000	$12,390,000	$12,390,000	$0	$0	$0	$0	$0	$0

Sources: U.S. Department of Housing and Urban Development; MassHousing; Massachusetts Housing Partnership; DHCD; EOHLC; Strategy 5 Consulting LLC.

Table 11

CDP 4 - Supportable Funds

Project Cash Flow		**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**Year 8**	**Year 9**	**Year 10**
Total Net Operating Income		$51,450,000	$25,410,000	$12,390,000	$12,390,000	$0	$0	$0	$0	$0	$0
Annual Debt Service		$10,325,000	$10,325,000	$10,325,000	$10,325,000	$10,325,000	$10,325,000	$10,325,000	$10,325,000	$10,325,000	$10,325,000
Annual Cash Flow		$41,125,000	$15,085,000	$2,065,000	$2,065,000	-$10,325,000	-$10,325,000	-$10,325,000	-$10,325,000	-$10,325,000	-$10,325,000
Supportable Funds											
Supportable Equity:											
Required Developer Return		17%									
Supportable Equity		$28,784,501									
Supportable Debt:											
NOI YEAR 4		$12,390,000									
Debt Coverage Ratio		1.2									
Debt Service		$10,325,000									
Interest Rate	5.0%										
Loan Term	10										
Supportable Debt		$81,121,245									
Total Supportable Funds											
Minimum Equity[1]		$28,784,501	26%								
Supportable Debt[2]		$81,121,245	74%								
Total Supportable Funds		$109,905,746	100%								

[1] The financial model employed in this table solves for a minimum equity requirement based on cash flow after supportable debt service. The actual financing package will likely include significantly greater developer equity which may be structured in the form of loaned capital equal to as much as 30% of the debt required.

[2] The financial model employed in this table uses conventional debt financing. The actual financing package would likely use a combination of short term construction **loans, low-interest industrial or economic development loans, and debt that could be structured at more favorable terms within the 30-year span.**

Sources: U.S. Department of Housing and Urban Development; MassHousing; Massachusetts Housing Partnership; DHCD; EOHLC; Strategy 5 Consulting LLC.

	Table 12			
	CDP 4			
Project Cost Summary / Residual Land Value				
Building Costs			**Supportable Funds**	
Gross Building Area	260,000		Minimum Equity	$28,784,501
Total Building Costs @ $350 sf	$91,000,000		Conventional Debt	$81,121,245
Land	$0		**Total Supportable Funds**	$109,905,746
Total Building Costs	$91,000,000		**Total Building Costs**	$91,000,000
Estimated Project Value	$91,000,000		**Residual Land Value**	$18,905,746
Sources: International Code Council; Strategy 5 Consulting LLC.				

3.5 Conceptual Development Program 5 – Summary

This CDP is comprised of 200 owned apartments (condominiums) consisting of 35% one-bedroom units, 45% two-bedroom units, and 20% three-bedroom units. The gross building area is estimated at 260,000 square feet, is of wood frame construction, and could be configured in various ways to fit a range of parcel sizes and dimensions. The project would be considered upper-midscale quality in construction, materials, fixtures, furnishings, and equipment. Parking supply is calculated based on 2 spaces per unit. The key variable assigned to this CDP is an affordable unit count of equal to 20% of the total. For a complete breakdown of the CDP 5 assumptions and inputs to the pro forma, please see Appendix E.

3.5.1 Feasibility Assessment

CDP 5 is also a sales model, rather than a leasing model, and adheres to an accelerated timeframe for recapture of an initial investment as opposed to the rental model. The conceptual project displays significant gross annual revenue potential from the 200 for-sale units, including 80% sold at the market rate, and 20% sold at an affordable rate. Estimated annual expenses are based on percentages of revenue and are within industry norms. Net operating income is positive and sufficient to generate debt and equity levels that could provide about $101 million in total supportable funds. This includes a provision for a required developer return and is based on input criteria shown in Appendix E.

Total building costs are estimated at about $91 million, reflecting the assumption of larger dwellings and a higher unit cost for development accorded to owned rather than rented units. The supportable debt / development cost relationship results in a theoretical Residual Land Value of about $11million. Based on these and other outputs and considerations detailed in the report, the analysis finds the project depicted in CDP 5 meets the economic feasibility threshold and may provide a moderate level of profitability to a private sector enterprise.

See Tables 13, 14 and 15.

Table 13

CDP 5 - 10-Year Cash Flow Pro Forma

200 Units - 20% affordable

Revenues	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**Year 8**	**Year 9**	**Year 10**
Total Dwellings Sold	100	50	25	25	0	0	0	0	0	0
Market Rate Units @ 80%	80	40	20	20	0	0	0	0	0	0
Avrage Sales Value	$600,000	$600,000	$600,000	$600,000	$0	$0	$0	$0	$0	$0
Annual Revenues	$48,000,000	$24,000,000	$12,000,000	$12,000,000	$0	$0	$0	$0	$0	$0
Affordable Rate Units @ 20%	20	10	5	5	0	0	0	0	0	0
Average Sales Value	$200,000	$200,000	$200,000	$200,000	$0	$0	$0	$0	$0	$0
Annual Revenues	$4,000,000	$2,000,000	$1,000,000	$1,000,000	$0	$0	$0	$0	$0	$0
Total Annual Gross Revenue	$52,000,000	$26,000,000	$13,000,000	$13,000,000	$0	$0	$0	$0	$0	$0
Expenses										
General & Administrative	$1,040,000	$520,000	$260,000	$260,000	$0	$0	$0	$0	$0	$0
Maintenance and Upkeep	$2,600,000	$1,300,000	$650,000	$650,000	$0	$0	$0	$0	$0	$0
Property Taxes	$630,000	$630,000	$630,000	$630,000	$0	$0	$0	$0	$0	$0
Total Annual Expenses	$4,270,000	$2,450,000	$1,540,000	$1,540,000	$0	$0	$0	$0	$0	$0
Net Operating Income										
Total Annual Revenues	$52,000,000	$26,000,000	$13,000,000	$13,000,000	$0	$0	$0	$0	$0	$0
Total Annual Expenses	$4,270,000	$2,450,000	$1,540,000	$1,540,000	$0	$0	$0	$0	$0	$0
Net Operating Income	$47,730,000	$23,550,000	$11,460,000	$11,460,000	$0	$0	$0	$0	$0	$0

Sources: U.S. Department of Housing and Urban Development; Massachusetts Housing Partnership; DHCD; EOHED; Strategy 5 Consulting LLC.

Table 14

CDP 5 - Supportable Funds

Project Cash Flow		**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**Year 8**	**Year 9**	**Year 10**
Total Net Operating Income		$47,730,000	$23,550,000	$11,460,000	$11,460,000	$0	$0	$0	$0	$0	$0
Annual Debt Service		$9,550,000	$9,550,000	$9,550,000	$9,550,000	$9,550,000	$9,550,000	$9,550,000	$9,550,000	$9,550,000	$9,550,000
Annual Cash Flow		$38,180,000	$14,000,000	$1,910,000	$1,910,000	-$9,550,000	-$9,550,000	-$9,550,000	-$9,550,000	-$9,550,000	-$9,550,000
Supportable Funds											
Supportable Equity:											
Required Developer Return		17%									
Supportable Equity		$26,779,717									
Supportable Debt:											
NOI YEAR 4		$11,460,000									
Debt Coverage Ratio		1.2									
Debt Service		$9,550,000									
Interest Rate	5.0%										
Loan Term	10										
Supportable Debt		$75,032,241									
Total Supportable Funds											
Minimum Equity[1]		$26,779,717	26%								
Supportable Debt[2]		$75,032,241	74%								
Total Supportable Funds		$101,811,959	100%								

[1] The financial model employed in this table solves for a minimum equity requirement based on cash flow after supportable debt service. The actual financing package will likely include significantly greater developer equity which may be structured in the form of loaned capital equal to as much as 30% of the debt required.

[2] The financial model employed in this table uses conventional debt financing. The actual financing package would likely use a combination of short term construction loans, low-interest industrial or economic development loans, and debt that could be structured at more favorable terms within the 30-year span.

Sources: U.S. Department of Housing and Urban Development; MassHousing; Massachusetts Housing Partnership; DHCD; EOHLC; Strategy 5 Consulting LLC.

	Table 15			
	CDP 5			
Project Cost Summary / Residual Land Value				
Building Costs			**Supportable Funds**	
Gross Building Area	260,000		Minimum Equity	$26,779,717
Total Building Costs @ $350 sf	$91,000,000		Conventional Debt	$75,032,241
Land	$0		**Total Supportable Funds**	$101,811,959
Total Building Costs	$91,000,000		**Total Building Costs**	$91,000,000
Estimated Project Value	$91,000,000		**Residual Land Value**	$10,811,959
Sources: International Code Council; Strategy 5 Consulting LLC.				

3.6 Conceptual Development Program 6 – Summary

This CDP is comprised of 200 owned apartments (condominiums) consisting of 35% one-bedroom units, 45% two-bedroom units, and 20% three-bedroom units. The gross building area is estimated at 260,000 square feet, is of wood frame construction, and could be configured in various ways to fit a range of parcel sizes and dimensions. The project would be considered upper-midscale quality in construction, materials, fixtures, furnishings, and equipment. Parking supply is calculated based on 2 spaces per unit. The key variable assigned to this CDP is an affordable unit count of equal to 25% of the total. For a complete breakdown of the CDP 6 assumptions and inputs to the pro forma, please see Appendix F.

3.6.1 Feasibility Assessment

CDP 6 is also a sales model and adheres to an accelerated timeframe for recapture of an initial investment as opposed to the rental model. The conceptual project displays meaningful gross annual revenue potential from the 200 for-sale units, including 75% sold at the market rate, and 25% sold at an affordable rate. Estimated annual expenses are based on percentages of revenue and are within industry norms. Net operating income is positive and sufficient to generate debt and equity levels that could provide about $97 million in total supportable funds. This includes a provision for a required developer return and is based on input criteria shown in Appendix F.

Total development costs are estimated at about $91 million, reflecting the assumption of larger dwellings and a higher unit cost for development accorded owned rather than rented units. The supportable debt / development cost relationship results in a theoretical Residual Land Value of about $6.7 million. Based on these and other outputs and considerations detailed in the report, the analysis finds the project depicted in CDP 6 meets the economic feasibility threshold and may provide a viable level of profitability to a private sector enterprise.

See Tables 16, 17 and 18.

Table 16

CDP 6 - 10-Year Cash Flow Pro Forma

200 Units - 25% affordable

Revenues	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**Year 8**	**Year 9**	**Year 10**
Total Dwellings Sold	100	50	25	25	0	0	0	0	0	0
Market Rate Units @ 75%	75	38	19	19	0	0	0	0	0	0
Avrage Sales Value	$600,000	$600,000	$600,000	$600,000	$0	$0	$0	$0	$0	$0
Annual Revenues	$45,000,000	$22,500,000	$11,250,000	$11,250,000	$0	$0	$0	$0	$0	$0
Affordable Rate Units @ 25%	25	13	6	6	0	0	0	0	0	0
Average Sales Value	$200,000	$200,000	$200,000	$200,000	$0	$0	$0	$0	$0	$0
Annual Revenues	$5,000,000	$2,500,000	$1,250,000	$1,250,000	$0	$0	$0	$0	$0	$0
Total Annual Gross Revenue	$50,000,000	$25,000,000	$12,500,000	$12,500,000	$0	$0	$0	$0	$0	$0
Expenses										
General & Administrative	$1,000,000	$500,000	$250,000	$250,000	$0	$0	$0	$0	$0	$0
Maintenance and Upkeep	$2,500,000	$1,250,000	$625,000	$625,000	$0	$0	$0	$0	$0	$0
Proprty Taxes	$630,000	$630,000	$630,000	$630,000	$0	$0	$0	$0	$0	$0
Total Annual Expenses	$4,130,000	$2,380,000	$1,505,000	$1,505,000	$0	$0	$0	$0	$0	$0
Net Operating Income										
Total Annual Revenues	$50,000,000	$25,000,000	$12,500,000	$12,500,000	$0	$0	$0	$0	$0	$0
Total Annual Expenses	$4,130,000	$2,380,000	$1,505,000	$1,505,000	$0	$0	$0	$0	$0	$0
Net Operating Income	$45,870,000	$22,620,000	$10,995,000	$10,995,000	$0	$0	$0	$0	$0	$0

Sources: U.S. Department of Housing and Urban Development; Massachusetts Housing Partnership; DHCD; EOHED; Strategy 5 Consulting LLC.

Table 17

CDP 6 - Supportable Funds

Project Cash Flow		**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**Year 8**	**Year 9**	**Year 10**
Total Net Operating Income		$45,870,000	$22,620,000	$10,995,000	$10,995,000	$0	$0	$0	$0	$0	$0
Annual Debt Service		$9,162,500	$9,162,500	$9,162,500	$9,162,500	$9,162,500	$9,162,500	$9,162,500	$9,162,500	$9,162,500	$9,162,500
Annual Cash Flow		$36,707,500	$13,457,500	$1,832,500	$1,832,500	-$9,162,500	-$9,162,500	-$9,162,500	-$9,162,500	-$9,162,500	-$9,162,500
Supportable Funds											
Supportable Equity:											
Required Developer Return		17%									
Supportable Equity		$25,777,326									
Supportable Debt:											
NOI YEAR 4		$10,995,000									
Debt Coverage Ratio		1.2									
Debt Service		$9,162,500									
Interest Rate	5.0%										
Loan Term	10										
Supportable Debt		$71,987,739									
Total Supportable Funds											
Minimum Equity[1]		$25,777,326	26%								
Supportable Debt[2]		$71,987,739	74%								
Total Supportable Funds		$97,765,065	100%								

[1] The financial model employed in this table solves for a minimum equity requirement based on cash flow after supportable debt service. The actual financing package will likely include significantly greater developer equity which may be structured in the form of loaned capital equal to as much as 30% of the debt required.

[2] The financial model employed in this table uses conventional debt financing. The actual financing package would likely use a combination of short term construction loans, low-interest industrial or economic development loans, and debt that could be structured at more favorable terms within the 30-year span.

Sources: U.S. Department of Housing and Urban Development; Mass Housing; Massachusetts Housing Partnership; DHCD; EOHLC; Strategy 5 Consulting LLC.

	Table 18			
	CDP 6			
Project Cost Summary / Residual Land Value				
Building Costs			**Supportable Funds**	
Gross Building Area	260,000		Minimum Equity	$25,777,326
Total Building Costs @ $350 sf	$91,000,000		Conventional Debt	$71,987,739
Land	$0		**Total Supportable Funds**	$97,765,065
Total Building Costs	$91,000,000		**Total Building Costs**	$91,000,000
Estimated Project Value	$91,000,000		**Residual Land Value**	$6,765,065
Sources: International Code Council; Strategy 5 Consulting LLC.				

Section 4: Summary Conclusions

- The EFA has been conducted pursuant to the Instructions for Economic Feasibility Analysis as set forth by the EOHLC. The methodology employed includes the use of Conceptual Development Programs (CDPs), and a series of pro forma that serve as tools in understanding the feasibility paradigm. The pro forma inputs, variables, and resultant outputs have been developed using the best available data and information from a variety of sources.

- The recently completed Housing Production Plan / Housing Needs Assessment Update includes Housing Trust goals designed to address local housing issues, while working to reach the state 40B affordable housing goal. The prioritization of funding to help develop affordable rental units to address Grafton's most critical local housing need and most vulnerable residents, the preservation of long-term affordability, and the creation of affordable home ownership opportunities, are also goals.

- The consultant asserts that the Town of Grafton Housing Production Plans, and other reports and data reviewed for this EFA, have sufficiently documented the demand for housing in general, the demand and need for affordable housing, and the policies and programs designed to leverage private sector investment to meet those needs, both now and for the foreseeable future. This includes the programmatic interface with Section 3A of the Zoning Act.

- The Compliance Guidelines require that 10% of units in the MBTA Zoning Districts be affordable. This EFA evaluates multi-family project performance at 10%, 20% and 25% affordability to understand the relative impacts on the bottom-line components of feasibility. Though 25% affordability in the new district may exceed the allowable percentage according to Section 3A of the Zoning Act, the analysis has included pro forma using this variable to help establish a trend line concerning affordability, feasibility, and profitability.

- Each CDP was found to meet or exceed accepted feasibility thresholds, although general levels of considered profitability were greater at the 10% affordability benchmark, decreasing at the 20% and 25% marks. Still, the CDPs were shown to be both feasible and profitable, with final outputs of the pro forma indicating theoretical levels of Residual Land Value estimated at approximately $7.4 million, $5.2 million, and $4.0 million for rental CDPs 1, 2 and 3 respectively. Ownership CDPs 4, 5 and 6 registered theoretical Residual Land Values of $18.9 million, $10.8 million, and $6.7 million respectively.

- The essential question posed to the Town of Grafton and the authors of the EFA: "Are 20% of affordable units in a conceptual project planned for the proposed district economically feasible?" has been answered in the affirmative, according to the analysis conducted pursuant to the Compliance Guidelines.

- Profitability, a facet of feasibility, is also demonstrated to varying degrees by the six CDPs. Each demonstrates significant revenue generation, manageable fixed operating expenses, and positive Net Operating Income. These underpinnings of profitability are indicators that multi-family projects, even those with inclusionary affordable units, can be economically and financially viable.

- Variables associated with specific, real-time development projects, including changes in the market environment, individual design and development decisions, business management and operating decisions, site-specific land and building costs, funding and finance particulars, and other unforeseen future conditions may impact the forecast feasibility / profitability outcomes.

- The EFA supports the underlying policy goals of Section 3A of the Zoning Act, including the demonstrated ability of the market to support additional multi-family dwellings, coupled with demonstrated operational feasibility of conceptual development, can result in new housing opportunities that may help support livable communities.

- The recently completed Housing Production Plan / Housing Needs Assessment Update includes Housing Trust goals designed to address local housing issues, while working to reach the state 40B affordable housing goal. The prioritization of funding to help develop affordable rental units to address Grafton's most critical local housing need and most vulnerable residents, the preservation of long-term affordability, and the creation of affordable home ownership opportunities, are also goals.

- The EFA has been conducted pursuant to the Instructions for Economic Feasibility Analysis as set forth by the EOHLC. The methodology employed includes the use of Conceptual Development Programs (CDPs), and a series of pro forma that serve as tools in understanding the feasibility paradigm. The pro forma inputs, variables, and resultant outputs have been developed using the best available data and information from a variety of sources.

- The Compliance Guidelines require that 10% of units in the MBTA Zoning Districts be affordable. This EFA evaluates multi-family project performance at 10%, 20% and 25% affordability to understand the relative impacts on the bottom-line components of feasibility. Though 25% affordability in the new district may exceed the allowable percentage according to Section 3A of the Zoning Act, the analysis has included pro forma using this variable to help establish a trend line concerning affordability, feasibility, and profitability.

- Each CDP was found to meet or exceed accepted feasibility thresholds, although general levels of considered profitability were greater at the 10% affordability benchmark, decreasing at the 20% and 25% marks. Still, the CDPs were shown to be both feasible and profitable, with final outputs of the pro forma indicating theoretical levels of Residual Land Value estimated at approximately $7.4 million, $5.2 million, and $4.0 million for rental CDPs 1, 2 and 3 respectively. Ownership CDPs 4, 5 and 6 registered

theoretical Residual Land Values of $18.9 million, $10.8 million, and $6.7 million respectively.

- The essential question posed to the Town of Grafton and the authors of the EFA: "Are 20% of affordable units in a conceptual project planned for the proposed district economically feasible?" has been answered in the affirmative, according to the analysis conducted pursuant to the Compliance Guidelines.

- Profitability, a facet of feasibility, is also demonstrated to varying degrees by the six CDPs. Each demonstrates significant revenue generation, manageable fixed operating expenses, and positive Net Operating Income. These underpinnings of profitability are indicators that multi-family projects, even those with inclusionary affordable units, can be economically and financially viable.

- Variables associated with specific, real-time development projects, including changes in the market environment, individual design and development decisions, business management and operating decisions, site-specific land and building costs, funding and finance particulars, and other unforeseen future conditions may impact the forecast feasibility / profitability outcomes.

- The EFA supports the underlying policy goals of Section 3A of the Zoning Act, including the demonstrated ability of the market to support additional multi-family dwellings, coupled with demonstrated operational feasibility of conceptual development, can result in new housing opportunities that may help support livable communities.

Appendix A

CDP-1

200 Unit Rental Apartments
10% Affordable
10-Year Cash Flow Pro Forma
Development and Operating Assumptions

General Concept – See Conceptual Development Program 1.

Operating Revenues

Total Dwelling Units – 200 units, of which 35% are 1-bedroom, 45% are 2-bedroom, and 20% are 3-bedroom.

Market Rate Units – 180 units, equaling 90% of Total Dwelling Units, allowing for 10% of Total Dwelling Units set-aside for affordable units.

Average Market Rent – An average rate based on 35% of units (63 1-bedroom) leased at $2,200; 45% of units (81 2-bedroom) leased at $2,800; and 20% of units (36 3-bedroom) leased at $3,400. Equals a weighted average of $2,710 (rounded to $2,800) market rate per unit.

Annual Market Revenues – 180 units times average market rent, times 12 months. Equals $6.04 million annually.

Affordable Rate Units – 20 units, equaling 10% of Total Dwelling Units, allowing for 90% of Total Dwelling Units as market rate units.

Average Affordable Rent – An average rate based on 35% of units (7 1-bedroom) leased at $1,775; 45% of units (9 2-bedroom) leased at $2,130; and 20% of units (4 3-bedroom) leased at $2,461. Equals a weighted average of $2,072 (rounded to $2,000) affordable rate per unit.

Annual Affordable Revenues – 20 units times average affordable rent, times 12 months. Equals $480,000 annually.

Total Annual Gross Revenues – Market rate revenues, plus affordable rate revenues, equal $6.52 million annually.

Operating Expenses

General and Administrative – Category includes leasing functions. Expenses estimated at 5% of gross revenues, approximately $326,000 annually.

Maintenance and Upkeep – Category includes cleaning, normal building maintenance and service. Expenses estimated at 10% of gross revenues, approximately $652,000 annually.

Property Taxes – Based on the Town of Grafton millage rate of $15.75 per $1,000 of value, levied on assessed value of $40 million, or about 70% of total development costs. Equals approximately $630,000 annually.

Total Annual Expenses – Approximately $1.60 million annually.

Net Operating Income – Total annual revenue minus total annual expenses. Equals approximately $4.91 million annually.

Supportable Funds – A combination of supportable debt and supportable equity investment. Note that the model solves for maximum debt and minimum equity as a measure of feasibility. This does not constitute a recommended or preferred funding and finance approach.

> **Supportable Equity** – Net Present Value (NPV) based on a required developer return of 17% and annualized cash flow. Approximately $3.81 million.
>
> **Supportable Debt** – Present Value (PV) based on NOI, supportable debt service, a debt coverage ratio of 1.2, and interest rate of 5% applied to a MassHousing low interest program conventional loan. Approximately $63.63 million.
>
> **Total Supportable Funds** – Supportable debt, plus supportable equity, equals approximately $67.44 million.

Project Cost Summary – Building consisting of approximately 200,000 square feet based on an average of 1,000 square feet per unit. Hard and soft costs included. Assumes no extraordinary site preparation or environmental costs. Unit cost estimate $300 per square foot. Total building costs are estimated at approximately $60 million.

Residual Land Value (RLV) – The model does not use a land value input, but rather estimates the theoretical amount the project can afford to pay for land – the Residual Land Value, or RLV. The RLV is equal to the Total Supportable Funds, minus the Total Development Costs. This is used as a tool in assessing feasibility. A positive RLV indicates relative positive feasibility. A negative RLV indicates a lack of relative feasibility. RLV for CDP 1 is estimated at $7.44 million.

Appendix B

CDP-2

200 Unit Rental Apartments
20% Affordable
10-Year Cash Flow Pro Forma
Development and Operating Assumptions

General Concept – See Conceptual Development Program 2.

Operating Revenues

Total Dwelling Units – 200 units, of which 35% are 1-bedroom, 45% are 2-bedroom, and 20% are 3-bedroom.

Market Rate Units – 160 units, equaling 80% of Total Dwelling Units, allowing for 20% of Total Dwelling Units set-aside for affordable units.

Average Market Rent – An average rate based on 35% of units (56 1-bedroom) leased at $2,200; 45% of units (72 2-bedroom) leased at $2,800; and 20% of units (32 3-bedroom) leased at $3,400. Equals a weighted average of $2,710 (rounded to $2,800) market rate per unit.

Annual Market Revenues – 160 units times average market rent, times 12 months. Equals $5.37 million annually.

Affordable Rate Units – 40 units, equaling 20% of Total Dwelling Units, allowing for 80% of Total Dwelling Units as market rate units.

Average Affordable Rent – An average rate based on 35% of units (14 1-bedroom) leased at $1,775; 45% of units (18 2-bedroom) leased at $2,130; and 20% of units (8 3-bedroom) leased at $2,460. Equals a weighted average of $2,072 (rounded to $2,000) affordable rate per unit.

Annual Affordable Revenues – 40 units times average affordable rent, times 12 months. Equals $960,000 annually.

Total Annual Gross Revenues – Market rate revenues, plus affordable rate revenues, equal $6.33 million annually.

Operating Expenses

General and Administrative – Category includes leasing functions. Expenses estimated at 5% of gross revenues, approximately $316,000 annually.

Maintenance and Upkeep – Category includes cleaning, normal building maintenance and service. Expenses estimated at 10% of gross revenues, approximately $633,000 annually.

Property Taxes – Based on the Town of Grafton millage rate of $15.75 per $1,000 of value, levied on assessed value of $40 million, or about 70% of total development costs. Equals approximately $630,000 annually.

Total Annual Expenses – Approximately $1.58 million annually.

Net Operating Income – Total annual revenue minus total annual expenses. Equals approximately $4.75 million annually.

Supportable Funds – A combination of supportable debt and supportable equity investment. Note that the model solves for maximum debt and minimum equity as a measure of feasibility. This does not constitute a recommended or preferred funding and finance approach.

> **Supportable Equity** – Net Present Value (NPV) based on a required developer return of 17% and annualized cash flow. Approximately $3.69 million.
>
> **Supportable Debt** – Present Value (PV) based on NOI, supportable debt service, a debt coverage ratio of 1.2, and interest rate of 5% applied to a MassHousing low interest program conventional loan. Approximately $61.52 million.
>
> **Total Supportable Funds** – Supportable debt, plus supportable equity, equals approximately $65.21 million.

Project Cost Summary – Building consisting of approximately 200,000 square feet based on an average of 1,000 square feet per unit. Hard and soft costs included. Assumes no extraordinary site preparation or environmental costs. Unit cost estimate $300 per square foot. Total building costs are estimated at approximately $60 million.

Residual Land Value (RLV) – The model does not use a land value input, but rather estimates the theoretical amount the project can afford to pay for land – the Residual Land Value, or RLV. The RLV is equal to the Total Supportable Funds, minus the Total Development Costs. This is used as a tool in assessing feasibility. A positive RLV indicates relative positive feasibility. A negative RLV indicates a lack of relative feasibility. RLV for CDP 2 is estimated at $5.2 million.

Appendix C

CDP-3

200 Unit Rental Apartments
25% Affordable
10-Year Cash Flow Pro Forma
Development and Operating Assumptions

General Concept – See Conceptual Development Program 3.

Operating Revenues

Total Dwelling Units – 200 units, of which 35% are 1-bedroom, 45% are 2-bedroom, and 20% are 3-bedroom.

Market Rate Units – 150 units, equaling 75% of Total Dwelling Units, allowing for 25% of Total Dwelling Units set-aside for affordable units.

Average Market Rent – An average rate based on 35% of units (52 1-bedroom) leased at $2,200; 45% of units (67 2-bedroom) leased at $2,800; and 20% of units (30 3-bedroom) leased at $3,400. Equals a weighted average of $2,710 (rounded to $2,800) market rate per unit.

Annual Market Revenues – 150 units times average market rent, times 12 months. Equals $5.04 million annually.

Affordable Rate Units – 50 units, equaling 25% of Total Dwelling Units, allowing for 75% of Total Dwelling Units as market rate units.

Average Affordable Rent – An average rate based on 35% of units (17 1-bedroom) leased at $1,775; 45% of units (23 2-bedroom) leased at $2,130; and 20% of units (10 3-bedroom) leased at $2,461. Equals a weighted average of $2,072 (rounded to $2,000) affordable rate per unit.

Annual Affordable Revenues – 50 units times average affordable rent, times 12 months. Equals $1.20 million annually.

Total Annual Gross Revenues – Market rate revenues, plus affordable rate revenues, equal $6.24 million annually.

Operating Expenses

General and Administrative – Category includes leasing functions. Expenses estimated at 5% of gross revenues, approximately $312,000 annually.

Maintenance and Upkeep – Category includes cleaning, normal building maintenance and service. Expenses estimated at 10% of gross revenues, approximately $624,000 annually.

Property Taxes – Based on the Town of Grafton millage rate of $15.75 per $1,000 of value, levied on assessed value of $40 million, or about 70% of total development costs. Equals approximately $630,000 annually.

Total Annual Expenses – Approximately $1.56 million annually.

Net Operating Income – Total annual revenue minus total annual expenses. Equals approximately $4.67 million annually.

Supportable Funds – A combination of supportable debt and supportable equity investment. Note that the model solves for maximum debt and minimum equity as a measure of feasibility. This does not constitute a recommended or preferred funding and finance approach.

> **Supportable Equity** – Net Present Value (NPV) based on a required developer return of 17% and annualized cash flow. Approximately $3.63 million.
>
> **Supportable Debt** – Present Value (PV) based on NOI, supportable debt service, a debt coverage ratio of 1.2, and interest rate of 5% applied to a MassHousing low interest program conventional loan. Approximately $60.46 million.
>
> **Total Supportable Funds** – Supportable debt, plus supportable equity, equals approximately $64.09million.

Project Cost Summary – Building consisting of approximately 200,000 square feet based on an average of 1,000 square feet per unit. Hard and soft costs included. Assumes no extraordinary site preparation or environmental costs. Unit cost estimate $300 per square foot. Total building costs are estimated at approximately $60 million.

Residual Land Value (RLV) – The model does not use a land value input, but rather estimates the theoretical amount the project can afford to pay for land – the Residual Land Value, or RLV. The RLV is equal to the Total Supportable Funds, minus the Total Development Costs. This is used as a tool in assessing feasibility. A positive RLV indicates relative positive feasibility. A negative RLV indicates a lack of relative feasibility. RLV for CDP 3 is estimated at $4.09 million.

Appendix D

CDP-4

200 Unit Owned Condominiums
10% Affordable
10-Year Cash Flow Pro Forma
Development and Operating Assumptions

General Concept – See Conceptual Development Program 4.

Operating Revenues

Total Dwelling Units – 200 units, of which 35% are 1-bedroom, 45% are 2-bedroom, and 20% are 3-bedroom.

Absorption - Operating revenues are based on sales absorption of 100 units in year 1, sale of 50 units in year 2, sale of 25 units in year 3, and sale of 25 units in year 4.

Market Rate Units – 180 units, equaling 90% of Total Dwelling Units, allowing for 10% of Total Dwelling Units set-aside for affordable units.

Average Market Sales Value – An average rate based on 35% of units (63 1-bedroom) sold at $450,000; 45% of units (81 2-bedroom) sold at $650,000; and 20% of units (36 3-bedroom) sold at $750,000. Equals a weighted average of $600,000 market rate sales price per unit.

Annual Market Revenues – 180 units times average market sales value of $600,000 equals $108 million. Revenue stream equal to approximately $54 million in year 1, sales of $27 million in year 2, sales of $13.5 million in year 3, and $13.5 million in year 4.

Affordable Rate Units – 20 units, equaling 10% of Total Dwelling Units, allowing for 90% of Total Dwelling Units as market rate units.

Average Affordable Sales Value – An average rate based on 35% of units (7 1-bedroom) sold at $180,000; 45% of units (9 2-bedroom) sold at $200,000; and 20% of units (4 3-bedroom) sold at $220,000. Equals a weighted average of $197,000 (rounded to $200,000) affordable revenue per unit.

Annual Affordable Revenues – 20 units times average affordable sales value of $200,000. Revenue stream equal to approximately $2 million in year 1, sales of $1 million in year 2, sales of $500,000 in year 3, and $500,000 in year 4.

Total Annual Gross Revenues – Market rate revenues, plus affordable rate revenues, equal $56 million in year 1, $28 million in year 2, $14 million in year 3, and $14 million in year 4.

Operating Expenses

General and Administrative – Category includes leasing functions. Expenses estimated at 2% of gross revenues, approximately $1.1 million in year 1, $560,000 in year 2, $280,000 in year 3, and $280,000 in year 4.

Maintenance and Upkeep – Category includes cleaning, normal building maintenance and service. Expenses estimated at 5% of gross revenues, approximately $2.8 million in year 1, $1.4 million in year 2, $700,000 in year 3, and $700,000 million in year 4.

Property Taxes – Based on the Town of Grafton millage rate of $15.75 per $1,000 of value, levied on assessed value of $40 million, or about 70% of total development costs. Equals approximately $630,000 annually.

Total Annual Expenses – Approximately $4.5 million in year 1, $2.5 million in year 2, $1.6 million in year 3, and $1.6 million in year 4.

Net Operating Income – Total annual revenue minus total annual expenses. Equals approximately $51.4 million in year 1, $25.4 million in year 2, $12.4 million year 3, and $12.4 million in year 4.

Supportable Funds – A combination of supportable debt and supportable equity investment. Note that the model solves for maximum debt and minimum equity as a measure of feasibility. This does not constitute a recommended or preferred funding and finance approach.

> **Supportable Equity** – Net Present Value (NPV) based on a required developer return of 17% and annualized cash flow. Approximately $28.78 million.
>
> **Supportable Debt** – Present Value (PV) based on NOI, supportable debt service, a debt coverage ratio of 1.2, and interest rate of 5% applied to a MassHousing low interest program conventional loan. Approximately $81.12 million.
>
> **Total Supportable Funds** – Supportable debt, plus supportable equity, equals approximately $110 million.

Project Cost Summary – Building consisting of approximately 260,000 square feet based on an average of 1,300 square feet per unit. Hard and soft costs included. Assumes no extraordinary site preparation or environmental costs. Unit costs are estimated at $350 per square foot. Total building costs are estimated at approximately $91 million.

Residual Land Value (RLV) – The model does not use a land value input, but rather estimates the theoretical amount the project can afford to pay for land – the Residual Land Value, or RLV. The RLV is equal to the Total Supportable Funds, minus the Total Development Costs. This is used as a tool in assessing feasibility. A positive RLV indicates relative positive feasibility. A negative RLV indicates a lack of relative feasibility. RLV for CDP 4 is estimated at $18.9 million.

Appendix E

CDP-5

200 Unit Owned Condominiums
20% Affordable
10-Year Cash Flow Pro Forma
Development and Operating Assumptions

General Concept – See Conceptual Development Program 5.

Operating Revenues

Total Dwelling Units – 200 units, of which 35% are 1-bedroom, 45% are 2-bedroom, and 20% are 3-bedroom.

Absorption - Operating revenues are based on sales absorption of 100 units in year 1, sale of 50 units in year 2, sale of 25 units in year 3, and sale of 25 units in year 4.

Market Rate Units – 160 units, equaling 80% of Total Dwelling Units, allowing for 20% of Total Dwelling Units set-aside for affordable units.

Average Market Sales Value – An average rate based on 35% of units (56 1-bedroom) sold at $450,000; 45% of units (72 2-bedroom) sold at $650,000; and 20% of units (32 3-bedroom) sold at $750,000. Equals a weighted average of $600,000 market rate sales price per unit.

Annual Market Revenues – 160 units times average market sales value of $600,000 equals $96 million. Revenue stream equal to approximately $48 million in year 1, sales of $24 million in year 2, sales of $12 million in year 3, and $12 million in year 4.

Affordable Rate Units – 40 units, equaling 20% of Total Dwelling Units, allowing for 80% of Total Dwelling Units as market rate units.

Average Affordable Sales Value – An average rate based on 35% of units (14 1-bedroom) sold at $180,000; 45% of units (18 2-bedroom) sold at $200,000; and 20% of units (8 3-bedroom) sold at $220,000. Equals a weighted average of $197,000 (rounded to $200,000) affordable revenue per unit.

Annual Affordable Revenues – 40 units times average affordable sales value of $200,000 equals $8 million total. Revenue stream equal to approximately $4 million in year 1, sales of $2 million in year 2, sales of $1 million in year 3, and $1 million in year 4.

Total Annual Gross Revenues – Market rate revenues, plus affordable rate revenues, equal $52 million in year 1, $26 million in year 2, $13 million in year 3, and $13 million in year 4.

Operating Expenses

General and Administrative – Category includes leasing functions. Expenses estimated at 2% of gross revenues, approximately $1 million in year 1, $520,000 in year 2, $260,000 in year 3, and $260,000 in year 4.

Maintenance and Upkeep – Category includes cleaning, normal building maintenance and service. Expenses estimated at 5% of gross revenues, approximately $2.6 million in year 1, $1.3 million in year 2, $650,000 in year 3, and $650,000 in year 4.

Property Taxes – Based on the Town of Grafton millage rate of $15.75 per $1,000 of value, levied on assessed value of $40 million, or about 70% of total development costs. Equals approximately $630,000 annually.

Total Annual Expenses – Approximately $4.27 million in year 1, $2.45 million in year 2, $1.54 million in year 3, and $1.54 million in year 4.

Net Operating Income – Total annual revenue minus total annual expenses. Equals approximately $47.73 million in year 1, $23.55 million in year 2, $11.46 million year 3, and $11.46 million in year 4.

Supportable Funds – A combination of supportable debt and supportable equity investment. Note that the model solves for maximum debt and minimum equity as a measure of feasibility. This does not constitute a recommended or preferred funding and finance approach.

> **Supportable Equity** – Net Present Value (NPV) based on a required developer return of 17% and annualized cash flow. Approximately $26.77 million.
>
> **Supportable Debt** – Present Value (PV) based on NOI, supportable debt service, a debt coverage ratio of 1.2, and interest rate of 5% applied to a MassHousing low interest program conventional loan. Approximately $75.03 million.
>
> **Total Supportable Funds** – Supportable debt, plus supportable equity, equals approximately $101.81 million.

Project Cost Summary – Building consisting of approximately 260,000 square feet based on an average of 1,300 square feet per unit. Hard and soft costs included. Assumes no extraordinary site preparation or environmental costs. Unit costs are estimated at $350 per square foot. Total building costs are estimated at approximately $91 million.

Residual Land Value (RLV) – The model does not use a land value input, but rather estimates the theoretical amount the project can afford to pay for land – the Residual Land Value, or RLV. The RLV is equal to the Total Supportable Funds, minus the Total Development Costs. This is used as a tool in assessing feasibility. A positive RLV indicates relative positive feasibility. A negative RLV indicates a lack of relative feasibility. RLV for CDP 5 is estimated at $10.8 million.

Appendix F

CDP-6

200 Unit Owned Condominiums
25% Affordable
10-Year Cash Flow Pro Forma
Development and Operating Assumptions

General Concept – See Conceptual Development Program 6.

Operating Revenues

Total Dwelling Units – 200 units, of which 35% are 1-bedroom, 45% are 2-bedroom, and 20% are 3-bedroom.

Absorption - Operating revenues are based on sales absorption of 100 units in year 1, sale of 50 units in year 2, sale of 25 units in year 3, and sale of 25 units in year 4.

Market Rate Units – 150 units, equaling 75% of Total Dwelling Units, allowing for 25% of Total Dwelling Units set-aside for affordable units.

Average Market Sales Value – An average rate based on 35% of units (52 1-bedroom) sold at $450,000; 45% of units (68 2-bedroom) sold at $650,000; and 20% of units (30 3-bedroom) sold at $750,000. Equals a weighted average of $600,000 market rate sales price per unit.

Annual Market Revenues – 150 units times average market sales value of $600,000 equals $90 million. Revenue stream equal to approximately $45 million in year 1, sales of $22.5 million in year 2, sales of $11.2 million in year 3, and $11.2 million in year 4.

Affordable Rate Units – 50 units, equaling 25% of Total Dwelling Units, allowing for 75% of Total Dwelling Units as market rate units.

Average Affordable Sales Value – An average rate based on 35% of units (17 1-bedroom) sold at $180,000; 45% of units (23 2-bedroom) sold at $200,000; and 20% of units (10 3-bedroom) sold at $220,000. Equals a weighted average of $197,000 (rounded to $200,000) affordable revenue per unit.

Annual Affordable Revenues – 50 units times average affordable sales value of $200,000. Revenue stream equal to approximately $5 million in year 1, sales of $2.5 million in year 2, sales of $1.25 million in year 3, and $1.25 million in year 4.

Total Annual Gross Revenues – Market rate revenues, plus affordable rate revenues, equal $50 million in year 1, $25 million in year 2, $12.5 million in year 3, and $12.5 million in year 4.

Operating Expenses

General and Administrative – Category includes leasing functions. Expenses estimated at 2% of gross revenues, approximately $1 million in year 1, $500,000 in year 2, $250,000 in year 3, and $250,000 in year 4.

Maintenance and Upkeep – Category includes cleaning, normal building maintenance and service. Expenses estimated at 5% of gross revenues, approximately $2.5 million in year 1, $1.25 million in year 2, $625,000 in year 3, and $625,000 in year 4.

Property Taxes – Based on the Town of Grafton millage rate of $15.75 per $1,000 of value, levied on assessed value of $40 million, or about 70% of total development costs. Equals approximately $630,000 annually.

Total Annual Expenses – Approximately $4.13 million in year 1, $2.38 million in year 2, $1.50 million in year 3, and $1.50 million in year 4.

Net Operating Income – Total annual revenue minus total annual expenses. Equals approximately $45.87 million in year 1, $22.62 million in year 2, $11million year 3, and $11 million in year 4.

Supportable Funds – A combination of supportable debt and supportable equity investment. Note that the model solves for maximum debt and minimum equity as a measure of feasibility. This does not constitute a recommended or preferred funding and finance approach.

> **Supportable Equity** – Net Present Value (NPV) based on a required developer return of 17% and annualized cash flow. Approximately $25.77 million.
>
> **Supportable Debt** – Present Value (PV) based on NOI, supportable debt service, a debt coverage ratio of 1.2, and interest rate of 5% applied to a MassHousing low interest program conventional loan. Approximately $72 million.
>
> **Total Supportable Funds** – Supportable debt, plus supportable equity, equals approximately $97.76 million.

Project Cost Summary – Building consisting of approximately 260,000 square feet based on an average of 1,300 square feet per unit. Hard and soft costs included. Assumes no extraordinary site preparation or environmental costs. Unit costs are estimated at $350 per square foot. Total building costs are estimated at approximately $91 million.

Residual Land Value (RLV) – The model does not use a land value input, but rather estimates the theoretical amount the project can afford to pay for land – the Residual Land Value, or RLV. The RLV is equal to the Total Supportable Funds, minus the Total Development Costs. This is used as a tool in assessing feasibility. A positive RLV indicates relative positive feasibility. A negative RLV indicates a lack of relative feasibility. RLV for CDP 6 is estimated at $6.76 million.