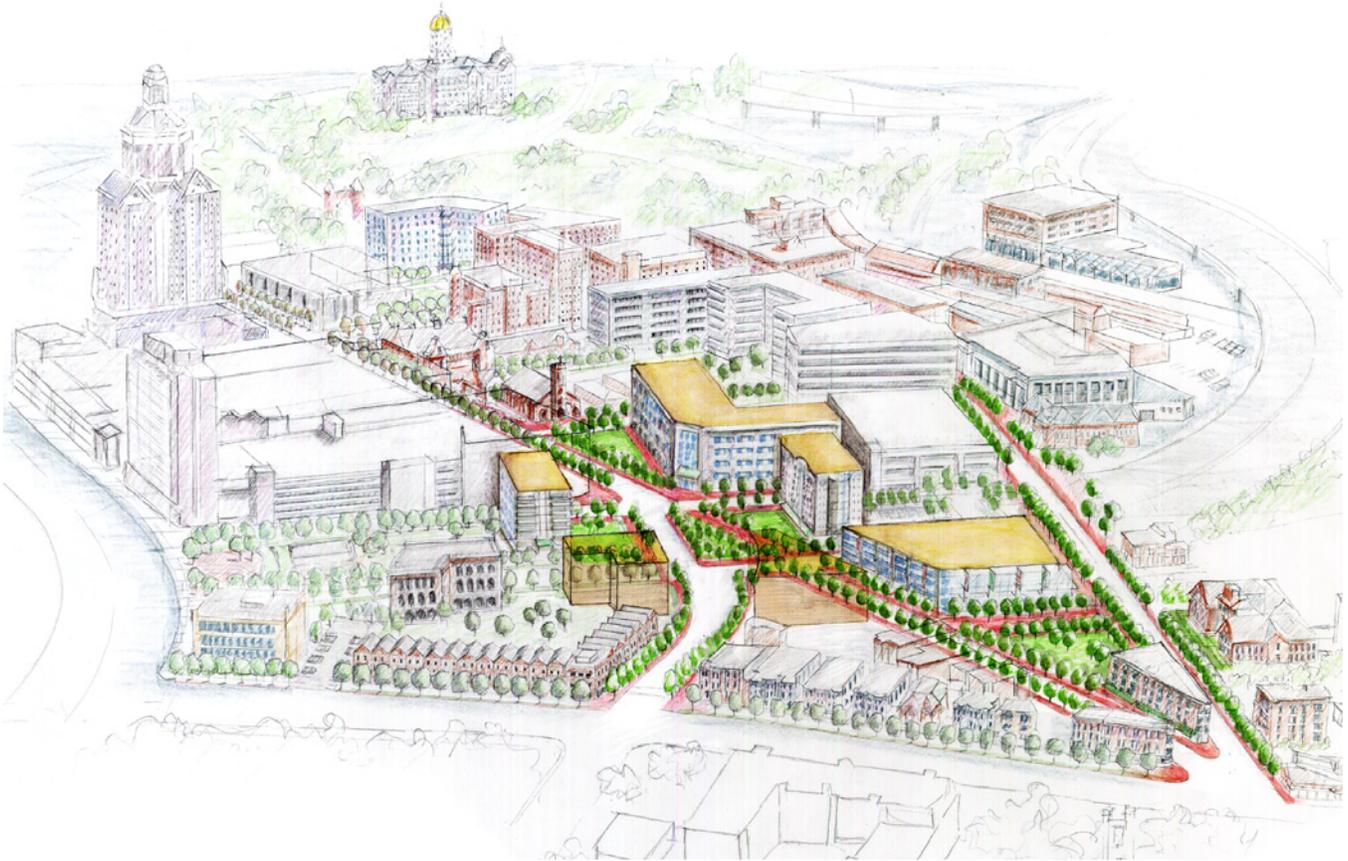


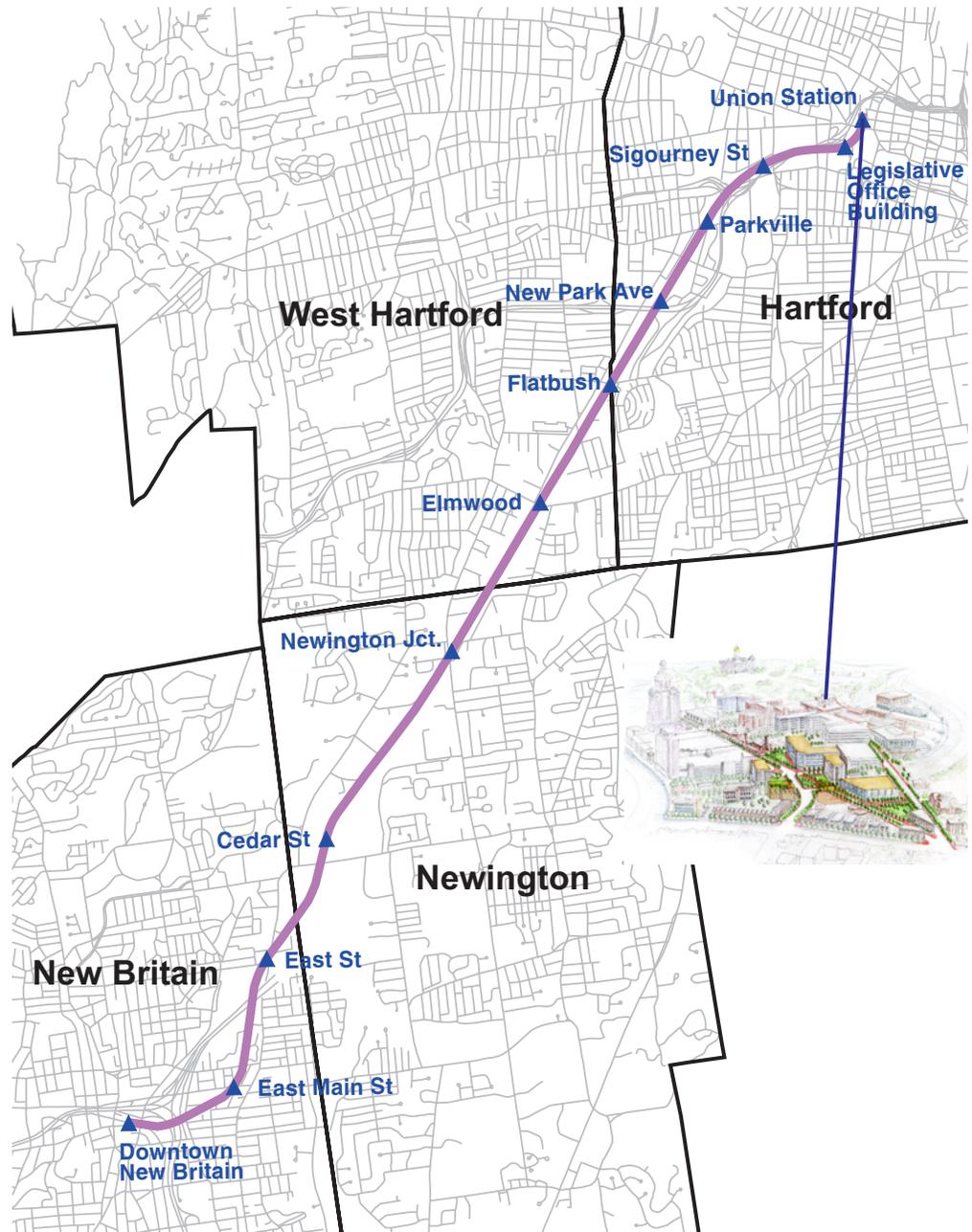
New Britain - Hartford Busway Station Area Planning Project
Union Station Area Plan

July 2004



Capitol Region Council of Governments

CROSBY | SCHLESSINGER | SMALLRIDGE LLC



For more information: contact CRCOG at 860-522-2217 or go to CRCOG's or Hartford's websites: www.crcog.org; www.hartford.gov

Prepared in cooperation with citizens, the Cities of New Britain and Hartford, the Towns of West Hartford and Newington, the Capitol Region Council of Governments, and the Connecticut Department of Transportation. The opinions, findings and conclusion expressed in this publication are those of the respective Municipal Advisory Committees that served on the project and do not necessarily reflect the official views or policies of the Connecticut Department of Transportation and/or the U.S. Department of Transportation.

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The report was accepted by the Hartford MAC on May 20, 2004 with the following language:

The Hartford Municipal Advisory Committee for the New Britain/Hartford Station Area Planning project endorses the Station Area Plans for the Flatbush, Parkville, Sigourney, and Unions Station as guides for the City of Hartford to refer to when considering projects and policies pertaining to the stations' environs. City staff should consider these plans when reviewing proposals for infrastructure (e.g. streets) and development in these areas. The Planning and Zoning Commission should incorporate these plans into Hartford's Plan of Conservation and Development. Respective NRZs should adopt these plans as part of their Strategic Plans.

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Introduction

The Project

The New Britain-Hartford Busway is a new rapid transit facility being built by the Connecticut Department of Transportation. The exclusive 9.4-mile long busway, linking downtown New Britain with downtown Hartford's Union Station, will run along active and inactive railroad rights-of-way through four cities/towns: New Britain, Newington, West Hartford and Hartford. The Busway was selected as one of ten Federal Transit Administration (FTA) Bus Rapid Transit (BRT) demonstration projects and will be paid for with both federal and state money. Construction on the Busway is scheduled to start in 2006 and service should start by the end of the decade.

This document is the outcome of a complementary effort to the Busway project: the Station Area Planning Project. The primary goal of the Station Area Planning Project is to coordinate transportation and land use planning for the areas around proposed station sites in order to enhance the pedestrian environment and development around transit stations and maximize the benefits of the Busway investment. This study is state funded through the Transportation Strategy Board. Conducted by the Capitol Region Council of Governments (CRCOG) together with a consultant team led by the Crosby | Schlessinger | Smallridge, the study has been coordinated with municipal and community leaders in Hartford, West Hartford, Newington, and New Britain to identify underutilized property/development opportunities and develop strategies to create vibrant walkable districts with easy access to regional transit.

In each of the four municipalities, a Municipal Advisory Committee (MAC) was established. The MACs, comprised of municipal staff, members of local boards and commissions and station area stakeholders, met regularly over the past year to assist in the station area planning process by reviewing progress to date and providing input on local issues and concerns.

Three Public Open Houses were held in Hartford to elicit input from a larger audience. At the first open house, the concept of transit oriented development was explained, and the initial assessment of each of the twelve station areas was presented, along with the reasons for the selection of six station areas for further study. At the second open house, the Design Principles for the six Hartford station areas were presented, along with early concepts for the four Hartford station areas selected for more detailed planning. The detailed plans shown in this document were presented at the third open house.

What is Transit Oriented Development and The Case for Density

Transit experts assert that success for a transitway depends on many factors, of which one is planning for and bringing about appropriate and coordinated development. Appropriate means a mix of development—housing, commercial, office—and a relatively high level of density. The other key factors include provision of an attractive, safe and inviting pedestrian environment, and the use of public space integrated with the transit station and commercial space to create a “sense of place.” This type of transit-supportive development is often called Transit-Oriented Development or TOD.

The potential impacts of bus rapid transit on commercial property in Canada, Australia and Latin America suggest that BRT investments can have substantial market impacts. The number of BRT systems in the United States is modest compared to heavy rail, commuter rail and light rail systems, but recent surveys have shown that significant mixed-use development is occurring in the Pittsburgh West Busway and Boston Silver Line Phase II Busway corridors.

TOD districts are usually defined as the $\frac{1}{4}$ to $\frac{1}{2}$ mile radius around a station, approximately a comfortable five to ten minute walking distance.

Successful transit-oriented development requires that development occur at densities that encourage pedestrian activity and support transit. Starting at densities of 12 dwelling units per acre, research shows that dependence on the automobile begins to decline and the use of transit increases. At 16 units per acre, these

trends become significant.¹ Decision-makers and citizens often balk at the idea of increased densities due to concerns about the perceived negative impacts of compact urban development. However, research on the topic finds no correlation between urban density and a vast array of urban ills. Conversely, the research shows that density, in fact, results in many benefits for urban areas from the neighborhood to the regional levels². Some of the findings include:

- Residential density does not increase traffic congestion. In fact, as density increases, automobile usage declines
- Per capita energy usage is lower in denser urban areas as a result of the reduction in vehicle trips and trip length associated with increased density
- Density can lead to increases in expendable income by reducing average household transportation costs
- Infrastructure (e.g., water, power, transportation) capital and operating expenditures are lower in dense urban areas than in less densely developed urban areas
- Both commercial and residential properties in close proximity to transit stations enjoy a property value premium
- Increased property values around transit stations translate into increased property tax revenues for municipalities
- Density is not correlated with increased crime
- Increased density in the central city can lead to increased economic productivity, which translates into increased economic performance in both the city and the suburbs

Density succeeds by fostering activity on the street throughout the daytime and into the evening. The keys to successful compact urban development are a mix of uses (including a mix of housing types, shops, and services) and high-quality, pedestrian-oriented design. Through visualization techniques that educate decision-makers and citizens about what successful compact development looks like, opponents of density can be convinced that dense development translates into

¹ Fleming, Randall, *The case for Urban Villages*, reprinted from *Linkages Issue No. 8*, periodical of the Institute for Ecological Health. <http://www.fscr.org/html/2000-01-05.html>.

² See Appendix A for a more detailed discussion of density and sources for these findings.

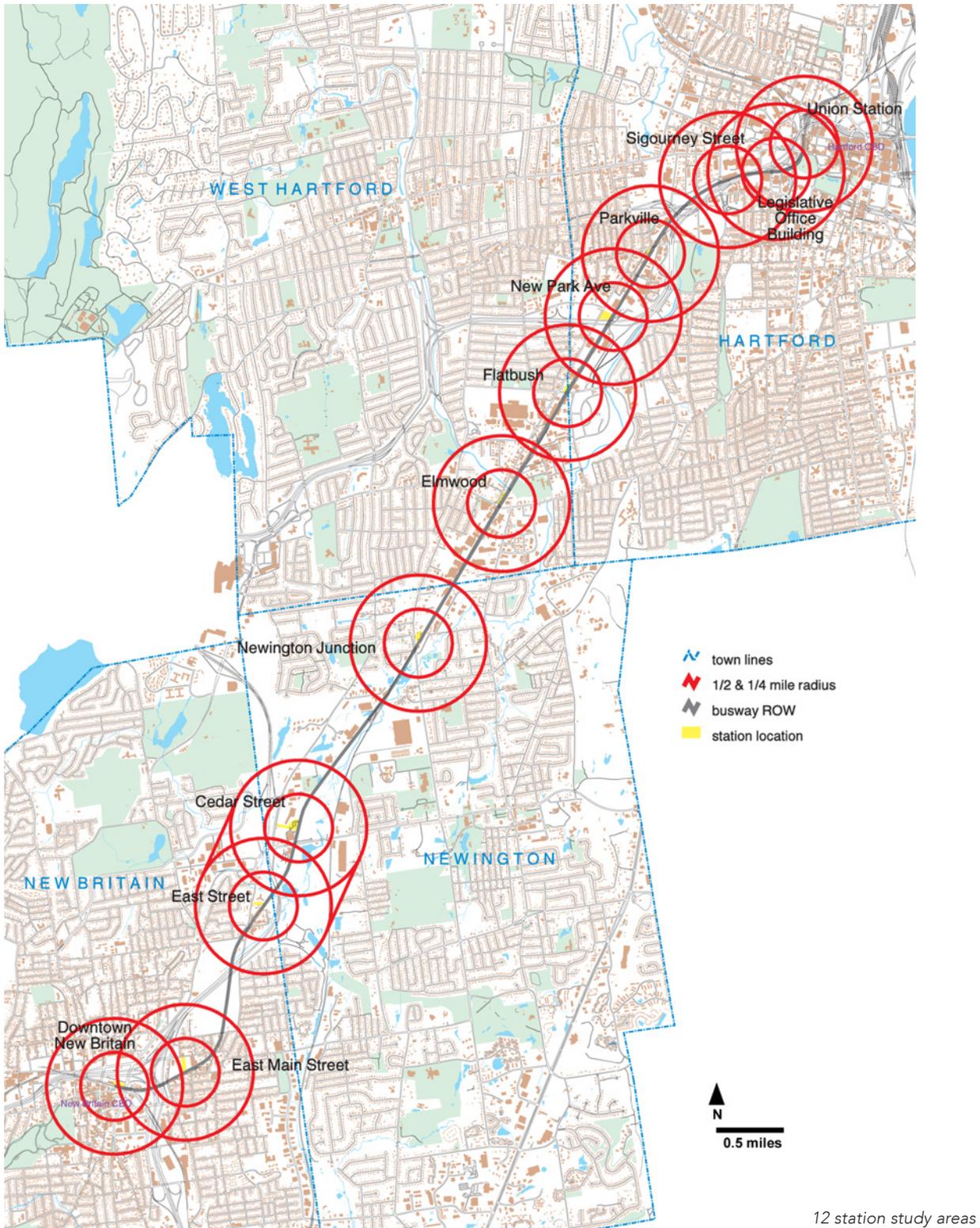
significant benefits for the neighborhood, city and region. Compact development, can, in fact, act as a panacea for revitalizing our urban neighborhoods.

Study Process

The study started by evaluating and comparing each of the busway's 12 station sites (see 12 station study areas map on next page) for potential transit oriented development opportunities. With the help of the Municipal Advisory Committee, the consultant team summarized issues and opportunities and used the information as background to evaluate each site. A set of criteria was developed and used to select six sites for more detailed study. For all 12 sites, design and development principles were developed to help communities guide development in a transit supportive way. Technical memoranda for each of the four towns were published detailing the principles for transit oriented development (see *City of Hartford: Principles for Transit-Oriented Development, December 2003, published separately*).

For the six station areas selected for further study [*Union Station, Sigourney Street, Parkville (Park Street at Francis Avenue), Flatbush (New Park Avenue at Flatbush Avenue), Cedar and East (studied as one area), and Downtown New Britain*] the consultant team took the design and development principles to the next step and created conceptual land use and development plans to help steer development towards higher density mixed-use projects that will provide economic development opportunities and support transit.

Each of the six sites has different characteristics and different approaches to planning for them were used. In some locations alternative development plans were explored before a preferred plan was adopted, while in other locations a preferred concept was apparent from the beginning. Where applicable, options are discussed as possible alternatives to the preferred plan. In addition to preparing development options and/or a preferred development plan for each site, an implementation and phasing strategy was developed to outline the necessary steps required to realize the plan. These plans are the primary content of the Station Area Planning Report developed for each station area.



12 station study areas

Project Area History

The busway corridor and the station sites in particular, are, in the main, broken up into smaller isolated parcels defined by the busway corridor (shared with Amtrak from Hartford Union Station to Newington Junction), highways, major arterial roads, waterways and wetlands. This is not uncommon in older northeastern and Midwestern cities and is the consequence of an historic layering of transportation corridors in the natural environment.

Early roads and turnpikes in the 18th century typically followed valleys where there were watercourses and wetlands; in the mid-19th century the railroads, seeking routes with relatively level grades, also located in the valleys. In the New Britain-Hartford Busway Corridor there has been a succession of railroad companies – the Hartford and Fishkill Railroad, The New England Railroad, The New York and New England Railroad, and today, Amtrak. Heavy industry developed parallel to the rail line and, as industry declined or moved out in the mid-20th century, I-84 and other limited access highways were constructed in the corridor.

The result of this historic pattern is a patchwork series of potential development parcels at station sites that are:

- isolated by watercourses and wetlands, the Amtrak ROW, major arterial roads and limited access highways, and, in some locations, by large formerly industrial parcels
- impacted in some manner (e.g., by highway noise or industrial pollution)
- characterized by the combination of excellent highway access and large residual parcels so that “auto oriented” zones have been created with big box retail, car dealerships and other auto oriented uses

Despite these challenges, there is opportunity for Transit Oriented Development. The factors above, along with market forces, municipal policies, the direction given by the Municipal Advisory Committees, and the unique and singular physical characteristics of these sites, have given form to the final plans.

This report frames the opportunities and details the development options for the area around the Downtown Hartford station.

Site Description / Framing the Opportunities

The Project Area

Increasing transit opportunities at Union Station, and the other planned and ongoing downtown development projects, provide the immediate opportunity to upgrade the pedestrian environment around Union Station, creating better linkages to the Asylum Hill neighborhood to the northwest and the Central Business District to the east, and the long-term opportunity to create a strong link between downtown and the Clay Arsenal neighborhood north of I-84.

There is significant ongoing development and redevelopment in downtown Hartford (see Downtown Hartford: context and development initiatives on the next page). Great attention has been and is being focused on housing around Bushnell Park, and changes to the Civic Center and Adriaen’s Landing and the riverfront. Most of the land around Union Station is either part of an ongoing redevelopment program or is already part of a well-defined district, such as the insurance company



Union Station from above, looking west

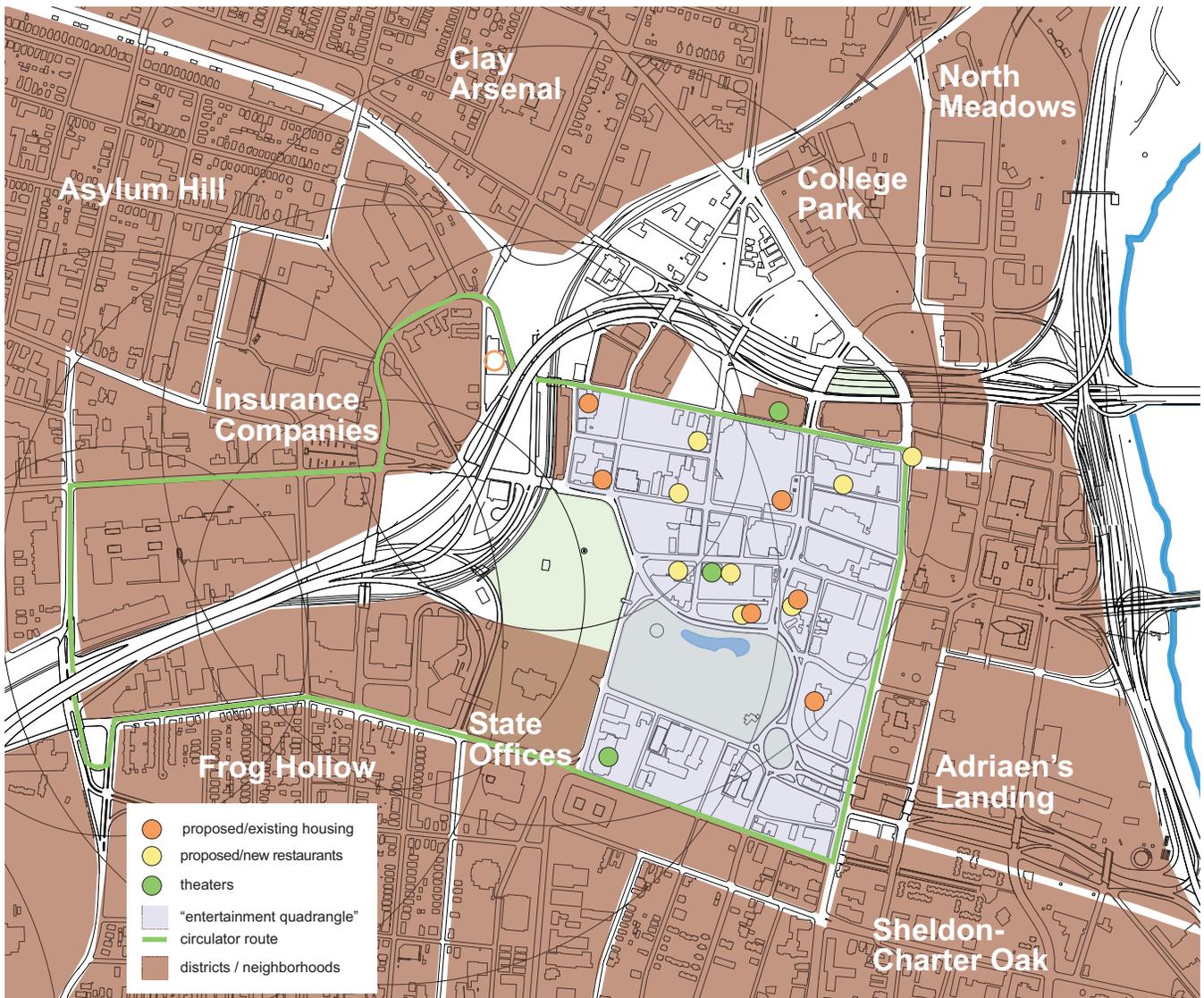


Downtown Hartford with Union Station in foreground. Union Station shown in red.



Union Station area looking south; Union Station shown in red.

headquarters district to the west and the state office district to the south. As shown on the figure, the recently named “entertainment quadrangle” has a number of theaters, and new and proposed restaurants and residential developments. The parking lots just to the east of the station have been discussed (in other downtown planning studies such as The Greenberg Plan) as housing sites.



Downtown Hartford: context and development initiatives

Although developing a downtown master plan is beyond the scope of this Station Area Planning Project, it was suggested by the Municipal Advisory Committee that the scope be broadened to look at how to reconnect downtown with the Clay/ Arsenal neighborhood to the north.

The area north of Union Station, continuing on across I-84, however, has received little attention. This area includes a number of large vacant parcels and surface parking lots, many in public ownership (see Ownership of Key Parcels and Key Development Parcels on pages 10 and 11). I-84 cuts through the middle, creating a “no man’s land” and further separating much of this area from the development activity to the south. This area is within a five to ten minute walk of Union Station and the proposed circulator route along Church Street. I-84 will continue to be a barrier between this area and downtown as long as surface parking lots and garages dominate this corridor. Without a vision for the long-term development potential of this area, the parking lots will likely evolve over time into parking structures.

However, there is an alternative to using the parcels solely for parking. This large, underutilized area so close to downtown and well-served by transit provides a unique opportunity for a new “in-town” neighborhood that could develop as Hartford continues to grow and benefit from transit and other downtown investments. This development would require a major public investment in decking over I-84 between Chapel Street North and Chapel Street, from Trumbull Street to High Street, to create an important new public amenity – a highly visible and important green space with strong pedestrian linkages from Ann Street and High Street to Allyn Street.

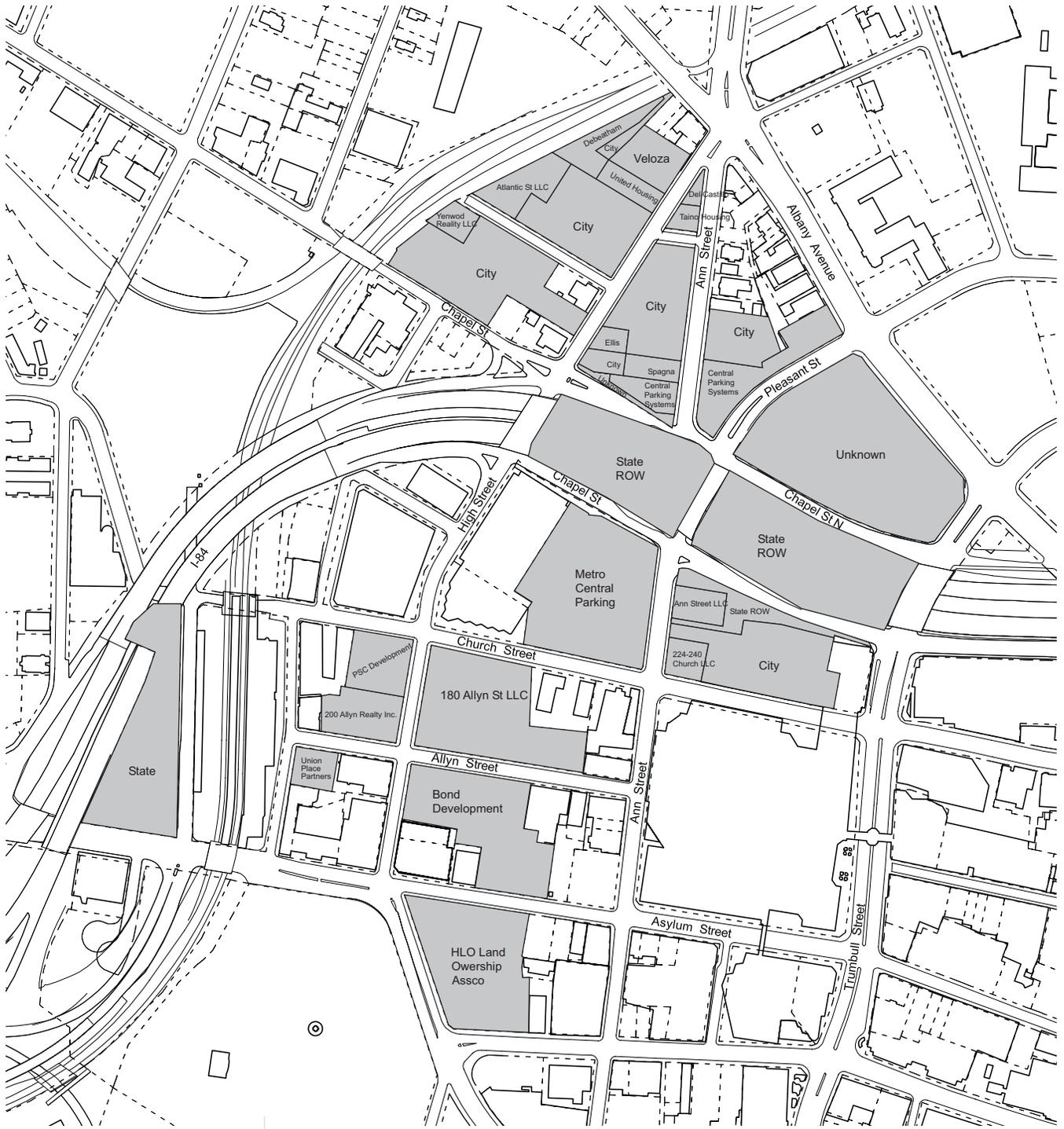
At the northern end of Ann and High Streets, some fine 19th and early 20th century buildings are ripe for redevelopment, and on Ann Street south of Chapel Street there are several beautiful churches and a handsome row of turn of the century commercial buildings. The southern end of Ann Street has evolved into part of the entertainment district with restaurants and bars. Historic buildings on High Street include the Governor’s Footguard Building.



Looking south along Ann Street; the Governor’s Footguard Building is on the right.



Historic buildings north of I-84 include the Isham Terry House and the Second North District School on High Street.



Ownership of key parcels



Key development parcels with acreage indicated

The Market

As shown in the table on the following page, residential density is within the TOD target range of over 12 units per acre, and employment density is well over the target range of 25 to 50 jobs per acre.

At the convergence of a multiplicity of transportation networks (Amtrak, intercity bus, intracity bus, bus rapid transit, interstate system, a planned downtown circulator, and future possibilities for commuter rail), historic Union Station holds real promise to reclaim its status as a major urban multimodal transportation center. As

the northeastern terminus on the Hartford-New Britain BRT busway, it is ideally situated to serve as a gateway into Hartford’s downtown core. Riders will be able to access the proximate administrative, employment, and entertainment centers or seamlessly connect with other modes of alternative transportation.

As shown below, the Union Station area is just over the minimum TOD housing density target of 12 units per acre, but significantly over the minimum employment density target of 25 to 50 jobs per acre.

2003 Population*	554
2008 Projected Population*	540
Projected Population with planned, under construction or recently completed housing**	1,499
Projected Percentage Change**	+170%
2003 Dwelling Units	410
2003 Residential Density	15.8 units/acre
2003 At-Place Employment	7,044
2003 Employment Density	224.3 jobs/acre
2003 % of Public Transportation Commuters	10.2%
2003 % of Walking Commuters	27.2%

* Based on ESRI (Environmental Systems Research Institute) Business Solution projections. Projections are based on recent historical trends and do not reflect programmed development activity or projects currently under construction. Given current trends in downtown housing, the population is, in fact, expected to increase.

** Based on planned, construction or recently completed housing units and the 2003 occupancy factor of 1.35 persons per unit.

Strategic redevelopment and infill will enhance the station’s environs, thereby increasing employment and, primarily, residential densities. Despite its urban setting, Union Station’s 15.8 households/acre places it only fourth in terms of residential density among the analyzed station areas. At 224.3 employees to the

acre, the Union Station area is home to a significantly imbalanced daytime/night-time ratio of 12.1. That is, for every resident, there are over 12 workers. While the residential density does exceed the transit-supportive threshold of 12 units/acre, a severe jobs/housing imbalance of this nature suggests a highly built-up office environment underutilized during evening hours. By enhancing the residential component and attracting more entertainment and cultural venues (a trend already underway), the busway station and its environs are more likely to be characterized by continuous use.

Population projections based on historic housing patterns within a ¼-mile radius of Union Station had been predicted to decrease. However, public policies to induce demand for downtown housing are producing results. The level of multi-family activity in the downtown suggests that there is a latent demand for higher density residential products. Over 700 units of downtown housing have been either planned, are under construction or recently have been completed. This does not include the Capitol West office building at 1-7 Myrtle St., which was recently purchased with expectations to convert it to housing, or the over 500 units in construction on the eastern edge of the Central Business District (Front Street and Colt Gateway).

The Capitol West office building is a good example of the place making of Union Station already increasing the potential of other sites in the area. In early 2004, an undisclosed buyer agreed to pay \$1 million at a public bankruptcy auction to buy the office building and renovate it for rental housing. This development is particularly important since the building acts as a gateway for drivers exiting I-84 at Asylum Ave.

Judging by a market analysis, the existing residential population suggests that there is potential for a mix of urban dwellers including upwardly mobile young professionals. According to the Environmental Systems Research Institute's (ESRI) Business Information Solutions, the predominant residents of the Union Station Area are either *Metro Renters* or *Inner City Residents*. These demographic designations are part of ESRI's new segmentation system that provides an accurate, detailed descrip-

tion of America's neighborhoods, Community Tapestry™. U.S. residential areas are divided into 65 segments based on demographic variables such as age, income, home value, occupation, household type, education, and other consumer behavior characteristics.

The neighborhood's *Metro Renters* are young, well-educated singles beginning their careers in large urban centers. They tend to occupy, with and without roommates, rentals in older high-rise apartment buildings. The median household income for this demographic is \$47,200 and is projected to continue to increase. Living in the same physical milieu are ESRI's *Inner City Tenants*. Like the *Metro Renters*, this population is youthful with single and shared household living arrangements. Unlike the former, however, the Inner City Tenants are not characterized by high levels of educational attainment or income earning potential.

Access to jobs and cultural opportunities is a critical amenity for both of these groups. This is reflected in the relatively high shares of alternative mode use. Of commuters, over 27 percent of area residents walk to their jobs and an additional 10 percent take public transportation. Both of these figures suggest that the area is already amenable towards walking trips and transit patronage. The integration of additional trip generators and related pedestrian improvements could be expected to enhance the environment further.

TOD Goals

Through work with the Hartford Municipal Advisory Committee and CRCOG, the following goals for this area were developed:

- Create a vibrant multimodal transportation hub and gateway to downtown employment
- Contribute to the vitality of the growing cultural/entertainment district
- Capitalize on transit investment and other downtown initiatives to link downtown Hartford across I-84 to the Clay Arsenal neighborhood to the north

- Improve pedestrian connections to Union Station from the immediate downtown area and new housing developments as well as from Asylum Hill to the west and Clay Arsenal to the north
- Build on the entertainment district immediately adjacent to Union Station
- Support the continued development of downtown housing

These goals are in addition to the two overriding project goals:

- Maximize input and benefits from the transportation infrastructure to the municipalities and neighborhoods along the busway corridor
- Coordinate this major transportation investment with land uses and economic development



Preferred Development Options

Site History and Its Influence on Station Area Plans

State House Square was Hartford's symbolic and functional center for nearly 300 years; and from this center, radial streets spread out to the hinterlands – Main Street to the north and south, Asylum and Farmington Avenues to the west, Albany Avenue to the northwest and State Street itself to the landing on the Connecticut River. These streets defined and prescribed distinct districts within the city's core for the past 150 years.

Beginning with Bushnell Park, and extending through Constitution Plaza and, most recently, Adriaen's Landing and the proposed College Park, these districts - except for one - have been re-invented. Centered on historic Ann Street, the triangle bounded by the railroad, I-84 and Main St./Albany Avenue is an area of large undeveloped parcels, highway frontage roads and potential highway air rights within a five to ten minute walk of Union Station. It is this transit accessible district - this potential new neighborhood in the city - and a joint development opportunity at Union Station, on which we have focused our attention (see Union Station planning areas diagram, next page).

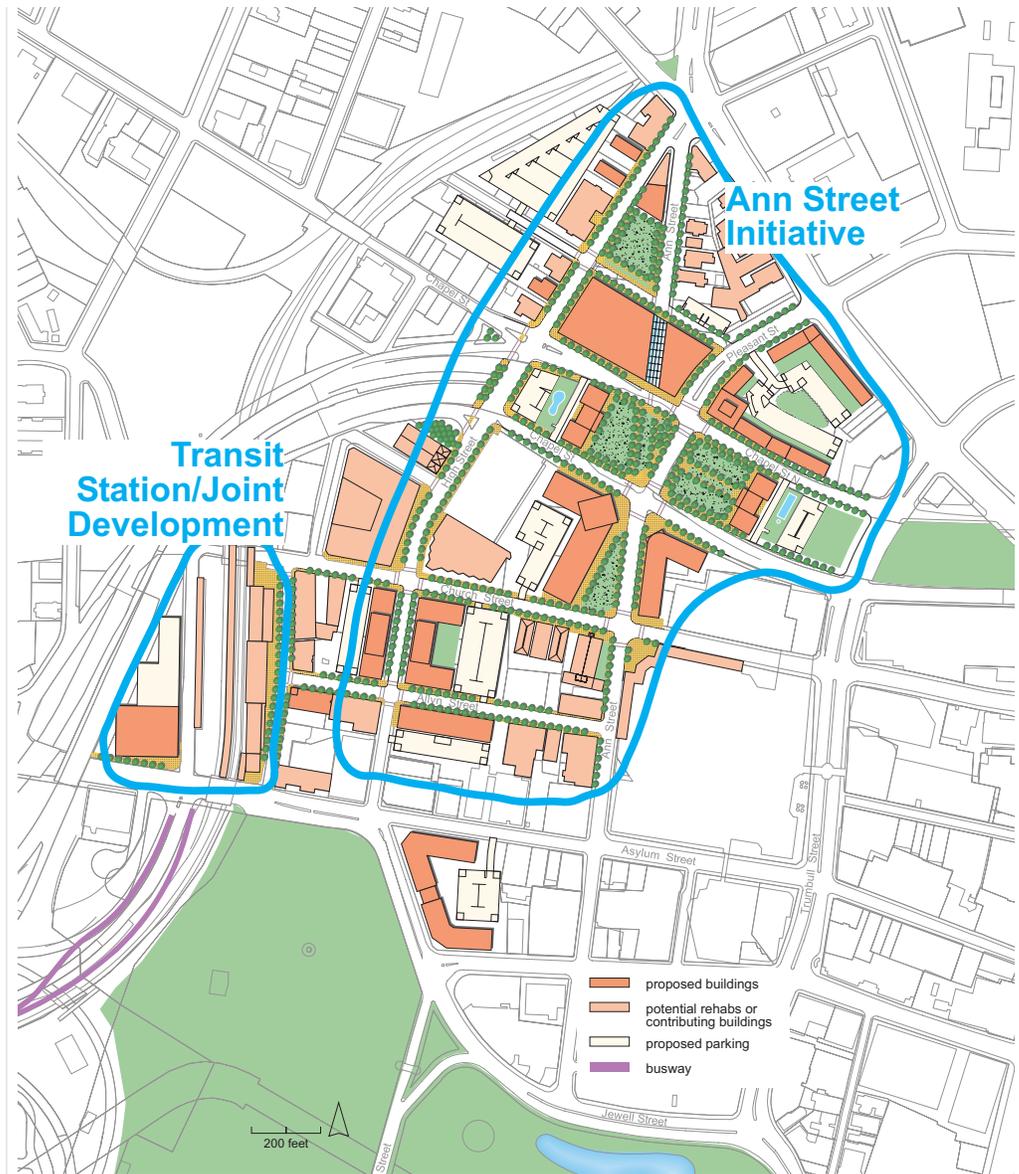
The Plan

The plan for the Union Station area includes two major initiatives:

- Transit Station Joint Development
- Ann Street Initiative

Transit Station Joint Development

At Union Station, a new mixed-use building is proposed on the triangular parcel bound by Spruce Street, Asylum Street and I-84, currently in use for surface parking. The building combines an expanded parking supply for the transit station, an air-rights office building, and neighborhood service retail along the Asylum Street



frontage. The retail and office space on Asylum Street will add activity and a sense of security along this heavily traveled pedestrian route.

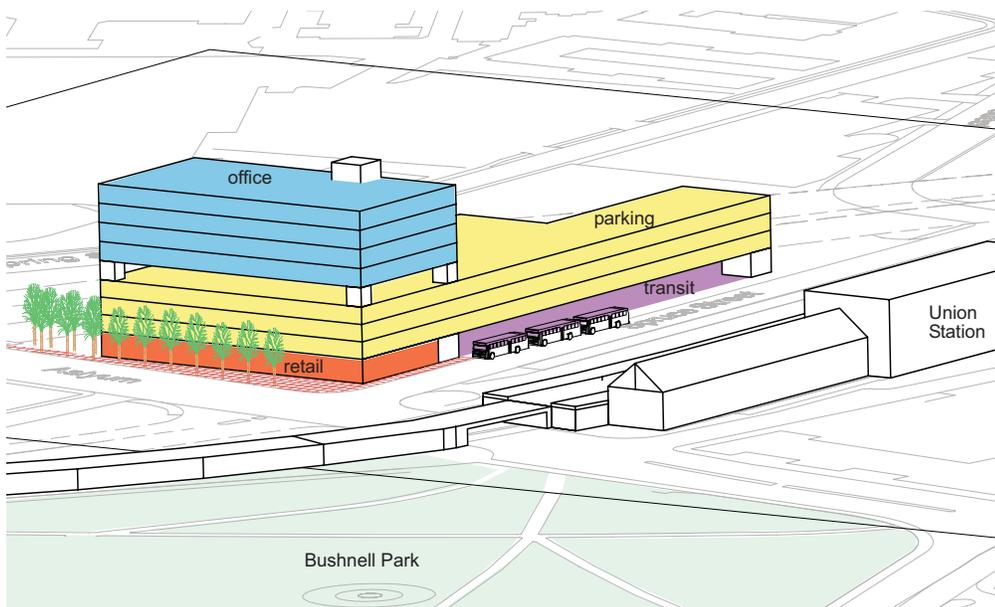
The retail space is appropriate for neighborhood service retail. The office building - with large floor plates of 26,000 square feet per floor, proximity to the capitol and other state buildings and excellent transit access - would be a prime location for a state office building. Its proximity to the increased level of transit service should warrant a relaxation of parking requirements. Given its accessibility, the office

Union Station Planning Districts

building could potentially limit its parking to 2.5 – 3 spaces per 1,000 square feet (compared to 5-6/1000 in a less accessible location).

Because of its location above the retail and parking, the offices would be above the level of I-84 and would have beautiful views of Bushnell Park, the capital and downtown Hartford. As an alternative, the upper floors could be developed as housing (see concept sketch below).

The project could demonstrate public sector support for BRT transit-sensitive office development that encourages the maximum utilization of public transit. Importantly, the development of parking spaces required to support the busway and the Union Station transit station would be eligible for FTA funding. The parking also would add to the ridership of the busway and would be supportive of additional transit activity at Union Station including utilization of the facility for westbound riders on the New Britain to Hartford BRT; subsequent BRT lines; enhanced intercity, intracity and local circulator bus service; enhanced Amtrak service; and, future commuter rail. The value of the site (already in state ownership) could be used as part of the state match for any federal funding.



Proposed concept for joint development at Union Station

Parking at the station and joint development office building will be an immediate concern. The proposed 325-vehicle structured facility, at least partially funded through FTA, will provide spaces for transit riders and employees. The remaining spaces will be open to the public on an availability basis. In addition to serving the park-and-ride needs of multimodal passengers, the facility will accommodate station area employees and visitors to the growing entertainment district in the evenings and on weekends.

Of primary importance are the pedestrian linkages between Union Station and Hartford's employment centers and attractions. Working with local civic groups such as Hartford Proud & Beautiful, the Transportation Division of the Hartford Department of Public Works should enhance the pedestrian experience for transit riders accessing points throughout the downtown (see *typical roadway sections in City of Hartford: Principles for Transit-Oriented Development, December 2003, published separately*). In addition to increasing commuter connectivity, wayfinding and signage should guide multimodal passengers from Union Station to entertainment destinations (Wadsworth Athanaeum, Civic Center, Old State House, Theatre Works, The Bushnell and Hartford Stage) and educational opportunities (Capital Community College).

Also in the near term, pedestrian improvements should be implemented to link the station to ongoing downtown housing and rehabilitation projects, as well as to Asylum Hill. Pedestrian and transit improvements will support ongoing housing development.

The complicated transportation movements in the area call for a much more in-depth ConnDOT/City multi-modal traffic study. This study should integrate the planned New Britain/Hartford BRT coming down at grade on Asylum, and its operations in the area, as well as other transportation activities including: the downtown circulator; the highway off and on ramps on both sides of Asylum; the complicated local road system at Garden, Farmington, Broad, and Asylum; intercity bus; local bus; taxi service and pedestrians/cyclists. The east/west pedestrian activity right now seems to primarily use the southern side of Asylum. Adding the

busway to the ramp will make this more difficult, yet the northern side of Asylum is unfriendly to navigate as well.

During the course of the study, there was discussion regarding how Union Station could benefit from the transit investment in the busway. Although it is clear that the increased pedestrian traffic from busway riders would not be sufficient to support additional retail within Union Station, the building could be used for other public purposes such as a City Design Center or Welcome Center, both of which would benefit from good transit access.

Ann Street Initiative

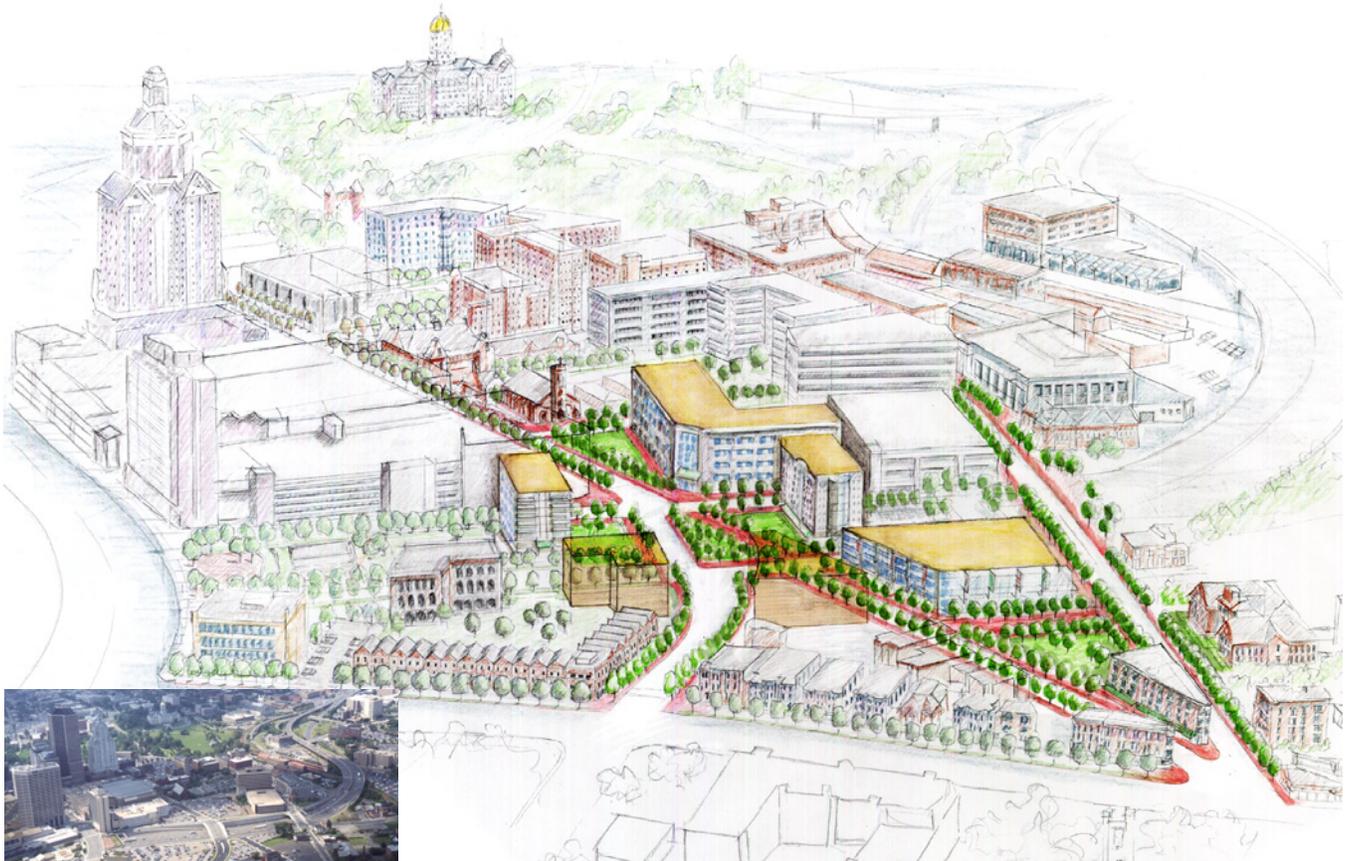
The Ann Street Initiative is a long range vision with a singular purpose: to focus development in the downtown core within walking distance of working, shopping and entertainment destinations and within easy walking distance of the Union Station Transit Station and the Downtown Circulator.

The bold vision is to use the proximity to transit, employment and entertainment retail to revitalize the north side of I-84. The large amount of developable property within five to ten minutes of the heart of the city creates a rare opportunity to redevelop a neglected district.

The plan includes decking over I-84 between High and Trumbull Streets, reclaiming unused land, reconnecting the Clay Arsenal neighborhood to downtown, and developing Ann Street with a series of small and mid-sized parks connecting Bushnell Park on the south to Tunnel Park on the north.

Development on vacant parcels between Church Street and Albany Avenue, including air-rights over I-84, extends downtown to the north with new mid-rise residential and office uses. New parks on I-84 air rights provide an elegant front door for surrounding buildings as well as new housing on the air rights.

North of I-84, there are two options illustrated (see Illustrative plans pages 23 and 24). One plan shows a new Government Center with a large indoor atrium over Ann



View southwest down Ann Street corridor (with Main St. in foreground). A new government center is shown north of I-84 with new residential buildings flanking plazas on I-84 air-rights. A landscaped spine along Ann and High Streets connects this new district south across I-84 to downtown.



Mid-rise residential buildings with active ground floor uses

Street. The atrium splits the building and provides a publicly accessible portion of the building with transaction counters and assembly spaces on the east side of Ann Street, and a “back office” portion of the building for administrative offices on the west side. The other plan shows a series of new residential buildings along Ann and Pleasant Streets, and rehabilitation of many existing residential structures. Both plans show development of a proposed City Public Safety Complex on the west side of High Street.

A new Government Center would build on these public safety plans and consolidate more city offices in this area. Currently, in addition to City Hall, city departments are dispersed in other locations around Hartford, including leased space at Constitution Plaza.



Illustrative Plan: Ann Street Initiative - Government Center Option



Illustrative Plan: Ann Street Initiative - Housing Option.

The decking of I-84 and development of two parks on the decks is a grand public gesture – as is the creation of a civic center (including a new Government Center and Public Safety Complex). But Hartford is no stranger to bold strokes starting with the building of Bushnell Park in 1859 on the site of a railroad yard and industrial area and continuing to the present plan for Adriaen’s Landing. It is rare to find this large a district (31 acres), so proximate to downtown and, most importantly, to the center of regional and intercity transportation in Hartford. This initiative should guide transportation/land use planning in the core so that this significant opportunity is not lost.

Development Summary

The plans described above are conceptual and illustrate the general type and scale of development recommended. Building footprints and total square footages were developed as a means of understanding the capacity of the sites; that is, the scale of development that could be accommodated along with associated parking requirements. For purposes of these plans, parking ratios of one space per housing unit and 3-5 spaces per 1,000 square feet of commercial space, depending on the actual type of commercial use and the availability of on-street parking, were used. The square footage numbers also were used to assess potential economic benefits associated with the plans.

As the plan is implemented, actual developments - based on property line surveys, much more detailed site information and level of design, and current market conditions – will differ from those shown here, but should follow the intent of the site plan and design guidelines (*in the Implementation Chapter*).

*Development Summary Table**

Use	Housing Option	Gov. Center Option
Office	567,920 sq. ft.	567,920 sq. ft.
Residential	1, 340 units	1,139 units
Government Center		218,706 sq. ft.
Retail	13,000 sq. ft.	13,000 sq. ft.
Structured Parking	687 spaces	725 spaces

**See Appendix B for a more detailed development summary.*

Infrastructure Plan

The key components of the infrastructure plan for the Union Station area will be the I-84 deck and associated park improvements. The I-84 deck could be built during the next major rehab of I-84 in downtown Hartford or as a separate project. Though major rehab of this section of I-84 is not programmed yet, the elevated section of I-84 through Hartford is nearing the end of its expected life cycle and will eventually have to be addressed in some fashion. The decking option should be considered and evaluated as part of the early planning phase of an I-84 project. The proposed decking could be part of the region’s Long Range Transportation Plan, or it could be targeted for a federal transportation earmark, or the decking itself could be funded with state economic development funds as its purpose is to provide development opportunities. These funding options would require substantial support of local, state, and/or federal representatives.

A major traffic and pedestrian study of the Union Station /Asylum Street area should be undertaken soon to address the impact of the busway on Asylum Street; the growing need for both taxi and private auto pick-up and drop-off spaces for both busway vehicles and the Downtown Circulator; pedestrian circulation in and around the station (particularly on Asylum Street); turning movements on and off of I-84 and their effect on pedestrian safety; and other traffic concerns on streets leading to and from the Union Station area.

Asylum Street has been a focus of study over the years and this Station Area Planning Study has examined the feasibility of narrowing the vehicular right of way and widening sidewalks; Asylum Street, however, has 10 foot lanes and no shoulders, so a major traffic study is required to address this possibility. There are opportunities to “bulb out” the sidewalk at intersections and off-ramps to shorten the pedestrian crossing distances and provide more pedestrian storage area.

Other improvements include the pedestrian improvements, such as landscaping, pedestrian scale lighting and other amenities on Asylum Street and other major pedestrian routes to Union Station. Some of these (within 1,500 feet of the station) could be funded with federal transportation funds. Pedestrian improvements will be partially dependent on the results of the circulation and access study described above.

Site work at the mixed-use joint development building adjacent to Union Station, transit-related structured parking spaces (including replacement parking spaces) and pedestrian linkages, including a potential overhead bridge from the parking garage to Union Station, should all be transit oriented capital cost items, eligible for Federal Transit Administration funding.

Economic Benefits

The potential tax and economic benefits of the midterm joint development project have been quantified. Given their indeterminate nature and timing, the fiscal and economic development impacts of the longer-term Ann Street initiative have not been examined.

The proposed joint development project near Union Station would consist of an estimated 104,000 square feet of office space, 20,000 square feet of retail space and 325 structured parking spaces. This would have an estimated construction value of \$17.1 million dollars, thereby generating an estimated 129 direct and indirect person years of employment, and \$6.1 million of direct and indirect payroll dollars. Once the building was fully occupied, 300 permanent, sustained jobs would be

created generating an annual payroll of \$14.8 million. Assuming the building was leased to the private sector and paid full property taxes, annual property tax revenues would be \$756,773 dollars. All figures are in constant 2004 dollars, do not include any impact from inflation and are based upon current payroll and tax rates.

Implementation Strategy

Acquisition and Reparcelsation

The existing triangular parking lot behind Union Station is currently operated by the Greater Hartford Transit District under a long-term lease agreement with ConnDOT, the owners of the property. In order to develop a transit station, parking garage and office building on the site, ConnDOT would have to modify or break GHTD's lease.

Developments in the larger surrounding area would involve longer-term acquisition and reparcelsation strategies that are premature to describe at this time. The City owns several of the parcels north of I-84 and should initiate planning activities to determine the additional potential for the utilization of any tax lien property.

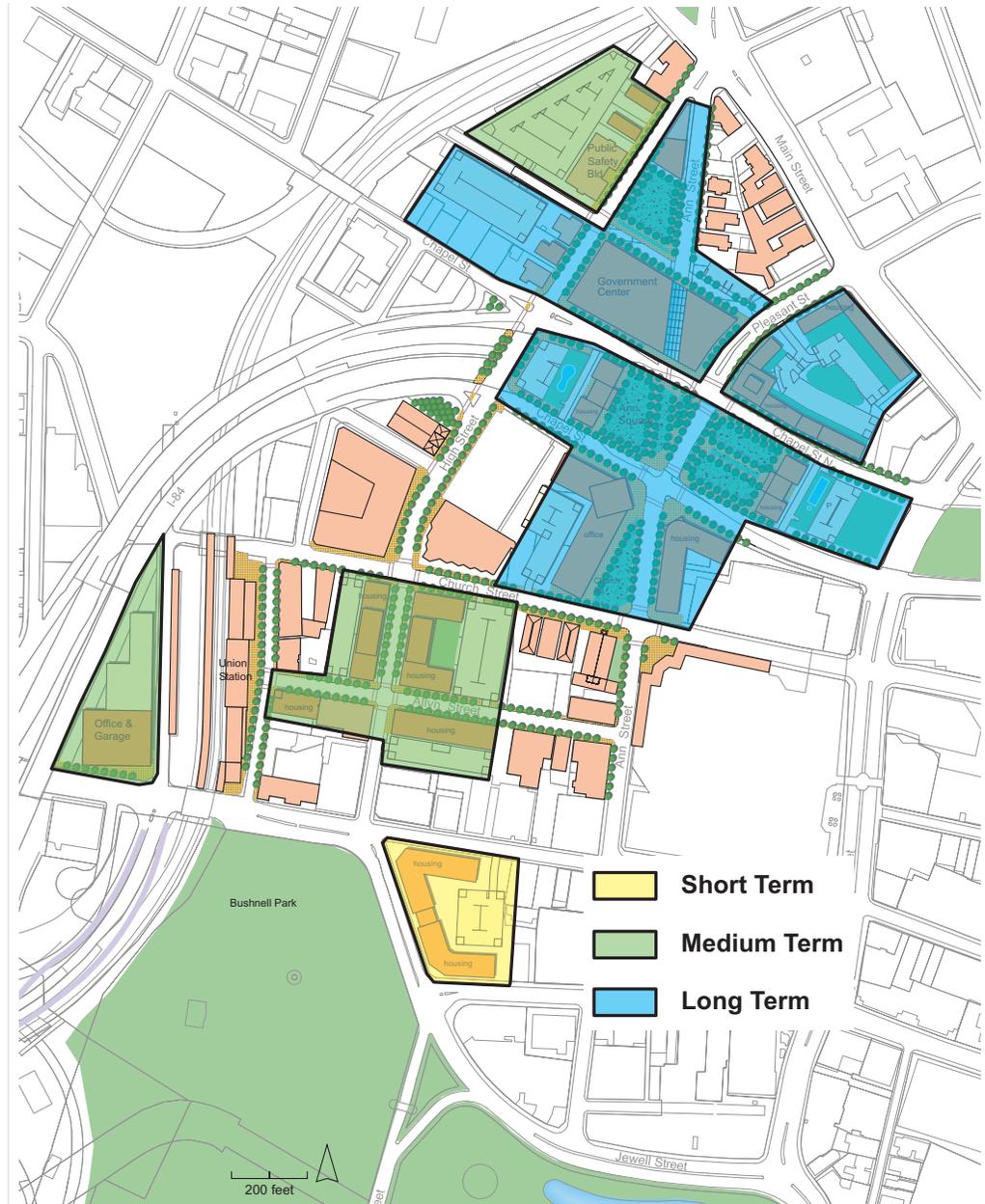
It is envisioned that any pedestrian enhancements would be in the public right-of-way. In some instances street tree planting could require small easements on private property. Actual requirements would be determined during the design process. The park shown at Church and Ann Streets could be constructed by the future developer of the property or by the City. If developed by the City, partial acquisition of the parcel would be required.

Phasing

The development plans look at three time horizons:

- **Short-term:** includes the time period up until the end of 2009, or when the busway is scheduled to begin operation
- **Medium-term:** begins in 2010, or at the start of busway operation, and continues through 2019 (up to ten years following the start of busway operation)
- **Long-term:** begins in 2020 and continues through 2025

The three time horizons are approximate and there could be some overlap between the medium-term and long-term periods.



Short-term: Build air-rights office at Union Station, infill housing on underutilized downtown lots, and pedestrian improvements.

Medium-term: Build new parks and residential development along Ann Street and on new decks over I-84 decks.

Long-term: New development and rehabilitation north of I-84.

Short-Term

Given the nature of initial busway operation related to Union Station, there appears to be minimum transit-related development that would occur prior to system operation. Continued encouragement of higher density housing in the Union Station and downtown area, continued efforts to revitalize downtown Hartford and

the emerging entertainment district around Union Station should be supported. Initial activities should focus on implementing a pedestrian and circulation system which supports the busway and transit-oriented development.

The Jewell Street (the former Hartford Hilton parcel) housing development across from Bushnell Park could happen in the short-term, independent of the busway project.

Planning should begin immediately for the areas north and northeast of Union Station. These long-term plans should focus on pedestrian and roadway improvements and linkages. It is important that any roadway, pedestrian, infrastructure and, in particular, I 84 bridge crossings be designed to enable future development opportunities. Similarly, any public facility investments such as new police facilities, parks etc. should take future redevelopment planning in mind.

Medium-Term

The transit oriented development project at Union Station is seen as a parking/office structure physically and functionally linked to Union Station. The planning for this facility should begin in the near-term, but the actual development of the building would probably await the opening of the busway and/or other transit enhancements to Union Station. Housing on existing surface lots along Allyn Street could also be developed during the medium-term. The City's schedule for construction of a new Public Safety Complex north of I-84 is uncertain at this time, but construction could happen during this medium-term period.

Long-Term

A primary long-term objective for the area should be to increase the station area's residential density. At just over 13 dwelling units per acre, Union Station has the potential to add significantly to its residential population. At the present time, downtown housing activity in Hartford is concentrated southeast of the site closer to the Connecticut River. This building trend can be expected to continue as Adriaen's Landing continues to develop. As the market for urban residential prod-



Mid-rise building with individual window openings



Garage with ground floor retail, Cambridge, MA.



Building sited at sidewalk edge and simple landscape reinforces the street edge

ucts matures, new construction and rehabilitation should begin to occur in other portions of the downtown. Given its level of accessibility and proximity to entertainment venues, the Union Station area has the potential to capture a significant portion of long-term housing development.

Zoning

The Hartford Municipal Advisory Committee recommends that the City of Hartford consider a proposal for a TOD Overlay District drafted by the City Planning Department. That overlay district should be applied to the Union Station area.

The complete text of the proposed zoning amendment is included in Appendix C.

Design Guidelines

Adopting design guidelines for the Union Station area is important for two reasons: 1) they provide the various parties involved in implementation a common framework for types of development that should be encouraged; 2) they provide developers a sense of comfort that the design integrity of the area will be maintained.

The illustrative plans for each station area adhere to the basic site planning design guidelines below. The plans illustrate recommended locations for building siting, both for each parcel and for the larger district, but as implementation begins other, more detailed, proposals will be considered for individual sites. The illustrative plan and the guidelines below can be used to evaluate individual projects.

The general guidelines for all station areas are:

- All development must be designed to enhance or create urban character that is pedestrian friendly, convenient for transit patrons accessing stations on foot, and safe. This is done through the siting of buildings at the sidewalk edge and using landscape elements that reinforce the street edge. Buildings should have at least one entrance on the street. Building facades should have street level windows and active ground floor uses. Parking

should be located behind buildings or screened with landscape elements.

- Sidewalks should be separated from moving traffic by planting strips and on-street parking. Street trees will frame the sidewalk space and improve the visual character of the station area for drivers on local streets (see *typical ROW sections and City of Hartford: Principles for Transit-Oriented Development, December 2003, published separately*).
- Streets in station areas should be as narrow as possible to facilitate pedestrian crossings without impeding traffic circulation. Slowing traffic will also allow drivers to take note of new development and hopefully entice them to stop and shop. Within station areas, streets need to be designed for people, vehicles, and businesses, not just to meet highway standards.
- Where possible, buildings should be designed to accommodate various uses over time. If market conditions do not support ground floor retail, buildings should be design to be easily retrofitted to accommodate retail at a later date.
- Building windows should be individual openings in the façade, not continuous bands, with well-defined lintels and sills. Building tops should be shaped with attention to their view against the sky. Use of upper floor setbacks and peaked roofs to articulate the roofline is encouraged. Façade planes should be visually broken to reflect the scale and development pattern of other buildings on the street. Mechanical penthouses and other projections or roof elements that are visible from the street should be architecturally integrated with the overall building design.

In addition to the overriding guidelines listed above there are components of the Union Station area that require additional guidelines.

- Buildings on and around the proposed decks over 1-84 should be 8 to 12 stories to help frame and enclose the large parks between North Chapel Street and Chapel Street. Taller buildings will also bring additional activity to the area.



Ground floor window systems designed to be replaced with retail store fronts when market for retail exists. University Park, Cambridge, MA



Individual window openings are preferred over window bands



Townhouse examples

- Church Square, the triangular park at the corner of Church and Ann Street, is intended to maintain a view corridor to the façade of Saint Patrick’s Church. The building facing this space should be sited to maintain views of the church façade.
- Because of the small scale of High Street and Allyn Street, proposed residential buildings there should be mid-rise buildings (5 to 7 stories, see photos on page 22). Mid-rise buildings will infill gaps in the street and bring new residents to downtown without creating cavernous streets.
- Ann Street north of 1-84 is an important and historic corridor into downtown. If development (such as a new Government Center) spans this street a public passageway or visual connection should be maintained.

Partnerships and Deal Structure

Most of the development opportunities in the Union Station area are mid-term to long-term and thus are more policy and institutional in nature. The primary partnership and deal structure in the Union Station area is the potential parking/office building immediately to the west of Union Station. ConnDOT and the City of Hartford should work with the CT Office of Policy and Management, Assets Management Unit, to encourage development of a state office building on this site.

The facility operator, whether Greater Hartford Transit District or ConnDOT, should also work directly with existing and future businesses to continue the parking practices that serve the retail and entertainment environment as well as transit patrons. During both daytime and, in particular, evening hours the facility currently attracts district visitors. The facility’s operator might consider a parking validation program in conjunction with nearby establishments. Rewards can also be offered to regular transit users. For example, discounted parking rates could be offered to those who want to park for the night but who are transit users (e.g. with proof a bus pass).

The State of Connecticut should strongly encourage its employees at its proposed and existing facilities to utilize public transportation including the New Britain –

Hartford busway. Depending on the size of personal work spaces, an office building at the Union Station site will bring between 400 and 500 workers to the station area everyday. A Transportation Demand Management (TDM) component could offer and distribute incentives (e.g. subsidized transit passes) to those employees that choose alternative modes of transportation. As a public entity, the State of Connecticut should be a model for the existing employers in the area by promoting transit ridership.

Beyond the station itself, Hartford's Department of Public Works, Transportation Division, should work with civic groups and other interested parties to improve pedestrian routes to common employment and tourist attractions. Founded in 1991 to create a pleasant and inviting urban experience, Hartford Proud & Beautiful is an ideal ally and should play a significant role in this effort. This joint endeavor will promote transit ridership, enhance city beautification, and generate pedestrian foot traffic for local businesses.

Businesses for Downtown Hartford is in the process of creating a Special Services District (SSD) for downtown Hartford (*for a more detailed discussion of the advantages of a SSD, and how a SSD would work, see the Station Area Plan for Parkville published separately*).

Public and private stakeholders should be encouraged to participate in the planning, development, and marketing processes. Participants should include ConnDOT, the State of Connecticut, the City of Hartford, the Greater Hartford Transit District (which manages Union Station and holds the lease for the parking lot), civic and merchant groups, and the Capital City Economic Development Authority (CCEDA), the quasi-public authority formed to direct State-supported economic development in and around downtown Hartford. High levels of cooperation will help communicate a unified vision for the station area to potential transit riders and visitors alike.

Housing Programs

The station area plan for Union Station includes significant new housing units. The proposed housing includes new construction on vacant lots, rehabilitation of existing units, and the reuse of older commercial and industrial buildings for housing. To support transit and increase activity in the station areas, the plan calls for higher densities and a mix of housing types.

The plan assumes that the housing will be constructed by the private sector, and will be offered for sale or rent at market rates. The housing will be developed over the next twenty to twenty-five years as the market demand dictates.

Under ideal market conditions, housing developers will construct housing to meet market demand without any incentives or assistance from the public sector. However, to encourage developers to build product that mirrors the housing densities and types recommended in the station area plans, the City, ConnDOT, and other state and local agencies might choose to consider public sector initiatives that could help direct the housing development program for the station areas. In addition, it is possible that the market prices for housing fall short of the cost of new construction. In this case, public sector initiatives could be used to help bridge this gap.

Therefore, the plan for each station area includes specific public sector programs that can be implemented to support the proposed station area housing development. The plans focus on public sector tools that can encourage and support market rate housing. There are additional housing incentives and assistance programs through local, state, federal, and non-profit sources that could be used to support development of low and moderate-income housing development, should the City choose to target this market at some time in the future.

The plan for the Union Station area includes 1,139 new housing units in the Government Center option and 1,340 in the housing option , they include:

- new apartments on existing surface parking lots located on High Street, Allyn Street, the intersection of Jewel and Asylum, and along Pleasant, Albany and High Streets north of Interstate 84
- new apartments on air rights over Interstate 84
- townhouses on vacant parcels on High Street north of Interstate 84

Much of the development proposed in the Station Area Plan is located on currently vacant or underutilized parcels that produce limited tax revenues for the City. When the plan is realized, these parcels will substantially increase in value, generating significant new tax revenue. To both encourage the realization of the plan, and to help finance needed infrastructure and streetscape improvements that will enhance the marketability of the proposed housing, the City could consider adopting a **Tax Increment Financing (TIF) District**.

TIF is a tool that allows a municipality to fund needed capital improvements in a designated location through bonding against future increased tax revenues. Typically (and often by law), a TIF district can only be established in an area that is recognized as in need of revitalization. TIF assumes that the capital improvements will, in fact, increase the value of the properties they serve, and will ultimately result in higher property values that generate increased tax revenues. For the purpose of taxes paid into a municipality's general fund or special districts, the tax base for properties within the district are frozen at the level that exists when the TIF is implemented. All of the future taxes generated as a result of the **increased** value of the property in the future are then dedicated to paying debt service and other costs associated with the capital improvements made in the district.

The City will need to establish distinct boundaries for any TIF District it chooses to establish. The TIF should include, at a minimum, the blocks included in the Station Area Plan. Boundaries should be recommended by the Planning Department, based on an assessment of neighborhood conditions at the time.

In the Union Station area, capital improvements financed through TIF could increase the attractiveness of development parcels and help support the realization of the

²¹<http://www.policylink.org/content/tools/37/67-1.asp>

station area plan. Furthermore, by providing the improvements needed to support the proposed housing development, the City could gain some leverage in directing the development program for the area.

TIF districts can be difficult to establish for several reasons. Some cities steer away from TIFs because of uncertainty regarding the actual amount of money that will be generated through increased property taxes, as it can be difficult to accurately forecast future increases in property values. Further, it is difficult to know that the full future increase in property values is attributable solely to the capital improvements funded through the TIF. Finally, many municipalities do not wish to commit future tax revenue to a specific target location. The City of Hartford will need to weigh these considerations when considering the establishment of a TIF district in the vicinity of Union Station.

³2*Coming Home to Hartford: Report of the Mayor's Homeownership Task Force, prepared for Mayor Eddie A. Perez, 2002.*

Tax abatements are another tax-based strategy the City could use to encourage housing development on key parcels in the Union Station area. Tax abatements provide property tax relief for a specified period of time for projects in target areas that meet precise municipal goals. For example, Portland, OR offers tax abatement for affordable homeownership projects in particular districts.¹ Any tax abatement program in the vicinity of Union Station would require development of a program with specific municipal goals associated with encouraging the development of the station area plan, as well as approval by the City Council.

Another public sector strategy that could support housing development in the Union Station area is the **long-term lease of City- or State-owned parcels** to developers willing to construct the types of housing recommended in the plan. Several of the surface parking lots in the vicinity of the station and several parcels north of Interstate-84 are city- or state-owned, and the land created through the decking of Interstate 84 will also be publicly-owned. Long-term lease agreements substantially reduce development costs by eliminating up front land acquisition costs. The potential for such agreements may entice developers to pursue more innovative types of development because their investment (and risk) is reduced. Furthermore, the public sector land owner can exert more control over the type and

mix of housing developed on the site, ensuring that it conforms to the spirit of the Station Area Plan.

Tax increment financing, tax abatements, and land leases require substantial public commitment and policy initiatives. A number of additional public sector tools exist to encourage housing development around Union Station, many of which may be easier to implement.

Two widespread techniques used to encourage development by reducing developer costs are adoption of a **streamlined permitting process**, and the **reduction of permit fees** for development that meets specific municipal goals. The Mayor's Homeownership Task Force recommended a streamlined or expedited permitting process as a mechanism to encourage homeownership in the City.² Such a process both makes the permitting process more predictable, and reduces development costs by reducing the amount of time a developer must hold a property before actual development commences. Reduced permitting fees further cut project development costs. The City could adopt a program that streamlines the development process and reduces fees in all TOD Overlay Districts adopted by the City Council.

Infrastructure (i.e., road, water, and sewer) and streetscape improvements can also enhance the desirability of target areas for new development, and are an important component of transit-oriented development programs. Some cities have adopted policies that target infrastructure and other capital expenditures to neighborhoods or districts that meet specific criteria or further specific community goals. TOD Overlay Districts could be targeted as priority areas for infrastructure improvements and other capital outlays as a mechanism for encouraging development in the station areas. This strategy does not have a net impact on municipal spending when implemented, because it simply provides a mechanism for prioritizing the spending of the City's capital budget, rather than changing the overall dollars collected or expended by the City. It can be argued that improvements targeted to a station area will pay for themselves over time as the property values in the station area increase, thus increasing tax revenues. This then translates into more dollars avail-

³Wilgoren, Debbi, "Plan Helps Homeowners Near Transit: Fannie Mae Program Offers Larger Mortgage," in *The Washington Post*, July 24, 2003, p. B01.

able for infrastructure projects throughout the City in the long term. The City could also target a portion of its federal Community Development Block Grant (CDBG) funds (assuming the area meets the CDBG criteria) to projects within the TOD Overlay Districts, further enhancing the attractiveness of these areas for new housing development.

One issue that arises with the development of new housing around station areas is the ability of the existing population to afford the units. In response to this concern, the Federal National Mortgage Association (Fannie Mae) has established the Location Efficient Mortgage (LEM) program. LEMs are available to homebuyers who live within close proximity (usually ¼ mile) to transit services. Evidence shows that within close proximity to transit service, a smaller percentage of the population owns automobiles. Those who are “carless” save on transportation costs because they avoid car payments, maintenance costs, urban parking costs, fuel costs, and auto insurance expenditures.³ These costs savings translate into more income available for other living expenses, including mortgage payments and homeowner’s insurance. Under the LEM program, prospective homeowners can use these cost savings to increase their income estimates for the purpose of qualifying for a mortgage. This, in turn, can substantially increase the price of a home for which the homebuyer can qualify. In addition, LEMs require a smaller down payment (typically 3%) than traditional mortgages. If the program is implemented in Hartford (which is expected to happen when the busway is built), it can be used to bridge the gap between the price of newly constructed housing in the Union Station area, and the ability of potential homeowners to qualify for mortgages.

Development Plan Summary: Next Steps

The following summarizes the phasing of the key development components

Short-Term: 2004-2009

- Consider incorporating station area plan into Plan of Conservation and Development
- Consider adopting zoning overlay district as outlined in Appendix C
- Identify sources of funds for capital improvements and land assembly
- Plan and program the Union Station Intermodal Center/Garage/Office Building
- Develop a master plan for the Ann Street Corridor
- Conduct a major traffic/pedestrian circulation study around Union Station and design appropriate changes to roadways and the pedestrian environment

Medium-Term: 2010-2019

- Develop the Intermodal Center/Garage/Air-Rights Office Building
- Plan and design the I-84 decks and parks
- Assemble parcels for development
- Assist property owners and developers in relocation activities as required
- Prepare RFPs for development of publicly owned parcels

Long Term: 2020-2025

- Build the I-84 decks and parks
- Develop the Ann Street Corridor north of I-84



Appendices

A: The Case for Density

B: Detailed Development Numbers

C: Proposed Zoning

Appendix A: The Case for Density

Many studies have shown that density is a necessary component of successful transit-oriented development. Starting at densities of 12 dwelling units per acre, research shows that dependence on the automobile begins to decline and the use of transit increases. At 16 units per acre, these trends become significant. To be truly successful, residential density must be part of a vibrant community, with sufficient neighborhood-level jobs, services, and shops to meet the daily needs of the residents, and designed to attract and accommodate substantial pedestrian activity.¹

While urban planners and transit proponents often recognize the benefits of density around transit station, many policymakers and urban area residents remain skeptical. Opponents contend that density equates with a myriad of urban ills, including increases in traffic congestion, public expenditures on infrastructure and services, and crime, while causing property values to decrease. Some suggest that density equates with poverty, although no empirical data supports this relationship.

Because of the debate over density and its impacts on the urban environment, considerable research has explored just how density effects urban neighborhoods. The overwhelming evidence is that urban density results in personal and public cost **savings**, environmental benefits, and an improved local and regional economy. Conversely, the urban ills often associated with density are more clearly related to the failure to mix uses and provide transportation options within an urban setting, as well as poor design that discourages pedestrian activity. Significant findings from the research are documented below.

Traffic Congestion

One of the most often cited arguments against increased residential density is that, by concentrating more people into a smaller area, traffic congestion will increase and become unmanageable. Many studies have been conducted to assess the relationship between density and traffic congestion, and the findings have consistently shown that residential density does not correlate with increased traffic

congestion. In fact, the research indicates that, as residential density increases, vehicle use decreases.

The argument that density causes more traffic congestion is flawed in part because it fails to recognize that the denser a neighborhood becomes and the greater the mix of uses found in that neighborhood, the less the residents rely on the automobile. “Research suggests that densities of seven units per acre are needed to support a small corner store; a small supermarket requires 18 units per acre.”² In urban areas with higher densities, retail establishments and services can locate within walking distance of their customer base, reducing reliance on automobiles. Urban “villages with adequate jobs, housing, shops, and entertainment that are serviced by good transit appear to be most effective in reducing automobile dependent leisure trips. In 11 US metropolitan areas, mid to high rise neighborhoods with employment centers, retail, and service areas and 1.5 mile commute distances have at least 25% of the population walking or biking to work.”³ “Individual census tract statistics gathered in the 1996 Canadian census...showed that the denser a neighborhood gets, the less it relies on auto travel and more on foot and public transit. The Smart Growth Network found that “when communities are created that double household density, vehicle travel is reduced by 20 to 30 percent, as people use convenient and cheaper alternatives to the car.”⁴

Energy Consumption

The relationship between density and energy consumption follows directly from the reduction in vehicle trips and trip length associated with increased density. With fewer vehicle trips, residents of denser urban areas use less gas, and thus consume less energy. In contrast to areas of low density development, energy usage for vehicle trips in higher density urban settings can be reduced by up to 43%.⁵ “With mixed uses involving 1 to 1 job/housing ratios, up to 68% less energy can be used and average commute distances have been reduced by 28%.”⁶ A study for the California Energy Commission found a direct correlation between reductions in vehicle miles of travel and energy consumption.⁷

Expendable Income

Higher density development near transit can benefit residents by providing real gains in expendable income. These gains result from two different impacts of transit-oriented development. First, in higher density areas well-served by transit, the average annual cost to operate a vehicle was found to be 33 percent less than in less dense neighborhoods with fewer transit options.⁸ This difference is attributable to reduced auto ownership in the denser areas served by transit, and shorter distances to services and shopping (resulting in decreased spending on fuel and auto maintenance.) The Federal National Mortgage Association (Fannie Mae), in conjunction with the banking community in several US cities, recognize this savings and its impact on expendable income, and have responded with the Location Efficient Mortgage (LEM) program. The LEM program considers this transportation cost savings when calculating an applicant's income qualifications for a mortgage, allowing homebuyers in areas served by transit to qualify for higher mortgages than their income would otherwise permit.⁹

Denser, transit-oriented development also can increase an individual's buying power if communities allow reductions in parking requirements for new housing construction in neighborhoods served by transit. "Required parking raises the cost of new housing construction by \$20,000 to \$40,000 or more per space."¹⁰ By not requiring parking, or by lowering the number of spaces required per unit, housing construction costs can be lowered, translating into reduced housing prices. These reduced prices have the effect of both providing home ownership options to a broader segment of the population, and allowing homeowners to reduce their housing costs, thereby increasing their expendable income.

Public Services and Infrastructure

Another argument proffered by opponents of urban density is that density will result in higher infrastructure costs. This argument is not borne out by the research. In fact, "more compact neighborhoods require fewer linear feet of utility lines – like water, sewer, electricity, phone service, and others – than dispersed communities do. As a result, many communities find that it is cheaper to provide and maintain

many services to compact communities.”¹¹ High density development can provide economies of scale in infrastructure investments, and by encouraging infill, excess capacity from existing utility infrastructure can be tapped before new construction is required.¹²

A 2004 Brookings Institute report catalogues the findings from numerous studies of the costs of providing services and infrastructure to densely developed urban areas compared to less dense urban and suburban development.¹³ The consistency of findings is remarkable. All of the studies found a substantial cost savings for providing infrastructure and municipal services to more densely developed urban areas. Some of the more striking findings include:

- A 1998 study found that “compact...growth patterns could reduce 25-year road-building outlays by 12 to 26 percent.”¹⁴
- A 1989 study of the Orlando metropolitan area found that “the public capital and operating costs for close-in, compact development were much less than they were for fringe, scattered, linear, and satellite development...the costs per dwelling ranged from a low of \$9,252 for downtown Orlando (1989 dollars) to a high of \$23,960 to serve new homes in ... a low density fringe development.”¹⁵
- Additional studies showed that shifting development from a pattern of sprawl to planned development “could reduce total road-building expenditures 12 percent in South Carolina, 12 percent in Michigan, and 26 percent in New Jersey.”¹⁶ Similar savings were reported for water and sewer infrastructure.
- The Brookings Insitute research survey also showed substantial savings in operating costs resulting from economies of scale, efficiency of service delivery, and the ability to draw on excess capacity in already developed areas.¹⁷

The overarching finding from the Brookings Institute study is that, while the magnitude of the savings will differ somewhat from community to community, governments can reduce the cost of public services and capital expenditures, saving taxpayers money, by channeling development into areas where existing infrastructure and services can be more efficiently utilized.

Property Values

One common misconception about density is that increased density results in decreased property values. In fact, some of the most expensive neighborhoods in many U.S. metropolitan areas have densities in excess of 50 units per acres. For example, two of the most desirable residential areas in Boston, Newbury Street and Commonwealth Avenue, have residential densities of 60 units per acre and 100 units per acre, respectively.¹⁸

Research on the relationship between proximity to transit stations and property values consistently shows that residential and commercial properties in close proximity to transit enjoy a property value premium. Some of the research results are as follows:

- In Washington, DC, the value of residential land within the impact area of Metro stations was found to be \$6 to \$8 per square foot greater (1980 \$s) than land in non-station locations.¹⁹
- Residences near the Lindenwold High Speed Line in Philadelphia realized a location premium of 6.4 percent.²⁰
- “Properties near the Los Angeles Metro Rail have average sale prices of \$102.13 per square foot compared to \$71.13 for properties that are not near the Metro Rail.”²¹

The above-cited studies focus on residential property values. Similar studies of commercial properties in the vicinity of transit stations have shown that these properties also realize a property value premium directly linked to their proximity to transit stations.²² The increased property values associated with locations near transit translate into an increase in the municipal property tax base, and a direct increase in tax revenues in the very neighborhoods where average public infrastructure and service delivery costs are reduced due to increased densities.

Crime

An additional argument often put forward by opponents of density is that increased density leads to increased crime. The research does not support this argument. International comparisons of crime rates, which show lower crime rates in more densely populated European and Asian metropolitan areas than in less-dense US cities, suggest that factors other than density contribute to high urban crime rates in the United States.²³

In fact, a strong argument can be made that increased density, combined with a mix of uses that generate activity throughout the day and evening, and designed to be pedestrian-oriented, leads to increased public safety. A high density neighborhood with a mix of uses will result in more pedestrian activity throughout the day and evening, creating more “eyes on the street”, and a built-in deterrent to crime. Furthermore, infill development on vacant lots and surface parking sites will eliminate areas devoid of activity. One “key to ensuring that density improves security is design that encourages greater neighborhood surveillance and interaction.”²⁴

Regional Economic Performance

The Brookings Institute study cited above also looked at how density impacts regional economic performance. The study found that urban planning strategies that encourage “compactness, density, and “quality of life” enhancement seem to support – or at least be associated with – modestly strengthened economic performance.”²⁵ Some of the findings include:

- Doubling employment density increases productivity by approximately 6 percent.
- Communities that utilize growth management techniques to limit sprawl realize a 1 percent increase in their economic performance (measured in terms of personal income) relative to other regions.
- Income growth in the central city of a metropolitan area translates into corresponding income growth in its suburbs.²⁶

These findings suggest that the economic benefits of compact development reach well beyond the individual neighborhood where density occurs to the entire city and metropolitan area.

Density, Design, and Mixed Uses

The above discussion serves to debunk a number of the myths associated with urban density. Research suggests that density, in fact, can provide numerous benefits to a municipality and its residents. The real keys to successful development at densities that support transit are 1) to incorporate a mix of uses, and 2) to design active, vibrant, pedestrian-oriented communities. The mix of uses should include a variety of types of residences, including townhouses, condominiums and apartment. By offer a range of housing types, the community will attract a variety of residence from young singles to empty-nesters. A heterogeneous population will ensure activity on the street during the day (when many folks are at work) and in the evening (after offices and service establishments close.) In addition to residences, uses should include shops and businesses that will be open during the day and that can provide job opportunities for neighborhood residents, as well as restaurants and entertainment establishments that will attract nighttime activity.

Design is also a crucial component of successful urban development. Urban neighborhoods should be designed to be pedestrian-friendly, contain lively public spaces, and respect the context of the surrounding community (with particular attention to the historic context of the built environment). Building materials, signage, streetscapes and street furniture, the location of buildings and entrances relative to the sidewalk, and the location of parking will all contribute to the success of urban neighborhoods and transit-oriented development. Buildings should be located close to the sidewalk, with parking located on-street, or in back of buildings. Ground floor space should be for active uses such as retail, with multiple doors and windows facing the street (see Design Guidelines in the Implementation Strategy chapter of the report). Density can and should be a central component of these neighborhoods.

Visualizing Density

Many opponents of density are influenced by memories of 1960s-style high rise public housing projects, or visions of dense office development accompanied by street-level garage entrances that undermine the pedestrian environment. Both decision-makers and residents need to be educated about what higher density, mixed-use, transit-oriented urban villages, and vibrant transit-served city centers can look like.

This can be accomplished through visualization techniques that show what density looks like elsewhere, as well as what density can look like around the proposed station areas. Real-world examples of density can be downloaded from existing web sites²⁷, or obtained directly from communities that have already accomplished compact transit-oriented development projects. Computer-generated visualization techniques that superimpose new development designs on photographs of existing station areas (such as the techniques used in CRCOG's TCSP project) can be used to help people understand what compact transit-oriented development can look like around the stations.

Finally, in a recent Boston-area conference on density, one participant noted that to implement public policy, both a problem and a solution to that problem must be articulated. Thus, in educating the public, density must be presented as a solution to many of the very urban ills that opponents of density have often offered as arguments against it. The goal should not be to demonize sprawl, but instead to advocate for the many benefits of density.²⁸

- ¹ Fleming, Randall, The case for Urban Villages, reprinted from *Linkages Issue No. 8*, periodical of the Institute for Ecological Health. <http://www.fscr.org/html/2000-01-05.html>.
- ² *Designing for Transit: A Manual for Integrating Public Transportation and Land Development in the San Diego Metropolitan Area*. July 1993.
- ³ *Op.cit., Fleming*.
- ⁴ *Smart Growth Network, Getting to Smart Growth: 100 Policies for Implementation*, the International City/County Management Association, undated, p. 10.
- ⁵ *Op. Cit., Fleming*.
- ⁶ *Ibid.*
- ⁷ *Parsons Brinkerhoff, Smart Growth Energy Savings; MPO Survey Findings*, for the California Energy Commission, September 21, 2001, p. 8.
- ⁸ Perkins, Broderick, The High-Density Solution for Tight Markets. http://realtymtimes.com/rtpages/20020509_highdensity.htm
- ⁹ www.locationeffeciency.com
- ¹⁰ ____, *unbundle new urban parking + housing*. [ttp://www.dbarchitect.com/www-writing/parking.html](http://www.dbarchitect.com/www-writing/parking.html)
- ¹¹ *Op. cit., International City/County Management Association*.
- ¹² *California Planning Roundtable, Myths and Facts about Affordable and High Density Housing*. <http://www.abag.ca.gov/services/finance/fan/housingmyths2.htm>
- ¹³ Muro, Mark, *Investing in a Better Future: A Review of the Fiscal and Competitive Advantages of Smarter Growth and Development Patterns*, The Brookings Institute Center on Urban and Metropolitan Policy, March 2004.
- ¹⁴ *Ibid., p. 13.*
- ¹⁵ *Ibid.*
- ¹⁶ *Ibid.*
- ¹⁷ *Ibid., p.18.*
- ¹⁸ *Rappaport Institute for Greater Boston, The D Word, January 2004 Conference Proceedings*. <http://www.ksg.harvard.edu/rappaport/forums/thedword.htm>
- ¹⁹ *PriceWaterhouseCoopers, Richmond/Airport-Vancouver Rapid Transit Project, April 3, 2001, p.2*
- ²⁰ *Ibid., p. 3.*
- ²¹ ____, *Urban Sprawl Ideas that Work*. [Http://www.stateaction.org/issues/sprawl/sprawlideas.cfm](http://www.stateaction.org/issues/sprawl/sprawlideas.cfm)
- ²² *Op. Cit., PriceWaterhouseCoopers*.
- ²³ *1000 Friends of Oregon, The Debate Over Density: Do Four-Plexes Cause Cannibalism?* <http://www.friends.org/issues/density.html>
- ²⁴ *Local Government Commission in cooperation with the US Environmental Protection Agency, Creating Great Neighborhoods: Density in Your Community, September 2003 (sponsored by the National Association of Realtors)*.
- ²⁵ *Op. Cit., Muro, p. 21.*
- ²⁶ *Ibid., pp. 21-23.*
- ²⁷ *See, for example, www.architechts.org/emplibrary/A1_a.pdf.*
- ²⁸ *Rappaport Institute for Greater Boston, The D Word, January 2004 Conference Proceedings*. <http://www.ksg.harvard.edu/rappaport/forums/thedword.htm>

Appendix B: Detailed Development Numbers

	Footprint	Stories	Total
Air Rights Over I-84			
Apartments	10,957	12	105 units
Apartments	11,515	12	111 units
Surface parking under pool			50 spaces
Surface parking under pool			56 spaces
<i>Additional parking in City Hall garage</i>			
Along High Street (south of I-84)			
Apartments	17,723	6	85 units
Apartments	24,563	6	118 units
Apartments	16,766	6	80 units
Garage	91	2	182 spaces
Surface parking			47 spaces
Surface parking			50 spaces
Allyn Street @ Union Place			
Apartments	7,238	6	35 units
<i>Parking off site</i>			
Ann Street (south of I-84)			
Apartments	21,066	12	202 units
Office	38,569	12	462,828 sq. ft.
Surface Parking			64 spaces
Jewell / Asylum on Bushnell Park			
Apartments	18,834	12	181 units
Apartments	14,663	12	141 units
Surface parking			53 spaces
At Union Station			
Office	26,273	4	105,092 sq. ft.
Parking below (above transit station)			325 spaces
Pleasant/Albany/Chapel Street			
Townhouses			18 units
Townhouses			15 units
Townhouses			5 units
Townhouses			24 units
Surface parking			59 spaces
Surface parking			50 spaces
High Street North of I-84			
Townhouses			5 units
Townhouses			4 units
Townhouses			4 units
Townhouses			6 units
<i>Parking on site</i>			
Options			
Between High & Pleasant (Housing Scheme)			
Townhouses			21 units
Apartments	19,724	5	69 units
Apartments	13,898	10	111 units
Surface parking			40 spaces
Garage under housing	90	2	180 spaces
Between High & Pleasant (over Ann Street - Government Center Scheme)			
Gov't. Offices West	45,939	4	183,756 sq. ft.
Gov't. Offices East	17,475	2	34,950 sq. ft.
Garage (west of High St)	100	4	400 spaces
Surface (west of High)	175	1	175 spaces

Townhouse size average 1,400 sq. ft. on 2 floors
 Apartment size average 1,000 sq. ft. for 2 bedrooms
 All square footages are gross

Appendix C: Proposed Zoning - Hartford

Introduced by:

Heading
And
Purpose:

AN ORDINANCE ESTABLISHING DEVELOPMENT PROVISIONS FOR TRANSIT ORIENTED DEVELOPMENT OVERLAY DISTRICT

COURT OF COMMON COUNCIL
CITY OF HARTFORD,

2003

Be It Ordained by the Court of Common Council of the City of Hartford:

Section 35- Purpose

The purpose of the Transit Oriented Overlay District is to create a more walkable, less auto-oriented and better-landscaped environment around the transit stations for any dedicated fixed guideway transit system, to encourage mixed use development, and to connect existing neighborhoods to transit stations through appropriate development, pedestrian-friendly design, attractive architectural design, and landscaping. Generally, any parcel of land fronting on a major street in the City of Hartford that is within a 1500 feet radius of a transit station along a fixed guideway transit system shall be developed according to guidelines in the following sections.

Section 35- Uses Permitted

Use requirements of the underlying zoning districts remain in force, except as noted in Section 35-xxx.

Section 35- Uses Not Permitted

The following uses shall not be permitted in the Transit Oriented Overlay District:

- Automobile General Repair and Services
- Automobile Limited Repair and Services
- Automobile Wash, Self Service
- Automobile Laundry
- Motor Vehicles – Retail
 - ◆ New and Used Cars
 - ◆ Used Cars only
 - ◆ New and Used Trucks
- Motor Vehicles or Gasoline Fueling Stations
- Motor Vehicles or Gasoline Service Stations
- Eating Places with Drive-in or Curb Service
- Commercial Parking Lots

- Junk and Scavenger Yards
- Motor Vehicle Wrecking and Junkyards
- Solid Waste Disposal
- Drive-in Movies

Section 35- Density Waiver

A Special Permit may be granted from the Planning and Zoning Commission to waive residential density, height limits, lot occupancy, and open space requirements from the maximum underlying zoning regulation provided that no portion of the structure shall be within fifty (50) feet of a residentially zoned property. The open space requirement may only be waived if the development is within fifteen hundred (1500) feet of a public park.

Section 35- Required Parking and Loading Areas

- a. All development in the Transit Oriented Overlay District shall provide the minimum onsite parking and loading spaces as required by the present zoning code, unless stated otherwise in this section.
- b. The maximum number of onsite parking spaces shall not exceed the minimum requirement by more than 5%. This requirement shall not apply to residential uses.
- c. The minimum required number of parking spaces may be reduced by the number of on-street parking spaces located along the building frontage. Only those parking spaces that are located on the same side of the street as the development and that do not extend beyond the street frontage of the subject property may count toward the reduction. This allowance shall not apply to residential uses.
- d. Shared Parking
 1. If there is more than one use on a lot, then the total parking requirement shall be equal to the sum of the parking requirement for each individual use.
 2. On lots with more than one use, the total parking requirement may be reduced, provided that the applicant submits credible evidence to the satisfaction of the Zoning Administrator that the peak parking demand of the uses do not coincide, and that the accumulated parking demand at any one time shall not exceed the total capacity of the facility. Such evidence must take into account the parking demand of residents, employees, customers, visitors, and any other users of the lot. It must also take into account parking demand on both weekends and weekdays, and both during the daytime and overnight.
- e. All surface parking lots shall provide a perimeter-landscaped strip a minimum of 5 feet wide around the edges of the entire lot. The landscaped strip shall contain no fewer than 4 trees for every 100 linear feet, as well as shrubs no less than 4 feet in height. A wall or decorative fence measuring 2.5 to 4.0 feet in height, as measured from grade, may be added to the landscaping strip.

- f. For surface parking lots greater than 20 spaces, at least 15 percent of the interior area shall be planted with trees and shrubs.
 - 1. Each planting area shall be a minimum of 25 square feet in size and have no dimension less than 5 feet.
 - 2. Each planting area shall have at least one tree.
 - 3. No row of parking shall contain more than 10 spaces wide without installation of a planting area.
- g. Bicycle racks shall be provided onsite at a rate of one bicycle parking space for every 10 automobile parking spaces.
- h. All zoning lots in effect at the date of this ordinance's adoption are subject to this ordinance for the purpose of determining maximum allowed parking.
- i. Property owners are responsible to properly maintain all landscaping, and replace all dead and diseased vegetation.

Section 35- Design Standards

Development in the Transit Oriented Overlay District shall comply with the following design standards:

- a. The main entrance of any building shall face the street.
- b. The main entrance of any building must provide for easy and convenient access from the sidewalk to the entrance.
- c. Any new construction must be built to the building line.
- d. In all Business and Commercial zones at least 25% of sidewalk level (or first level) wall area shall be in the form of transparent windows or doors.

Section 35- Structured Parking

Structured parking is an allowable use and is exempt from the maximum number of on-site parking spaces per Section 35-xxx Required Parking and Loading Areas but must follow the following design provisions:

- a. Structured parking built to the building line must have retail/office uses on the entire first floor length, except for portion of building used for means of access and egress.
- b. Structured parking without retail/office on the first floor must be set back a minimum of thirty feet from the street line. A perimeter, landscaped strip must be provided around the entire structure. The landscaped strip shall contain no fewer

than four trees for every one hundred linear feet, as well as shrubs, a minimum of 4 feet in height.

- c. A liner building containing retail/office on the first floor may be constructed in lieu of the landscaped strip at time of construction or at any time in the future.
- d. The design and site plan for the structured parking must be submitted to the Design Review Board.

Section 35- Parking facilities, as part of transit station development shall be exempt from Section –
Required Parking and Loading Areas.

*Ord. Transit Oriented Overlay District 6-23-03
GM*