Strategies to Guide Policy and Projects

Now that we know more about the actions we need to take to preserve and enhance the South End's characteristics, let's take a closer look at the strateiges we can use to help us achieve these goals. You've seen these icons throughout the plan, which represent which theme each of the "Key Strategies" relates to. Here's where you'll find those key strategies...and more! In this section, all of the plan's strategies are grouped by theme, so that we better understand what it will take within a particular system, or by a particular group of people to implement #OurVision for the South End.

Creative & Vibrant Economy
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Arts & Affordability
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Housing & the South End
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Neighborhood Parks & Open Spaces
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Connectivity & Mobility
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Barge Canal & Brownfields
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Stormwater Management
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How to Read This Section

For each of the themes that follow, you'll find a series of recommended strategies. Each of these strategies includes a "first step" to make it happen, and identifies potential stakeholders that might be involved in getting it going.

Recommended Strategy

First steps to make it happen *Stakeholders who should be involved*

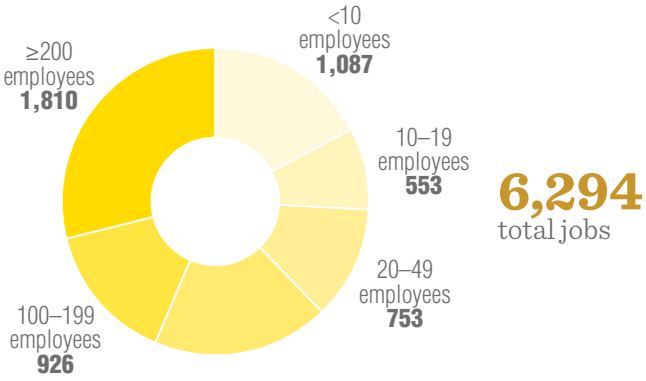
CREATIVE & VIBRANT ECONOMY

Second only to Burlington's downtown, the South End has long been an economic engine for the City and the region. It's a place where businesses grow from fledgling start-ups to national success stories. A place where manufacturing and R&D operations produce and prototype well-renowned products that have become staples in their industries. A place where artists and creatives 'make and break' things, and where innovative companies are discovering solutions for the future. This is a place where hundreds of people, with a wide range of occupations, come to work. Despite its small geographic area—just 4% of the city's land area—the South End's Enterprise District is home to 20% of the city's jobs and over 90% of its current industrial space.

The South End has evolved quite significantly over time, and today enterprise, innovation and the arts form the interconnected economic and social identity of the district. As the economy has changed, the types of work spaces within the South End have changed, too. A hundred years ago, South End buildings bustled with heavy-duty industrial activities—coal was transformed into gas, structural steel and iron castings were fabricated, and the Lumiere Brothers manufactured plates for development of color photographs. By the 1980s, many of these buildings, and a new generation of one-story industrial and commercial structures, stood vacant. In today's economy, these spaces are being adapted to support a rich and eclectic mix of small-scale manufacturing, food processors, artists and entrepreneurs, and a variety of offices and services.

PHOTO BY LEE KROHN

Number of employees by size of business, South End, 2014



The Burlington South End Market Study, prepared during Phase One of this planning process, identified some of the important trends and issues that are shaping the South End today, and that will continue to drive this important economic district. These trends include:

Growth in the "New Economy" sector. Industries focused on technology, traditional and industrial arts and design, research and development, and small-scale artisanal and food manufacturing have been fueling the economic evolution of the South End. These creative industries are making their home among the industries that currently exist, and are likely to continue to be important sectors of the South End's economy. Growth in this "New Economy" should be planned carefully, as the South End is already witnessing the impacts of its evolution, including:

- Demand for spaces that combine industrial AND retail operations is strong and growing. These include businesses like breweries with tap rooms, prototype facilities that welcome shoppers and offer tours, and artists' studios with retail space. As a result, industrial rents are $2.20/SF higher in the South End than in Chittenden County as a whole, reflecting the appeal of the South End for blended industrial/ retail operations.
- Office rents that are comparable to downtown are a result of the desirability of the South End to businesses in search of office space that want to be part of the emerging and eclectic vibe of the district, and want to take advantage of its resources, like availability of parking.
- Increasing difficulty in finding affordable and available space for businesses that are looking for traditional warehouse/manufacturing space, and for artist and small startups that are looking for inexpensive spaces in which to launch and grow.

An evolving economy and workforce that supports mixed uses. The "New Economy" is no longer about large spaces with few workers. Many former manufacturing spaces have evolved into workspaces that look and function like offices, bringing with them far more workers and types of activities than the traditional uses. These redefined spaces are

PHOTO BY LEE KROHN

simultaneously driving the increased diversity of jobs in the South End, and contributing to its gentrification by creating a demand for:

- Opportunities for collaboration, both within companies themselves and among businesses and industries. The adaptive reuse of some buildings has allowed for a variety of businesses to share resources, space and ideas and to work together on innovative solutions for their industries and the community.
- Retail, entertainment and service uses which are being introduced into the South End in response to a demand from workers and nearby neighbors who are looking for places to eat, shop, exercise and socialize within walking distance.

A demand for housing in the South End to accommodate a growing workforce. As there is throughout the City, there is a significant demand for housing in the South End to support the workforce's ability to live near their jobs and in an area with a high quality of life.

- Housing scarcity and affordability issues, which are confronting both the City and the region, are well-documented. But development economics and land use regulations present significant barriers to creating new, and a more diverse, housing types near significant South End employers.
- Employees of South End businesses, many of whom are commuting from housing outside of the City, are forced to drive and park, adding to traffic congestion and spill-over parking in residential neighborhoods.
- These factors are having an increasingly negative effect on businesses throughout the South End, and individual businesses' ability to attract talented employees to their companies and to the area. However, the demand for new housing has the potential to further threaten the availability and affordability of space for new and growing South End businesses. As a result, for more than two decades, City policy and regulations have prevented any new housing from being created within the Enterprise District.

Cities around the world have experienced similar trends, witnessing the transformation of former industrial districts into places where the "New Economy" is flourishing. These places have been defined and carefully planned for as "Innovation Districts." These districts are compact, mixed-use, sociable places. They utilize an array of economic, physical and networking resources to drive more sustainable, collaborative economic development. And, they are living laboratories, building and testing solutions to help evolve businesses and strengthen communities.

The South End has evolved over time in a somewhat organic manner; today it is home to many of the resources and activities that are found in innovation districts. The trends, however, point to the reality that the demand for space across all industry sectors in the South End exceeds the current supply. The Enterprise District is at an important juncture, one at which we need to rethink land use policy and economic development strategies to ensure that the arts, industry and creative enterprise can continue to coexist without putting one another at significant risk.

To this end, finding creative solutions to increase the supply of space for these activities must be a central focus of this plan in order for the district to thrive. There are a finite number of potentially developable parcels within the South End. In order to meet the needs of new and expanding businesses, policies are needed that unlock the potential of underutilized land through higher-density, more compact development. In addition to other economic development programs and policies, a key step to achieving this potential is to explore finer-grained land use policies that balance the preservation and continued evolution of the South End's economic landscape.

As we look toward the future, we must be sure to **preserve what makes the South End great**—its character and authenticity—while also working to **enable and facilitate its continued evolution** as the City's arts, innovation and enterprise district, in which a diversity of businesses and job opportunities are located.

planBTV South End outlines a strategy to:

- preserve and support the character of the South End by redefining the one-size-fits-all approach to land use regulation
- recruit additional investment, jobs, and people to ensure its sustained vitality by increasing space and rebuilding important infrastructure
- continue to provide a platform for innovation and enterprise to take root and grow through creativity and collaboration

Strategies for a Creative & Vibrant Economy

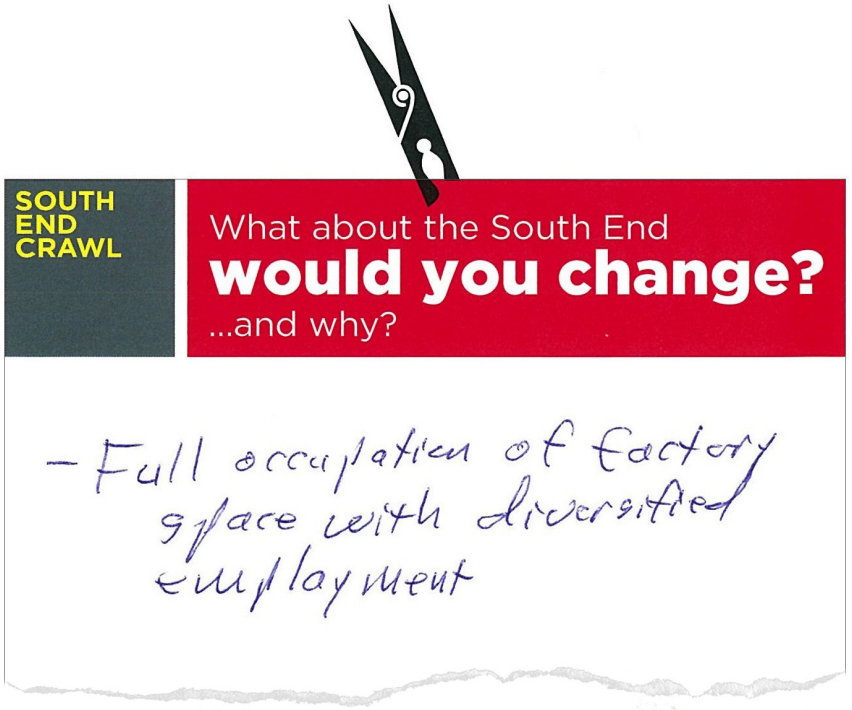
ADVANCE LAND USE POLICY CHANGES TO PRESERVE AND EXPAND THE VALUE OF THE SOUTH END TO THE CITY.

Land use policy and regulation must evolve from a one-size-fits-all approach to one that recognizes the unique and varied character of the South End, and prioritizes strategies that will preserve and enhance those characteristics. This strategy supports the protection and expansion of the Enterprise Zone's creative enterprise, manufacturing, business and arts sectors, while also identifying the need to find creative solutions to minimize conflicts with nearby residential areas and natural resources.

Evaluate possible changes to the Enterprise Zoning District that will reflect and enhance the experiences created by the built environment and types of activities within and around the district. These changes should recognize the variation in character throughout the district, and consider the relationship of the Enterprise Zone to its neighboring residential areas.

A more fine-grain approach to land use regulation within the Enterprise Zone will guide future growth, redevelopment and/or reinvestment in such a way that the arts, industry and creative enterprise can continue to coexist—alongside strong and desirable residential neighborhoods and important natural resources. Revised zoning regulations will address how and where to concentrate and support the arts and artists more directly; where the emerging creative and innovation economy can grow and flourish, and where more traditional manufacturing businesses can continue without direct competition from more sanitized development and land uses.

These changes should reflect the South End's characteristics, as discussed in this plan, and incorporate guidance on urban design, types of land uses, integration of transportation facilities and other infrastructure. Furthermore, any changes to the Enterprise Zone should be considered together with the Housing section of this plan's recommendation to evaluate the appropriateness of the zoning of properties within walking distance of the district.



Utilizing this guidance to shape a more fine-grain land use regulation within the Enterprise Zone will result in more predictable infill and development outcomes, clearly communicating what should be preserved and where new things can happen. Furthermore, it will support the growth and expansion of existing businesses while accommodating creative enterprises and innovation, and help to mitigate potential impacts on nearby natural resources and residences.

Consider a range of land use tools that could be used to guide the future growth and redevelopment of the Enterprise Zone; advance specific proposals for desired zoning changes.

Department of Planning & Zoning, Community & Economic Development Office

INCREASE SPACE AND REBUILD CRITICAL INFRASTRUCTURE IN ORDER TO SUSTAIN AND RECRUIT INVESTMENT, JOBS, AND PEOPLE TO SUPPORT THE SOUTH END.

Throughout the planning process, it has been clear that one of the major challenges impacting the South End is the ability to keep up with the demand for space across a broad range of business scales and types.

Encourage the redevelopment of under-developed sites to create new opportunities for businesses. Infill and new development can expand the stock of available space, as well as provide more variety in the size and types of spaces available.

Work with property owners to identify barriers to, and discuss potential strategies for, redevelopment of key sites.

Department of Planning & Zoning, Community & Economic Development Office, property owners

Facilitate the adaptive reuse of existing buildings in ways that keep them available to existing and potential businesses, artists and fledgling entrepreneurs. Reuse of these facilities can help maintain the character of the South End, maintaining affordable space over new construction, while also allowing for its continued evolution.

Foster collaboration among land owners and tenants to find opportunities for adaptive reuse of structures that will ensure long-term viability and affordability.

Department of Planning & Zoning, property owners, tenants

Re-build critical infrastructure to facilitate the continued evolution and expansion of businesses, set a high standard for environmental protection, and increase safety for all modes of transportation.

Implement plans for expanded street connectivity, improved pedestrian and bicycle infrastructure, and stormwater.

Dept. of Planning & Zoning, Community & Economic Development Office, Dept. of Public Works, Dept. of Parks, Recreation & Waterfront, CCRPC, property owners

Create new and diverse housing opportunities within walking and biking distance of the Enterprise District to address the demand from the South End's workforce, and create places where employees can live in close proximity to where they work. ***(See the "housing" recommendations)***

Consider the future role of the Shelburne Road corridor in accommodating the City's ongoing needs for transportation, housing, and employment opportunities.

Advance a Shelburne Road corridor study and implement recommendations of the regional ECOS Plan and City Council Housing Action Plan; ensure the study is broad in its evaluation of transportation and land use opportunities

Dept. of Planning & Zoning, Community & Economic Development Office, Dept. of Public Works, CCRPC

PRESERVE THE SOUTH END AS A PLACE WHERE INNOVATION AND ENTERPRISE CAN TAKE ROOT AND GROW.

The South End has long been an economic driver for the City. Strategies should focus on preserving what makes the South End great, while allowing for its continued evolution.

Prepare an economic development plan/strategy for the South End. This strategy should consider the businesses, employees and resources available today, and the needs of existing and prospective businesses in the future. If this is included within a city-wide economic development strategy, the role of and opportunities for the South End should be clearly identified.

Prepare an economic development strategy; identify specific opportunities for the South End.

Department of Planning & Zoning, Community & Economic Development Office, elected leadership

Expand the economic development toolbox available to support growth. There are many barriers, but relatively few tools available to assist the City, property owners, and businesses in advancing economic development objectives in the South End. Using an economic development strategy as a guide, the City can look for ways to expand upon its existing economic development tools. Some opportunities could include:

- **Expand the financial tools available from state and regional resources to support development of new facilities,** including grants, new economic development programs, or state designations that can enhance allocation of public resources. Work cooperatively with state government and regional development entities.
- **Continue to provide technical assistance to businesses,** including new enterprises and existing operations, who are seeking space in the South End. Help identify potential space; provide succession planning assistance to existing businesses and property owners; and assist businesses with navigating the city/state permitting processes.
- **Provide workforce training support** by working with local schools, colleges and universities and other regional institutions to ensure educational programs are preparing the workforce for the jobs of the future.

CEDO has a legacy of providing a range of support and assistance to businesses in Burlington, and in particular, those in the South End. This strategy is about expanding the resources available to support South End employers, which are critical to the economy and provide important jobs and services to our region. Funding and capacity to provide these services are limited, so creative partnerships may help the City achieve its economic development goals in the future.

Work cooperatively with state government, regional development entities, and local businesses, foundations and educational institutions to expand financial and strategic economic development tools; ensure sufficient resources are available to support these activities.

Dept. of Planning & Zoning, Community & Economic Development Office, elected leadership

Communicate the South End's unique character and advantages to potential future companies and enterprises that could locate in the district.

Continue and expand the "They Chose Burlington" campaign as a tool to tell the story about the South End when working to recruit, retain and grow the diverse mix of businesses in the district.

Community & Economic Development. Office, SEABA

ARTS & AFFORDABILITY

While the South End is home to an evolving landscape of businesses and jobs, it is also well-known as one of the City's arts districts. Thriving arts and maker districts contain a variety of uses and are in a constant state of motion—and the South End is no different.

As "urban pioneers," artists benefit from setting up shop in areas with low rents or high vacancy. Over time, as neighborhoods evolve, rising rents leave artists reacting to the forces around them instead of having the ability to control where they work and what they pay. **The Arts & Affordability Toolkit is an important resource and companion to this plan.** The Toolkit, (Appendix D) outlines a number of potential strategies that could be explored to help artists take the reins in determining the future of arts space in the South End.

IMAGE SOURCE: AS220.ORG

"I think we need to try and find ways for the artists to be able to do some kind of a co-op, gain financial control over their spaces so they're not at the whim of owners that decide to sell...to others who might be able to pay a little more." COMMUNITY COMMENT FROM PHONE BOOTH AT ARTS RIOT

Many of the strategies in the Toolkit discuss models for artists' ownership or partnership in the management of arts spaces. While it's certainly not the only strategy for preserving arts and affordability in the South End, it is an important one.

Ownership can be one of the most successful ways to ensure ongoing affordability. But being in control requires much more than simply owning space. The capacity to lead and manage the acquisition, development, programming, maintenance, and operations of a building is a must for any organization or individual interested in providing arts space. In a city of Burlington's size, the capacity to provide these spaces will depend on pooling a variety of resources and actors within and outside of the South End. And it's good business to pull in a variety of people and organizations—many of the skills and resources needed to acquire and manage affordable space go well beyond what most artists have the capacity to provide. Taking on responsibilities of real estate development or property management can be a big distraction from the making. On the flip side, owners and managers of commercial space may not have a thorough understanding of the current and future space and programming needs of an arts district.

The City of Burlington is committed to ensuring affordable artist and maker spaces are sustained and grown as the city and South End change. What can be done to keep things moving forward?

planBTV South End outlines strategies to support and grow:

- collaboration and continued support for organizations that can strengthen the arts district
- models of ownership/property development to address the affordability and availability of artist's space in the South End
- visibility and density of the district that brings customers and vibrancy

Strategies for Arts & Affordability

ENHANCE COLLABORATION AND SET UP FOR SUCCESS.

There are opportunities to strengthen the South End as an arts district through partnerships that combine a variety of arts, business and property management expertise.

Prepare an assessment of the economic impact of the arts and identify space/resource needs. This assessment should include an inventory of the current arts-related economic activity, supporting resources/infrastructure in the City today, and needs for the future. The role of and opportunities for the South End as an arts district should be clearly identified—what types of arts spaces and resources will be successful in an arts/maker/enterprise district.

Work with partners to prepare an assessment of the economic impacts of the arts; identify specific opportunities for the South End.

Burlington City Arts, Community & Economic Development Office, CHT

Form a Collaborative Working Group representing a broad array of skills and perspectives to support each other. Think of it as the "South End Maker Space Water Cooler"—a melting pot of ideas and relationships where conversations happen, ideas are born, and people are connected. What should it do? The Arts & Affordability Toolkit outlines some of the key players that should be involved in this working group and some of the critical first steps this group could pursue in order to expand space available for an arts district. A quick snapshot includes:

- **Gather South End artists & makers** in a discussion about their goals and needs for an arts district.
- **Gather South End property owners** to discuss their goals, worries, needs.

- **Create a Technical Assistance team of experts** in brownfields, finance, and property management and arts district programming to advise developers and arts entrepreneurs.
- **Engage landlords of artist space in honest (and difficult) conversations** about generational transitions and future plans.
- **Get the Burlington City Arts (BCA) market studies out there!** Developers and property owners need solid numbers to help them provide appropriate spaces.
- **Maintain a database of artists/makers with space needs** as a supplement to the market studies.
- **Publish the Arts & Affordability Toolkit** (an appendix to this plan) online and educate!
- **Think about capacity and leadership.** What needs to happen? Who can lead?
- **Don't get overwhelmed!** Pick one project, even if small, and focus on getting the system and capacity in place to succeed! Word on the street indicates a cooperative arts/maker retail space would be a great first goal.

Create a South End Working Group; write a mission statement, and set goals and a timeline for results.

Participants may include: SEABA, Burlington City Arts, Community & Economic Development Office, state-wide agencies and organizations, developers, property owners

Continue to support Burlington City Arts (BCA), South End Arts and Business Association (SEABA), and other arts organizations. BCA can play an instrumental role in ensuring South End artists continue to thrive and grow by offering mentorship and technical assistance. SEABA can lead the way locally, by engaging in collaborative relationships and participating in the recommended South End Working Group. BCA and SEABA will need to work closely together to achieve goals.

EXPLORE STRATEGIES FOR PRESERVING AND CREATING AFFORDABLE ARTIST SPACE.

There are opportunities to proactively preserve/create affordable artist space in the South End through partnerships that combine financial, technical and management expertise.

Evaluate models for preserving/creating affordable artist space. The Arts & Affordability Toolkit outlines a range of models that could be utilized to provide space. Each of these models presents its own benefits and challenges. These models, and properties that may be good candidates to deploy these models, are discussed in greater detail in the Toolkit:

- **artists/maker owned models:** common artists-as-owners structures include: an individual mission-driven artist as a developer; artist-owned spaces through a cooperative or an LLC; artist or non-profit organization joint venture with a developer; and arts organizations that own/lease space to others
- **non-profit and for-profit developers models:** artist space projects are complicated, and much needed expertise and resources can be gained by working with non-profit developers, for-profit mission-driven developers, or other for-profit developers
- **artist space through City actions models:** this could include a policy for affordable arts components of new development on City-owned land, or as a component of disposition and/or redevelopment of City-owned property

Use the Toolkit to evaluate sites/buildings which may be good candidates for new space. Use market data and results of the arts assessment to create a viable arts/maker business plan and approach developers; consider a city policy about arts space in public projects. (See page 116).

To be used by organizations such as South End Working Group, SEABA, Burlington City Arts, Community & Economic Development Office, property owners, developers

Create zoning and development regulations to help expand the supply of artist space. Zoning strategies can be used to encourage, or even require, new affordable spaces for production and display. However, a balanced, feasibility-based approach is important. Make the regulations too weak, the South End has lost an opportunity to expand its inventory of artist and maker space. But require projects to provide too much subsidy—either in the amount of artist/maker space or in the limits on rent or sales price—and a project could become financially infeasible. Regulatory strategies to consider are spelled out in more detail in the Arts & Affordability Toolkit, and include:

- **Consider incentives for new development projects to incorporate a portion of arts space** to ensure that the inventory of arts/maker space grows along with other uses. A typical range is 5-10% of the project square footage. This requirement could identify work space, performance/exhibit space, or space for public art on the ground floor/exterior of buildings. This requirement must be carefully informed by the City's development economics and the results of BCA's market study for new spaces.
- **Establish a process for verifying tenants/occupants,** when space is provided that is meant to be preserved as affordable or used exclusively by artists. This will help ensure the proper use of subsidized spaces and prevent gentrification/displacement of artists by non-artists within arts-specific projects.
- **Provide incentives for creation/preservation of arts space in existing commercial buildings.** Incentives could include: a code/regulations advocate that helps landlords understand what and how to improve spaces while retaining affordability; providing tax breaks or grants to offset costs of code compliance and upgrades without passing the costs of improvements to artist tenants; or, allowing increased density/infill on sites to help retain affordability.

Consider the appropriate zoning and development regulations to reinforce the South End as an arts district. (See page 40).

Dept. of Planning & Zoning, Community & Economic Development Office, Burlington City Arts, South End Working Group

EXPAND THE VISIBILITY OF THE ARTS DISTRICT TO PRESERVE AND ENHANCE ITS VIBRANCY.

Continue to incorporate the arts and the story of the neighborhood's history into the physical fabric of the South End. Strengthen the visibility of the arts by prioritizing the retention (and expansion where possible) of existing buildings to support artists and makers, and encourage creative use of building façades, public space and signage.

Implement the Parks recommendation of this plan to incorporate a Pine Street Arts Corridor and Linear Arts Park (See page 78) into the South End. Consider additional opportunities for self-guided tours/apps to communicate these stories.

Department of Parks, Recreation & Waterfront, Department of Planning & Zoning, Burlington City Arts, SEABA

Communicate the South End's unique character and advantages to potential and future arts and maker enterprises/venues and their visitors/consumers.

Continue and expand upon existing marketing, events, and infrastructure, like South End Arts Hop, to increase visibility and create a critical mass of resources and enthusiasts to support the district.

Efforts by SEABA, Burlington City Arts, Community & Economic Development Office

PHOTO COURTESY OF SMITHGROUPJJR

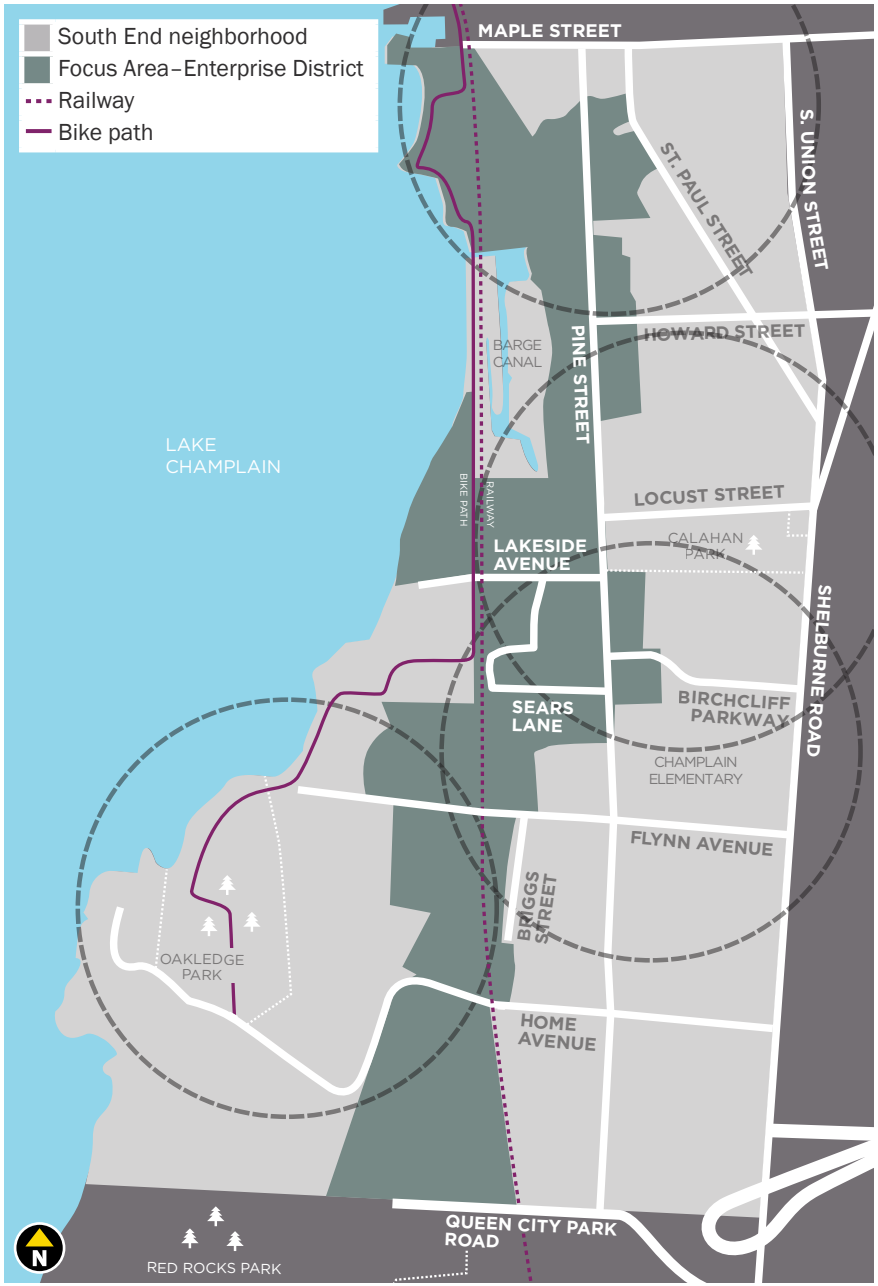
PHOTO CREDIT: HTTP://WWW.THISISCOLOSSAL.COM/2012/09/MUSICAL-SWINGS-ON-THE-STREETS-OF-MONTREAL/

HOUSING & THE SOUTH END

The plan recognizes that the Enterprise Zone does not have one distinctive character throughout, nor should the policies governing the entire zone be uniform. However, despite economic and demographic changes, the argument against allowing housing within the Enterprise Zone remains. Despite the bright lines depicted on the zoning map, the South End truly functions as a mixed-use neighborhood; it includes a commercial-industrial core flanked by thriving single- and multi-family neighborhoods. And this core has clearly distinguishable sub-areas, in which businesses feature a range of retail, office and industrial services.

Therefore, an important part of the planBTV South End process was to evaluate whether a single-use industrial zone is still relevant to the City's needs and the evolving character of the South End. The Planning process sought to answer questions about whether there are uses that are not permitted in the Enterprise Zone today that could be introduced in some locations.

Chief among these uses is housing. Housing is not currently permitted in the Enterprise Zone. The case for and against housing within the core of the South End has been debated back and forth, and our community is passionate about this topic. It is increasingly difficult to make the case that all housing should be excluded from the Enterprise Zone in light of the regional and city-wide housing shortage, the economic and environmental importance of locating housing close to South End workplaces, and the fundamental shift in the relationship of home and work in the new American city. So planBTV South End set out to answer the question, "Are there locations or situations in which some types of housing might be appropriate in some parts of the Enterprise Zone?"

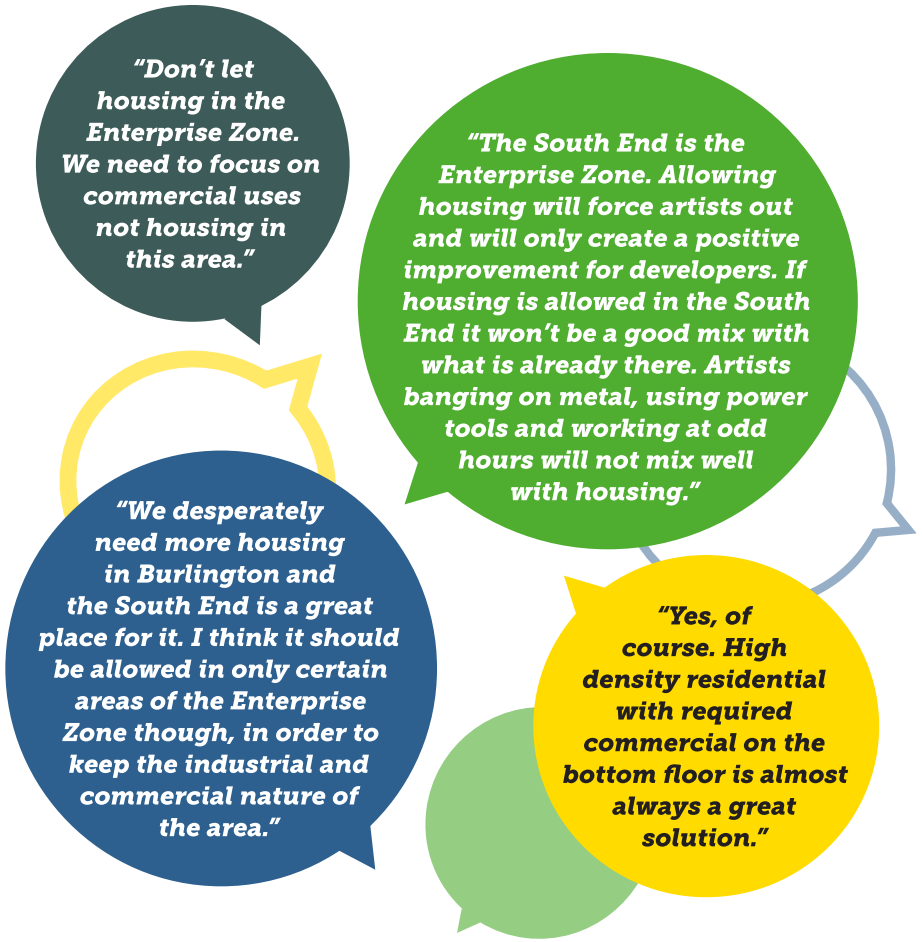


With the increasing demand for housing city-wide, and the steady appeal of the South End as a place to live and work, the conversation about new housing in this part of the City is an important one. More housing in the South End could bring benefits for all of us, including:

- More housing choices for people at different stages of their life, so "empty nesters," young workers and couples, and others looking for smaller, apartment-style units with lower monthly costs and maintenance burdens have options without leaving the South End, and to support the mixed-use character of the district.
- More spending power focused on neighborhood businesses, supporting a strong hyper-local economy.
- More trips that can be taken on foot or via bike, so area businesses would need less parking for customers and employees.
- Additional neighborhood density to support increased investment in neighborhood infrastructure, such as sidewalk and bikeway improvements and increased transit service.
- A more resilient economy that keeps workers and business in Burlington and Vermont, because without ample housing at prices workers can afford, Burlington—and the South End economic hub—will face challenges in attracting and retaining businesses.
- New development and redevelopment of underutilized sites, utilizing the revenues of residential development to bring additional amenities and space to the South End that may not otherwise be economically feasible.

However, we heard a lot of opinions about this. The primary concerns from those who do not support housing in this part of the South End include:

- New housing could conflict with industrial and commercial activities. The Enterprise Zone has long been a manufacturing district where housing is prohibited, and the one place left in the city where industrial activities are still allowed by local zoning. These kinds of activities



Community comments from the planBTV South End webtool.

typically come with loud noises, unpleasant odors, and truck traffic. While some of these impacts can be mitigated, housing can be a tough fit and ultimately make it more difficult for businesses to operate.

- Housing might contribute to the already rising rents and property values. However, the South End is already an expensive choice for traditional industrial/manufacturing enterprises, with higher rents than elsewhere in Chittenden County. This reflects the South End's appeal to businesses that combine industrial and consumer-facing operations—e.g., breweries with tap rooms, prototyping facilities with retail shops, commercial kitchens with cafés, studios that incorporate gallery or shop space—and are, therefore, willing to pay higher rents for industrial space. Housing isn't the only culprit squeezing out manufacturing. But adding more higher-paying uses within the Enterprise Zone could further erode the South End's position as a traditional manufacturing/light industrial area—perhaps threatening the businesses that rely on this low-cost space. This is especially true for small entrepreneurs and artists who rely on low-cost space to make ends meet.

Following much debate around the housing question, planBTV South End does <u>not</u> recommend zoning changes to permit housing in the Enterprise District at this time.

At the end of the day, the Enterprise District is about manufacturing and small businesses. Supporting these activities and the affordability of incubator space is the central focus of this plan. Some see new housing as essential to business sustainability, while others see it as a threat.

planBTV South End supports a continued community conversation about appropriate locations and types of housing within the South End neighborhood.

Several of the strategies in the accompanying Arts & Affordability Toolkit suggest creative housing models and mechanisms for preserving affordability; these strategies could be utilized both within and outside of the Enterprise Zone as the conversation about appropriate housing locations and types continues.

We recognize that opinions on this topic are likely to continue to be divided--and all of these opinions are valid. The benefit of the community conversation had in the *planBTV South End* process is that it added momentum to the development of more nuanced and creative solutions that move away from one-size-fits-all solutions, to respond to the perspectives that come from both sides. Burlington must create the land use policies and zoning tools to manage and control the type and extent of housing development in ways that avoid negative impacts that some community members fear, while capturing the positive economic and environmental benefits of an expanded housing supply for a growing workforce. Conversations like this must continue, as should the evaluation of city-wide needs for housing—including the location, unit types, and price points—and appropriate solutions for neighborhoods like the South End.

Therefore, planBTV South End outlines a strategy that is consistent with the housing goals in the City's Municipal Development Plan, to:

- Develop new and infill housing where the zoning presently permits housing, in order to realize the environmental and economic benefits of a diverse range of housing options.
- Utilize strategies for economic development and mobility to further strengthen the relationship between the residential areas of the South End and the Enterprise Zone, and protect the unique, mixed-use nature of this neighborhood.
- Utilize partnerships and creative ownership models to protect the affordability of housing in the South End—both existing housing stock and new units that could be developed.

Strategies for Housing in the South End

INCREASE SUPPLY AND DIVERSITY OF HOUSING IN THE SOUTH END.

Develop housing outside of the Enterprise Zone, where it's currently allowed by zoning. Consider sites that could be redeveloped, or that may be appropriate for infill housing, such as the school district maintenance facility behind Champlain School; the church site at Pine & Flynn; South Meadows; and commercial parcels on St. Paul, Shelburne and South Champlain Streets. Encourage development in locations which will diversify the housing types in the residential areas of the South End, strengthen the neighborhood's mixed-use character and support increased frequency and investment in transit and bicycle/ pedestrian infrastructure.

Initiate conversations with land owners to gauge interest in potential redevelopment and to identify potential barriers. Implement recommendations of the Housing Action Plan.

Department of Planning & Zoning, Community & Economic Development Office

Evaluate the appropriateness of zoning of sites adjacent to the Enterprise Zone. Explore opportunities for redevelopment or expansion of underutilized sites and buildings that are constrained by low-density zoning designations, such as the Champlain School site and other properties along Pine Street and near the Flynn Avenue intersection. Consider the zoning of properties around the Enterprise District, or the use of overlays for properties within and outside of the Enterprise District, which can help provide a transition and mitigate potential conflicts between the Enterprise Zone and residential neighborhoods.

Study the current uses and redevelopment potential of sites adjacent to the Enterprise Zone for potential rezoning to promote higher density residential or mixed uses; consider opportunities for zoning overlays to mitigate impacts of incompatible neighboring uses.

Department of Planning & Zoning, Planning Commission

Explore partnership opportunities and housing models which will advance the development of affordable and workforce housing in the South End. Using the case studies in the Arts & Affordability Toolkit as models, work with property owners, developers and non-profits to identify opportunities for increasing the supply of housing units to all income ranges, but particularly units which could be affordable and desirable for South End employees, artists and area young professionals.

Study the present housing supply and demand for the City, determine the appropriate market segments that could be developed in the South End, and identify feasible mechanisms for preservation of affordability for housing in the South End.

Department of Planning & Zoning; Community & Economic Development Office; property owners & developers; non-profit housing organizations; SEABA; South End residents

CONTINUE THE CONVERSATION.

Continue community discussion regarding housing in the South End. Continuing this discussion will be important to ensuring that the rules for future development in the South End match community needs. As our community and its neighborhoods continue to evolve, it is necessary to periodically revisit land use and zoning policies to ensure that change is sustainable and occurring in the appropriate locations, including within the Enterprise Zone.

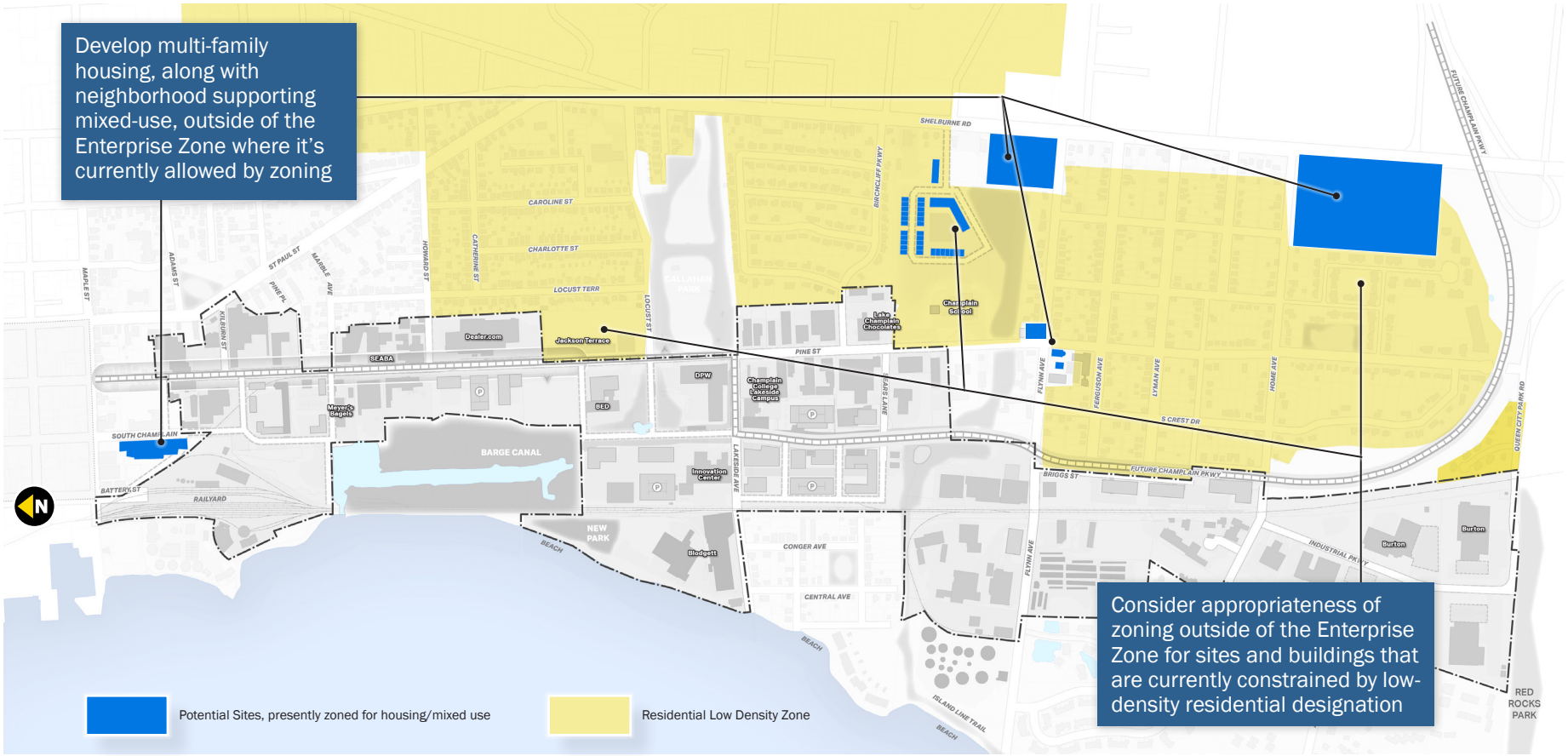
Provide forums for continued community discussion and information sharing as part of efforts to update zoning, implement partnerships and facilitate redevelopment.

Department of Planning & Zoning; Planning Commission; property owners; SEABA; non-profit housing organizations; South End residents

Monitor the impact that development and policy changes have on the South End and the Enterprise Zone. As new development and redevelopment takes place within the South End, it will be important to utilize planBTV South End as a benchmark to evaluate change. Increased housing density can have many and varied impacts on the character, infrastructure, economics, environment and sustainability of a neighborhood—both positive and negative. Analysis of these impacts should inform further activities which take place in the South End, and be informed by other city-wide and regional housing strategies.

Periodically provide updates on the conditions of the neighborhood to evaluate whether the changes taking place in the South End are achieving the desired outcomes.

Department of Planning & Zoning; Community & Economic Development Office



The creative project by Bren Alvarez and Julie Campoli explored South End sites that could accommodate mixed-use infill development. The Jackson Terrace apartments was one site that was re-envisioned to include inviting community uses on the ground floor, such as studio space, with first floor apartments relocated to a second floor addition. Additionally, the project envisioned a "sixth sister" street, between Jackson Terrace apartments and Locust Terrace that could accommodate infill housing and/or live-work spaces, connecting the Five Sisters neighborhood and the Pine Street Arts District.

RENDERING OF RE-IMAGINED JACKSON TERRACE APARTMENTS ON PINE ST BY BREN ALVAREZ

NEIGHBORHOOD PARKS & OPEN SPACES

The South End has fabulous open spaces. From its waterfront amenities including beaches, Oakledge Park, and the Island Line Trail to Calahan Park, South Enders frequently visit their neighborhood parks and open spaces. But some of these destinations can feel tucked away, hard to get to, or—like the Barge Canal site—ill-equipped for public use. There are opportunities for additional parks and public places in the South End, and for better connecting and utilizing the neighborhood's existing amenities. Improvements and additions to the current stock of open spaces will not only continue to support this lively neighborhood, but will help advance some other important planBTV South End goals for stormwater management and reimagining brownfield sites, and will be guided by the recommendations from the City's first-ever Parks, Recreation & Waterfront Master Plan.

planBTV South End outlines a strategy to:

- create new parks and public spaces and enhance current open spaces to meet more needs of the neighborhood
- increase connectivity to neighborhood open spaces

IMAGE COURTESY OF GROUNDVIEW DESIGN

Strategies for Parks & Open Spaces

CREATE AND ENHANCE NEIGHBORHOOD PUBLIC SPACES.

planBTV South End calls for new or improved parks and public spaces to serve this nature and city-loving neighborhood. Together, they'll equip the South End with a new urban wild, and will bring the creativity and spirit of the South End to the street. They'll help energize Pine Street, provide new places for events and happenings and better connect the diversity of neighborhood resources.

Establish the Barge Canal park, transforming the Barge Canal Superfund site into a publicly-accessible urban wild—an open space destination for passive recreation uses which celebrates the industrial heritage and educates the community on the ecological sensitivity of the site. Any recreational use of this site should be designed with extreme sensitivity to the site's history and ecological constraints, and could potentially incorporate interpretive signage, art and trails. Trails may need to be constructed as boardwalks in order to minimize any impact on the site.

Utilize the Brownfields Area Wide Plan for step-by-step guidance on how to pursue the clean up and reuse of the Barge Canal as a publicly-accessible open space; Utilize the Parks, Recreation & Waterfront Master Plan for guiding principles for park design.

Community & Economic Development Office; Parks, Recreation & Waterfront Department; Planning & Zoning Department

Explore potential for a new public waterfront park, boating access, and expanded waterfront bike path at the Blodgett site. As plans for the reuse of the site evolve, work with the property owner to identify opportunities for part of the site to be utilized for a public park and/or for an extension of the bike path along the waterfront between the Barge Canal and Lakeside neighborhood.

Work with the property owner to identify opportunities for public access to the Blodgett beach.

Community & Economic Development Office; Parks, Recreation & Waterfront Department; property owner

Create a Linear Arts Park along Pine Street, featuring interactive sculptures, murals, creative use of landscaping and more, both along the street edge and in front of Pine Street buildings. Utilize this as an opportunity to increase neighborhood green space, reinforce the character of the South End, and as an important piece of an innovative, connected stormwater management system.

Develop a Linear Arts Park Implementation Plan, a segment of Pine Street that identifies locations for installations, establishes a process and criteria for selecting/ commissioning work, identifies potential funding sources, and engages local property owners and artists in shaping this initiative.

Burlington City Arts, South End Arts & Business Association, Department of Public Works

Incorporate pocket parks, plazas and other open spaces into new developments in the Lakeside Avenue area. As sites redevelop and a greater critical mass of innovative business activity is taking place in this area, these spaces will encourage collaboration and connection. They should be designed to accommodate events or informal use, can showcase innovations in tech, art and other maker industries, and can double as stormwater management elements utilizing best management practices.

Encourage property owners/ developers to incorporate pocket parks, plazas and other open spaces that will reinforce the feeling of an innovation district in the South End.

Department of Planning & Zoning; Public Works Department, Burlington City Arts; Property Owners

Explore the potential for a South End community center providing indoor recreation opportunities and neighborhood gathering spaces, potentially as an addition to the Champlain School. In addition to recreational and community uses, this space could also be used to advance Economic Development goals by hosting continuing education and workforce development programs.

Continue to explore potential for a South End community center.

Parks, Recreation & Waterfront Department; Community & Economic Development Office; Burlington School District

INCREASE CONNECTIVITY TO NEIGHBORHOOD OPEN SPACES.

Getting to parks and public spaces on foot or via bike should be safe and easy! In addition to providing transportation choices to South End residents, new and improved biking and walking connections will make it easier to enjoy the neighborhood's diversity of open spaces.

Create a new entrance to Calahan Park along Pine Street, improving access and opening up the Park's activity on a less-than-exciting stretch of Pine Street. This offers an opportunity to better connect the neighborhood's resources along a more walkable, bikeable Pine Street.

Identify opportunities for an additional entrance to the park from Pine Street.

Parks, Recreation & Waterfront Department; Public Works Department

Address weak and missing links in the sidewalk network that connect residents to open spaces. Lack of sidewalks along parts of Lakeside Avenue and Pine Street, most of Industrial Parkway, and all of Sears Lane can make routes to South End open spaces less than welcoming for those arriving on foot. Better sidewalk conditions with green buffers are needed along Flynn Ave, Home Ave south of Batchelder Street, and along Pine Street between Calahan Park and Champlain School. Additionally, explore opportunities for crosswalks on Blynn and Home Avenues between Pine Street & Shelburne Road.

Explore ways to advance planBTV South End's Connectivity & Mobility recommendations. Secure funding to implement important links.

Department of Public Works; Parks, Recreation & Waterfront Department

Seek opportunities to create new ped/bike links from Pine Street to Lake Champlain as part of the Barge Canal park. Opportunities for better connections to the Lake are highly desired by neighborhood residents. Within the Barge Canal site, establish paths as elevated boardwalks if needed due to ecological constraints of the site.

Utilize the Brownfields Area Wide Plan for step-by-step guidance on how to pursue the reuse of the Barge Canal as a publicly-accessible open space.

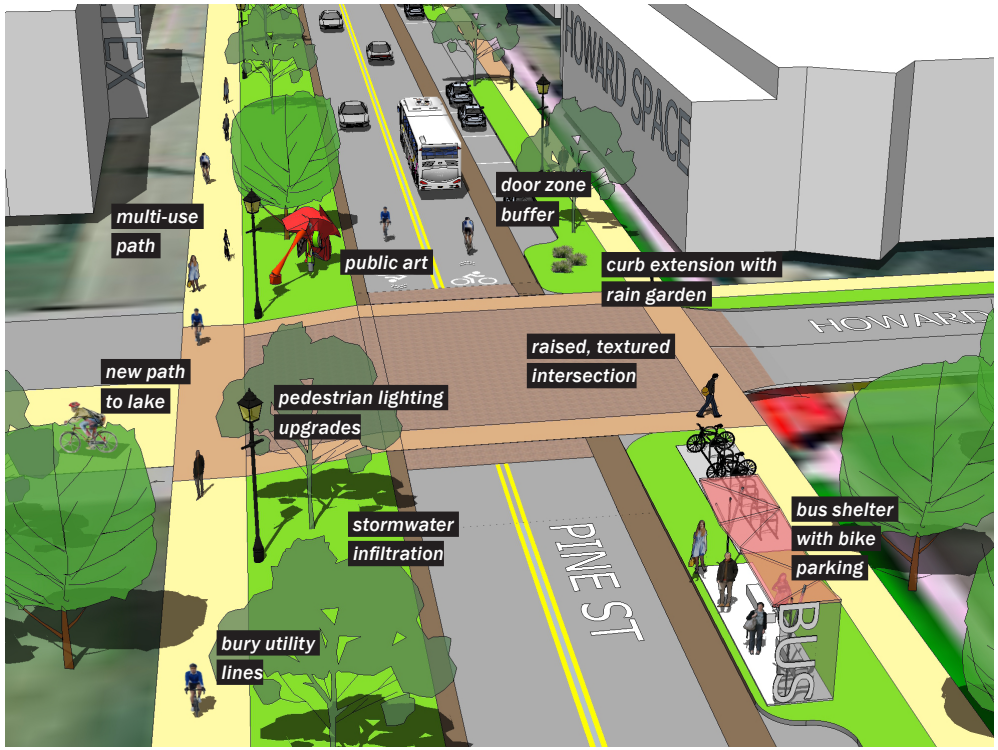
Public Works Department; Community & Economic Development Office; Parks, Recreation & Waterfront Department

CONNECTIVITY & MOBILITY

The South End has seen an influx of jobs, people and activity which led to an increase in traffic of all kinds—not only people in cars, but people walking and biking to the South End as well. In fact, pedestrian counts at key intersections have increased by almost 3 times since 2005! With this growth in activity, however, we've seen a rise in traffic and safety challenges that we must address. With Pine and Shelburne Streets as the only north-south through streets in the South End, it is not uncommon for traffic to crawl along Pine Street as people leave their jobs to head home for the day. And, we've seen the frequency of crashes between cars and bikes or pedestrians along these routes increase as well.

In recent years, the City has made improvements in the South End to address some of these important challenges. Pedestrians now benefit from greater visibility when crossing major streets with the addition of Rapid Flashing Beacons. The intersection of Pine Street and Lakeside Avenue has been improved with a new traffic signal and better bike lane markings. But there's much more we can do to improve the safety and connectivity of our transportation networks in the South End.

Throughout the planBTV South End process, community members emphasized their desire for enhanced walkability and bikeability along South End streets and at intersections, as well as for enhanced transit service. Additionally, those who live and work in the neighborhood are looking for more options for getting to their favorite businesses, to the Champlain School or to the Lake. In short, South Enders want a less car-centric neighborhood. Creating a more inviting and connected environment for walking, riding a bike, and taking the bus is not just essential for getting to and around the South End—these improvements also strengthen the character of the neighborhood, boost its economic development potential, and make it more environmentally sustainable.



Pine Street at Howard Street, showing improvements that could make this street a better, safer place to bike, walk, drive and catch the bus.

The Champlain Parkway design and the Railyard Enterprise Project studies continue to evolve outside the scope of the planBTV South End process. However, the challenges and potential improvements that these projects could bring must be considered as part of this plan.

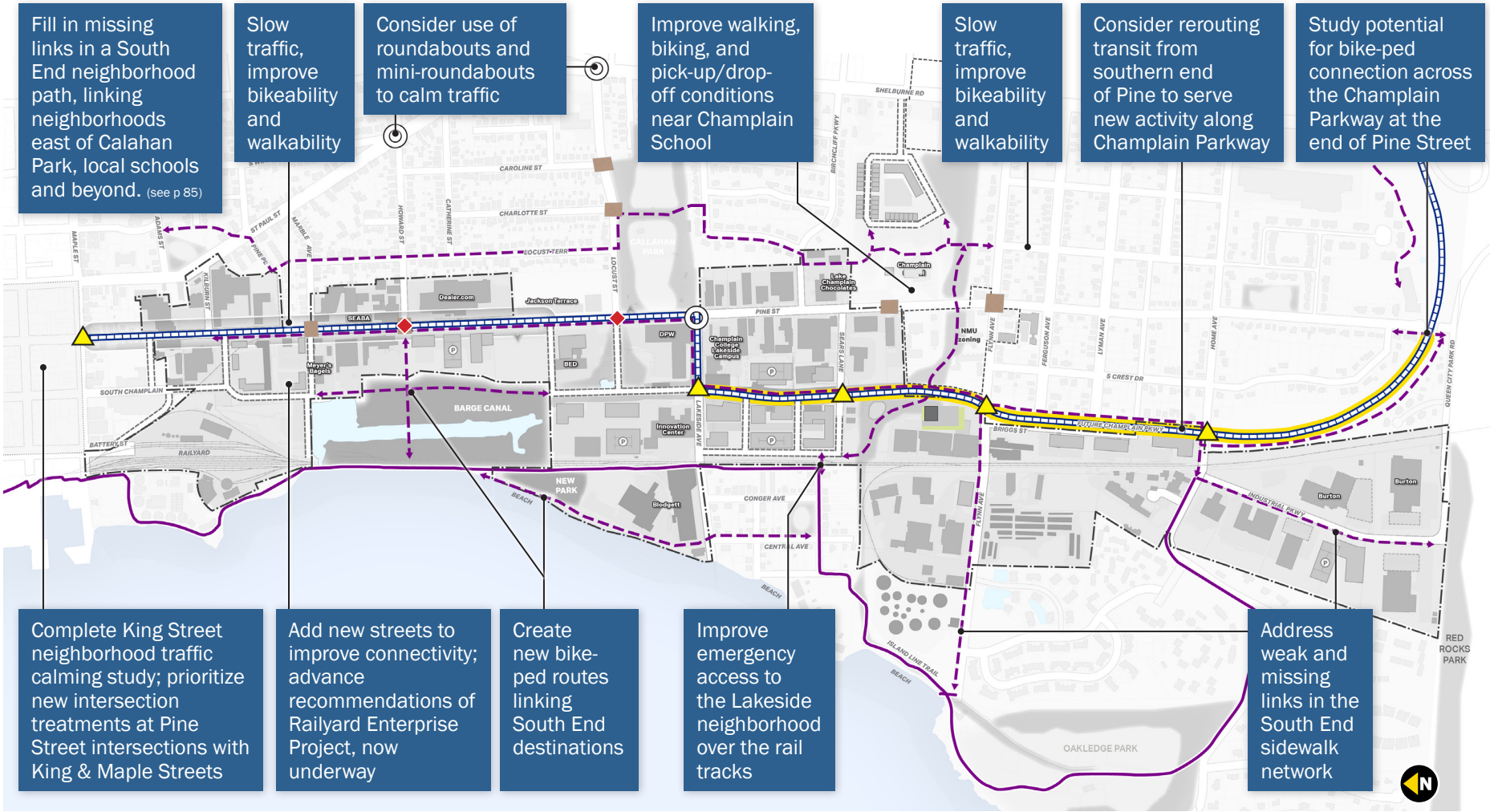
The Champlain Parkway's design—originally envisioned as a four lane divided highway that would run along the City's waterfrtont—has changed greatly over the past several decades. Today, plans for the Parkway not only consider new street connections, but also modifications to existing streets all the way from King Street to Queen City Park Road. It now includes design elements for slower speeds, facilities for walking and biking, greater connectivity to uses that need to be supported by vehicular and truck traffic, and sets up opportunities for traffic calming on nearby neighborhood streets. The Railyard Enterprise Project has emerged from several planning studies which identified the railyard as one of the largest underutilized areas of the City, with great opportunity for thoughtful redevelopment. Several alternatives are being studied for developing multi-modal transportation infrastructure that better connects Pine and Battery Streets, reduces impact of freight operations, improves connectivity with nearby residential neighborhoods, and supports economic development and mixed-use infill around the railyard area.

While there are many anticipated improvements from these projects, there are also many continuing concerns about the benefit that will be realized by these investments. In particular, the Champlain Parkway's design has attracted a wide range of support, criticism, and suggestions for alternative street design or use of the land. The City continues to work with state and federal agencies to identify future retrofits and improvements that can be made along the Parkway's corridor to expand its functionality.

Much like the bold vision for new street connectivity in planBTV Downtown & Waterfront, this plan envisions that new and retrofitted facilities that emerge from these projects will serve to better connect the neighborhood, reinforce an urban street network, expand multi-modal connectivity and support economic development goals for the South End. By implementing these goals, the South End can become less car-centric and the streets can become an extension of the neighborhood's character.

To realize the vision for the neighborhood, planBTV South End outlines strategies to:

- improve on- and off-street connections for walking and biking so that they're safe and comfortable for the full range of users
- expand infrastructure for all modes of transportation in order to address critical connectivity, traffic and parking challenges
- reinforce the character of the neighborhood by using our streets not only as places for moving people, but also to support adjacent land uses, and as a canvas for innovative stormwater systems and public art



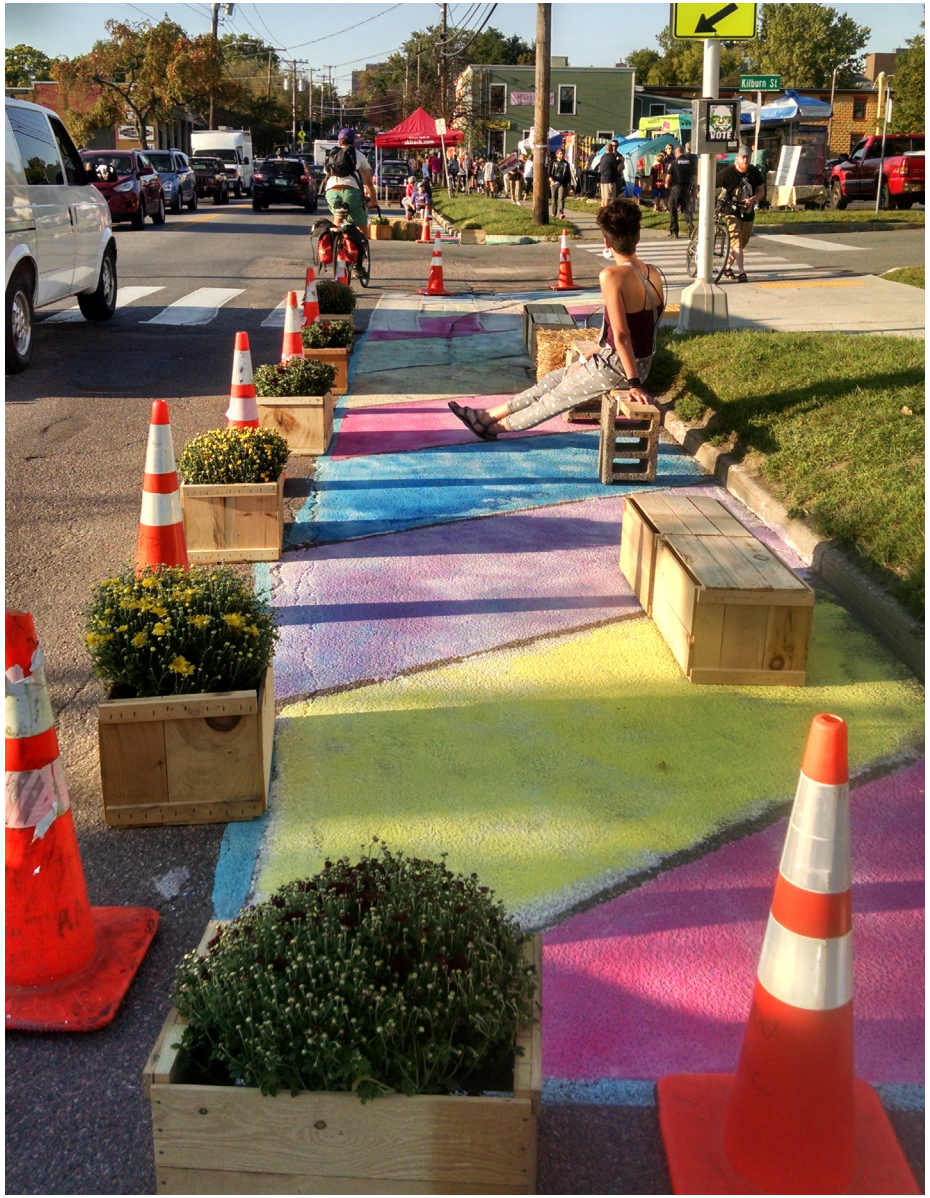
MAP LEGEND

- Focus Area
- Potential New Street Connection
- Planned Champlain Parkway Route
- Existing Bike Path/Bike Routes
- Proposed New/Improved Bike & Pedestrian Routes
- Potential Bus Route
- New Transit Stops with Bike Racks
- Raised/Textured Intersection/ Crosswalk
- Proposed Traffic Signal (as part of Champlain Parkway Plans)
- Intersections to Study for Potential Improvements

Strategies for Connectivity & Mobility

IMPROVE ON- AND OFF-STREET WALKING AND BIKING CONNECTIONS FOR THE FULL RANGE OF USERS.

A key element to reinforce the South End's identity as a mixed-use neighborhood is to ensure that there are safe, connected routes for people who walk and bike. Increased opportunities for walking and biking should be emphasized along the Pine Street corridor, and to connect neighborhood amenities, such as schools, parks, the Lake and other destinations. And, these connections are not only desirable for residents of the South End. Pine Street is a major commuter corridor; making it more friendly for people who walk and bike is attractive to employees of many South End companies, and helps reduce the pressure for more cars and parking as additional businesses start up in the neighborhood.



There are many opportunities to develop creative strategies to improve the South End's walking and biking infrastructure. Refer to the recommendations of the planBTV Walk/ Bike Master Plan (www.planbtvwalkbike.org) for more specific details.

PHOTOS COURTESY OF JULIE FLYNN.

Reinforce the target speed of 25 mph for all streets in the South End. People walking and biking are particularly vulnerable to higher speed traffic. Additionally, the design of streets and intersections can encourage vehicles to drive faster than posted speed limits, creating an uncomfortable environment for those walking and biking. We should update the City's Transportation Plan to expand the concept of target speed, and reinforce it through project design. Traffic calming principles should be incorporated into all projects, public and private, and should be emphasized along major streets such as Shelburne and Pine, near schools and parks, and in other locations as needed.

Leverage current street and corridor projects currently underway to advance these concepts.

Department of Public Works

Address weak and missing links in the South End sidewalk network. Lack of sidewalks along parts of Pine Street and Lakeside Avenue, most of Industrial Parkway, and all of Sears Lane can make routes to South End destinations unsafe and less than welcoming for those traveling on foot. Additionally, better sidewalk conditions with green buffers are needed along Flynn Avenue, Home Avenue south of Batchelder Street, and along Pine Street between Calahan Park and Champlain School. Additionally, explore opportunities for crosswalks on Blynn and Home Avenues between Pine Street & Shelburne Road. We should also consider improving locations where "informal" pedestrian paths have cropped up, particularly as a way to connect the South End's neighborhoods to nearby parks, the Lake and other amenities.

Further explore near-term and long-term improvements for the South End's sidewalk/path infrastructure as recommended in the planBTV Walk/Bike master plan. Secure funding to implement missing links.

Department of Public Works; Parks, Recreation & Waterfront Department

Develop a City policy on locating and designing mid-block crosswalks. Major streets like Pine with lots of pedestrian activity and lots of vehicular traffic would benefit from additional mid-block crossings. These crossings need to provide for pedestrian safety and be carefully coordinated with vehicular flows. Use of raised and/or textured paving and pedestrian activated signals should be considered.

Draft a policy statement regarding mid-block crossings.

Department of Public Works

Continue to expand and enhance bike infrastructure within the South End. The South End needs a range of cycling infrastructure, to reflect the range in ability and desired facilities of people who bike. The proposed off-street, shared-use path proposed by the Champlain Parkway is a start. We should also consider infrastructure such as protected bike lanes along busy streets like Shelburne Road, bicycle boulevards on neighborhood streets, additional bike parking at South End destinations and at bus stops, expanding the South End's network of bike and pedestrian links, and adding new links to access the well-loved Island Line Trail. And as we meet our goals for enhanced stormwater infrastructure, we can reduce barriers that make cycling uncomfortable—like puddles and temporary flooding that make some wary of bike commuting in the area.

Further explore near-term and long-term improvements for the South End's bike infrastructure as recommended in the planBTV Walk/Bike master plan. Secure funding to implement missing links.

Department of Public Works; Parks, Recreation & Waterfront Department

Establish a South End Neighborhood Path*—a neighborhood pedestrian and bicycle route linking residential areas to neighborhood parks, schools and other destinations. This route would provide a low-speed, low-traffic route for younger, older and less confident cyclists—and for those who prefer a lower-traffic walking and biking environment than Pine Street provides. The route will utilize a combination of a path through the school and park, and a bicycle boulevard on local, traffic-calmed streets for "low stress" biking.

**Note: The South End Neighborhood Path pictured throughout this plan is illustrative only, and draws upon the recommendations from the 2013 Champlain Elementary School Safe Routes to School Pedestrian & Bicycle Feasibility Study. Many of the connections do not presently exist. Particularly, it is acknowledged that the portion of the path illustrated to connect to Cherry Lane from Calahan Park is currently an informal path across private property with no public access at this time. Potential steps that would be necessary in order to formalize this path are outlined in the Safe Routes to Schools study, but are not the subject of this plan.*

Explore the potential for roadway treatments and connections of a route as part of the planBTV Walk/ Bike master plan.

Advance plans to construct elements of this route as recommended by the 2013 Champlain School Safe Routes to School study, and any applicable amendments.

Department of Public Works; Parks, Recreation & Waterfront Department; Community & Economic Development Office; Burlington School District

Improve walking and biking conditions at and to Champlain School. Pine Street between Lakeside and Flynn Avenue should be transformed into a complete streetscape that will encourage all to walk and bike more regularly to the school or to Calahan Park. Options for Pine Street could include a median for safer crossings, a streetscape with wider sidewalks, landscaped buffers, tighter corners at intersections, narrower driveways and narrower vehicle lanes. Additionally, a plan should be implemented to better manage school drop-offs.

Advance plans to construct speed tables and bulbouts along Locust Street and at the Birchcliff Parkway-Cherry Lane intersection; reactivate the Champlain Safe Routes to School Committee and update/expand the existing SRTS plan.

Advance plans to improve school drop-offs.

Department of Public Works, Champlain Safe Routes to School Committee, Burlington School District

Seek opportunities to create new pedestrian and bicycle links to Lake Champlain and the future Barge Canal park. Improve existing conditions along Flynn and Lakeside Avenues. Seek opportunities for new connections from Pine Street to the Lake, and between Lakeside Avenue and the future street connections to the north being explored through the Railyard Enterprise Project. Establish paths as elevated boardwalks if needed due to environmental constraints on the Barge Canal site.

Secure funding to improve existing links. Study the feasibility of new connections through the Barge Canal site as part of future plans to transform the site into a publicly-accessible open space.

Department of Public Works; Community & Economic Development Office; Department of Planning & Zoning; Parks, Recreation & Waterfront Department

EXPAND INFRASTRUCTURE TO ADDRESS CONNECTIVITY, TRAFFIC AND PARKING CHALLENGES.

Providing more options for people to get around the neighborhood is an important step in addressing the mobility challenges of the South End. New street connections, with intersections at a more regular interval, provide more opportunities for people to get to their destinations, reduce congestion on Pine Street, and support investments in multi-modal transportation options. And with more efficient and appropriately located parking and transit infrastructure, we can make sure that the South End continues to be a bustling place—without all the idling!

Add new street connections. Add connections where new city streets are being explored through the Railyard Enterprise Project and the Champlain Parkway, and where other connections are possible through the redevelopment of key South End sites around Locust/ Lakeside Avenue/Sears Lane (See page 72).

Amend the City's official map to include future connections.

Department of Planning & Zoning; Department of Public Works; Community & Economic Development Office; Vermont Agency of Transportation; Federal Highway Administration; City Council

Adopt land use policies that limit block size or perimeter, allowing future development flexibility in how it provides connectivity, but ensuring a well-connected urban street grid. These policies could help shape the evolution of the Lakeside/Locust/Sears Lane area, where new streets could help support a more connected South End, as well as in the area where new street connections are being explored as part of the Railyard Enterprise Project.

Revise development standards to ensure smaller block sizes where feasible if/when vacant lots are redeveloped.

Department of Planning & Zoning

PHOTO BY LEE KROHN

Address key intersections to improve safety and alleviate traffic congestion. Consider appropriate locations for new traffic signals, roundabouts or mini-roundabouts to address traffic congestion, and reinforce lower, safer speeds at intersections.

Explore potential for a redesigned intersection at Howard/St. Paul/ Winooski, where improvements could help foster an emerging neighborhood activity center.

Advance plans for a roundabout and other multi-modal improvements at Shelburne/Ledge Rd/Willard/St. Paul/Locust intersection.

Prioritize the implementation of an appropriate treatment to address traffic congestion at Maple/Pine intersection either in conjunction with or independent of the construction of the Pine Street section of the Champlain Parkway.

Department of Public Works

Conduct a Shelburne Road corridor study. This area could benefit from a focused corridor study exploring strategies for making it a more walkable, bikeable, crossable place and to help foster an emerging neighborhood activity center at the intersection with Flynn Avenue. Also included as an economic development strategy, this study could consider current and future land use, and potential development/ redevelopment sites.

Secure funding and determine a scope of work for the study.

Department of Public Works, Community & Economic Development Office, Department of Planning & Zoning, Chittenden County Regional Planning Commission; consult with City of South Burlington

Explore potential to increase transit frequency and improve service. Reducing wait times for the bus, extending hours of service into the evening, increasing utilization of existing service lines (such as the Champlain College shuttle), and better integrating bus service with other multi-modal systems will make transit an appealing choice for many more people. And, service improvements such as real-time bus arrival information will help South End commuters know exactly when the bus is coming—making it an attractive option to driving.

Work with CCTA to explore options for funding service enhancements.

Community & Economic Development Office, Department of Public Works, Chittenden County Transportation Authority (CCTA)

Provide appropriately-located, amenity-rich bus stop areas. Pine Street should be enhanced as a transit corridor, with attractive, well-lit, comfortable and accessible bus stops, bike racks for easy modal transitions, and the opportunity to turn transit hubs into "places." These transit stops could also include outdoor art, landscaping and other creative features to make them beautiful and to reinforce the South End's character. Well-designed stops will not only improve safety and comfort of existing riders, but can help increase ridership and send an important message that transit is important and worthy of investment.

Make bus stop enhancements a key component in other streetscape/ corridor improvement projects, and in grant applications for those improvements.

Seek design concepts from the community that can be integrated into transit stops. Identify possible funding sources for implementation such as Transportation Alternatives or the National Endowment for the Humanities.

Community & Economic Development Office; Department of Public Works; CCTA, Burlington City Arts

Continue to explore potential for transit-oriented park-and-rides or intercept lots. Consider development of a small transit-oriented park-and-ride or intercept lot where Burlington residents could drive to a LINK bus stop, and where inbound employees could park at a satellite lot and catch a high-frequency bus, walk or bike into the South End or Downtown. Such a facility should be designed to be multi-modal, and could replace informal area park-and-rides which have recently gone away or which are slated for other uses. Consult the 2011 Chittenden County Park-and-Ride & Intercept Facility Plan.

Identify potential locations for future park-and-ride or intercept lots; identify funding opportunities for high-frequency bus service

Department of Public Works, Community & Economic Development Office, Department of Planning & Zoning, CCTA, Chittenden County Regional Planning Commission

As part of the planBTV South End artist-led community engagement project, local artist Tyler Vendituoli designed and fabricated a bike rack sculpture with a vintage coin operated parking meter on each coil. Vendituoli created this sculpture as a commentary on how we get into and out of the South End, how space is at an increasing premium, and the challenge of parking with growth of the area.

Plan for parking. Parking is a growing challenge in the South End. As key sites redevelop, and new infrastructure is added, shared parking solutions, appropriately located and well-design parking structures, and a strong network of multi-modal options is strongly recommended. We can further define policies and strategies for parking and transportation demand management through a South End parking study.

Secure funding and determine a scope of work for the study.

Department of Public Works, Community & Economic Development Office, Department of Planning & Zoning

STREETS AS PLACES TO REINFORCE NEIGHBORHOOD CHARACTER.

Streets and other pathways are an important part of the South End. They provide the linkages to the neighborhood's key destinations, and the way they are designed can reinforce the neighborhood's identity, support the type of land uses that are desired, and perform other services—besides moving cars!

Incorporate stormwater management features into streetscapes. Many of the traffic-calming features and landscape buffers that are to be built into public rights-of-way can also be utilized for innovative stormwater management features to help address the amount and quality of stormwater runoff that has an impact on our receiving waters. Improvements to South End streets and streetscapes should incorporate the recommendations of the Stormwater element of this plan.

Implement stormwater management tools identified in the Stormwater element of this plan (See page 95) when South End streets are redesigned or new streets are constructed.

Department of Public Works

Continue to incorporate the arts into the physical fabric of the South End. Strengthen the visibility of the arts by utilizing public rights-of-way, bus stops, signage and other streetscape enhancements, where appropriate, as opportunities to incorporate public art and creative landscapes.

Implement the Parks element recommendation of this plan to incorporate a Pine Street Arts Corridor and Linear Arts Park (See page 78).

Department of Public Works; Parks, Recreation & Waterfront Department; Planning & Zoning Department, Burlington City Arts; SEABA

PHOTO COURTESY OF SEATTLE DEPARTMENT OF TRANSPORTATION

BARGE CANAL & BROWNFIELDS

The South End's industrial history left behind brownfields, sites with documented or potential soil and/or groundwater contamination from previous uses. Contamination has to be mitigated before these sites can be safely turned into something new and beneficial for the South End—more industrial or maker space, small offices or even open spaces. Remediating contaminated sites will both allow for new active uses to take place and improve environmental quality in the neighborhood.

The largest and best known of the South End's contaminated sites is the Pine Street Barge Canal site—a former coal gasification plant with such serious environmental issues it was designated by the federal government as a Superfund site. The Barge Canal site has a long history of clean-up, monitoring and planning efforts. Other brownfields scattered throughout the neighborhood have experienced varying levels of testing and remediation. More information about these brownfield sites is available in the South End Phase 1 Existing Conditions Report at ***www.planBTVSouthEnd.com***.

There are limited federal and state resources available to help with testing and clean-up, so prioritizing a course of action is critical. Which sites are most important to be redeveloped and which sites need the most help? What new uses are appropriate for these re-claimed sites and how can they contribute to achieving land use, urban design and development objectives?

planBTV South End outlines a strategy to:

- provide necessary assistance to support redevelopment of key brownfield sites
- continue to advance clean-up and reuse of South End brownfield sites

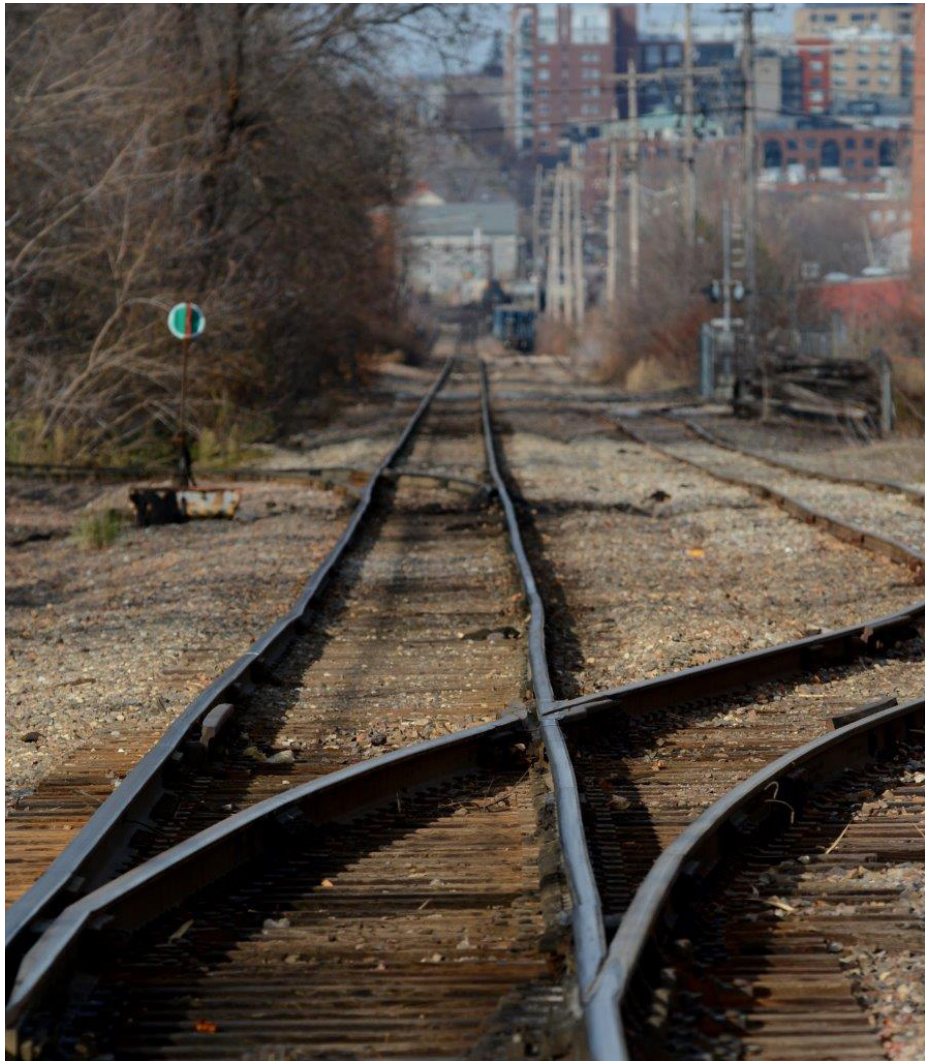


PHOTO BY LEE KROHN

Strategies for Brownfields

PROVIDE NECESSARY ASSISTANCE TO SUPPORT REDEVELOPMENT OF KEY BROWNFIELDS.

Planning, technical and financial assistance can be critical to helping owners of brownfield sites better understand the types of contamination on their land, assess the degree of remediation required, and take the steps involved in safely transforming sites into something new. Partnerships between CEDO, the federal Environmental Protection Agency (EPA) and the Vermont Department of Environmental Conservation (VT DEC) can facilitate the process of evaluation, remediation, and redevelopment.

Finalize plans underway for key South End brownfield sites. Through the Brownfields Area Wide Plan and the Railyard Enterprise Project (REP), the City is studying future opportunities for brownfield sites in and around the railyard and Barge Canal sites. The Brownfields Area Wide Plan serves as an implementation plan for the redevelopment concepts in this plan, and the REP. These plans identify future infill and redevelopment opportunities, evaluate options for needed infrastructure connections, and outline the steps to safely transform these sites.

Complete the Brownfield Area Wide Plan and Railyard Enterprise Project Alternatives Assessment.

Community & Economic Development Office, Department of Public Works, Department of Planning & Zoning

Provide technical assistance to owners of brownfield sites. Based on the extent of contamination and other factors, such as deed restrictions, owners face myriad remediation requirements and/or future land use restrictions. The City should continue to work owners of these sites to ensure they better understand contamination levels and have tools available for the clean-up and reuse of these sites.

Conduct further studies to quantify contamination and level of remediation.

Community & Economic Development Office, Department of Planning & Zoning, private property owners

Pursue federal and state funds for evaluation and remediation of sites. While remediation is possible for most sites, it drives up the cost of development. For priority brownfield sites, compete for funding assistance from federal Environmental Protection Agency (EPA) and Vermont Department of Environmental Conservation grants.

Complete funding application process. Complete studies and begin remediation efforts.

Community & Economic Development Office, Department of Planning & Zoning, private property owners

Complete remediation and begin redevelopment. Once sites have been appropriately remediated, implement redevelopment plans to return them to active and productive use for the South End. Additional technical and financial support may be needed to make these projects feasible.

Engage developers and designers to create plans that integrate environmental considerations into future reuse of sites.

Community & Economic Development Office; Department of Planning & Zoning; private property owners

CONTINUE TO ADVANCE CLEAN-UP AND REUSE OF SOUTH END BROWNFIELD SITES.

In order preserve and enhance the characteristics of the South End, this plan identifies potential redevelopment of and future uses for underutilized sites throughout the neighborhood—many of which are considered to be high- or medium-risk brownfield sites. Through additional planning and studies, opportunities for implementing planBTV South End's vision for these sites, and the reuse other properties, can be explored.

Prioritize the reuse of the Barge Canal site and the land around it. Continue to study opportunities for transforming the Barge Canal site into a publicly-accessible open space and activate land around it by encouraging remediation and appropriate reuse. One vacant site on Pine Street east of the canal (453 Pine Street) and one larger site south of the canal (the former General Electric Lakeside location, which includes the Innovation Center) are subject to the Barge Canal deed restrictions on allowable land uses. Any reuse of these sites has to be designed and located in a way that does not disturb the protective soil cap on the canal site.

Complete Brownfield Area Wide Plan and implement recommendations for these sites; investigate successful redevelopment of Superfund sites as public open spaces.

Community & Economic Development Office; Department of Planning & Zoning; private property owners

Infill development along Industrial Parkway. Add more industrial space along Industrial Parkway to take advantage of the location and current uses. Infill development made possible by consolidating parking in a shared facility will give existing users room to grow, while staying in the same place. Any redevelopment here may be subject to VT DEC regulations.

Conduct further studies to quantify the contamination and level of remediation. Pursue EPA and VT DEC grants as needed. Integrate environmental considerations into future redevelopment plans for these sites.

Community & Economic Development Office; Department of Planning & Zoning; private property owners

Identify other priority sites for further studies. In addition to the key redevelopment sites outlined here, there are several other sites in the South End that will require further investigation to determine the extent of contamination and type of remediation needed before redevelopment can be considered. The former Vermont Structural Steel site, the self-storage site on Flynn Avenue and the existing Mobil terminal are examples of uses that may change over time, but have contamination concerns that are considered to be medium or high risks to redevelopment.

Prioritize remaining brownfield sites for environmental study and future redevelopment based on location, potential reuse, visibility and other factors.

Community & Economic Development Office, Department of Planning & Zoning

STORMWATER MANAGEMENT

The vital connection between the City of Burlington and Lake Champlain relies on the thoughtful management of stormwater, and reducing our impact on the Lake is among our highest priorities as a community. As an urban industrial landscape where 'things are made,' we see a lot of infrastructure dedicated to transportation and storage of cars and freight in the South End—e.g. surface parking lots and large building footprints—which typically involves a lot of pavement. These paved areas, however, generate stormwater runoff that follows several different paths to the Lake. As we know from page 24 in the "About the South End" section, stormwater runoff for the South End is either collected in underground combined sewer pipes that drain to the wastewater treatment plant, or it drains directly into Englesby Brook or Lake Champlain (via the Barge Canal or Blanchard Beach).

The primary stormwater issues that impact our receiving waters are the **amount** of runoff for areas that drain to the combined sewer or Englesby Brook and the **quality** of the runoff that's draining to Englesby Brook or the Lake. The aim of a sustainable stormwater management system is to first reduce the total amount of runoff. This can be done through minimization of impervious surface and use of green stormwater infrastructure. For the runoff that cannot be held on-site, a sustainable stormwater management system aims to slow down the water to reduce peak flows to the combined sewer and to provide treatment to the runoff that drains to our receiving waters.

Lake Champlain is considered to be "impaired" due to excessive phosphorus levels. To correct this impairment, the City will need to substantially reduce the phosphorous entering Burlington Bay, and ensure that future development has a net zero—or even a regenerative—impact on phosphorus runoff. To meet this ambitious target, the City will need to seek out any and all opportunities to reduce and clean stormwater, ranging from retrofits to existing systems, to implementing the most effective and innovative systems in new public and private projects. We should also be proactive about curbing potential impacts on Lake Champlain from chloride, a contaminant associated with the use of road salt for clearing ice and snow in winter conditions, and other pollutants our urban landscape may contribute to the lake. And an important component of all of this work is making sure that the community is educated on the importance of caring for our waterbodies and understanding what they can do to help reduce runoff and pollution.

Outside of planBTV South End, the City is preparing a City-wide Integrated Plan for Stormwater and Wastewater which will detail a wide range of water quality strategies.

This plan looks specifically at the South End, and identifies strategies to better utilize resources to manage and treat stormwater runoff to improve our impaired waterbodies:

- Identifying opportunities to expand stormwater capacity within existing infrastructure
- Reducing neighborhood runoff & localized flooding
- Improving the quality of runoff before it reaches its destination

Strategies for Stormwater Management

EXPAND STORMWATER CAPACITY WITHIN THE NEIGHBORHOOD.

Deploy creative thinking and planning for stormwater in a systematic way by retooling our existing infrastructure.

Plan it as a system. With the ever increasing focus on cleaning up Lake Champlain, both the City and private developers will be asked to do more to slow down and clean runoff from their property. An eco-district approach can be used in the South End so that the most effective stormwater solutions can be put to work in the right places. Much like the "Green Machine" for stormwater management downtown, a district system should be explored for the South End using the public right-of-way for bioswales, retention pockets, tree wells, and other techniques to "bank" stormwater credits, giving more flexibility for future projects.

Explore the feasibility and alternatives for establishing a stormwater management district

Community & Economic Development Office; Department of Planning & Zoning; Department of Public Works

Rethink the role of parks and open spaces. The City's first-ever Parks, Recreation & Waterfront Master Plan, adopted in 2015, identifies a major role for the City's parks and open spaces in stormwater management. Burlington's parks can perform essential ecological and biological functions for the City, as well as help capture stormwater runoff, prevent erosion and reduce the impact of floods. Management priorities will be established for each city park to identify its role in stormwater management, followed by an assessment of its geology and topography. This will guide decisions about each park's capacity for and placement of amenities to ensure that its use complements its natural qualities and its larger role in the ecological health of the City.

Implement Stewardship recommendations from the BPRW Master Plan; continue to advance Oakledge Park siting study.

Parks, Recreation & Waterfront Department; Department of Public Works

John Brickels—Stormwater Street

REDUCE NEIGHBORHOOD RUNOFF.

As future development and redevelopment occur, both public and private entities should expand the use of low-impact development techniques to meet or exceed the City's performance standards for stormwater.

Minimize paved areas, which are the primary source of runoff. In the spirit of "an ounce of prevention is worth a pound of cure" every square foot of pavement or roof are should be evaluated for its necessity. For example, parking areas should be sized for average use, not peak needs, and alternatives to driving and parking should be considered at high demand times. Driveway widths and streets should be just wide enough to accommodate the largest vehicles that typically come and go, and not necessarily the largest trucks that may ever show up. Multi-story buildings should be encouraged over single-story spaces so that the "per person" or "per job" roof area is reduced.

Revise land development regulations to encourage or require minimization of parking lot sizes, street widths and roof surfaces; expand the use of pervious pavements and/or green roofs; and encourage multi-story development to reduce impervious surface footprints.

Department of Planning & Zoning; Department of Public Works

Slow the water down with measures that will disperse runoff rather than concentrate the flows. New developments, road projects, and parks can accomplish this quite easily by design, with stormwater being dispersed to multiple points and travel over planted areas before entering the City's network of stormwater pipes. Existing systems can be retrofitted, where "green pockets" are inserted between the paved area and the collection systems for stormwater dispersal or filtration into the ground. Parking areas can be surfaced with permeable asphalt or paver systems that absorb or even store some stormwater.

Identify the "low hanging fruit" for reducing flows into the systems for retrofits of existing infrastructure.

Department of Public Works

Flow restoration for Englesby Brook. Englesby Brook is an impaired waterbody primarily due to the uncontrolled volume of stormwater runoff draining from impervious surfaces in the area. The Flow Restoration Plan for the brook identifies that best management practices need to first be implemented throughout the watershed to reduce runoff to meet its target flow. Once the reduced flow has been met, we can set our sights on enhancing its capability by restoring the riparian zone along the brook's edge. This means installing and maintaining plants and trees along its banks to hold in the soil, and providing treatment and filtering of rainwater before it enters the brook.

Complete the Englesby Brook Flow Restoration Plan and pursue prioritized implementation of the proposed stormwater management retrofits

Engage the Champlain School and community groups to apply for an Ecosystem Restoration Grant to fund riparian enhancement.

Department of Public Works

IMPROVE WATER QUALITY.

Treat the water to remove phosphorous and other pollutants before it heads to the lake. Because the soil types and water table in the South End are less well suited to infiltration practices than other parts of the city, underdrains will be needed in most stormwater treatment projects. Bioretention cells or raingardens and sand filters are nothing more than landscaped pockets of soil and gravel of various shapes and sizes, which provide a place for stormwater to soak in and give life to plants and be cleaned in the process. Street trees can be planted in Silva Cell™ stormwater planters, which take in water from the street, clean and filter it with the soil, and then allow the water to be taken up by the tree while also providing adequate soil volume for tree survival. These types of features should be used routinely in public and private development projects in favor of the conventional "collect and send into the lake" systems. In addition, retrofits of existing systems will be needed to meet the City's goals, which can be spurred on by pilot demonstration projects in the South End. Three possible ideas are:

- **Plant more trees** along the Champlain Parkway or Pine Street with Silva Cell™ System that stores and filters runoff.
- **Green bus bulbs.** The planned curb extensions in the Champlain Parkway project can be "upgraded" to also serve a stormwater management function by becoming mini-bioretention cells. Public art can further be incorporated to make these distinctive, attractive places.
- **Living Bioswales.** Within the South End and particularly along Pine Street, linear stormwater planters can be introduced to provide both reduction and treatment of runoff.

Identify opportunities for applying the City's College Street stormwater toolkit into new projects and to existing infrastructure in areas where change is not expected.

Department of Public Works

"Englesby Brook needs to be highlighted and nurtured as a stormwater collector and central water artery of the South End."

COMMUNITY COMMENT FROM WEBTOOL