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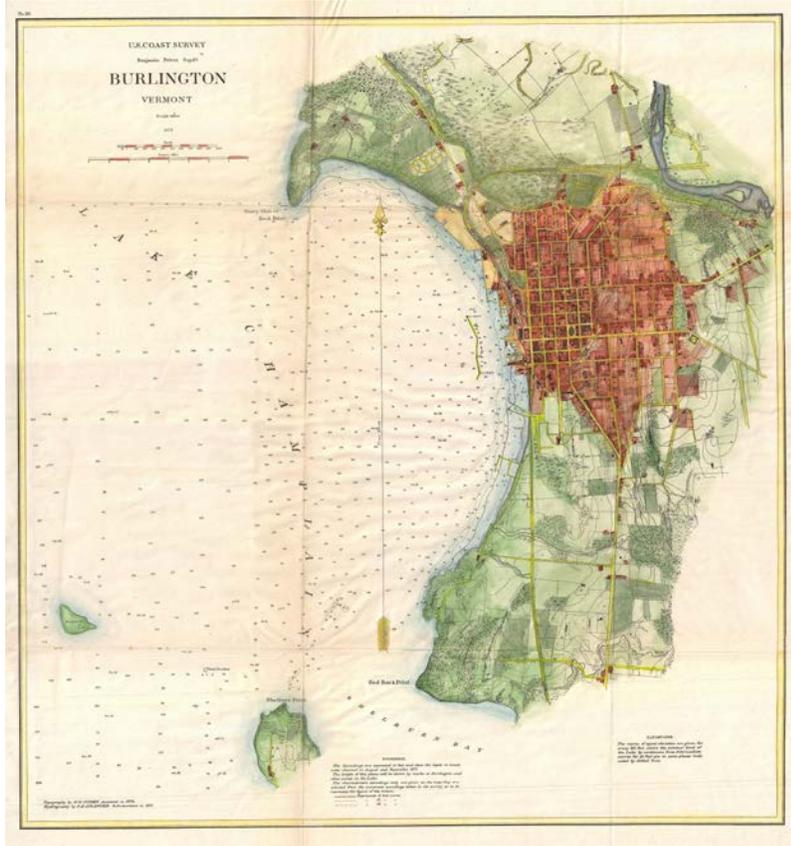Rachel Siegel
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Re-Adopted by the Burlington City Council
March 31, 2014

CITY OF BURLINGTON, VERMONT

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Introduction

Burlington's "Municipal Development Plan" presents a vision for land use and development over the next ten to twenty years. It will prepare the city for growth, provide a reliable basis for public and private investment, and guide the city through the early twenty-first century. This plan has been prepared and adopted in accordance with the Vermont Municipal and Regional Planning and Development Act (VSA Title 24, Chapter 117).

Planning in Burlington

Land use planning has played a central role in shaping the City of Burlington since 1925 when voters authorized "the creation of a Municipal Planning Commission in accordance with Act No. 107 of the Laws of Vermont of 1921." This action eventually resulted in the city's first land use plan and zoning ordinance in 1947, a subdivision ordinance in 1955 to control the layout of city streets, and subsequent revisions to each as needed.

In the 1960's, the City undertook a major urban renewal program in an effort to revitalize the downtown area. Large tracts of land were created in the Central Business District (CBD) to be available for commercial development. However, urban renewal also eliminated neighborhoods, altered street patterns, and significantly changed the historic context of the downtown.

Since 1973, in accordance with the Vermont Municipal and Regional Planning and Development Act (VSA Title 24, Chapter 117), a Municipal Development Plan for the City of Burlington has been prepared every five years. In 1988, the Vermont legislature amended the Act and other statutes affecting land use planning. Collectively known as "Act 200," these changes encouraged comprehensive planning at the state, regional and local levels, facilitated cooperation between communities, and offered a forum to resolve disputes. Communities that choose to plan must do so in an effort to address a common set of statewide goals. The *1991 Burlington Municipal Development Plan* was Burlington's first plan to be guided by the goals of Act 200.

A new approach to the update of the Municipal Development Plan, now branded planBTV, has recently been developed in Burlington. Instead of preparing an overall update every 5 years, the Department of Planning & Zoning is now constantly working on various area-wide master plans or topic specific plans that eventually update the relevant chapters of this plan. The recent 2013 Downtown & Waterfront Master Plan is a great example of this new approach, which will allows for a more in-depth look and understanding of the dynamics and character of each distinct city neighborhood.

The creation of planBTV is greatly advanced by the inclusion of several past and new planning studies and technical reports prepared by various city departments. To the extent practical, these priorities are also included in this Plan.

All of these plans are to be considered incorporated into this plan, and are adopted herein by reference:
- *Urban Reserve Interim Use and Stewardship Plan*, October 1997
- *North Street Revitalization Plan*, November 1998
- *Waterfront Urban Renewal Plan*, December 1998
- *Street Tree Master Plan*, February 2000
- *Harbor Management Plan*, October 2000
- *Consolidated Plan for Housing and Community Development*, 2008
- *planBTV-Downtown & Waterfront Master Plan 2013*
- *planBTV-Open Space Protection Plan 2014*
- *planBTV-Climate Action Plan 2014*

Purpose and Role of the Plan

A community's Municipal Development Plan, or "Master Plan," must be both visionary and strategic. The Master Plan outlines goals and objectives for the future and is the principal guide directing land use policy and decision-making. It defines the policies, programs and specific actions necessary to attain these objectives.

A Master Planmust be prepared every 5 years in accordance with state statute and has standing in statewide regulatory proceedings including Act 250. As mentioned above, Burlington's new approach to land use planning provides more frequent updates to the

Municipal Development Plan with the preparation of area master plans or topic specific plans. All City plans and programs which effect land use and development, including the Zoning Ordinance, Subdivision Regulations, Impact Fees and Capital Improvement Plan, must be in conformance with the policies and directives found in the Municipal Development Plan.

For the vision presented in this plan to become a reality however, other steps must follow its adoption. These include:

- **revision of municipal ordinances and bylaws** to ensure the Plan's goals and policies are properly reflected, implemented and enforced;

- **development of a capital budget and program** to outline long-term public investment needs and commitments;

- **development of area-specific master plans, programs and policies** to offer more detailed and site-specific strategies for selected parts of the city;

- **ongoing evaluation** of plans, policies and programs; and

- **continuing community involvement** in the planning and governing process.

This Master Plan must be considered a "living document" and not placed on a shelf until the next revisions are due in 2011. It will be continually reviewed, modified and expanded as necessary to reflect changing circumstances and opportunities. In fact, the process for revising this plan has already begun, and over the next 2-3 years a comprehensive re-write of the City's Master Plan will take place.

OUR COMMUNITY VISION:
A "Sustainable" Burlington[1]

A plan for future land use and development must be based on a vision for the future of the community. Such vision rarely offers a great level of detail, but provides an essential framework and a set of benchmarks or objectives that help to articulate where a community is headed. This section of Burlington's municipal development plan outlines that broad vision for the future of the city. Each of the sections that follow offer an increasing level of detail regarding what this vision looks like and a set of strategies intended to turn this vision into reality.

As noted earlier, perhaps the most significant change from the 1996 Plan is the completion of a community-wide visioning process known as the *Burlington Legacy Project*. Through *The Burlington Legacy Project* people from all of Burlington's neighborhoods came together to build a vision of the future.

Five major themes emerge in the common vision that Burlington residents hold for the future of the city as articulated in the *Burlington Legacy Project Action Plan*:

- **Burlington is at the heart of a regional population and economic center that offers meaningful jobs at liveable wages; where a diverse housing stock serves all income levels; with a growth rate that balances jobs and housing; offering high quality arts, entertainment and recreational opportunities of interest and benefit to all residents; with concentrations of higher density, mixed-use development surrounded by residential neighborhoods and open space;**

- **Neighborhoods provide a rich quality of life with diverse households in both type and income; offer basic goods and services to residents, and areas of open space interconnected with public transit, bike paths and trails;**

- **Active and meaningful participation in community decision-making; a responsive, pro-active government;**

- **High-quality education and social supports for our youth; lifelong learning opportunities for all residents;**

- **Clean air and water; a protected network of natural systems; a legacy of cultural and natural amenities to be enjoyed and nurtured by current and future generations.**

Burlington's greatest challenge in the years ahead will be to balance the benefits and burdens of growth. Balance is the essence of sustainability, and creating a sustainable community is at the center of the city's vision. Elements of a "sustainable community[2]" include:

- **Ecological Integrity**: including satisfying basic human needs such as clean air and water; protecting ecosystems and biodiversity; pollution prevention strategies.

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[1] This section is largely excerpted from the *Burlington Legacy Project Action Plan*, May 2000.
[2] Developed by the Institute for Sustainable Communities, 27-28 June 1995.

- **Economic Security**: including local reinvestment; meaningful employment opportunities; local business ownership; job training and education.

- **Empowerment and Responsibility**: including respect and tolerance for diverse views and values; a viable non-government sector; equal opportunity to participate in decision-making; access to government.

- **Social Well-Being**: including a reliable local food supply; quality health services, housing and education; creative expression through the arts; safety from crime and aggression; respect for public spaces and historic resources; a sense of place and making a contribution to the community.

A sustainable city is one that meets its current needs without reducing its capacity to meet its needs in the future. A city is sustainable environmentally only if it consumes its natural resources at the same rate as it replenishes them. It is sustainable economically only if it derives the

> ### *SUSTAINABLE DEVELOPMENT*
>
> **Decisions and choices made today should not limit the choices and opportunities of future generations**

maximum benefits possible from local wealth and resources, and invests that wealth back into the community. It has sustainable government only if its citizens have equitable, just, and full access to decision-making. It is sustainable socially only if it meets the basic needs of residents for food, shelter, clothing, health care, child care, and transportation.

In order to support such hallmarks of sustainability as efficient, economical alternative transportation systems and a thriving business sector that offers skilled, high-wage jobs, Burlington must grow. But the need to concentrate growth in the region's urban core raises conflicts that are inherent to any effort to attain sustainability:

How do we provide adequate housing for a growing population and still preserve open space? How do we encourage new businesses to locate in Burlington, spurring high-quality job growth, yet minimize the amount of traffic in the city? How do we maximize our use of local food and other resources, yet assure that people have access to affordable basic goods?

If we succeed, Burlington in the future will remain at the core of a regional population, economic, and cultural center with concentrations of high density mixed-use development surrounded by residential neighborhoods and open space; a diverse housing stock that serves all income levels and family situations; high quality arts and recreational opportunities.

If we succeed, significant public and private investment will have improved the quality of our environment, and public acquisition and creative site planning will have permanently protected significant natural areas and important natural and recreational systems for the benefit and enjoyment of current and future generations.

If we succeed, Burlington's built environment will reflect a legacy of moderately scaled buildings, high quality urban design, and a rich architectural heritage. Unique design characteristics of each neighborhood will have been retained, while new construction and public investment respects the city's historic character and architecture while effectively meeting the demand for continued growth.

If we succeed, Burlington will be served by a regional transportation system that offers a range of mode choices that are safe, affordable, efficient, and convenient for residents, employees, and visitors. Rail, transit, cycling, and walking are increasingly more competitive with the automobile as the dominant mode of choice. Burlington's residential streets will have been reclaimed as attractive public spaces, and a series of trails and paths provide access between neighborhoods and areas of protected open space.

If we succeed, Burlington is the core of a regional educational, health care, commercial, cultural, and governmental center. A diverse mixture of businesses sustain the city's economic base including vibrant neighborhood centers served by neighborhood-oriented local businesses like grocery stores and doctor's offices; the Downtown and Waterfront abound with cultural and recreational opportunities while serving as a retail and financial center for the region; the Intervale abounds with agricultural entrepreneurs; while the South End offers well-paying and high quality jobs. Burlington's economy has become more self-reliant through significant increases in local ownership and control of businesses, and reinvestment of local resources. Burlington residents, who were not fully participating in the city and regional economy, now have access to meaningful jobs paying a livable wage, job training, and job retention services.

If we succeed, Burlington will place a priority on maintaining and upgrading existing facilities and infrastructure over new construction. City services and facilities will be managed in order to maximize efficiency, conserve resources, and support increased levels of development without degrading the natural environment or unnecessarily burdening the taxpayers.

If we succeed, Burlington is a leader in the development and implementation of energy efficiency measures that reduce energy costs, enhance environmental quality, improve security and sustainability, and enhance economic vitality.

If we succeed, Burlington is part of a region that has been successful in balancing employment growth with that of housing, and finding equitable solutions to sharing the responsibility of providing affordable housing. In Burlington, all people have access to safe, decent, and affordable housing. Burlington's housing needs are being met through rehabilitation and conservation of the existing stock, and creative high density infill.

If we succeed, Burlington's educational institutions, in partnership with families and the community, educate and inspire students to influence and shape the future. The City's educational system prepares our youth to be contributing members of our society and their communities, trains them in the skills necessary to be successful in the workforce, and develops the skills for a lifelong commitment to learning.

If we succeed, Burlington's residents participate meaningfully in decisions that affect them. The youth of the community have been empowered to be active participants in local decision making. Neighborhood and citywide groups, as well as individuals and adjacent communities, have a clear voice in a city policy-making process that is open and accessible.

The *Burlington Legacy Project Action Plan* recognizes that we cannot bemoan sprawl, traffic congestion, a stagnant population, or the erosion of families in Burlington—unless we're prepared to grow as a city. If we are to succeed in creating a truly sustainable community, future development within the City of Burlington must further the following principles:

- Support and strengthen our **neighborhoods**.

- Concentrate **mixed-use, high density development** within **growth centers** including the center city, neighborhood activity centers, and institutional core campuses.

- Long-term protection and stewardship for **natural areas and open space**.

- **Lessen the dependence on the automobile** by offering a range of transportation choices.

- Respect for the city's **architectural and cultural history**.

- Support **long-term solutions** over short-term fixes to community needs and problems.

- Promote collaboration and cooperation through **working partnerships** between governments, non-profits, institutions, and businesses.

- Increased **participation in decision-making**.

This Plan envisions Burlington as a city where…

*… **neighborhoods** are the heart and soul of the community, and possess a strong identity. Neighborhoods are linked to each other via a network of greenspaces, public transit, pedestrian, and bicycle routes. Historic patterns of development and architecture are respected, while future growth reflects changes in family, work and travel patterns by offering a range of housing choices. Everyday services such as markets, pharmacies, and childcare are concentrated in higher density mixed-use activity centers that serve the immediate needs of the surrounding neighborhood. Local streets are reclaimed as public spaces, oriented to pedestrians, with minimal through traffic.*

*… the **downtown** is a distinctly urban place serving as the historic core of the county's educational, economic, cultural, and governmental center. Downtown Burlington is a high density, mixed-use growth center that has blended the need for concentrated and efficient development with a respect for the city's architectural heritage and natural environment. Vacant and underutilized land and buildings have been adaptively reused for housing, shops, and offices. An integrated system of regional and local public transit, bicycle routes, and pedestrian paths are increasingly competitive with individual automobiles as the preferred mode of travel thus reducing the need for single-passenger automobiles. Downtown Burlington is also a neighborhood - offering housing for a range of income levels and household types, everyday services, and employment opportunities.*

*… religious, educational and medical **institutions** have a respected place in the community, and play a vital role in the city's economy and social well-being. Development of academic and medical campuses, including additional housing, is concentrated on core campuses in order to minimize impacts on adjoining residential neighborhoods. Working cooperatively with the City, neighborhoods, and business community, the institutions share their valuable skills, resources, and leaders to help address development, transportation, housing, social, and neighborhood issues within the community. Historic properties have been adaptively reused and redeveloped to ensure they continue to contribute to the community and neighborhood. Development of property owned by religious institutions is in some cases being redeveloped into higher density mixed-use developments or preserved as open space.*

*… **Lake Champlain and the Winooski River**, are protected and cherished as valuable natural and economic assets of the community. The Downtown Waterfront offers a dynamic mix of year-round recreational, cultural, commercial, and residential uses, and is physically and architecturally integrated into the downtown and surrounding neighborhoods. Commercial development on the waterfront compliments and enhances other commercial districts in the City. Public access and circulation is provided by an integrated system of regional and local public transit, ferries and shuttles, bicycle routes, and pedestrian paths. The shorelines outside of the downtown and along the river remain largely undeveloped with a network of protected conserved lands including natural areas offering habitat and travel corridors for wildlife, trails and bike paths for passive recreation, and agriculture. The ecology and natural and cultural history of the shoreline are protected and interpreted for the public.*

*… the city's unique **natural systems and open spaces** are identified and protected through a combination of public acquisition, stewardship, and creative site planning, and function as vital components of the city's infrastructure and economy. The Lake Champlain shoreline, Winooski River corridor and Intervale, Centennial and Englesby Brooks, and other significant natural areas have been the focus of these efforts.*

LAND USE POLICIES

THE CITY OF BURLINGTON WILL…

- **Protect natural areas from harmful and incompatible development, and maintain the integrity of natural systems.**

- **Conserve and strengthen residential neighborhoods.**

- **Encourage the adaptive reuse and historically sensitive redevelopment of underutilized sites and buildings.**

- **Encourage mixed-use development patterns, at a variety of urban densities, which limit the demand for parking and unnecessary automobile trips, and support public transportation.**

- **Strengthen the City Center District (CCD) with higher density, mixed-use development as part of the regional core while ensuring that it serves the needs of city residents, particularly those in adjacent neighborhoods.**

- **Target new and higher density development into the Downtown, Downtown Waterfront, Enterprise District, Institutional Core Campuses, and the Neighborhood Activity Centers.**

- **Encourage development of an active, urban waterfront that offers a mix of uses, is open to the public and linked with adjacent neighborhoods.**

- **Strengthen the Pine Street corridor for commercial - industrial development while minimizing adverse impacts on adjacent residential neighborhoods.**

- **Encourage light industry, the creative arts and technologies, and manufacturing and incubator space for new and emerging business in appropriate locations including the Pine Street corridor.**

- **Support the development of the proposed Intervale Eco-Park to provide opportunities for value-added processing of agricultural products and develop synergistic relationships between agricultural and energy-related businesses.**

INTRODUCTION

Future development and investment in the City of Burlington are guided by a diverse set of policies and strategies intended to encourage and facilitate development in specific parts of the city. The following section outlines the principal land use and development pattern to be implemented over the next 10-20 years, and serves as a policy umbrella to the other sections of the Plan that follow. It defines **where** and **how** future development is to occur. All of the other sections offer more detailed information and guidance in specific areas such as transportation or urban design that will help to facilitate this pattern.

This section of the Plan is strategic in its approach, and does not offer information or insight for all portions of the city. Instead, it focuses on areas of the city that are targeted for future development or redevelopment. These areas are the **Downtown Improvement District**, the **Downtown Waterfront**, **Institutions**, **Neighborhood Activity Centers**, the **Enterprise District** and **Brownfields**. Additionally, this Plan identifies individual neighborhoods that are in a state of change and require strategic planning and investment in order to meet community goals. These neighborhoods are **Riverside Avenue**, **Mill-Grove Street**, the **Old North End Enterprise Community**, and the **South End neighborhood**. Where this Plan is silent regarding a specific part of the city – primarily low-density residential areas, it is intended that those areas remain largely unchanged, and that the current development and use patterns remain as they are in order to preserve and maintain a high quality of life.

A Regional Growth Center

Burlington is at the heart of a larger urbanizing region that is the principal economic and cultural engine for the northern Champlain Valley, as well as the state of Vermont. While Burlington only makes-up a small portion of this area in physical terms (~10 square miles or 1.66% of Chittenden County's land area), the surrounding area is often distinguished by its proximity to the city. The city itself is the largest, and the most intensely developed community in Vermont with a population more than two-times that of its neighbors. Being the most urban agglomeration in the state also brings challenges to Burlington that are similar to other larger metropolitan areas, i.e.: homelessness and transient populations, concentration of social services, etc.

The historic development pattern of the region is characteristic of New England with higher density mixed use compact centers surrounded by working farms and forests, and served by basic infrastructure - the definition of what we today call a "growth center." These features help to define Vermont's unique identity, support our high quality of life, and form the qualities that attract new business development and tourism.

However, the traditional development pattern has become blurred and is threatened by suburban development on the fringes of the city including large single-use developments such as shopping malls and planned residential subdivisions, strip commercial development along major highway corridors, and the continued dominance of the automobile with its associated parking lots, traffic congestion and ever-expanding highways. This trend is not only a threat to the region's traditional patterns of development, but also to our future economic growth, natural environment, and sense of community.

Geographically, Burlington is only a small part of the surrounding region, and has no extraterritorial authority over land use and development in adjoining communities. Responsibility and ability to reverse this trend of suburbanization lies therefore with each nearby community, and our willingness to collaborate together as a region on land use and public investment issues.

The 2013 *ECOS Regional Plan* places much of Burlington within a "Metropolitan Planning Area" which also includes portions of the cities of Winooski and South Burlington. The Regional Plan presents a hierarchy of progressively larger scale and more intense mixed-use development pattern. The creation of these "planning areas" follows Vermont's land use planning goals which seeks to define "growth centers[1]", and provides a very important framework to focus a wide range of objectives and policies governing future land development. The purpose of the regional growth center is to "contain the county's largest buildings and highest residential densities. Since most of the enterprises and services having a substantial regional impact are anticipated to be located in a Metropolitan Planning Area, it should receive the highest priority for public sewer and water infrastructure. An emphasis on non-automotive modes of transportation should be given priority to allow for easier pedestrian access."

The City welcomes the opportunities and responsibilities that are associated with serving as the historic core of a regional growth center. The boundaries of this area, however, must reflect existing and proposed development within the city, and recognize the fact that portions of this area may be either unavailable or undesirable for future development.

For the Regional vision to become reality, all communities must work together towards a more sustainable pattern of development. A more traditional pattern, through the use of carefully planned growth centers, is necessary to protect and invigorate existing cities and villages, maintain working farm and forest lands, and bring back a more sustainable and affordable form of community development.

Growth centers throughout the region should reflect traditional settlement patterns and be served by adequate infrastructure including public transportation. The number and size of growth centers must be based on reasonable projections of future growth, and their capacity to accommodate high-density development – primarily as infill and adaptive reuse. They must be small enough to concentrate development, yet large enough to accommodate the projected growth. And finally, growth centers themselves must encourage higher density mixed-use development, respect historic and cultural resources, preserve and create pockets of greenspace where possible, and promote public transit, walking and biking as the preferred forms of transportation. The Regional Plan should lead this process with a detailed plan for regional growth and development that emphasizes compact development and serves to discourage sprawl.

A Vermont City

By nearly every definition, Burlington is a city; a city, however, at a smaller Vermont scale. Burlington has tall buildings, but most remain under five to eight stories; an important airport and public transit system; colleges and a university, theaters and galleries, offices, restaurants, hotels, banks and shops - yet still remains at just above 40,000 residents.

Burlington is also, in many ways, a traditional Vermont village in both form and function. The city is compact and serves as a central place of commerce, housing, education, industry, and government. People know local shop owners, and often encounter family, and friends throughout their daily travels. This description as both city and village is the essence of what makes Burlington such an attractive place to live, work and visit. Burlington exemplifies the metaphor of

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[1] The concept behind "growth centers" is to concentrate higher density mixed use development into traditional' development centers in an effort to preserve and maintain the surrounding rural landscape.

the "urban village[2]" - "a shorthand way of describing the *feel* we want from our cities." It is not so much more than a location, but the *personality* of a place. Urban villages aren't built - they evolve over time.

Burlington's character and sense of place is widely celebrated – both locally and nationally. The city's character has evolved over time by respecting historical development patterns and architecture; cultivating "community" in our neighborhoods; protecting valuable natural, historic, and recreational resources; developing lively cultural events, resources and activities; and putting the needs of City residents above the desires of visitors.

However, as Burlington has continued to evolve, this Vermont City must meet the challenges of accommodating future populations without destroying its character. Nurturing Burlington's human scale, social character, and sense of place while encouraging future growth and development is the primary objective of the City through the implementation of this Plan.

Room to Grow

Burlington has relatively little undeveloped land remaining on which to grow. The entire city consists of only 6,457 acres of land (5,601 acres when excluding right-of-ways). Yet, Burlington will continue to grow, both as a community, and as an important part of the economic, social, and cultural core of the region. This Plan anticipates continued and sustainable growth in housing, services, employment, and population, while protecting the city's natural systems, maintaining its moderate scale and high quality urban design, supporting its neighborhoods, and celebrating its heritage.

The basic land uses in Burlington include residences, commerce, industry, public/semipublic facilities, parks and recreation, and undeveloped land. Residential and tax-exempt lands are the largest categories of use.

Burlington Land Use (Percentage of Acreage)

Residential 34%
Tax-Exempt 45%
Mixed-Use 1%
Commercial 8%
Ag & Forest 8%
Utility 1%
Industrial 3%
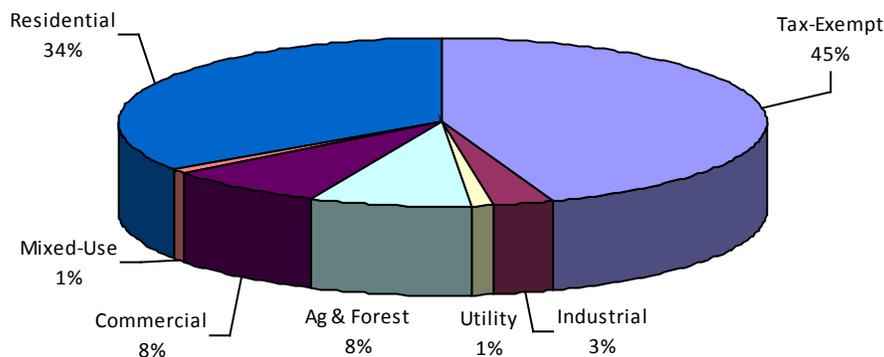
Over one-third of the city is considered undeveloped land. Undeveloped does not necessarily mean un-used however. While these properties may not contain a structure, they may be put to a commercial or industrial use for storage, serve as a golf course or playground, be actively farmed, or used for parking. In many cases, this land is both undesirable and unsuited for development due to seasonal flooding, steep slopes and sensitive natural or cultural features. A vast majority of

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[2] Sucher, David, *City Comforts: How to Build an Urban Village*. City Comforts Press. Seattle 1995,

the undeveloped land in Burlington is exempt from property taxes, which means it is owned by a religious or educational institution, the city or the state, or a non-profit organization.

Vacant land is only a portion of the future development potential. Many properties remain significantly "underdeveloped"[3]. Many developed parcels and surface parking lots could be more intensely re-developed with multi-use structures[4], taller buildings, and smaller setbacks.

Complete build-out of the City is not likely to happen. Many parcels are substantially developed - some with historic buildings - or include areas that are inappropriate for intense development. Often land characterized as vacant cannot, and should not, be developed because it is either wetland or other natural area, has steep or unstable slopes, or is a small, oddly shaped lot. However, Burlington can easily accommodate additional growth and sustain itself as an important component of the regional hub without threatening the City's unique qualities and defining characteristics.

The challenge is to define the amount of future growth that is possible and desirable, and develop effective strategies to encourage future growth while retaining the scale and character of the city. These strategies must address two distinct issues currently faced by the City: first, how can we ensure a more efficient use of properties that are currently developed to some extent (such as through adaptive reuse of vacant upper floors, or additions); second, is to ensure the most efficient use of properties that are currently undeveloped or undergoing significant redevelopment.

Open Space Protection

The natural environment is a chief ingredient in defining Burlington's character - making it one of the most attractive and inviting small cities in the country. Burlington's citizens, non-profits, and city government have a proud tradition of protecting the city's sense of place, natural environment, open spaces, and recreational opportunities. Recent studies throughout the country have debunked the myth that conservation and development are inherently at odds. The fact is that open space conservation is good for everyone - residents, property owners, visitors, and businesses alike – and the bottom line. This is a fact that Burlington clearly recognizes, and from which it has long benefited.

The result was the completion of the *Burlington Open Space Protection Plan* in October 2000. The plan presents a far-reaching strategy that will enable the City to pursue and implement its long-held goals for open space protection, providing an over-arching vision for the future of Burlington's landscape where natural areas, parklands, and greenbelts are physically integrated into the urban fabric to complement development with conservation - where natural and recreational systems play an essential role in enhancing environmental quality, economic prosperity, and quality of life. A 2013 update, rather than a wholesale replacement of the 2000 plan, adapted the original vision and goals to reflect progress made on past goals and changes in the public perception of needs for open space. The foundation of the update was an extensive public outreach process to understand what is currently on the minds of residents regarding open

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[3] "Underdeveloped" refers to those parcels that are developed at less than 50 percent of the average of the existing or allowable density in the zoning district.

[4] "Multi-Use Structures" refers to buildings, for example, with: parking below grade, street level retail, and office and/or residential uses above the street.

space quality, availability and access. The open space inventory was also updated to reflect the current status and use of open space in the city. Combining the public input gathered with the updated inventory in a matrix will be used to inform open space acquisitions in the coming years. Finally, policy goals were articulated to guide future decisions relating to open space.

Both the 2000 Open Space Protection Plan and its 2014 update are hereby incorporated in to this plan by reference.

Growth Areas

The City of Burlington expects, and welcomes, continued growth and development over the next ten years – primarily in the form of infill, adaptive re-use and redevelopment. In an effort to facilitate future growth, and to continue to encourage urban densities and use patterns, the City will seek to concentrate future higher-density development activity primarily into the following areas:

DOWNTOWN & URBAN WATERFRONT

planBTV – Downtown & Waterfront Master Plan
In the Fall 2010, the City of Burlington was awarded a Sustainable Communities Challenge Grant by the US Dept. of Housing and Urban Development (HUD) which provided a unique opportunity to advance Burlington's place as one of America's most livable and sustainable communities. Burlington's project – known as "planBTV" and incorporated by reference herein – was the result of a 2+-yr planning process for the development of a comprehensive guide for downtown and waterfront development that will foster sustainable economic growth over the next 10-20 years.

The development of a land use and development plan focused on Burlington's Downtown and Waterfront has been a long-standing action item in the Municipal Development Plan since at least 1996. While many other planning efforts involving the downtown or waterfront have taken place over the years, none were comprehensive in scope where land use, transportation, land development, urban design, and public infrastructure were all woven together. Additionally, past examples of comprehensive plans prepared by the City had been done at a city-wide level with broad-brush and high level recommendations. The planBTV study area encompasses the Downtown Improvement District in its entirety, as well as the waterfront and harbor, but does not include the Urban Reserve.

planBTV: Downtown and Waterfront Master Plan refines broad city-wide goals for sustainable development into a focused, actionable, area-specific strategy to ensure the vitality of the central core of our community and enable us to achieve our community vision. While the over-riding focus of the effort has been centered on improving economic vitality, the plan addresses a wide range of inter-related topics including housing, transportation, climate change, urban agriculture, waterfront and harbor development, parking, land use and urban design. Overall, the final outcome can be summarized around four fundamental themes in order to create a more livable community – **Vibrant Economy, Great Urban Design, Housing Choice,** and **Transportation Choice**. None can be considered in isolation, and all have a direct influence on the success of each and every other theme.

DOWNTOWN IMPROVEMENT DISTRICT

The City's "Downtown Development District" designation will make various incentives such as state tax credits and loans available to facilitate continued redevelopment and reinvestment in the heart of the city. To gain a better understanding of the opportunities and obstacles for future development, the City has created a detailed area plan specific to the Downtown and Waterfront – planBTV. planBTV identifies and specifies the infrastructure needs, density potential, and development logistics and defines design standards. planBTV should serve as the primary tool for guiding private and public investment necessary to ensure the vitality of the city's core.

THE DOWNTOWN WATERFRONT URBAN RENEWAL DISTRICT

Since the early 1800's, Burlington's harbor and downtown waterfront have been an important commercial area, scenic and recreational attraction, and community resource. The Lake Champlain waterfront is the city's premier gateway, and an asset that cannot be duplicated or replaced.

In 1998, the City revised its *Waterfront Revitalization Plan* for the Waterfront Urban Renewal District. This Plan was a revision of an Urban Renewal Plan prepared by the City in 1990. The 1998 Plan included 22 projects that are in varying stages of development. New projects include the expansion of the Lake Champlain Basin Science Center, redevelopment of the Moran Generating Station, improved pedestrian and public transit connections with downtown, and access to adjoining neighborhoods to name only a few. This plan is incorporated into this municipal development plan by reference. The City's priorities for the Downtown Waterfront have most recently been articulated in planBTV-Downtown & Waterfront Plan adopted in 2013. planBTV includes many of the projects identified in the 1998 Waterfront Revitalization Plan.
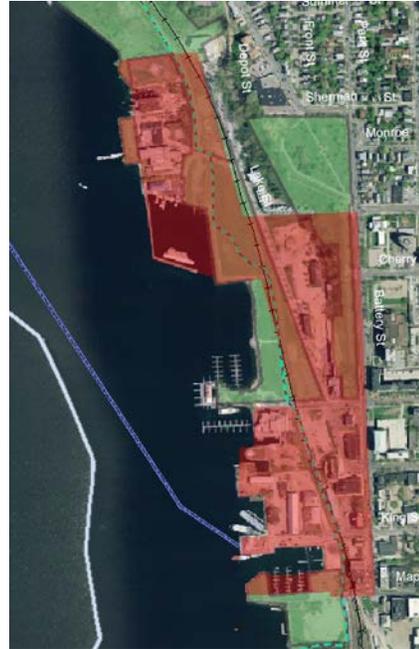
- Urban Reserve

The 40-acre "Urban Reserve" north of the Moran Plant remains largely vacant, and has limited infrastructure making new development costly. In proposing the original purchase of the Urban Reserve, the *1990 Urban Renewal Plan for the Waterfront Revitalization District* stated very clearly that one of the principal motivations for creating this "Urban Reserve" was: "to reserve the right for future generations to determine what level of development should occur at this site." The citizens of Burlington maintain a strong interest and concern for the future of their waterfront in general, and the Urban Reserve in particular.

In October 1997, the City Council adopted an *Urban Reserve Interim Use and Stewardship Plan*, which recommended that the City maintain the property as passively-used and publicly-accessible open space allowing the continued re-naturalization of the property and reseeding, with opportunities for public education, enjoyment and informal passive recreation. Additionally, the

plan committed to the continued investigation and limited remediation of this brownfield site, and to maintaining remnants of the property's railroad and industrial heritage. The final use of this property remains a large and important issue for the city. A long-term plan for the property is a priority of the City

INSTITUTIONS

Burlington's institutions of higher education and health care play an important role in the city's economy and overall vitality. Not only do they provide nearly 30 percent of all jobs in the city, they serve statewide educational and health care needs, attract new and expanded business to the region, and broaden cultural opportunities within the city. In order to compete in their respective missions, they must continue to change and grow over time. The Institutions do, however, pose impacts on adjoining residential neighborhoods. Issues such as noise, parking, traffic, housing costs and neighborhood character continue to be of great concern.

A more urban configuration of each core campus, fixed growth boundaries, more efficient use of existing facilities, and cooperative relationships such as CATMA (Campus Area Transportation Management Association) and partnerships such as UVM's Winooski Falls apartments, will help the Institutions develop without further intrusion into the neighborhoods. In recent years, the City, the institutions and the neighborhoods have worked jointly on the creation of Institutional Core Overlay (ICO) Zones that would concentrate development within their respective core campuses. To-date core campuses have been adopted for Champlain College, UVM and Fletcher Allen.

As the Institutions focus future growth within these core campuses, a fresh look should be taken at the current Institutional (I) zoning district boundaries, and allowed densities outside of the core campuses, to ensure both continue to reinforce safe and healthy neighborhoods with vital and growing institutions.

- University of Vermont

The UVM Board of Trustees are considering a new Campus Master Plan. This plan outlines a number of strategies to concentrate university functions within existing boundaries, improve circulation within and through the various campuses (Academic, Athletic, and Redstone), and make more efficient use of existing sites for future development. Additionally, UVM has entered into several partnerships with a private developer to provide housing for students This is a good model that should be considered for use in Burlington's City Center as well. Finally, there may be opportunities to create and locate research and development space in the city's enterprise district as a means of supporting new business

Ira Allen Chapel

development and technology transfer. All of these go a long way towards balancing the future development needs of the University with a respect for the surrounding residential neighborhoods.

Waterman Building

Perhaps the biggest issue facing the University-City relationship continues to be that of student housing. Students have a tremendous impact on the availability and affordability of housing in the city as well as the quality of life in the residential neighborhoods surrounding the campus. While not all students who live in rental housing attend the University, it has a dominating influence given its size and the composition of its undergraduate population.

The University and the City have struggled over this issue for decades with little result. As part of a City-University agreement, UVM is working to provide additional on-campus housing at University Heights. This is an important and welcomed step, but more will need to be done in coming years to absorb a higher percentage of students who live on-campus. The University currently houses approximately 60% of its undergrad degree students on-campus. Other opportunities for additional on-campus housing include the recently acquired Trinity campus and Redstone campus.

The University and the City must also continue to address quality-of-life issues faced by the residential neighborhoods surrounding the campus. Problems over noise, traffic, parking, and vandalism threaten the stability and tranquility of these residential areas. The University has also agreed to take action against any off-campus student misconduct.

- Champlain College

Champlain College is a small private college located between the University of Vermont and the downtown. Champlain was established in 1878 as a business college, and operated as a two-year college until 1991 when its first bachelor's degree was offered. A graduate program was added in 2002. Today, Champlain occupies 40 buildings on over 22 acres, and serves approximately 2,000 students. Back in 2007, Champlain College developed a campus master plan that address how and where Champlain College will grow in the future to meet it's goal of increasing its student base without further intrusion into the surrounding residential neighborhood. Opportunities for consideration may include apartment-style housing in the City Center.

- Fletcher Allen Health Care

Fletcher Allen has made an important strategic decision to make a significant investment in expanding and revitalizing its MCHV-Campus in Burlington. This $70 million, 607,000 square-foot development project created a new outpatient treatment facility on the MCHV Campus, a new Education Center that physically integrates the hospital complex with the adjacent Medical School at the University, and more than 1,200 underground parking spaces. This development has been largely welcomed by the City and nearby residents. However, concerns over traffic into and through the facility, the loss of greenspace, and threats to historic resources and water quality in Centennial Brook remain. As their attention turns to future needs and facilities, including those of the in-patient portion of the hospital, Fletcher Allen will need to continue its efforts to minimize the impacts of parking and traffic, preserve the remaining historic buildings and valued open spaces, and reduce stormwater runoff to allay these concerns.

NEIGHBORHOOD ACTIVITY CENTERS

The *1991 Burlington Municipal Development Plan* introduced the concept of the "Neighborhood Activity Center" (NAC) to encourage small-scale commercial and mixed-use development in convenient neighborhood locations. The NAC applies the growth center concept[5] at a neighborhood scale.

The intent of the NAC is to take underutilized commercial areas within a residential area, and transform them into higher-density, compact mixed-use settlements. These areas will typically include childcare centers, local banks, grocery stores, offices, branch libraries, pharmacies, small businesses, churches, and housing. NAC's are close to where people live and oriented to serving the neighborhood, thus lessening the need to drive for local errands and convenience shopping. They may also be attractive locations for community technology centers that provide support and resources to small businesses, and serve as remote offices for larger businesses offering employment for nearby residents.
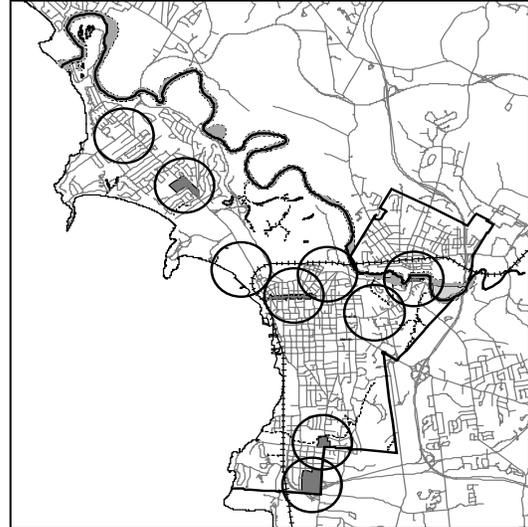
Neighborhood Activity Centers

In 1994, the City completed a conceptual plan for two Neighborhood Activity Centers – one located on North Avenue at the Ethan Allen Shopping Center, and the other on North Winooski Avenue and Archibald Street. The Ethan Allen Shopping Center has seen a significant increase in the number of housing units, with the recent development of both senior and rental units. Today, the City takes a broader view of NAC's, and recognizes their potential application across a wider variety of sites around the city. If they are to be successful, they must be within walking distance of nearby residents, and therefore more than just two or three locations throughout the city are necessary. They also need to be designed and scaled to serve the surrounding neighborhood; therefore, a "one size fits all" approach to density or uses may not be appropriate. Finally, they should be linked to the center city via active public transit corridors. Additional locations for the development of Neighborhood Activity Centers include North Street's Commercial District, the intersections of Shelburne Street and Flynn Avenue, North Avenue and Plattsburg Avenue, Colchester Avenue and Mill Street. Each site will be evaluated for its ability to serve such a function, and appropriate zoning changes will be developed on a case-by-case basis.

The City will draw infill development into these areas through revised zoning that promotes neighborhood-scale mixed uses, increased density, smaller setbacks, additional parking waivers, and height bonuses for shared and below-ground parking. Convenient access to transit, and bicycle and pedestrian routes, must also be provided. Finally, it is of critical importance that these areas maintain clear and distinct boundaries from the surrounding neighborhood to prevent the spread of the higher densities. Options for consideration will include the creation of form-based regulations for these areas.

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[5] Growth Centers are areas of higher density, typically mixed-use, development surrounded by working farm and forestland or lower density development.

- North Street Commercial District

In 1998, the City completed a revitalization plan for North Street's commercial district. The North Street Plan was adopted by the City Council with a specific recommendation that the City's Municipal Development Plan incorporate its principle recommendations. ***This Plan for the revitalization of the North Street Commercial District is thus incorporated by reference.***

Historically, the western portion of North Street (west of No. Winooski Ave.) has served as "Main Street" for Burlington's Old North End (ONE) neighborhood. The intent of the Plan is to create a more livable and pedestrian-friendly environment, and restore community pride and vitality in the commercial district. In doing so, the same concept of higher-density, neighborhood-oriented uses envisioned for NAC's were applied as a strategy for future development and revitalization of this struggling commercial district.

The intent behind the creation of the Plan was to create a mixed-use area that supports locally-owned destination businesses and encourages small, neighborhood-oriented businesses. The traditionally working class and ethnically diverse character of the neighborhood will be maintained and supported, and the history of North Street and the Old North End Neighborhood should be celebrated and communicated. The City was successful in listing the North Street Commercial District to the National Register of Historic Places, and will continue to seek Downtown District designation from the VT Downtown Program so that this area can benefit from the full range of incentives for redevelopment available at the state and federal level.
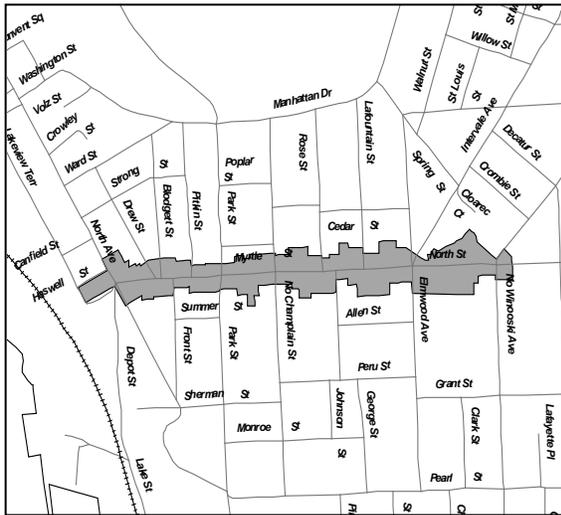
North Street Commercial District

The principal recommendations of the Plan focus on the safe use and enjoyment of the streetscape for pedestrians; a range of streetscape improvements including narrowing the street, widening the sidewalk, raised and painted crosswalks, and creating bump-outs at intersections and crosswalks. Other improvements include adding street trees and landscaping, the undergrounding of all overhead utilities, and a reconfiguration of the street lighting. While the streetscape and street reconfiguration portions of this Plan where completed in 2005, the City must still work hard with local businesses and residents to ensure the vision for this neighborhood center is fully realized.
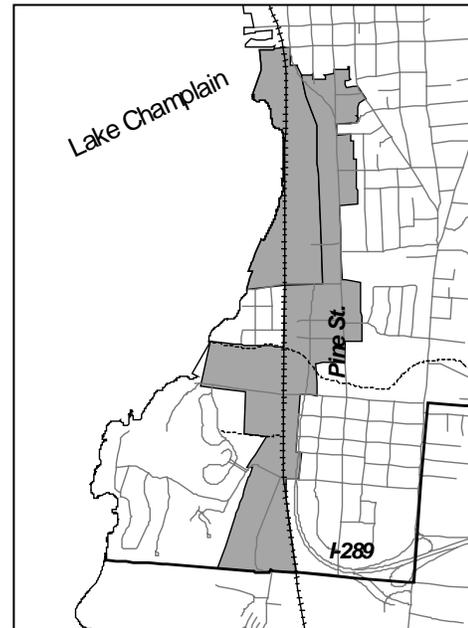
THE ENTERPRISE DISTRICT

Historically, Burlington's major industrial corridor, the Enterprise District along and west of Pine Street, has seen new and expanded industrial uses, and the adaptive reuse of old warehouses and factories. The Enterprise District adjacent to the Pine Street corridor is one of the only places in the city where many commercial-industrial uses are permitted. Traditionally, these businesses have provided many well-paying jobs to both white and blue-collar workers, added significantly to the regional economy and city tax-base, and helped to underwrite the cost of city services and utilities.

However, this area is also adjacent to several residential neighborhoods, and there is growing pressure to allow new uses such as retail and housing that may not be complementary to the area's commercial-industrial character and function. Nearby residents are particularly concerned about the impact of through-traffic, particularly trucks, on neighborhood streets; noise from nearby industrial uses; safety of pedestrians and children; and access to local parks and the lake. The City is working to protect these residential areas from the impacts of nearby industrial uses, and will promote future uses that are less transportation and trucking oriented. Traffic calming techniques and designated truck routes have been employed to discourage through-traffic and trucks in residential areas. The long anticipated completion of the Champlain Parkway should also help to address many of the traffic concerns.

Tensions over the future direction of this portion of the city remain. Is it to continue as a predominantly commercial-industrial district that supports value-added enterprise, or is it to convert to a more mixed-use commercial district that supports additional housing? While significant change has occurred in the City's manufacturing base over the years, many opportunities remain for the future. The City must maintain some place where commercial and industrial uses can remain and flourish if the City's objectives as a sustainable community are to be realized. The location, extent and character of this (or these) area(s) must be evaluated within the context of overall citywide objectives for land use and community development.

Planning is underway for the redevelopment of a significant portion of this area surrounding the General Dynamics' site into largely commercial offices. The future of the railyard immediately to the north could well be a deciding factor as well. If the railyard operations are moved out of the city, opportunities to expand rail use and relieve future truck traffic will be lost. The City must first consider the long-term impact on its future commercial-industrial base before turning its back on this important piece of transportation infrastructure. If additional jobs are to be brought into the area, then there must be recognition of the housing demand that this will create and the impact on an already severe housing shortage. Finally, redevelopment of the railyards should keep in mind the recommendations of the *Burlington Harbor Management Plan* that designates this area for seasonal marina services.

Working with businesses and residents, the City must identify areas within the district that remain viable for continued commercial-industrial use, and assess the fiscal impact to the tax-base and

Enterprise Zoning District

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ratepayers of any proposed conversion away from commercial-industrial uses. If the City chooses to maintain the commercial-industrial nature of the district, it must then aggressively protect this area from intrusion by incompatible uses, and work to minimize any impacts on adjacent residential areas. Examples should include greater use of rail to minimize truck traffic, and permanent buffers (either vegetative or lower intensity uses) from residential areas. Over the next few years the City will develop a detailed sector plan (planBTV-South End) that outlines future development, infrastructure, greenspace, and circulation needs of this portion of the city.

BROWNFIELDS[6]

The *Burlington Brownfields Pilot Initiative* is an US Environmental Protection Agency (EPA) program that facilitates redevelopment of properties with real or perceived contamination issues through the assessment of environmental risk, remediation planning, and relief from liability. The City has made the cleanup and redevelopment of Brownfields a high priority to improve the environment, increase the tax base, create and retain jobs, and curb sprawl.

The Community & Economic Development Office (CEDO) works with non-profit partners, other City Departments, commercial brokers, developers, and Vermont Dept. of Environmental Conservation to expedite complex transactions.

Completed Projects include Architectural Salvage Warehouse, Mill View Apartments, Multigenerational Center, the temporary VT Transit Passenger Terminal, Thelma Maple Housing Coop, and Metalworks.

Recent projects include:

- **Vermont Transit Bus Barns**: Bus and trolley maintenance and repair facility into 25 units of affordable housing and 20,000 square feet of new commercial space.
- **Urban Reserve**: Assessment and cleanup of former bulk oil storage facility.
- **Moran Plant**: Abandoned coal-fired power plant.
- **Pine Street**: Potential 100,000 square foot new commercial/retail development.
- **Vermont Railway Rail Yard**: Potential move of railway being studied: possible 13 acres freed up for mixed-use development
- **General Dynamics Armament Systems (GDAS):** Possible construction of new world headquarters and redevelopment of 225,000 square foot manufacturing facility.
- **Central Market**: conversion of former dairy/ice cream factory/police station into food market.

City of Neighborhoods

Burlington's vitality and sense of community comes largely from the strength of its residential neighborhoods and the diversity of its people. Neighborhood boundaries are defined by where you live, and more importantly the <u>people</u> who live near you. It is this sense of place, and the quality of the built and natural environment, that form the foundation of Burlington's outstanding quality of life.

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[6] Brownfields: Abandoned, idled, or under-used industrial and commercial facilities where expansion or redevelopment is complicated by real or perceived environmental contamination. (US EPA)

The individuality of each residential area of the city must be respected in order to support and strengthen established neighborhood land use and design patterns, and most importantly the quality of life enjoyed by the residents. For example, setbacks and building height should generally reflect existing neighborhood patterns, but they needn't be uniform throughout the city. There are places in the city (downtown, NAC's, and other areas where higher density development is desired) where smaller setbacks should be allowed. Commercial uses, except authorized home occupations, should largely be excluded from residential areas except where they are part of a neighborhood activity center. The stability and quiet of low-density residential areas should be protected to the greatest extent possible. Working with neighborhood representatives, the City needs to identify design features worthy of protection, and work with citizens and the private sector to improve the livability of neighborhoods.

Within each neighborhood, this Plan vigorously promotes greater opportunities for pedestrian and bicycle travel, access to public transportation, traffic calming of residential streets, concentrations of mixed-use development that provide convenient neighborhood services, restoration of older buildings, and public greenspace in an effort to enhance neighborhood identity and character. Future opportunities include:

- Residential uses, including single-room occupancy (SRO) with no kitchens, in upper floors of commercial buildings.

- Performance standards to protect residential neighborhoods from the impacts of adjacent industry and commercial development.

- Creation of mixed-use higher-density neighborhood activity centers to put daily services and jobs within walking distance of residential areas.

- Improving the frequency and convenience of public transit, and developing creative parking alternatives for higher density developments.

- Offering childcare facilities in all neighborhoods.

- Increasing density in Neighborhood Activity Centers and designated locations along major transit corridors.

- Embarking on a greening program to replace unnecessary pavement with landscaping; encourage a diversity of open spaces accessible to each neighborhood including pocket parks and community gardens; the promotion of rooftop and wildflower gardens, and a network of paths and wildlife travel corridors.

NEIGHBORHOODS IN TRANSITION

Many neighborhoods in the city are in the process of changing or reinforcing their own identity. Through sensitive and strategic design, regulation, enforcement, and investment, the City can target these areas in order to fulfill community goals.

Riverside Avenue

Historically a mix of residential, industrial, public, and commercial uses, Riverside Avenue was recently reconstructed to clearly define the street edge, improve access and safety for pedestrians and bicycles, and improve the flow of traffic. The south side of the street has been the site of rapid residential development. Ways must be found to alleviate traffic congestion, improve pedestrian connections into adjoining neighborhoods, and contain stormwater. Strong erosion control measures are necessary to protect steep slopes and water quality. The northern side of the road parallels the Winooski River along a very steep embankment. This area is increasingly prone to slope instability and some areas have recently failed forcing the City to condemn some existing buildings.
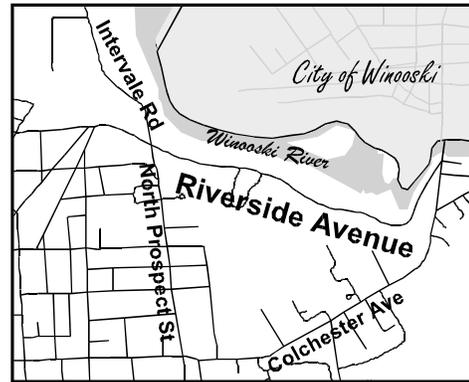

Riverside Avenue Area

The City will encourage a more urban configuration of higher-density mixed residential and commercial uses on the south side of the street. The street itself must continue to serve as an important thoroughfare for the city while providing safe opportunities for pedestrians and cyclists. The area along the river bank is ideal for a greenway corridor connecting to the Intervale, providing a buffer from the busy street for the river and the trails along the river bank. The City is considering rezoning portions of the north side of Riverside Avenue along the river to an open space zone such as Recreation/Conservation/Open Space (RCO), as well as long-term protection through acquisition for conservation and the use of transferable development rights.

Mill Street-Grove Street Neighborhood

At the eastern end of Riverside Avenue is the Mill Street-Grove Street neighborhood. This area lies directly across the Winooski River from the City of Winooski, and is connected with the City of South Burlington via Patchen Road. The neighborhood serves as an important gateway to **both** cities of Burlington and Winooski.

As with Riverside Avenue, areas adjacent to the river along Grove Street have very steep banks and sensitive habitats. These must be cleaned-up and protected to prevent degradation, erosion and water quality. Opportunities to preserve a greenway corridor along the river to protect water quality, preserve wildlife travel corridors, and provide passive recreation are a high priority.
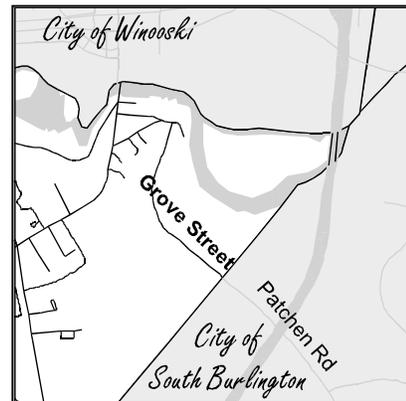
Mill Street-Grove Street Area

Mill Street is a neighborhood with a rich history, and strong ties to the City of Winooski. The riverfront surrounding the Winooski Falls and the associated mill buildings are important features – both naturally and historically. Pedestrian access across the river must be ensured as many residents are served by businesses and services found in Winooski. A proposal to provide a pedestrian bridge across the river in this area will go a long way towards improving connections across the river.

The Old North End Enterprise Community

Neighborhoods immediately north and south of downtown have suffered neglect and disinvestment over the years. These areas need public and private investment in infrastructure, housing, and street amenities to improve their residential and commercial environment.

In 1994, a portion of the City of Burlington was named an *Enterprise Community* by the US Department of Housing & Urban Development - one of 75 nationally. This area encompasses the neighborhoods of the Old North End, Downtown Waterfront, Central Business District, and the neighborhoods immediately south of the CBD generally bounded by King and Willard Streets (Census Tracts 3, 4, 5 & 10). This area is defined by its pervasive poverty, high unemployment, and general distress. In fact, no other neighborhood in Vermont matches Burlington's Enterprise Community (EC) in terms of population living below the poverty level.
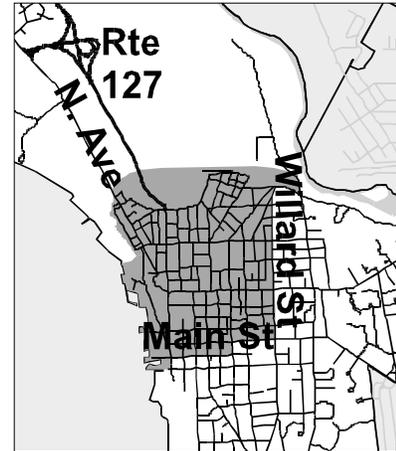

Old North End Enterprise

In the face of many challenges, the EC remains a viable residential and commercial area with many assets and opportunities. The housing stock is in poor condition, but repairable. Existing small business require only a bit more space, assistance or capital in order to prosper. There exists a well-established network of "third-sector" organizations with years of experience. In addition, perhaps more importantly, there remains a sense of community and neighborhood identity that is working hard to make the EC a better place. Several projects are underway or have been recently completed that will help to advance the goals of the neighborhood including:

- **Vermont Transit Bus Barns**: The conversion of an historic bus and trolley maintenance and repair facility into 25 units of affordable housing and 20,000 square feet of new commercial space.
- **Community Health Center**: An extensive redevelopment and expansion of the Community Health Center facility on Manhattan Drive.
- **North Street Commercial District Revitalization Plan:** A combination of streetscape, historic preservation, and business development strategies to revitalize the Old North End's "Main Street."
- **North Winooski Avenue Rehabilitation**: Streetscape and traffic flow improvements.

It continues to be a high priority of the City to actively promote redevelopment and investment within the Enterprise Community, and to implement the strategies found in *Common Ground: A Strategic Plan for the Old North End Enterprise Community* which is incorporated into this Plan by reference.

South End Neighborhoods

As discussed previously, Burlington's "South End" neighborhoods have become increasingly attractive as places to live given their proximity to downtown and the lake. However, portions of this area are part of an industrial zone that extends southward along the lakeshore from the downtown. Obvious conflicts have been the result. Residents are faced more and more with the impacts (most typically noise and truck traffic) resulting from the redevelopment and expansion of industrial uses nearby. Industrial properties are faced with angry neighbors with complaints over traffic, noise, and loss of open space. This is increasingly a problem as the City looks to support and retain existing manufacturing jobs and attract additional businesses to this area - the largest industrial zone in the city, and at the same time improve the livability of its residential neighborhoods.
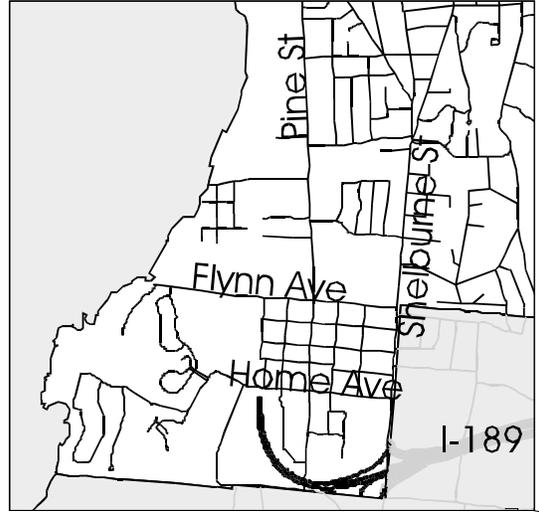
Burlington's South End

Current zoning offers little relief. Buffers between residential and industrial zones are small, and use restrictions do little to limit the types of uses that are most likely to generate high volumes of truck traffic. At the same time, zoning has encouraged increased residential development near to what has traditionally been a predominately industrial area. The result has been the completion of several large residential developments (Red Rocks, Lake Forest, Ledgewood, Southwind). The outcome of these converging policies has had unsatisfactory impacts on many South End residents, as well as posing uncertainty for existing and future industrial users.

The City must take immediate steps to ensure industrial uses adjacent to residential areas minimize their impacts on the residential character of the South End especially with regard to through traffic, air quality, noise and safety for cyclists and pedestrians - especially young children. At the same time, the City must take steps to protect core industrial areas by limiting scattered infill residential development and other uses that may threaten to erode the continued viability of industry and manufacturing.
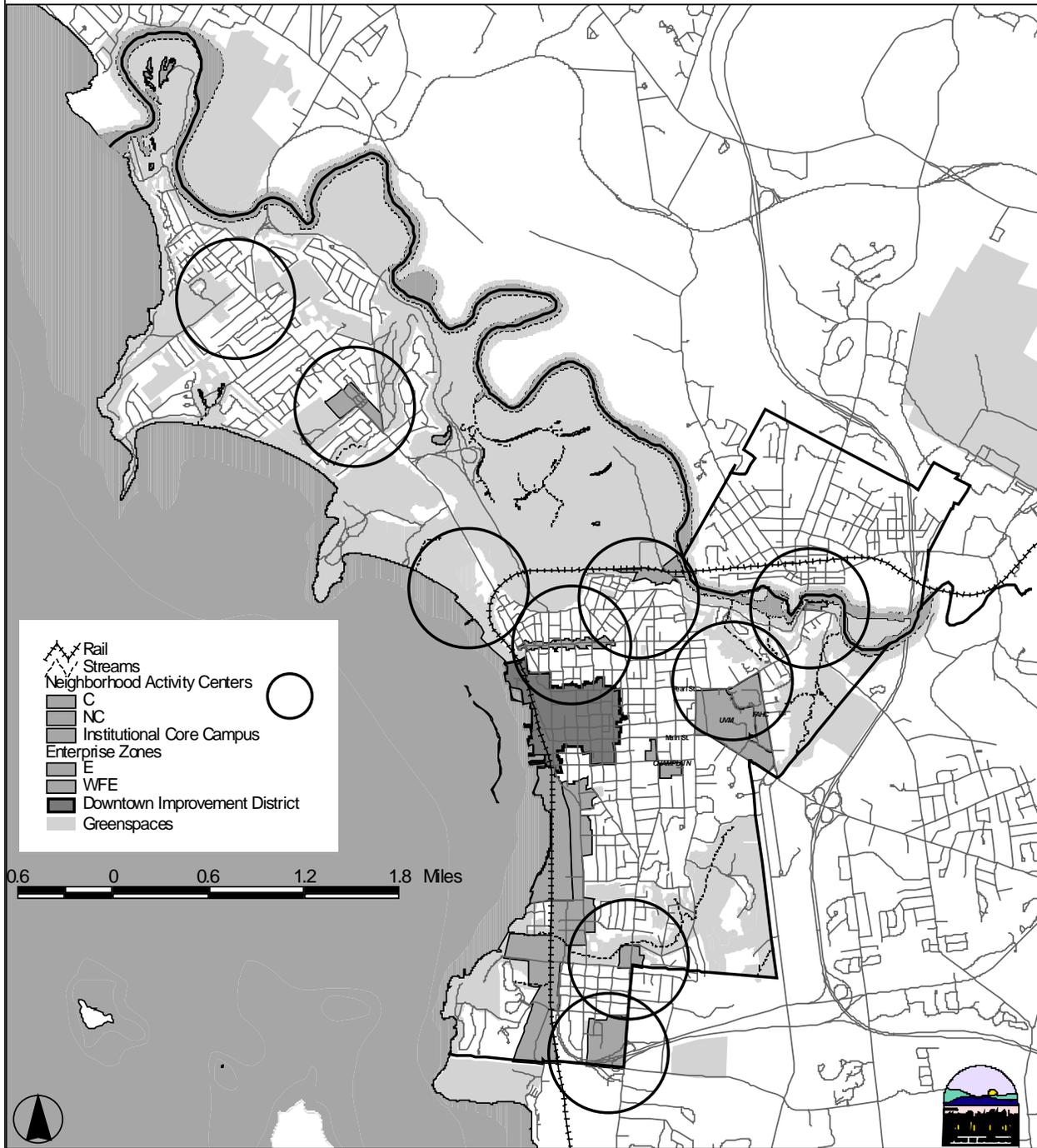

Lakeside Avenue

Pine Street Sculpture

City of Burlington, VT
2001 Municipal Development Plan

Future Land Use Map
- Centers for Growth and Development -

Legend:

- Rail
- Streams
- Neighborhood Activity Centers
- C
- NC
- Institutional Core Campus

Enterprise Zones
- E
- WFE
- Downtown Improvement District
- Greenspaces

0.6   0   0.6   1.2   1.8   Miles

Action Item	Lead Agency	Secondary Agencies
Undertake an analysis to better understand the physical capacity of specific parts of the city to accommodate additional development.	Planning & Zoning	CEDO
Completion of a study that evaluates the nature, extent and scale of future upland development needed to serve the water-based activities proposed by the *Harbor Plan*.	Parks & Recreation	Planning & Zoning CEDO
Continue the implementation of the *North Street Commercial District Revitalization Plan*.	CEDO Public Works BED	Planning & Zoning Parks & Recreation
Develop a planBTV-South End area master plan to identify areas within the south end Enterprise Zoning District that remain viable for continued commercial-industrial use, and assess the fiscal impact to the tax-base and ratepayers of any proposed conversion away from commercial-industrial uses.	Planning & Zoning CEDO	
Continue the cleanup and redevelopment of Brownfields a high priority to improve the environment, increase the tax base, create and retain jobs, and curb sprawl.	CEDO	
Consider a rezoning for the former-St. Joseph's Orphanage that would allow for institutional campus development.	Planning & Zoning CEDO	
Continue the implementation of the 2000 *Open Space Protection Plan and its 2013 Update*.	Conservation Board Planning & Zoning Parks & Recreation	
Advocate land use and development policy and strategies that further Burlington's role as the historic core of the region, limit suburban sprawl, and encourage future development to be concentrated within local and regional growth centers as a member of the Chittenden County RPC.	Planning & Zoning Public Works CEDO	
Re-examine the Institutional District boundaries and allowed densities in those areas where they adjoin residential neighborhoods.	Planning & Zoning	
Develop more plans for Riverside Avenue and the Pine Street corridor through the use of design charrettes or preparation of a detailed sector plan.	Planning & Zoning	
Monitor remediation and interim use of the Urban Reserve.	Planning & Zoning CEDO	

Examine the opportunities for increasing allowable densities along selected portions of major transit corridors.	Planning & Zoning	CEDO
Study the feasibility of using transfer of development rights program for portions of the city.	Planning & Zoning	CEDO
Prepare a plan for the development of a network of connecting mid-block pathways within the downtown and into adjacent neighborhoods, and add these corridors to the City's Official Map.	Public Works	Planning & Zoning CEDO
Monitor the expansion of FAHC to ensure issues regarding traffic, historic buildings and stormwater runoff are carefully addressed.	Planning & Zoning	Public Works
Monitor the impact of the "Functional Family" ordinance on the supply and affordability of housing.	CEDO	

Vision Statement

This Plan envisions Burlington as a city where...

...Burlington's natural environment is recognized as a fundamental asset whose protection is essential to our continued health, high quality of life, and future development. Significant public and private investment have improved the quality of our water, air, and soils, and natural filtration systems and processes are used on par with more engineered solutions. Burlington has committed itself to reducing greenhouse gas emissions and improving the quality of our waters. A combination of purchases of land and easements, responsible stewardship, and creative site planning has permanently protected significant natural areas, community forests, wildlife corridors, and important natural systems for the benefit and enjoyment of current and future generations. Natural areas, parklands, and greenbelts join development with conservation throughout the urban fabric of the city.

CITY POLICIES

THE CITY OF BURLINGTON WILL...

- **Work toward a sustainable relationship with the natural environment.**

- **Protect its natural resources from degradation, including: air, water, soils, plant and animal life, agricultural lands, forests, geologic features, and scenic areas.**

- **Maintain or increase the existing ratio of publicly owned or permanently protected natural areas to developed land.**

- **Protect and preserve natural areas and open spaces of local, regional, and statewide significance for the benefit of future generations.**

- **Protect, maintain, and enhance the City's urban forest, including both large patches of woods and wooded corridors/treebelts that provide places of refuge and travel corridors for wildlife and people.**

- **Protect the shorelines and waters of Lake Champlain, the Winooski River, and other water sources from damage and degradation.**

- **Maintain and improve the integrity of natural and recreational systems within the City.**

- **Preserve scenic viewpoints and viewsheds, and insure public access to natural areas where appropriate.**

- **Increase the number and quality of small urban open spaces, especially in underserved neighborhoods of the city.**

- **Guide a higher proportion of future development into the city center and neighborhood activity centers.**

- **Ensure long-term stewardship and appropriate public access to natural areas and open space, including improved opportunities for pedestrian access and interaction throughout the City.**

Green Frog

North Beach Wetland

Lake Champlain Shore

Winooski River Kayakers

Sustainable development in the City of Burlington begins with a respect and understanding of the natural systems that provide us with the resources necessary to function and grow, and that support our outstanding natural surroundings. These include basic functions such as clean air and water, but also include stable and fertile soils and irreplaceable natural communities. These resources and natural systems not only provide drinking water, breathable air, habitats, and agricultural opportunities, but also serve as the cornerstone to enhancing our overall quality of life. They offer numerous recreational opportunities and enhance our competitive advantage for future growth and prosperity.

This section outlines Burlington's policies and priorities for protecting and sustaining its most important environmental and natural features.

An Ecosystem Perspective

Burlington is part of the largest metropolitan area in the Lake Champlain Basin. Located on a peninsula between the Winooski River and Lake Champlain, our urban community is intricately linked with the many facets of the larger basin ecosystem, and beyond. Although much of the land within the city has been altered to provide homes, employment, and recreational opportunities, our relationship and responsibilities to the natural environment are of no less significance. Our physical, emotional, and cultural well-being are inseparably linked to the health of natural systems. Burlington residents have strongly voiced their concern for the city's natural environment and their desire to protect it.

Burlington's physical setting contributes much to our uniqueness. Among the obvious features is the city's relationship to water. Of the 32 miles that make up our political boundary, 25 miles are defined by the Winooski River and Lake Champlain. No point in the city lies more than 1 3/4 miles from either of these two water bodies. When we consider the streams that flow through the city, it's clear that our daily activities have the potential for adversely impacting our own drinking water, healthy aquatic life, and high quality recreational experiences.

Lake Champlain and the Winooski River are two of the region's most valued resources. They provide extensive aquatic habitat, scenic beauty, recreation opportunities, even food, and drinking water. Lake Champlain provides our drinking water as well as that of dozens of other communities within the region. The lake and river are simply elements of a much larger and very complex ecosystem - including the *Lake Champlain Basin*, spanning 8,234 square miles; the 10 million acre *Champlain Adirondack Biosphere Reserve*[1] designated by the United Nations in 1989; and, the 26 million acre *Northern Forest* stretching from eastern Maine to the Tug Hill region of central New

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[1] An honorary designation bestowed by the United Nations to encourage social and economic vitality, and preserve and improve environmental health.

York. For these and other reasons, many of our local activities must be considered within a larger regional context.

Stormwater runoff is the most significant source of nonpoint source water pollution in the United States and within the Champlain Basin. Recognizing the importance of improving the water quality of stormwater runoff, Burlington established a Stormwater Program in 2009. The Program is administered by the Department of Public works but entails cross-departmental coordination for development review, parks & public lands maintenance, and transportation infrastructure. The Stormwater Program is also involved in the oversight of the operations and maintenance of the city's combined and separate storm sewer systems.

Burlington's combined sewer system handles wastewater and stormwater, primarily in the Downtown and South End, but also in parts of the New North End. Stormwater runoff entering the combined system is treated and discharges into the lake and river. Large storms, however, can overwhelm the combined sewer system and cause overflows with little treatment into the receiving waters. Emphasis has been placed on capturing stormwater onsite where it falls and either infiltrating it into the ground or slowly releasing it into the combined system. Doing so lessens peak flows and reduces the chances of overflows.

The City's separate storm system serves much of the New North End and small sections of other city neighborhoods. Stormwater flowing through this separate system flow's untreated into the lake and the river. As more and more of the city's land area is made impervious, the volume of runoff will increase, carrying motor vehicle oil, road salt, household chemicals, and other toxins directly into the lake and river. To address this, emphasis has been placed on improving onsite water quality by way of infiltration into the ground or by providing filtration of runoff prior to offsite discharge into the separate system. The City has also limited the use of hazardous substances on lawns and green areas.

The long-term effects of increased boating and recreational uses on and along the lake remain unclear. The lake cannot indefinitely neutralize all the toxins, chemicals, and wastes discharged into it. Development up and down the lake will further degrade the quality of the water. Burlington is an active partner with other municipalities in the Lake Champlain Basin working to improve water quality and manage the recreational carrying capacity of this important body of water.

An Economic Asset

The economic, cultural, public safety, and health benefits of balancing community development with environmental protection are increasingly being quantified in economic, as well as social measures that show them to bring significant and diverse values to society. Open space protection is an important component behind successful community development projects, and a major contributor to the character of place that forms the foundation of our economy. Community investment and planning will determine where and how development occurs, how cost effective it is, and whether the most important natural systems are preserved and sustained.

There is a long-held belief that undeveloped land is not economically productive, and that it only really carries its weight in the local tax base after it is developed. Communities are quickly learning the opposite. More and more studies are showing that conserving open land and choosing carefully where development goes is not contrary to economic health, but essential to it. Corporate CEO's say quality of life for employees is the third-most important factor in locating a

business, behind access to domestic markets and availability of skilled labor. Owners of small companies ranked recreation/parks/open space as the highest priority in choosing a new location.

The choice we face is not one of environment and aesthetics versus economics, after all. Instead, the fact is that land conservation is a sound investment. Studies comparing the fiscal impacts of development to those of open space protection have found that open space preservation has a more positive impact on a community's economy than most conventional forms of suburban-style

Burlington Bike Path

development, even when property is preserved through public dollars. Weighing the true costs and benefits of development and open space protection is the key to making the right investment choices, for in the final analysis, the cost of protecting a community's important natural systems and open spaces may seem high, but the cost of not protecting them may be much, much higher.

Urban Ecosystems

The elements of the natural world do not recognize political boundaries, nor can they be compartmentalized, fenced off, and isolated from our day-to-day activities. Rainwater flows off rooftops, over lawns, and down streets along a path towards the lake. The air we breathe flows freely through the mountains, forests, and meadows, across highways, homes, and industry. Much of what we do, no matter where we may happen to be, has the potential for impacting the natural environment.
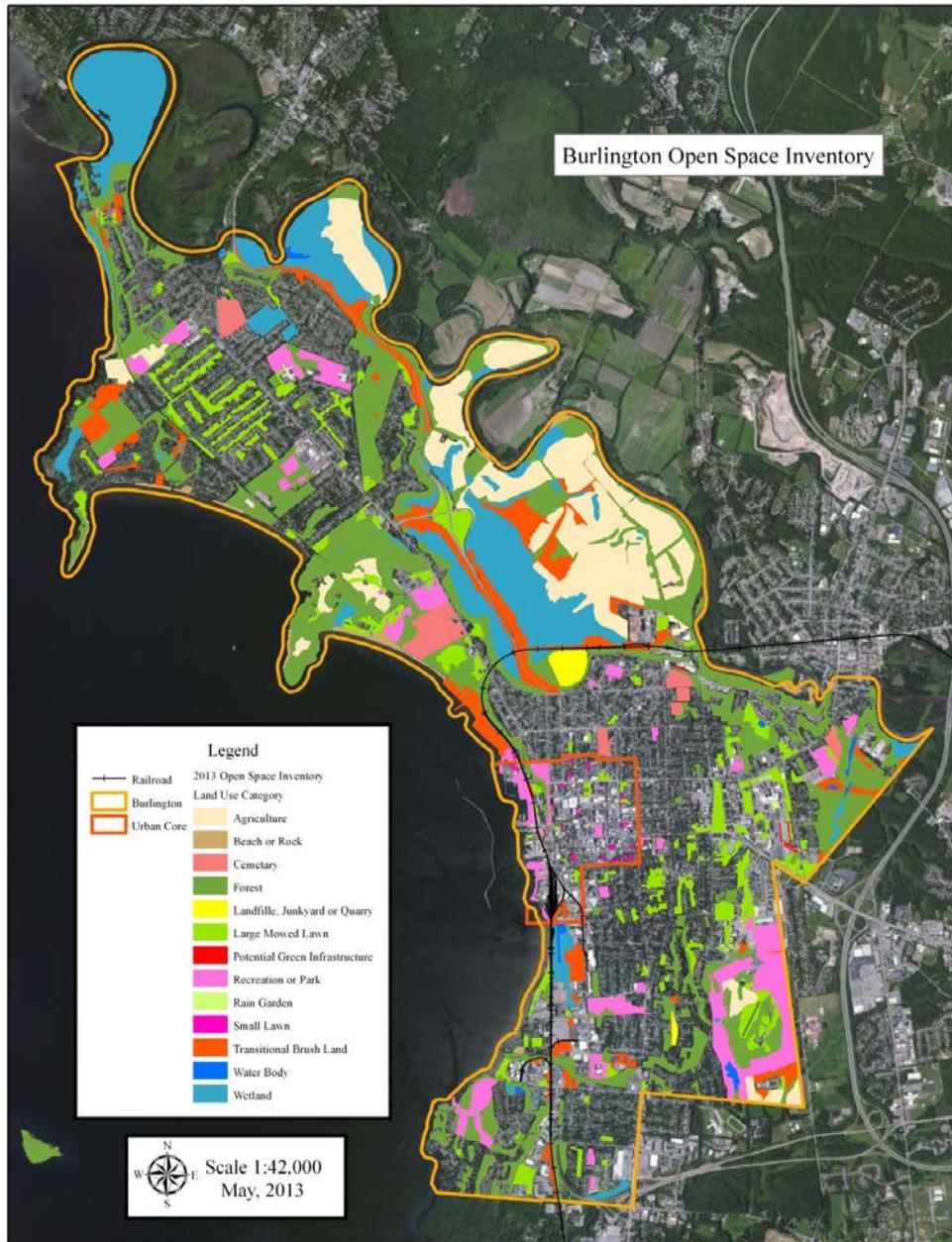
Traditionally, planning for the environment and natural resources has focused on specific issues affecting public health (water quality, toxic reduction, air pollution, etc.) and the protection of individual sites or species. What these approaches often fail to consider is the fact that everything is interconnected. There is little value in protecting the site of an endangered plant population if the water flowing through the habitat is polluted. Typically, too much attention is focused on an individual plant or animal population, and not enough on the conditions that enable their existence or survival - their habitat.

Burlington recognizes its environment and natural landscape as part of an "urban ecosystem." This ecosystem includes not only natural resources, habitats and systems, but also human adaptations and enhancements such as street trees, culverted streams, and stormwater runoff. In order for growth and prosperity to be sustainable over time, future development must minimize its impact on the environment through proper location and site design, energy efficiency, waste reduction, and renewable and durable construction materials. Rivers and streams that serve a wetland, areas of forest cover that connect sustainable forest communities, and travel corridors that link important wildlife habitats all must be considered.

Open Space Protection Plan

In 2000, the city adopted its Open Space Protection Plan. That Plan created an inventory of open spaces within the city and identified several distinct open space categories – wetlands, riparian and littoral zones, and significant natural areas. The Plan also served as the foundation for the

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Conservation Legacy Program and associated Conservation Legacy Fund. The Conservation Legacy Program and associated fund enabled the city to play an active role in the acquisition and protection of significant open spaces within our urban ecosystem. The Open Space Protection Plan and its 2013 update identify and categorize open spaces within the city and establish priorities for acquisition and protection of these spaces and also identify opportunities for implementation of open space land uses such as urban agriculture and green infrastructure. Protection, acquisition, access, and facilitation of appropriate land uses are fundamental priorities of the Open Space Protection Plan.

Burlington Open Space Inventory

Legend

- Railroad
- Burlington
- Urban Core

2013 Open Space Inventory
Land Use Category

- Agriculture
- Beach or Rock
- Cemetary
- Forest
- Landfille, Junkyard or Quarry
- Large Mowed Lawn
- Potential Green Infrastructure
- Recreation or Park
- Rain Garden
- Small Lawn
- Transitional Brush Land
- Water Body
- Wetland

Scale 1:42,000
May, 2013

SHORELINES AND WETLANDS

Lands along the Winooski River and Lake Champlain are particularly fragile, and serve as important greenbelts surrounding the city. Vegetation along the shoreline of lakes and ponds, rivers and streams, and wetlands should be protected in order to stabilize the shoreline, filter surface runoff, and provide habitat for wildlife. In order to effectively provide these valuable ecosystem services, the Vermont Fish and Wildlife Department recommends setting aside buffers of naturally growing grasses, shrubs, and trees to protect the health of a stream, wetland, river, or lake. These buffers must be large enough to allow

Lake Champlain Shoreline

provision of their ecosystem services. City regulations protect these fragile areas with established buffer zones and require Conservation Board review of development proposals that may impact them.

Shorelines must not be used exclusively for private benefit. Appropriate public access should be encouraged in places that will not harm the ecology of these fragile areas. The City will work to establish public access through easements or acquisition in places that will not harm the natural environment along shorelines.

Wetlands are particularly important for protection. As development adds impervious surface, their role in capturing and treating urban runoff becomes more and more critical. City regulations protect the functions and values of wetlands and their associated buffer zones and require Conservation Board review of development proposals that may impact them.

SIGNIFICANT NATURAL AREAS

Natural areas are discrete areas of particular sensitivity that are recognized for their highly significant natural functions and values. These areas must be protected from the impact of development. Burlington contains 17 natural areas (including 6 urban wilds) as recognized by the Vermont Natural Heritage Program. These areas provide habitat for rare, threatened, or endangered species. Recent map work associated with the 2013 Open Space Protection Plan update establishes the basis for future onsite analysis to identify additional natural areas within the city that may warrant protection. This map identifies up to 22 distinct natural communities that may have been historically present in the city and may continue to exist today. City regulations recognize the importance of these natural areas with established buffer zones and require Conservation Board review of development proposals that may impact them. Where appropriate, the city should work towards improving public access to these natural areas.

STEEP SLOPES

There are many areas throughout the city with steep slopes. Construction, cutting and filling, and loss of vegetation on these sites can erode the slope's stability, degrade water quality, and diminish the city's natural landscape. Burlington has adopted regulations limiting development on these slopes to preserve scenic quality, and prevent unnecessary damage to shorelines or bodies of water from streambank erosion.

THE INTERVALE

The Intervale is a 350-acre area along the Winooski River just one mile from downtown Burlington, of which about half is in the floodplain. This unique land, formed by the meanderings and seasonal flooding of the Winooski River, is presently used for farming and community gardens, conservation and education, and power generation. The Intervale contains Burlington's largest natural areas, best agricultural soil, and largest extent of undeveloped land. Mostly protected by zoning, the Intervale continues to merit special attention.

Intervale Community Farm

The Intervale has an agricultural tradition that stretches back to its first human settlers. These first farmers were Native Americans who grew beans, corn and squash in the area for hundreds of years. American settlers, including Ethan Allen, later farmed the floodplain throughout the 18th and 19th centuries. The farms in the Intervale, however, declined in the last century, and it became a dumping ground in the 1960's and '70's. Dumps, highway construction and wetland drainage threatened the integrity of the Intervale and obscured its agricultural value.

Nevertheless, farming never completely ceased in the Intervale. The area represents the last prime farmland in the city boundaries. Even as the last dairy farms were waning, Burlington residents lobbied to open the area to residents who wanted to grow their own food. To fulfill this demand, Tommy Thompson of "Gardens for All" set up the first community gardens in 1970.

In 1986, the Intervale entered its current era when Will Raap, president of Gardener's Supply Company, decided to locate the headquarters of his national mail order company on the edge of the floodplain. Mr. Raap's vision of a sustainable farming experiment was solidified in 1988 when he formed the Intervale Foundation, a nonprofit organization committed to growing food using sustainable agriculture methods. The Foundation took over the task of acquiring additional acreage in the floodplain, administering an incubator program, managing the Green City Farm, and operating the compost project.

Today, the land is being revitalized, and is home to small incubator farms, community supported agriculture, and a community co-op farm. In addition to serving as the agricultural heart of Burlington, the Intervale is premier wildlife habitat with frequent sightings of deer, fox and mink. The Intervale also functions as an important recreational area for hikers, bikers, boaters, and others.

In 2012, the Intervale Foundation developed a management plan for its land area located in the floodplain to define and protect the areas natural character and agricultural potential. The

objectives of the Plan include enhancing agricultural productivity, protection of wildlife habitat, and management of the resource in the context of the ecological processes that shape it. The City supports these efforts, and will continue to work to protect this important part of the city for the purposes of conservation and open space, wildlife and scenic corridors, agricultural use and passive public recreation.

URBAN AGRICULTURE

Beyond the relatively large scale farmlands of the Intervale, urban agriculture includes smaller enterprises such as market gardens, community garden, and even backyard gardens. Growing interest in the pursuit of these smaller scale urban agricultural activities is reflected in the 2012 Urban Agriculture Task Force report. Map work associated with the 2013 Open Space Protection Plan update depicts prime agricultural soils within the city network of open spaces and provides an analysis neighborhoods currently underserved by community gardens. The city is presently developing regulations to facilitate greater urban agricultural opportunities.   The prime agricultural soils information and proximity analysis may be utilized to identify appropriate locations for new or expanded community gardens or other urban agricultural activities.

GREEN INFRASTRUCTURE

Green infrastructure includes urban green spaces that may be utilized as pocket parks to provide refuge from the urban hardscape. It also includes spaces that may be used as areas for integrated stormwater management in the form of rain gardens, infiltration parks, and the like. Capturing stormwater runoff in these urban green spaces is essential to improving water quality and lessening impacts to "gray" infrastructure such as separate and combined sewer systems. Presently, city regulations do little to encourage green infrastructure. Given the clear benefits to water quality and the lessened impacts to "gray" infrastructure, the city should establish incentives for green infrastructure. Mapping information contained within the 2013 Open Space Protection Plan update identifies green areas, particularly within the urban core, that may be appropriate for utilization as green infrastructure.

TRAILS

Trails provide access to open space lands for recreational purposes, transportation alternatives for walkers and bicyclists, and corridors for wildlife movement throughout the city. Analysis in the 2013 Open Space Protection Plan update reveals that Burlington has more than 40 miles of trails; however, much of the trail network exists in disconnected clusters. The city should pursue greater connectivity within its trail network to improve its overall functionality. Information within the Open Space update may be used to identify priority areas for connection and expansion.

FLOODPLAINS AND FLUVIAL EROSION HAZARD AREAS

Vermont statutes governing the use of areas likely to be flooded have been developed to protect people as well as natural resources. Burlington has also been a member of the National Flood Insurance Program (NFIP) since the 1980s and has therefore regulated development in the flood hazard areas since then. Two types of areas have been defined, flood hazard areas and floodways.

Flood hazard areas (Title 10 V.S.A., Chapter 32) are areas that have a 1 in 100 chance of being inundated by flood in any given year. They have been designated by both federal and state governments and are often updated. If the flood hazard area is improperly used and unprotected,

a flood can create a serious threat to the public, private investments can be destroyed, and significant natural resources can be damaged. In Burlington, most of the flood hazard areas are located along the Winooski River Valley, which the Intervale is part of. There are very few structures in the Burlington floodplain, except for the mouth of the Winooski River.

A floodway (Title 10 V.S.A., Chapter 32) is the channel of a river or other watercourse and the adjacent land area that must be reserved to discharge the 100-year floods without cumulatively increasing the water surface elevation more than one foot. The floodway is the most hazardous section of a flood hazard area. Developments in a floodway are likely to increase the flood height and velocity and probably would be damaged in the event of a flood.

Floodplains in Burlington are depicted on the map on page 11.

Burlington, Vermont

Legend

Municipal Setback
- 50 Foot
- 100 Foot
- 250 Foot

FEMA DFIRM
- Special Flood Hazard Area, (formerly known as 100 yr Flood)
- 0.2% Annual Chance Flood Hazard, (formerly known as 500 yr Flood)

Fluvial Erosion Hazard
Sensitivity Rating
- Very Low
- Moderate
- High
- Very High
- Extreme
- No Phase 2 FEH Zone

1 in = 2,400 ft

NOTE:
Stream sensitivity refers to the likelihood that a stream will respond to a disturbance or stressor, such as a change to the sediment or flow regime. Some streams are more likely to be in a measurable state of change due to their setting within the watershed and impacts from humans. Stream sensitivity ratings are used to determine appropriate river corridor meander belt widths. Stream sensitivity alone is not an indication of an active adjustment process and does not equate to a flood risk level; the appropriate river corridor plan should be consulted for further details on the physical condition of a specific reach of river.

While some flood losses are caused by inundation (i.e. waters rise, fill, and damage low-lying structures), most flood losses in Vermont are caused by "fluvial erosion," *Fluvial erosion* is erosion caused by rivers and streams, and can range from gradual bank erosion to catastrophic changes in river channel location and dimension during flood events.

A mapped FEH area includes the stream and the land adjacent to the stream. In Burlington, FEH have been mapped for the Winooski River, Engelsby Brook and Centennial Brook, as seen on the map on page 12. This map identifies the area where stream processes can occur to enable the river to re-establish and maintain stable conditions over time. The area boundaries also attempt to capture the lands most vulnerable to fluvial erosion in the near term as well as the area needed by a river to maintain equilibrium. Mapping of those FEH areas also provides a valuable insight into the location and nature of fluvial erosion hazards, and can be used to support many effective mitigation options. These include:

- using the map to design new investments in the Capital Budget (larger culverts, etc.) to reduce impacts of fluvial erosion on municipal infrastructure; and
- creating a Fluvial Erosion Hazard (FEH) Overlay District similar in scope and detail to Flood Zones wherein new development would be restricted similarly.

Natural Environment Action Plan

Action Item	Lead Agency	Secondary Agencies
Continue to implement the remediation and Interim Stewardship Plan for the Urban Reserve.	CEDO	Planning & Zoning
Investigate design opportunities to utilize permeable surface materials in place of impermeable materials in new development and parking.	Planning & Zoning	Public Works
Continue to identify and map significant natural areas and open spaces, and prioritize areas for long term protection.	Planning & Zoning Parks & Recreation	
Implement measures to treat stormwater runoff from existing development, and require new development to treat stormwater through the use of acceptable best management practices	Public Works	Planning & Zoning
Continue the implementation of the *Open Space Protection Plan and its 2014 update*.	Planning & Zoning Parks & Recreation	
Identify and map hazardous waste sites and underground storage tanks	Planning & Zoning CEDO	
Use the 2014 Open Space Inventory to guide potential purchases of high priority open spaces and trail connections.	Planning & Zoning	Parks & Recreation
Support conservation organizations, including the Winooski Valley Park District in their conservation efforts and goals to educate the public about the value of wetlands, shorelines, and natural areas	Planning & Zoning	Parks & Recreation

Work with other local, state, and regional groups on watershed policy and planning	Public Works	Planning & Zoning
Collaborate with neighboring communities regarding protection of important natural features and systems.	Planning & Zoning	Parks & Recreation
Develop City policy to minimize the use of road salt on city streets as permitted by safety requirements	Public Works	
Development of source reduction programs.	Public Works	
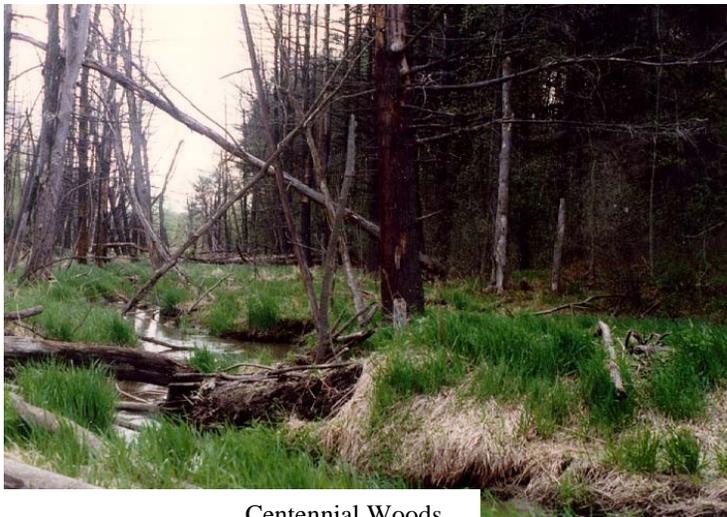
Centennial Woods

Lake Champlain

III. BUILT ENVIRONMENT

Vision Statement

This Plan envisions Burlington as a city where…

…Burlington's built environment reflects a legacy of a rich architectural heritage, moderately scaled buildings, and high quality urban design. The unique design characteristics of each neighborhood have been retained, while new construction and public investment respect the city's historic character and demonstrate high quality architecture while effectively meeting the demand for continued growth. In higher density areas, buildings are closer to the street, with parking underneath or in a nearby structure. All buildings and public facilities are welcoming to people with disabilities. Both new construction and renovations to older buildings illustrate a commitment to sustainable development practices with the use of green building materials and energy efficient design. The streetscape is clean, well maintained and lined with shade trees. Overhead utilities have been relocated underground, and excessive street lighting has been eliminated. Important view corridors and scenic vistas have been retained, and developed areas are complimented by open spaces, parks, and natural areas.

CITY POLICIES

THE CITY OF BURLINGTON WILL...

- **Protect its scenic views and view corridors, and encourage development that compliments Burlington's natural setting.**

- **Retain its moderate scale and urban form in its most densely developed areas, while creating opportunities for increased densities.**

- **Conserve the existing elements and design characteristics of its neighborhoods, and maintain neighborhood proportions of scale and mass.**

- **Retain and enhance Burlington's historic buildings and architectural features.**

- **Encourage new land uses and housing designs that serve changing demographics and benefit from new technologies where appropriate.**

- **Enhance the City's gateways and streetscapes.**

- **Protect, maintain and enhance the City's urban forest.**

- **Enhance the pedestrian experience by improving opportunities for pedestrian access and interaction throughout the city.**

- **Strengthen the City's role as a cultural and arts center, and support efforts to introduce public art into the city's built environment.**

- **Ensure people with disabilities have equal access to the built environment.**

- **Ensure building design and public amenities take into account Burlington's northern climate.**

INTRODUCTION

Burlington's **built environment** - it's buildings and structures, and how they relate to the city's landscapes, layout, and history - make Burlington the special place it is. The city has a rich architectural legacy, set within an exceptional natural setting, that provides the foundation to its vital economy, human-scale environment[1], and high quality of life. As Burlington continues to grow, we must conserve and build upon this legacy through careful planning and high quality urban design. The following section outlines Burlington's policies and priorities for maintaining and enhancing the quality of its built environment.

Respecting Our Natural Setting

With Lake Champlain and the Adirondacks to the west, the Green Mountains to the east, and the embrace of the Winooski River along our northern boundary, Burlington is blessed with an outstanding setting. Throughout the city - at the end of streets, from parks, offices, and homes - significant views are provided of the lake, river, mountains, forested and natural areas, and prominent building landmarks. Burlington is in the fortunate position of being able to blend urban amenities with a beautiful natural setting. The City must take full advantage of this setting by identifying and protecting view corridors and important scenic views for all to enjoy - today and tomorrow. A plan for identifying and protecting views of important visual landmarks and landscapes from public vantage points must be undertaken as the City contemplates opportunities for future higher-density development.

Lake Champlain & Adirondacks

Burlington's built environment must be respectful of the city's natural environment. While city ordinances allow for development at particular densities, design review regulations require that development consider the capacity and context of each individual site. The City should amend Article 30 of the *Burlington Zoning Ordinance* to include a definition of "Buildable Area" for the purposes of calculating allowable density in certain parts of the city. The "buildable area" would be limited to only that portion of a property suitable for the construction of structures or other forms of land development, and exclude such areas that are: underwater or subject to flooding, slopes greater than 30%, and lands within the right-of-way of an existing or proposed public street.

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[1] "Human-scale" refers to the size, shape, and proportions of the built environment as perceived by, and in relation to, a pedestrian on the street. While different for different people, an object is considered to be of a human-scale when it appears measurable to the observer and its detail can be appreciated in relation to its overall mass. This is in contrast to an object or space that take on an awesome or super-human size due to its size and/or distance to the observer. (Lynch, Kevin. *Site Planning*).

Designated growth centers and activity zones such as the downtown, neighborhood activity centers and institutional campuses would be exempted from such a provision however, as they are places where higher density development is desired and encouraged. Offering density bonuses for the protection of important resources and sites could also be considered. Natural buffers and landscaping, including trees, shrubs and flowerbeds, should be used extensively to ease the transition between the built and natural form of the city. The use of green building materials and energy efficient design will help us to reduce our long-term impact on our environment. (See also the Energy section of this Plan)

A City Built for People

Burlington is a city built for people to experience on foot. Its buildings, streets, and layout are at such a scale that people feel comfortable in the built environment. Most places are within walking distance, buildings do not overwhelm the landscape or the streetscape, throughout much of the city distant views are limited only by topography and vegetation; buildings offer a personal connection to the street. To maintain this scale and character:

- Most buildings in high density areas should be no taller than six to eight stories, and should make the most effective use of the site. Building height is based on its location (both individual site and context) and function.

- Mixed-use development should occur in concentrated areas within walking distance of higher densities.

- In higher density areas, buildings should be closer to the street, with uses and entrances at the street level that invite pedestrian activity. Transitions between high density and low-density areas should be gradual. Access to light and air is maintained, while care is taken not to cast large shadows over nearby buildings and alter wind patterns.

- Buildings and public amenities should be designed with Burlington's northern climate in mind, and embrace all of Burlington's seasons.

- The massing and design of large development projects should be subdivided so that the widths of the facades are compatible with the scale and patterns of their surroundings. Building facades should be articulated along the street, and punctuated with windows, bays, balconies, and other openings.

- Adequate green space and amenities should be provided to encourage people to be outside enjoying the city year round. This includes the creation of rooftop gardens, a system of trails and paths, and a network of publicly conserved open spaces.

- People should be able to move safely and conveniently throughout the city without the need for a car on a network of sidewalks and paths.

- Streets should be easy to cross, with signals, signs, and crosswalks designed to enhance the pedestrian experience.

- Benches, bike racks, trash and recycling containers, public phones, public rest rooms, information kiosks, public art and drinking fountains should be added to popular outdoor gathering spaces.

ADDING UP THE DETAILS

Public: The City's public investment in its infrastructure includes thousands of small details: street lighting, manhole covers, catch basins, curb and ramp details, sidewalk paving textures, street trees, utility lines, benches, fire alarm boxes and hydrants, traffic signs and signals, fencing, parking meters, and many more. The cumulative effect of these details, in conjunction with more substantial investments in public buildings and spaces, defines the standard of quality for Burlington's built environment. Public buildings should set an example by defining a new standard for high quality architecture, creative site planning, energy efficiency, and green building techniques, and public projects should receive the same level of review for possible impacts on the built and natural environment that private projects receive.

Private: New construction and building renovation include numerous details that impact the design quality of the city. Gas, water, and electric meters, electrical transformers, heating, ventilating and air conditioning equipment, mailboxes, handicapped access ramps, refuse and recycling facilities and other service features can seriously detract from a building's appearance if not properly located or screened. While the nature and purpose of such equipment imposes certain requirements on their location, these details are often added to a building at the end of the process - leaving few creative options. Whenever possible, these service features should be integrated into building and site design from the beginning so as not to distract from the quality of a building or its site.

GATEWAYS

"You never get a second chance to make a good first impression." Gateways create a sense of arrival for those entering the city or neighborhood within it, and set the tone for what's to come. This feeling can be created with appropriate signs and landmarks, plantings, burying utility lines, protecting important views, and using distinctive pavement and architectural elements at intersections. Each gateway to the city or its neighborhoods should reflect the particular characteristics of its setting and provide a welcoming introduction. The City should take active steps to enhance the primary gateways into the city.
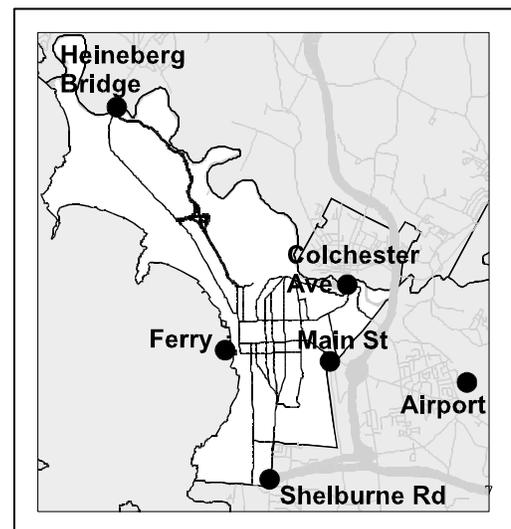
PUBLIC ART

Public art enhances the overall quality of the built environment. Examples of public art can be found throughout the city. Whether it is a mural on a downtown building wall, a sculpture in a park, or unique architectural details on a building, public art personalizes the city and offers seeds for conversation and contemplation.

Public art also includes performance art. Street musicians, jugglers, dancers, and magicians add vitality, activity, and a sense of community. Diverse offerings of public art should be encouraged and celebrated as distinctive elements of Burlington's quality of life.

CULTURAL FACILITIES

Cultural facilities for the visual and performing arts are an important aspect of Burlington's life and economy. From major events like the Discover Jazz Festival and First Night Burlington, to poetry readings at small coffee houses and paintings displayed in storefronts, the arts provide cultural vitality to the city as well as fulfill a growing economic niche. The Flynn Theater, with a seating capacity of 1,400, contributes over $7 million to Burlington's economy each year. Memorial Auditorium, operated by the City, provides seating for 2,500 for concerts and sporting events. Several other small facilities are dispersed throughout the city and help make the arts a part of everyday life.

In addition to upgrading and maintaining existing facilities, additional performance and exhibition space will be needed to provide opportunities and affordable venues for artists. Needs include not only additional physical space, but also the associated equipment and infrastructure necessary to ensure the viability of existing and future venues.

Studies have identified the following needs:

- Continued improvements to Memorial Auditorium and the Flynn Theater.
- A small or mid-sized theater (less than 300 seats).
- Dance space for rehearsal and small performances.
- A medium to large multi-exhibit art gallery and exhibition space.
- Small gallery and exhibition spaces in the downtown and on the waterfront

The City should also investigate the best methods for linking important cultural facilities such as Memorial Auditorium, City Hall's Contois Auditorium, and the Flynn Theater along with related land uses such as restaurants and galleries. Improved linkages, whether in the form of a downtown cultural/arts district or simply a centrally located arts information kiosk, would help bolster this important segment of the downtown economy.

BURLINGTON AS AN ACCESSIBLE CITY

To have equal opportunity, all people with disabilities must have equal access to the built environment. Many people think accessibility refers only to wheelchair access. But it also includes access for people with sensory and other mobility impairments. Equal opportunity for people with disabilities means:

- doors that open easily and ramps that are not too steep.
- signs at appropriate heights that are large enough to read
- accessible parking spaces, telephones, and transportation.
- convenient and accessible public rest rooms
- accessibility to the arts and cultural opportunities
- accessibility to the public decision-making process.

Burlington is committed to removing barriers within the built environment that hamper people with disabilities. This Plan proposes that the City establish a "disability-friendly" approach whereby new developments and building renovations, both public and private, are encouraged to go beyond the minimums established by regulation and pursue innovative ways to enhance convenience and accessibility for all residents with disabilities.

A NORTHERN CLIMATE

Burlington is a northern city, with frequent cold spells and large amounts of snow. While this is easy to remember in December or January, it can be forgotten during warm and sunny summer days. It is important that buildings, courtyards, and public amenities (such as bus shelters) be designed to provide refuge from the elements and remain inviting year-round. Protection from wind, cold, rain, snow, and ice should be important design considerations. Building design must also take into account how it may influence the microclimate by casting long shadows or modifying wind patterns. Mature trees can provide summer shade and shelter from winter winds.

Mixed-use districts, and the location of convenience stores and other local services close to residential neighborhoods, can also make life easier during the winter, especially for residents without an automobile. Priority must also be given to ensuring that snow and ice accumulation on sidewalks is cleared promptly.

Most importantly, the City must embrace all four seasons, and design should facilitate the public's enjoyment of each. Using color, vegetation, natural light, and providing opportunities for shelter and shade, creative design can take advantage of the best that each season has to offer.

Streetscape[2] Design

One of the most important factors affecting the quality of urban life is the character of city streets. Crucial to a street's character are such things as building heights and setbacks, the planting of street trees, presence of overhead utilities, quality of street lighting, and the design quality of the "street furniture."

It is important to establish appropriate setback requirements for buildings. Consistent front and side yard setbacks along a street helps creates a building edge and a well-defined public space. Buildings in commercial and higher density areas should be built

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[2] Streetscape refers to the visual image presented along a street including the combination of buildings, street, parking, trees, signs, furniture, utilities and other hardscape features.

closer to the sidewalk to provide an urban character. Moreover, in industrial and commercial areas, off-street parking should not be allowed directly in front of buildings. In residential areas, front yards, porches, and building facades should be the predominant visual element along the streetscape, and garages and driveways should play a minimal role.

The following approaches will improve the quality of the streetscape:

- New buildings or additions on any given street should be consistent with the predominant setback pattern for that street.
- Especially in downtown and commercial areas, setback requirements should reinforce an urban and pedestrian streetscape by being closer to the sidewalk.
- Street-level store fronts and building entrances should be open and inviting to pedestrians, and service entrances, driveways and garages should be located on side streets or in service alleys.
- The scale and massing of buildings on any given street should be harmonious. This does not mean uniform however. Variations in scale and design are an essential factor in creating a distinctive built environment.
- Street width should be appropriate to the type and character of land uses found along the street.
- Where streets have more pavement than necessary, excess pavement should be replaced by green areas, sidewalks, or other appropriate public amenities.

The City needs to undertake a public design process to identify and outline future design characteristics of the public rights-of-way. This process should serve to help answer the following:

- What is our objective for the City's public rights-of-way?
- How do we want our public rights-of-way to function and to look like?
- What is the design/aesthetic objective we have for a particular street, corridor, gateway, or neighborhood?

The City's *Street Classification System* offers a simple framework to begin working from where function, service, and design objectives for each category are defined and articulated. (see also the *Transportation System Plan* section of this plan)

STREETS AS PUBLIC PLACES

While not all streets can be as inviting and accessible to the public as the Church Street Marketplace, the pattern of streets, paths and pedestrian amenities should make walking safe and easy in all areas of the city. Residential and commercial areas should be active public places where social interactions are encouraged. People should be able to stroll, sit, pass through, look around, walk around, and enjoy neighborhoods, shopping areas, and conservation areas. Increasing pedestrian activity improves business by increasing traffic passing by storefronts, improves public safety by placing more eyes on the street, and benefits our sense of community by facilitating communication and interactions between neighbors, business owners and visitors.

LOCATING UTILITIES

Overhead utilities - including electric, telephone, and cable - present a dominant visual element throughout many parts of the city. This is especially concerning where street trees and other streetscape improvements are desired to make parts of the city more inviting for development and pedestrians or to preserve or enhance important viewsheds.

Many large trees have been radically pruned to accommodate power lines. Indeed, the vistas along many of our city streets are more strongly characterized by the march of utility lines than the promenade of trees. This is particularly unfortunate along streets such as Pearl and College that have important views of Lake Champlain.

While too expensive to accomplish everywhere, there are parts of the city where placing overhead utilities underground, or relocating them behind buildings, must be an important design consideration. In addition to all new development, priority should be given to undergrounding overhead utilities in the Downtown Waterfront, the North Street Commercial District, Riverside Avenue, North Winooski Avenue, streets that offer important view corridors to Lake Champlain, and the main approaches into the city.

STREET TREES

An essential feature of a healthy and attractive urban environment is the presence of trees - along the streets and in public parks and private yards. More than simply an aesthetic amenity, trees in the urban environment stabilize soils, provide a filter for surface runoff and air pollutants, shade summer sun, block winter winds, muffle sounds and provide habitat and refuge to birds and other small animals. The main objectives of Burlington's urban forestry program include maintaining existing public trees (numbering approximately 8,000) and planning for the creation of a sustainable urban forest through the City's tree planting program. (see also the *Community Facilities and Services* section of this Plan)

Sustaining Burlington's urban forest into the future will require a consensus regarding the goals and design objectives for the urban forest, and an understanding of the conditions necessary for a tree to survive in an urban environment. Poor soil conditions, road salt, auto emissions, and overhead and underground utilities all work against street tree survival under urban conditions.

The Department of Parks and Recreation has a *Street Tree Planting Plan* as a component of an *Urban Forest Master Plan*. In addition to inventorying assessing the condition of existing trees, the Plan articulates city-wide objectives for public trees, identifies future planting sites, lists appropriate species for re-planting, establishes site planning guidelines, and explores opportunities and mechanisms for planting on private property to expand possible planting sites within the streetscape. Most importantly, it outlines a plan for maintaining the existing street tree population with annual budget recommendations and proposed work schedules for pruning.

STREET AND SITE LIGHTING

Recent expansions in the use of exterior lighting have resulted in a marked increase in overall lighting levels within the city. While originally intended to reduce energy use and improve security, the use of high-pressure sodium lighting - in combination with new styles of fixtures - has had several unintended results. These include a distortion of natural colors, excess brightness, glare spilling onto adjacent properties, and an obscuring of the night sky known as "sky glow" which affects not only Burlington, but neighboring communities as well.

Recognizing these issues are common in other areas, and pose impacts regionally, the City participated in a site lighting study in cooperation with the Chittenden County Regional Planning Commission. The purposes of the study were to develop information on lighting issues and technology, and to establish a set of lighting guidelines that will help Burlington and other communities in the review of new lighting installations. Issues of particular importance in Burlington include:

- Overall illumination levels are too high.
- Concern about the visual quality and color distorting properties of high-pressure sodium lights.
- Glare from unshielded or misdirected fixtures.
- Improving the quality of outdoor lighting to improve public safety and perceptions of security.
- Unnecessary illumination of building facades.
- Design quality of fixtures and poles.
- Desire for complementary fixture designs in different types of settings and neighborhoods.

Recommendations resulting from this study - including the use of cut-off or shielded fixtures; lower wattage bulbs; color corrected or other acceptable light sources; and fixtures and pole heights which are appropriate for the site and neighborhood - will be evaluated for inclusion in the city's zoning guidelines and utilized by all city departments in the review of lighting installations. Additionally, there is an inherent conflict between street trees and street lighting, and locations of trees and lighting should be coordinated between Parks & Recreation and BED early in the planning and design stage of a project.

Built Environment Action Plan

Action Item	Lead Agency	Secondary Agencies
Evaluate the options and opportunities for increased development density and building height within the Downtown area, Neighborhood Activity Centers and other city growth centers to enable significant future growth without harming the scale and character of the city and it's historic resources and scenic views.	Planning & Zoning	CEDO
Extend the use of floor area ratio (FAR) as a measure of development density beyond the CBD and Transitional Zones.	Planning & Zoning	CEDO
Amend Article 30 of the *Burlington Zoning Ordinance* to include a definition of "Buildable Area" for the purposes of calculating allowable density in certain parts of the city.	Planning & Zoning	CEDO
Identify important scenic view corridors and points of interest and ensure their protection in the Zoning Ordinance, especially from public places such as primary streets and parks.	Planning & Zoning	Parks & Rec.
Undertake a public design process to identify and outline future design characteristics of the public streetscape.	Public Works Parks & Rec.	Planning & Zoning CEDO
Revise Burlington's Subdivision Ordinance and street design standards to ensure that the width and design of each street fit its function and location.	Public Works	Planning & Zoning
Develop a comprehensive street lighting plan and site design standards.	Planning & Zoning BED	Public Works
Develop conceptual guidelines to define gateways through the use of signs, plantings, architectural landmarks and other design features.	Planning & Zoning	Public Works
Define north/south and east/west mid-block pedestrian pathways connecting the Central Business District and the surrounding neighborhoods.	Planning & Zoning	Public Works
Modify the Zoning Ordinance's Design Review criteria to ensure building development take into account Burlington's northern climate	Planning & Zoning	BED

Develop criteria and guidelines for use of sustainable building technologies.	Planning & Zoning	
Evaluate the feasibility of linking cultural facilities through the use of a downtown cultural /arts district or through a centrally-located arts information kiosk	City Arts	Planning & Zoning
Develop a Percent-For-Arts Ordinance for public buildings.	City Arts	Treasurer's Office

IV. HISTORIC PRESERVATION

Vision Statement

This Plan envisions Burlington as a city where…

…Burlington's rich and varied historic and architectural legacy, the result of more than two centuries of development, remains a vital link to the city's history, and plays an active part in its future. The City has preserved its historic legacy through careful planning and quality design by encouraging adaptive re-use and respectful infill development. This architectural legacy is an important part of the city's character. Burlington's historic buildings are readily adaptable to changes in the building market and demand for continued growth.

CITY POLICIES

THE CITY OF BURLINGTON WILL….

- **Identify and protect its historic structures and resources.**

- **Conserve the existing elements and design of its established neighborhoods.**

- **Protect its archaeological resources.**

- **Educate its residents and visitors on the City's many architectural, archeological, and historic sites and resources.**

- **Use historic preservation as an economic development tool by offering technical and financial incentives that promote the rehabilitation of historic buildings**

INTRODUCTION

Burlington's rich heritage is illustrated in the many archeological, historic and architecturally significant places found throughout the city. Included are structures, districts, corridors, landscapes, sites and many other unique cultural environments, which add greatly to the city's character, and its sense of place and time. Burlington has a tradition of protecting and celebrating historic and architecturally significant places illustrated through a commitment to conserve and protect elements of this rich heritage through reinvestment, planning, and design review. The following section of this Plan outlines the City's policies and priorities for protecting historic resources and advancing historic preservation as an economic development tool.

Identifying Historic Resources

The identification and characterization of historic resources is based on a long record of academic research, professional practice, and legal precedent. The uniform standards used across the country for the identification of historic resources are those used to identify properties eligible for listing on the National Register of Historic Places[1]. While not all properties are indeed eligible for listing on the National Register, the criteria provide a consistent and tested guide to evaluating historic significance.
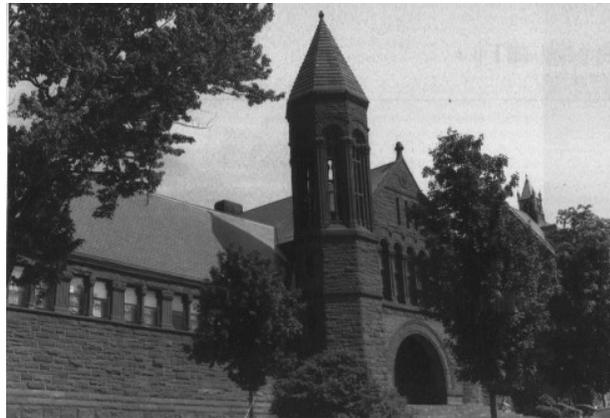
Billings Library, UVM

Historic resources typically fall into one of two categories (with archeological, or pre-historic, resources being separate and distinct from "historic" resources) – historic *buildings* and historic *districts*. Historic buildings possess important architectural, engineering or historic merit in their own right, while districts represent a collection of buildings whose design qualities, relationships, and history illustrate an important cultural pattern, historic event, architectural characteristics or scenic quality as a whole. Districts (including landscapes), sites, buildings, structures, and objects can all be considered for listing on the National Register, however, individually listed buildings are considered to be of greater significance than a building listed solely as part of a district.

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[1] The *National Register of Historic Places* is a national listing, administered by the US Dept. of the Interior, National Park Service, of cultural resources found to be worthy of preservation. It includes places of local and statewide significance as well as those of importance to the nation as a whole.

In order to be considered "historic," a property must meet three tests: **Age** - it must be at least 50 years old (with certain exceptions); **Integrity** - of location, design, setting, materials, workmanship, feeling, and association; and **Merit** - it must:

- be associated with events that have made a significant contribution to the broad patterns of our history; or

- be associated with the lives of significant persons in our past; or

- embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

- have yielded or may be likely to yield, information important in history or prehistory.

The actual evaluation must be carried out by a historic preservation professional trained and qualified to evaluate historic resources. The criteria for meeting these qualifications also come from the National Register. Once identified and evaluated, a historic resource can be listed on a local, state, or a national register depending on its level of significance. Actual listing is a nomination process to an advisory body that

Hierarchy of Historic Significance
▪ National Historic Landmarks
▪ National Register Buildings
▪ National Register Districts

review, evaluate, and determine those properties that meet the criteria and will be placed on the official register.

BURLINGTON REGISTER OF HISTORIC RESOURCES (BRHR)

In 1992, the City began the *Burlington Register of Historic Resources* (BRHR), which is an ongoing list of identified and listed historic structures, sites, features, and districts. The BRHR currently includes some 2,800 sites throughout the city, with more added each year through the work of city departments, university students, state and federal agencies, and individual property owners. The BRHR serves three basic purposes.

1. Provides an important information base for educating the public about Burlington's heritage;

2. Allows property owners a reference point for making decisions about how to make appropriate improvements to their properties, without removing or obscuring important building details; and

3. Provides a factual basis for public officials to make informed decisions during the review of renovation, rehabilitation, or demolition proposals.

The BRHR includes:

- the **Burlington Historic Survey**: An ongoing inventory of identified historic resources found in Burlington. These sites have been evaluated for their

historic integrity and significance, but have not yet been nominated for listing on the State or National Register.

- **Burlington Historic Sites and Districts**: A listing of historic resources (66 buildings and 6 historic districts) which are specifically identified under Article 8 of the *Burlington Zoning Ordinance*. Some are also listed on the State or National Register.

- the **State Register of Historic Places**: A listing of historic resources deemed to posses statewide significance (180 buildings in Burlington), and maintained by the VT Division for Historic Preservation.

- the **National Register of Historic Places**: A listing of historic resources deemed to posses national significance (see the table following this chapter), and maintained by the National Park Service.

It is important to note that not all historically significant sites have been identified and evaluated, and each year new sites become age-eligible (50-years or older). It is estimated that less than 25% percent of the City's buildings have been surveyed. While the City's preference would be to quickly complete a comprehensive survey, it is not practical given available resources, and the significant number of structures that still need to be surveyed.

With this in mind, it should be clear that actual listing of a historic resource by a state or federal authority is not the definitive answer to the question "what is historic?" The City must rely more on a sites eligibility for listing as a determination for what warrants special protection.

To this end however, the City is committed to an ongoing survey effort over the next several years with the help of grant funds from the VT Div. of Historic Preservation. In May 2000, the City completed a *Historic Sites and Structures Survey Plan* that will be used to guide the work of future survey efforts conducted by the Dept. of Planning and Zoning. In addition, the City must ensure that the BRHR, and the Survey in particular, is updated regularly and that the information is made accessible to the public.

IMPLICATIONS OF HISTORIC DESIGNATION

Understanding the implications of historic designation is increasingly confusing. The term "historic" can refer to a property that is found on a Survey, listed on the State or National Register, or identified in the City's zoning ordinance. All are correct, but the implications and ramifications of each are vastly different. Additionally, there is not a clearly articulated relationship between the BRHR and the City's development review process. This leads to a mis-perception that identifying a property as "historic" implies regulatory restrictions. This is not necessarily the case however. When a property is listed on the State or National Register, review and regulatory restrictions are triggered only when state or federal funds

Follett House

or programs are involved. For example, changes to a property listed, or eligible for listing, on the National Register must meet the Secretary of the Interior's Standards only when using a federal grant, loan, or tax credit program. Properties listed on the State Register are protected when the project triggers Act 250 or state grants or programs are involved. City zoning <u>only</u> applies to those historic sites and districts actually listed in the ordinance.

The City will continue to protect historic sites and structures from unnecessary demolition or changes incompatible with their historic significance. The City's design review criteria include a general heritage standard that applies to eligible buildings; and a set of more specific guidelines for structures within the Zoning Ordinance's Article 8 regarding Historic Buildings. Regardless of location, all historic buildings should be protected through reasonable regulation, incentives that encourage rehabilitation, and an aggressive public education program. Where regulation is the chosen option, clear guidelines should be used to make the review process more understandable and easier to navigate.

In May of 1999, the Dept. of Planning & Zoning completed a report[2] intended to evaluate and propose changes to how current city land use regulations (specifically zoning) consider and address the renovation and preservation of historic resources. The City will continue to implement the recommendations contained in this report in the coming years. A priority will be given to revising the *Burlington Zoning Ordinance* with respect to its applicability, consideration, and protections for historic resources under Article 6 – Design Review and Article 8 – Historic Buildings and Districts. In addition to clarifying what historic resources are protected under local regulation, two other issues that must be considered are the review of proposals for the demolition of historic buildings, and cases of demolition by neglect[3].

Preservation and Neighborhoods

Protecting historic structures is really part of a larger endeavor to conserve existing elements and design characteristics of the City's neighborhoods. These neighborhoods provide the context within which the importance of individual structures is defined. As previously noted, Burlington has had extensive design review authority in place for over 20 years. The purpose behind design review is to monitor and evaluate changes to a community's buildings and landscapes. It is a process where changes to existing buildings or new development are evaluated according to a set of pre-determined standards. It used to ensure that these modifications respect the character of existing buildings and settings. It is a planning and development review tool that is often applied to historic areas or a community, but also may be used in new areas that are developing in order to achieve consistent design themes and considerations.

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[2] Burlington Dept. of Planning Zoning. *Burlington Preservation Planning Project: Preservation Planning Phase II Report - Part I – Historic Buildings*. May 1999.

[3] Demolition by Neglect is the case where a building has not been adequately maintained by the owner and it has deteriorated to a point where it's historic character and integrity has been lost and can no longer be restored, or the building has become a public hazard and must be removed.

While the extent of design review in Burlington, and the criteria by which individual applications are reviewed has evolved over time, no comprehensive rethinking of how this valuable tool is applied across the city has been given in many years. Burlington's Design Review District encompasses all of the commercial, industrial, conservation, institutional and higher density residential portions of the city, yet applies only two differing sets of review criteria.

An assessment of neighborhood characteristics and features prepared as part of the City's ongoing Historic Survey could form the basis for dividing Burlington's extensive Design Control District into smaller, more cohesive areas, and possibly developing new or additional Design Review criteria or standards. This is likely to entail clarifying the distinctions between the 3-4 types of Design Control Districts already in-place, and providing more personalized design criteria that are more sensitive to the specific design issues and character of each district. The objective of will be to make Burlington's extensive Design Control District more sensitive and responsive to the diverse design and neighborhood character issues found across the City.

Finally, neighborhood conservation plan could be used to identify important physical elements and design features, in addition to those noted as historic, and define the physical characteristics worth protecting in each neighborhood. These include traditional building types, setbacks, street layout, lot size and coverage, landscaping and street details. These plans would form the basis for developing neighborhood-level design standards to assist property owners and developers in the development review process.

Preservation as an Economic Development Strategy

As Burlington works to protect and maintain the integrity of its historic buildings and landscapes through restoration, adaptive reuse and renovation, it becomes increasingly clear how preservation is a very effective economic development strategy. The Ice House, Ethan Allen Fire House, the Rose Street Artists Co-op, Jim's Corner Store, Hotel Burlington/Hunting Hotel, the Maltex building, and Bennington Potters North are all successful adaptive reuses of existing buildings. Even the Community Boathouse

Lang House

was built on a recycled oil barge. Opportunities for the restoration and renovation of buildings can be found throughout the Central Business District, the Downtown Waterfront and the Old North End.

Perhaps the most striking example of using historic resources as part of an economic development strategy is the Church Street Marketplace. Here, design review and historic preservation strategies have been combined with pedestrian amenities to make this downtown shopping area one of the finest of its kind in the nation.

In addition, as the travel and tourism industry becomes a larger segment of the regional economy - currently one-fifth of the state's total economy - opportunities to promote heritage tourism should be explored. Examples include education and interpretation of the City's past through historic walking tours, brochures, events and signs.

To reinforce this economic development strategy, all policies of and projects undertaken by the City should enhance the City's historic resources and neighborhood characteristics. City policy should continue to support the innovative use of historic structures.

FINANCIAL INCENTIVES

While there is much the City can do through research, regulation, and education to protect the City's heritage, none are as effective as those which combine economic incentives and technical assistance. This is what makes the difference between a process that is strictly regulatory and adversarial, to one that is cooperative and collaborative. The City must work with the private sector to promote preservation. For example, the City should assist developers with preservation techniques and design strategies, and by providing assistance in locating financing for eligible historic preservation projects. The City must continue to evaluate opportunities for creating a Historic Preservation Trust Fund for such things as providing no-interest or low-interest loans to help renovators achieve historically appropriate solutions.

Listing on the National Register of Historic Places offers certain federal tax benefits for income producing properties that can serve to enhance the viability of commercial districts in the city. Many of the city's most complex and noteworthy preservation projects were made possible by using the Reinvestment Tax Credit Program administered by the state for the National Park Service. The City will continue to encourage and support National Register designation for commercial areas of the city as a means of encouraging reinvestment and adaptive reuse of historic buildings. Two examples include the re-nominating Church Street Marketplace and other portions of the City Center to the National Register of Historic Places, as well as portions of Pine Street.

Finally, the Vermont Downtown Program offers financial incentives such as tax credits and loans for development in historic downtowns that have been designated "Downtown Development Districts." Recently, the city's Downtown Improvement District received this designation from the state. The North Street Commercial District and portions of No. Winooski Ave. may also be a candidate for such a designation.

Preservation and the Enterprise Community

There are more than 2,300 buildings in the Old North End, many of which were built between the early 1800's through the mid-twentieth century. Approximately 800 structures - a little more than one third of the total - have been identified in the Burlington Inventory of Historic Resources as having national, state or local significance. It is estimated that at least half of the remaining buildings may be eligible for listing.

Some of the development strategies identified in the City's Enterprise Community application focuses directly on historic preservation. The future vision statement about the built environment from that application says it succinctly:

> *"This is a community that values its setting and traditions. The residents and institutions of the Old North End Enterprise Community preserve their historic sites and structures. They conserve unique design elements, neighborhood characteristics, and streetscapes in each neighborhood, while ensuring that new construction meets these criteria."*

Strategies designed to attain this vision range from surveying historic properties, National Historic District designation for portions of the Old North End - including the North Street Commercial District - and rehabilitation of neighborhood businesses and residences.

Of particular interest however, is the ability to restore and maintain historic structures while maintaining their affordability. The City must continue to pursue the creation of technical assistance programs and revenue sources that enable the city to merge its historic preservation and housing affordability objectives.

The Importance of Archaeology

In Vermont, prehistoric remains consist mostly of Native American stone tools, flake debris from tool making, pottery pieces, burial ornaments, human bones, fire hearths and objects related to hearths. Archeological sites represent activities of early American inhabitants from the period of contact to about 75 years ago. Development and redevelopment throughout many portions of the City have disturbed many of the potential sites for finding archaeological remains. Once disturbed from their original context, much of the archaeological value of an artifact is lost.

Despite more than a century of historic development, many areas in Burlington remain archaeologically sensitive. These include shorelines, floodplains and ancient beaches along the lake and river, as well as more recent finds including a former War of 1812 cemetery and encampment in the Old North End. Proposed development in these areas should be evaluated for their possible impact on these resources.

Burlington should protect its remaining archaeological resources. The presence of archaeological remains does not need to prevent development of a site however. Steps can be taken to insure that important remains are not disturbed. Often mitigation can be achieved simply through documentation rather than complete preservation. The Major Impact Development Ordinance requires that larger developments do not have an undue adverse effect on archaeological sites. This ordinance should include smaller

developments or site work at large projects that could disturb an archaeological site in sensitive portions of the city. Working in close partnership with the State, the City should work to minimize the burden on individual property owners in these sensitive areas while at the same time ensure the resources are properly documented and protected.

Historic Preservation Action Plan

Action Item	Lead Agency	Secondary Agencies
Establish a relationship with the National Main Street Center and Vermont Downtown Program to assist with the revitalization of North Street as a neighborhood commercial center.	CEDO	Planning & Zoning
Work with the VT Division of Historic Preservation, CEDO and the Burlington Certified Local Government Program to facilitate compliance with Section 106 of the National Historic Preservation Act[4].	Planning & Zoning CEDO	
Submit a nomination including the Church Street Marketplace as a National Register Historic District.	Marketplace	Planning & Zoning
Continue efforts to complete the Historic Sites and Structures Survey, and annually re-publish and improve public access to the *Burlington Register of Historic Resources*.	Planning & Zoning	
Provide technical assistance to property owners and developers on historic preservation techniques as well as identification of financing opportunities for eligible historic preservation projects.	Planning & Zoning CEDO	
Develop a range of incentives to support historic preservation efforts in the City including a Historic Preservation Trust Fund and a Historic Preservation Tax Stabilization Program.	Planning & Zoning CEDO	Treasurer
Develop a comprehensive public education program focusing on the short-term and long-term benefits of historic preservation.	Planning & Zoning	
Expand the Major Impact Development Ordinance to address significant archaeological resources.	Planning & Zoning	

[4] Compliance under Section 106 of the National Historic Preservation Act is triggered when a proposed project involves federal programs, properties, agencies, grants and loans.

National Register of Historic Places, Burlington, VT (April 2004)		
RESOURCE NAME	**ADDRESS**	**LISTED DATE**
Allen, Ethan, Homestead	Off Van Patten Pkwy.	7/24/1986
Battery Street Historic District	Roughly bounded by Lake Champlain, Main, Maple, and St. Pauls Sts. (both sides)	11/2/1977
Battery Street Historic District (Boundary Increase)	Roughly bounded by Brown's Court, King, Adams, and Union Sts.	6/28/1984
Buell Street--Bradley Street Historic District	2-71 Bradley St., 24-125 Buell St., 16-75 Orchard Terr., 9-96 S. Union St., 11-87 Hungerford Terr.	11/13/1995
Burlington Bay Horse Ferry (shipwreck)	Burlington Harbor	12/15/1993
Burlington Breakwater	Burlington Harbor	6/6/2003
Burlington Montgomery Ward Building	52--54 Church St.	5/30/1991
Burlington Traction Company	662 Riverside Ave., includes 321-343 N. Winooski Ave.	10/7/2004
Carnegie Building of the Fletcher Free Library	College St. and S. Winooski Ave.	8/18/1976
Champlain School	809 Pine St.	12/10/1982
Chittenden County Courthouse	180 Church St.	4/11/1973
City Hall Park Historic District	Church, College, Main and St. Paul Sts.	6/9/1983
Ethan Allen Engine company No. 4	Church St.	4/16/1971
First Baptist Church	81 St. Paul St.	3/2/2001
First Methodist Church of Burlington	S. Winooski Ave.	10/5/1978
Follett House	63 College St.	10/30/1972
General Butler (shipwreck)	Burlington Bay	10/22/1998
Grassemount	411 Main St.	4/11/1973
Head of Church Street Historic District	Pearl and Church Sts.	7/15/1974
Howard Mortuary Chapel	455 North Ave.	10/21/1999
Kelsey, Martin L., House	43 Elmwood Ave	2/24/1983
Lakeside Development	Lakeside, Central, Conger, Wright, and Harrison Aves.	4/12/1982
Main Street-College Street Historic District	Roughly bounded by College, S. Williams and Main Sts., and S. Winooski Ave.	10/13/1988

National Register of Historic Places, Burlington, VT (April 2004)		
RESOURCE NAME	**ADDRESS**	**LISTED DATE**
Moquin's Bakery	78 Rose St.	6/27/1997
North Street Historic District	Roughly Along North St., from North Ave. to N. Winooski Ave.	12/21/2001
O.J. Walker (shipwreck)	Burlington Bay	10/22/1998
Old Ohavi Zedex Synagogue	Archibald and Hyde Sts.	1/31/1978
Palmer, Charles R., House	201 and 203 N. Willard St.	8/30/2005
Pearl Street Historic District	Roughly 184 to 415 Pearl St., Orchard Terr., and Winooski Ave.	11/1/1984
Redstone Historic District	S. Prospect St.	11/14/1991
Robarge, John B. Duplex	58-60 N. Champlain St.	8/6/2005
Robinson, Daniel Webster, House	384 and 388 Main St.	4/22/1982
Ruggles, Lucy, House	262 S. Prospect St.	12/16/2005
Saltus Grocery Store	299--301 N. Winooski Ave.	11/19/2001
South Union Street Historic District	S. Union St. between Howard and Main	10/31/1988
South Willard Street Historic District	S. Willard St.	11/3/1988
U.S. Post Office and Customhouse	SE corner of Main and Church Sts.	11/21/1972
University Green Historic District	University of Vermont campus	4/14/1975
Wells, Edward, House	61 Summit St.	10/3/1979
Wells-Jackson Carriage House Complex	192-194 Jackson Court and 370 Maple St.	12/10/1982
Wells-Richardson District	Main, Pine, College, and St. Paul Sts.	3/5/1979
Winooski Falls Mill Historic District (Boundary Increase)	485--497 Colchester Ave., 5--21 Mill St., 8--32 Barrett St.	9/30/1993
Winterbotham Estate	163 S. Willard St.	5/12/1975

MOVING FORWARD TOGETHER

Transportation Plan for the City of Burlington
Department of Public Works
Department of Planning and Zoning
Community and Economic Development Office (CEDO)

Adopted: 28 March 2011

…the Transportation element of the *Burlington Municipal Development Plan* pursuant to 24 V.S.A Ch 117.

This *Transportation Plan* reaffirms Burlington's long-term transportation vision, describes intermediate-term strategies for moving toward the vision, and specifies an initial Five Year Plan that will be updated annually. Once adopted, this *Transportation Plan* assumes the role of the required transportation element of the *Burlington Municipal Development Plan*.

1) Burlington's Transportation Vision

…transportation functions as part of an interconnected system which offers a range of choices that are safe, affordable, efficient, and convenient for residents, employees, and visitors alike. As a result, rail, air, ferries, transit, cycling, and walking are successfully competing with the automobile for the dominant mode of choice. Local and regional multimodal corridors and centers are maximizing our use of existing infrastructure, while eliminating congestion, preserving air quality, and conserving energy. Commuters, families, and employers are benefiting from a diverse array of transportation demand management strategies such as car- and van-pools, flexible work schedules, and telecommuting. Land use and transportation decisions are considered together, significantly reducing the need for individual automobiles and large parking facilities. Greater use of rail for freight has been embraced as an effective means of removing trucks from neighborhood streets. City streets are attractive public spaces, and function as part of a system of interconnecting streets. Circulation within the downtown, waterfront, neighborhood activity centers, and institutional campuses is predominantly oriented to the pedestrian. A series of trails and paths provide access between neighborhoods and areas of protected open space.

In recent years, the City of Burlington has continually recommitted itself to a transportation vision which stresses transportation choices and livability, including the Legacy Plan (2000) and the Climate Action Plan (2000). This *Transportation Plan* reaffirms this vision.

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2) Transportation in the Future

The *Transportation Plan* is directed at promoting three general themes:

A)   Strong and Healthy City

B)   Transportation Choices

C)   Great Streets

2A) Strong and Healthy City

Transportation is a foundation of a vital Burlington. It serves residents, businesses, institutions, workers, shoppers, patrons, and visitors. Transportation infrastructure is a critical part of the urban form and a strong contributor to how the City is experienced in daily life.

Economic Health

The downtown/waterfront and Hill institutions areas are major jobs centers for the greater Burlington region. Other areas in the City may become more important jobs centers including the "enterprise zone" to the south of downtown along the Lakeshore and Pine Street, and the industrial area between Home and Flynn Avenues. These jobs centers depend on transportation for their workers, customers, and product delivery. As part of the *Transportation Plan* development, extensive interviews were conducted with business people in the downtown/waterfront area. Several concerns were frequently mentioned: parking availability, congestion, and wayfinding.

Physical Health

Studies have shown that regular physical activity improves health and quality of life. Adults can reduce the risk of chronic disease (i.e., heart disease, type II diabetes, obesity) with just 30 minutes of moderate exercise, such as brisk walking, five or more days per week. Many Americans report that they want to walk more but find barriers to walking. "Active living" for children can be promoted through "Safe Routes to School" and supporting children in walking and biking.

Choices for an Aging Population

The AARP recommends high quality walking and transit options for older residents. Its *Growing Older in a Livable City* process surveyed 800 local residents aged 45 and up about concerns and obstacles to walking and using transit. The highest ranked walking concerns were: 1) conflicts with bikes and skateboards, 2) adequate places to sit and rest, 3) crossing islands available where needed. The top transit concerns were: 1) adequate shelter, 2) limited weekend and evening service, 3) and benches.

Safety

Safety is of critical importance, particularly where walkers and bikers interact with cars and trucks.

Environmental Health

Tailpipe emissions represent the second greatest source of global warming gases in the United States. Encouraging alternative transportation modes is a key part of any effort to address global warming. The No Idling Campaign is another illustration of Burlington's commitment to public health and the environment.

2B) Transportation Choices

Cars

According to 2000 Census data, 62 percent of Burlington residents drove alone to work and another 12 percent carpooled. For commuters coming into Burlington, the car mode share today is even higher – 83 percent drive alone and 14 percent carpool. There is peak hour/peak direction congestion at the City's gateways including Main Street, Colchester Avenue, and Shelburne Road. While this congestion is frustrating to many, all successful cities must deal with traffic congestion. A partially offsetting benefit of this congestion is that it "meters" traffic coming into the core of the City, and helps to limit congestion there.

The planned Champlain Parkway (Southern Connector) will add limited additional roadway capacity. The traffic analyses indicate that the Pine Street section will continue to act as a metering point. For the peak hours/peak directions, overall roadway capacity into and out of the City is estimated to increase by only about 2-4 percent.

Lacking expansion opportunities, the City does not intend to add new capacity beyond the Champlain Parkway. The goal of the City is to accommodate growth in travel within the existing roadway network and through Transportation Systems Management (TSM), non-auto modes, and Transportation Demand Management (TDM).

Transportation Systems Management (TSM)

Transportation Systems Management (TSM) uses the roadway as efficiently as possible. Common TSM actions include installing new traffic signals and improving coordination between signals.

There is a national effort to apply new technology to traffic management under Intelligent Transportation Systems (ITS). Several ITS projects are under consideration at the Chittenden County Metropolitan Planning Organization (CCMPO) which could help traffic operations in the City. These include projects to coordinate and monitor traffic signals on congested streets, provide signal preemption for emergency vehicles, and provide real-time traveler information.

Transit

Transit availabity is critical, especially for the young, the old, those without cars, and those who otherwise are dependent on transit. It also is becoming increasingly important that transit be attractive to choice riders, some of whom will need to shift to transit if the City is to increase the number of travelers in and out of the core. Choice riders (those who do not rely solely on public transportation) have identified the current level of service as a deterrent to more transit use, citing lack of evening/weekend service, service frequency, and long travel times.

The near-to-medium term vision for public transportation service in Burlington is to provide a high level of service on primary trunk routes serving downtown from the north, northeast, east, and south, complemented by shuttle services and neighborhood feeder services. Trunk routes (see Fig. 2) include:

- North Avenue;
- Essex Junction (service to Colchester Avenue/Winooski/Essex);
- University Mall/Airport;
- Shelburne Road; and
- Pine Street.

These trunk routes would run frequently during the day, and service would be provided evenings and weekends, and serve both walk-access transit riders and those parking at remote lots.

Walking

Walking is the fundamental urban transportation mode and is an essential part of all trips, especially transit trips. Walking is healthy, good for the environment, and does not contribute to congestion. This *Transportation Plan* envisions a fully walkable city. Priorities for improving the City's walking infrastructure include improved maintenance and improved crossings.

Biking

The *Transportation Plan* supports biking as a transportation choice that is non-polluting, energy efficient, and promotes good health. Burlington has some excellent off-road paths, but lacks the on-street facilities needed for biking to be a practical alternative to cars for day-to-day transportation. This *Transportation Plan* calls for a complete bike network.

Accessibility

It is critical that transportation be accessible as possible, especially for pedestrians, transit customers, and those using handicapped parking spaces

Transportation Demand Management (TDM)

Transportation Demand Management (TDM) aims at reducing car travel and congestion. Work trips are especially important because they repeat on a regular basis, so changing even a single daily commute makes a big difference over time.

The Campus Area Transportation Management Association (CATMA) has been highly effective in reducing travel and parking demand for the City's major educational and health care institutions. A Downtown Transportation management Association (TMA) is under discussion as a means to expand this success to the downtown area.

CATMA Employee Commute Shares
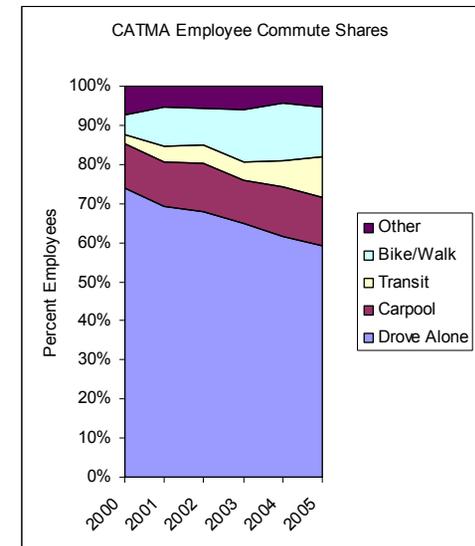
Parking

Parking is a critical resource for any community, especially in the downtown/core area. It is the means by which a driver is converted to a shopper, client, visitor, or just plain citizen. Provision of appropriate parking in terms of location, quantity, and accessibility is essential to the survival and prosperity of any community's downtown core, including Burlington.

The Burlington core area relies heavily on its "character" and attractive environment to support its economic base. Parking however, even when attractively done, represents a "hole" in the

street-level activity that is an integral part of that attractiveness. Moreover, parking incurs substantial costs ranging from $12-$15,000 for above ground garage spaces and $25-30,000 for underground spaces. Additionally, parking requires significant annual maintenance costs including plowing, paving and striping, fee collection, and policing.

It is the policy and priority of the City to better utilize the existing parking inventory by implementing improved parking management strategies, and to add additional inventory in strategic locations necessary and as new development presents opportunities. Parking in the downtown core is currently inadequate and action should be taken to address this issue. Parking management strategies aimed at increasing the utilization of existing facilities are set out in this Plan, and include improved wayfinding enabling motorists to more readily find available spaces in under-utilized facilities, along with more market-oriented approaches to the pricing of parking designed to free-up more on-street spaces.

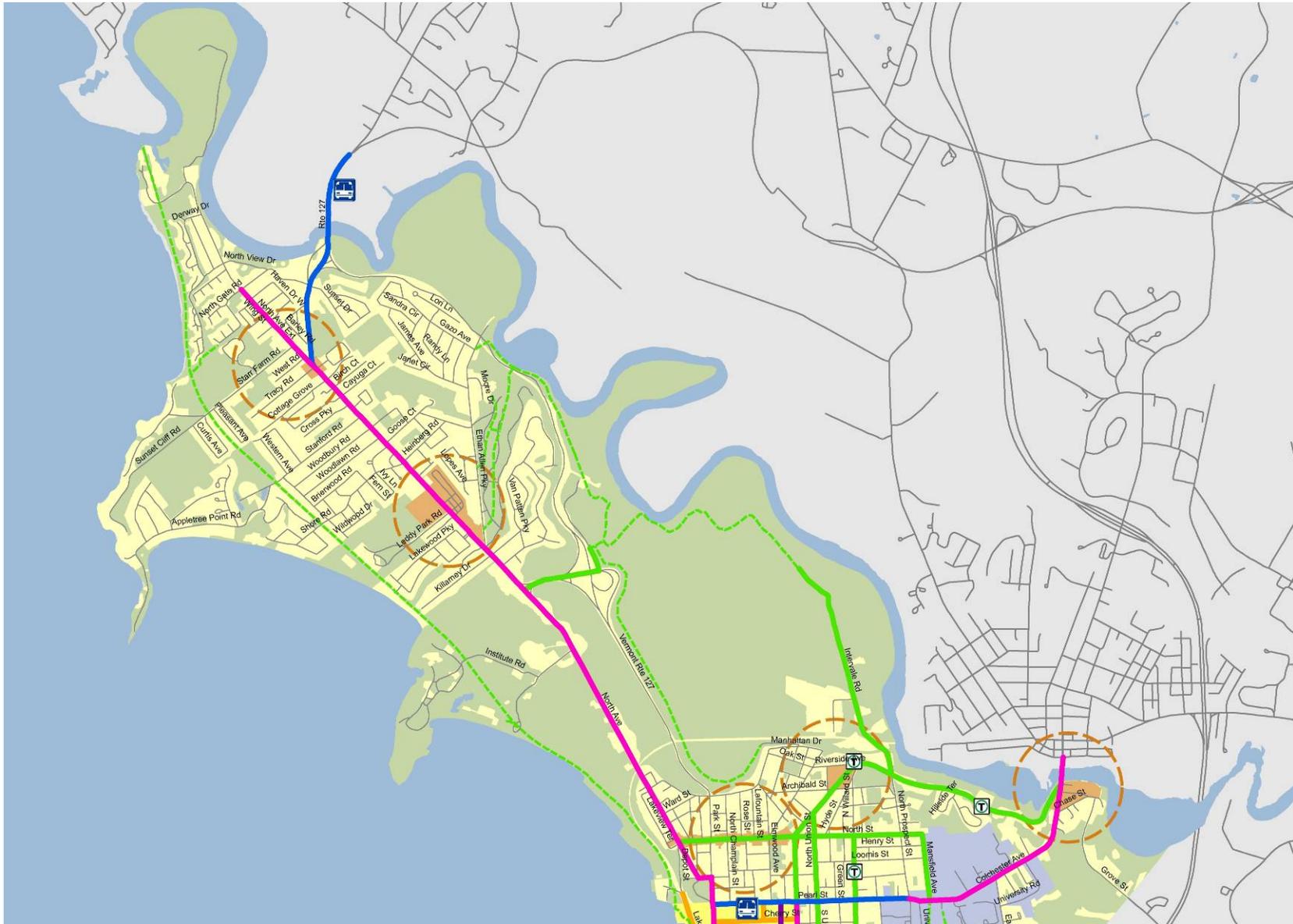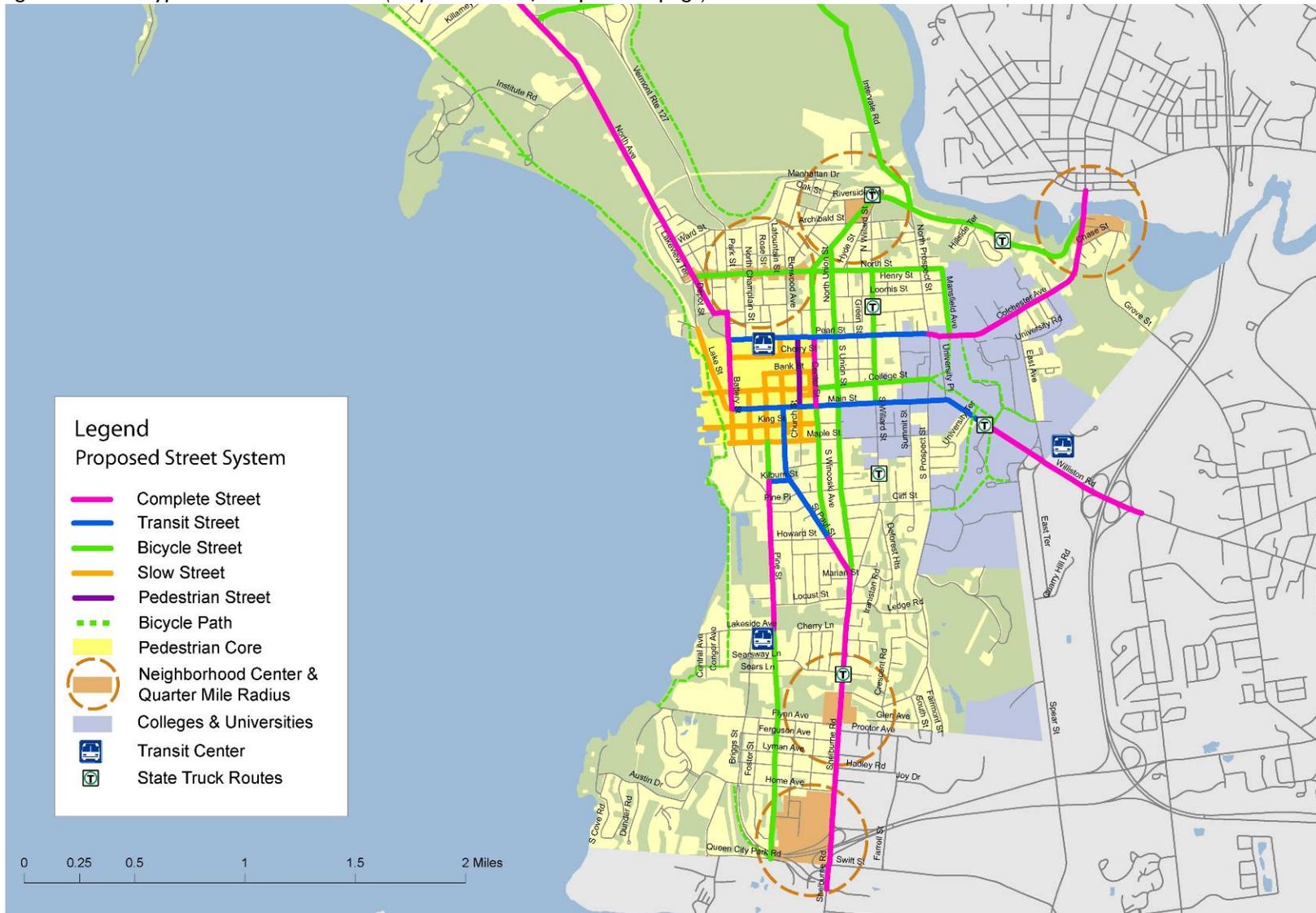*Figure 2: Street Types and Street Network (map continued on following page)*

Figure 2: Street Types and Street Network (map continued from previous page)

Legend
Proposed Street System

- Complete Street
- Transit Street
- Bicycle Street
- Slow Street
- Pedestrian Street
- Bicycle Path
- Pedestrian Core
- Neighborhood Center & Quarter Mile Radius
- Colleges & Universities
- Transit Center
- State Truck Routes

2C) Great Streets

A major component of this *Transportation Plan* is a shift to a "complete streets" strategy and the new *Street Design Guidelines*. Streets are classified (see Figure 2) as: 1. *Complete Street*; 2.*Transit Street and the Bicycle Street*; 3. *The Slow Street*; 4. *State Truck Routes*; and 5. *Neighborhood Streets*.

1. The Complete Street

In general, Burlington's gateway streets must carry all travel modes – cars and trucks, buses, bikes, and pedestrians - because no alternatives exist. Typically, these streets today include four travel lanes with no space for bikes and poor pedestrian crossings. There is a successful national movement to reallocate pavement in such cases to form *Complete Streets*.

Figure 3: The Complete Street

A *Complete Street* (Figure 3) could include:

1) enhanced transit stop;
2) traffic calming by removing a lane of through traffic;
3) short pedestrian crossings;
4) bike lanes;
5) updated utilities and lighting;
6) landscaped median island and turn lane;
7) stormwater planters; and
8) tree belts.

Some of the *Complete Street* conversions in Burlington will involve reducing the number of travel lanes from four to three. There will be concerns about whether a single through travel lane in each direction is sufficient to carry traffic. This issue will need to be addressed on a case-by-case basis in the scoping process, but preliminary analysis suggests that conversion is possible for the four-lane sections identified in Figure 2 except for Main Street through the UVM Campus where no changes are recommended. In addition, conversions elsewhere in the U.S. generally have resulted in reduced accident rates and less speeding.

In almost all cases, urban street capacity is limited at intersections rather than along street segments. Therefore, it is often possible to reduce width without increasing congestion. Furthermore, in a four-lane street, the left lanes operate inefficiently due to conflicts between left-turning vehicles and through vehicles. Moving the left turning vehicles out of through traffic removes these conflicts and also generally reduces accident rates.

Some features of the design shown in Figure 3, including the median treatment, could be modified during the scoping process. In many cases, a *Complete Street* can be tested with simple re-striping. The only essential element of a complete street is accommodating all travel modes safely and efficiently.

2. The Transit Street and the Bicycle Street

In Figure 2, *Complete Streets* in some locations transition to *Transit Streets* or *Bicycle Streets* where one of the modes is accommodated on a parallel route. For example, Main Street is shown as a *Transit Street* to the west of the central part of the UVM campus because bikes are accommodated on a combination of College Street and UVM paths. South Winooski Avenue is shown as a *Bicycle Street* because St. Paul Street is shown as the primary north-south transit street in that area. The *Street Design Guidelines* call for the remaining modes to be treated like they are in *Complete Streets*.

3. The Slow Street

The *Slow Streets* (Figure 4) are located within the pedestrian-oriented downtown core bounded by South Winooski Avenue, Maple Street, the waterfront, and Pearl Street.

Figure 4: The Slow Street

In the *Slow Streets*, cars, buses and bicycles all share the right of way. Pedestrians get priority, and crossings are frequent and short to help reduce intersection delays for both pedestrians and cars. Cars easily pull in and out of curbside spaces. It is proposed that a 20 mph speed limit be adopted for this area.

4. State Truck Routes

Routes 2 and 7 are designated Vermont truck routes. Some of this network is on *Complete Streets*. Residents on other sections, including Willard Street, frequently complain about truck traffic. There is no way to remove trucks from City streets. Instead, the *Street Design Guidelines* focus on calming traffic and supporting all modes. For example, South Willard Street is also a popular bicycle route. It has not been designated as a *Bicycle Street* because there is not enough space for separate bicycle lanes, but traffic speeds should be compatible with mixed traffic.

5. Neighborhood Streets

The streets not otherwise designated in the street plan will be *Neighborhood Streets*. This category ranges widely from low-volume residential streets to streets with moderate traffic volumes. Although there are no specific guidelines for these streets in the *Street Design Guidelines*, many of the general principles are applicable. Therefore, the *Street Design Guidelines* should be referenced prior to major reconstruction. In particular, the concepts for providing a quality pedestrian experience and accomplishing traffic calming through design are widely applicable to many situations.

The topic of appropriate speed limits was mentioned frequently in public meetings, as well as during the Pedestrian Summit. In order to create the safe pedestrian environment that is desirable for neighborhood streets, the City will adopt a blanket speed limit of 25 mph for all streets not otherwise posted.

3) Moving Forward

The City has made significant progress toward the transportation goals in the 2001 *Municipal Development Plan*. This *Transportation Plan* builds on this success.

Moving forward on the *Transportation Plan* requires:

- Steering toward that course (*Transportation Services*);
- Monitoring what is going on (*Progress Indicators*); and
- Charting a course (*Five Year Plan*).

Transportation Services

Current practice defers responsibility for implementation of transportation projects to the Department of Public Works (DPW) who oversees an ad-hoc working group known as the Transportation Technical Advisory Committee (TAC) comprised of staff from the Department of Public Works, the Planning and Zoning Department, the Community and Economic Development Office (CEDO), the Parks and Recreation Department, and City Arts.

The development of the street design guidelines and adoption of the "Great Streets" philosophy calls out for a "different" way of doing things. City staff must be committed to employing this new philosophy to implements segments of the plan. Commitment to the "Great Streets" philosophy will ensure a transparent process and an empowered decision making body.

Changes need to occur in the way the City delivers these programs and services. The changes are basic:

treat the streets holistically as proscribed in the Great Streets philosophy,

develop annual work plans dedicated to meeting the goals of this plan,

establish mechanisms for the review of theses plans,

develop a project prioritization methodology and

develop methods to communicate these activities to the public.

The Department of Public Works will identify staff whose responsibility will be the preparation of work plans and the development of monitoring systems and communications methods designed to meet the goals set by the plan. Staff will continue to work with the city wide technical advisory committee and may create ad hoc advisory groups to carry out its responsibilities. This committee, an ad hoc working group known as the Transportation Technical Advisory Committee (TAC), is comprised of staff from DPW, the Planning and Zoning Department (PZ), the Community and Economic Development Office (CEDO), the Parks and Recreation Department (P&R), and Burlington City Arts (BCA). DPW will oversee the work of the TAC.

As a means of reviewing plans and communicating with the public prior to the implementation of major street redesign projects, DPW shall submit these projects' plans to and consult with the City Council's Transportation, Energy and Utilities Committee (TEUC).

The Public Works Commission (PWC), in its role of regulator of the operation of vehicular and pedestrian traffic on the streets and sidewalks, will continue its traditional oversight of the maintenance and development of infrastructure, parking and traffic systems. In this role, plans for major street redesign projects will be approved by the PWC after DPW has consulted

with and received input from the TEUC. The City Council Transportation, Energy and Utilities Committee (TEUC) will monitor the transportation indicators described below. This will set a course that will result in progress.

The Mayor and City Council may appoint advisory committees to oversee any phase of specific projects as they see fit.

Progress Indicators

> *If we could first know where we are, and whither we are tending, we could better judge what to do, and how to do it…* (Abraham Lincoln, speech to the Illinois Republican State Convention, June 16, 1858)

Fourteen progress indicators will be tracked and reviewed annually. The indicators have been chosen because they are important to the goals of the *Plan*, and because they can be tracked at little or no additional cost. Some of the indicators have specific goals. For example, there is a long-term goal for the first indicator of completing 100 percent of the *Complete Streets* network. Other indicators do not have specific targets but are important to monitor. For example, if the volume of traffic entering and exiting the City is increasing but road capacity is not, action will be needed.

The indicators are:

1) *Complete Streets* (percent completed);

2) *Priority Transit System* (percent of weekly service hours achieved);

3) *Transit Ridership* (annual);

4) *Traffic Volumes into and out of the City* (vehicles per weekday);

5) *Accumulation of Cars* (estimated for weekdays from traffic volumes – an indication of parking demand);

6) *Downtown/Waterfront Parking Spaces* (total public and private spaces);

7) *Downtown On-Street Parking Utilization* (peak times on weekdays – part of parking pilot program described below);

8) *Parking Revenues* (annual City parking revenues from garages, surface lots, and on-street spaces);

9) *Maintenance Expense* (annual City budget as percent of needed maintenance budget – current spending is not keeping up with maintenance needs)

10) *Number of Burlington Employees Covered by TMAs* (Total number in Transportation Management Associations including CATMA, a downtown TMA under discussion, and any other TMAs that might form);

11) *TMA Employee Mode Shares* (percent walking, biking, using transit, carpooling);

12) *Mode Shares for Students at Public Schools* (percent walking, biking, using transit, carpooling);

13) *Traffic Crashes (*reported crashes per year, segmented by injury vs. property damage only, and whether pedestrians and cyclists were involved); and

14) *Energy Use/Greenhouse Gas Emissions* (estimated fuel consumption in City and by City residents by cars, trucks and buses.

These indicators will track the City's progress towards achieving the long-term transportation vision with indicators addressing the three major themes of Strong and Healthy City, Transportation

Choices, and Great Streets. The indicators are described in more detail the Technical Appendix (Appendix 1).

4) Initial Five Year Plan

The Five Year Plan will be updated regularly.

The initial plan will focus on the following:

Maintenance

The City's first priority is maintenance. Current annual expenditures are insufficient to meet resurfacing needs. An additional challenge is that events, especially major snow storms, can place a major short-term burden on staff and equipment. Many comments have been received asking for better maintenance, particularly for pedestrian and bicycle facilities. Maintenance operations are largely paid for with funds from the street and sidewalk dedicated tax and excavation fees and supplemented by revenues from the traffic fund. The parking pilot programs (described below) may provide additional money for maintenance.

Funded Capital Projects

These projects are funded primarily with Federal and State funds. However, several of the projects require substantial local matching funds. This *Transportation Plan* calls for the completion of these projects.

Waterfront Improvements – This project includes improvements to lower College Street from Lake Street to the Circle, improvements to the Battery Park extension, bicycle and pedestrian improvements on the lakefront, wayfinding, and improved pedestrian crossings at College and Battery for which conceptual designs have been completed. Additional work is being done developing concepts for improving access to the waterfront north of College Street to include Depot Street and access to the Moran plant site, and to the waterfront south of Main Street to include access through the railyard. This

Transportation Plan calls for the Battery Street improvements to be done consistently with the *Complete Street* model, and that a waterfront parking pricing pilot project (described below) help provide matching funds.

Marketplace District Improvements – Funds are available for improvements to the side streets off of Church Street and to Church Street from Main to King. This *Transportation Plan* calls for street improvements to be done consistently with the *Street Design Guidelines* including the *Slow Street* model which emphasizes pedestrian crossings. Countdown timers and more public seating should be included in the scoping process. Another parking pricing pilot program would help provide matching funds and may provide a source of continued funding to maintain these improvements.

Downtown Transit Center – A Federally-funded study is underway to choose a location and design a new facility to replace the Cherry Street Transit Center.

South End Neighborhood Transit Center – CCTA currently operates two shuttle services from the PARC Shuttle Lot (a.k.a General Dynamics lot), located between Sears Lane and Lakeside Avenue, just west of Pine Street on land leased by the City. The owners intend to develop this parcel. Over the long term the City looks to replace this surface facility with a parking structure (increasing the number of parking spaces from 350 to 575) and a climate-controlled passenger waiting area.

Wayfinding – Elements of the 2003 Wayfinding Plan will be implemented utilizing funds from the several downtown waterfront improvements projects. Completion of this project will help direct visitors to the City to easily find available parking and important destinations.

Southern Connector/Champlain Parkway – This project is intended to connect the western end of I-189 with the Burlington

downtown. A Final Supplemental Environmental Impact Statement (FSEIS) was completed in 2009 for an alternative which avoid the Barge Canal. These alternatives include about 0.7 miles of new roadway and using about 1 mile of existing streets (Lakeside Avenue and Pine Street). Pine Street would be reconstructed as a two-lane street with provision for bike traffic (either bike lanes or wider shared lanes). The Pine Street cross sections in the FSEIS are generally consistent with the *Complete Street* model in the *Street Design Guidelines*.

Flynn Avenue Sidewalk – The City has received funding through the MPO for the addition of sidewalk along the north side of Flynn Avenue connecting Shelburne Road to Pine Street and extending exiting sidewalk to Oakledge Park.

Capital Project Priorities Needing Scoping and/or Funding

Colchester Avenue – In 2006, the Colchester Avenue Task Force recommended that Colchester Avenue be reconstructed as a "fully integrated road designed as part of a multi-modal system accommodating transit, cycling and walking." This *Transportation Plan* recommends a scoping process for Colchester Avenue to become a *Complete Street*.

Shelburne Street Roundabout – The intersection of Shelburne Street with Willard, Ledge, and Locust Streets has been identified as a high accident location. Previous work by the City recommended a roundabout at this location. VTrans is starting a scoping process.

Route 127 Terminus – The end of Route 127 with local streets presents traffic concerns to local residents, especially concerning traffic speed. A scoping process resulted in City Council selection of a preferred alternative which has been identified in the CCMPO Transportation Improvement Plan for funding in 2010 and is awaiting state participation.

<u>Queen City Park Bridge:</u> Scoping has begun on this one lane bridge which connects Industrial Parkway with US Route 7. Bicycle/pedestrian capacity improvements are being explored as well as structural improvements.

<u>Cliff Street Sidewalk:</u> A neighborhood planning study examining the need for sidewalk along this Hill section street is wrapping up. Depending on the preferred alternative, capital funds may be needed.

Several possible capital projects were identified in the CCMPO Unified Planning Work Program: Improvements to Intervale Road, access planning for the Gosse Court Armory, and bicycle/pedestrian access to the Ethan Allen Homestead via North Avenue.

The desire for intersection improvements at the intersections of North Avenue and Plattsburgh Avenue, at North Winooski Avenue and Archibald Street and at Route 127 and Manhattan Drive have been registered through this and other neighborhood planning processes.

There are several possible capital bicycle projects, including implementation of the North South bicycle plan, repairs and upgrades to the waterfront bicycle path, and the development of a bicycle connection to Winooski are all projects in various stages of development.

This *Transportation Plan* calls for these projects to be prioritized and pursued in the order in which they are ranked.

Policy Initiatives

The City will pursue several policy initiatives including:

- Supporting creation of a downtown Transportation Management Association (TMA);
- Changing speed limits to 20 mph in the downtown Slow Streets zone and to 25 mph on neighborhood streets without posted speed limits;
- Supporting improvements to the western corridor rail infrastructure and expansion of passenger rail services to Burlington;
- Supporting alternative funding sources for public transit operations;
- Supporting car sharing service (discussed more in Technical Appendix); and,
- Changing zoning parking requirements to permit impact fee or payment-in-lieu options.

Transit

The transit vision (described above) for a set of trunk routes with high frequency and evening and weekend service will require significant new funding. CCTA's Transit Development Plan includes a comprehensive menu of service improvements including Interregional and Regional commuter services, trunk and local routes, shuttles and feeder services, and demand response service. Transit is a regional need and the reliance on local property taxes is a severe limiting factor on CCTA's ability to increase service. In Act 141 of 2001, the Legislature recognized that local property taxes are not a viable long-term source to support transit operations. The City will continue to push for a regional transit funding source.

However, successful transit is reliant on compact and efficient land use patterns. Proposed transit service improvements must be coordinated with established land use plans. Transit services should be provided where higher-density, mixed-use development is anticipated well in advance, rather than re-routed in response to new development proposals after-the-fact.

Parking Pricing Pilot Programs

It is the policy and priority of the City to better utilize the existing parking inventory by improving parking management strategies, and to add additional inventory in strategic locations only as necessary. Efforts to improve management of the existing parking systems include wayfinding and TMA's as noted above, combined with remote parking served by shuttles/transit, carsharing, capital improvements that make parking facilities more attractive and desirable, and market-based pricing.

This plan introduces the concept of market priced parking with the recommendation of taking incremental steps to test its validity locally under the assumption that market pricing will influence demand. Three parking pricing pilot programs are proposed. The purposes of the programs are:

- Increase availability of high demand parking spaces by encouraging shifts to spaces that are less utilized,

- Encourage alternatives to driving alone, and

- Increasing parking revenue (possible uses include matching Federal grants, improving maintenance and enforcement, building more parking, and supporting transit).

Downtown On-Street Parking – Parking availability downtown is a common complaint of visitors and the business community. This is partly due to the heavy utilization of on-street parking spaces which are the most apparent parking spaces. Experts recommend pricing so that 15 percent of on-street parking spaces are available so customers will be able to find parking spaces quickly and easily. Others, particularly employees, are encouraged to find lower-priced, less visible spaces, use transit routes, or remote parking shuttles. The first pilot program would replace existing downtown meters in historically high demand areas with

a new system that would allow payment by credit card or paper currency in addition to coins. Pricing would be extended into evening hours, and prices would be increased gradually until target utilization was achieved.

<u>Waterfront Parking Lots</u> – A second pilot would charge for parking in the waterfront lots throughout the year and not just during special events. As noted earlier, the revenues generated would offset local cost of improvements.

<u>Neighborhood On-Street Parking</u> – A third pilot program would build on the residential permit program and include selling a limited number of non-residential permits for daily parking in the neighborhood. This program would only be advanced if there were neighborhood support, and should be part of a more comprehensive re-evaluation of the residents-only parking program. In other parts of the U.S., there has been strong interest when revenues are spent in the neighborhoods where the fees are collected.

Downtown Parking Supply

Some parking in the downtown is likely to be lost due to redevelopment. The City has a policy of no net loss, so these spaces will need to be replaced. Additional parking spaces in strategic locations – particularly in the Main Street corridor - also may be needed.

Opportunities for increasing parking supply include expanding the Marketplace garage into the Handy air rights and adding on-street parking spaces with conversion to one-way streets. Both of these ideas require additional study.

The Marketplace garage study would include cost estimation, possible funding sources, and an estimated timeline. This opportunity, along with previously identified parking projects on the TD Bank site and the "super block" on the northeast corner of Main and South Winooski, deserve further study.

The relocation of the Cherry Street Transit Station will free additional on-street parking spaces. It may also be possible to convert Cherry Street or other downtown streets to one-way, which could provide additional parking spaces through conversion to diagonal parking. Scoping for these changes could be accomplished with the Marketplace District Improvements.

Finally, the City has had a longstanding preference not to develop parking on the waterfront. As a result, opportunities to develop additional parking supply in the Battery Street corridor – even underneath Battery Park Extension – need to be explored over the long term.

New and innovative motorized personal transportation devices, such as segways and electric scooters, will likely continue to gain interest as an alternative mode of transportation in Burlington. The City will need to evaluate the possible impacts the use of these devices may have on both vehicles on the street and pedestrians on the sidewalk and any infrastructure needs they may require.

Remote Parking

The City is committed to providing remote parking with transit/shuttle service. The PARC shuttle lot located between Sears Lane and Lakeside Avenue, just west of Pine Street is the location for the planned South End Neighborhood Transit Center. A Chittenden County Metropolitan Planning Organization (CCMPO) study from 2003 identified possible locations for additional "auto capture" facilities on Burlington's periphery including a facility at Exit 14 in I-89. This *Transportation Plan* supports linking the proposed transit trunk lines with other remote parking lots wherever possible.

5) For More Information:

The Transportation Plan has several appendices:

1) Technical Appendix

2) Street Design Guidelines

3) Market Study

4) Public Participation Report

5) Memo on alternative scenarios

6) Memo on preliminary Colchester Avenue analysis

The complete *Transportation Plan* can be accessed on the internet at:

www.ci.burlington.vt.us

The 2006 Legacy Town Meeting focused on transportation

Transportation Plan Steering Committee

Jesse Beck, Waterfront Marketplace Downtown Committee

Amy Bell and Polly McMurtry, VTrans

Mary Chaffee, Ward 4/7 NPA

Chris Cole, CCTA (Aaron Frank, alternate)

Peter Keating, CCMPO

Bill Keogh, Burlington City Council

Max Kuusela, Youth Representative

David Lustgarten, Burlington Bicycle Council

Roger Marshall, Ward 5 NPA

Jerry Manock, Ward 6 NPA

Dawn Moskowitz, DPW Commissioner

Bob Penniman, CATMA

Suki Rubin and Ariane Kissam, Ward 2/3 NPA

Wayne Senville, Ward 1 NPA

Marc Sherman, DPW Commissioner

Emily Stebbins and Livia DeMarchis, Planning Commissioners

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ORW Landscape Architects and Planners (White River Junction, VT)

Third Sector Associates (Burlington, VT)

TranSystems (Montpelier, VT)

VI. ECONOMIC DEVELOPMENT PLAN

Vision Statement

This Plan envisions Burlington as a city where…

.… Burlington continues to serve as the historic core of a regional population, educational, health care, commercial, cultural, and governmental center. Among the city's chief economic assets, include its accessibility to major population centers in northeastern North America, a skilled and dedicated workforce, and a high quality of life, which is preserved and enhanced through the promotion of development that is compatible with the city's neighborhoods and natural environment. Burlington's economy is sustained by a diverse mixture of businesses including: neighborhood-oriented local businesses like grocery stores and doctor's offices in vibrant neighborhood centers; a medley of service, retail, financial and cultural enterprises throughout the downtown and waterfront; health care and academic institutions that offer the latest in intellectual, technological and scientific opportunities; food production joined with agricultural entrepreneurship in the Intervale; well-paying and high quality commercial enterprises in the south end; and a travel and tourism industry that caters to visitors interested in Burlington's heritage and the region's outdoor recreational amenities.

… the city's economy continues to be sustained largely through a balance of self-employment, small business growth, and enterprise and institutional development. Burlington serves as an incubator for new business ventures, and enables established business to set down roots rather than move away. Educational and health care institutions have expanded their role in developing and transferring their knowledge base to benefit local residents and businesses. The city has developed a range of technical and financial incentives to retain, encourage, and support economic development, helping it to keep pace with growth in surrounding communities. Burlington's economy has become more self-reliant through significant increases in local ownership and control of businesses, reinvestment of local resources, a commitment to environmental quality, and an investment in people and infrastructure. Burlington residents, who were not fully participating in the city and regional economy, now have access to meaningful jobs paying a livable wage, job training, and job retention services.

CITY POLICIES

THE CITY OF BURLINGTON WILL...

- **Nurture sustainable development to provide for the city and its residents over the long term.**

- **Promote and strengthen a mixed economy, and work actively to retain existing businesses and jobs.**

- **Promote and support locally owned and controlled small businesses including home occupations appropriate to the character of the neighborhood.**

- **Partner with the private, not-for-profit, and other government sectors to support existing businesses, attract future development, and conduct joint marketing.**

- **Invest in the necessary public improvements, particularly transportation, to strengthen the Downtown, both as a Regional Growth Center, and as city neighborhood.**

- **Work with neighboring communities, regional agencies, and state government to promote land use and development policies that support the Burlington's role as the Regional Growth Center.**

- **Support sustainable development activities in target areas of the city including the Enterprise Community, Neighborhood Activity Centers, the Pine Street Corridor, Downtown, and the Downtown Waterfront.**

- **Focus technical assistance, marketing and recruitment for economic development towards target industries.**

INTRODUCTION

The *Burlington Legacy Project's* vision for the economy focuses on four basic principles that should guide the city towards sustainability over the next 3 decades. These are: *Creating a Vibrant Urban Center*, *Economic Security*, *Economic Self-Reliance*, and *Transportation*. The following chapter of this plan outlines the City's economic development policies and priorities, and implements the Legacy *Project's* principles by concentrating on the following areas: Burlington's role in a **Regional Growth Center**, advancing **Sustainable Development Strategies**, **Supporting Targeted Industries**, identifying **Strategic Locations for Development**, and seeking to build **Cooperative Relationships**.

Regional Growth Center

The City of Burlington is a major economic force in Vermont. As a central part of the regional growth center for northwestern Vermont, Burlington provides jobs and services for residents of the city, county, and beyond. Not only does the city host a variety of businesses within its own boundaries, but it also contributes directly to economic development activity and opportunities throughout the surrounding region. The city's overall quality of life, reputation as a forward-thinking community, host of urban amenities, and proximity to a wide range of recreational choices combine to make Burlington, and surrounding portions of Chittenden County, a very attractive location for new, expanding, and relocating businesses.

Burlington is fundamental to the "Regional Growth Center" identified in the *Chittenden County Regional Plan*. By encouraging and accommodating growth in this area, surrounding communities and their rural working landscapes can be protected from unwanted sprawl development, and served with the desired job opportunities and services. This combination of uses and landscapes provides the foundation for the region's competitive advantage. The growth center concept, with Burlington at its core, must be supported –both regionally and locally - if this advantage is to be sustained into the future. The City will continue to work with its neighboring communities and regional planners to re-enforce a compact settlement pattern with concentrations of jobs and services in growth centers.

Burlington's Economic Mix

Burlington's vitality comes from its strong mixed economy. Diversity allows the city to weather temporary weaknesses in different sectors of the economy. This is a balance that the city must strive to maintain and support in the coming years. The City must also emphasize efforts to retain existing employers by redeveloping former brownfields to provide room for expansion, investing in city infrastructure, and developing transportation alternatives for workers and the movement of goods

In the Greater Burlington labor market, the labor force has grown from 80,950 in 1992 to 99,400 in 1998. The regional economy (in a six-county area) is expected to add 44,250 jobs over the 2000-2010 period. Nearly 35% of Burlington's employment base is service

related - dominated by the health and educational fields. Service jobs have been the fastest growing sector at 6.2% between 1988 and 1992. Health service jobs have grown almost 50% in the last ten years. Our institutions play a very important role in Burlington's economy. The University of Vermont and Fletcher Allen Health Care are the city's largest employers. They are an asset to the community and reinforce its economic base.

Retail jobs are also important to Burlington's economy comprising approximately 16% of the total in 1992. A strong retail sector keeps the city economy active and strong by contributing to the overall activity level, and attracting residents, visitors and businesses to the City. However, Burlington's position as the region's retail center has eroded to nearly 31% of county retail sales - down from 55% in 1970. In addition, retail jobs are rarely well paying, and don't typically offer equivalent benefits of jobs in other sectors. Yet, these jobs serve those in the community for whom flexible, part-time jobs are essential.

Burlington's Largest Employers	
Fletcher Allen Hospital	6,000
University of Vermont	3,187
Burlington City Schools	799
City of Burlington	615
Chittenden Bank	600
General Dynamics	475
Blodgett Holdings	400
Champlain College	302
Specialty Filaments	220
Radisson Hotel	180

Manufacturing has traditionally been vital to Burlington because it creates well-paying jobs, draws investment into the area, and strengthens other sectors of the economy. Presently 7.5% of Burlington's jobs are in manufacturing - down from 15.3% in 1980. This reflects, in large part, losses at General Dynamics (formerly General Electric).
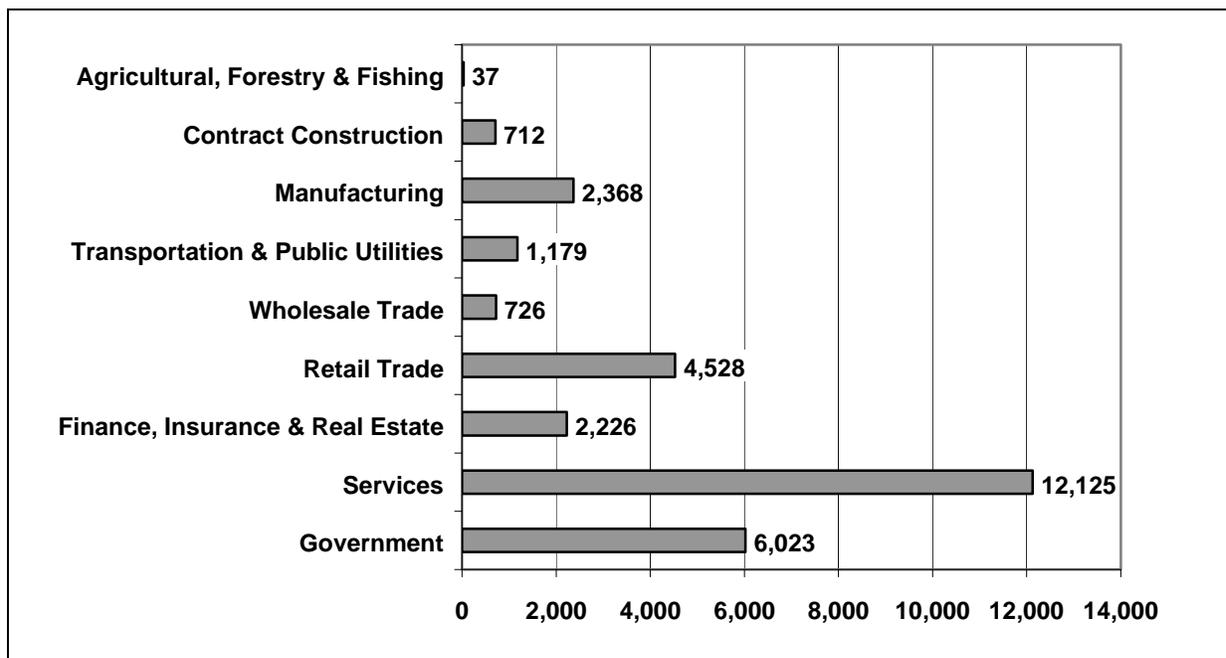

Figure 1. 1999 Employment by Industry - City of Burlington.

Sustainable Development Strategies

To remain vital, Burlington will continue to provide an environment conducive to businesses, good jobs for workers, and the necessary support - including good housing, childcare, access to services, educational opportunities, and a healthful environment. It will continue to invest in the downtown. It will support its existing job base and its mix of industry, government, education, health care, and tourism while encouraging the creation of jobs that benefit the worker, the consumer, and the environment. Following are five strategies aimed at making development of Burlington's economy sustainable over time.

CREATING NEW JOBS

Burlington's workforce grew from about 26,000 in 1980 to nearly 31,000 in 1990. Since then, total employment has remained constant. Of particular importance to note is that approximately 59% of all employed city residents also work in the city - by far the highest percentage in Chittenden County and up from 33% in 1980. While total employment has declined somewhat since 1990, self-employment and home-based businesses have grown
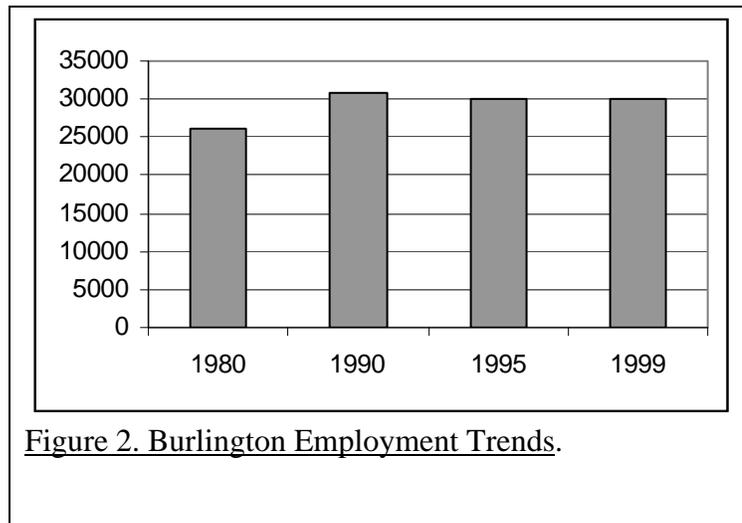

Figure 2. Burlington Employment Trends.

significantly over the past decade. And the number of people working at home grew by 32% to over 600 between 1980 and 1990. This is a very important trend as it relates to transportation needs and the opportunity for the city to promote concentrations of small businesses in neighborhood activity centers.

Because so few businesses relocate each year, new jobs will be created primarily by new or expanding local businesses. Burlington has been most effective as a incubator for new, locally owned businesses - a factor that has been important to regional job creation. Locally owned and -controlled businesses not only create new jobs; they keep local dollars in the City to re-invest in improvements, services, and infrastructure. The continued growth and development of small and locally owned businesses will be a high priority for the future.

It is also important for the city to provide opportunities for existing business to grow within the city, and not be forced to move once they have reached a certain size. The future redevelopment of brownfields around the city as well as opportunities within the Enterprise zoning district are two examples for further examination.

JOBS FOR ALL

Although Burlington has experienced an economic boom over the last ten to fifteen years, not everyone has shared in the good times. This is especially evident during economic downturns. While Burlington has the lowest unemployment of any MSA[1] in the Northeast, some people have no jobs; others who work, earn too little to support themselves or their families;

Figure 3. 1989 Median Household Income.

others still are under-employed - in situations that don't make the best use of their talents and abilities. Burlington's per capita income is less than 70% of the county. Most serious is that nearly one in five people in Burlington live in poverty, many of which are mother-led households - more than twice the rate of the county.

In 1997, the Burlington-based Peace and Justice Center published the first phase on the *Vermont Job Gap Study*. This was the first in a 5-part research study that sought to understand whether the Vermont economy is producing enough jobs that pay a "livable wage[2]." The study estimated the cost of meeting a family's basic needs (which for an urban area was determined to be: $8.21/hr or $17,086/year for a single person, or $19.82/hr or $41,224/yr for a family of four), estimated and identified the number of livable wage jobs in Vermont, and finally assessed the societal costs of not meeting a family's basic needs. The debate that has followed has broadened the discussion around job creation from one that largely focused on those without jobs, to now include the extent to which available jobs are meeting basic needs. The Vermont Legislature established the Legislative Livable Income Study Committee in 1999 to follow-up on this issue and make recommendations for legislation to further the overall objective of a livable income for all working Vermonters.

To improve the economic well-being of all city residents - and particularly working-class young people, people with disabilities, and women - the City will work with the private sector to create job opportunities, offer training programs, provide housing, and ensure needed support services such as childcare and health benefits. The City will encourage the creation of well-paying, meaningful jobs that offer workers a safe workplace, job security, a wide variety of salaries and benefits that support families, and a say in decisions that affect them.

MIXED USE AND MIXED RETAIL

One economic strategy that will guide the City into the future is **diversification**. Traditional economic development has typically focused on one large industry or employer. However, when that industry experiences a downturn, or the large employer

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[1] Metropolitan Statistical Area as defined by the US Census Bureau. This includes the City of Burlington and several surrounding communities in Chittenden and Franklin counties.

[2] A "livable wage" is the hourly wage or annual income necessary to cover basic needs and all relevant state and federal taxes.

reduces or closes operations, the impact on the community is significant. The volatility of technology and the restructuring of defense industries offer two pertinent examples. One advantage of targeting a broad range of industries and businesses is diversification of risk. Should one segment decline, the others remain to support the overall economy.

Neither manufacturing, tourism, education, small business, health care, finance, nor retail is the single answer to maintaining and improving Burlington's economy - it's all of them. The same is true within each economic sector. A range of retail from hardware to jewelry, from department stores to boutiques, will allow the City to serve the needs of its residents and workers, and remain an attraction to visitors.

INFRASTRUCTURE INVESTMENTS

In many cases, investment in the necessary infrastructure to support future development must occur first in order to attract business growth and opportunities. Early investment demonstrates a commitment and willingness on the part of the City that business is welcome and will be supported. Of particular important will be future investments in the City's transportation infrastructure and public transit systems, as well as telecommunications. Examples include better public transit and parking options to serves workers downtown, reserving some capacity to load and unload freight by rail, enabling high speed data and communication services that allow residents to work at home or serve technology-bases businesses, and creation of better energy systems and conservation programs. Other sections of this Plan, most importantly *Energy*, *Transportation* and *Community Facilities and Services,* discuss in greater depth the type and location of future infrastructure development.

BUSINESS RETENTION AND PARTNERSHIPS

One of the basic tenets of sustainable development is making the best use of existing resources. It is within this context that the retention and nurturing of existing businesses must be the highest priority for the future. Successful businesses already in place are the best marketing tool. The City needs to have a better understanding of the needs of existing businesses, and be in constant dialogue with them to ensure that mutual concerns and objectives can be addressed through cooperation. Another asset that needs more attention is the role that the educational institutions play in developing and sharing new research and technologies and spinning them off into new businesses.

An example of this strategy already at work is the "Downtown Partnership." The Partnership is a public-private initiative between city government and the business community jointly addressing issues including transportation and parking, downtown development, public safety, and recruitment and marketing. In late 1989, the Burlington Business Association (formerly the Downtown Burlington Business Association) initiated the creation of *Burlington: A Shared Vision*. This document was prepared to help shape the City's last master planning process, and remains a viable blueprint for the downtown's future. Future efforts to combine public and private partners to collaborate on joint projects, define critical issues, and development strategies for future business growth will be encouraged and supported.

Supporting Targeted Industries

Burlington recognizes that in order to have successful and sustainable economic development, the city must target its energies. Without sacrificing existing businesses and economic diversity, the following areas present the greatest opportunities for future success given their growth potential, Burlington's competitive advantages, and their fit within broader community-based objectives of the city.

ENVIRONMENTAL ENTERPRISE AND TECHNOLOGY

Burlington already has a very positive image as an environmentally friendly community, and is widely recognized as a highly desirable place to live and work. These advantages can be used as a powerful economic development tool to attract businesses that place a premium on social and environmental factors when locating new offices and facilities.

Burlington will encourage new business development within the environmental services and manufacturing sectors. These include environmental testing, engineering, waste management, education, research, audits, remediation, and energy efficiency. Several examples already exist including Gardener's Supply, Vermont Energy Investment Corp., Living Technologies, and Burlington Electric's McNeil Generating Station. In addition, Burlington will examine opportunities related to recycling and the re-use of recycled materials into value-added products.

Sustainable development must also consider value-added manufacturing and processing of agricultural and forest resource products. In addition to making productive and sustainable use of existing local resources, these types of businesses also provide markets for products produced throughout the region. This comes back to benefit the community in many ways by supporting local farmers and the surrounding traditional working landscape, and supports our high quality of life. Opportunities include additional agriculture in the Intervale, incubator space for small agricultural enterprises, specialty food production and distribution, community gardens, aquaculture and greenhouses.

TECHNOLOGY AND TELECOMMUNICATIONS

Computer technologies and telecommunications have rapidly become essential components in the success of nearly all types of businesses. Like the completion of the interstate highway system, the high-speed exchange of information and instant communications have dramatically changed not only the way businesses is done, but where.

Once again, Burlington's reputation as a desirable community can serve to attract many businesses, and business functions, related to technology and telecommunications. Examples include remote office/branch office (ROBO), small office/home office (SOHO), professional services, interactive media, electronic publishing, distance research and learning, and telemarketing.

While Burlington recognizes the growth potential in this industry, exactly how to tap into it and what are the infrastructure needs and potential impacts remain questions. The City will need to monitor emerging innovations in the industry, consider the potential impacts and how to address them, and offer a plan to improve Burlington's access into this growing industry. Opportunities exist to build upon existing high-tech businesses like IBM and IDX, and the companies that service or spin-off from them.

In encouraging these types of technologies, the City will also take steps to ensure that start-up and small businesses are not left at an unfair disadvantage. Access to technological resources, education, and infrastructure by small businesses should be established through colleges and community technology centers similar to that created within the Enterprise Community. The City has also taken it upon itself to form a partnership to provide local telephone, data, high-speed Internet access and cable television services. The network will enable private-sector companies to provide added choice in telecommunication services to residents and businesses of Burlington and outlying areas.

ARTS AND ENTERTAINMENT

Long before the term "Creative Economy" became popular, Burlington has been widely recognized as an arts and entertainment center, and for its emerging music and recording industry. Efforts will continue to support arts and entertainment, which expands economic activity and enhances the city's quality-of-life. In addition, the arts enliven the city beyond the 9-5 workday - offering a more efficient use of public infrastructure. Future opportunities include incubator space for artists to live and work, an arts information center downtown to provide comprehensive event listings and information, educational programs and events that showcase and celebrate the wealth of artistic creativity within the community. The City continues to collaborate with UVM's Flemming Museum on the creation of an arts and exhibit space in the former Moran Generating Station on the waterfront.

CANADIAN TRADE

The elimination of trade barriers facilitated by NAFTA, political uncertainty over the future of Quebec, proximity to Burlington and the city's quality-of-life reputation all present significant opportunities for the expansion and/or relocation of Canadian-based businesses to Burlington. The City should capitalize on these through a marketing program focused on small and medium-sized businesses in Montreal and southern Quebec.

RECREATION AND TOURISM

Much of Burlington's reputation for a high quality-of-life is based on the abundant recreational opportunities in the area, and the city's outstanding natural setting. These advantages also serve as attractions for tourism - coupled with festivals, shopping, restaurants, arts and entertainment. Many visitors come to take in many of the regional

attractions and activities including boating on the lake, skiing and hiking in the mountains, or to attend special events and meetings.

Burlington has become a destination itself apart from the overall "Vermont Experience." The city hosts several major events throughout the year that attract thousands of visitors from throughout the northeast including First Night Burlington, Vermont City Marathon, Howard Bank Criterium, Discover Jazz Festival and many others. Burlington also host such attractions as the Flynn Center for the Performing Arts, the Lake Champlain Basin Science Center and Memorial Auditorium. Surrounding communities benefit from Burlington's reputation and special events through proximity, overflow, and simple name recognition.

The entire Lake Champlain region is preparing for the 400th anniversary of the arrival of explorer Samuel de Champlain in 1609. This six-year celebration will highlight Champlain's journey down the St. Lawrence River from Quebec City, up the Richelieu River and into Lake Champlain. Additionally, the National Park Service has recently completed a report on the creation of a Champlain Valley Heritage Corridor. Both efforts highlight the importance of heritage tourism to the region's travel and tourism economy. This form of tourism (one of the fastest growing in Vermont and around the world) is centered on the inherent character and resources (both cultural and natural) of a particular area. For this reason, preserving the character of Burlington, and its natural environs and cultural resources, are a critically important part of an overall economic strategy.

Tourism creates many jobs in the service sector, especially hotels and restaurants, and the retail sector - bringing vitality and revenue to the area. While discussion occurs regionally regarding the need for a large convention space, Burlington will ensure that it has the necessary accommodations, meeting and exhibition space to attract small to medium-sized events downtown. However, Burlington can best encourage tourism by serving the needs of its residents first. A community that provides excellent facilities and services for its own inhabitants, and has a well-established sense of community, will continue to be an attraction to visitors.

HEALTH, EDUCATIONAL , LEGAL, AND FINANCIAL INSTITUTIONS

As noted previously, service sector businesses related to health care, education, legal, and financial services play a dominating role in the city's economy. These businesses are also of the type that are in the best position to utilize available office space - both existing and potential, take advantage of emerging technology and telecommunications, and compliment an urban mixed land use pattern. Finally, these businesses – particularly those related to education and health care – provide

opportunities for research and development that in turn can be transferred to benefit other private sector businesses. The retention of existing facilities and businesses will be a high priority.

However, health care continues to undergo an industry-wide restructuring. The national debate over the rising cost of healthcare, and the anticipated expansion and redevelopment of Fletcher Allen Health Care's facility in Burlington, are only two examples. Burlington will continue to closely monitor trends in this field, and work with the institutions to improve their ability to provide services and jobs in the community.

Strategic Locations for Development

Much of Burlington is already well developed, and much that remains provides important natural, recreational, and open space for city residents - factors themselves that greatly benefit Burlington's economy. However, many opportunities for new and expanded development exist.

Strategic locations for future development include the Downtown and Downtown Waterfront, the Old North End Enterprise Community, the Enterprise Zone/Pine Street Corridor in the South End, Institutional Core Campuses, and Neighborhood Activity Centers. A more detailed discussion of these areas is found in the *Land Use* section of this Plan. Two additional areas are discussed below.

AN ECO-ENTERPRISE ZONE ON THE INTERVALE

A small portion of the Intervale, including the home of Burlington Electric's McNeil Generating Station, have been rezoned, and planning is underway for the creation of the "Riverside Eco-Park.".

As conceived, the Eco-Park will attract and house environmentally and agriculturally-oriented and compatible businesses, allowing for a range of joint ventures and sharing of resources. One such example might include commercial greenhouses heated by waste heat from McNeil Station and utilizing compost created from Intervale farmers.
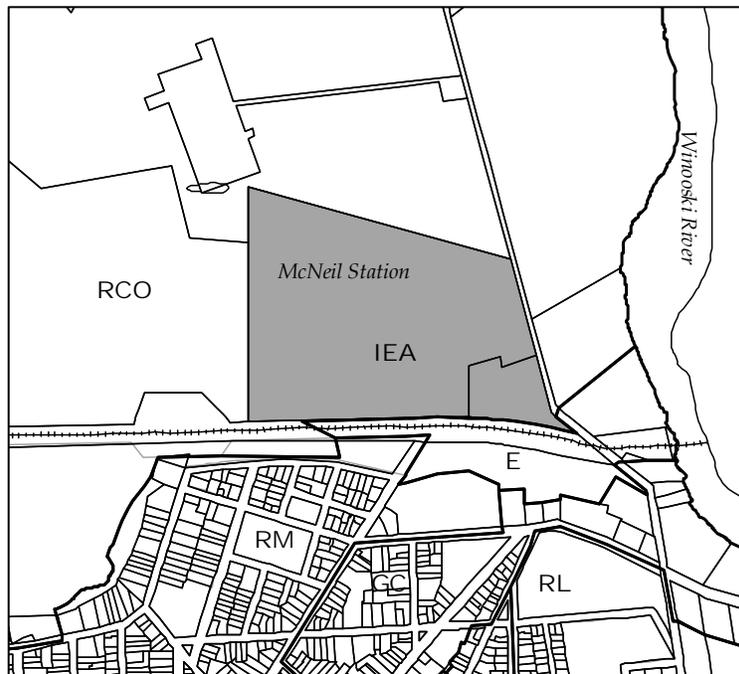
However, the Intervale remains an ecologically sensitive area (see the section on the *Natural Environment*), much of which is prone to seasonal flooding. While the Eco-Park is outside of the flood zone, special considerations must be accommodated in any plans for future development in this area to ensure the agricultural character and sensitive resources are adequately protected.

BROWNFIELDS

Burlington's industrial past has left the city with a legacy of past mistakes that may produce opportunities for future development. The City has a host of older industrial sites with some degree of environmental contamination - the extent of which remains unknown in many cases. Burlington has begun to investigate opportunities to remediate these properties in order to bring them back into useful economic service. Once the degree of contamination is better understood, options for clean up and redevelopment can be investigated. Not only do these site represent locations for new development, but also markets for locating new environmental service/waste remediation businesses in the city. For additional information, see the *Land Use* section.

Cooperative Relationships

Planning for sustainable economic development in Burlington cannot occur in a vacuum. Burlington is highly dependent upon a wide range of factors, partners, and relationships including neighboring communities, state government, and non-profit development organizations. The same holds true for development activities within the city as well. City departments and the business community must be in constant dialogue and actively cooperate in order to achieve common objectives.

REGIONAL PLANNING AND COOPERATION

The close interdependence between the City and its neighboring communities demand a regional perspective on a number of issues related to economic development including land use, transportation and development itself. Currently the City participates in regional planning and development activities through the Chittenden County Regional Planning Commission (CCRPC) and the Greater Burlington Industrial Corp. (GBIC). The Lake Champlain Regional Chamber of Commerce plays a major role in promoting the entire region.

Efforts to work more closely as a region - to support and attract development and protect our competitive advantages - must continue. This should include an active dialogue between the public and private sector. Infrastructure, services, joint marketing and financing opportunities need to be considered. There may be increased support for an equitable sharing of local tax revenues generated from new development through a greater appreciation of the mutual gains and benefits.

The city administration and departments must be in constant dialogue with the business community in order to address mutual needs and concerns. This has traditionally been a high priority, and is achieved primarily through the Community and Economic Development Office and efforts such as the Downtown Partnership. However, many other collaborative opportunities between local businesses, institutions, neighboring communities, and non-profit agencies exist, and should be actively pursued.

Economic Development Action Plan

Action Item	Lead Agency	Secondary Agencies
Continue to work with its neighboring communities and regional planners to re-enforce a compact settlement pattern with concentrations of jobs and services in growth centers.	Planning & Zoning CEDO	
Develop and maintain an inventory of commercial-industrial sites and buildings as a tool to facilitate expansion and relocation of businesses.	CEDO	Planning & Zoning
Expand energy efficiency and cost reduction programs for businesses.	BED	CEDO Public Works
Pursue new collaborative opportunities between local businesses, institutions, neighboring communities, state government and non-profit agencies to support, retain, expand, and attract future business growth.	CEDO	
Complete a Comparative Analysis of the cost of, and obstacles to, development in the City with neighboring and similar sized communities.	CEDO	Planning & Zoning
Complete the creation of an Eco-Enterprise/Agriculture District for a portion of the Intervale.	CEDO	Planning & Zoning
Implement the Economic Strategies outlined in the ONE EC Plan "Common Ground" and the *Consolidated Plan for Housing & Community Development*.	CEDO	
Provide small business with new or expanded financing programs including a Business Loan Program.	CEDO	
Establish plans for the renovation and adaptation of the Moran Generating Plant on the	CEDO	

Downtown Waterfront.

Establish a *Sustainable Development Business Program* to provide information, education and resources to the business community regarding making their business practices and processes more environmentally friendly and sustainable.	CEDO	BED
Develop additional conference and exhibition space within the Downtown.	CEDO	City Arts
Establish a relationship with area institutions for technology development and deployment initiatives.	CEDO	
Establish an Arts Information Center in a downtown location.	City Arts	CEDO
Evaluate opportunities to expand the Eco-Enterprise Zoning concept to other parts of the city.	Planning & Zoning	

VII. COMMUNITY FACILITIES AND SERVICES PLAN

Vision Statement

This Plan envisions Burlington as a city where…

…local government recognizes the importance of providing high quality community services, and places at least as high a priority on maintaining and upgrading existing facilities and infrastructure than on new construction. City services and facilities are managed in order to maximize efficiency and support increased levels of development without degrading the natural environment or unnecessarily burdening the taxpayers. The City places a high priority on the conservation of precious resources - energy, water, land, air, etc. - so that they may remain available for use by future generations. Innovative approaches to stormwater management, water, and wastewater services and energy services have made Burlington a national leader. City administrative functions and those that involve direct contact with the public are conveniently concentrated downtown and in neighborhood activity centers. The City works in close partnership within and between neighboring communities, government departments, non-profit agencies and private businesses in order to support responsible growth management in the region, and maximize the efficiency and effectiveness of municipal services.

CITY POLICIES

THE CITY OF BURLINGTON WILL...

- **Make the most effective and efficient use of existing services, buildings, utilities, and facilities before adding new capacity, or initiating new construction.**

- **Coordinate land use and development with the availability and capacity of public services, facilities, and utilities, in order to ensure a high level of service.**

- **Ensure that existing public property, buildings, and capital facilities receive regular maintenance, and any upgrade, re-placement, or expansion of these facilities be based on approved standards.**

- **Coordinate utility work - including highway, gas, water, sewer, and electric - to minimize the costs of construction and impact on the neighborhood.**

- **Include the needs of workers and residents, as well as the impact of visitors, in setting standards for service.**

- **Place appropriate fiscal burden of facilities and utilities on the users.**

- **Protect its natural environment - including Lake Champlain and the Winooski River - from damage and degradation caused by public infrastructure and utilities.**

- **Require that all city buildings, facilities, and infrastructure adhere to a high standard of urban design, public accessibility, and energy efficiency.**

- **Concentrate City administrative functions and public services in the downtown to the greatest extent possible.**

INTRODUCTION

This Chapter of Burlington's Municipal Development Plan focuses on the wide range of municipal services and facilities provided by the city in order to support and facilitate development, and meet the needs of its residents, property owners, and visitors. Burlington's municipal facilities include water supply, wastewater disposal, and stormwater drainage. Municipal services include fire, police, library, parks, curbside recycling and general government services. This section discusses services and facilities provided by the City, including current limitations, potential problems and proposed improvements. The transportation system, electric utility, and schools are discussed in separate sections. Also important to the discussion of municipal infrastructure and services is an outline of the implementation strategies – including funding options and priorities – that is found in the Implementation Plan section.

Burlington City Hall

Perhaps most pertinent to this section is the concept of *sustainability*. Without adequate infrastructure and public services, the city cannot sustain its current level of development - let alone increase this level of growth and serve as part of a Regional Growth Center. A lack of municipal infrastructure and capacity will be the greatest limiting factor to future growth and development. This is a key area for further analysis before the City fully embraces a proposal for significant future development and population growth. The City must coordinate land use and development with the capacity and capability of municipal facilities and utilities to maximize their efficiency and effectiveness, and maintain a high quality level of service.

Pursuing a sustainable program for providing municipal infrastructure and services is based on:

1. **Maintenance:** The City's existing buildings, facilities, and property must be properly maintained in order to avoid costly and unnecessary capital expenses due to neglect.

2. **Efficiency:** Municipal facilities and services must operate at maximum efficiency towards their respective goals and objectives in order to avoid wasting scarce resources – natural, energy, and human - and public tax dollars.

3. **Conservation:** The City must place a high priority on the conservation of precious resources - energy, water, land, human, etc. - so that they may remain available for the benefit, use, and enjoyment of future generations.

4. **Partnerships:** The City must pursue partnerships within and between neighboring communities, governments, non-profit agencies and private

businesses in order to maximize resources and talents, share responsibilities and serve the future vitality.

Municipal Water Supply System

Burlington's drinking water comes directly from Lake Champlain. The city's water distribution system includes the Water Treatment Facility located on the downtown waterfront, the Main Street Reservoir, two water tanks, and a pipe distribution system. The Hill Section, Fletcher Allen Hospital, and UVM, because of their elevation, are served by two high water tanks. This area is called the <u>high service area</u>. The rest of the city is in the <u>low service area</u>, served by the Main Street 7-million- gallon reservoir. The Dept. of Public Works serves more than 40,000 people with more than 10,000 water service connections.

Currently the City's water rates are among the highest in the region. This is due in part to an assessment based on wastewater flows, and coupled with the debt burden on recent, but long overdue, improvements to the wastewater system. Stabilization of water rates remains a high priority for the City. Future efforts to improve the municipal water system must focus on the rate structure in addition to capacity and efficiency improvements.

SYSTEM CAPACITY

In 1984, the capacity of the water system was expanded to 18 million gallons per day (MGPD). However, peak demand has never actually exceeded 12 MGPD, and Burlington's water system typically operates at less than one-third of its total capacity. This could easily change should the city see the significant growth it desires over the next 20 to 30 years.

 Burlington has explored ways to use some of this remaining capacity in order to moderate water rates. The Department of Public Works has entered into an agreement with Burlington Electric to investigate the feasibility of providing district-wide heating and cooling to the urban waterfront and hill sections of the City. If viable, such a utility would utilize some of the water system's excess capacity, provide an alternative source of energy, and help lower water rates throughout the City. (Additional discussion of District Heating & Cooling is found in the *Energy Section* of this Plan.) One other option under discussion has been selling water to neighboring communities or the Champlain Water District, in order to help stabilize water rates for city users. Colchester Fire District #2 has purchased wholesale water from the City since 1965. This contract was recently extended to 2010.

Before entering into additional long-term water agreements, the City must first address two important issues – first, will the city have the capacity necessary to accommodate

future levels of growth, and secondly, how might the sale of Burlington's excess capacity influence growth and development patterns within the region. Adjacent communities and water systems are encouraged to utilize Burlington's excess capacity before building new treatment facilities, but only to the extent that it helps concentrate development within core growth areas. Burlington's excess water capacity <u>must not</u> be used to contribute to suburban sprawl, but instead should be used to support a more concentrated development pattern.

DISTRIBUTION SYSTEM NEEDS

Nearly all of the city is served by the current distribution system, and no large extensions to the service area are contemplated. However, deficiencies in the water storage system pose potential problems during fire-fighting operations that draw large volumes of water. In addition, while several water pipes have been replaced over the years, the distribution system in the downtown continues to use some of the original pipes laid in the 1800's. Many of these pipes are very brittle. This problem is most evident during the winter months when sections freeze and breaks occur, and play a role in restricting adequate fire flows.

The City currently does what it can to respond to the breaks as they occur, and replace as much of the pipe as money and time will allow. While this is not the most effective and efficient approach, the wholesale repair and replacement of decrepit sections of the water distribution system will prove expensive, and will be disruptive to daily activities downtown. Cost estimates for a system-wide upgrade approach $30 million. Efforts to solve this problem must be coordinated with other planned construction activities in the right-of-way in an effort to save excavation costs and minimize disruption to businesses, public services, and the streetscape.

Municipal Wastewater System

The municipal wastewater system serves nearly 98% of the city. The wastewater treatment system includes a collection system of pipes under the streets, 23 pumping stations, and 3 treatment plants - the Main Plant at the foot of Maple Street, the East Plant on Riverside Avenue and the North Plant off North Avenue Extension.

SYSTEM CAPACITY

In 1991, the City completed a $52 million wastewater improvement program to expand capacity, separate storm and sanitary sewer systems, and upgrade treatment systems. Capacity at the Main and East Treatment Facilities were expanded by 1.3 million gallons per day (MGD) and 0.2 MGD respectively.

	Main	North	East
Permitted Capacity (MGD)	5.3	2.0	1.0
Reserve Capacity (MGD)	0.600	0.912	0.236

Reserve (%)	11.3	46.0	24.0

Wastewater   capacity   –
particularly at the Main Plant serving the downtown area - however may be a central factor in constraining potential growth. While the 1991 expansion should help the city serve a total population of more than 60,000 people, the <u>location</u> of these users in relation to the capacity of the respective treatment facility may prove to be the constriction point. Additionally, federal regulations regarding the treatment of combined sewer flows may also limit the capacity at the Main Treatment Facility, and ultimately growth, in the city's central service area. This will be one of the most important issues for the city to evaluate as it contemplates the pace and location of future development.

Sludge is a by-product of the sewage treatment process. Presently, the City participates in a regional Biosolids Processing Facility where de-watered sludge is converted for use as a fertilizer. The City is supporting other communities in the region by de-watering their sludge prior to it being sent to the Regional Treatment Facility. In addition, Burlington currently treats leachate collected at the Regional Disposal Facilities in Williston. Both are examples of regionalization and sharing of services and infrastructure that protect the environment, save resources, and keep down costs.

STORMWATER RUNOFF

In the past, sewer overflows during storm events have discharged directly into Lake Champlain without treatment, and basements in certain parts of the city have flooded. As part of the wastewater system improvements, the City separated combined storm and wastewater in the northern and southern sections of the city. However, because of dense development downtown, that portion of the system remains combined. To compensate, the capacity of the Main Treatment Facility was significantly expanded to treat stormwater runoff in addition to the normal sewer flows. While this was an expensive solution, in the end it may prove to be the most effective in terms of improving the water quality in the lake – the City's, and many other community's, source of drinking water.

Still, untreated stormwater continues to enter Lake Champlain directly and via the Winooski River and Englesby Brook. The quality of stormwater runoff is a serious problem. Many toxic substances are used on our streets, lawns and in our cars. Polluted runoff is now widely recognized by environmental scientists and regulators as the single largest threat to water quality in the United States. Phosphorus has been identified as the greatest water quality threat to Lake Champlain. Within the Champlain basin, urban land produces approximately 18% of the average annual nonpoint source phosphorus load to the Lake - much more phosphorus per unit area than either agricultural or forested land (Lake Champlain Basin Program, 1996).

As the city's surface area becomes increasingly paved and otherwise impermeable, the natural filtration process decreases. Natural cover plays an important role in reducing the amount of pollutants entering surface waters. Soils filter out many types of contaminants; grasses and ground cover slow the flow of water, allowing sediment to settle; trees reduce siltation by stabilizing soil along stream banks and hillsides, and slowing the force of precipitation as it reaches the ground. Unlike most overland flow, water entering the

stormwater system in an urban area does not have the benefit of being filtered through vegetative buffers. Each rainfall flushes pollutants from streets and yards into the stormwater collection system that are then transported directly into the lake or river. Although costs may be significant, the City must consider treating stormwater that it collects in the stormwater system, and continue to mandate that developments install and maintain on-site systems to collect and treat surface runoff outside of the downtown area.

Solid Waste

As throughout Vermont and elsewhere, Burlington has a growing solid waste crisis. City residents discard approximately 31,000 tons of trash a year.

REGIONAL MANAGEMENT AND DISPOSAL

Due to environmental impacts, shrinking land resources, and public opposition, it has become increasingly difficult and costly to properly dispose of solid waste. Burlington's own landfill on Manhattan Drive closed in 1989, as did a small lined landfill in Colchester in 1992. The City continues to maintain responsibility for monitoring these sites for possible groundwater contamination.

Recognizing that solid waste management is a regional issue, Burlington is a member of the Chittenden Solid Waste District (CSWD). The District recently closed a regional lined landfill in Williston and has been attempting to develop another site for several years. Long-term disposal remains a very volatile issue that must be resolved. Other regional solid waste management facilities that Burlington benefits from include a Biosolids Processing Facility for sludge, a Materials Recovery Facility for commingled recyclables, an Environmental Depot for household hazardous wastes, and composting and a Wood/Yard Waste Depot on the Intervale.

CURBSIDE PICK-UP AND RECYCLING

Residential solid waste is picked-up at the curbside by private haulers. Residential, commercial, and institutional landowners must make their own arrangements for waste pick-up. While this generally has proven to be effective, there is no cooperation between haulers to coordinate pick-up days, resulting in an over-abundance of trucks on residential streets. One alternative to the present system to be considered would be to franchise haulers within the City. The Department of Public Works believes this would better coordinate service, reduce truck traffic in the neighborhoods, and may provide an overall cost savings to individual property owners.

In order to reduce the waste stream and make better use of resources, the City operates its own recycling program through the Department of Public Works. The program is funded by a Solid Waste Generation Tax assessed on each hauler. The program was first piloted in 1991 with a waste reduction goal of 2%. Burlington was recognized in 1994 by the US Conference of Mayors for a waste diversion rate of 41% - exceeding a statewide goal of 40% by 2000. In FY1995, the City collected 2.886 tons of recycled material - nearly 385 pounds per household, and a 20% increase over the previous year.

Beyond recycling, Burlington must continue to find ways to decrease the volume of trash produced. This includes reducing packaging, and stimulating the recycled goods' market through purchasing policies. Closer to home, the City could increase its use of recycled paper in offices, use less paper, and use it more than once. It could also discourage the use of disposable goods such as plastic utensils.

Public Safety

POLICING SERVICES

As Burlington has grown over the years, public safety has become an increasingly important concern. The Burlington Police Department meets national standards, which recommend two officers per 1,000 residents. As the city grows, so do the demands on the police department. However, because Burlington serves as a regional growth center - providing many services unrelated to residential uses - the police force must also be capable of meeting a wider range of nonresident demands.
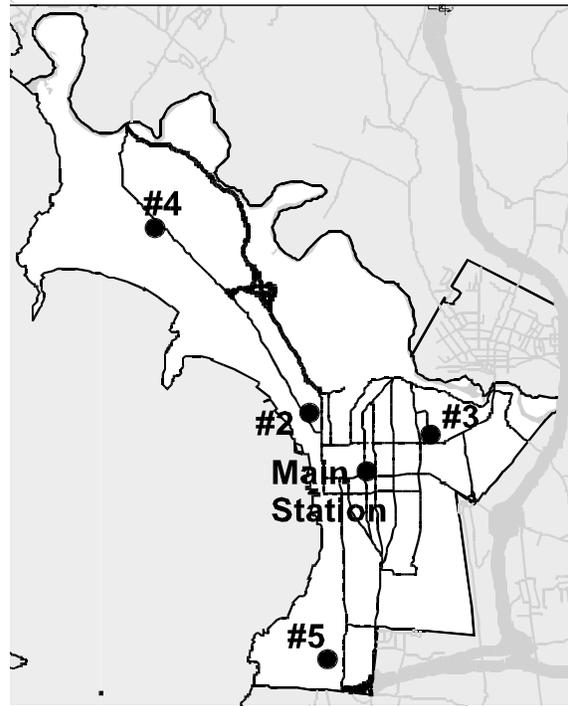

In 1990, the Burlington Police Department began a Community-Based Policing Program. Community-Based Policing recognizes that the sole responsibility for protection and law enforcement cannot rest with the Police Department. By placing officers directly into the neighborhoods, a greater familiarity develops between the police and the residents. The officers then serve as facilitators, allowing the citizens to accept more responsibility for keeping their neighborhoods safe, and are available as a resource when incidents occur.

In 1998, the Department shifted from a single Community Policing Unit to a total community policing philosophy. Teams of supervisors and patrol officers have been assigned to geographic areas of the city. These teams work closely with Americorps*VISTA members serving with the Public Safety Project to relay community concerns to the Department, and develop creative strategies with active citizen members. This shift is an important component to enhancing the vitality of our neighborhoods as attractive and safe places to live, and facilitating their individual sense of community.

The Department continues to struggle with providing adequate service to some of the city's most active places due primarily to financial constraints. Maintaining a visible police presence on the Church Street Marketplace, downtown waterfront and city beaches and parks has long been a goal. Three approaches to achieving this goal include the re-establishment of a Beaches and Parks Unit, creation of an outpost station in the heart of the Marketplace, and placing more officers on bicycle patrol. Each will improve the visibility and mobility of the police officers, and make them more approachable and accessible to the public. Finally, the role of the Police Department in providing services in the Harbor should be explored in collaboration with the Burlington Harbor Master, the VT State Police, and the US Coast Guard. Clearer lines of jurisdiction and responsibility must be developed in order to meet the growing needs of the harbor and its users.

FIRE & AMBULANCE SERVICES

The Burlington Fire Department is housed in five stations located throughout the City. The Department has expanded stations on North Avenue, Ferguson Avenue and Central Station within the past 15 years, and has completed a historic preservation project at Station #3 on Mansfield Ave. to correct structural deficiencies and make facade improvements. The Department has also completed equipping each of its stations with exhaust ventilation systems. Major repairs and rehabilitation to the Central Fire Station on South Winooski Ave. remain however. The Department operates six engines, a 95-foot aerial tower truck, and three ambulances. A boat to assist with emergencies on the lake remains a future equipment need as the downtown waterfront continues to develop. The Department has recently begun staffing a second ambulance to serve the city. Future

Burlington Fire Stations

vehicles should be the smallest possible to meet the need of a given area.

In addition to fighting fires, the Fire Department provides fire investigation, community outreach, and emergency medical services. In the last year, firefighters responded to 5,351 requests for fire and emergency medical assistance, and performed 833 fire safety inspections. 3,887 of these call were for medical emergencies with over 800 requiring some level of advanced emergency medial care.

Fire department officials believe they have adequate facilities and equipment with which to fight fires as long as building heights do not increase significantly beyond the current maximum heights. Fire prevention is however, the most important concern. Newer structures, equipped with sprinklers and fire detectors, are less likely to burn than are older buildings. Since much of the city's housing, old and new, is wood frame construction; the City must target its efforts towards improving the safety of existing structures. One example is requiring sprinkler systems in all multi-unit residential construction and reha-bilitation. Should the City move inn such a direction however, it should also work closely

with developers and property owners to find economically viable solutions to providing this level of fire protection.

COMMUNICATIONS

Both the Fire and Police departments currently use a combined 911 emergency communications system through a central dispatch in the Police Department. Emergency service officials statewide have recently completed the implementation of Enhanced-911 service. Enhanced-911, or E-911, provides information to the dispatcher on the <u>location</u> of the originating emergency call. This service eliminates much of the uncertainty when locating emergency calls, should speed up response time, and greatly improve efficiency and public safety.

Parks & Recreation

Burlington contains approximately 980 acres of public parkland. These lands include parks that are developed for intensive public use, as well as property that remains undeveloped for passive recreation and/or conservation purposes. Over 530 acres of this public parkland is owned by the City and managed by the Department of Parks and Recreation. An additional 450 acres is owned and managed by the Winooski Valley Park District, primarily in the form of conservation lands offering access and footpaths to shorelines.

Parks provide a number of functions, and serve a variety of populations. District Parks serve as conservation areas and open space that benefits the entire community, while Neighborhood Parks typically offer playground equipment to serve small areas of the city. Diversity of public open spaces is an important consideration in the future planning for parks. The City must continue to provide a wide range of open space and recreational opportunities for its population, workforce, and visitors. These include both developed and undeveloped sites throughout the city, and distributed within each neighborhood. Special attention must be paid to long-term protection and use to ensure these sites remain a benefit future generations.

In addition, linkages between recreational facilities and parklands are critical to making the most efficient use of these spaces and maximizing their accessibility. We must consider parks in the context of natural and recreational <u>systems.</u> These linkages often take the form of improved recreational paths like the Burlington Bike Path and unimproved foot trails, but also include wildlife travel corridors, streambank buffers, linear parks, and public viewsheds. Burlington will continue to offer improved walking,

biking and recreational opportunities with an eye towards building connections with adjoining communities and protecting streambanks and wildlife travel corridors.

As a regional growth center, Burlington must find a balance between conservation and continued development that addresses the needs of the City's diverse population - present and future. As Burlington continues to develop, remaining natural areas become more vulnerable to encroachment and their ecology more endangered. The City must work to protect some of these areas through full or partial acquisition. Presently the city has approximately 650 acres of natural area either publicly owned or permanently protected by easements. The City has long-held a goal to retain a four-to-one ratio of developed land-to-protected natural areas in an effort to ensure that natural areas are protected as other land is developed. The newly adopted *Open Space Protection Plan,* will play an important role in helping the City achieve this objective. (See also the Natural Environment Section)

BURLINGTON PARKS AND RECREATION

The Department of Parks and Recreation is responsible for the planning and management of the city's park system under the direction of the Parks and Recreation Commission. This system includes City Parks, Neighborhood Parks, Playfields, Special Use Areas, and District Parks. In addition, the Department is responsible for managing a system of community gardens, management of the Burlington Harbor and its facilities, planting and maintaining approximately 8,000 street trees, and offering a broad base of recreational programs to residents of the city and neighboring communities.

North Beach Bath House

As a regional center, Burlington's parks and recreational facilities offer an important attraction to businesses and tourists - thus serving the city's future economy in addition to its residents. The Parks and Recreation Commission has adopted national standards to assess the City's need to acquire and develop additional park land, and its ability to meet the needs of the community. These standards are based on proximity to populations, and identify the quantity, type, and distribution of parkland and recreation facilities. However, recent studies show that 50% of those who use Burlington's downtown and waterfront parks are non-residents, and therefore City standards have been modified accordingly. However, national standards aren't able to take into account the existing natural assets of a given community. Some places, like Burlington, are very fortunate to have an abundance of high quality natural features, while others may have very few.

Burlington must also consider this when evaluating its consistency with national standards.

Maintenance

The Parks and Recreation Commission have identified the need to maintain and rehabilitate existing facilities and infrastructure as its top priority. Proper maintenance is essential to ensuring that our parks adequately and efficiently serve their intended purposes. It can also prevent the need for unnecessary capital improvements to correct deficiencies that occur as a result of neglect. Priority is given to restoration and rehabilitation projects over new construction whenever possible. Maintenance must be a priority issue for the City's park system in the future.

Future Facility Needs

In 1992, the Department completed a *Five Year Recovery Action Plan 1992-1997*. This plan was prepared in an effort to define specific needs and interests of the public with regard to Parks and Recreation lands, facilities and programs. The Plan outlined three areas of focus for the City:

- addressing increased demand associated with continued residential growth;

- development of recreational facilities associated with the Lake Champlain waterfront; and

- development of a network of bicycle paths throughout the City.

While originally completed in order to participate in a federally funded program, this plan proved a useful tool for evaluating the city's parks system and developing improvement strategies. It should be revised in light of demographic changes, financial constraints and new opportunities.

The Parks and Recreation Commission has identified indoor recreational facilities as the most pressing unmet facility need. The Commission's long-term solution proposes to meet this need through an Indoor Recreation Center that would include a swimming pool, a therapy pool, an indoor track, senior citizen and children's facilities, and multi-purpose rooms. While proposals have been crafted to create such a facility, nothing has advanced beyond the conceptual stage. A centralized location in the downtown is preferred, however the lack of available land remains an obstacle. Consideration must also be given to developing one or more of the facilities (gym, pool, track, etc.) within neighborhood activity centers located the north and/or south ends of the city. Partnerships with existing facilities, particularly in collaboration with the YMCA in the downtown and neighborhood schools in other parts of the city, should also be explored.

The most pressing unmet need of the park system includes a four-acre neighborhood park the New North End necessitated by continued growth in residential development. New Park facilities

Little Park

include the *Elaine and George Little Park* in the Old North End which greatly improves the aesthetic qualities of street and adjoining neighborhood; the recently completed Skate Park on Lake Street near to the former Moran Generating Plant on the waterfront. This project provides a much needed location to accommodate a growing demand for skateboarding and in-line skating facilities; and finally, a new fishing pier on the Waterfront opened to the public in May 2001 offers a much welcome venue for anglers.

The Parks & Recreation Department relies heavily on the use of School Department property and facilities. This is an example of sharing resources between city departments for the maximum benefit to the community. However, through shared use, these facilities receive more intensive use than anticipated when originally constructed, and thus will be expected to require more frequent maintenance and restoration. This type of collaboration is encouraged for existing and future recreational and school facilities.

Fishing Pier

Community Gardens

Burlington Area Community Gardens (administered by the Dept. of Parks & Recreation) maintains 350 garden plots at seven sites throughout the city. Burlington has more community garden plots per capita than any other community across the country. Currently they serve approximately 1,400 people. Three of the garden sites are designated as "organic gardens" where only organic fertilizers and natural pest controls may be used. The Department is currently in the process of revising the *Burlington Area Community Gardens Master Plan* (1991) in order to maintain, and possibly increase,

Starr Farm Community Garden

the availability of convenient garden plots to all areas of the city, and ensure the necessary infrastructure is available to meet the needs of the users. Securing long-term access to garden space, and making them available across the city are important priorities. Among the greatest needs for future garden space in the City are in and near to the Old North End neighborhood, and in the South End. Efforts will also be made to relocate existing gardens that are not currently located convenient to residents. Efforts to implement the *2000 Burlington Open Space Protection Plan*, if successful, should be useful in these regards.

Open Space Protection
Protection of natural areas and open space in Burlington has long been identified as one of the public's highest priorities, and was included as one of the priorities of the *Burlington Legacy Project Action Plan*. In February 2002, the City Council unanimously adopted a resolution creating the "Burlington Conservation Legacy Program" within the Dept. of Parks & Recreation as a major element of the 2000 Burlington Open Space

Protection Plan. The purpose of this program is to manage and coordinate the protection and enhancement of significant natural areas, and other important conservation lands within the City of Burlington, under three programmatic elements:

- *Land Stewardship*
  To ensure the responsible long-term stewardship and management of significant natural areas and conservation lands owned by the City of Burlington.

- *Acquisition Planning*
  To facilitate the acquisition of significant natural areas and important conservation lands for permanent protection within the City of Burlington in partnership with area land trusts, non-profit organizations, and local, state and federal government agencies.

- *Conservation Education*
  To improve the public's familiarity and appreciation of Burlington's natural areas, to communicate the importance of open space protection, and to encourage public participation in the protection and planning process.

The Conservation Legacy Program is jointly administered by the Department of Parks and Recreation with oversight by and the Conservation Board. Since its creation, a new category of public lands has been established within the City Parks System called "Urban Wilds." Urban Wilds are those lands that provide habitat for rare and endangered plant and animal communities, wetlands and other riparian systems, flood plain, unique geological and hydrological features, important wildlife habitat and travel corridors, areas important for scientific research and education, scenic vistas, trails, passive recreation, sustainable forest communities, and cultural features. To date the program has completed management plans for two Urban Wilds – the **Arms Grant** on North Avenue and the **Mackenzie Property** on the Intervale, and organized several public outreach activities including clean-ups, a photo contest and fund raisers.

Urban Forests[1]

The Department of Parks and Recreation has completed a *Street Tree Planting Plan* as a component of an *Urban Forest Master Plan*. As noted in the *Built Environment* section, the Plan articulates city-wide and neighborhood objectives for public trees, and outlines a plan for maintaining the City's street tree population. Voters recently passed a local property tax increase that will be dedicated to planting and maintaining the city's street trees.

However, Burlington's urban forest is much more than street trees, and also includes public trees and forests in parks, cemeteries, schools and other public land, and trees on private land in yards, open space and edges of developed areas. Examples include forest

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[1] The urban forest is the aggregate of all vegetation within an urban area, the management of populations of trees, and the intersection of people with biology of urban flora and fauna.

communities such as Ethan Allen Park, Leddy Park, Arms Grant Park, Intervale properties, and WVPD. Whether they are found within the public greenbelt, in a backyard, or in a city park or natural area, trees contribute greatly to the vitality and livability of a community. The *Urban Forest Master Plan* takes this holistic view of the city's trees and, in concert with the *Open Space Protection Plan*, offers a framework and strategy for retaining and nurturing Burlington's urban forests.

Cemeteries

The City maintains and operates three public cemeteries – Lakeview, Elmwood and Greenmount. Of these, only Lakeview continues to offer future burial sites. An issue that the City will need to address in the near future is should additional space be acquired to accommodate new cemeteries?

WINOOSKI VALLEY PARK DISTRICT

Independent from the City, the Winooski Valley Park District (WVPD) also manages parkland in Burlington. The WVPD is a consortium of 8 member communities along the lower Winooski River working together to conserve natural resources of regional significance. The mission of the WVPD as stated in their Master Plan is the:

> *...planning, acquisition and management of lands and waters within the boundaries of its member municipalities in the Winooski River Valley for the purposes of conservation, preservation of natural areas, establishment of parks and passive recreation.*

Properties owned and managed by the WVPD within the city include: Ethan Allen Homestead, Derway Island Nature Preserve, Heineberg Wetland, and the Salmon Hole. The most recent addition is the "Mayes Landing" property near the mouth of the Winooski River. These lands are a great asset to the city and its residents.

Burlington is very fortunate to have such a wealth of conservation lands. These properties provide important recreation, education and conservation opportunities that benefit the entire region. Future development in the City must ensure the long-term protection of these properties, encourage their use for educational and recreational purposes, and consider future acquisitions of important and threatened conservation areas. The City will also continue to partner with the District in the acquisition and protection of important conservation lands.

Library Services

Residents of Burlington have access to several libraries throughout the community. These include the Fletcher Free Library operated by the City, the UVM Bailey-Howe Library, and other smaller libraries in local colleges and neighboring communities.

FLETCHER FREE LIBRARY

Located in a renovated and expanded building on College Street, the Fletcher Free Library is a source of information, education, culture, and recreation for residents of Burlington, and the surrounding region. The library currently holds 107,597 volumes, 2,204 videos; 2,820 audio materials, and 273 periodicals. The library has approximately 11,000 borrowers and circulates over 270,000 items per year. A 0.5 cent tax dedicated to books was created in 1996.

In most cities the public library is considered the most appropriate site for computers for public use, and the Fletcher Free is no exception. The library has been working with IBM and several other local agencies to bring a Public Access Computer Center to the main reading room, where computer users will be able to access the Internet for research

Fletcher Free Library

and e-mail, participate in short workshops where they can to use various types of standard software, and work on their own to practice what they have learned.

While the library has continued to provide in-house and telephone reference service, the whole nature of public library information service has changed dramatically due to the widespread use of the World Wide Web. A large subscription database incorporating the full text of general information, health, and business related periodicals and newspapers is available on the library's Web site to anyone with a Fletcher Free borrower's card. The library's plans to provide additional subscription databases on topics such as history, women's and ethnic studies, genealogy and literature will depend largely on future funding. The library plans to migrate to a Web based automated library system, which will make the library's catalog accessible to the public through its Web site.

The library has a computerized card catalog and checkout system as it seeks to make the best use of emerging technologies. This effort is expected to continue with integration into the Vermont Automated Library System (VALS). VALS offers dial-up access to card catalogs in the State Library System and most Vermont colleges, and a variety of other information services including pending legislation, state bids and text-based internet connections. Technology promises to improve the public's access to information and services, and libraries are likely to become central information points. Improved public access via technology may also reduce unnecessary automobile trips.

The Fletcher Free Library also provides a variety of cultural events, exhibits, and meeting rooms for groups and programs. As the city grows, the library will need to continue to expand both its collection and its services. The library should continue to serve as an important community focal point. Continued increases in use of the library will also demand the continued maintenance and improvement of existing facilities.

The greatest future needs of the Library continue to be the need for ongoing maintenance of the building and utilizing technological innovations that improve the efficiency, effectiveness, and accessibility of the library and its collection, and that respond to public demand..

Neighborhood Linkages & Outreach

The library has an outreach librarian to bring library services into the community. The Library operates an Outreach Van that serves senior and childcare centers, low-income neighborhoods, and shut-ins. The library continues to pursue ways to replace this outdated vehicle, through leasing arrangements and bookmobile grants.

The library attempted to offer some of its services through a branch library in the city's south end. However, the need to rely on volunteer staff and lack of funds to support a separate collection resulted in the branch being closed. Although the Library Commission has received formal requests for a branch library in nearly every ward in the city, any future consideration for branch libraries should be targeted for Neighborhood Activity Centers, and should consider utilizing existing or co-locating with, public or community facilities, such as schools or senior centers.

General Government Services

The City of Burlington employs over 650 people located in many different sites throughout the city. These include general city services in City Hall and Ethan Allen Fire Station, the Departments of Public Works and Parks & Recreation offices on Pine Street, and Electric Department facilities on Pine Street, Lake St. and the Intervale.

INVENTORY OF CITY PROPERTY AND BUILDINGS

As the city grows and expands its services, pressure for additional employees and facilities will also increase. Because city government is distributed among several quasi-independent departments, there is often inadequate consideration of joint services, and an independent decision of one department will likely affect others. For example, expansions of department functions within City Hall have created a serious shortage of meeting rooms. In order for the City to make informed decisions regarding its own future needs, it must maintain an accurate inventory of all city-owned property - including its current condition and future capabilities. Where available, this type of information is typically maintained by the individual departments with limited coordination. With the exception of periodic Master Plan updates and annual capital budgeting processes, there are few opportunities for city services and facilities to be considered as a single entity.

In 1992, the City began an annual Capital Improvements Program (CIP) for the prioritization of capital needs and allocation of capital funds between city departments. The CIP is an essential component to the City's financial planning processes. An accurate inventory of all city property, facilities, and buildings must be incorporated into the annual Capital Improvements Program. Additional steps should be explored for joint planning and use of city- and school-owned property and facilities.

IMPROVEMENTS AND MAINTENANCE OF CITY BUILDINGS

City-owned buildings and facilities are an important capital asset, and present a visible expression of the City's values, priorities, and expectations. The City must serve as

responsible steward of these public resources, and an example to others with innovative rehabilitation and new construction projects that demonstrate high quality design, energy-efficiency, and green building techniques.

The City must ensure the sustainability of its capital plant in order to prevent costly and unnecessary repair and reconstruction in the future. Chronic funding limitations have forced continued deferment of necessary maintenance and improvements, and an inability to respond to changing demands for services. The City must commit to a long-term building maintenance and improvement program that places a priority on the preservation and enhancement of historic public buildings and long-term stewardship of all public facilities.

The 1999-2004 Capital Improvement Plan (CIP) proposed the creation a new project for major repairs and renovations to existing city-owned buildings. This initiative is intended to begin to address the costs incurred by the city from years of neglect. Initially 10% ($75,000) of the General Fund should be dedicated in the CIP to be allocated upon specific request to the City Finance Board. Eligible repairs and restorations must be limited to major "bricks and mortar" repairs and renovations that address important health & safety, structural or energy-related needs of important city buildings. Priority buildings include City Hall, Ethan Allen Firehouse, Memorial Auditorium, and Central Fire Station. This project should follow, and first include where one does not already exist, a historic assessment of the building to ensure that all repairs respect the historic significance and integrity of these important public structures.

Ethan Allen Firehouse

A City Facility Improvement Study/Plan is also necessary to inventory and document existing conditions of all public buildings and facilities, and identify and prioritize needed improvements. Such a study/plan could provide important documentation, justification, and guidance for any long-term capital funding mechanisms the city may consider. The city must also identify the appropriate city department or office to coordinate and oversee such an effort, and include a mechanism and process to update this information over time, and to monitor its implementation.

CONCENTRATION OF SERVICES IN DOWNTOWN

In order to encourage future development, and to provide a wide-range of city services in a centralized location, the City will concentrate its facilities and services downtown whenever feasible. Locating city offices and services in the downtown provides opportunities for cooperation and collaboration between departments. It improves public access, opportunities for sharing resources, and lessens unnecessary automobile trips for city employees and the public.

One such effort in the future should address the co-location of departments, or department offices, responsible for permitting. City departments that issue development

permits should be accessible in one central location to provide permits and information. This would not only improve public access and make the overall process easier to understand, but also would facilitate streamlining and improve coordination and collaboration between the various departments that issue permits.

ROLE OF TECHNOLOGY AND TELECOMMUNICATIONS

In 1995, the City took a comprehensive look at how city government can make the most effective and efficient use of technology and telecommunications. The purposes of this study were to identify how various portions of city government currently utilize computer technology, and define ways to share resources most effectively.

Technology and telecommunications hold significant opportunities for improving the way city government functions and provides services to the public. Computers must be more than automation-for-automation-sake, however. Technology must, at a minimum,:

- improve the efficiency and accuracy of routine and duplicative tasks;
- be a vehicle for communication and information sharing within city government, and with the public; and,
- facilitate cooperation and collaboration between city departments.

Since that time, information technology has evolved significantly. Speed, access, and capability have all blossomed at blinding speed, however the City's needs and priorities remain the same. Today, most city departments are connected to a wide-area network (WAN) that enable email and file sharing. Several city departments are actively using the worldwide web to provide information about programs and services to the public. Future efforts must continue to improve the quality of the city's telecommunications infrastructure and expand public access where appropriate. They must also consider the needs of several city departments for shared information systems such as land records/assessment/permitting, GIS, and financial systems that facilitate the integration and sharing of information.

Community Facilities and Services Action Plan

Action Item	Lead Agency	Secondary Agencies
Complete a detailed analysis of the City's water and wastewater capacity, and its ability to serve future population growth and development.	Public Works	Planning & Zoning
Develop alternative sites, programmatic alternatives, and financing options for the development of one or more Indoor Recreation Centers in the Downtown or in convenient neighborhood locations.	Parks & Recreation	Planning & Zoning
Develop a neighborhood park in the New North End.	Parks & Recreation	Planning & Zoning
Revise Parks and Recreation's Five Year Action Plan into a comprehensive Parks and Recreation Plan for the City.	Parks & Recreation	Planning & Zoning
Develop strategies to improve treatment of stormwater runoff on-site through site design guidelines.	Planning & Zoning	Public Works
Evaluate requiring sprinklers in all new residential construction and rehabilitation involving four or more units.	Public Works	Fire
Establish "Utility Corridors" within rights-of-way to co-locate utilities, minimize the costs of construction and maintenance, and avoid negative impacts to the streetscapes.	Public Works	Parks & Recreation BED
Upgrade the water distribution system to correct fire protection flow deficiencies and modernize city infrastructure.	Public Works	
Define standards and requirements for paving materials that increase natural filtration.	Public Works	
Continue to treat stormwater runoff from the Downtown area through system improvements, and consider future capacity expansions as necessary.	Public Works	
Evaluate franchising solid waste haulers within the city.	Public Works	
Establish a Municipal Permitting Center in the Downtown area.	Public Works Planning & Zoning	
Develop a long-range Municipal Building Maintenance and Improvement Program.	Treasurer	Public Works Planning & Zoning

Continue to upgrade the ability of City departments Treasurer
to effectively implement and use technology and
telecommunications to expand and improve city
services for the public.

Vision Statement

This Plan envisions Burlington as a city where...

...Burlington is a leader in the development and implementation of energy efficiency and renewable energy measures that reduce energy costs, enhance environmental quality, improve security and sustainability, and enhance economic vitality. Key elements of this success are a broad range of energy efficiency programs, public education in resource conservation, publicly-owned alternatively-fueled electric generation, biomass-fueled district energy technologies, energy-efficient green building technologies, and climate-friendly transportation solutions, which includes support for alternative fueled vehicles.

CITY POLICIES

THE CITY OF BURLINGTON WILL:

- **Optimize overall energy efficiency, reduce energy requirements, and minimize the need for new energy resources on a citywide basis.**

- **Continue to aggressively pursue the transition to renewable sources, cogeneration, and district heating.**

- **Improve the energy efficiency of city-owned buildings and facilities.**

- **Reduce transportation energy use by lessening reliance on drive-alone car trips, using more fuel-efficient vehicles, promoting increased transit use, and decreasing vehicle miles traveled.**

- **Educate its citizens regarding energy efficiency, the benefits of public utility ownership, renewable electric generation, and conservation to ensure that citywide resource allocation decisions in years to come will reflect the wishes of an informed citizenry.**

- **Make tangible efforts to reduce greenhouse gas emissions through the implementation of the *Climate Action Plan*.**

INTRODUCTION

Access to reliable and clean energy, at an affordable price, will be an important factor in defining and facilitating future growth and development in Burlington. This Chapter briefly outlines how energy is used and supplied to the city, discusses some of the most important public policy issues related to energy generation and consumption, and finally proposes a series of strategies to improve efficiency, protect the consumer and the environment, and maintain energy self sufficiency. Much of the information and policy direction for this section comes from *The Burlington Climate Action Plan*[1] **adopted by the City Council in the winter 2014**, and included as part of this plan by reference.

Energy Use & Supply

Nearly 85% of city residents rely on natural gas for space heating and domestic hot water use; typically the two largest users of energy in homes. Over 90% of commercial customers rely on natural gas for these purposes as well, however these buildings can use a good deal of electricity for lighting, central air conditioning, ventilation, and office equipment. Statewide energy use among fuels shows a dominance of oil in energy consumption. About 70% of Vermont homes use oil for space heating purposes.

In 1989, approximately 23% of homes and apartments in the city used electric space heating as the sole heating source and through the efforts of energy efficiency programs; residential electric heat use has been reduced down to about 5% of homes with electric heat as the sole heat source. These are typically buildings that do not have access to natural gas due to topography or subsurface conditions that make laying pipeline difficult.

Electricity is a high-quality power source, but to date has been inappropriate for space and hot water heating due to historically higher costs. Natural gas continues to be a more suitable heat source. Recent significant drops in the current and projected costs of natural gas make this unlikely to change in the foreseeable future. Oil on the other hand has seen continued price escalation. If the market for natural gas were to change materially however, this could need re-examination.
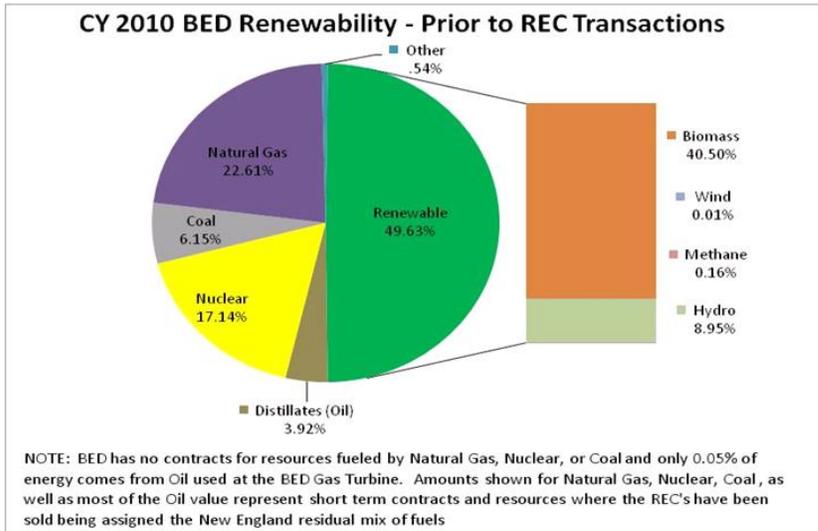
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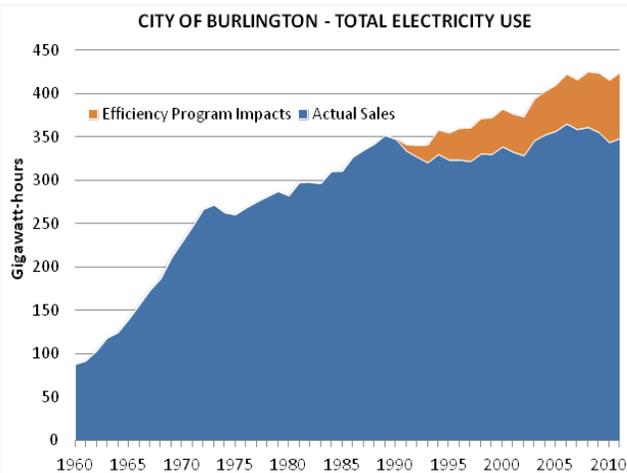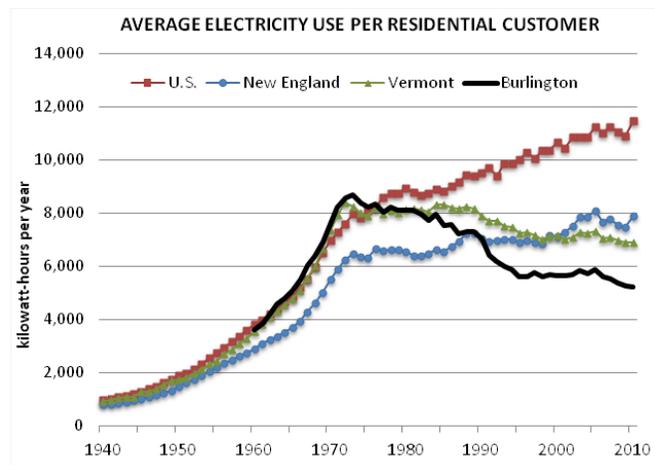
[1] *2014 Climate Action Plan* Burlington, Vermont.

Burlington's energy use priorities focus on developing more effective and economically viable Vermont based renewable energy alternatives including solar, wind and bio-mass energy sources, and a continued emphasis on conservation and efficiency programs. Energy efficiency has been shown to be Vermont's least expensive future energy supply resource over time, and is consistently becoming a greater environmental imperative. The Burlington Electric Department is owned by all the citizens of Burlington, who have been unequivocally clear that the option for future supply that they prefer above all others is the pursuit of additional cost-effective energy efficiency.

BURLINGTON ELECTRIC

Burlington is fortunate to have a municipally-owned and operated electric company. Burlington Electric (BED) began in 1905, and currently serves about 16,300 residential customers and more than 3,600 commercial customers. BED serves the full range of energy services including generation, transmission, distribution, energy efficiency and other retail energy services.

Burlington is a recognized world leader in the use of renewable energy and energy conservation. In 2011, Burlington as a whole used 4.7 percent less electricity then it used in 1989. The pie chart below shows the proportion of BED's 2010 energy sources that came from renewable generation (this chart reflects the source of BED's power, and does not reflect the change in BED's emission claims caused by the sale of RECs as discussed below).

CY 2010 BED Renewability - Prior to REC Transactions

- Other .54%
- Natural Gas 22.61%
- Coal 6.15%
- Nuclear 17.14%
- Distillates (Oil) 3.92%
- Renewable 49.63%
- Biomass 40.50%
- Wind 0.01%
- Methane 0.16%
- Hydro 8.95%

NOTE: BED has no contracts for resources fueled by Natural Gas, Nuclear, or Coal and only 0.05% of energy comes from Oil used at the BED Gas Turbine. Amounts shown for Natural Gas, Nuclear, Coal, as well as most of the Oil value represent short term contracts and resources where the REC's have been sold being assigned the New England residual mix of fuels

BED owns 50% of the 50-megawatt (MW) McNeil Generating Plant located in the Intervale. McNeil Station is one of the world's largest woodchip-fueled electric generating facilities. In late 2008 a new emission control system (a regenerative selective catalytic reduction or "RSCR" device) was installed which dramatically reduced McNeil's nitrogen oxide (NOx) emissions. With the installation of this equipment, McNeil qualifies to sell Renewable Energy Credits ("RECs") to other states. When BED sells these RECs, BED loses the ability to claim McNeil as a renewable generating source, but is able to use the revenues from the sale of the

RECs to offset the cost of the emission control equipment and to help control rates. Since late 2008, BED has realized significant value from the sale of McNeil RECs and these revenues have been used to help maintain current rate levels.

The graph below summarizes the annual generation and tons of wood used at the McNeil Station. The difference between tons of wood used and generation in 2000 represents the last year where McNeil used significant amounts of natural gas to generate electricity (though the capability to do so still exists). The drop in output in 2011 is related to periodic maintenance that occurs on a seven year cycle.
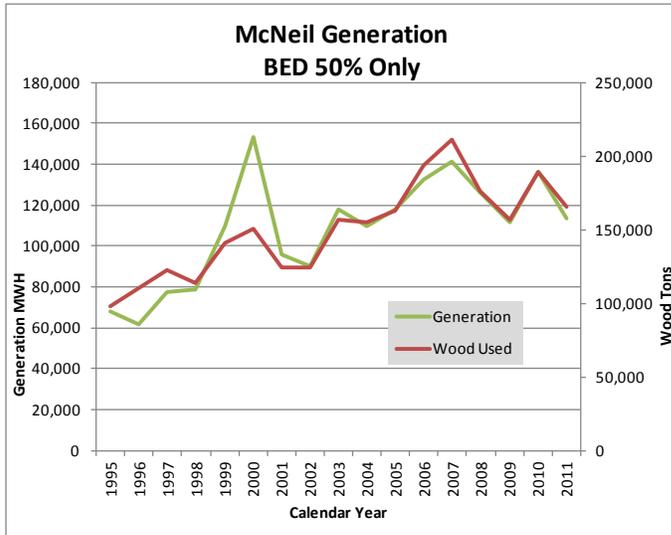
In addition, BED owns a 25-MW turbine located next to the Water Treatment Plan on Lake Street. The gas turbine is a black start unit capable of cold-starting the McNeil Station as well as energizing critical load such as the Fletcher Allen Health Center.

BED has recently contracted for the full output from Georgia Mountain Community Wind (GMCW), a proposed 10 MW wind facility in Milton/Georgia, Vermont which went online at the end of 2012. Additionally, BED has signed and received voter approval for a long-term contract with Hydro-Quebec where deliveries will begin in 2015. Lastly, BED has received approval for a modification to its tariff to allow it to increase the benefits customers receive from solar net metering installations in recognition of the higher value of solar renewables to BED. BED continues to seek other power supply options including local generation. BED has the right to purchase (at fair market value) the Winooski One hydro facility on the Winooski River between Burlington and Winooski at the end of its current VEPP contract in March 2013. This facility is capable of producing 7.3-MW of power. Maintaining local energy self-sufficiency is an important component to Burlington's future sustainability.

In addition to its own generation facilities, BED purchases power from a variety of sources and through the New England Power Grid. In determining where to purchase energy, BED considers the total social and environmental costs in its decision-making process. In 2012, approximately 50% of this power came from renewable sources and this percentage is expected to continue to grow when the new resources mentioned above begin deliveries. When BED's Integrated Resource Plan (IRP) was filed in 2008, Burlington had a goal of providing 100% of its power from renewable sources. The new 2012 IRP revisited the 100% renewable goal in light of lower natural

gas prices and did support buying short-term renewable power contracts until cheaper long-term renewable sources could be found. BED continues to focus on a goal of 100% renewable supply and is continuing to seek cost effective options. In particular, a third wind contract is under consideration and BED hopes to soon purchase the Winooski One Hydro dam. If those two options work out as expected, BED will reach 100% renewability in 2014.

Advanced Metering Infrastructure (AMI)

The deployment of AMI is a technological advance that will change BED's business and operations in very fundamental ways. These changes will have a profound impact on the community, so BED is committed to working closely with its customers, other Vermont utilities, regulators and legislators to arrive at solutions that provide the best benefit to the Burlington energy consumer.

BED partnered with other Vermont utilities and the Department of Public Service ("DPS") to develop and submit a statewide grant application to the Department of Energy ("DOE") to obtain Smart Grid Investment Grant ("SGIG"), funding. The funds awarded to all participating Vermont utilities totaled $69 million of a $138 million project (100% of the requested amount). The DOE awarded BED $7.15 million for a $14.3 million total project (again 100% of the requested amount). The full Federal matching funding received by BED reduced BED's direct cost for its Smart Grid projects by 50%. On June 28, 2011, BED sought voter approval to issue Revenue Bonds to obtain matching funds for the projects, which resulted in approval of the bond issuance by 61% of Burlington voters. BED closed on the sale of the Revenue Bonds on October 13, 2011. BED initial phase of advanced meter deployment began on April 23, 2012 and finished in early 2013.

BED's AMI plan centers on its ability to improve system planning/reliability, improve customer service, empower customers to engage in choices regarding their use of energy, and possibly modify their usage to reduce costs. BED has defined a list of service offerings and utility enhancements that will result from the AMI project.

The selected technologies will have the ability to provide immediate customer and societal benefits as well as the potential for future benefits as the systems and service offerings mature. These benefits are derived from the enhanced data collection, communications and process integration capabilities provided or enabled by the proposed AMI Project. Over the longer-term, use of AMI (integrated with a Meter Data Management System) for time-of-use pricing or other pricing options, will allow customers to the option to adjust consumption decisions based on the day-to-day (or potentially even hour-to-hour) price of electricity and its impact on their bills.

With a fully active system, BED can:

- Dispatch crews to outages without waiting for customer calls (while minimizing manual handling of outage information)
- Give customers much greater insight into how they use electricity via a web portal
- Reduce the need to send trucks into the field for move-in and move-out meter readings
- Have much more information to assist in answering customer questions
- Develop more accurate class level load forecasts
- Be able to develop much more personalized energy efficiency programs (including better estimates of potential savings)
- Be much more accurate in our distribution transformer and conductor sizing
- As a side benefit, automate many of the manual functions performed every day, giving staff more time to focus on customer needs and more tools to fix problems

BED believes the following benefits are possible to the consumer as a result of this new technology:

- Expanded integration of distributed renewable energy
- Access to data needed to support time differentiated electric rates in more detail than is currently possible
- Capability to connect power consuming appliances in the home to load control devices if customer's desire
- Opportunity to reduce fossil fuel use by converting fossil energy sources to electric based renewable sources
- Remote access home usage and ultimately remotely control appliances/usage
- Allowed access to third party services to better manage their usage and load control (e.g. Google)

District Heating & Cooling/ Community Energy

BED, in conjunction with the Department of Public Works, continues to study the feasibility of developing district heating and cooling, or now known as "District Energy," within portions of the city. Areas under evaluation begin with the Winooski Avenue corridor all the way to the downtown. Although not under consideration at this time, the concentration of industrial land uses along Pine Street may make this area another attractive location to provide this type of service.

The concept for District Energy is to replace natural gas and fuel oil as heat sources with hot water. Such a plan will utilize excess city water capacity, combined with energy and excess/low cost heat produced by McNeil Station. Energy would be distributed underground to either heat or cool buildings within the district. If feasible, district heating and cooling is expected to provide a viable energy alternative, make use of existing water capacity, diversify the city's energy mix, and make the city a more attractive and competitive location for business.

Energy Efficiency Programs

BED began an ambitious energy efficiency program in 1990. Over $37 million has been invested by BED since 1991 with about half of this being matched from BED customers. BED has implemented a wide range of programs to reduce overall energy consumption and costs through the city. These included:

- **Smartlight**: leased compact florescent energy saving light bulbs to both residential and commercial consumers. In the near future, this may include other items financed on the electric bill.

- **Heat Exchange**: offers assistance and financial subsidies to convert customers from electric heating to other heating sources. Over time, as legislation in this area evolves, BED will become increasingly more involved in the growth of fossil fuel saving energy efficiency programs as well.

- **Commercial Efficiency programs:** offers a customized menu of energy savings opportunities to the City's commercial electric customers to provide "positive cash flow" financing of demand-side management measures.

- **Energy-Efficiency Standards:** adds additional requirements to those minimum standards adopted at the statewide level for buildings and energy-consuming

equipment in new construction and rehabilitation projects. These go hand in hand with incentive programs to help building owners, architects, developers, and even tenants to achieve higher levels of energy efficiency.

- **PACE:** is an innovative residential energy efficiency and renewable energy financing program that was launched in 2012. It offers residents a way to finance high-level energy efficiency and small-scale renewable energy projects over very long terms, making these projects more affordable.

In 2000, BED was appointed the City's "energy efficiency utility." This designation allows BED to administer funds collected on the electric bill through a statewide "energy efficiency charge." This appointment was renewed in 2011.

Energy Use and Climate Protection

Most climatic scientists now agree that human-caused emissions of greenhouse gases[2] are having a measurable impact on the earth's climate. While increases in global temperatures are highlighted as one of the primary outcomes of climate change, many impacts that are more serious may result. These include an increase in the frequency and intensity of extreme weather events, rising sea levels, and a northward expansion in the range of tropical diseases and pests. Each poses a significant economic and environmental threat to our region and beyond.

In 1996, Burlington became one of the first cities to join the "Cities for Climate Protection" campaign, organized by what is now referred to as "ICLEI: Local Governments for Sustainability." This led to a 1998 City Council resolution to reduce our emissions to 10% below 1990 levels and the formation of a Climate Protection Task Force. This group, comprised of non-profit, city, and business leaders appointed by then Mayor Peter Clavelle, guided an 18-month analysis and planning process, which ultimately led to the City's first Climate Action Plan (CAP). This plan was adopted by the City Council in May 2000.

In 2008, Burlington began its CAP update and review process with an inventory of Burlington's emissions. This inventory, conducted using ICLEI's Clean Air and Climate Protection (CACP) software, involved input, not only from key City departments such as Burlington Electric Department (BED), Department of Public Works (DPW), and Department of Planning and Zoning (DPZ), but other organizations such the Chittenden Solid Waste District (CSWD) and the Regional Planning Commission.

GHG emissions reduction target:
The first short-term target requires leveling off the emissions by 2016 and bring them back to 2010 levels. The second target involves an actual reduction of the 2010 emission levels by 2025:

- Municipal Operations - 20% reduction from 2010 levels by 2025.
- Airport Operations - 10% reduction from 2010 levels by 2025.
- Community-Wide - 10% reduction from 2010 levels by 2025.

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[2] "Greenhouse Gases" are any gas found in the earth's atmosphere that contributes to trapping energy under the atmosphere and causing warming. Such gases include carbon dioxide, methane, ozone, nitrous oxide, chlorofluorocarbons (CFC's) and water vapor.

Recommended actions propose to reduce traffic and air pollution, save money for the City and its residents and businesses, and help protect the environment for future generations. After a lengthy public idea generation and prioritization process, thirty-six strategies have been included in the plan under the following eight categories:

- Compact Mixed-Use Development
- Community-wide Transportation
- Municipal Transportation
- Local Gardens, Farms and Food Production
- Energy Efficiency in Buildings
- Renewable Energy Resources
- Urban Forestry & Carbon Sequestration
- Waste Reduction and Recycling

In addition to reducing greenhouse gas emissions, the recommendations of this Plan will benefit the city in other ways:

- **Cleaner air**: Motor vehicles are the single largest source of urban air pollution. In addition to greenhouse gases, cars emit such carcinogens as butadiene, benzene, and formaldehyde.

- **Improved human health**: Cleaner air will result in healthier people. An estimated 40,000 premature deaths nationally are attributed to motor vehicle emissions.

- **Improved economic vitality**: Improvements in energy efficiency mean tangible cost savings to individuals and businesses. Energy independence keeps local dollars in the local economy and improves the competitiveness of local businesses.

- **A more livable community**: A city with less traffic, cleaner air, more trees, and successful businesses will be a more attractive and livable place to live for current and future generations.

Energy Action Plan

Action Item	Lead Agency	Secondary Agencies
Sponsor forums for architects, developers, contractors, and others to inform them about new city ordinances, regulations, and standards and to provide technical assistance as to how they can incorporate new analytic and production techniques in their work	BED	Public Works
Review vocational curricula to promote energy efficiency and to develop programs to prepare students for employment in new energy-related fields.	BED	Schools
Develop an overall energy budget to manage the city's energy consumption. For electricity, the budget should be based upon local generating capacity if practical.	BED	

Examine the costs and benefits of requiring new development to either pay an energy impact fee or make an offsetting investment in efficiency.	BED	Planning & Zoning
Prepare an evaluation of the citywide potential, constraints and impacts associated with the development of new renewable energy sources - including fuel cell, cogeneration, biomass, solar, geothermal, hydro, wind, and methane.	BED	
Develop guidelines for tree heights and species selection that maximize energy efficiency.	Parks & Recreation	BED
Amend and enforce the municipal code and ordinances with an eye on reducing CO2 loads.	Planning & Zoning	BED
Develop a comprehensive education/outreach program to increase public awareness about the affects of global climate change on public health, the economy and the environment.	BED	Planning & Zoning Public Works Schools
Expand and maintain the City's inventory of street trees and shrubs.	Parks & Recreation	
Fully implement existing utility sponsored efficiency programs (electric and natural gas) in the commercial and industrial sectors.	BED	
Increase energy efficiency in municipal-owned and leased buildings.	Treasurer's Office	BED Public Works Schools
Explore and to obtain the resources necessary to implement the objectives of the municipal buildings and operations plan.	Treasurer's Office	BED Public Works Schools

IX. HOUSING PLAN

Vision Statement

This Plan envisions Burlington as a city where…

…all people have access to safe, decent, and affordable housing. Burlington's housing needs are being met through rehabilitation and conservation of the existing stock, and creative high density infill. New construction is encouraged in the Downtown and in neighborhood activity centers, and focused on meeting gaps in affordability and design to enhance diversity of housing stock, family types and incomes throughout the city. The designs of new housing blends with the city's built and natural surroundings, are highly energy efficient, and are accessible to people with disabilities.

…Housing options include a wide range of living situations including single-room occupancy units, apartments, single detached homes, cooperatives, condominiums, group homes and co-housing – all of which have virtually eliminated the need for shelters for the homeless. Opportunities exist for low- and moderate-income people to own their own homes. The educational institutions offer a range of high quality housing options that have greatly reduced the pressure on the rental housing market. The region has been successful in balancing employment growth with growth in housing. Equitable solutions to providing affordable housing have been implemented across the region.

CITY POLICIES

THE CITY OF BURLINGTON WILL…

- **Encourage a healthier regional balance of affordable housing in each community, proximate to jobs and affording mobility and choice to low income residents.**

- **Support the development of additional housing opportunities within the city, with concentrations of higher-density housing within neighborhood activity centers, the downtown and institutional core campuses.**

- **Support and implement programs to preserve and upgrade the existing housing stock to ensure that residents do not live in substandard conditions.**

- **Enforce ordinances, such as inclusionary zoning and minimum housing, which promote housing opportunities, safety, and affordability.**

- **Increase the rate of homeownership within low and moderate-income neighborhoods to 25%.**

- **Support innovative ownership alternatives to fee-simple home ownership and for-profit rentals, such as community land trusts, limited-equity condominiums, and co-operatives .**

- **Encourage a wide range of housing options to meet different and changing needs of households with children, the elderly, people with disabilities, and moderate- and low-income households.**

- **Support housing models, organizations, and programs that insure perpetual affordability, fill gaps in the housing tenure ladder, and increase the overall supply of housing in the community.**

- **Ensure that no renters or buyers seeking housing are dis-criminated against on the grounds of race, religion, gender, sexual preference, or disability by enforcing laws protecting this right.**

- **Encourage the reversion to single family occupancy of properties, especially in areas with high concentrations of student rental housing, which have been converted to multi-unit dwellings.**

- **Encourage a healthier regional balance of affordable housing in each community in the greater Burlington region, proximate to jobs and affording mobility and choice to low income residents.**

- **Assist the City's neediest residents confront the various obstacles and problems they face in the housing market.**

- **Preserve existing affordable housing, whether subsidized or not.**

Introduction

In July 2003, the City of Burlington completed the *2005 Consolidated Plan for Housing and Community Development* ("Consolidated Plan") as required by the US Department of Housing and Urban Development (HUD). Because of its size, Burlington is an "entitlement community" for HUD's Community Development Block Grant (CDBG) Program and certain housing funds. Burlington is Vermont's only HUD entitlement community. The Consolidated Plan outlines in some detail the city's housing needs, opportunities, programs, and future strategies. Rather than duplicate all of this information here, the Consolidated Plan is adopted by reference as part of this Plan.

This section summarizes the housing needs of the city - including those of low- and moderate-income people. It advocates for stable neighborhoods, affordability and diversity in housing options, protection of the housing stock, and equality of opportunity. This section emphasizes the development of higher-density housing in the City's development centers primarily, but not at the exclusion of additional housing in existing residential neighborhoods where compatible. Committed to the rights of all people to safe, decent, and affordable housing, Burlington has worked actively to implement these goals through a series of programs and policies including a housing preservation program, an inclusionary zoning ordinance, a security deposit ordinance, and fair housing legislation.

A Regional Issue

Housing is first a regional issue. The "commute" has become the norm for most working households. Thus, each community has a responsibility to consider the availability of housing within a larger region when planning for job growth. Where will the workers live? While it is preferable for housing and job creation to occur together and in close proximity to one another, the impact that the influx of new workers have on the availability and affordability of housing in the surrounding area must be evaluated.

Burlington continues to carry more than its share of the responsibility for meeting the affordable housing needs of the region. Burlington, and adjacent Winooski, provide nearly 70 percent of all publicly assisted housing in the county, yet are home to only 30 percent of the population. All municipalities in the region must work together, and share in serving Chittenden County's housing needs for all income levels.

On the initiative of the City, Chittenden County local elected officials have adopted a position paper supporting the inclusion of fair-share housing in the *Chittenden County Regional* Plan. Burlington will continue to work with other communities in the region to develop strategies and projects that share fairly the provision of housing for the homeless, the disabled, low-income households with children, and renters of every income - classes of housing consumers that are frequently excluded from communities surrounding Burlington.

Trends in Housing

(A more comprehensive and up-to-date profile of housing data and trends can be found in the Appendix.)

The 2000 US Census indicated that Burlington had 16,395 units of housing, not including dormitory rooms and other group quarters. This represents a 5.9% increase from 1990 and less than half of the housing growth experienced between 1980 and 1990. Yet, the population of the city (according to the Census – a figure the City disputes) fell by -0.6% during the same period indicating a continued shift in the type and size of households. Like with population, Burlington continues to loose its historic share of the regional housing market to the faster growing suburbs. For the first time, Burlington's share (in both absolute numbers and proportion of regional housing growth) in the production of new housing between 1990 and 2000 fell behind that of South Burlington and Williston. The result is a continued suburbanization of the region with isolated, low density residential development scattered in outlying communities.
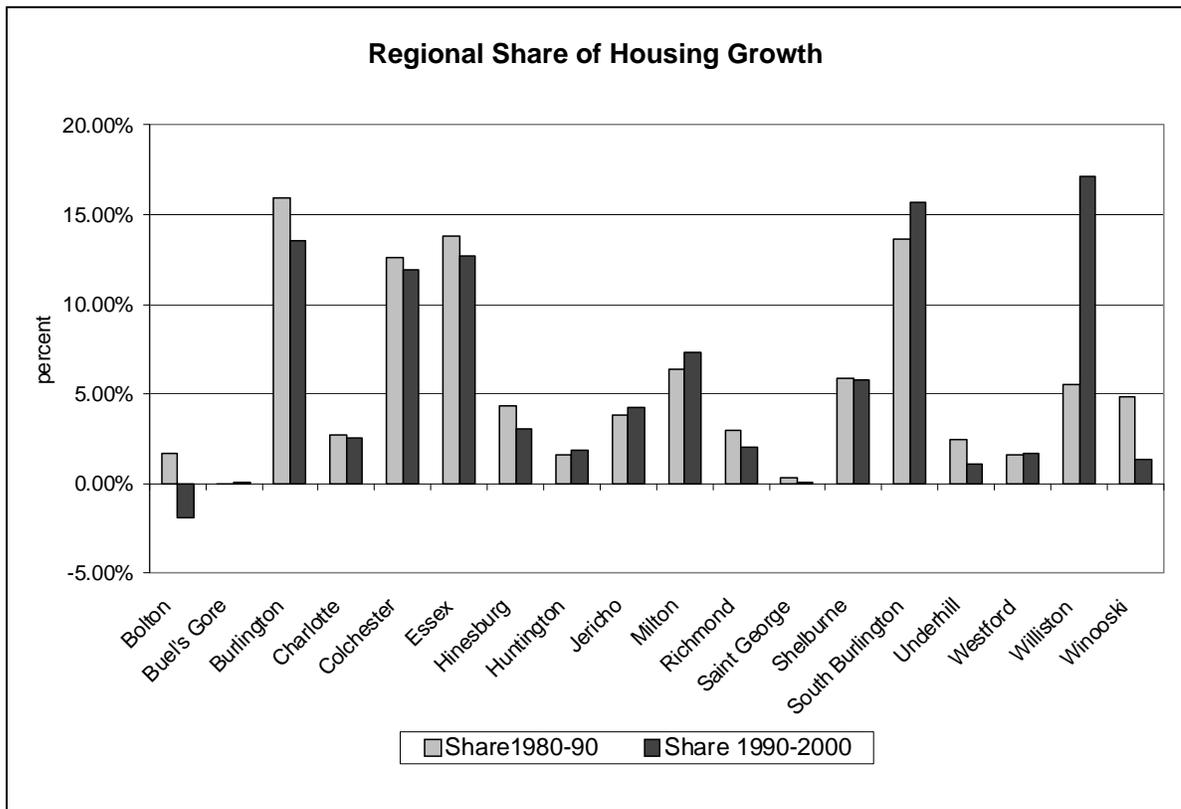
The city's housing stock includes 6,590 owner-occupied units (41.5%) and 9,295 renter-occupied units (58.5%). While the total number of dwelling units increased nearly 6 percent from 1990 to 2000, between 1980 and 1990, the number of rental units rose more than 20 percent (compared to a 12.5% increase in total housing units) while between

1990 and 2000 the growth in rental housing matched the grown in total units, suggesting that the shift away from owner-occupied housing may be stabilizing.

However, Burlington, and the rest of Chittenden County, is in the midst of a housing crisis. An Allen & Cable study of the Chittenden County rental market released in September 2000 found only 6 vacant rental units of 1,639 surveyed in Burlington and Winooski, and none in the surrounding suburban communities. Allen & Cable found a vacancy rate of less than 1% for the past four years shrink to less than 0.25% today[1]. The report also cites apartment rent inflation of 6-7% for 1 and 2 bedroom units and 11.6% for 3 bedroom apartments. Average rents without utilities range from $562 for 1-bedroom units to $971 for 3 bedroom units. These rents are 28-40% higher than in other areas of the state. A recent annual report issued by the National Low Income Housing Coalition found that Vermont is tied with New York as the <u>least affordable state for renters</u> when factoring in average wages.

Homeownership is also out of reach for many people with similar availability and affordability barriers. The median price of a home in Burlington has risen from $110,000 in 1990 to $134,250 in 1999 – a 22% increase. Prices in the surrounding area are even higher at $140,000 for Chittenden County as a whole. It should be no surprise that the rate of individual homeownership in Burlington is well below county, state, and national averages.

A study, prepared jointly by the Chittenden County Regional Planning Commission and Metropolitan Planning Organization[2], attempts to forecast economic and demographic trends in the six counties comprising northwestern Vermont. These projections indicate a future housing demand[3] of approximately 53,000 through 2035 for Chittenden County. This translates into a growth rate of between 1.8 and 2.0% per year across the county. This is roughly in-line with past trends in the annual growth rate for housing between 1980-1990 of 2.6%. This forecast data was not developed at the city level, but given that the population growth rate for Burlington, South Burlington, and Winooski is projected to be 1/3 of the rest of the county, the same may be said for housing demand. This would mean a future housing demand in the three city core of the region of approximately 17,500 through 2035.

If Burlington is indeed going to absorb a higher percentage of future population growth in the future, these trends illustrate the direction and priorities for housing in Burlington – to **increase the availability, quality, and affordability of housing in the City** in order to meet the needs of current and future populations.

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[1] A "healthy" vacancy rate is around 5% according to the Allen and Cable Report.

[2] *Economic and Demographic Forecast: Northwest Vermont and Chittenden County – 2000 to 2035 and Beyond,* Economic & Policy Resources, Inc. for the Chittenden County Regional Planning Commission and Metropolitan Planning Organization, September 2000.

[3] "Housing Demand" is roughly equivalent to the number of households, and should not be confused with "housing units" which is a more specific indicator.

Improving the Quality of the Housing Stock

Much of the housing in Burlington is quite old. Despite recent construction, almost half of the city's housing stock was built before 1940. Many units are not energy efficient, adding unnecessary costs for both the owner and renter - and on the environment. Based on City Minimum Housing Inspections, approximately 50% of the rental housing in the city is considered "substandard" based on the City's definition[4]. Many of these violations present serious safety risks, yet would not require a significant investment to correct. Approximately 10% of the city's rental units are in need of significant rehabilitation – requiring a reinvestment of more than $5,000 per unit. Many more units, both rental and owner occupied, will need substantial rehabilitation over the course of the next ten years.

Less than ten buildings in the city are considered vacant. These buildings have gone unused in most cases for years, and it is the City's goal to see them brought back into productive use. Additionally, vacant buildings are considered a hazard and blight on the surrounding neighborhood, and can often be subject to arson, vandalism, and other illegal activities. The City has enacted a Vacant Building Ordinance that seeks to ensure that vacant buildings are properly secured, and hopes to encourage the owner to bring them back onto the market. This ordinance has resulted in the number of vacant buildings decreasing from nearly 30 to less than 10 in 18 months.

However, most of these buildings are in need of substantial rehabilitation, and some owners are choosing to tear them down instead. This result would not forward the City's goals of preserving and expanding the housing stock or preserving historic buildings. Efforts should be undertaken to prevent demolition whenever possible. Possible examples include tax credits or abatement programs for substantial rehabilitation, technical assistance programs, or grants and low interest loans. Any solution must seek to protect the historic character and integrity of these buildings as well as bringing them back into the market.

This older housing must be properly maintained so that it will be able to safely and comfortably meet the needs of current and future occupants. In an effort to help preserve the housing stock, the city-run Home Improvement Program (HIP), implemented in 1983, provides low-interest loans to repair and rehabilitate housing. Between 1995-2000, 252 owner-occupied units have benefited from emergency/small repair/ and rehab loans, paint and access grants, and down payment assistance. The city's Minimum Housing Inspection Program has been enforcing minimum rental housing standards since 1981.

The city's Minimum Housing Standards were revised several years ago and Energy Efficiency Standards were added in 1997, but they must be enforced aggressively if housing is to be safe and habitable. The overall improvement of the city's housing stock will continue to be a high priority over the next several years, and it will be a high priority use of the city's Community Development Block Grant allocation.

Much of the city's rental housing is found in older historic buildings throughout the downtown, old north end and south end neighborhoods. As noted in the *Historic Preservation* Section of this Plan, historic preservation can be a tool in facilitating the

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[4] Section 18-19(d) of the City Code of Ordinances.

rehabilitation of the housing stock. Property owners of income-producing properties can utilize the federal Reinvestment Tax Credits to help finance the cost of making major improvements to the buildings. Many non-profit housing providers couple historic preservation tax credits with Low Income Tax Credits to finance larger redevelopment projects. The City will continue to play an active role in informing and assisting property owners in the use of these and other incentives for rehabilitation in order to increase and improve housing in Burlington.

Housing as the Key to a Livable Community

All citizens of Burlington have the right to live and raise their families in homes that are safe and sound, and available to them at a cost that allows them to afford the other necessities of life. No community can be considered truly successful if people don't actually want to live there. When people live in a community, they become invested in its future success, and add vitality and spirit that encourages future economic development, deters crime, and sustains a higher quality of life.

Burlington's housing policy is shaped around the concept of a "housing ladder of tenure," which represents a <u>community housing system</u>. The "housing ladder of tenure" provides housing options that offer increasing amounts of security and equity as one moves "up" the ladder. This ranges from shelters for the homeless at the lowest "rung," to fee-simple home ownership at the top of the ladder. The ladder includes a wide range of housing options including basic shelter, group homes, single-room occupancy rentals, limited-equity cooperatives and condominiums, rental apartments, limited-equity home ownership, and fee-simple home ownership.

MIX OF HOUSING TYPES AND INCOMES

There is no single solution to any problem, or option that will fulfill everyone's needs. Burlington cannot, and must not, be a community that targets one population - either rich or poor. An essential element to the city's future vitality is its diversity – its diversity of housing stock and income ranges. A wide range of housing types and affordability to serve the needs of a diverse population will be supported within the city. This includes such options as single-room occupancy apartments (SRO) and single detached homes, co-housing and cooperatives, apartments and condominiums, group homes and boarding houses. In addition to various housing types, housing that serves a range of incomes must also be included and encouraged.

The City will continue to protect and enhance the livability of its low-density residential neighborhoods for primarily single-family housing. However, it will actively promote and encourage the development of multi-unit, higher-density housing in its neighborhood

activity centers, institutional core campuses and downtown as a means of providing greater housing opportunities that serve a wide range of housing needs.

ENCOURAGE HOUSING DOWNTOWN

Burlington's downtown must be more than a cultural, retail and commercial center - it must be a neighborhood. A neighborhood that enlivens the area beyond normal business hours, takes ownership and responsibility for public spaces, enhances the economic value of downtown properties, and sustains local neighborhood-oriented businesses.

To really become a neighborhood will require additional housing – especially mid-range market-rate housing in order to achieve a balance in the income levels served. Although the Urban Renewal Policy of the 1960's removed nearly all housing downtown, there remain more than 550 units of housing downtown including 160 in two elderly housing projects, 10 single family-detached, and 106 apartments located above commercial space. Approximately 80 percent of the downtown housing is renter-occupied, and much of it is publicly assisted in one form or another.

Within the last five years, expensive market-rate housing has been built on and near the waterfront, and more is being considered. While the market is driving demand for the high-range, and public subsidies are providing assistance for the lower-range, the middle-range is a gap that is not being adequately addressed. Housing models that serve the mid-range income level (80-100% of area median) might include affordable apartments for young professionals, townhouses for new families, or condominiums for recent retirees.

To sustain a vital downtown, City policy will encourage the further creation of housing throughout the Downtown Improvement District. This will include efforts to rehabilitate under-utilized buildings to provide housing on the upper floors, and redevelop vacant and under-utilized properties into higher density housing that, in some cases, can include mixed-uses.

Meeting the Needs of All

Burlington is home to a wide range of people. Family households and unrelated individuals sharing housing include both traditional and nontraditional families, with and without children. Elderly and those without cars choose to live in Burlington to be near jobs, services, and health care. People with disabilities live here, as do people from different cultural experiences and income levels. Over the next ten years, the median age of the population will continue to rise and Burlington will have more elderly residents. Burlington will also see an increasing number of single-parent families and two-income families. These trends will affect the demand for housing.

AFFORDABILITY

As noted above, housing remains scarce and costly for many Burlington residents. Housing sale prices and rents have grown twice as fast as household incomes in Burlington since 1980. According to the 1990 Census, 50% of all renter households and 20% of all homeowners are spending more than 30 percent of their gross income for rent. By definition, these households are living in housing that is not affordable. The proportion is even higher in the Old North End and neighborhoods surrounding the University.

However, Burlington is committed to affordable housing. 23% of the estimated 9,427 rental units in Burlington are occupied by families benefiting from Section 8 or an equivalent rental assistance program. Over 550 rental units have some form of rent restriction in place. Burlington addresses the need for affordable housing through numerous programs, including:

- One cent dedicated tax from the property tax to the Housing Trust Fund, which finances production and preservation of perpetually affordable housing for low- and moderate-income people.

- The Inclusionary Zoning Ordinance that requires new housing developments to create affordable units.

- Expansion of the stock of single-room-occupancy (SRO) housing.

- The condominium conversion and the housing replacement ordinances, which seek to preserve existing affordable housing.

- A Home Improvement Program (HIP) to repair and rehabilitate the existing housing stock.

Despite all of these well-intentioned efforts, a chronic lack of funding and available land remain significant barriers. Public funding is one of the greatest limiting factor in the capacity of nonprofits to create new units of affordable housing, and the private sector is often unable to serve low-income households without large amounts of public subsidy. It is not uncommon for Burlington's $425,000 of federal HOME Funds that are available for affordable housing development and rehabilitation to be committed nearly one full year in advance.

Burlington will continue to advocate for more financial assistance from the state and federal government including increasing both the federal Low Income Housing Tax Credit and the Vermont Housing Tax Credit. Additionally, the City will continue to evaluate and improve the efficacy of its programs that seek to provide more affordable housing within the city including evaluating barriers and incentives in the local permitting process. Finally, the City will work with nonprofit and for profit developers on finding and developing sites to accommodate new opportunities for housing that include permanently affordable units.

Homeless

Some people have no homes at all. In 1995, the Committee on Temporary Shelter (COTS) served 73 homeless families. By 1999, that number had increased to 296 families

– a 400% increase in four years. The number of homeless single adults served has not shown as dramatic an increase – hovering close to 500, but emergency shelters remain at capacity. These numbers underestimate the homeless population in Burlington because many people choose not to, or cannot, stay in shelters for lack of room. Instead, they sleep on the street, in abandoned buildings, or in the woods. Homeless families may move in with friends, family, or stay in their cars. In Burlington, as elsewhere, homelessness remains a severe socio-economic problem.

Burlington's homeless strategy is based on offering a "continuum of care" developed originally in 1984. Coordinated by the private, nonprofit COTS, non-profit housing and service providers collaborate with the City to provide a range of services that include:

- Prevention
- Outreach, Intake and Assessment
- Emergency Shelter and Shelter Services
- Supportive Services
- Transitional Housing
- Permanent and Semi-permanent Supportive Housing

The City will continue to work with non-profit housing and service providers to offer services and opportunities to meet the complex needs of the City's homeless population. This is the most important 'first-rung" on the housing tenure ladder.

People with Disabilities

Approximately 5,000 people with disabilities live in Burlington. Of these, 25 percent have disabilities for which they use special equipment and household adaptations. Present law requires that a percentage of new or substantially rehabilitated rental and multi-unit projects be accessible. The City needs to ensure that this law is enforced and that these units are truly accessible. The City also needs to encourage developers to go beyond the minimums established by regulation and pursue innovative ways to enhance convenience and accessibility for all residents with disabilities. In addition, we must promote design standards that allow people with disabilities access to more housing.

However, providing access to persons with disabilities – especially in older buildings – requires creativity and sometimes a willingness to join forces with neighboring properties - sharing an elevator for example. Building codes and other city ordinances, combined with technical and financial assistance, must encourage all property owners to make their buildings accessible.

First-Time Homeowners

Many families need just a few more resources to become home owners, such as down-payment assistance or slightly lower mortgage rates. To supplement federal and state programs, it is important for local programs to help families and individuals become first-time buyers. Coupled with a fair paying job, home ownership can be the final step to economic independence.

Students

Burlington is home to three residential post-secondary schools; the University of Vermont, Champlain College, and four additional educational institutions with substantial student populations. The University of Vermont provides 4,090 on-campus beds. This represents housing for 47% of the University's degree students. According to a 1998 study of Burlington's rental housing market[5], Burlington's off-campus student population was approximately 2,826 students occupying approximately 1,150 units – 16% of the city's market-rate rental units.

Students who live off campus create inflationary pressure on rents; attract absentee landlords; and contribute to noise, traffic, and parking problems. The 1998 Allen and Cable study found a direct relationship between student density and rental rates reporting that rents were 15-20% higher in the residential areas surrounding the University.

In negotiations between the University and the City, an informal goal that UVM would house no less than 50% of its degree students on campus was agreed to. A longer-range goal of 52% was also considered. Responding to City and neighborhood concerns, UVM has begun to attract students back to campus through policy changes, improvements to existing residence halls, and the construction of new student housing. In addition, the University's *Good Neighbor Program* is working to improve relations between students and neighborhood residents, and educate students about the responsibilities associated with off-campus living. In order to be successful, proposals for additional student housing several objectives must be addressed in the planning process. These include:

- Provide a range of housing types that meet the needs and interests of the student population. These should include apartments that give students an opportunity to get away from the typical dormitory living situation.

- Addressing parking and circulation. Every effort should be made to provide parking either underground or within a structure to minimize the amount of land dedicated to surface parking. Additionally, traffic circulation patterns within residential neighborhoods and through the University campus must be evaluated to minimize through traffic off campus, and the need to use cars all together.

- Include nearby residents in the planning process. Residents of adjacent residential neighborhoods have the greatest interest and stake in the outcome of these projects outside of the University community. They must be included as active participants in the planning process to ensure their specific issues are considered and addressed.

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[5] Prepared by Allen and Cable in August 1998 for the University of Vermont.

Housing Action Plan

Action Item	Lead Agency	Secondary Agencies
Monitor ratio of housing to commercial development growth within the City, and explore the creation of a linkage program for commercial development to ensure housing growth keeps pace.	CEDO	Planning & Zoning
Implement the Housing Affordability Strategy found in *2005 Consolidated Plan for Housing and Community Development*.	CEDO	
Continue to implement *Common Ground: A Strategic Plan for the Old North End Enterprise Community*.	CEDO	
Examine the feasibility of public bonding for housing preservation and, where appropriate, for housing construction.	CEDO	Treasurer
Underdeveloped and undeveloped properties located in residential zoning districts should be assessed for suitability of housing development.	CEDO	
Implement a system to investigate and act on claims under the city's anti-discrimination ordinance.	CEDO Attorney	
Participate with the University, and other institutions as applicable, to develop locations and designs for student on-campus housing.	CEDO	Planning & Zoning
Encourage the appropriate reuse of buildings for mixed -use including residential.	Planning & Zoning	CEDO
Expand local housing investments in the Burlington Employee Retirement Fund.	Treasurer	
Play a proactive role in establishing a regional affordable housing allocation plan.	Planning & Zoning	CEDO
Consider requiring a Certificate of Habitability for existing apartments for a change in occupancy.	Public Works	
Study the feasibility of allowing SRO's in low-density zones.	Planning & Zoning	
Develop housing on one or more of the following City-owned properties: Brown's Court parking lot, Elmwood Avenue parking lot, and the Depot Street Triangle site.	CEDO	
Support the creation of new rental and owner-occupied housing on every parcel of land in	CEDO	

Burlington that is zoned for residential development at the number of units allowed by zoning. Identify buildable sites for eventual housing construction/conversion.		
Convene an interdepartmental task force designed to remove barriers to creating more housing in the downtown core and on scattered "in-fill" sites throughout the City.	CEDO	Planning & Zoning
Implement the impact fee waiver ordinance for the construction of new, permanently affordable housing.	Planning & Zoning	CEDO
Work with housing advocates and the legislative delegation to secure additional state and federal funds for affordable housing.	CEDO	
Implement HomeOwnership 2000 (HOP 2000), a joint initiative of the Community & Economic Development Office and the NeighborWorks-Homeownership Center designed to increase the number of owner-occupied duplexes in the Old North End, King Street, Lakeside and other target areas.	CEDO	
Rehabilitate substandard housing through such tools as loans and grants provided by the City's Home Improvement Program to owner-occupants of 1 to 4 unit buildings and the RePAR Program.	CEDO	
Place chronically and seriously substandard rental properties in receivership.	Public Works CEDO	
Encourage increased funding for comprehensive code enforcement, and support the code enforcement ordinance that significantly increases the penalties for landlords who continue to violate livability standards.	CEDO	Planning & Zoning Public Works Treasurer
Develop a program to encourage employers to support efforts of their employees to purchase homes in the Old North End and neighborhoods adjacent to the University of Vermont.	CEDO	
Encourage banks, credit unions and mortgage companies to offer innovative in-house mortgage products that expand homeownership	CEDO	
Encourage the inclusion of strong fair-share housing language in the final version of the Year 2000 Chittenden County Regional Plan, and vigorously oppose attempts to weaken the commitment to fair-share housing.	CEDO Planning & Zoning	

Housing Plan

X. EDUCATION PLAN

Vision Statement

This Plan envisions Burlington as a city where…

…Burlington's schools, in partnership with residents and the community, educate and inspire students to influence and shape the future. The City's educational system prepares our youth to contribute to society and their community, trains them in the skills necessary to be successful in the workforce. All residents have opportunities to develop the skills for a lifelong commitment to learning. The abundance and diversity of educational opportunities serve to enhance the City's competitive advantage as an attractive place to both live and work. Examples include a commitment to early childhood education and neighborhood schools at the elementary level, high quality secondary and vocational education, and college-level opportunities ranging from a state-of-the-art university to small community colleges. Burlington's educational facilities are made available as a community resource and serve as neighborhood centers.

CITY POLICIES

THE CITY OF BURLINGTON WILL…

- **Ensure excellent and diverse educational opportunities, services and facilities in order to facilitate a tradition of lifelong learning by Burlington residents, and support and encourage efforts by parents to be involved in their children's education.**

- **Support and maintain the use of neighborhood schools where children live in close proximity to their school, and schools serve a wide range of community and neighborhood functions.**

- **Ensure safe access to school facilities, and encourage walking, biking, and public transit to get to school.**

- **Use school facilities efficiently so that buildings and play fields serve multiple functions.**

- **Be responsible stewards of its educational facilities so that they continue to serve current and future generations.**

- **Provide educational opportunities and schedules that reflect residents' needs and provide flexibility in meeting future needs.**

INTRODUCTION

In David Soucher's book *City Comforts[1]*, he characterizes children as an "indicator species for successful communities." If our communities are attractive to families with children, then they are more likely to be sustainable over time. This section discusses educational facilities and services offered within the City of Burlington, and focuses primarily Burlington's public school system and its facilities.

Burlington's schools, and the education of our residents, are essential components to the future health and vitality of the city. Not only do they improve our ability as a community to compete in the economic marketplace, but education helps us to better understand and appreciate differences in cultures, artistic expression, and responsibilities as citizens.

Offering Diverse Educational Opportunities

Burlington's public school system maintains six elementary schools, two middle schools, one alternative school, an area Technical Center, Burlington High School, an administrative building, and a maintenance facility. In addition to public schools, Burlington is home to a wide range of private and alternative schools including three catholic elementary schools (St. Joseph's, Mater Christi and Christ the King), the Rock Point School, the Schoolhouse, YouthBuild, and the Richard Milburn High School.

Burlington residents also are afforded a wide range of pre-school and post-secondary educational opportunities making lifelong learning an available option for many. Examples of some of the post-secondary schools in the city include the University of Vermont, Champlain College, Adult Basic Education, Community College of Vermont, Burlington College, VT College of Cosmetology, and the New England Culinary Institute.

Champlain College

Burlington is committed to offering a wide range
of educational opportunities that can serve the diverse needs of our residents, and instill a commitment to lifelong learning.

SAFE ACCESS TO SCHOOLS

Whether it is public or private, elementary or post-secondary, schools are places where there are very high concentrations of pedestrians. Areas around elementary and middle schools have become increasingly congested with traffic from parents transporting children to and from school. This creates a cycle of dependence on motor vehicles to transport children as parents' concern for their children's safety grows along with more traffic and congestion. Areas of particular concern are the three schools in the New North End – Flynn, Smith, and Hunt.

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[1] Soucher, David; *City Comforts: How to Build an Urban Village;* City Comforts Press, Seattle, 1995.

As a community, we have a responsibility to provide safe access to our schools. This includes providing sidewalks, mid-block crossings, bike paths, and trails that offer students an alternative to walking on the street. On a limited basis, Burlington Schools use CCTA buses to transport kids to school – primarily for middle school students. All are intended to minimize vehicular trips. The City will continue to provide these facilities and amenities to the greatest extent possible. (see also the *Transportation System Plan*)

Schools are a Community Asset

Burlington's educational facilities are more than schools, but are an important community asset - each providing a focal point and meeting place within the city's neighborhoods. The City encourages a land use pattern where residential areas are within walking distance of neighborhood services. Schools are an essential element within a neighborhood. They serve to establish connections between families, and are focal points for neighborhood

Edmunds Middle School

interactions and communication. This communication and familiarity between people is one of the essential bonds that creates and maintains what we call "communities."

Schools should be located in close proximity to other community services and higher density residential areas, and on public transit routes, to facilitate access without the need for a car. The best locations include neighborhood activity centers that are intended for concentrating neighborhood-oriented services.

School buildings provide meeting spaces for community groups and other city programs. Recent renovations to both Barnes and Wheeler Schools have included the creation of community rooms to meet the needs of community groups for additional meeting space. In addition, Wheeler also provides space for other community service providers to improve their delivery of service to families with children living in the heart of the Old North End Enterprise Community.

H.O. Wheeler School

School playgrounds also serve as neighborhood recreation areas. The Burlington Parks & Recreation Department makes significant year-round use of school facilities in providing a wide variety of after-school, evening and summer activities for youths and adults. School property use by Parks & Recreation, as well as other community groups, continues to grow and points to the indispensable role that schools play in the life

of the city. Schools must continue to serve multiple functions in the future. The current demand for use of school facilities by Parks & Recreation cannot always be satisfied however. This situation is expected to continue unless significant indoor recreation space can be provided elsewhere in the community.

Moreover, as demographics and technologies change, our school system will have to meet new needs and patterns. For example, schools that are closed all summer and kindergartens that operate less than half days create schedule conflicts for working and single parents, and may not be the most efficient way of utilizing these facilities. As telecommunications and technology improves, opportunities to take advantage of distance learning programs will become more affordable and available throughout the city.

The opportunity for neighborhood interactions in and around schools should be expanded and should include all residents - especially seniors, and all types of schools. To the extent practicable, all schools in Burlington should open their doors to their neighborhoods by offering use of special programs, meeting space and recreational facilities. They also must be active and meaningful partners in community problem-solving and decision-making initiatives.

Public Educational Facilities

The Burlington School District is the largest public school district in the state with a total enrollment of over 3,600 students in 2005. It is also likely to be the poorest and the most culturally diverse school system in the state as well. Nearly 50% of the students qualify for free or reduced meal programs, and 14% of the students speak English as a second

language with over 28 different languages spoken at home. While the challenges are great, the opportunities and rewards are even greater.

The Burlington School District is divided into six neighborhood school districts for the purposes of distributing school enrollment among the City's elementary schools. These neighborhood schools are at the foundation of efforts to create a "learning community." They provide a place to build upon educational and community goals in close proximity to where people live.

These districts are then combined into two middle school districts (Hunt – Flynn, Smith and Wheeler, and Edmunds – Barnes, Edmunds and Champlain), and finally one high school district.
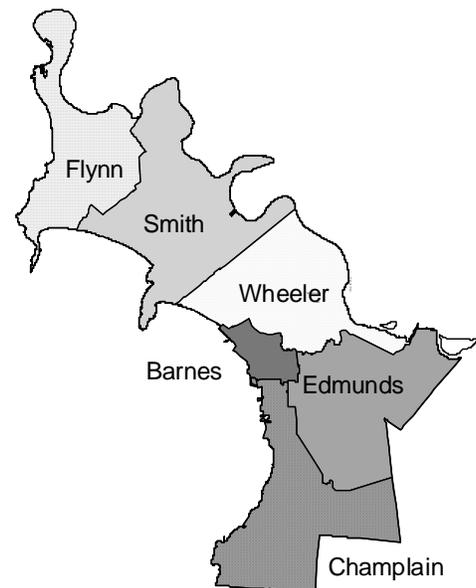
FACILITIES PLANNING

Transforming Burlington into a "Learning Community" was the focus of a School Board and Department long-range strategic planning process in 1995. This process involved over eight hundred individuals during the 1994/1995 school year, and resulted in the development of nine strategic planning goals.

One of these goals, "to develop a funding plan for consistent, long range financial stability," included a review of all current educational facilities to ascertain their needs for capital improvements and required work necessary for complete compliance with the Americans with Disabilities (ADA), as well as outline their potential use. The result of this process provides an important blueprint for furthering the city's educational goals, identifying opportunities for sharing resources, and improving the efficiency of existing facilities.

We must provide adequate facilities in response to growth and demographic changes, and make the more efficient use of public school buildings and grounds. In 2005, Burlington voters supported maintaining neighborhood schools when faced with the possible closure of Lawrence Barnes School. The City must also be a responsible steward of its public facilities, and its historic buildings in particular. Wheeler and Edmunds schools, and the former Thayer School, are important historic buildings. Each require ongoing maintenance in order to prevent deterioration, and Edmunds in particular is in need of significant rehabilitation including the repair and replacement of many of its windows. Another need identified in the community is for outdoor playfield space for use by the Edmunds Middle School. While the school property is too small to accommodate league-regulated fields, cooperation and collaboration with nearby Parks and Recreation facilities are encouraged. Meeting the needs of city schools should be a priority over making facilities available to non-city groups.

School	Total Acreage	Square Feet	#Playgrounds/Fields
School Property and Outdoor Playing Fields			
Admin & Maint.	17.74	57,191	
Elementary Schools			
Champlain	9.7	61,776	3
Edmunds	6.5	23,770	1
Barnes	3	28,800	3
Wheeler	2	39,080	1
Flynn	10	40,152	3
Smith	14	30,900	8
Middle Schools			
Edmunds M.S.	(inc. w/ elem Sch.)	65,647	(inc. w/ elem Sch.)
Hunt M.S.	20.6	76,282	4

High School			
Burlington H.S.	44	236,169	7
Total	127.54	659,794	30

Source: Burlington School Department, Burlington Dept. of Parks & Recreation. 1995

PROJECTING NUMBERS

The School Department utilizes state estimates of the city's population from the VT Department of Health, and population-forecasting information provided by an area demographer in order to project future enrollments. Population-based projections however, typically do not include housing data - growth in housing stock, changes in family size and household characteristics.

Major demographic changes have occurred over the past several years that may greatly influence future enrollments. These include a 50-year decline in the average family size - which many experts believe has stabilized at 2.2 people per household. This is due in part to more single-parent families and fewer numbers of children per family. Another important factor is the aging of the population and the "graying" of some of the city's largest neighborhoods. This is particularly true in the New North End. As these neighborhoods gradually transform back into family neighborhoods with children, there will be a continued impact on school enrollments - most likely one that shifts capacity needs between neighborhoods rather than an increase in total system growth.

The School District also needs to play and active roll in the City's planning and development review process by offering information and recommendations regarding proposed development in the city and its possible impact on current and future educational facilities. This will be especially important as the City considers the possibilities, barriers, and impacts of significant population growth over the next three decades.

LONG-RANGE FINANCIAL STABILITY

One of the priorities identified in the School Department's Strategic Planning Process was "to develop a funding plan for consistent, long range financial stability." Recent events at the local, state and federal levels have drastically transformed the financial landscape for publicly funded schools. No longer are traditional programmatic funding sources available at the same levels - and in some cases at all. In addition, local property taxpayers are overly burdened and increasingly less likely to make-up the difference.

Education Action Plan

Action Item	Lead Agency	Secondary Agencies
Immediate Term		
Identify stable funding mechanisms to support school infrastructure needs.	Schools	
Mid Term		
Estimate future school enrollments based on a combination of population, land use, and housing projections.	Schools	
Encourage community services and senior housing to locate in close proximity to schools.	Planning & Zoning	CEDO
Provide safe routes and transportation alternatives for children to the public schools especially those for pedestrians and bikes.	Public Works	Parks & Recreation Planning & Zoning
Consider the potential impacts on school enrollments when evaluating new developments through greater School Dept. involvement on the Technical Review Committee.	Schools	Planning & Zoning
Long Term		
Consider ways to expand the use of school facilities for other community activities, and to design additions that lend themselves to multiple uses.	Schools	

IMPLEMENTATION PLAN

Vision Statement

Burlington is a community where residents participate meaningfully in decisions that affect them. Neighborhood and citywide groups as well as individuals and adjacent communities have a clear voice in a city policy-making process that is open and accessible.

Many issues, including those in the areas of transportation, housing, land use, solid waste, recreation, and the protection of natural areas (including Lake Champlain and the Winooski River) are addressed in regional forums. Burlington continues to cooperate with neighboring communities and regional entities to seek comprehensive solutions.

This plan sets forth a vision for Burlington over the next ten years and offers both policies and actions to implement that vision. The document by itself, however, will accomplish nothing included here. The City, through its Departments, Commissions, Administration, and City Council must now implement this plan through the array of tools available, and in partnership with other governments and the private and non-profit sectors.

This section discusses how various implementation tools relate to specific actions recommended in the plan. Each section of the Plan contains a more complete discussion of necessary actions.

Ongoing Community Participation

This document was shaped by the concerns of the citizens of Burlington. This process does not end with the completion of the Plan. The City must continue its policy of sharing information with the public, listening to their concerns, and acting on them. Only in this way will the Municipal Development Plan be an effective document for guiding growth and change. Community participation must include citizen education and ways to encourage meaningful involvement.

Neighborhood Planning Assemblies are one of the primary vehicle through which the City acquires feedback from citizens. NPA's have been the center piece of citizen engagement in Burlington for nearly two decades. They are a principle forum through which citizens provide feedback to the City on projects, plans, and policies. In the past three years alone over 1,000 citizens have participated in NPA's.

However this is not enough. One of the central objectives of the *Legacy Project Action Plan* is to involve a broad section of citizens in all aspects of decision-making.

> *This means involvement that occurs not only in the voting booth at election time. It also means providing the opportunity to have a greater impact on all decisions made not only by the government, but also by local businesses, institutions, non-profit organizations, neighborhood associations, and more."*

> *In striving toward this kind of wide-ranging public participation in governance, Burlington must address three key issues: the need for responsiveness and accountability on the part of government, the need for local control over decisions affecting neighborhoods, and the need for informed decision-making.*

> *Providing our young people with the education to make informed decisions and participate more effectively in our community is just the first step toward greater empowerment for youths. Burlington must also strive to provide "a place at the table" for youths when making decisions that effect their community and their future[1].*

Priority Actions included in the Plan include:

- Increase diversity - including youths and minorities - on decision-making boards of all types and provide a regular "report card" on progress.

- Implement a neighborhood design process as part of each municipal development plan update, providing residents with more of a voice about how their neighborhood will grow in the future.

- Reorganize city government to make it more responsive and accountable to the voters, with the mayor overseeing city departments while balancing strong input from commissioners and other committed citizen-volunteers with more effective and centralized management.

- Provide youth representation on city boards and commissions, with the representative(s) to be chosen by youths themselves.

- Identify community service and internship placements for students to participate in civic affairs.

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[1] *Burlington Legacy Project Action Plan*, May 2000.

To improve citizen education the City should:

- work with the school department to add a city government module to civics classes.
- encourage the media to more fully cover all aspects of city government.
- expand the town meeting television coverage of Planning Commission, Development Review Board, and City Council meetings.
- extend the use of town meeting television to all city commissions.

To encourage meaningful participation the City should:

- explore ways to strengthen the neighborhood planning assemblies and improve attendance.
- better publicize and advertise neighborhood planning assembly meetings and encourage early review of major development proposals at the neighborhood level.
- insure neighborhood planning assembly participation in and review of institution development plans and projects.

Regional Cooperation

Cooperation between state and federal government, neighboring municipalities, regional entities, and the non-profit and private sectors will be absolutely necessary for many of the policies in this plan are to be successfully implemented. Pooling resources make regional solutions more cost efficient and effective. Regional coordination and cooperation must be an on-going process.

Many of the issues facing Burlington, such as natural resource protection, transportation, housing, and waste management, must be addressed on a regional level. All communities, for example, must share fairly the provision of housing for the homeless, the disabled, low-income households with children, and for renters of every income. Each section of the Plan describes regional relationships associated with the area discussed. Burlington must continue to work with other municipalities, both individually and in collective regional forums, to seek solutions to common problems.

However, the City must insure that Burlington residents are fairly represented in these regional forums. Burlington has over 28% of the County's population, one third of the County's jobs, and has been designated a "Regional Growth Center" in regional land use plans. Yet, when it comes to regional land use policy and decision-making, Burlington is in no better position to effect change than a community one tenth its size.

Burlington is presently a member of the following regional organizations:

- Chittenden County Transportation Authority (CCTA): A regional transportation authority responsible for providing public transportation in Burlington, South

Burlington, Winooski, Essex, and Shelburne. Burlington representation: 2 of 10 members.

- **Chittenden County Metropolitan Planning Organization (CCMPO):** Governed by federal law, the CCMPO identifies, plans, prioritizes, and programs transportation improvements within the urbanized portion of the region. Burlington representation 1 of 9 voting members.

- **Chittenden Solid Waste District (CSWD):** Consisting of a majority of municipalities in the region, the District is responsible for management and disposal of solid waste including the planning, siting, design, and operation of facilities. Burlington representation 1 of 16 members.

- **Winooski Valley Park District (WVPD):** This nonprofit organization acquires and manages open space, wildlife habitat, farmland, and other natural areas within the watershed of the Lower Winooski River. Burlington representation 1 of 7 members.

- **Chittenden County Regional Planning Commission (CCRPC):** This quasi-governmental organization includes all municipalities in the county. It provides planning support services to its member communities, and develops regional land use plans and policy. Burlington representation 1 of 22 members.

Public/Private Partnerships

Combined efforts between public and private partners are another way to implement the Plan policies. Presently the City participates in many shared efforts including:

- The Downtown Partnership
- Banking Council
- Bio-Tech Task Force
- Chittenden County Alcohol and Drug Alliance

Cooperation between the public, private, and non-profit sectors plays an important role in problem solving and future planning. Burlington must continue to work with the University and the other institutions to solve parking, transportation, and housing problems. The Planning Commission and the institutions will cooperate to find appropriate sites for on-campus housing and concentrate new development. CEDO will continue to work with the private sector to retain and expand the job base. Public/private partnership may be particularly helpful in resolving transportation issues. The City should explore the potential for a downtown transportation management organization that would implement solutions to congestion and parking. This organization would include representatives from the business community, city government, and users. The City should join with the private sector to revitalize the transitional areas north and south of the downtown.

Inter-Departmental Collaboration

Coordination and partnerships must extend to city departments as well. While city government is separated into 25 departments and offices - many of which with an independent governing commission - all city government serves the residents and taxpayers of Burlington. In order to serve the community most effectively, city departments must continue to search for ways to improve communication, share information and collaborate on joint projects. For example, Planning and Zoning, Parks and Recreation, and the Schools can work together to design more diversified, multifunctional school facilities. Planning and Zoning can share economic, demographic, and geographic information with other departments, and coordinate permitting processes with Public Works. CEDO and Public Works can coordinate the minimum housing inspection program with the low-interest Home Improvement Program.

Inter-departmental collaboration begins with improvements in communications between departments and how the city shares information both internally and with the public. Realizing that many city functions rely heavily on data/communication flows, and that efforts to date have focused on the specific needs of individual departments, an evaluation of current city investments in technology was started in 1996. Recommendations will address how the City can make the best use of emerging technologies to improve efficiency and services. This study must be followed by the necessary investments in hardware, software, and training. In this information age, city government cannot afford to be left behind.

Each section of this Plan's Action Plan defines specific actions to be accomplished within a generalized time frame, and identifies key partners responsible for specific actions The following table outlines these relationships in general:

Topic Area:	Key Partners:
Land Use	Planning & Zoning
	All City Departments
Natural Environment	Planning & Zoning
	Public Works
	Parks & Recreation
Built Environment	Planning & Zoning
	Public Works
	Parks & Recreation
Historic Preservation	Planning & Zoning
	CEDO
Transportation System	Public Works
	Planning & Zoning
	CEDO
Economic Development	CEDO
	Planning & Zoning
Community Facilities and Services	All City Departments
Energy	BED
	Public Works
	Planning & Zoning
Housing	CEDO
	Planning & Zoning
	Public Works
Education	School Dept.
	Parks & Recreation
	Planning & Zoning

Inventories, Sector Plans and Studies

The policies and actions recommended in this plan originate from public input, technical information, and analysis. Planning and development is an ongoing process; as conditions change, actions needed to implement polices and visions will change. Moreover, additional research is needed to implement some of the policies in this plan.

Collection of Information:

Inventories, plans, and studies are all based on relevant information. Each department in city government collects information on its projects and programs. Examples include traffic data and road conditions, building and zoning permits, land records, and socio-economic data. This information should be collected in such a way that it will be useful and available to all city departments. For example, GIS is an important tool in gathering and analyzing spatially referenced information. Nearly all data collected by the City is referenced to places on the ground. The city should encourage departments to collect information in a format compatible with the GIS database.

Inventories and Studies:

This plan recommends the completion of several inventories and studies that will help in formulating new regulations and programs. They will also be important tools for monitoring progress and success. Examples include an assessment of citywide preservation activities, an inventory of public buildings and their condition; a feasibility study for an energy district in the CBD; an inventory of public art and cultural facilities; and inventories of historic buildings and natural resources.

Sector Plans:

While the Municipal Development Plan defines general policy directions and land use for **all** areas of the city, more detailed sector plans are necessary to address the needs of certain neighborhoods. These include Riverside Avenue, the Pine Street corridor, Downtown, the Downtown Waterfront, and the Intervale. These sector plans should be based on already-existing work, such as the Waterfront Urban Renewal Plan, the Riverside Revitalization Plan, and the Downtown Partnership Study, and should include extensive public participation and review.

Besides these sector plans, the City, through the Planning Department, Community and Economic Development Office, and Neighborhood Planning Assemblies should undertake conservation plans for each neighborhood in the city. These plans would inventory building conditions, identify important physical elements, and define the architectural characteristics worth protecting in each neighborhood. These include traditional building types, setbacks, street layout, densities, landscaping, and street details. Each plan would also include an inventory of the current level of neighborhood services. New development or changes should reinforce and enhance the existing neighborhood patterns and not diminish the current level of neighborhood services as defined in this plan. Work on the sector and conservation plans should begin shortly after the plan is adopted.
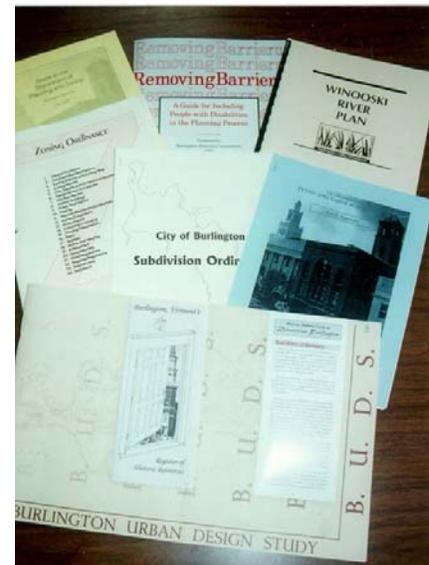
COMPREHENSIVE MASTER PLAN RE-WRITE

As noted previously, the Legacy Project provides a roadmap for change that will guide Burlington in sustaining its role as the vital economic, social, and cultural hub of the region. It envisions growth into a "real city" with both a significantly higher population and an outstanding quality of life, including a thriving business sector; full, high-wage employment; a vibrant downtown and waterfront; excellent housing opportunities; strong social supports; and an environment that is managed and protected with great care. The Burlington Legacy Project provides a blueprint for ongoing, community-wide dialogue about the nature and extent of future development based on the principles of sustainable development. It also calls for a strong collaboration with surrounding communities and regional organizations.

The next revision of the City's Municipal Development Plan will be the first complete and comprehensive re-write of the Master Plan since 1991, and will advance the Legacy Project's vision for Burlington to the next stage by outlining more specific policies and land use plans that will facilitate the City's future growth. This will require two significant initiatives and investments by both the City and the residents. First, studies will be necessary to better understand the City's physical capacity to grow significantly as proposed in the community vision adopted in the *Legacy Project Action Plan*. The City will need to address the questions of **what is possible** and **what might it look like** in order to determine the public's comfort level with significantly increased density. Second, the public's attitudes and desires for future development must be sought. This plan offers a framework, but more detail is necessary regarding specific density levels and building heights that will be acceptable to the community. For this, a series of neighborhood forums and design charrettes will be conducted over the next two years. Finally, an assessment of the capacity of the City's infrastructure (water, sewer, transportation, schools, etc.) to accommodate addition growth must be determined. This will be essential information for determining the city's total capacity for growth and estimating the public investments that will be necessary to encourage and support future development. Each of these efforts will be very high priority actions, and will require outside expertise and funding to undertake. The goal is to have a new plan to present to the public sometime in 2003.

Zoning and Subdivision

State law gives municipalities the power to regulate land use through tools such as zoning by-laws, subdivision regulations, shoreline by-laws, and an official map. These regulatory tools address many different issues, among them design control, historic preservation, parking and traffic, densities, land use and cover, and resource protection. While other plans, programs and policies affect development within city, the zoning and subdivision regulations are the City's principle regulatory means used to carry out the policies and recommendations of the Municipal Development Plan.

This plan recommends studying the following land use changes for inclusion in the zoning ordinance as an example.

- Protection of all or part of the following natural areas: Mount Calvary Red Maple Swamp, Redstone Quarry, Barge Canal, Flynn Estate, Northshore Wetland and those areas identified as Natural Areas of Local Significance

- The creation of neighborhood mixed-use activity centers in the following proposed locations: Ethan Allen Shopping Center area, and along North Winooski Avenue near Riverside Avenue

- Evaluate the types of uses encouraged in the South End.

- Complete the Institutional Core Overlay Zone.

- Evaluation of street design and lighting standards

- Increase densities within the downtown and Neighborhood Activity Centers, and along major transit corridors, including North Avenue, Shelburne Street, South Winooski Avenue, Pearl Street, and Colchester Avenue

- Implementation of shoreline zoning along the Winooski riverfront and the lakeshore.

- Adoption of a trip reduction and redistribution ordinance to limit the number of vehicle trips generated by new development.

- Re-evaluation of parking requirements and further enhance use of the Parking and Mass Transit Capital Fund.

The land use section, as well as other parts of this plan, contains more detailed recommendations regarding changes in the zoning and development regulations. While all recommended changes should be included in the revised zoning ordinance, priority should be given to protecting the natural environment, designating growth and activity centers and implementing trip reduction and parking strategies.

PROCESS CHANGES

Policies in this plan can be implemented through changes in the development and permitting process. The City should consider ways in which the development review process can be streamlined and simplified to insure that the cost of development does not rise unnecessarily. Ordinances and guidelines should be easily understood by the public, and requirements should be made clear at the outset. To accomplish this:

- The City should undertake a comprehensive review of all development permit processes to ensure consistency, compatibility, and efficiency.

- The City should establish a central permit office for "one-stop shopping" in the downtown.

- The Planning Commission, in concert with the Design Advisory Board and the Public Works Commission, should establish a set of *Burlington Design Principles* to serve as the foundation for future public and private development.

- The Design Review section of the Zoning should be rewritten to emphasize the integral relationship between proposed projects and neighborhood patterns.

Capital Improvement Program

The City of Burlington and its various departments own approximately 1,000 acres of land. Excluding those at the Burlington International Airport, but including Burlington Electric Department, the City owns property valued at over $193 million. These buildings serve functions as diverse as ice hockey, offices, public meeting space, and wastewater treatment. The City also owns sewer and water lines, roads and right-of-ways, electric lines and other utilities.

To provide services, the City must maintain its existing facilities and utilities, upgrade them to meet community interests and needs, and expand them as the city grows. Police and fire vehicles must be replaced regularly, sewer treatment facilities must be upgraded to improve the quality of Lake Champlain, and the City must expand its park system as the number of users increase.

Capital improvements cost money. Various needs must be balanced against each other. To do this effectively, the City has implemented a capital budget and program that proposes and ranks capital projects based on goals established in this plan and on established standards for the appropriate provision of services. The Capital Improvement Plan (CIP) outlines a schedule for the expenditure of municipal funds for public physical improvements over a six-year period. It consists of two components: **a capital budget**, which lists and describes the capital projects to be undertaken during the coming fiscal year, and **a capital program**, which lists and describes the capital projects proposed to be undertaken during each of the following five years.

Capital improvement projects are typically major expenditures, such as the purchase, construction, reconstruction, renovation, or replacement of a public building, facility, or major equipment item. The capital program gives highest priority to projects that in the long run will save the city money, especially in terms of energy efficiency, or that are necessary to protect public health and safety. Projects to expand, replace, or upgrade facilities must be based on established service standards. New projects should not be financed at the expense of neglecting existing infrastructure and facilities.

Capital improvements do not include maintenance of existing facilities, property and buildings however - perhaps the City's most pressing financial need. The City must continue to invest in maintenance - making it a high priority - in order to make the best use of existing resources and prevent unnecessary capital costs caused by neglect.

Impact Fees

To help mitigate the impact of new development on the property tax, the Vermont Legislature enacted legislation allowing communities to assess equitable impact fees on new development to cover associated municipal capital costs. Since 1992, the City has been assessing impact fees for a range of municipal services including transportation, fire, police, parks, library, and schools. In FY95, over $140,000 in impact fees were assessed on new or expanded development.

The use of funds collected through Impact Fees is limited to capital improvements to accommodate the demands created by new growth. Impact fees must be used within six years of payment. When fees raised are not enough to address large capital improvements on their own, they could be used to pay down the debt associated with the issuance of a bond for the same purpose. The City will continue to monitor the assessment and expenditure of impact fees to ensure fees assessed are paid in a timely manner, and that fees levied are properly utilized.

Program and Project Implementation

While many of the goals of this plan can be implemented through legislation and regulation of the private sector, many other policies must be put into place by direct action of the City and its departments. These programs will need the financial support of the capital planning process, impact fees, or direct budget allocation. Major new programs and actions that have priority include:

- Land conservation program to purchase or protect natural areas.
- A transportation system and demand management program.
- Improvements to Riverside Avenue, North Street and Champlain Connector.
- Treatment of stormwater run-off.
- Wastewater capacity in the downtown area

On-going projects that have priority include:

- Sidewalk and pedestrian improvements.
- Accessibility improvements.
- Downtown Waterfront Infrastructure.

LEGISLATIVE INITIATIVE

In some instances, implementation of this plan will require legislative initiative on the state or federal level. The City must work with the appropriate legislative groups to realize the plan's vision, for example, to expand the allowed land uses along the downtown waterfront or to enable local option taxes to fund open space protection.

EVALUATION

This plan recommends ongoing evaluation of the various programs recommended to determine their effects and if they are in fact successful. This is particularly important for ordinances and zoning bylaw changes. For example, the City should monitor the existing inclusionary zoning, housing replacement, and housing demolition ordinances to assess their effectiveness in preserving affordable housing.

Relationship to Other Plans

The impacts, both positive and negative, associated with growth and development knows no boundaries. It is incumbent on every community to look beyond its borders, and evaluate the potential regional impacts associated with changing land use patterns. Individual developments must be compatible with adjacent neighborhoods, and so too must the plans of communities and regions. This portion of this Plan briefly examines its compatibility with similar plans in adjacent communities and that of the region.

Compatibility with Adjacent Municipalities

Burlington shares boundaries with three communities: the cities of South Burlington and Winooski, and the Town of Colchester. The Winooski River separates Burlington from Colchester and Winooski. Only with South Burlington, do land uses abut directly.

CITY OF SOUTH BURLINGTON

The table below presents a comparison of actual zoning districts along the border shared between Burlington and South Burlington. For the most part, land uses are compatible. In two instances, one in each community, residential uses abut non-residential use. This is the result of historical growth and land use patterns, and must be addressed on a case-by-case basis through proper site planning to mitigate any possible adverse impacts.

Boundary/Location	ZONE	
	So. Burlington	Burlington
Lake Champlain - Route 7		
Lakeshore-Central Ave.	Recreation	Residential (RL-W)
Central Ave.-Railroad	Queen City Park	Enterprise Light-Manufacturing
Railroad-Pine St.	Commercial 1 – Residential 15	Residential (RL)
Pine St.-Route 7	Commercial 1 – Residential 15	Recreational (RCO-RG)
Route 7		
I-189-Home Ave.	Commercial 1 – Residential 15	Recreational (RCO-RG) and Neighborhood Activity (NAC)
Home Ave.-Proctor Ave.	Commercial 1 – Residential 15	Residential (RM)

Boundary/Location	ZONE	
continued	**So. Burlington**	**Burlington**
Route 7-Spear Street		
Route 7-S. Prospect St.	Residential 4	Residential (RL)
S. Prospect-Spear St.	Institutional Agricultural South	– Recreation (RCO-RG)/ Institutional (I)
Spear Street		
I-189-Route 2	Institutional-Agricultural South	Recreation (RCO-RG)/ Institutional (I)
	Residential 4	
	Institutional-Agricultural North	
Route 2-Patchen Road		
Rte. 2-Cent. Woods	Commercial 1 Residential 12	– Institutional (I)
Cent. Woods-Grove St.	Institutional-Agricultural North	Recreation (RCO-RG)
Grove Street-Winooski River		
	Residential 4	Residential (RL)

SOURCE: So. Burlington Planning Department

Two areas of particular interest to the City of Burlington are the gateways into the city between Williston Rd. and I-89, and between Shelburne Rd. and I-189. Burlington will continue to monitor proposed developments in these areas for their potential impact on traffic congestion in and out of the city, and their visual relationship to the city's gateways. For more on the treatment of Burlington's Gateways, see the *Built Environment Section*.

CITY OF WINOOSKI

The Winooski River forms the boundary between Burlington, and the City of Winooski, and Town of Colchester. All three communities call for shoreline protection of these fragile areas in their respective land use policies.

Winooski and Burlington share the Winooski River Bridge (US Rt. 7) as a gateway. The Winooski Plan proposes strengthening the City's central commercial area adjacent to this gateway, which has happened gradually in the last few years. Burlington created a small mixed commercial zone at Mill Street, to allow reciprocity with the Winooski downtown area. These uses are generally complementary. For more on the treatment of this gateway and the Grove Street neighborhood, see the *Land Use Section*.

TOWN OF COLCHESTER

The Colchester Plan states:

> "Warners Corner Planning Area serves as a gateway to the town from the
> City of Burlington and is appropriate for providing concentrated
> commercial services and high density residential occupancy. The
> development of this area mirrors the development patterns of the north
> end of Burlington."

The New North End is the most suburban section of Burlington with limited access to services. While adjacent "concentrated commercial services and high density residential" land uses might not necessarily be compatible, the presence of the Warners Corner provides a great opportunity for New North End residents to access services close to home. In fact, the river and Route 127 act as a buffer to minimize potential disharmony in land uses. Colchester and Burlington must continue to work together to insure an adequate traffic circulation and transportation program to prevent congestion.

SHARED RESOURCES AND ISSUES

Compatibility refers to more than adjacent land uses; it also includes the use of, and impacts upon shared resources, such as the lake and river, air, transportation systems, and regional facilities.

Transportation

Burlington shares two major arterial entrances with South Burlington, and one each with Winooski and Colchester. A tremendous amount of traffic flows through these communities traveling in and out of Burlington. This Plan suggests strategies to reduce the number of these trips to ease congestion in all communities and parking problems in Burlington.

Many communities are developing innovative approaches to traffic management. The South Burlington Transportation Management Association is one such strategy designed to ease congestion along US Route 7. Colchester and Winooski may also want to explore similar strategies to limit new trips. All four communities must work cooperatively to address congestion at our borders, and in support of expanded public transportation options throughout the region.

Burlington International Airport

Owned by Burlington, but located in South Burlington, Burlington International Airport serves as an important transportation hub and economic resource for northern Vermont and northeastern New York. However, continued growth of the airport may pose additional impacts on neighborhoods in South Burlington, Winooski and to some extent Williston. Airport officials are encouraged to work closely with South Burlington and Winooski representatives to minimize disturbance. Similarly, communities surrounding the airport must ensure future development is both compatible and located safely outside federally designated operational limits.

Water Quality

Burlington's plan identifies measures to protect the quality of Lake Champlain and the Winooski River. Colchester's plan mandates protection and improvement of water quality in Mallets Bay, and further suggests shoreline protection to prevent pollution and erosion. South Burlington, too,

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wants to maintain and protect the water quality of Lake Champlain as well as rivers and streams. Winooski calls for improved water quality in the lower Winooski River.

Urban stormwater runoff is the largest threat to water quality in this country. As Burlington, and our neighboring communities continue to grow, consideration should be given to joint efforts to monitor and address stormwater management.

Housing

Presently Burlington provides approximately 85% of the subsidized affordable housing for low-income people in Chittenden County, with Winooski providing most of the rest. South Burlington and Colchester propose creating affordable housing in their municipalities. This is a goal compatible with Burlington's plan and should be aggressively pursued. All communities in the region must make take measures to address their fair-share housing responsibilities.

Compatibility with the ECOS Regional Plan

Largely, the ECOS Plan articulates a strong and visionary future for Chittenden County. The Plan emphasizes future development that fulfills the concept of "growth centers" at both the regional and local scale. In doing so, it recognizes the importance of mixed-use development, higher densities, walkable communities, sharing responsibilities for affordable housing, protecting open space, and planning for future infrastructure to name only a few.

The ECOS plan vision
The ECOS plan articulated vision is as follows: "Our vision is that Chittenden County be a healthy, inclusive and prosperous community". Burlington's community vision is presented in the chapter: Our Community Vision: A Sustainable Burlington, and reflects the wishes and aspirations of those who have participated in the process over the year.

ECOS and planBTV Broad Goals
The ECOS plan presents a set of goals that related very closely to the goals articulated in planBTV. The table below presents the ECOS broad goals and lists which sections of planBTV include similar goals for Burlington. No contradictions have been found in analyzing regionals and local overarching goals for the future.

ECOS plan	planBTV Chapters & Supporting Plans
1. Natural Systems – Design and maintain a strategically planned and managed green infrastructure network composed of natural lands, working landscapes, and open spaces that conserve ecosystem values and functions, and provide associated benefits to our community.	Land Use Chapter Natural Environment Chapter Energy Chapter **Supporting Documents** Open Space Protection Plan, 2000 and 2013 update Climate Action Plan (to be adopted in 2013)
2. Social Community – Promote the skills, resources, and assurances needed for all community members to participate in the workforce and in their family, civic and cultural lives, within and among their neighborhoods, and in the larger	Education Chapter Community Facilities and Services Chapter

community.	
3. Economic Infrastructure – Build the region's capacity for shared and sustainable improvements in the economic wellbeing of the community through support of both local and globally competitive initiatives.	Economic Development Plan **Supporting Documents** planBTV-Downtown & Waterfront Plan, 2013
4. Built Environment - Make public and private investments in the built environment to minimize environmental impact, maximize financial efficiency, optimize social equity and benefits, and improve public health.	Land Use Chapter Built Environment Chapter Housing Chapter Transportation Chapter Energy Chapter **Supporting Documents** planBTV-Downtown & Waterfront Plan, 2013 Climate Action Plan (to be adopted in 2013)

Conclusion

Burlington's plan is largely compatible with those of its neighboring communities and the region. Nevertheless, as long as municipalities must continue to rely on local property tax as their primary means of revenue generation, it will be impossible to adequately address issues of growth distribution within Chittenden County and fulfill the goals of Act 200.

Glossary of Terms

Act 200: The 1988 amendments to Vermont Statute 24 V.S.A. Chapter 117; the Vermont Municipal and Regional Planning and Development Act. (a.k.a. the Growth Management Act of 1988).

Act 250: Vermont Land Use and Development Law 10 V.S.A.Ch 151; the state environmental review process conducted by a District Environmental Commission (DEC) to consider a proposed development 's impact using 10 established criteria.

Act 78:The 1987 Vermont Solid Waste Bill.

Adjacent: lying near or close to, as distinguished from adjoining.

Adjoining: touching, as distinguished from adjacent.

Adverse impact: a condition that creates, imposes, aggravates, or leads to inadequate, impractical, unsafe, or unhealthy conditions on a site proposed for development or on off-tract property or facilities.

Aesthetic: the perception of artistic elements, or elements in the natural or created environment, that are pleasing to the eye.

Affordable housing: a sales price or rent within the means of low or moderate-income households as defined by state or federal law.

Agricultural land: land capable of supporting commercial farming as defined by state law.

Agricultural runoff: the portion of melted snow, rainfall, and other liquids that flows across agricultural ground surface and returns to surface or groundwater – sometimes contaminating a water body or resource with fertilizer, manure, pesticides, sediment, and other foreign materials.

Agriculture/Farming: 1) The cultivation or other use of land for growing food, fiber, Christmas trees, maple sap, or horticultural and orchard crops; or 2) the raising, feeding or management of livestock, poultry, equines, fish or bees; or 3) the operation of greenhouses; or 4) the production of maple syrup; or 5) the on-site storage, preparation and sale of agricultural products principally produced on the farm; or 6) the on-site production of fuel or power from agricultural products or wastes produced on the farm.

Archaeological resources: any material of past human life, activities or habitation that are of historic or prehistoric significance.

Artist: Any person working or creating in any of the arts, including visual arts, literary arts, dance, music, video and film making, performance art, media art and all other forms of artistic expression.

Best management practices (BMP): the methods, measures, designs, performance standards, maintenance procedures, and other management practices that prevent or reduce adverse impacts upon water quality.

Brownfields: Abandoned, idled, or under-used industrial and commercial facilities where expansion or redevelopment is complicated by real or perceived environmental contamination. (US EPA).

Building permit: Written permission by the City Building Inspector for the construction, repair, alteration or addition to a structure.

Build-out analysis: a study that examines an area 's capacity for development.

Bylaw: zoning regulations, subdivision regulations, shoreland, and flood hazard bylaws, an official map or a capital budget and program adopted under the authority of 24 V.S.A. Chapter 117 §4401.

Capacity Study: an inventory of available natural and human- made resources, based on detailed data collection, which identifies the capacities and limits of those resources to absorb land development. Also, a study of where the Region stands high and low in its economic and social performance relative to other regions and areas.

Chittenden County: the County of Chittenden is formed of the Towns of Bolton, Charlotte, Colchester, Essex, Essex Junction, Hinesburg, Huntington, Jericho, Milton, Richmond, St. George, Shelburne, Underhill, Westford, Williston, the Cities of Burlington, South Burlington, and Winooski, Avery 's (Buel's) Gore and so much of Lake Champlain as lies in this state west of the towns and cities in the county adjoining the lake and not included within the limits of the county of Grand Isle. The City of Burlington is the shire town.

Cluster Development: a development design technique that concentrates buildings in specific areas on the site to allow the remaining land to be used for recreation, common open space, and preservation of environmentally sensitive features; sometimes referred to as planned residential development (PRD) or planned unit development (PUD).

Cogeneration: the production of electricity and heat, generally in the form of steam or hot water, from a facility.

Corridor: a narrow strip of land associated with the movement of people, wildlife, goods, services, and/or utilities in a Right-of-Way.

Cultural Facilities: establishments that document the social and religious structures and intellectual and artistic manifestations that characterize a society and include museums, art galleries, and botanical and zoological gardens of a natural, historic, educational, or cultural interest.

Cultural Resource Site: Archeological sites containing information of known or potential value in answering scientific research questions; archeological sites containing information that may shed light on local, State, or national history; sites of cultural importance to local people or social or ethnic groups, such as locations of important events in their history, historic or prehistoric cemeteries, or shrines; sites associated with events important in the history of the community as a whole (battlefields, trails, etc.); cemeteries associated with important events or people, or whose study can provide important information about history or prehistory; ruins of historically or archaeologically important buildings or structures; historically important shipwrecks; cemeteries important for the architectural or artistic qualities of their constituent

structures and monuments; constructed landscapes that exemplify principles, trends, or schools of thought in landscape architecture, or that represent fine examples of the landscape architect's art.

Demolition by Neglect: Demolition by Neglect is the case where a building has not been adequately maintained by the owner and it has deteriorated to a point where it's historic character and integrity has been lost and can no longer be restored, or the building has become a public hazard and must be removed.

Development: the division of a parcel into two or more parcels; the construction, reconstruction, conversion, structural alteration, relocation or enlargement of any building or other structure; or of any mining, excavation or landfill; and any change in the use of any building or other structure, or land, or extension of use of land.

Dwelling unit: one or more rooms, designed, occupied, or intended for occupancy as a separate living quarter, with cooking, sleeping and sanitary facilities provided within the dwelling unit for the exclusive use of a single family maintaining a household.

Feeder hookups: infrastructure such as water and sewer lines, that serves secondary needs such as housing units and business locations.

Floodplain: land subject to a 1-percent or greater chance of flooding in any given year.

Floor Area Ratio: FAR, or Floor Area Ratio, refers to the ratio of the floor area of a building to the area of the property. A FAR of 1 is equivalent to a 1-story building covering the entire lot, or a 2-story building covering only half of the lot.

Geographic Information Systems (GIS): a computerized system capable of performing complex analyses of geographically-related information and displaying that information in tabular or map formats.

Greenhouse Gases: "Greenhouse Gases" are any gas found in the earth's atmosphere that contributes to trapping energy under the atmosphere and causing warming. Such gases include carbon dioxide, methane, ozone, nitrous oxide, chlorofluorocarbons (CFC's) and water vapor.

Greenways: The components of an integrated, continuous open space system. Greenways link to and connect open space areas such as parks and habitat areas.

Groundwater: the water below land surface in a zone of saturation, but not including surface waters.

Growth Center: an area within a community providing for a concentration of housing, commercial services, employment opportunities and government uses, and served by basic infrastructure.

Growth Patterns: the established historic configuration and pattern of land development.

Habitat: the physical and biological environment that a community of a particular species of plant or animal requires in order to remain viable.

Hazardous Waste: as defined in 10 V.S.A.§6602(4), as may be amended from time to time.

Headways: Headways refer to the frequency of service. (e.g. a bus every 20 minutes)

Historic Building: buildings possessing eligibility for listing on the State or National Register of Historic Places with respect to age, related historic contexts and historic integrity; notable examples of architectural styles and periods or methods of construction, particularly local or regional types; buildings showing the history and development of such diverse areas as communications, community planning, government, conservation, economics, education, literature, music, and landscape architecture; stores and businesses and other buildings that provide a physical record of the experience of particular ethnic or social groups; complexes of buildings, such as factory complexes, that comprise a functionally and historically inter-related whole; markets and commercial structures or blocks; buildings by great architects or master builders and important works by minor ones; architectural curiosities, one-of-a-kind buildings; sole or rare survivors of an important architectural style or type; studios of American artists, writers, or musicians during years of significant activity; institutions that provide evidence of the cultural history of a community (churches, universities, art centers, theaters, and entertainment halls); buildings where significant technological advances or inventories in any field occurred (agricultural experiment stations, laboratories, etc.).

Historic District: Groups of buildings that buildings possessing eligibility for listing on the State or National Register of Historic Places with respect to age, related historic contexts and historic integrity; groups of buildings that physically and spatially comprise a specific environment; groups of related buildings that represent the standards and tastes of a community or neighborhood during one period of history, unrelated structures that represent a progression of various styles and functions, or cohesive townscapes or streetscapes that possess an identity of place; groups of building, structures (silos, barns, granaries, irrigation canals) that possess an identity of time and place; groups of structures and buildings that show the industrial or technological developments of the community, State, or Nation; groups of buildings representing historical development patterns (commercial and trade centers, county seats, mill towns); Groups of sites, structures, and/or buildings containing archeological data and probably representing an historical or prehistoric settlement or pattern of related activities.

Household: a family living together in a single dwelling unit.

Housing Demand: "Housing Demand" is roughly equivalent to the number of households, and should not be confused with "housing units" which is a more specific indicator.

Human-scale: "Human-scale" refers to the size, shape, and proportions of the built environment as perceived by, and in relation to, a pedestrian on the street. While different for different people, an object is considered to be of a human-scale when it appears measurable to the observer and its detail can be appreciated in relation to its overall mass. This is in contrast to an object or space that take on an awesome or super-human size due to its size and/or distance to the observer. (Lynch, Kevin. Site Planning).

Industrial Park: a tract of land planned, developed and operated as an integrated facility for a number of individual industrial uses, with special attention to circulation, parking, utility needs, aesthetics, and compatibility.

Industrial Use: the industrial (see industry) purpose or activity for which land, buildings, facilities or other form of land development are designed, arranged, or intended for which land, buildings, facilities or other form of land development are occupied or maintained.

Industry: those fields of economic activity including agriculture, forestry, fishing, hunting, and trapping; mining; construction; manufacturing; transportation; communication, electric, gas, and sanitary services (including the disposal, reuse, recycling and management of solid waste and hazardous waste and any of its associated facilities); and wholesale trade. Industrial uses (see industrial use) need to meet the performance standards, bulk controls, and other requirements established in local bylaws and as determined by the District Environmental Commission in Act 250 proceedings.

Infill: development or redevelopment of land that has been bypassed, remained vacant, and/or is underused as a result of the continuing urban development process. These areas are already served by municipal infrastructure, and are found within the current extent of the urban development pattern of the community.

Infrastructure: services and facilities –such as highways and roads; water and sewer lines and other utilities; communications systems; and public facilities –needed to sustain industry, residential, commercial and all other land use activities.

Intermodalism: Intermodalism refers to making connections, or linkages, between various modes of transportation. Multimodalism refers to providing a range of transportation options (e.g. buses, cars, carpools, bikes, walking, etc.)

Land Use: a description of how land is occupied or utilized.

Legislative Body: the Selectboard in the case of a Town, the Trustees in the case of an incorporated village, the Mayor and Alderpersons or City Councilors in the case of a city, and the supervisor in the case of an unorganized town or gore.

Livable Wage: A "livable wage" is the hourly wage or annual income necessary to cover basic needs and all relevant state and federal taxes.

Metropolitan Statistical Area: Metropolitan Statistical Area or MSA as defined by the US Census Bureau. This includes the City of Burlington and several surrounding communities in Chittenden and Franklin counties.

Mixed Use: Any mixture of land uses, including mixtures of residences with commercial, offices with retail, or industrial with offices and retail.

Mixed-Use Development: the compact development of a tract of land, building, or structure with a variety of complementary and integrated uses, such as, but not limited to, residential, office, manufacturing, retail, public, or entertainment.

Mobility: The movement of goods and provision of access to activities and community services that is reasonably available to all people, including those who do not drive automobiles due to age, income, illness, disability, or choice.

Multiple-Family: A term describing residential units built with two or more dwelling units within a single building.

Multi-Use Structures: "Multi-Use Structures" refers to buildings, for example, with: parking below grade, street level retail, and office and/or residential uses above the street.

Municipality: town, a city, or an incorporated village or an unorganized town or gore.

Natural Area: an area of land or water that has unusual or significant flora, fauna, geological, or similar features of scientific, ecological, or educational interest.

Neighborhood: A cluster of residential and related land uses within the city, which typically has a focal point at a neighborhood shopping center, school or park, with an approximate radius of one-quarter to one-half mile from the focal point to the periphery.

Non-Work Trips: Non-work trips are typically errands to the grocery store, childcare, post office, etc.

Open Space: publicly and privately-owned areas of land, including parks, natural areas and areas of very low-density development. Open spaces are places in the outdoors which 1) provide people with a visual and/or other sensory connection to nature and the natural landscape; 2) support the function of healthy ecosystems; or 3) support recreation without conflicting with other designed uses.

Passive Recreation: passive recreational activities such as sitting, walking, nature watching and general relaxation. In contrast to "active recreation" that involve dedicated and organized recreational activities such as baseball, soccer, tennis, hockey, etc.

Pedestrian Scale: an urban development pattern that facilitates walking as a safe, convenient, and interesting mode of travel. It is an area where walking is at least as attractive as any other mode to all destinations within the area.

Pedestrian-Oriented Design: Urban design intended to facilitate pedestrian movement in an area, as opposed to design that primarily serves automobile movement. Examples of pedestrian-oriented design include continuous building streetwalls with shop windows, outdoor cafes, street trees, benches, and planters.

Planned Residential Development (PRD): zoning regulations, for the purpose of encouraging and enabling flexibility of design and development of land, that permit up to 25-percent greater density of housing in exchange for land for open space of municipal purposes, as permitted by 24 V.S.A.§4407(3).

Primary Agricultural Soils: soils that have a potential for growing food and forage crops, are sufficiently well-drained, are well supplied with plant nutrients or highly responsive to the use of fertilizer, and have few limitations for cultivation.

Public Offices: office spaces used by governments of all levels, i.e., general purpose local government, schools, special purpose government spaces.

Renewable Energy Resources: energy available for collection or conversion from direct sunlight, wind, running water, organically derived fuels including wood, agricultural sources, waste materials, waste heat, and geothermal sources.

Right-of-Way: a strip of land acquired by reservation, dedication, forced dedication, prescription, or condemnation and intended to be occupied by a road, pedestrian way, crosswalk, railroad, electrical transmission lines, oil or gas pipeline, water line, sanitary storm sewer, and other similar uses.

Riparian: of, pertaining to, or situated on, the edge of the bank of a river or other body of water. Riparian trees and shrubs are typically phreatophytes, plants whose root systems is in constant contact with groundwater.

Satellite: a man-made object or vehicle in orbit over the Earth, which receives and transmits electromagnetic radiation for purposes including wireless telecommunications.

Scenic Resources: those visually pleasing landscapes including mountains, farms, ridge lines and shorelines, and the locations providing scenic vistas of those landscapes.

Section 248: Vermont Law regarding the Public Service Board, including its duties and role and the rules of electricity and natural gas supply and transmission.

Setback: the distance a structure has to be from a property line.

Single Family Dwelling: a building containing one dwelling unit for a single housekeeping unit.

Solid Waste: as defined in 10 V.S.A.§ 6602(2), as may be amended from time to time.

Sprawl: development of a low-density nature, in previously rural areas outside of defined metropolitan and village area boundaries and some distance from existing development and infrastructure.

Stewardship: a planning and management approach to land and natural resources that considers environmental impacts and public benefits of actions as well as public and private dollar costs.

Streetscape: the visual image of a street, both within and abutting the public right-of-way including the combination of buildings, parking, signs, trees and other vegetation, and other hardscape and street furniture.

Traditional: of, pertaining to or in accord with tradition. Tradition is a set of customs and uses viewed as a coherent body of precedents influencing the present.

Traffic Calming Devices: Structures built in roadways intended to slow traffic or reduce traffic volumes. Examples include speed humps, roundabouts, and traffic diverters.

Transfer of Development Rights (TDR): the transfer of the right to develop or build, (expressed in dwelling units per acre) from land in one district to land in another district where such transfer is permitted; a relatively common land development control tool used to preserve open space and farmland.

Transportation Demand Management: Transportation Demand Management refers to efforts to influence how and when people use the transportation system. Examples include staggered or flexible work schedules, telecommuting, and car/van pooling.

Transportation Infrastructure: see Transportation Network.

Transportation Modes: Transportation systems are divided into modes. A single "mode" of transportation is automobile, public transit, bicycle, rail, etc. "Multi-modal" refers to a combination of one or more individual modes. "Intermodal" refers to opportunities to make connections between modes.

Transportation Network: the system of sidewalks, trails, bicycle paths, public transportation facilities and routes, railroad tracks and rights-of-way, roads, streets, highways, and all other corridors whose major purpose is to provide mobility for people and goods within the Chittenden County Region. Synonymous with transportation infrastructure.

Underdeveloped: "Underdeveloped" refers to those parcels that are developed at less than 50 percent of the average of the existing or allowable density in the zoning district.

Urban Center: a compact form of development with a dense, mixed core of residential, commercial, and service facilities.

Urban Decentralization: the reduction of population, commercial activities, and services in an urban center due to development outside the center.

Urban Forest: The urban forest is the aggregate of all vegetation within an urban area, the management of populations of trees, and the intersection of people with biology of urban flora and fauna.

Water Pollution: the addition of pollutants to water in concentrations or in sufficient quantities to result in measurable degradation of water quality.

Watershed: an area of land that drains water, sediment, and dissolved material to a common outlet at some point along a stream channel.

Wellhead Protection Area: areas designated by the Vermont Department of Health to protect the quality of public water supplies.

Wetland: areas inundated by surface or groundwater with a frequency sufficient to support vegetation or aquatic life that depends on saturated or seasonally saturated soil conditions for growth and reproduction (e.g., marshes, swamps, sloughs, river and lake overflows, and bogs; but excluding such areas as grow food or crops in connection with farming activities).

Wildlife Habitat: the physical and biological environment that a community of a particular species of wildlife requires in order to remain viable.

Wildlife: any member of a non-domesticated species of the animal kingdom, whether reared in captivity or not, including without limitation, any mammal, fish, bird, amphibian, reptile, mollusk, crustacean, arthropod or other invertebrate, and including any part, product, egg, offspring, dead body, or part of the dead body of any such wildlife.

Wireless Telecommunications Facility: any site, structure, object, or improvement, which includes one or more pieces of equipment or machinery intended or used to send and/or receive non-visible electromagnetic radiation for the purpose of communication. These include, but are not limited to, towers.

Wireless Telecommunications services: all services requiring wireless telecommunications facilities.

Zoning: the delineation of districts and the establishment of regulations governing the use placement, spacing, and size of land and buildings.

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APPENDIX: Community and Housing Profile

Community Profile

Unless otherwise indicated, all data in this section comes from the 2000 Census. Information on areas within the City of Burlington is included by reference to census tracts. A map of the 2000 census tracts in Burlington is included at p. 18 for reference. (The boundaries of tracts 1, 3, 7, 8, 9, 10 and 11 changed from the 1990 to the 2000 Census.)

Population

Burlington is Vermont's largest city, with a population of just under 40,000. Burlington is the regional hub of Chittenden County (with a population of 146,571) for commerce, government, education, and health, legal, financial and social services.

The City's population has grown slightly over the last 20 years. Chittenden County, on the other hand, has seen a substantial increase in population.

Burlington Population Growth
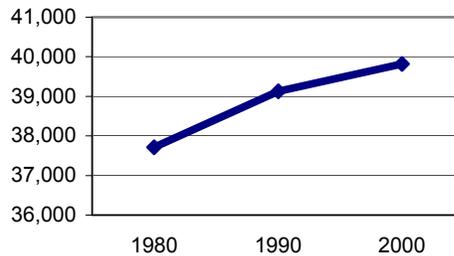
Chittenden County Population

Prepared by the Burlington Community and Economic Development Office, 2003
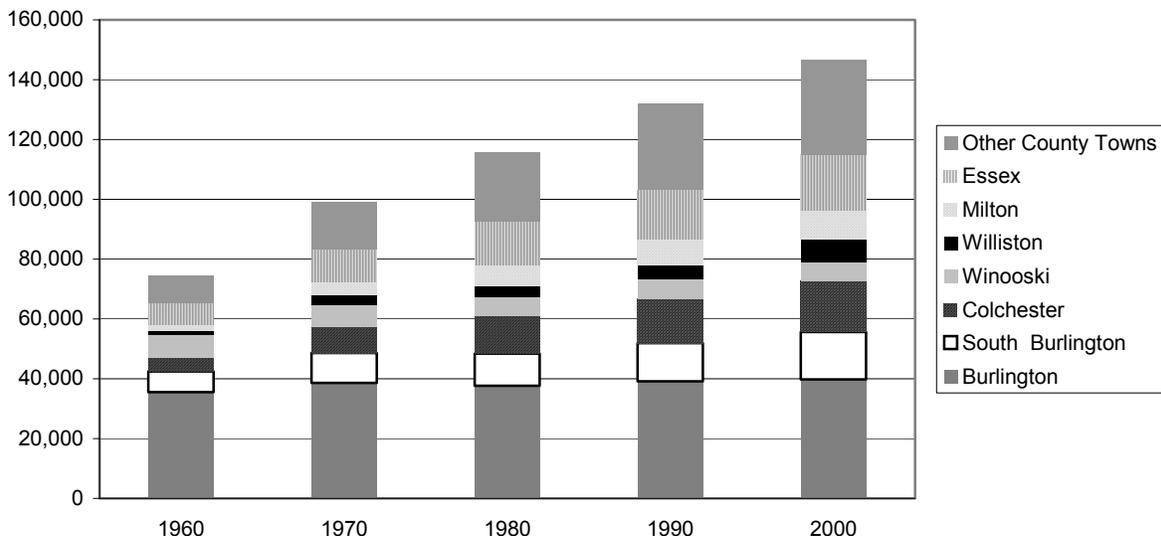
Household Characteristics

Burlington had a total of 15,885 households at the time of the 2000 Census. A 50-year trend of diminishing average household size had continued, with the average household in 2000 consisting of 2.2 persons.

Families comprise less than half of all Burlington households. Close to 40% of family households with children are headed by single parents, mostly women. Most (64%) of Burlington's non-family households are people living alone.

Household Demographics

- Single-Parent Families with Children 8%
- Married-Couple Family Households with Children 13%
- Other Family Households 23%
- Individuals Living Alone 36%
- Other Nonfamily Households 20%
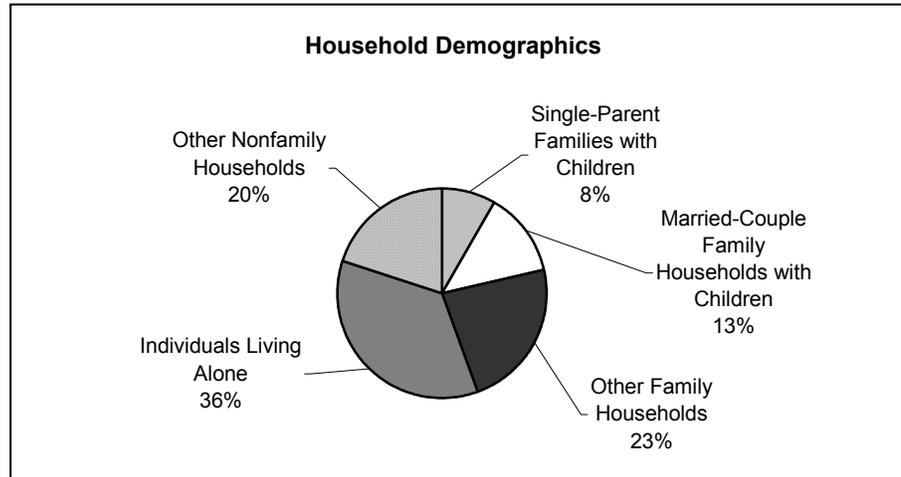
Many of the biggest shifts in Burlington demographics occurred between 1970 and 1980, with declines in rates of homeownership and children coinciding with increases in numbers of college students and single-person households. The biggest decrease in the number of Burlington families happened during the decade from 1970 to 1980. Over the last decade, the number of family households actually increased slightly, although the percentage of family households decreased slightly.

Age of Population

Burlington has a high concentration of young adults. The presence of a number of institutions of higher learning within the city limits clearly contributes to local age demographics. In 2000, over a quarter of the City's population – 10,163 residents – were enrolled in college or grad school.

Seniors age 60 and older made up 13% of Burlington's population – a proportion slightly lower than state (17%) and national rates (16%). Children under the age of 18 made up 16% of the City's population – again, a proportion lower than state (24%) and national (26%) rates. Previous citywide downward trends in

Age of Population

Bar chart showing population by age group (x-axis: Under 5, 5 to 17 years, 18 to 24 years, 25 to 44 years, 45 to 59 years, 60 and older; y-axis: 0 to 16,000)
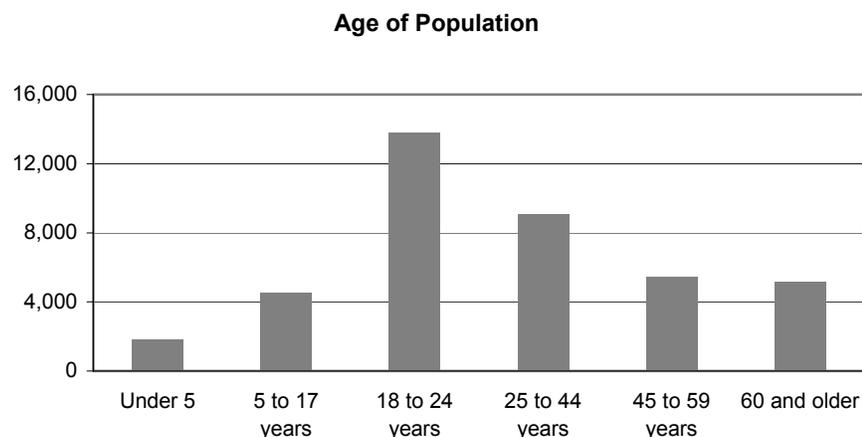
the proportion of children under 18 stabilized and increased in the last decade.

College Students

The City is home to two residential institutions of higher learning (the University of Vermont and Champlain College) and to four additional educational institutions with substantial student populations (the Community College of Vermont, Burlington College, the New England Culinary Institute and the Vermont College of Cosmetology). The University of Vermont (UVM) is the largest of these educational institutions, and has the greatest impact on local housing.

The overall number of college students in the City has grown from 5,877 in 1970 to 10,163 in 2000, with the largest jump in growth occurring from 1970 to 1980. UVM has announced a 10-year goal of increasing undergraduate enrollment from 7,600 to 9,600 and graduate enrollment from 1,200 to 2,400. There are currently around 6,100 college and graduate students living off campus in Burlington. In some neighborhoods, students are now the principal residents. That trend has significantly affected the availability and affordability of rental housing in the City, as well as quality of life in residential neighborhoods.

Income and Poverty

Chittenden County is the most prosperous county in Vermont, with a 2000 median family income of $59,460 and a median household income of $47,673. Median income in Burlington, however, lags below that of the rest of Chittenden County (with the exception of the City of Winooski).

Median household income in Burlington is $33,070, and is even lower in census tracts 3, 4, 5 and 10. Median <u>household</u> income is impacted by the large number of off-campus student residents in Burlington. However, median <u>family</u> income is also significantly lower in Burlington ($46,012 in 2000) than in the rest of the county (again, excluding Winooski), and lower again in the census tracts 3, 4 and 10.

Median Income
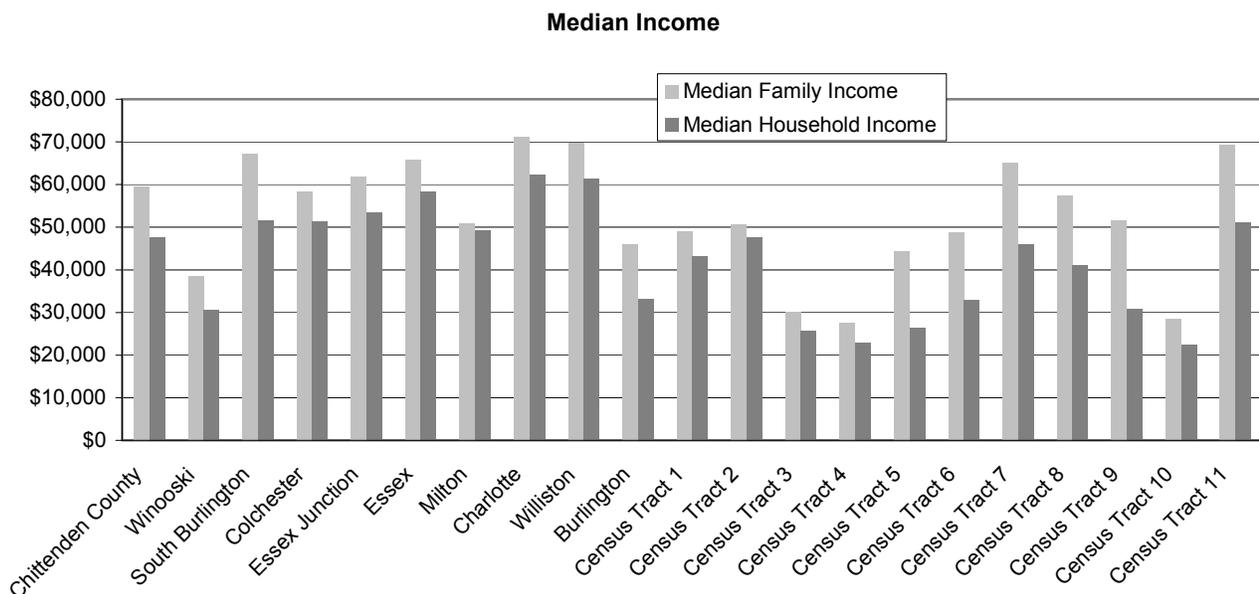
The chart below shows income distribution for households and families in Burlington:

Income Levels - Burlington
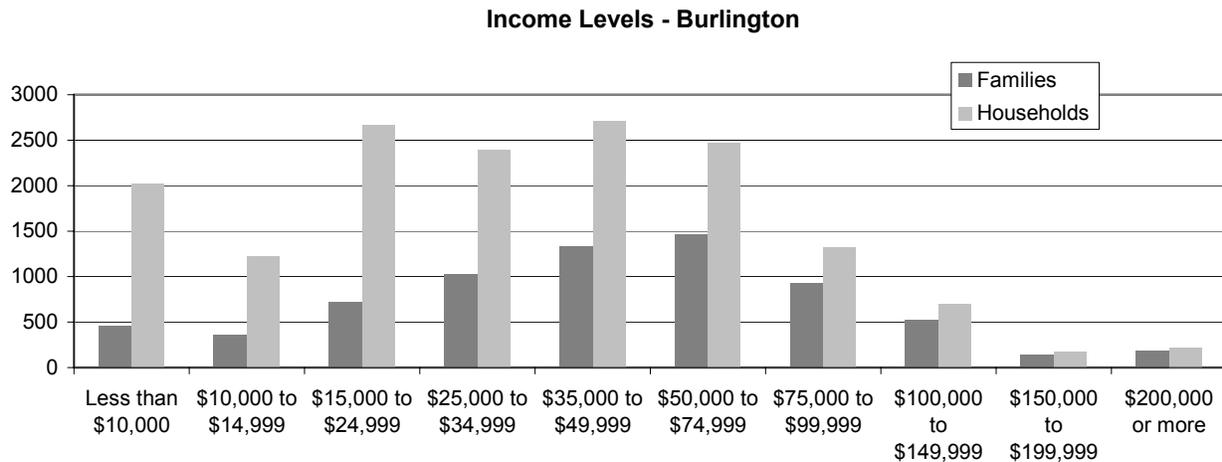
Poverty thresholds for purposes of the 2000 Census were:

	Single Adult < 65	Single Adult 65 and Older	Single Adult with 2 Children	Two Adults with 2 Children
Annual income was less than:	$8,959	$8,259	$13,874	$17,463

The Census showed that in five of Burlington's eleven census tracts - where about 46% of the city's population lives - the poverty rate for individuals was over 25%. However, in assessing poverty, the poverty rate for individuals in the City is skewed by the City's large population of college students who don't live in dorms (6,103 people) – and who are counted in the census calculation of the poverty rate for individuals. A more realistic assessment of poverty in the City is probably found in the family poverty rate.

Poverty is particularly pronounced among female-headed households with children. In the Old North End neighborhoods of Burlington, where there are a high proportion of female-headed households, 60% of those households - and 39% of children age 17 and younger - were living in poverty.
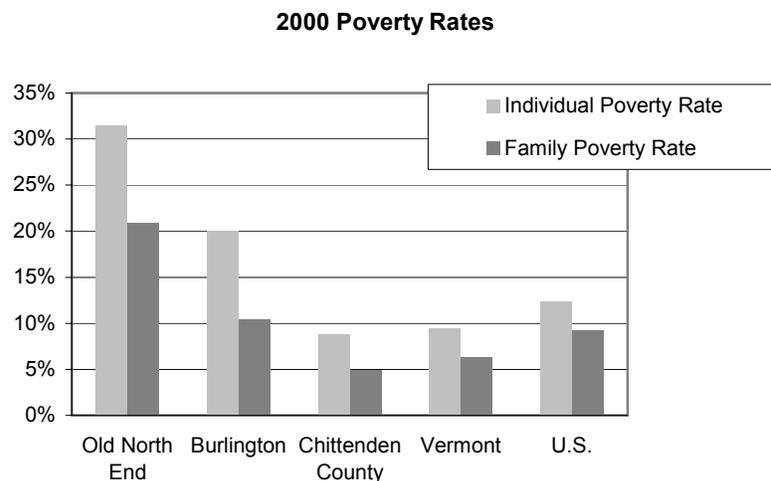
2000 Poverty Rates

Forty-nine percent of families living in poverty had at least one working adult in the household, and 11% had at least one adult working full-time, year round.

Poverty Trends

Poverty rates for families, families with children, and female-headed families with children decreased in the last decade after increasing – sometimes sharply – from 1980 to 1990.   For seniors, the poverty rate continued to decline over the last 20 years. Around 20% of the children in Burlington continue to live in poverty. That compares to a national rate of 16.1% and a state rate of 10.7%.

Those Living in Poverty:	1980	1990	2000
# families	563	798	743
# families with children under 18	434	689	624
# female-headed households with children under 18	299	504	451
# age 65 and older	515	408	383
# age 17and under	990	1208	1248

Poverty Trends
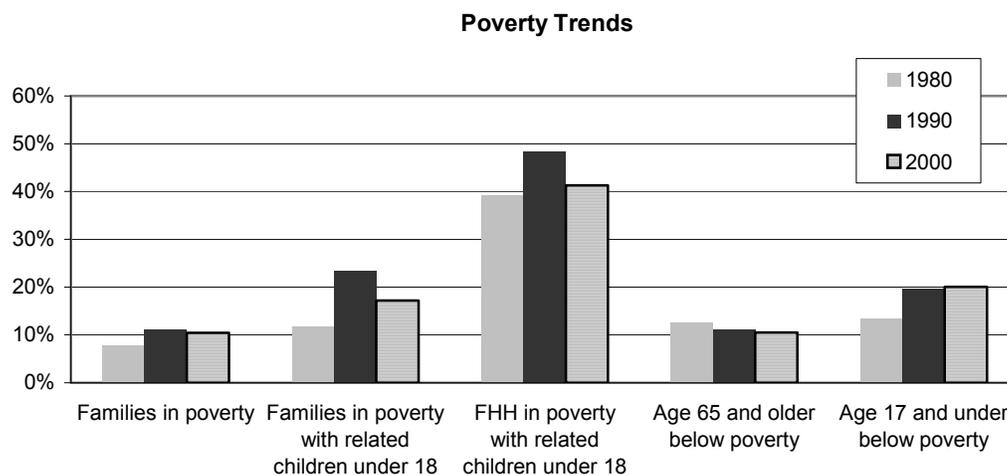
Low and Moderate Income Thresholds and Geographic Concentrations

"Low and moderate" income standards are established by regional medians, and are updated annually by HUD. The table below shows the definition of "low and moderate income"[1] for the year 2003 for the Burlington Metropolitan Statistical Area for one to four person households.

	1 Person	2 Persons	3 Persons	4 Persons
Very Low Income (30% of Median)	$13,800	$15,750	$17,700	$19,700
Low Income (50% of Median)	$22.950	$26,250	$29,500	$32,800
Moderate Income (80%of Median)	$36,750	$42,000	$47,250	$52,500

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[1] For purposes of the Consolidated Plan, the definitions of "low," "very low," and "moderate" income are from the CDBG program. Under the HOME program, the term "low-income" is defined as at or below 80% of Area Median Income (AMI), and very low-income is at or below 50% of AMI.

"Poverty" thresholds are set nationally, and are generally lower than the local "low and moderate income" thresholds. For example, the 2002 poverty thresholds from the Census Bureau for people under 65 were:

Household Size	No Children	One Child	Two Children	Three Children
Single Person	$9,359			
Two People	$12,047	$12,400		
Three People	$14,072	$14,480	$14,494	
Four People	$18,556	$18,859	$18,244	$18,307

Using "low and moderate income" standards, fifty-seven percent of the City's population overall are low and moderate-income residents (i.e., earn less than 80% of area median income). In 16 of 27 census block groups, more than half of the households were low and moderate income. The table on the following page shows low and moderate-income information for each census block group in the City.

Using poverty statistics, there are high percentages of families living in poverty in census tracts 3, 4 and 10 in Burlington. A large number of families living in poverty are also found in census tract 2. To compare these rates against larger regions, the poverty rate nationally for families is 9.2%; the statewide rate is 6.3%.

Within Chittenden County, families living in poverty tend to be concentrated in Burlington. Forty-three percent of the county's impoverished families live in Burlington, although the City has only 20% of all families overall.

To compare "low and moderate income" and "poverty" thresholds against the Basic Needs Budget calculated by the

	# of Families	# of Families Living in Poverty	% of Families Living in Poverty
Chittenden County	35,168	1,738	4.9%
Williston	2,140	18	0.8%
Essex Junction	2,253	42	1.8%
Essex Town	5,017	91	1.8%
South Burlington	3,785	87	2.3%
Shelburne	1,846	55	2.9%
Milton	2,609	110	4.2%
Charlotte	991	46	4.5%
Colchester	4,187	227	5.4%
Winooski	1,467	154	10.2%
Burlington	**7,055**	**743**	**10.4%**
Census Tract 1	1,256	92	7.3%
Census Tract 2	1,545	108	7.0%
Census Tract 3	709	165	23.3%
Census Tract 4	508	138	27.2%
Census Tract 5	323	35	10.8%
Census Tract 6	581	30	5.2%
Census Tract 7	274	5	1.8%
Census Tract 8	559	57	10.2%
Census Tract 9	382	12	3.1%
Census Tract 10	358	67	18.7%
Census Tract 11	627	34	5.4%

Joint Fiscal Office of the Vermont Legislature – which calculates the wages necessary to cover food, housing, child care, transportation, health care, clothing, household and personal expenses and insurance plus federal and state taxes – see Livable Wage section in Economic Development.

Low and Moderate Income Residents in Burlington by Block Group

	Low/Mod Residents	Universe*	% Low/Mod	Moderate Income Families	Low Income Families	Very Low Income Families
Census Tract 1, Block Group 1	1,281	2,857	44.8%	322	138	71
Census Tract 1, Block Group 2	843	1,761	47.9%	218	79	34
Census Tract 2, Block Group 1	1,039	1,509	68.9%	334	188	113
Census Tract 2, Block Group 2	746	1,629	45.8%	190	62	16
Census Tract 2, Block Group 3	201	965	20.8%	38	12	3
Census Tract 2, Block Group 4	419	1,455	28.8%	99	33	16
Census Tract 3, Block Group 1	1,613	1,908	84.5%	375	246	143
Census Tract 3, Block Group 2	947	1,310	72.3%	178	86	52
Census Tract 4, Block Group 1	856	1,119	76.5%	141	81	54
Census Tract 4, Block Group 2	893	1,115	80.1%	148	118	69
Census Tract 4, Block Group 3	492	719	68.4%	95	46	19
Census Tract 5, Block Group 1	475	722	65.8%	69	26	20
Census Tract 5, Block Group 2	1,151	1,688	68.2%	57	38	25
Census Tract 5, Block Group 3	1,093	1,329	82.2%	36	15	14
Census Tract 6, Block Group 1	1,300	2,346	55.4%	190	75	28
Census Tract 6, Block Group 2	976	1,676	58.2%	52	38	21
Census Tract 7, Block Group 1	271	851	31.8%	33	14	5
Census Tract 7, Block Group 2	409	716	57.1%	25	8	0
Census Tract 8, Block Group 1	795	1,591	50.0%	156	85	49
Census Tract 8, Block Group 2	220	718	30.6%	52	17	11
Census Tract 9, Block Group 1	239	688	34.7%	26	5	0
Census Tract 9, Block Group 2	474	863	54.9%	40	11	0
Census Tract 9, Block Group 3	637	842	75.7%	74	40	14
Census Tract 10, Block Group 1	563	810	69.5%	62	41	20
Census Tract 10, Block Group 2	934	1,132	82.5%	180	112	63
Census Tract 11, Block Group 1	665	1,578	42.1%	129	62	47
Census Tract 11, Block Group 2	164	874	18.8%	22	5	0
CITYWIDE	19,696	34,771	56.6%	3,351	1,681	907

*Total persons counted for purposes of calculating low and moderate income percentages. May be less than the total census count of population because it excludes certain groups such as students in dorms.

Race and Ethnicity

Burlington as a whole has become more racially and ethnically diverse over the last 20 years. Overall, 9.1% of City residents now identify themselves as something other than white and not Hispanic. (The 2000 Census allowed people to identify themselves as multi-racial for the first time.) The City's largest single minority group is Asian; among that group, Vietnamese are the largest subgroup.

Race and Ethnicity Trends
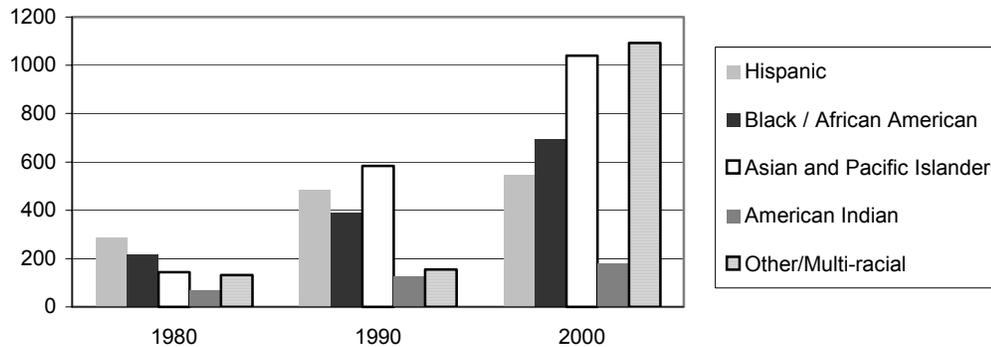
Racial/Ethnic Concentrations

Data from the 2000 U.S. Census showed no significant geographical concentrations of racial groups within Burlington. However, a higher percentage of minority residents live in the Old North End area of Burlington than in the rest of the city.

Racial Concentrations in Burlington
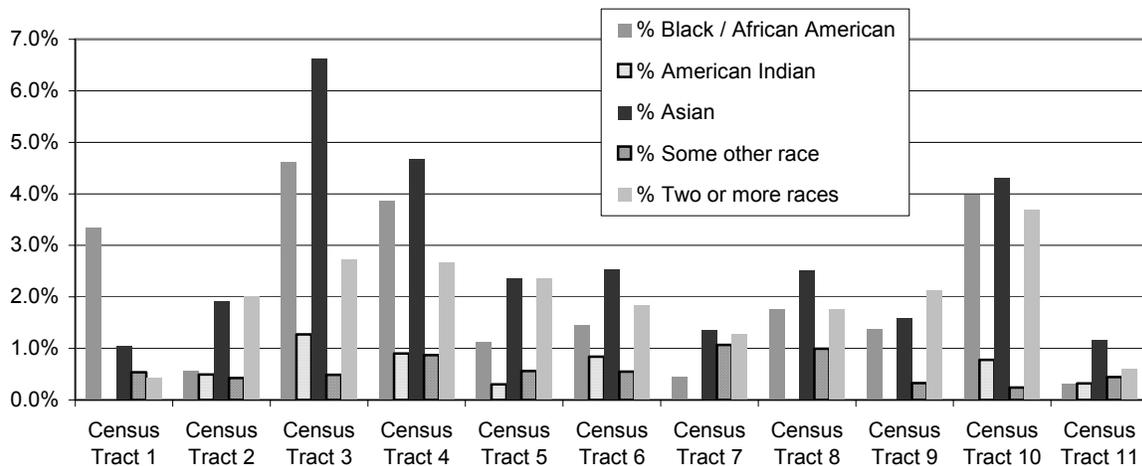
In comparing Burlington to the rest of Chittenden County, there is clearly a geographic concentration of minority residents in the City. Burlington accounts for about 27% of the

county's population, yet the City's percentage of racial minorities is considerably higher in each racial category:

Burlington as a Percent of Chittenden County
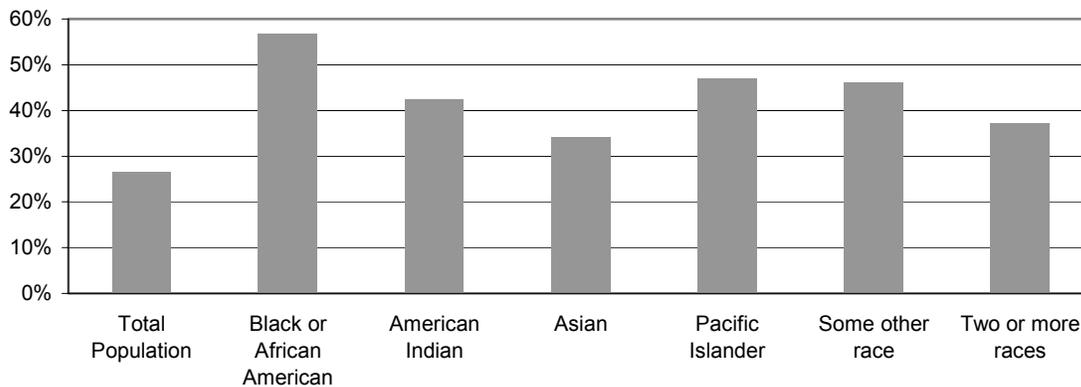
Information from the 2000 Census did show economic – as opposed to geographic – concentrations among racial/ethnic groups in the city. Both individual and family poverty rates are significantly higher among most minority groups:

Race	Total Individuals	# Individuals below poverty level	% Individuals below poverty level	Total Families	# Families below poverty level	% Families below poverty level
White	32,412	6,302	19.4%	6,640	646	9.7%
Black/African American	719	219	30.5%	156	40	25.6%
American Indian	163	69	42.3%	19	5	26.3%
Asian	922	223	24.2%	195	33	16.9%
South Pacific Islander	15	0	0.0%	9	0	0.0%
Some Other Race	166	39	23.5%	15	9	60.0%
Two or More Races	672	171	25. 5%	88	10	11.4%

New Residents, Foreign-Born

Burlington has seen an increase in its population of new residents who are foreign-born and newly arrived in the United States. The 2000 Census showed that almost 5% of City residents (1,925 people) had entered the country in the last ten years – and 1,345 residents had entered the country in the last five years. Major refugee resettlement groups have come from Vietnam, Bosnia and the Sudan. The City anticipates that Bantu refugees from Somalia will be resettled here over the next two years.

In Chittenden County, only Winooski has greater percentages of residents who entered the country in the last decade:

New Residents, Foreign-Born

Legend:
- % of Residents Who Entered Country in Last 5 Years
- % of Residents Who Entered Country in Last 10 Years

(Municipalities: Bolton, Burlington, Charlotte, Colchester, Essex, Hinesburg, Huntington, Jericho, Milton, Richmond, Shelburne, South Burlington, Underhill, Westford, Williston, Winooski)
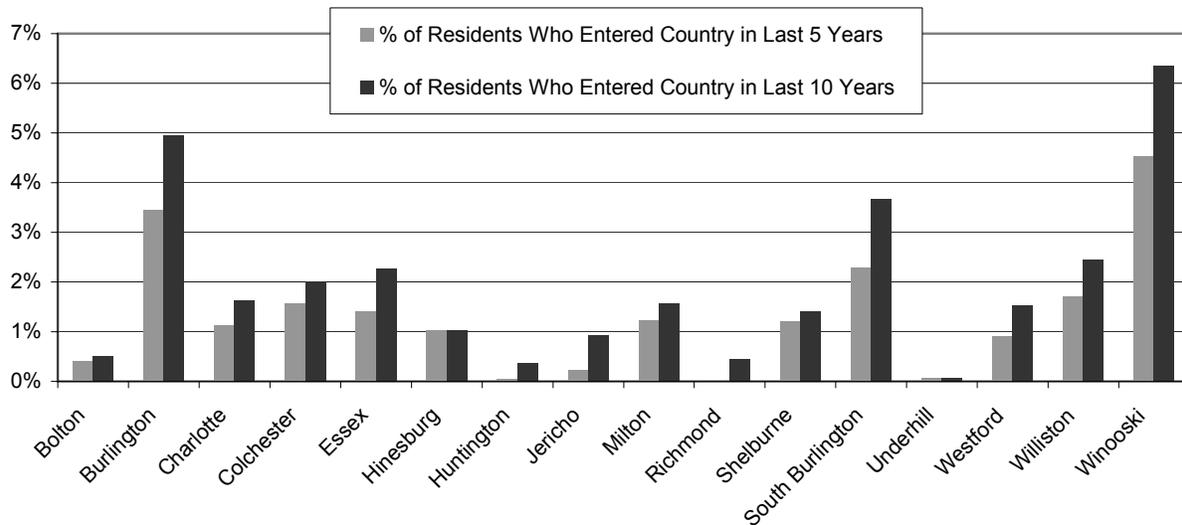
Education and English Proficiency

Burlington residents as a whole are well-educated, with 65% of those age 25 and older reporting some post-secondary education and 42% having at least a bachelor's degree. (The City's rate for residents having at least a bachelor's degrees is substantially higher than state (29.4%) and national (24.4%) norms.)

Residents Without a High School Diploma

(Census Tract 1 through Census Tract 11 and TOTAL)
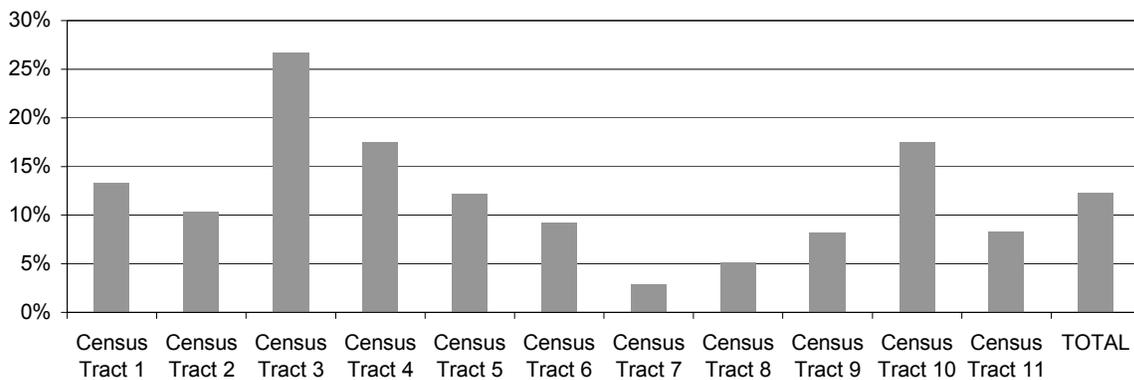
At the same time, however, 12% of the City's adult residents – and over a quarter of adult residents in some Old North End neighborhoods (especially census tract 3) - had less than a high school diploma.

Around 10% of the City's population speaks a language other than English at home. A total of 414 households (2.6% of the City's households) identify themselves as "linguistically isolated," i.e., a household in which no person 14 years old and over speaks only English and – for those household members who speak a language other than English - no person 14 years old and over speaks English "very well." In Burlington, the principal household languages other than English are Serbo-Croatian, Vietnamese, Russian and French.

Principal Language	# of Linguistically Isolated Households
Spanish	26
Other Indo-European Languages	276
Asian and Pacific Island Languages	98
Other Languages	14

Most residents with limited English proficiency are working-age adults:

	5 – 17 years	18 – 64 years	65 years and older
# of residents who speak English "not well" or "not at all"	49	518	51

Residents with Disabilities

The 2000 Census reported the following numbers of residents age 5 and older living with a disability:

Sensory disability	Physical disability	Mental disability	Self-care disability	Go-outside-home disability	Employment disability
1,122	2,322	2,157	633	1,656	2,649

Seven percent of children age 5 to 15 had a reported disability; a mental disability was the most frequently reported type of disability, mentioned in over 80% of the reports.

Ten percent of residents age 16 to 20 and 16% of residents age 21 to 64 reported some kind of disability. The employment rate for residents age 21 to 64 reporting a disability was 56%, as contrasted with 81% for residents in that age group reporting no disability.

Forty percent of seniors age 65 and older reported having some kind of disability. A quarter reported a physical disability; 18% reported a go-outside-home disability, defined as a physical, mental, or emotional condition lasting six months or more that made it difficult to go outside the home alone to shop or go to the doctor's office.

For children and working age adults, disabilities clearly affect poverty status:

	Poverty Rate
Age 5 to 15	
With a disability	49.6%
With no disability	18.8%
Age 16 to 20	
With a disability	39.8%
With no disability	37.9%
Age 20 to 64	
With a disability	30.5%
With no disability	17.3%
Age 65 and older	
With a disability	13.8%
With no disability	8.3%

Housing Conditions and Market Analysis

Number and Types of Units

The 2000 Census found 16,395 housing units in the City: 9,295 rental units, 6,590 owner-occupied units, and 510 "other" vacant or seasonal units. That represents the following increases over the last decade:

	Increase in units from 1990 to 2000
Total Units	915
Owner-Occupied	683
Renter-Occupied	522

Chittenden County added 6,769 units to its housing stock over the last decade. Of those, 1,898 were renter-occupied units. Overall, South Burlington and Williston added the most units;

Growth in Housing Units, 1990 - 2000

Burlington and South Burlington added the most rental units.

Age of Housing

Over 47% of Burlington's housing stock was built before 1950. These older units generally mean higher costs for maintenance, heat and insurance.

Within Chittenden County, Burlington has five times as many units over 50 years old than any other municipality. As a percentage of total housing stock, only Burlington and Winooski have pre-1950 unit shares approaching fifty percent.

Housing Units Built Before 1950

Percent of Housing Stock Built Before 1950

Within Burlington, there are particularly high concentrations of housing units over 50 years old in the Old North End, King Street and Lakeside neighborhoods. Only in census tracts 1 and 2 (the New North End neighborhoods) and census tract 11 in the South End was most of the housing stock built after 1950:

	# Owner-Occupied Units Built Before 1950	% Owner-Occupied Units Built Before 1950	# Renter-Occupied Units Built Before 1950	% Renter-Occupied Units Built Before 1950	Total # Units Built Before 1950	% All Units Built Before 1950
Census Tract 1	150	10.9%	95	20.9%	245	13.3%
Census Tract 2	323	20.0%	17	2.6%	340	15.0%
Census Tract 3	395	90.6%	618	63.4%	1013	71.8%
Census Tract 4	185	94.4%	737	56.5%	922	61.4%
Census Tract 5	205	79.8%	1059	69.2%	1264	70.7%
Census Tract 6	376	68.7%	587	45.9%	963	52.7%
Census Tract 7	196	58.5%	150	42.6%	346	50.4%
Census Tract 8	379	62.1%	239	50.6%	618	57.1%
Census Tract 9	249	81.1%	576	62.4%	825	67.1%
Census Tract 10	117	56.3%	599	64.0%	716	62.6%
Census Tract 11	208	29.5%	70	16.9%	278	24.8%
TOTAL	1915	60.5%	4017	55.7%	5932	57.2%

Lead Paint Hazards

Given the age of the City's housing stock, lead paint is presumed to be present in most areas of the City, and particularly in the Old North End and King Street and Lakeside neighborhoods. Using 2000 Census data for numbers of households and national estimates of percentages of

units likely to have lead paint (based on age), the City estimates that the extent of the lead paint hazard is as follows:

Owner-Occupied Units with Lead Paint	4225
Low-Income Owner-Occupied Units with Lead Paint	899
Renter-Occupied Units with Lead Paint	6109
Low-Income Renter-Occupied Units with Lead Paint	5408

Household Tenure

In contrast to national, state and county figures from the 2000 Census, most of Burlington's households did not own their own homes. On homeownership rates, Burlington looks more like other New England cities than other Chittenden County towns. Burlington's homeownership rate has never topped 50% in the last forty years.

Burlington homeowners are aging in place. Over 47% have lived in their houses for twenty or more years, and over 40% are age 55 and older. Only around 10% moved in within the last year.

Burlington's homeownership rate increased slightly in the last decade, reversing a downward trend from 1970 to 1990. (The decade from 1970 to 1980 represented the largest decrease in homeownership).

Homeownership

Homeownership levels are lowest in the Old North End and downtown neighborhoods (census tracts (C.T.) 3, 4, 5, 6 and 10). Most City neighborhoods saw homeownership rates holding even or increasing in the last decade; some, however, saw decreases.

Burlington Homeownership Trends
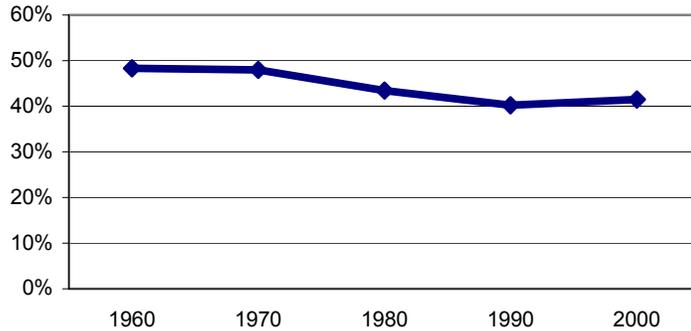
Tenure Type, Household Type and Bedroom Mix

Only 27% of Burlington's homeowners are families with children. A bare majority of Burlington families with children (51%) own homes – the remaining 49% of families with children are renters. Around 18% of all City apartments are occupied by families with children.

Burlington Homeowners
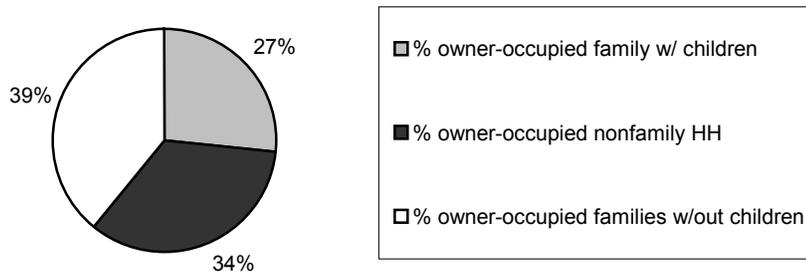
- % owner-occupied family w/ children
- % owner-occupied nonfamily HH
- % owner-occupied families w/out children

There is, of course, more mobility among renters than among homeowners. However, there is a core group of tenants who have lived in the same apartment for at least 5 years.

Renters - Families and Transience

- % of renters who are families w/ children
- % renters in place 5+ years

The bedroom mix of rental units in
the City is:
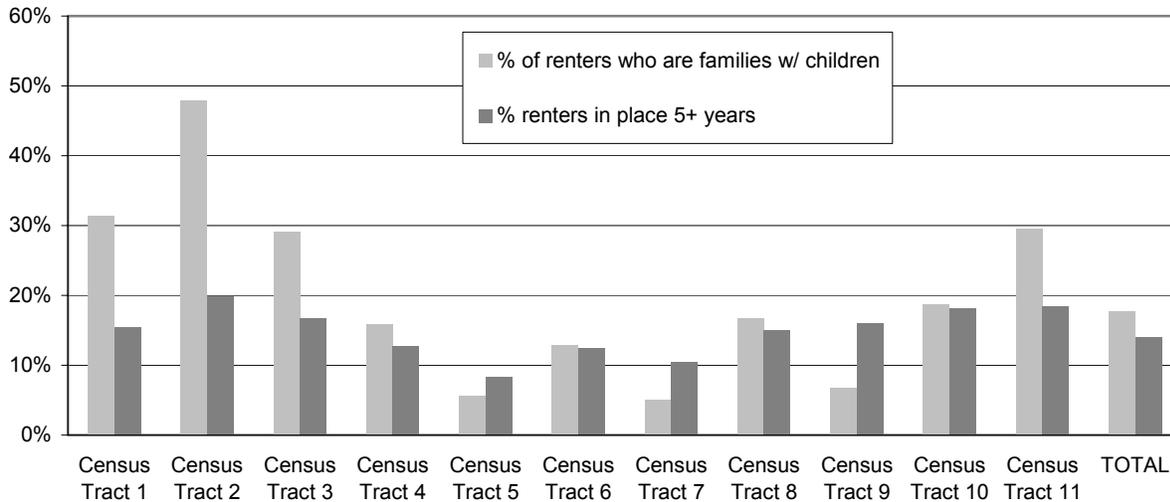
Bedroom Mix, Rental Units
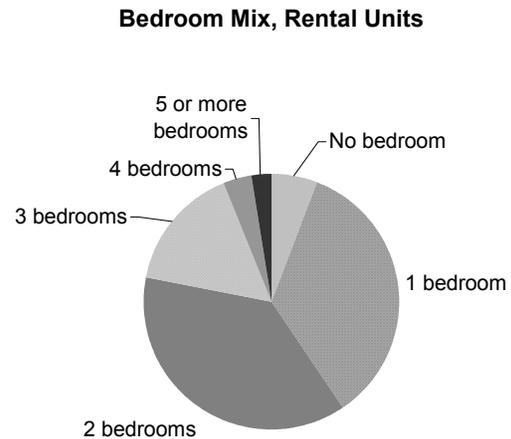
Rental Vacancy Rates

After seven years of historically low vacancy rates, an extremely tight rental market is finally
beginning to loosen up.[2] However, the rental market has yet to reach a "balanced" vacancy
rate – which, according to most experts, is between 3% and 5%.

Chittenden County Rental Vacancy Rates
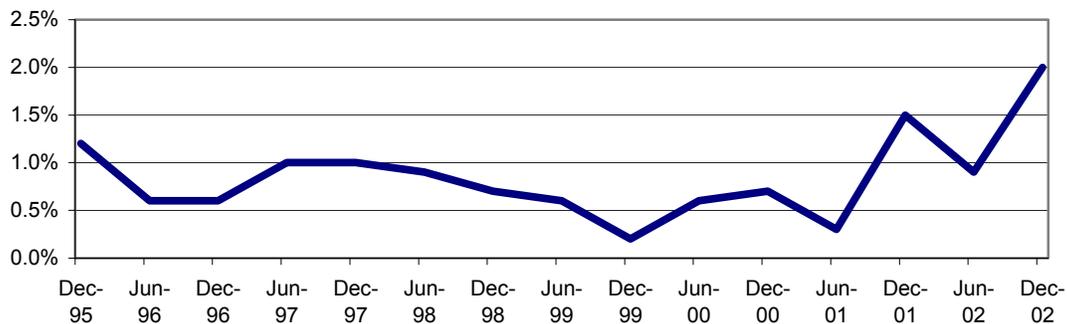
Housing Costs

According to the Allen & Brooks Report, the median price of a single-family home in Chittenden
County rose from $122,050 in 1990 to $184,500 in 2002 – an increase of over 50%. There
have been significant increases in median sales prices in the last 4 years.

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[2] Data cited here are from the December 2002 Allen & Brooks Report. The Allen & Brooks Report is a
definitive housing market analysis prepared every six months by a private sector real estate consulting
firm.

Chittenden County Single Family Median Price

Based on state Property Transfer Tax data analyzed by the Vermont Housing Finance Agency, the median home sales price in Burlington has risen 29% over the last three years, reaching $165,000 in 2002. The monthly mortgage payment for a $165,700 loan (assuming no down payment) at 6.5% interest for a 30-year term would be $1,042 (exclusive of insurances and property taxes). Insurance and property taxes would be around $400 more per month. Burlington does remain one of the more affordable communities in the county for homebuyers.

Chittenden County Median Home Sales by Town

The average monthly rents with and without utilities as of September 2002 (from the December 2002 Allen & Brooks Report) and the current fair market rents (calculated as the dollar amount below which 40% of all standard quality units are rented) for the greater Burlington market are:

	Efficiency	1-bedroom	2-bedroom	3-bedroom
Fair Market Rent	$512	$627	$836	$1,140
Average Rent, Tenant Pays Utilities	$540	$636	$803	$1,096
Average Rent, Landlord Pays Utilities	$592	$734	$943	$1,281

Rents have been rising from 5.4% to 8.7% per year:

Increases in Average Monthly Rent, Chittenden County

Cost Burden

According to the 2000 Census, 4,338 renter households (46.8% of all renter households) in the City were cost burdened, i.e., spending more than 30% of their gross annual income for housing. The proportion was even higher in census tracts 3, 4, 5, 6, and 10, where two-thirds of renter households were cost-burdened. Citywide, 2,055 renter households were severely cost-burdened, i.e., paying 50% or more of their income on housing. (This data does not distinguish between college students and non-student renters.)

In September 2002, the National Low Income Housing Coalition estimated that the "housing

wage" in Burlington – the amount that a full time (40 hours a week) worker must earn per hour in order to afford a two-bedroom unit at the area's Fair Market Rent – was $16.08. A full-time worker earning minimum wage could afford to pay a monthly rent of no more than $268 without

becoming rent-burdened – an amount which is $156 below the fair market rent for an efficiency apartment, and $424 below the fair market rent of $692 for a two bedroom apartment.

The table below shows what rental housing is affordable to households at various income levels based on 2002 Metropolitan Statistical Area median income figures.

	Annual Household Income	Maximum Affordable Rent[3]	Affordable Units at Fair Market Rent
Earn state minimum wage ($6.25/hour)	$13,000	$325	None
Earn 30% of median family income	$17,220	$430	None
Earn 50% of median family income	$28,700	$718	Efficiency or 1 bedroom
Earn 80% of median family income	$45,920	$1,148	Efficiency, 1, 2 or 3 bedroom
Earn median family income	$57,400	$1,435	All units

Substandard Housing Conditions

"Substandard" conditions are defined by ordinance[4] to include any housing unit with 5 or more nonlife-threatening code violations or with any one of the following:

- The physical condition or use of the dwelling constitutes a public nuisance;
- Any physical condition, use or occupancy considered an attractive nuisance to children, including, but not limited to, abandoned wells, shafts, basements, excavations and unsafe fences or structure;
- Any dwelling with unsanitary sewage or plumbing facilities;
- Any dwelling designated unsafe for human habitation or use;
- Any dwelling manifestly capable of being a fire hazard or manifestly unsafe or unsecured so as to endanger life, limb or property;
- Any dwelling from which the plumbing, heating or other facilities required by law have been removed, or from which utilities have been disconnected, destroyed, removed, or rendered ineffective, or the required precautions against trespassers have not been provided;
- Any dwelling that is unsanitary or which is littered with rubbish or garbage, or which has an uncontrolled growth of weeds; or
- Any dwelling that is in a state of dilapidation, deterioration or decay; faulty construction; overcrowded; open, vacant or abandoned; damaged by fire to the extent of not providing shelter; in danger of collapse or failure and dangerous to anyone on or near the dwelling.

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[3] Both Maximum Affordable Rent and Fair Market Rent are inclusive of all utilities, except cable television and telephone.
[4] Section 18-19(d) of the City Code of Ordinances.

Overcrowding has not been a substantial problem in Burlington. The 2000 Census reported only 297 units in the City with more than one person per room, and minimum housing inspections have not revealed significant overcrowding.

Given the age of the housing stock in the City, most housing units are in need of some level of repair or rehabilitation. Based on minimum housing inspections,[5] around 50% of the rental units in the City are "substandard" within the above definition. Frequently, the code violations found present serious safety issues, but do not require substantial investment to correct (i.e., lack of smoke detectors, broken railings).   An estimated 10% of the City's rental units are in need of significant rehabilitation, at a level requiring $5,000 or more per unit.

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[5] The City's Code Enforcement Office conducts around 1,000 routine minimum housing inspections a year, and around 1,000 complaint-based inspections.

Housing Conditions and Market Analysis

Number and Types of Units

The 2000 Census found 16,395 housing units in the City: 9,295 rental units, 6,590 owner-occupied units, and 510 "other" vacant or seasonal units. That represents the following increases over the last decade:

	Increase in units from 1990 to 2000
Total Units	915
Owner-Occupied	683
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Chittenden County added 6,769 units to its housing stock over the last decade. Of those, 1,898 were renter-occupied units. Overall, South Burlington and Williston added the most units;

Growth in Housing Units, 1990 - 2000

Burlington and South Burlington added the most rental units.

Age of Housing

Over 47% of Burlington's housing stock was built before 1950. These older units generally mean higher costs for maintenance, heat and insurance.

Within Chittenden County, Burlington has five times as many units over 50 years old than any other municipality. As a percentage of total housing stock, only Burlington and Winooski have pre-1950 unit shares approaching fifty percent. See Age of Housing Stock Maps on p. 36-37.

Housing Units Built Before 1950

Percent of Housing Stock Built Before 1950

Within Burlington, there are particularly high concentrations of housing units over 50 years old in the Old North End, King Street and Lakeside neighborhoods. Only in census tracts 1 and 2 (the New North End neighborhoods) and census tract 11 in the South End was most of the housing stock built after 1950:

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In contrast to national, state and county figures from the 2000 Census, most of Burlington's households did not own their own homes. On homeownership rates, Burlington looks more like other New England cities than other Chittenden County towns. Burlington's homeownership rate has never topped 50% in the last forty years.

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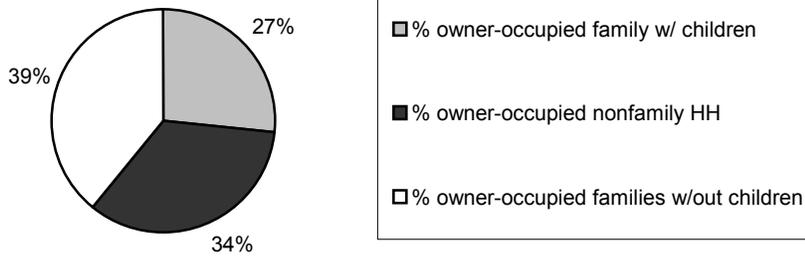
Homeownership

Homeownership levels are lowest in the Old North End and downtown neighborhoods (census tracts (C.T.) 3, 4, 5, 6 and 10). Most City neighborhoods saw homeownership rates holding even or increasing in the last decade; some, however, saw decreases. See Homeownership Maps on pp. 38-39.

Burlington Homeownership Trends
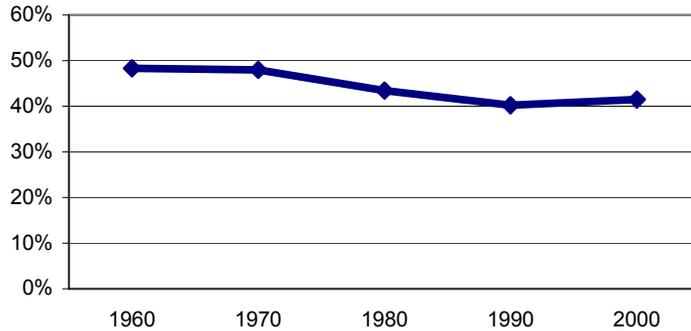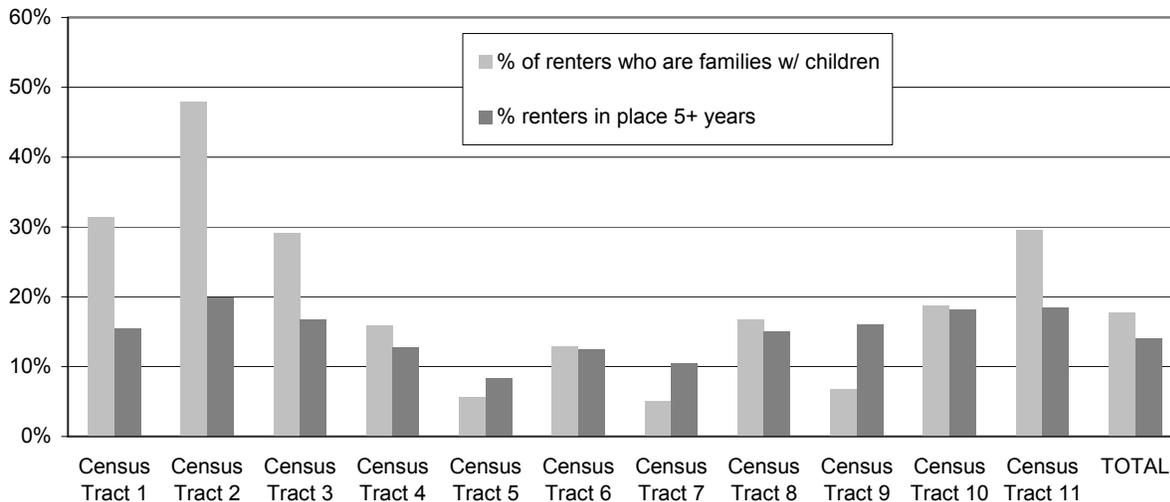

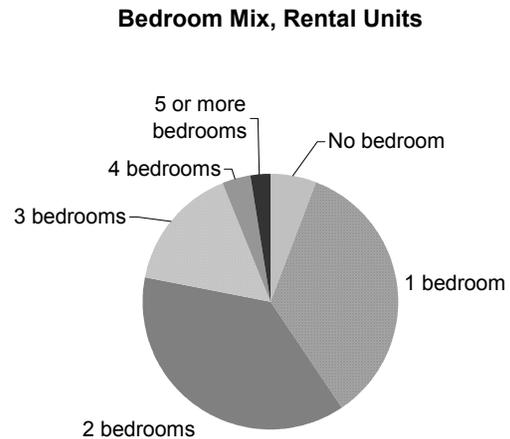## Tenure Type, Household Type and Bedroom Mix

Burlington Homeowners

- % owner-occupied family w/ children
- % owner-occupied nonfamily HH
- % owner-occupied families w/out children

Only 27% of Burlington's homeowners are families with children. A bare majority of Burlington families with children (51%) own homes – the remaining 49% of families with children are renters. Around 18% of all City apartments are occupied by families with children.

There is, of course, more mobility among renters than among homeowners. However, there is a core group of tenants who have lived in the same apartment for at least 5 years.

Renters - Families and Transience

- % of renters who are families w/ children
- % renters in place 5+ years

The bedroom mix of rental units in
the City is:

Bedroom Mix, Rental Units

Rental Vacancy Rates

After seven years of historically low vacancy rates, an extremely tight rental market is finally
beginning to loosen up. [6] However, the rental market has yet to reach a "balanced" vacancy
rate – which, according to most experts, is between 3% and 5%.
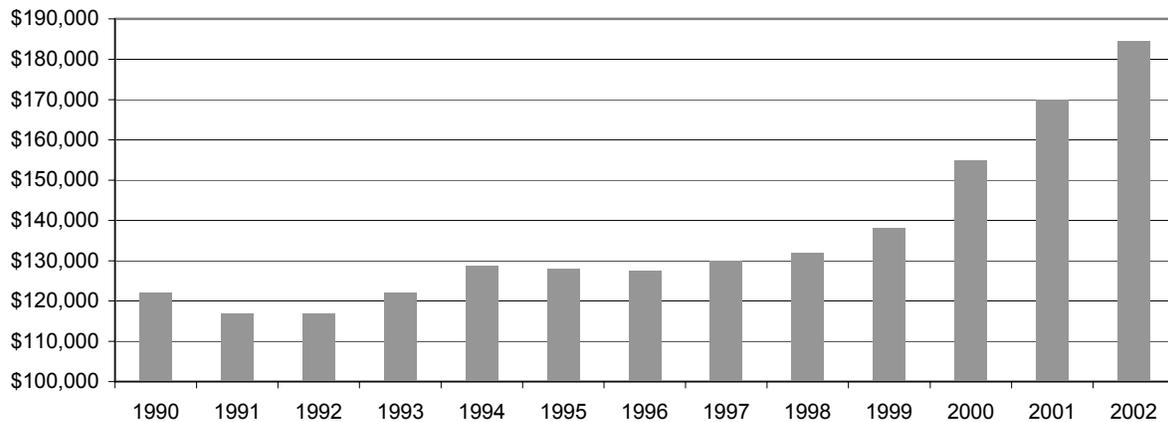
Chittenden County Rental Vacancy Rates
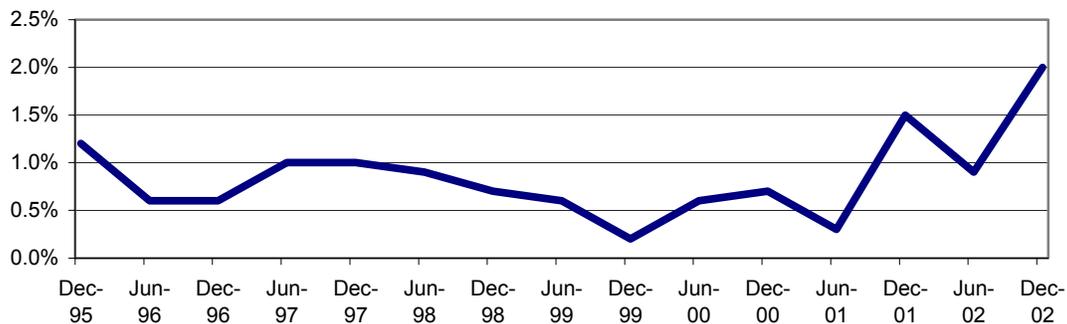
Housing Costs

According to the Allen & Brooks Report, the median price of a single-family home in Chittenden
County rose from $122,050 in 1990 to $184,500 in 2002 – an increase of over 50%. There
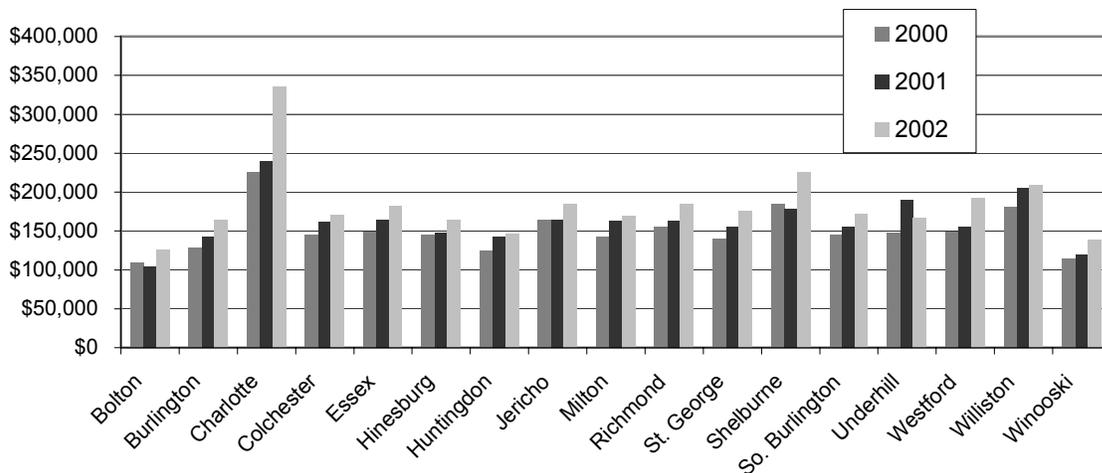have been significant increases in median sales prices in the last 4 years.

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[6] Data cited here are from the December 2002 Allen & Brooks Report. The Allen & Brooks Report is a
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Chittenden County Single Family Median Price

Based on state Property Transfer Tax data analyzed by the Vermont Housing Finance Agency, the median home sales price in Burlington has risen 29% over the last three years, reaching $165,000 in 2002. The monthly mortgage payment for a $165,700 loan (assuming no down payment) at 6.5% interest for a 30-year term would be $1,042 (exclusive of insurances and property taxes). Insurance and property taxes would be around $400 more per month. Burlington does remain one of the more affordable communities in the county for homebuyers.

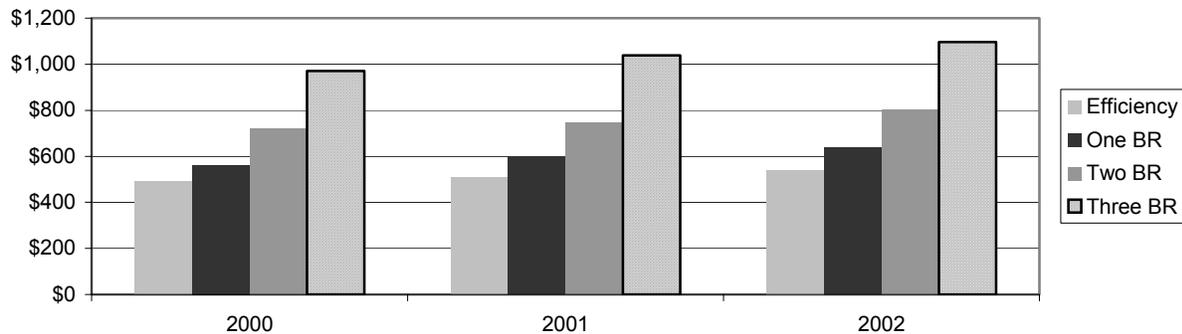**Chittenden County Median Home Sales by Town**

The average monthly rents with and without utilities as of September 2002 (from the December 2002 Allen & Brooks Report) and the current fair market rents (calculated as the dollar amount below which 40% of all standard quality units are rented) for the greater Burlington market are:

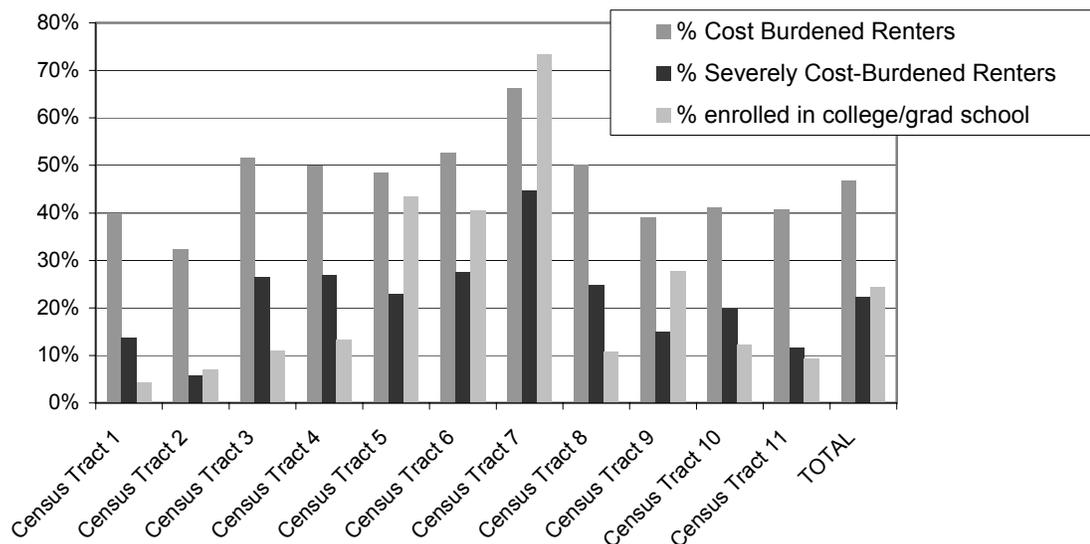|	*Efficiency*	1-bedroom	2-bedroom	3-bedroom
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Average Rent, Tenant Pays Utilities	$540	$636	$803	$1,096
Average Rent, Landlord Pays Utilities	$592	$734	$943	$1,281

Rents have been rising from 5.4% to 8.7% per year:

Increases in Average Monthly Rent, Chittenden County

Cost Burden

According to the 2000 Census, 4,338 renter households (46.8% of all renter households) in the City were cost burdened, i.e., spending more than 30% of their gross annual income for housing. The proportion was even higher in census tracts 3, 4, 5, 6, and 10, where two-thirds of renter households were cost-burdened. Citywide, 2,055 renter households were severely cost-burdened, i.e., paying 50% or more of their income on housing. (This data does not distinguish between college students and non-student renters.) For a regional comparison of cost burden rates, see Cost Burdened Renters Map on p. 40.

In September 2002, the National Low Income Housing Coalition estimated that the "housing wage" in Burlington – the amount that a full time (40 hours a week) worker must earn per hour in order to afford a two-bedroom unit at the area's Fair Market Rent – was $16.08. A full-time worker earning minimum wage could afford to pay a monthly rent of no more than $268 without

becoming rent-burdened – an amount which is $156 below the fair market rent for an efficiency apartment, and $424 below the fair market rent of $692 for a two bedroom apartment.

The table below shows what rental housing is affordable to households at various income levels based on 2002 Metropolitan Statistical Area median income figures.

	Annual Household Income	Maximum Affordable Rent[7]	Affordable Units at Fair Market Rent
Earn state minimum wage ($6.25/hour)	$13,000	$325	None
Earn 30% of median family income	$17,220	$430	None
Earn 50% of median family income	$28,700	$718	Efficiency or 1 bedroom
Earn 80% of median family income	$45,920	$1,148	Efficiency, 1, 2 or 3 bedroom
Earn median family income	$57,400	$1,435	All units

Substandard Housing Conditions

"Substandard" conditions are defined by ordinance[8] to include any housing unit with 5 or more nonlife-threatening code violations or with any one of the following:

- The physical condition or use of the dwelling constitutes a public nuisance;
- Any physical condition, use or occupancy considered an attractive nuisance to children, including, but not limited to, abandoned wells, shafts, basements, excavations and unsafe fences or structure;
- Any dwelling with unsanitary sewage or plumbing facilities;
- Any dwelling designated unsafe for human habitation or use;
- Any dwelling manifestly capable of being a fire hazard or manifestly unsafe or unsecured so as to endanger life, limb or property;
- Any dwelling from which the plumbing, heating or other facilities required by law have been removed, or from which utilities have been disconnected, destroyed, removed, or rendered ineffective, or the required precautions against trespassers have not been provided;
- Any dwelling that is unsanitary or which is littered with rubbish or garbage, or which has an uncontrolled growth of weeds; or
- Any dwelling that is in a state of dilapidation, deterioration or decay; faulty construction; overcrowded; open, vacant or abandoned; damaged by fire to the extent of not providing shelter; in danger of collapse or failure and dangerous to anyone on or near the dwelling.

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[7] Both Maximum Affordable Rent and Fair Market Rent are inclusive of all utilities, except cable television and telephone.
[8] Section 18-19(d) of the City Code of Ordinances.

Overcrowding has not been a substantial problem in Burlington. The 2000 Census reported only 297 units in the City with more than one person per room, and minimum housing inspections have not revealed significant overcrowding.

Given the age of the housing stock in the City, most housing units are in need of some level of repair or rehabilitation. Based on minimum housing inspections,[9] around 50% of the rental units in the City are "substandard" within the above definition. Frequently, the code violations found present serious safety issues, but do not require substantial investment to correct (i.e., lack of smoke detectors, broken railings).   An estimated 10% of the City's rental units are in need of significant rehabilitation, at a level requiring $5,000 or more per unit.

[9] The City's Code Enforcement Office conducts around 1,000 routine minimum housing inspections a year, and around 1,000 complaint-based inspections.

APPENDIX B: Burlington Demographic Profile

This section presents a basic overview of some of Burlington's socio-economic trends. More detailed information pertaining to economic and housing characteristics can be found in those respective sections of the Plan, or in an appendix developed for the *2008 Consolidated Plan for Housing and Community Development* prepared as part of the City's participation in the U.S. Department of Housing & Urban Development Community Development Block Grant (CDBG) and Home Investment Partnership Act (HOME) programs.
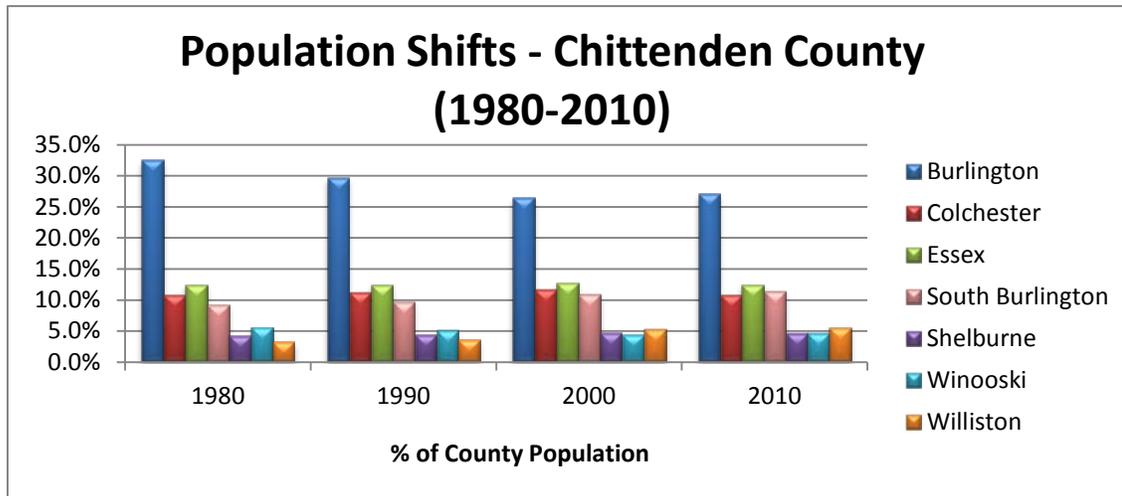
POPULATION

The City of Burlington remains Vermont's most populated community with a 2010 (US Census) population of 42,417. This accounts for just over 27% of Chittenden County's total population, and more than two times that of the state's next largest community – the Town of Essex.

Since 1960, Burlington's population has experienced a series of "ups and downs" with only small real increases over time. Between 1970 and 1980, Burlington witnessed a 2.4% population decline which was later offset by a 3.8% increase between 1980 and 1990. The Census 2010 population represents a 9.1% increase since 2000. . This sudden increase in population during the last decade follows the national trend of people migrating back to the inner cities. In fact, downtown Burlington has seen an even more significant increase in residents with 23% in the last decade.


Burlington's Population 1910-2010
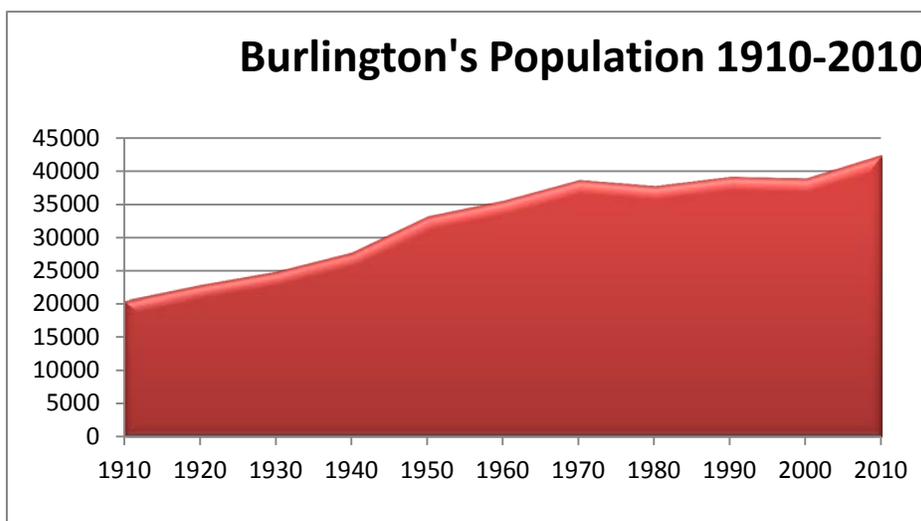
The actual population number is less important than the trends experienced within the larger region however. Burlington's marginal population fluctuations are in contrast to

population growth experienced by other communities in Chittenden County, and is indicative of continuing suburbanization within the region.

Population Shifts - Chittenden County (1980-2010)

As illustrated here, Burlington's population as a percentage of the County's has experienced a steady decline between 1980 and 2000, but is now seeing a resurgence, beginning to see its share of the county's population increase.

The Chittenden County Regional Planning Commission has recently collaborated on the creation of a new Economic and Demographic Forecast for the six northwestern counties of Vermont. This forecast projects future population growth, employment and housing demand through 2035.
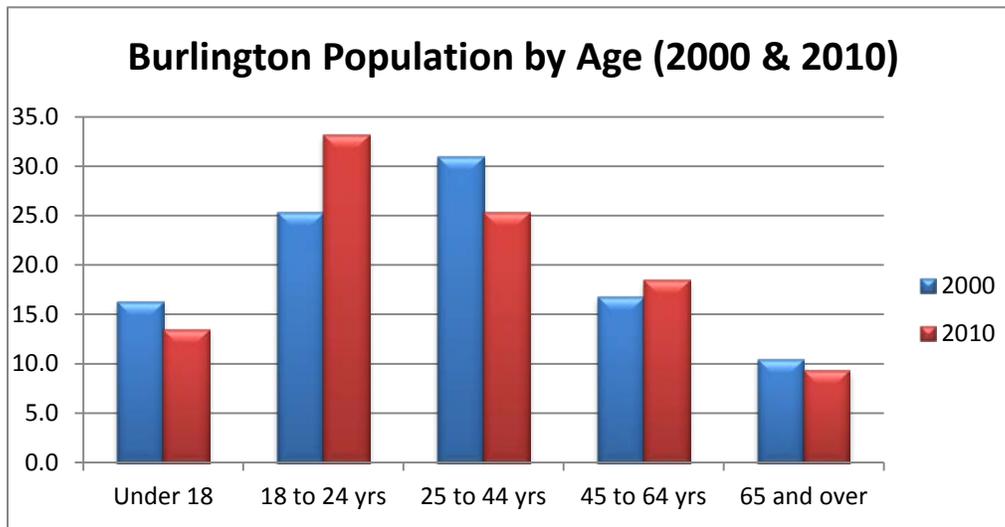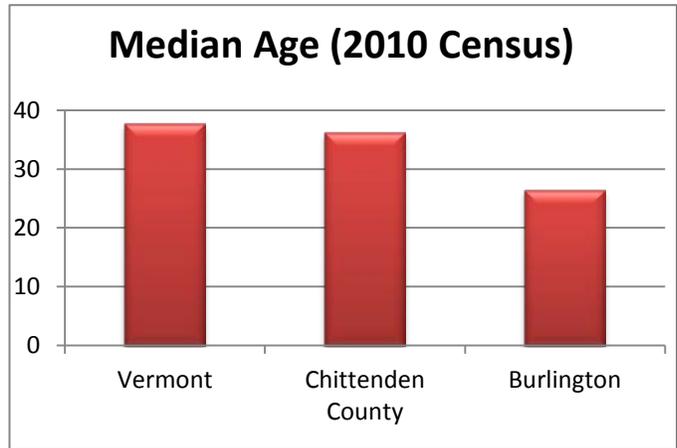
Population Projections 2010-2035
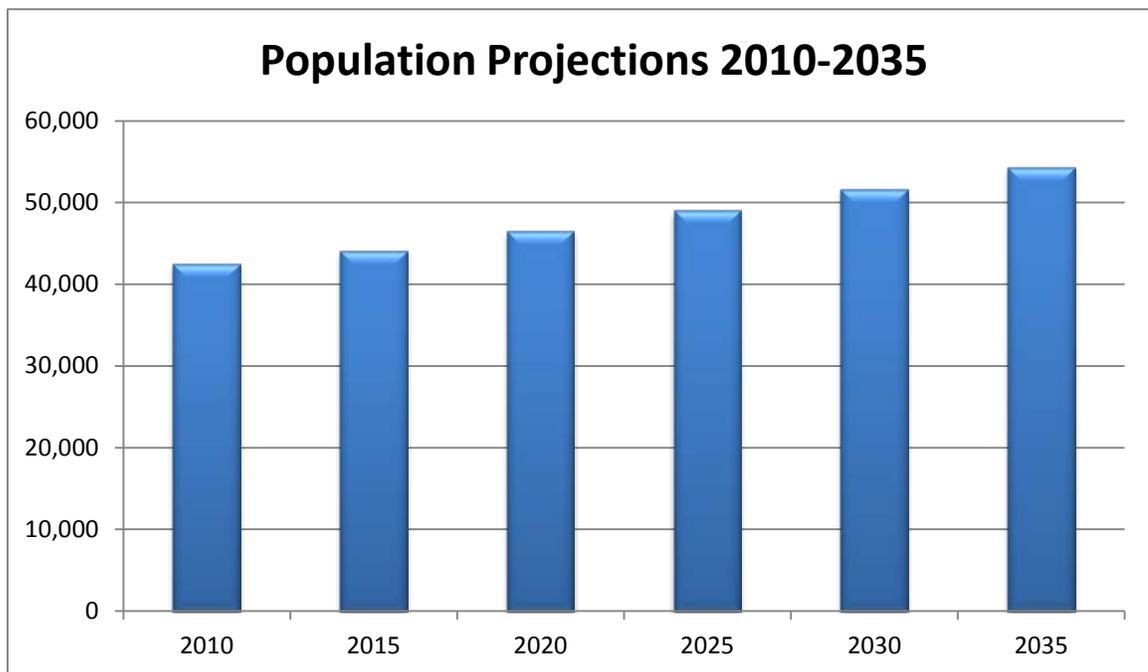
Population projections, by design and practice, are "best estimates" at a given point in time, of what the future may bring. They typically involve a complex array of assumptions, and combine relationships between employment trends, net migration and natural population increases. While they are an important planning tool, projections should be used with great caution – particularly the smaller the community and the longer the time horizon. The following chart illustrates a range of possible populations based on related trends.

However, Burlington's population is not the whole growth story.

Burlington's population is young. The median age in Burlington is 26.5 years old as compared to the state median of 37.7. The graph below shows how younger kids under 18 are becoming a smaller part of the population, while the 18 to 24 years old (college student) have increased considerably as a proportion of the overall city residents.

Median Age (2010 Census)

A bar chart showing median age values for Vermont, Chittenden County, and Burlington on a scale of 0 to 40.

Burlington Population by Age (2000 & 2010)

A grouped bar chart comparing 2000 and 2010 population percentages across age groups: Under 18, 18 to 24 yrs, 25 to 44 yrs, 45 to 64 yrs, and 65 and over, on a scale of 0.0 to 35.0.

With demographic trends towards smaller families, growth of housing must also be considered. Growth in housing has consistently exceeded population growth since 1960. The city continues to be an attractive place to live - especially as people are drawn to the many amenities the city has to offer including convenient access to shopping, services and employment opportunities.

Burlington's population is diverse. 12.7 percent of Burlington's residents identify themselves as non-white, and 2.6 percent of the population is of two or more races.

Race of Non-White Burlingtonians

Legend:
- 2000 (red)
- 2010 (blue)

Race	2000	2010
Black or African American	29	29.8
American Indian and Alaska Native	16	2.3
Asian	39	27.5
Hispanic or Latino	0	20.6
Some other race	16	19.8