



Transit Development Plan

EXECUTIVE SUMMARY

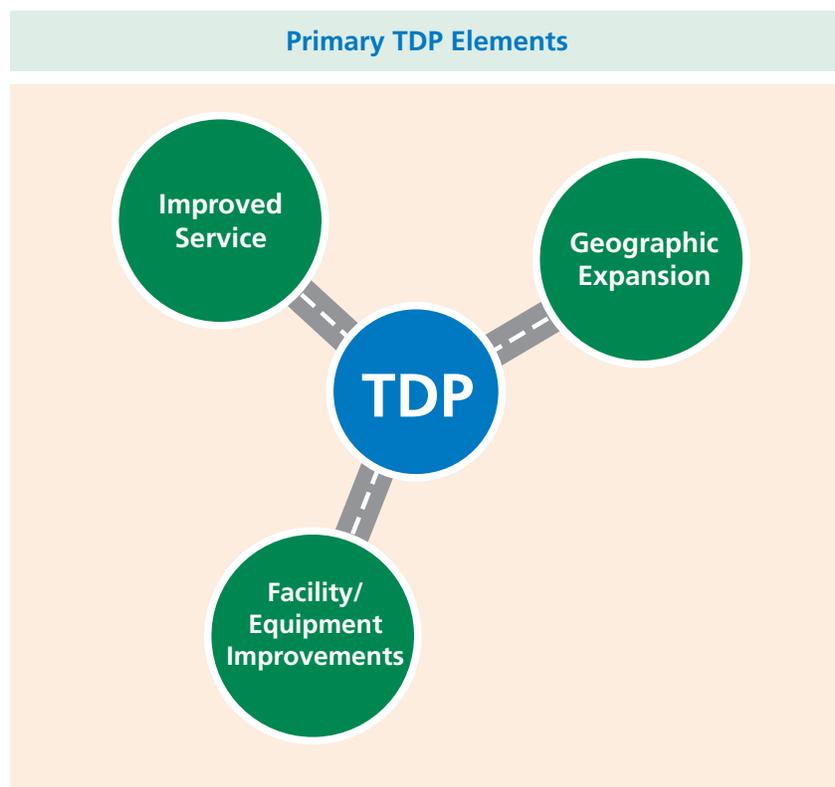
SEPTEMBER 2010

Executive Summary

“Business as usual will not allow public transportation to deliver desired outcomes. Only with policy changes and increased support will public transportation help achieve the region’s mobility and sustainability goals.”

–Chapin Spencer,
CCTA Board Chair

The Transit Development Plan (TDP) for the Chittenden County Transportation Authority provides a program for the expansion and enhancement of public transportation service in Chittenden County over a 10-year period and beyond. It is the foundational planning document for the agency, as it establishes the framework within which all other short term service planning and capital planning occurs. The TDP also provides detailed strategies to meet the goals of numerous other regional and state entities as listed in such documents as the City of Burlington’s Transportation Plan, the CCMPO’s Metropolitan Transportation Plan, the VAOT Long Range Transportation Business Plan, and the Governor’s Climate Change Action Plan. Increased financial and political support from municipalities, the state, the business community, and other organizations will be crucial to CCTA’s success in meeting multiple regional goals.



The mission of CCTA is to operate safe, convenient, accessible, innovative and sustainable public transportation services in the Chittenden County region that reduce congestion and pollution, encourage transit oriented development and enhance the quality of life for all.

The Strategy Committee of the CCTA Board has developed a vision statement to describe CCTA's future role in the region and its relationship with its member communities:

The Chittenden County Transportation Authority will play an important role in northwest Vermont's transportation system and will carry an increasing number of passengers each year. With growing ridership, CCTA will provide the region with economic development, environmental benefits and a cost effective means of transportation. The public transportation options offered by CCTA will serve a wide range of passengers, including those who are transit dependent and those who have other transportation choices. CCTA's services and facilities will use technology in order to be convenient and attractive enough to entice individuals to use their cars less. In order to maximize access to CCTA's public transportation services, communities will focus development along existing transit routes, considering the presence of transit when contemplating future development, and will work to improve the pedestrian environment in all areas served by CCTA buses. By combining efforts with bicycle, pedestrian, carpool, and carshare entities, alternative modes of transportation will rival the primacy of the single occupancy vehicle and will surpass it in terms of affordability.

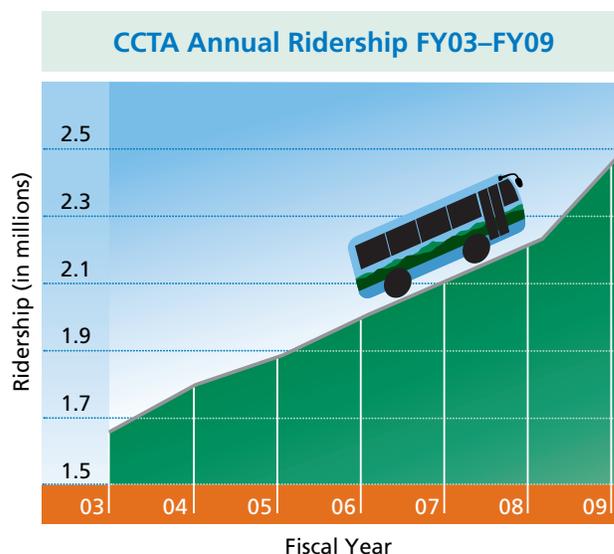
In order to make this vision a reality, the following items must be pursued:

- Municipalities should change their local zoning to more strongly support and incentivize transit oriented development, including higher density and mixed use projects, along transit corridors in their communities.
- CCTA, the municipalities of northwest Vermont, and the State of Vermont should work together to develop a regional funding mechanism for public transportation that relieves the burden on the property tax.
- The Chittenden County Metropolitan Planning Organization (CCMPO) must have greater autonomy and control regarding programming the region's federal transportation funding.
- CCTA and the CCMPO must have greater control to develop and implement transportation infrastructure projects, such as park and ride lots, in our region.

Service Summary

CCTA operates 13 local fixed routes, traveling within and to Burlington, South Burlington, Essex, Essex Junction, Colchester, Shelburne, Williston, and Winooski. CCTA operates a new (Feb. 2010) regional commuter route linking Milton to Burlington and three interregional commuter routes linking downtown Burlington to St. Albans, Montpelier, and Middlebury. CCTA's fixed-route services mostly operate six days per week and most CCTA routes offer trips every 30 minutes, though the Essex Junction route and the new (June 2010) Route 1 to Williston operate every 15 minutes during peak periods. For most routes, evening service and morning service on Saturdays is operated hourly. Sunday service is only operated on the Route 1 – Williston, Route 12 – South Burlington Circulator, and Route 18 – Sunday Special.

Since 2003, CCTA has been working to implement new routes and service expansions recommended in the last Short Range Public Transportation Plan (the predecessor to the TDP). In response to these improvements, marketing efforts, capital upgrades, and institutional relationships, CCTA has enjoyed annual ridership increases in the range of 5-7% for each year since 2003, including an increase of 12% in from 2008 to 2009.



Market Assessment

Chittenden County is, by far, the most densely populated county in Vermont. Population density is essential for mass transit services as there must be enough people along a route to produce sustainable ridership. For buses to be competitive with driving, they need to run at a high frequency (at least four trips per hour in each direction). The higher the frequency, the more seats there are to be filled, and thus the higher the density needs to be to support the service. Most of the areas served by CCTA's local routes have moderate to high densities, with the highest densities found near the downtown area of Burlington.

There are a few areas in the county that have densities that support high levels of service, but which are outside of the current service area. The further removed these areas are from current routes, the greater the cost will be to tie them into the system.

While CCTA now serves the most important commuting corridors, there are other opportunities for new commuter service including the VT 15 and VT 116 corridors, among others. Overall, the town of Colchester has the greatest amount of unserved territory with adequate density to support public transportation, and is thus the next best market for local and commuter transit service. However, there are barriers to extending service to Colchester (see Chapter 7).

3 households per acre is an industry-standard measure of the residential density needed to support fixed-route bus service. It is roughly equivalent to quarter-acre zoning. The New North End of Burlington is an example of this level of residential density.

Needs Analysis

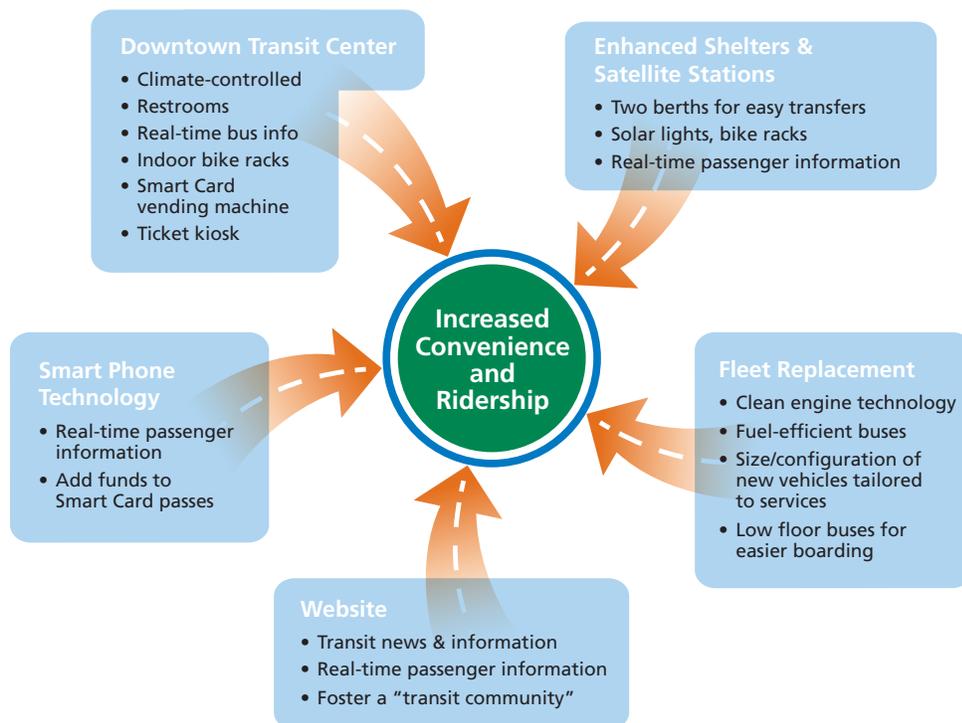
The answer to the question “what are the greatest unmet needs for public transportation in Chittenden County” depends on who is asked. For residents outside of the urban core, the answer is clearly new commuter routes to outlying communities such as Colchester, Hinesburg, Jericho and Richmond. For residents of communities that already have some service, the answer is more hours (including weekend service) and higher frequency on the existing routes. Additional connections, such as cross-town links between the two parts of South Burlington, would also expand the travel options of current riders.

In the transit industry, 30-minute service is considered unattractive to choice riders, while 15-minute service in the peak periods is considered a significant threshold to making transit competitive with driving. Establishing 15-minute peak service on all four of the major corridors into Burlington—North Ave, Colchester Ave/Pearl Street (VT 15), Williston Road/Main Street (US 2), and Shelburne Road (US 7)—is likely to be the most cost-effective investment in new service that CCTA can make. This is the central transit recommendation in the Burlington Transportation Plan.

Expanding the hours of service on CCTA routes is likely to be the next most cost-effective investment. Service offered 14-16 hours per day (such as 6:00 a.m. to 10:00 p.m.) is considered to be the minimum needed to

Increased frequency on major corridor routes is likely to be the most cost-effective investment in new service CCTA can make.

Capital and Technology Investments



Capital and technology investments are key factors in transit’s ability to draw people out of their cars.

attract choice riders, but many CCTA routes end service by 7:00 p.m. In addition to more evening service, Sunday service on the four major corridors, with the Essex Junction route leading the way, would generate additional ridership.

Beyond service expansion, respondents to surveys and participants in public outreach requested further investment in shelters, benches, bike racks and other passenger facilities, as well as new technology such as real-time passenger information, wi-fi on buses, and trip planning software. Such investments in physical infrastructure and technology make the system more appealing to existing riders and future choice riders.

The pedestrian environment in bus service corridors is an essential element of the overall system. All passengers are pedestrians (either on foot or in a wheelchair) before they board the bus and after they exit. If the pedestrian environment is not safe, comfortable, and attractive, then neither is the bus system, no matter how good the service is. CCTA member communities must continue to work with CCTA to improve pedestrian facilities along and extending from bus routes to provide better access to transit service from neighborhoods.

A safe and comfortable pedestrian environment is essential to the success of public transportation.

Existing Shelters



ABOVE: Examples of improved bus shelters already implemented.

Proposed Investments



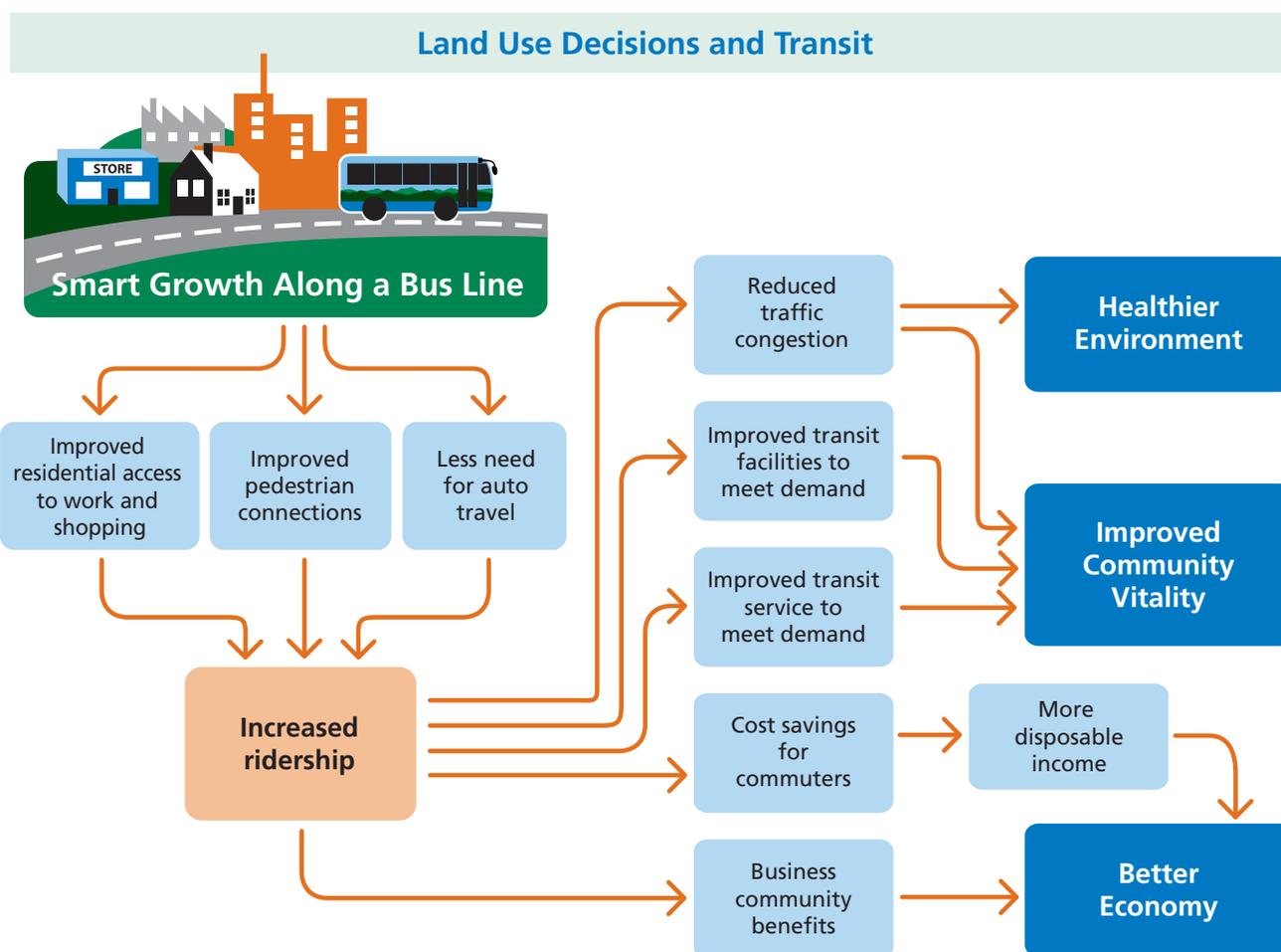
ABOVE: Examples of further facilities investments to enhance passenger convenience and safety.

Regional Coordination and Sustainability

To an ever larger extent, CCTA plays a vital role in the economy of Chittenden County, allowing for continued economic growth in a way that is consistent with reduced energy use, environmental protection, sustainable land use, and reduced traffic congestion. In order to achieve this, CCTA coordinates closely with local, regional, and state governments and works with the private sector to leverage investment in transportation.

The future system envisioned in the TDP can only be achieved if future land use decisions support public transportation. Whether this land use is called “smart growth,” “transit oriented design,” “pedestrian oriented design,” or some other term, future development (especially the type that generates demand for public transportation) must be focused in a geographical area that is compact and conducive to efficient operations. As municipalities and developers consider new construction of homes and commercial space within CCTA’s member communities, communication and cooperation with CCTA and other regional organizations is necessary.

Land use decisions that promote efficient public transportation service will result in a healthier environment, a revitalized community, and an improved local economy.



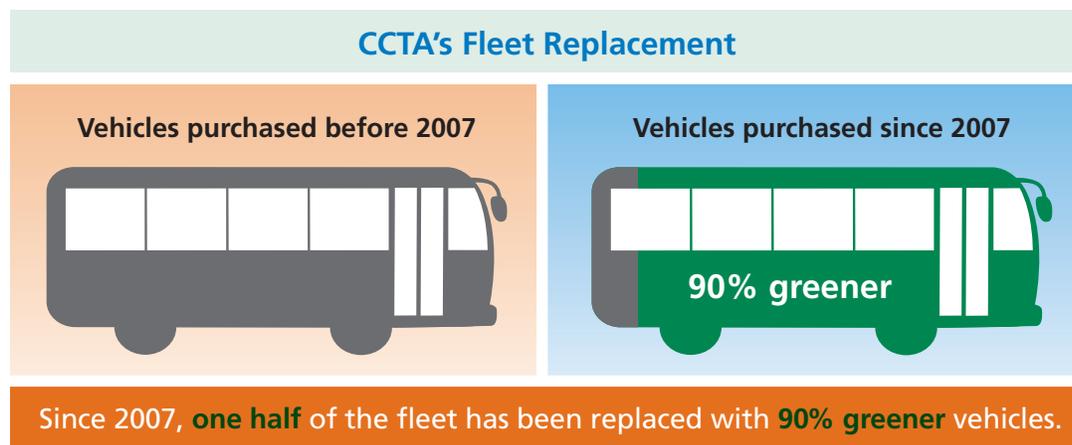
Transit Investments

The TDP includes a wide range of service recommendations to be implemented as funding becomes available. These include the following:

- **Interregional commuter routes** to Cambridge (via VT 15), Waterbury, and Swanton
- **Intermodal connection routes** to Grand Isle (ferry) and Rutland (Amtrak)
- **Regional commuter routes** to Colchester, Hinesburg, and Richmond
- **Service upgrades on trunk corridors:** North Ave, VT 15, US 2, Pine Street, Shelburne Rd.
- **Service upgrades on local routes:** Riverside, Essex Center, City Loop, South Burlington Circulator
- **New local services** in South Burlington, Colchester, and Essex
- **New parking shuttles** to downtown, Fletcher Allen and the airport from intercept lots at exits 12, 14, and 16
- **Feeder services** to commuter and trunk routes in outlying towns
- **ADA complementary paratransit service** and other demand response services

Capital Investments

Capital investments are also a critical part of the TDP. CCTA has established a vehicle replacement plan, and additional expansion vehicles will be required as new services are implemented. The size and configuration of new vehicles purchased will be tailored to the services. All new vehicles purchased will employ clean engine technology to reduce harmful emissions. CCTA will also seek to acquire fuel-efficient and low-emissions buses.



Investments in Facilities

CURRENT: Cherry Street Station

- No indoor waiting area
- No place to sit
- No Restrooms
- No covered bike racks
- Not well lit at night
- Long walk to buses
- Brrrrrrrr!



PROPOSED: Downtown Transit Center



- Climate controlled and well-lit waiting area
- Real-time bus info
- Restrooms
- Indoor bike racks
- Ticket kiosk & smart card vending machine

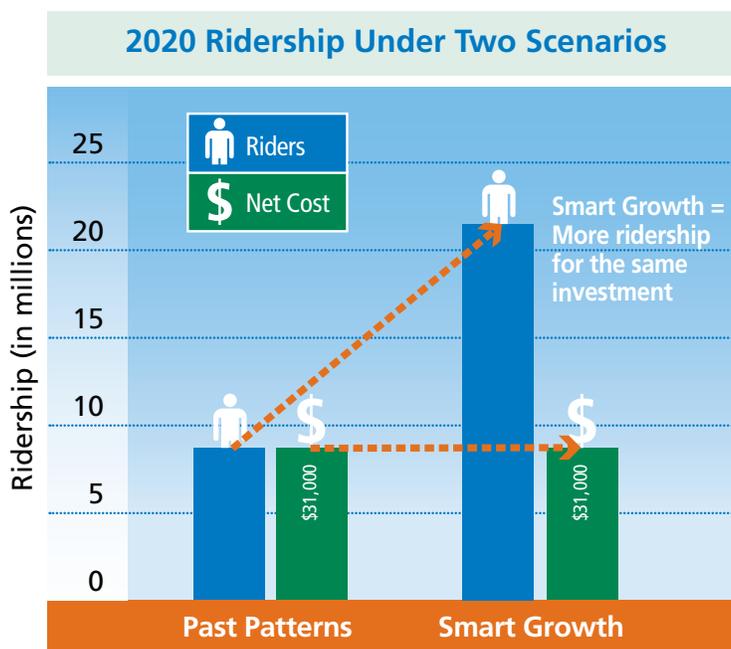
The most needed facility investment for CCTA's system is the replacement of Cherry Street Station by a new **Downtown Transit Center** in the downtown core of Burlington. The current passenger environment at Cherry Street Station, without a climate controlled waiting area or other passenger amenities, is insufficient to attract new riders to transit. Outside of Burlington, there are several locations that could be considered transit satellite stations—where two or more routes come together—and would include large shelters with lights, bike racks, real-time passenger information (in the future), and two bus berths to allow for easy transfers.

A new Downtown Transit Center is imperative to make the entire bus system more convenient and attractive for passengers.

An increase in the number of publicly owned park and ride lots is crucial to the development of future transit services and CCTA strongly advocates for such an expansion. Park & Ride lots are an integral part of successful commuter transit service in the region, especially since parking and traffic congestion are an issue in downtown Burlington and on the Hill/University of Vermont area. Existing transit routes can be made more successful and cost-effective through the expansion of park & ride capacity at existing lots and the creation of new lots as they increase access to transit services without significant new operating costs.

Impact of Improved Transit Services

The discussion of costs and benefits of public transportation usually focus on the financial costs of operation, the number of riders, fare revenue and other easily calculated values. The impacts of transit, however, go well beyond these types of figures. Public transportation plays a critical role in the



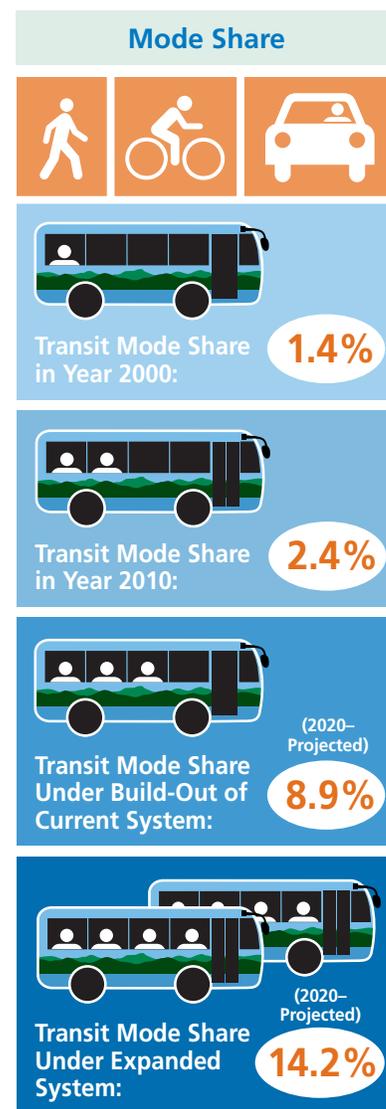
See Notes section for details regarding projections.

economic vitality and future sustainability of Chittenden County. Effective transit service makes more sustainable development patterns feasible and reduces the need for additional road capacity. The mobility afforded to all residents and workers is also a major benefit offered by CCTA. The commuter service offered by CCTA, which draws people out of their cars, results in significant environmental benefits. In FY2009, the LINK Express commuter routes operated by CCTA carried over 117,000 passengers. With an average trip length of roughly 30 miles, this bus ridership represents over 3.5 million miles not driven in cars. These saved miles translate into a savings of at least 140,000 gallons of fuel and a reduction of carbon monoxide and carbon dioxide emissions of 193,545 pounds and 2,815,200 pounds, respectively. These benefits of transit tie directly back to the policies articulated in local, regional, and state plans.

While future ridership is an important figure, the statistic most relevant to measuring whether CCTA is achieving its mission is perhaps the percentage of trips in the region that is made on public transportation, also known as the transit mode share. In 2000, the transit mode share was estimated to be 1.4% of all trips made within the six core communities of Chittenden County (Burlington, Essex, Shelburne, South Burlington, Williston, and Winooski). By 2010, it is estimated that the transit mode share has increased to 2.4% based on the growth of CCTA ridership compared to overall traffic growth.

Extending that trend in mode share growth out to 2020 with the current system results in an estimated 4.2% transit mode share. A full build-out of the system would lead to an 8.9% mode share in 2020. However, full implementation of the TDP, plus “optimistic” assumptions about future prices and policy decisions, at least with respect to transit’s competitive position to the private automobile, could result in much higher mode shares. With gasoline and parking fees rising substantially (to \$10 per gallon and \$5 per day for parking at all locations that are within CCTA’s service area), and with a land use policy to focus new development in transit priority corridors designed in a way consistent with TOD/POD principles, transit mode share could rise to 14.2% if all of the TDP recommendations were implemented. That translates into a 590% increase in mode share, compared to a 380% increase in costs.

The percentage of travel in the region that takes place on buses can increase substantially with an expanded CCTA system and pricing and policies that make automobile travel more expensive.



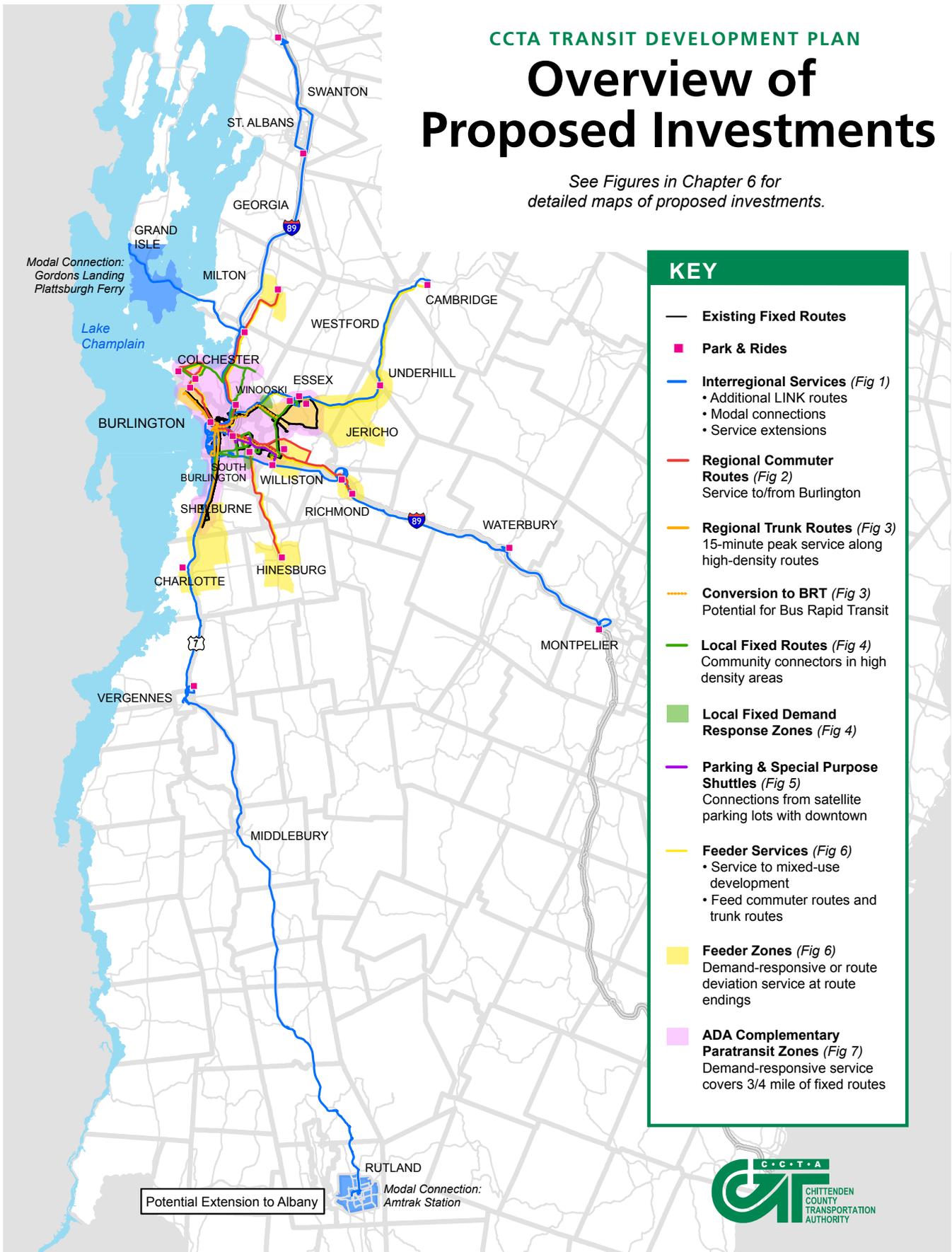
Funding

It has been clear for many years that the current funding mechanism for public transportation is insufficient to support the expanded transit system that most Chittenden County residents believe is needed. Through expanded use of federal funds and diligent work at the local level to increase local contributions and membership, CCTA has managed to pursue its mission to the extent possible. However, the ambitious agenda in this TDP is impossible without a significant change in the funding structure. The imperatives of supporting economic vitality, reducing traffic congestion, improving air quality, mitigating the severity of climate change, and enhancing mobility for all citizens argue strongly for a much more robust public transportation system.

At the state and regional level, it is clear the recognition that the current funding structure is unsustainable must be converted into action. There is no means of raising revenue that will be completely painless for all parties. Most economists and environmental scientists believe that increasing taxes on motor fuels is a necessary step toward curbing CO₂ emissions. One of the major barriers to this option is the lack of political support. Perhaps the multiple imperatives of lessening the burden on local property taxes, supporting public transportation and reducing carbon emissions will finally result in action.

Overview of Proposed Investments

See Figures in Chapter 6 for detailed maps of proposed investments.



Notes:

2020 RIDERSHIP UNDER TWO SCENARIOS:

1. Federal funding and costs are assumed to increase 5% annually through 2015 and 4% annually from 2016 to 2020.
2. All costs shown are net of fare revenue, assumed to remain constant at 23% of costs.
3. "Maintain Current System" is operation of the system as it exists in June 2010; "Expanded" means full implementation of all TDP recommendations.
4. Net cost of ADA complementary paratransit is included in estimates, assuming that demand for ADA trips grows in proportion to fixed route service.
5. Ridership on the current system is projected to grow at 3.9% annually, based on the experience of ridership change since 2001, excluding new routes and major service increases.
6. The "steady state" scenario assumes no major changes in transportation prices or land use policy. The "optimistic" scenario assumes that gasoline will retail for \$10 per gallon in 2020 (more than triple the current price), that there will be an increase in parking fees of \$5 per day at all locations that are within CCTA's service area, and that land use decisions are made to focus new development in transit priority corridors, and that the new development is designed in a way consistent with TOD/POD principles.



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