



TOWN OF ESSEX TOWN TRANSPORTATION STUDY

Volume III - Implementation Plan
Final Report • April 2011

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Part I. Goals, Policies, and Programs

The following vision and associated goals were developed in conjunction with the Essex Planning Commission with input from the Town Transportation Plan Working Group and members of the public during a series of meetings and workshops.

Vision and Goals

Both the 2005 Plan of Conservation and Development for Essex, Connecticut and the 2009 Connecticut Statewide Bicycle and Pedestrian Transportation Plan have informed the vision and goals for the Town of Essex Transportation Study. The vision and goals were intended to guide the development of transportation recommendations for Essex and were re-visited throughout the course of the project. Guidance from the Plan for Conservation and Development provides that planning efforts in Essex:

“Should facilitate open space preservation, development in continuity with historic patterns and structures, vital mixed uses, multi-modal transportation opportunities, flexibility through special permit criteria, re-evaluation of permitted uses within current zones, and site design which fosters community interaction” (Page 6).

VISION

The vision of Essex described in the Plan of Conservation and Development is shared by this study, which is one of “an economically vibrant, livable, and sustainable community” (Page 6). In order to make this vision a reality, the Town Transportation Plan has addressed large-scale town-wide goals, as well as quality-of-life concerns, economic development priorities, multi-modal transportation enhancements, and specific efforts that address the needs of the village centers.



Well-marked pedestrian crossing in Centerbrook

Source: Nelson\Nygaard

GOALS

Drawing upon the planning documents and input from the Commission and Working Group, the following goals were established in support of the Plan’s vision.

Town-Wide Character Goals

These town-wide goals are focused on the qualities that make the town of Essex unique. Central to these goals is the preservation of the qualities inherent to the village centers and the surrounding rural areas. All of the goals of this study underpin the following three town-wide character priorities, each of which supports a form of land use found throughout Essex:

- Preserve the town atmosphere
- Enhance village vitality
- Retain rural residential character outside villages

Quality of Life Goals

Quality of life goals expand upon the town-wide goals to address the way people live, work, visit, and recreate in the town of Essex. These goals are:

- Preserve the existing and unique character of each of the three village centers and the rural and small town residential character outside the centers
- Promote appropriate historically-sensitive in-fill land uses that encourage walkable communities
- Address parking design so that facilities do not isolate buildings, but allow them to be integrated with the town's streetscapes, limiting disruptions to cyclists and pedestrians
- Utilize design standards to ensure new transportation infrastructure is appropriate for the size and character of town
- Preserve open space and guide infrastructure and development so they avoid encroaching upon natural features
- Recognize the travel, circulation, and parking needs of residents, employees, and tourists, and provide the businesses, services, and infrastructure to support all three groups



Griswold Inn, Main Street, Essex Village

Source: Nelson\Nygaard

Economic Development Goals

The goals for economic development aim to make Essex a vital town with businesses that meet the needs of the community. These goals are:

- Ensure that transportation decisions foster economic development in a manner that respects historic patterns and structures in the three traditional village centers
- Support the newer development areas of Bokum Center and the Heritage Gateway
- Encourage mixed-use development to ensure the compact and efficient use of land in town
- Support redevelopment and reuse of existing structures as well as existing industrial and commercial areas
- Preserve existing real estate values
- Provide transportation infrastructure that serves the desires of residents and tourists while accommodating the needs of businesses and services in Essex

Mobility Goals

The ease of moving about town is critical to all aspects of life in Essex. The mobility goals for the study are to:

- Pursue multi-modal transportation opportunities and ensure that walking, transit, and bicycle use is encouraged in policy and design
- Preserve the existing person-capacity and multi-modal mobility along major arterials
- Address key safety issues caused by increasing vehicle volumes and travel speeds on Town and State roadways
- Provide attractive and adequate public parking in Essex's villages without detracting from the areas' active land uses
- Increase walking and biking opportunities throughout town and link them to other means of transportation
- Connect major attractions in town by a variety of modes
- Alter Route 9 and its Exit 3 to minimize their impact as barriers for the town and turn them into an appropriate gateway that welcomes visitors to Essex



Essex Steam Train and Riverboat Sign

Source: Nelson\Nygaard

Village Specific Goals

The three villages have goals unique to their circumstances, which are outlined below:

Essex Village

- Retain, protect, and enhance the walkable character of Essex Village
- Provide infrastructure, amenities, and programs to attract bicyclists
- Ensure sufficient parking availability for customers and employees

Centerbrook

- Protect children walking to and from the elementary school, encouraging walking as a means of access
- Improve operations by all modes at the intersection of Westbrook and Main Streets
- Increase walkability within Centerbrook and between Ivoryton and Essex Center

Ivoryton

- Preserve Ivoryton's unique historic character
- Improve walking safety within the village center
- Accommodate customer and patron short-term parking safely on-street
- Enhance and build on existing cultural attractions and public open space

Policies and Programs

The following recommended policies and programs are designed to advance the vision of the future Town of Essex by providing the necessary framework to achieve the community's goals, as defined above. These policies and programs outline new or enhanced Town-wide strategies that are both intended to guide immediate decisions affecting growth and development within Essex as well as to provide a framework for future decisions made by successive Town administrations and staff that reflects the vision and goals of today.

PEDESTRIAN ENHANCEMENTS PROGRAM

Description

A pedestrian enhancements program prioritizes the changes needed to complete a safe pedestrian network in Essex. The program identifies criteria to prioritize adequate pedestrian access improvements during development review, new road construction, regular Town maintenance, and road widening projects. The pedestrian enhancements program includes all pedestrian amenities: sidewalks, crosswalks, pedestrian signals, ADA ramps, etc., to create a continuous, accessible, and safe walking environment.

By enhancing the pedestrian experience in retail districts and around other key destinations, more people walk between stores and destinations, creating a more vibrant and inviting environment. A pedestrian enhancements program aims to create a network where residents can support local retail activity, ensuring that walking from

home to work or school is an easy and pleasurable experience, and that pedestrians feel safe from the beginning to the end of their trip.

Goals/Objectives

The Pedestrian Enhancements Program's primary goal is connectivity, which means a continuous walkway network made up of sidewalks, paths, and multi-use trails with frequent and safe street-crossing opportunities that do not require pedestrians to travel out of their way to reach destinations. Criteria are included for each of the following set of design characteristics:

- **Clarity:** Crosswalks should make it obvious to motorists that pedestrians can be expected to cross, and pedestrians should be guided to the designated crosswalk.
- **Predictability:** Crosswalk placement should be predictable, and should increase in proximity to key destinations where more pedestrians can be expected to cross. Every effort should be made to provide safe crossings in locations lacking facilities yet demonstrating a clear high pedestrian demand.



Sidewalk activity and pedestrian amenities in Portsmouth, NH.

Source: www.pedbikeimages.org / Dan Burden

- **Visibility:** Crosswalks should be clearly marked, signed, and illuminated so that motorists and pedestrians are visible to each other.
- **Permanence:** Crosswalks should be well-maintained permanent elements of the transportation network. Thermoplastics, inlay tape or regular painting should be standard, with changes in paving materials where appropriate, given area conditions.
- **Limited Exposure:** There should be limited conflicts with traffic, and crossing distances should be reasonably short or made shorter through the incorporation of curb extensions and/or pedestrian refuges.
- **Clear Crossing:** The crosswalk should be free of all obstacles and hazards and should be accessible to all users. Snow clearance, especially at curb ramps, is essential to wintertime pedestrian activity.
- **Width:** The needs of all users should be accounted for when designing sidewalks. This means ensuring that all Americans with Disabilities Act (ADA) requirements are met and that the needs of individuals with mobility limitations are given proper consideration. This is particularly critical in slope changes and sidewalk widths.
- **Sidewalk Clearance Program:** A town-wide sidewalk clearance program is a snow removal policy, which would prioritize blocks for immediate snow removal, identify areas where snow should and should not be plowed, and have guidance on hazards for snow piling in particular areas.

Benefits

A structured program will provide a systematic framework to prioritize areas of greatest need. Instead of haphazard improvements, Town staff will be able to prioritize and strategically invest in infrastructure that will complete a larger network. A program with goals and criteria for project selection may also aid in gaining funding for projects.



Broomfield, CO's treated crosswalks alert both drivers and pedestrians

Source: www.pedbikeimages.org / Dan Burden

Tradeoffs

A pedestrian enhancements program will only be successful if it is coordinated with other related programs, such as Safe Routes to School and Traffic Calming projects. To use planning and construction dollars most efficiently, these programs in particular need to work together to create a safe network of pedestrian amenities. The criteria of a pedestrian enhancement program should also be incorporated into the site plan approval process reviewed by the Zoning Commission to ensure that pedestrian amenities and connectivity are considered with each site plan application.

Necessary Steps for Implementation

The Planning Commission, Public Works Department, and Zoning Commission need to work together to identify and establish a clear set of criteria for prioritizing pedestrian enhancement needs throughout town. Consider establishing a Pedestrian Committee made up of residents and business owners concerned with the pedestrian environment to oversee the development of a prioritization plan. Develop a prioritization plan, in conjunction with the other prioritization plans outlined below, to guide investment in maintenance and expansion of the network. Improvement prioritization can be used to guide routine maintenance toward areas with the highest priority, in order to more efficiently leverage the Town's limited maintenance funds in order to better support walking.

The Town should establish a way for citizens to identify key areas of concern: anything from faulty crossing signals to heaving pavement. This can be done through an advertised email address, a 311 call-in number, or an online mapping program. This allows individuals to provide the Town (and/or Pedestrian Committee) with information about the state of the network rather than requiring limited staff to monitor every foot of the walking environment.

The prioritization plan and its criteria should be adopted by the Town and incorporated in all development review and future planning considerations. This adopted prioritization program can be used to identify improvements developers should provide or support as part of their project approval process. This way, the Town can smartly target investments from the private sector to make Essex a safer more pleasurable place to walk.

Initial Project List

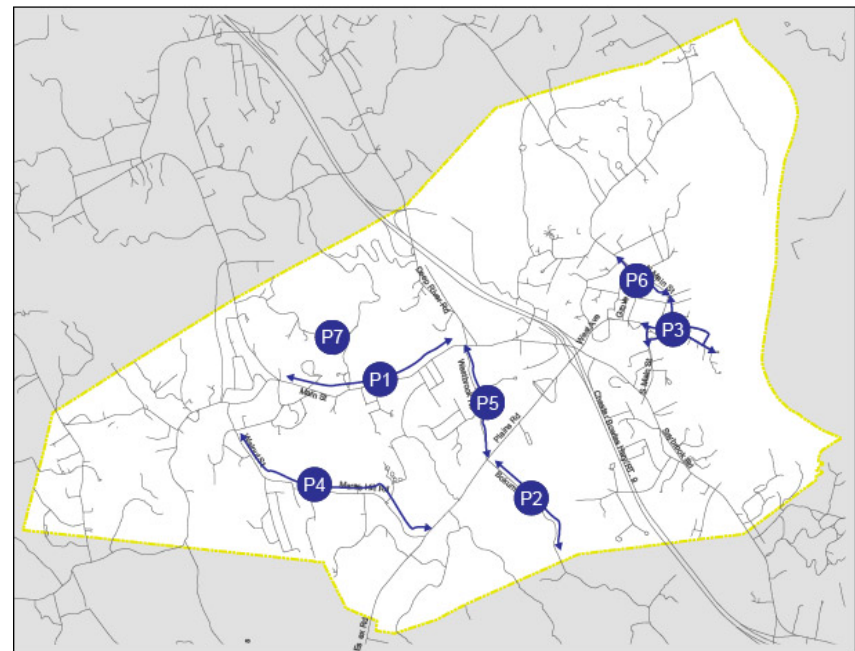
Townwide

1. Identify priority projects for current and future Safe Routes to School (SRTS) grant monies
2. Identify geographic and policy priorities in Essex to help determine which projects happen first (i.e. repair vs. new construction; near schools vs. near village centers)

Corridor/Site Specific

- P1. Provide safe sidewalks and crossings along Main Street between Centerbrook and Ivoryton
- P2. Provide safe sidewalks and crossings along Plains Road south of Bokum Corner
- P3. Complete Essex Village sidewalks to create a continuous walking environment (Ferry St. and portions of Pratt, N. Main, Main, West, etc. See Volume II.)
- P4. Build a sidewalk or informal off-road trail along Walnut St/ Mares Hill Rd
- P5. Add a sidewalk on Westbrook Road
- P6. Improve sidewalk on North Main Street
- P7. Improve sidewalk on West Hills Road

Figure 1 Initial Project List – Pedestrian Enhancements Program



BICYCLE INFRASTRUCTURE PROGRAM

Description

The bicycle infrastructure program is designed to strategically introduce bicycle infrastructure within and between the village centers, creating stronger community connections. This program will promote a safe and inviting environment that encourages bicycling as an alternative to driving. It will include plans for the development of trails, paths, bike lanes, bike boulevards, parking locations, and a route system, including the branding of routes. Bicycle accommodations would connect major centers of activity, including schools, recreational facilities, major employers, and the village centers.

Goals/Objectives

The primary goal of the bicycle program is to encourage more people to ride their bicycle in place of driving when the trip is within a few miles. The program's objectives include: connecting key destinations with a safe cycling network; including secure bicycle parking at key destinations; and ensuring that bicycles can be brought on board all forms of transit so that they may be used at both ends of a journey, greatly extending the range of a person not using a car. In addition, it is particularly important that bicycling infrastructure be as safe as possible, and that bicyclists, pedestrians, and drivers are educated on sharing the road.

Including adequate wayfinding signage is essential to orient riders and make navigating a quick task while focusing on riding safely. Distinct signage and pavement markings are examples of elements that orient bicyclists to get to where they need to go.

Benefits

A bicycle-friendly community will result in more people riding, and more people riding means biking is safer. Bicycling is often a mode of choice for tourists visiting quant communities, and a safe biking environment in Essex may increase visitation.



*Bike Boulevard Sign in San Luis Obispo, CA
Source: www.pedbikeimages.org / Adam Fukushima*

Bicycling is a very convenient alternative to the automobile for trips within a few miles. Providing the infrastructure to facilitate biking reduces bicycle-automobile-pedestrian conflicts by providing clear guidance on right-of-way, thus improving safety as well as community-level interpersonal relationships.

Tradeoffs

Providing many forms of bicycle facilities requires the annexation of roadway space for bicyclists. This often involves the taking of vehicle lane space and may involve the taking of parking spaces. This can be seen as both a negative and positive impact of bicycle facilities because narrowing vehicle lanes generally lowers average travel speeds, thus improving safety for all roadway users.

Not all roads are able to safely accommodate bicyclists, but sometimes those roads are the shortest distance between two places, or they may be the missing link in a network. When these roadways

are unable to accommodate the dedication of space for bicycles and the sharing of the road is unsafe or infeasible, parallel paths can be considered, though at a significant cost.

Necessary Steps for Implementation

Consider establishing a Bicycling Committee to provide a forum for review of the investment in bicycling facilities. Coordinate with the Pedestrian Committee in developing a prioritization plan for investment in infrastructure maintenance, repair, and construction. Also, work with the Pedestrian Committee to establish a method for citizens to inform the Town of locations with immediate concerns (i.e., email address, 311, online mapping, etc.).

The Town or its Bicycling Committee should work proactively to expand bicycling facilities and resources through partnerships:

- Coordinate with the greater lower Estuary to integrate plans for bicycle routes
- Work with businesses in town to identify ideal locations for bicycle parking
- Consider the use of SRTS funds to cover bicycle infrastructure improvements
- Coordinate bicycle initiatives with the Statewide Plan and utilize regional and state resources to further these initiatives

Initial Project List

Connecticut’s Statewide Bicycle and Pedestrian Transportation Plan recommends that Towns pursue inclusion of bike lanes when road improvements are made and work with other Towns for regional bike trails. As Essex implements its Town Transportation Plan, special focus should be given to a priority bicycle network whereby a strong effort is made to create cohesive and continuous bicycle facilities. At the top of this priority network are the routes that will serve as the backbone of a greater network of neighborhood feeder facilities. The backbone of the network will include:

B1. Community Connector: West Avenue/Main Street from Essex Village through Centerbrook to Ivoryton

B2. Commercial Connector: Plains Road from West Avenue to Bokum Road (* potential extension to Mares Hill Road and beyond to Westbrook)

B3. Central Link: Westbrook Road from Centerbrook to Plains Road

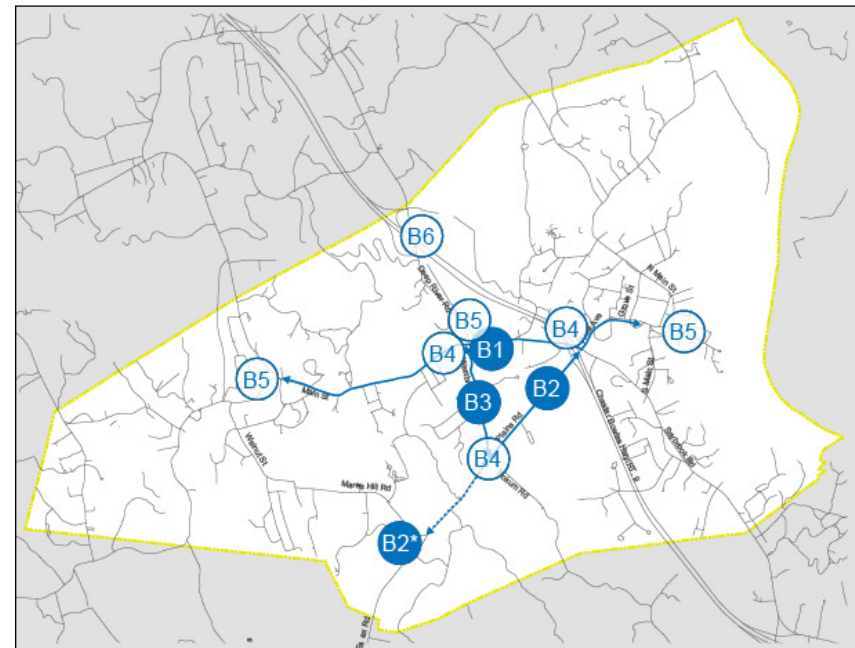
More specific areas:

B4. Attention to intersection improvements for bicyclists in particularly difficult intersections (specifically at the Exit 3 Gateway, Main Street & Westbrook Road in Centerbrook, and Plains Road & Westbrook Road)

B5. Needed short-term bicycle parking locations (such as along Main Street in each village, at the museum, playhouse, and steam train, at Town Hall and the library, along the Bokum shopping plaza entries, near the marinas, etc.)

B6. New long-term bicycle storage lockers at the Exit 4 park and ride

Figure 2 Initial Project List – Bicycle Infrastructure Program



SAFE ROUTES TO SCHOOL

Description

The Federal Safe Routes to School (SRTS) program provides funding for implementing improvements within one mile of an elementary or middle school to improve safety, which encourages more walking and biking to school. There are significant benefits to such a program including improved health for students, improved student grades and concentration in class, and improved environments around schools with fewer vehicle trips and a safer, more vibrant pedestrian environment.

Necessary Steps for Implementation

The Essex Town Planner in cooperation with the Essex Elementary School (EES) has developed a Safe Routes to School (SRTS) plan in accordance with Federal guidelines and applied for an infrastructure grant to implement improvements. The EES plan consists of a series of capital improvements as well as programmatic elements to facilitate safer and more desirable walking and bicycling to EES. Since the school is located in the Centerbrook area of Essex, any pedestrian or bicycle improvements aimed at improving non-motorized access to the school will also benefit the village of Centerbrook (and vice versa). As a result of the SRTS plan, the Town has been awarded a \$450,000 SRTS grant for the construction of infrastructure recommended in the plan.

The Town of Essex is currently working with the Connecticut Department of Transportation (CTDOT) to advance the construction of sidewalks on Main Street and begin to implement pedestrian improvements at the Centerbrook intersection. The Town is responsible for the design costs and will be reimbursed for the construction costs of these improvements. It is expected that the design will be complete in 2011 for construction during the 2012 construction season.



Safe crossing with guard, Phoenix, AZ

Source: www.pedbikeimages.org / Mike Cynecki



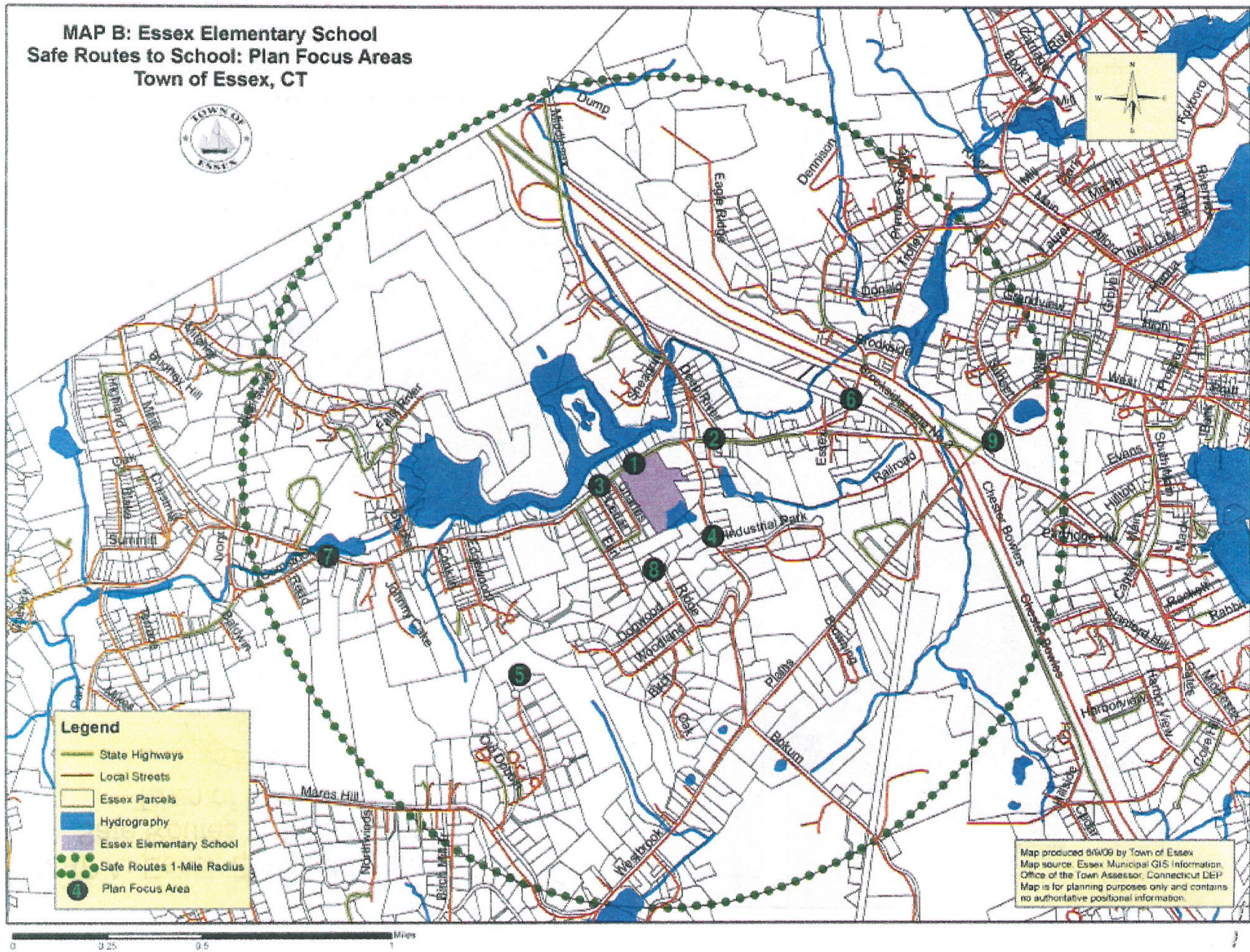
Marked crossing in Boulder, CO

Source: www.pedbikeimages.org / Dan Burden

Initial Project List

1. Replace walkway between Main Street and the front door of EES;
2. Install new sidewalk along the south side of Main Street along the frontage of EES and proceeding in a westerly direction to connect Charles, Cedar, and Earl Streets with the existing sidewalk system;
3. Establish a clear crosswalk with road paint and signage across Main Street linking the new sidewalk with the existing sidewalk on the north side of Main Street;
4. Widen/upgrade the existing inadequate sidewalk along the north side of Main Street in a westerly direction from Earl Street crosswalk to Falls River Drive; and
5. Install signage on both approaches to the Valley Railroad Overpass Bridge on Dennison Road to alert motorists to the potential presence of bicycles and pedestrians on the narrow bridge.

Figure 3 Safe Routes to School Plan Focus Areas



Source: Safe Routes to School Plan, July 2009

LOCAL TRANSIT PROGRAM

Description

Previously, the Town was served during peak tourism season by a trolley service operated by a local business owner in order to promote connectivity between the marina and downtown businesses. While the service was ultimately discontinued in recent years due to the expense, the past existence of the trolley indicates that there is local interest and demand for such service. A rejuvenated local transit public-private partnership program would offer options for travel and encourage use of modes other than autos. Furthermore, coordinating this service with the Estuary Transit District's trips through Essex would allow many ETD riders to travel car free to and from a wider array of destinations than ETD now serves.

Goals/Objectives

The Town should approach local businesses to begin a discussion of a public-private partnership that can fund a local transit service for both visitors and local residents. Estuary Transit District should be involved in these discussions because it may be able to run the service as an addition to its existing services if potential ridership warrants. Such a service would enhance mobility and access for the Essex community.

Regardless of the type of service provided, transit access can be enhanced and promoted by instituting a program of transit enhancements that could include: improved bus stops with bus shelters or waiting areas, lighting, stop beacons, benches and/or trash bins as locations allow; snow clearance programs for town bus stops and surrounding sidewalks; enhanced customer information, such as a low-cost real-time information service provided to those with mobile devices; and strong, easily readable, branded customer information (web-based, in print, on vehicles, and on signing) that makes ETD and Town service and stops readily recognizable. These enhancements will improve local understanding and awareness of a transit program provided by the Town or another entity.



*Estuary Transit District Bus Stop
Source: Nelson\Nygaard*

Alternative means of promoting local-area transit access could include a Taxicab Voucher Program. Users receive a voucher that covers a portion of the cost of a taxicab ride within town. (Trips out of town would be excluded, as the cost may be high.) This type of program could provide a cost-effective means for the Town to provide enhanced mobility at a lower cost than it would incur providing direct transit services – and with a high level of flexibility for riders. If coordinated with Essex’s existing FISH (Friends in Service Here) program, this can be very cost-effective.

Benefits

A local transit program is a great way to serve a larger number of daily trips with just one vehicle, thereby reducing the number of vehicle trips and the amount of parking required. Local transit also brings people out of their homes, businesses, and cars and onto the streets, activating the public space and increasing the volume of potential customers. Depending on the service plan, local transit could provide regular connections between the village centers.

Tradeoffs

Transit service is expensive to operate and maintain, and seasonal ridership may fluctuate. Transit also often carries with it a negative socio-economic stigma that may need to be overcome through smart marketing and branding.

Necessary Steps for Implementation

Given annual operating costs that can easily exceed \$150,000 for only one vehicle, the Town should first identify clear on-going funding sources and partners. Larger communities are able to support local transit through assessments or local business associations, such as the dues for a Transportation Management Association which provides a variety of tailored transportation benefits to local employees. However, absent large contributors, Essex would have to add transit expenses to its annual budget or look for outside funding sources. With limited eligibility for Federal or State funding, the Town might seek a Transportation Lending Services Corporation loan from the Community Transportation Association.

As part of preparing a bid for grant or loan financing, the Town should conduct a route planning exercise to develop the most productive and efficient routing for local transit service. Far too often transit lines are laid out by guesswork or politics when basic population and jobs analyses will point to where transit will work best. Fortunately, ETD is currently conducting route evaluations for the two routes serving Essex, and the results of that study should be available soon to help design a local service for Essex.

Primary responsibility for advancing the Local Transit Program lies within the Planning Commission, the Board of Selectmen, and the Estuary Transit District.

Initial Project List

There are many options for designing such a service, including:

- **Shuttle/Trolley Service:** Shuttle or Trolley services operate on a fixed route, generally with the same alignment in each direction. This type of service requires no reservations, but a walk to the final destination may be required.
- **Flex-Route:** Flex-route services follow a set path, but may deviate at the request of passengers (on the bus or by phone in advance) up to a certain distance, for example ¼ mile. There may be a surcharge for off-route deviation. This type of service provides a medium level of flexibility for customers in terms of access to specific destinations, but requires little advance planning.
- **General Public Dial-a-Ride:** Dial-a-Ride provides curb-to-curb or door-to-door trips to passengers, who call in advance to book a ride. Riders may be required to book up to one day ahead. This type of service provides the closest customer access to destinations, but also requires advance planning.

TRAFFIC CALMING PROGRAM

Description

Traffic Calming is a roadway design strategy intended to slow traffic speeds and improve safety while balancing the needs of all roadway users. A strong emphasis is placed on improving safety by reducing the dominance of vehicles within a neighborhood. Traffic calming is particularly applicable on residential streets but can also be applied in villages and on major arterials. There is a wide variety of traffic calming strategies that can be employed in various environments and some strategies are appropriate in one location and not another.

To develop appropriate traffic calming features where measured vehicle speeds are high, turning operations by vehicles would be evaluated along key pedestrian routes, as well as drivers' sight distance and sight lines when entering, exiting, or traveling along the roadway. For instance, vehicles parked near crosswalks can obstruct the view of pedestrians beginning to cross a street. To deal with this issue, Essex should adopt a minimum no-parking zone of 20-feet on the near and far side of all crosswalks. This no parking zone is ideally accommodated through the provision of curb extensions ("bump-outs"), which physically prohibit vehicles from parking too close to the crosswalk while allowing pedestrians to "step out" into the intersection to see around parked cars. Curb extensions also reduce crossing distance, which improves pedestrian safety by decreasing exposure to bicycle-automobile-pedestrian conflicts.

Elements of a traffic calming program may include:

- Road diets
- Shorter blocks
- Lane narrowing
- Turning radii reduction
- On-street parking
- Curb extensions
- Crossing islands
- Chicanes
- Raised crosswalks
- Speed tables
- Raised intersections
- Shared-space areas

Goals/Objectives

The traffic calming program will provide potential design elements that can be applied throughout town to slow traffic in appropriate areas and create safer conditions for all users. This safety benefit should become a priority of the Town for protecting its residents. Such a program is also effective at attracting new residents, businesses, tourists, and investment as it is quickly apparent that the community is concerned about the quality of life along its streets. Many traffic calming programs are catalysts for broader district improvements, including new sidewalks, landscaping, façade improvements, and lighting upgrades.

An important feature of quality traffic calming programs is their ability to change local perceptions about traffic design and operations in town. Residents soon learn that the reduced speeds do not add any notable driving delays, which leads to greater compliance with posted speed limits. As traffic calming elements become acceptable parts of street design, local Boards and Commissions begin to realize that initially designing streets to be smaller can avoid traffic calming retrofits all together. This can help new planned neighborhoods to look more like the narrower streets of historic village neighborhoods that are, in effect, already traffic calmed. As such, a traffic calming program can change public perception to support safer multi-modal streets.

Benefits

The traffic calming program directly addresses citizens' concerns about high speeds, improves safety for pedestrians and bicyclists and creates a more attractive community. Done well, a traffic calming program can have a number of additional benefits, including:

- Attracting new residents to streets with slower traffic
- Providing appealing streetscape environments in walkable commercial districts
- Creating new gateway treatments
- Encouraging greater walking and bicycling

Tradeoffs

Traffic calming often involves reducing speeds which lengthens travel times. However, the difference in total trip time is usually negligible, even if perceptions are otherwise. Traffic calming can add some time to emergency response vehicles and should be designed to minimize impacts to response times, especially near the ends of service radii or where higher en-route speeds are typical.

Necessary Steps for Implementation

While the Town Transportation Plan identifies some streets within the Town of Essex where traffic calming strategies would improve conditions, specific recommendations should be developed through a series of conversations within each neighborhood. The needs of each neighborhood should be identified up front – such as “slow speeds” or “discourage cut through traffic by employing measures to change travel patterns.” Town staff should conduct interactive workshops in each neighborhood to educate the community on the benefits and tools of traffic calming and to hear residents’ thoughts about the most appropriate measures. Ultimately, the neighborhood in which traffic calming is employed will be the most affected by the roadway design changes. As such, the details of the plan should be developed by the community itself with overall guidance from an experienced traffic engineer.



Curb extensions in Hudson, Ohio make for a shorter crossing distance.

Source: www.pedbikeimages.org / Dan Burden

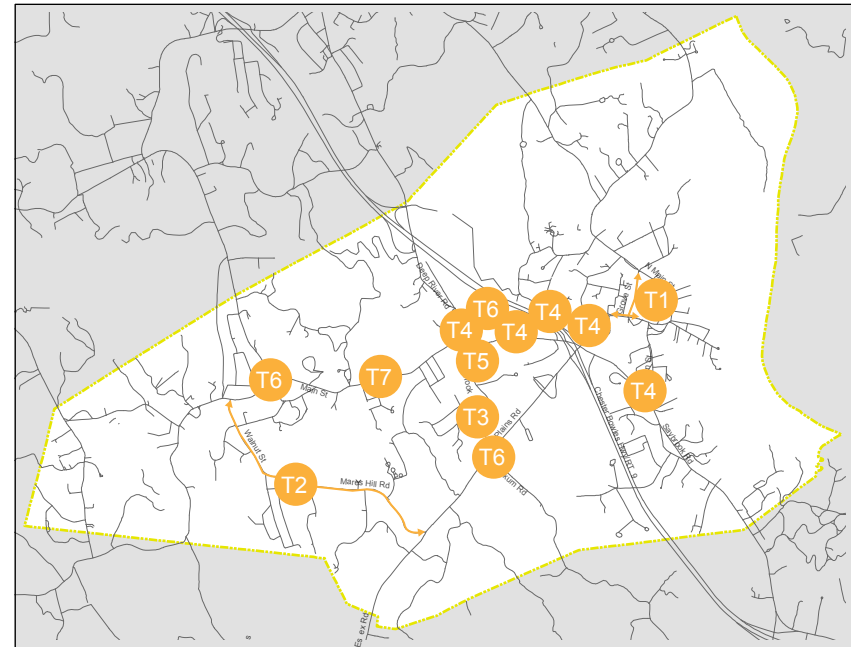
Initial Project List

Within the town of Essex, a number of neighborhoods and roadways have been identified as good candidates for further study to determine appropriate traffic calming strategies. These locations include:

- T1. Speed reduction measures for the West Avenue, Grove Street and North Main Street neighborhood near Essex Village
- T2. Speed reduction measures for Mares Hill Road/Walnut Street
- T3. Sightline improvements along Westbrook Road
- T4. Safety improvements at several intersections (Westbrook & Main Street, Deep River Road & Main St, Dennison Road & Main Street, Prospect & West, South Main & West, bridge over Route 9)
- T5. Curbcut modifications at Main Street gas stations in Centerbrook
- T6. Crossing safety improvements in Ivoryton, Bodum Corner, and Centerbrook
- T7. Variety of traffic calming strategies on Main Street between Centerbrook and Ivoryton

These locations are identified based on input from the stakeholders and the study team's observations and knowledge of the town's roadway infrastructure and issues. In all cases, a repeated concern related to speeding and poor pedestrian environments were noted. Traffic calming strategies can address both these concerns and enhance safety while improving village environments.

Figure 4 Initial Project List – Traffic Calming Program



PARKING MANAGEMENT PLAN

Description

Historically, “solving the parking problem” almost always meant increasing the parking supply. Unfortunately, constantly increasing the supply does not resolve everyone’s desire to park in the most convenient space – it simply encourages more auto use, as people are encouraged to drive to places that offer “plenty of free parking.” Parking demand management “manages” curb space for availability and provides the optimal amount of parking to meet needs, while reducing traffic congestion and accommodating new development. Revisions to the current parking requirements of the zoning code are also recommended to ensure that sufficient parking is provided, without an oversupply.

A parking management plan includes strategies such as shared parking, improved signing and wayfinding, a pedestrian-oriented “park once” plan for drivers to park and conduct multiple trips on foot, and demand-responsive regulatory strategies to distribute parking more evenly, so some areas are not always overcrowded and others empty.

A parking management program also introduces several parking ordinances, including:

- Parking in-lieu fees – which allows developers to pay a fee in lieu of building required off-street parking
- Unbundled parking – which separates the cost of parking from the cost of housing or office space so that tenants can make informed decisions about their mode of transportation.
- Shared parking – which allows different land uses to share the same parking supply, which reduces the amount of parking needed.
- Bicycle parking – encouraging the use of bicycles by ensuring convenient secure parking at destinations.



Bike Parking in Madison, WI

Source: www.pedbikeimages.org/Dan Burden



Parking exists within the main intersection in Essex Village

Source: Nelson\Nygaard

Goals/Objectives

The parking management plan for Essex aims to ensure adequate parking is provided while encouraging a balanced transportation system by incentivizing the use of modes other than the personal vehicle. The goal is to have a parking system that balances use across time and space, ensuring parking is available close to the driver's destination without creating excess parking supply. By responding to utilization patterns, planners can identify more restrictive policies in high-demand areas that encourage turnover, as well as unrestrictive policies for spaces that are regularly vacant. Managed correctly, at least one on-street space would be available on every block face (or approximately 15% of the available supply on that block face), which provides convenient parking and eliminates the perception of a lack of supply.

Key to a management program is freeing up spaces for more infrequent visitors that support local merchants. As such, a well-conceived parking management program is a catalyst for village development as parking becomes more available.

Benefits

- Decreased vehicle use and less traffic
- Safer pedestrian conditions
- Promotion of more village-style development
- Reduced consumption of land for future parking
- Healthier lifestyles

Tradeoffs

- Hard to change behavior/habits
- Need to offer safe alternatives (i.e. sidewalks, transit, safe bicycle facilities and parking)

Necessary Steps for Implementation

A detailed parking management plan needs to be developed for each of the village centers. These plans should identify all of the publicly accessible parking in the village, where and when there is excess supply, and where and when there is a parking deficit. Tailored strategies that address the specific conditions of each village should be selected and woven into a comprehensive parking management plan. These strategies should address management of demand, supply expansion, zoning requirements, financial incentives, and improved enforcement.

A first step might be the creation of a separate Parking Commission with representation from the Board of Selectmen, Planning Commission, and Zoning Commission.

Initial Project List

Townwide

1. Parking management plans
2. Zoning code changes (eliminate front-yard parking, reduce minimum parking requirements, permit sharing, increase accessory parking walk distance, etc)

Corridor/Site Specific

1. Add on-street parking in Ivoryton and Centerbrook for local businesses as well as a traffic calming measure
2. Establish an Essex Village residential parking permit program with signs and resident passes/stickers to clearly define where residents can find a space and where they should avoid high-demand customer parking

TRANSPORTATION DEMAND MANAGEMENT PROGRAM

Description

Transportation Demand Management (TDM) refers to a collection of strategies to manage the demand for parking and roadway capacity. TDM programs give people incentives to choose bicycling, walking, or taking transit over driving alone by making those alternatives more attractive and convenient. TDM strategies are appropriate at an introductory level in Essex to encourage the use of different modes. The Town may consider the following strategies:

- **Town Staff Carshare:** To enable Town staff to carpool, take transit, bike or walk to work, the Town could explore the potential for a commercial or Town-maintained carsharing program, where one or two carshare vehicles are available for work trips and to run errands



Biking and walking opportunities increase with transportation demand management strategies. Madison, WI.

Source: www.pedbikeimages.org/Dan Burden

- **Rideshare Program:** Encourage residents to commute to work by carpooling and vanpooling together, including sponsoring an Essex-specific rideshare database
- **Trip Reduction Program:** Give commuters resources and incentives to reduce their automobile trips, in the form of parking cash-outs, transit allowances, universal transit passes, etc.
- **Guaranteed Ride Home:** Providing employees who take other modes with a certain amount of free taxi-ride vouchers in case their alternative is compromised
- **Transportation Resource Center:** A storefront office and/or website that provides personalized information on transit routes and schedules, carpool and vanpool programs, bicycle routes and facilities, commuter alerts, and other transportation information. Typically has staff available to give businesses advice on pre-tax transportation fringe benefits, setting-up commute programs, and compliance with regulatory requirements. Other functions include distribution of new employee/tenant orientation materials and on-site promotional events (such as transportation fairs) and conducting surveys and counts in town and at employers to better assess transportation needs

Goals/Objectives

Establishing a suite of TDM strategies is an important step for the future of Essex. While few would utilize these programs today given their existing travel behavior, establishing them as options or even requirements of new businesses and developments in town will help to offset any new traffic impacts. Given Essex's interest in maintaining a quality walking and biking environment, it is essential to have the right incentive programs in place to promote those activities among new residents and employees – otherwise capital investments in non-motorized infrastructure will be less-effective.

In many smaller communities that see some of the same commuter patterns that Essex does to coastal employers or further to Hartford, employees have banded together to create their own rideshare systems, transit incentives, and vanpools. With the Town enabling these and other conveniences, Essex has a great opportunity to shift a number of travelers to modes other than single-occupant vehicles.

Benefits

TDM offers a choice to residents, employees, and visitors on how they get around. Populations such as older adults, those that cannot afford a car, and those that do not wish to drive would have information and options for travel.

Tradeoffs

With a small population, participation in TDM may be limited. However, it may be fruitful to partner with the Connecticut River Estuary Metropolitan Planning Organization, other organizations, or major employers to effectively administer some programs.

Necessary Steps for Implementation

Developing a TDM program in Essex does not require a great amount of effort. Town staff should first identify the State and regional programs available to Essex and seek advice from successful examples, such as New Haven's Rideworks. With a set of options, the Town can collaborate with the Essex Chamber of Commerce to find the names of those commuting greater distances, on an ETD route, or within biking/walking distance and begin the conversation of what benefits would make the trip by transit, bike, or foot more attractive. Many of the most successful TDM programs begin with simple information about non-auto resources and incentives.

Some of the available state resources include:

- NuRide, an on-line rideshare matching program
- Easy Street, Connecticut's vanpool program
- Guaranteed Ride Home, for users of Express Bus service from Bokum's Corner, Exit 3, and the Exit 4 park & ride lot

Initial Project List

1. Coordination meetings with the Connecticut River Estuary MPO, Connecticut Commuter Services, Rideworks, and Essex Chamber of Commerce
2. Establishment of a Transportation Resource Center online and at Town Hall
3. Investigate shared car options, including a Town vehicle or discussions with ZipCar, U-Car-Share, or RelayRides
4. Evaluate feasibility of a regional Transportation Management Association to broaden TDM offerings to a critical mass of employers in the region

PLACEMAKING WITH SHARED STREETS

Description

Placemaking is creating places that will attract people because they are pleasurable or interesting. Placemaking transforms transportation corridors into destinations of their own. Through the use of attractive landscaping, public art, public space, and innovative facilities, a once overlooked area can be transformed into a place that attracts people and businesses. A shared space is a common area intended to be simultaneously shared by pedestrians, bicyclists, and low-speed motor vehicles. They are typically considered shared streets developed without curbs or sidewalks, and vehicles are slowed by placing trees, planters, parking areas, and other obstacles in the street. The seeming “chaos” creates a situation where no single user group holds dominion over the space, no one is an intruder, and no one is the owner. Everyone becomes much more aware of their surroundings including the movements of other users resulting in a more congenial and civil public interaction. A shared street transforms the street into a public square, promenade, sidewalk café, playground, etc. Consideration must be given to provide access by fire trucks, sanitation vehicles, and other service vehicles (school buses and street sweepers), if needed.

In Essex, shared streets are appropriate in some places to emphasize nodes of activity in village centers and encourage public interaction. Shared streets are a great strategy to improve the sense of place and build a community. Even more importantly, shared streets are designed to improve safety for all users.

Goals/Objectives

Shared spaces create safe, civil places that encourage public interaction, economic activity and attract visitors, while protecting the character of historic village centers from the increasing dominance of the automobile.

Benefits

- Encourage economic activity
- Creates a greater sense of place
- Attracts visitors
- Improves safety
- Encourages walking and biking
- Improves civility between drivers, bikers, and pedestrians
- Unique features that places Essex in a different category than all of its neighbors

Tradeoffs

- Transforms roadways into places, increasing the time needed to pass through the area
- Full implementation involves reconstruction which carries a significant capital cost



Shared street in Asheville, North Carolina

Source: www.pedbikeimages.org/Dan Burden

Necessary Steps for Implementation

Shared streets require no special legislation or ordinances. It will require the development of detailed conceptual designs, engineering feasibility studies, and conversations with the public safety community in Essex. CTDOT would need to be involved in any projects targeting State owned routes.

Initial Project List

1. Deep River Road in Centerbrook
2. Summit Street in Ivoryton
3. Main Street in Essex Village



Branded street signs in New Amherstburg in Canada

Source: Flickr user jbcuiro, License info

<http://creativecommons.org/licenses/by-nd/2.0/deed.en>

STREET SIGN DESIGN GUIDELINES

Description

A street sign program is a comprehensive, town-wide program to sign all streets in town with a consistent sign style. This is important for wayfinding for both residents and visitors, and to unify the Town of Essex. Well-designed and implemented programs create a strong sense of place and community, often contributing to a sense of stability.

A good street sign program needs annual inspections and a maintenance program for all Town-owned signs to ensure proper upkeep.

Goals/Objectives

This program would aim to have every street in Essex signed at all intersections using a clear and concise format for each sign.

Benefits

Increase the ease of navigating Essex, especially for visitors. It would also create a more unified sense of community throughout the different parts of Essex.

Tradeoffs

This would involve the purchase of new signs and the installation of sign posts throughout town.

Necessary Steps for Implementation

- Identify locations lacking street signs
- Identify sign design
- Ensure that signs conform to the 2009 MUTCD, Chapter 2, Section 2D.43.
- Purchase signs
- Create an installation plan
- Create a maintenance program



Branded wayfinding signage in Charlotte, NC
Source: www.pedbikeimages.org \ Laura Sandt

BRANDED WAYFINDING PROGRAM

Description

A wayfinding program includes signage, flags, or other unique identifiers for residents and visitors to identify major centers of activity in Essex. These are designed to be easily recognizable – often branded specifically to the town image – and lead visitors from their point of arrival to their destination with minimal effort on the part of the visitor. A wayfinding program attracts customers to town, provides information for visitors to improve their experience and satisfaction, and serves as additional advertising for town destinations.

The target traveler should be considered when identifying the signage for any specific location. For instance, at the Exit 3 off-ramps, the wayfinding should be targeting drivers and so should be larger and higher up. Wayfinding in the center of one of the villages should be targeting pedestrians and bicyclists and thus smaller, lower to the ground, and more frequent.

Goals/Objectives

The branded wayfinding program should have two primary goals: to improve the ability for motorists, pedestrians, and cyclists to get around town easily without getting lost; and to help create a sense of community. Good wayfinding signage makes it easier and more pleasant to get to destinations. When integrated with branding tailored to Essex as well as each village, wayfinding signs help advertise community character.

Benefits

This type of signage can tie a community together since if it is an easily recognizable, unique brand. It can remind residents of attractions to visit or re-visit in the area and helps to orient newcomers. Branded signage is more attractive than standard highway and information signs, creating a less-generic and more local feel.

Tradeoffs

The cost of developing a wayfinding program including the branding design, sign purchases, installation plan and maintenance program.

Necessary Steps for Implementation

The benefits of a wayfinding program should be brought before the Board of Selectmen, the Economic Development Commission, and local businesses, in consultation with the Planning and Zoning Commissions.

Also refer to the 2009 MUTCD Section 2D.50 for sign and location criteria relating to wayfinding signs, including appropriate colors, sizes, arrow designs, breakaway supports, clear zones etc. Generally, the wayfinding signs should not obstruct intersection sightlines and should not be used for advertising of a commercial establishment.

Destinations to be identified in the wayfinding program need to be identified. Locations throughout town where installation is warranted need to be chosen.

Initial Project List

1. Vehicular signs leading visitors from the main gateways (Routes 154 and 153 at their approaches to each village and off of Exit 3 ramps) to each of the village centers
2. Vehicular signs directing visitors to public parking locations in each village
3. Pedestrian signs within village centers to guide visitors to the other village centers



Shirlington Village wayfinding signage in northern Virginia

Source: <http://www.johnmentis.com/>

ZONING CODE CHANGES

Description

A number of goals identified by the Town are not supported in the current Zoning Code. The Town of Essex should consider revising its zoning code to be more flexible in accommodating multi-use buildings and other non-traditional developments that compliment Essex's villages. If Essex wanted to create another village center in the same fashion as Centerbrook, Ivoryton, or Essex Village, the current Zoning Code would not allow it. The code would not allow a mix of uses in most parts of town and the moderate density observed in the villages would not be allowed as-of-right today. Other zoning regulations in Essex, such as requiring minimum setbacks (which are 25-75 feet for most land uses in Essex), a sewer avoidance ordinance, loosely regulating the width of driveway curbcuts, and having parking minimum requirements that are higher than standard peak parking demand rates, all contribute to making Essex less of a walkable, livable community and encourage a sprawling development pattern that forces a dependence on vehicle travel between nearby destinations. This trend also has reduced the residential component of each village, making them mostly commercial destinations.

The Heritage Gateway District zoning does provide more flexibility, but it is only in one small area near the intersection of Route 9 and Route 154. Additionally, the residential and commercial zoning codes encourage development to have low density, which may not be appropriate in all areas of Essex – particularly the village centers. The Town has identified an interest in reducing the dominance of the automobile which would involve encouraging more pedestrians, bicyclists, and transit riders in town. One of the most important factors in having more non-auto drivers is a mix of uses and at least moderate density at activity nodes. A revision of several of these zoning regulations would likely positively impact the walkability and livability of the villages and areas in between. If zoning code changes are made, campaigns or programs to educate the public and developers are needed.



Excessive driveway curbcuts in Essex

Source: Nelson\Nygaard



Wide sidewalks, a buffer between pedestrians and the street, and minimum building setbacks make Durham, NH an enjoyable place to walk.

Source: www.pedbikeimages.com\Dan Burden

Goals/Objectives

Encourage a built environment that will increase the use of modes other than the single occupant vehicle. This is best achieved by allowing mixed-use development of an appropriate character in the village centers and at major activity nodes in order to concentrate development where walking, internally-captured trips, and shared parking can occur with fewer vehicle trips than traditional development. More rural single-use development can be preserved outside villages and nodes. Both patterns should be complimented with incentives to provide multi-modal connectivity between nodes.

Benefits

Essex would be able to stop the continued progression of suburban auto-oriented uses along its commercial strips and enable more of the village-like development that attracts residents and visitors to Essex. This form of nodal development happens to have higher property values and would result in better tax revenue growth for the Town than current zoning allows per square foot of development – especially given the lower infrastructure costs associated with supporting compact development.

Tradeoffs

Changing the Zoning Code can involve a long public and political process.

Necessary Steps for Implementation

Initiate a public conversation to explore how the town would like to develop over the next 20 years. Explore the potential for innovative approaches to zoning such as using a form-based code rather than the traditional use-based code. Move forward by identifying areas where zoning should be changed to allow for development the residents would like to see. Revisit regulations that act as barriers to preferred development such as minimum setbacks, minimum parking requirements, the sewer avoidance ordinance, etc.

Initial Project List

Broad zoning changes

1. Explore options to encourage the development of Bokum Corner into a vibrant, pedestrian-friendly commercial village center
2. Identify and eliminate barriers to mixed-use development within Centerbrook and Ivoryton

Targeted zoning changes

1. Eliminate minimum parking requirements or replace minimum with maximum parking limits to encourage more walkable development and limit the amount of land dedicated to parking
2. Expand shared parking from just the Heritage Gateway District to the other Village centers, and remove the barriers (below) to shared parking:
 - a. Requirement of Special Exception by Planning Commission
 - b. Requirement that Shared Spaces be the Number of Spaces be the Cumulative Sum of Each Use (Resulting in over supply)
3. Ensure greater flexibility of parking requirements associated with a change of use for older buildings - Potentially eliminate the requirement to meet minimum parking requirements for a new use, to foster reuse of older buildings, or allow any additional parking needs through nearby off-street lots or on-street spaces
4. Build upon the removal of setback requirements in the Essex Village District and Heritage Gateway District by doing the same in Centerbrook, Ivoryton, and other locations as appropriate to have more pedestrian-oriented, walkable development
5. Incorporate into the existing zoning guidance on curb cuts considerations for their placement as they impact pedestrians and cyclists, as well as proximity to intersections and side streets. Make sure clear sightlines exist for motorist to see pedestrians and those on bikes, and vice versa

ACCESS MANAGEMENT PROGRAM

Description

Access management refers to a proactive approach to controlling how parcels are accessed from roadways. It involves using strategies that minimize vehicle conflicts, maximize sightlines, and preserve roadway capacity by eliminating excessive interruptions to traffic flow. Strategies such as driveway consolidation, driveway sharing, interconnecting sites, and medians are all considered access management.

Elements of this access management program include:

- Encouraging or requiring the sharing of driveways in commercial areas
- Limiting the number of driveway curb cuts, and designating entrance and exit curb cuts
- Restricting left-turn movements into and out of driveways near intersections – possibly through the use of medians

Benefits

Benefits of access management include increased traffic throughput, improved safety, and reduced delay.

Tradeoffs

Some drawbacks include negatively impacting on-site circulation or limiting access to sites from certain roadway directions. A successful access management plan requires knowledge of the best practices in access management and intensive outreach and communication with property owners.

Necessary Steps for Implementation

The Zoning Commission would adopt language in the zoning code that requires good access management principles to be employed in

all site designs. The zoning language also would require the Commission members to consider when site access can be improved through access management strategies.

Initial Project List

Corridors in Essex where access management strategies would have the most benefit include:

- Plains Road from Route 9 to the Westbrook town line
- Route 154 from Route 9 through Centerbrook
- Main Street from Centerbrook and through Ivoryton
- Deep River Road from Route 9 to Centerbrook
- Westbrook Road from Centerbrook to Bokum Corner
- Bokum Road from Bokum Corner to Old Saybrook town line

The Town of Essex Zoning Commission can research access management best practices and amend the zone code to add such language. The Town Planner, or a hired consultant, should do a zone code review and propose amendments to the code to incorporate access management in these corridors as well as throughout the Town.



*Pedestrian signalized crosswalk with no indication in Centerbrook
Source: Nelson\Nygaard*

Part II. Targeted Multi-Modal Improvement Plans

This section provides recommendations for enhancements to a number of key focus areas within Essex. These areas have either been identified as areas for attention through the Stakeholder outreach process or have been observed by the Study Team as candidates for enhancements that would advance the town's vision and goals. The key focus areas include:

- Centerbrook
- Bokum Corner
- Ivoryton

CENTERBROOK

Return of the Village Center

The redesign of Centerbrook seeks to restore the area as a vibrant village center where citizens come to shop and meet as a community. The redesign also seeks to address traffic congestion issues associated with the current intersection configuration and seeks to improve safety for pedestrians and bicyclists in the village.

Key Issues Addressed

A number of placemaking and transportation issues documented in the Needs Assessment (Volume II) are addressed in the proposed design, including:

Placemaking

- The Main Street frontage is hostile to pedestrians and generally unattractive due to a number of curb cuts and wide travel lanes between the northbound leg of Deep River Road and Westbrook Road

- The intersection of Main Street and Westbrook Road is very auto-oriented with few positive streetscape features
- The memorial statue and park in the core of the Centerbrook triangle is unnoticeable due to the large adjacent parking lot
- There are no clear gateways to Centerbrook

Transportation

- Discontinuous, ADA non-compliant, and/or broken sidewalks exist in several locations
- The single crossing of Main Street at Westbrook Road has ADA non-compliant push-button locations and introduces notable signal delay when activated
- All other crosswalks are unsignalized, even at signalized intersections
- Wide curb cuts threaten the pedestrian environment and introduce excessive turning-movement locations, reducing vehicular safety
- The off-set of the main intersection introduces much signal delay and vehicular congestion and results in awkward vehicular circulation patterns
- The one-way couplet of Deep River Road introduces unnecessarily high vehicle speeds
- The free right onto Deep River Road northbound allows high speeds in conflict with pedestrians and left-turning vehicles
- There are almost no on-street parking spaces to serve existing or future retail and restaurants

Overview of Proposed Changes

The recommended enhancements include the closure of the southbound leg of Deep River Road between the bank driveway and Main Street, with this space converted into a new public village green. The remainder of the southbound leg will become a two-way street connected to the northbound leg of Deep River Road at a redesigned split to the north and via an existing driveway to the south that is improved to street standards.

The northbound leg of Deep River Road will be changed into a two-way street handling all north-south traffic, and its intersection with Main Street will be tightened to reduce the turning radii, slowing right-turning vehicles as well as decreasing the crossing distance for pedestrians.

The resulting village center will help return Centerbrook to its role as the “center” of Essex while becoming an attraction for increased walking and biking activity. Meanwhile, the roadway changes not only reduce intersection delays in Centerbrook but make circulation patterns more logical, eliminating extra trips that must circulate through the existing intersections today due to the one-way pattern. Two-way traffic also will naturally reduce village vehicle speeds, yet overall delay will reduce. Centerbrook’s streets will become much more friendly to pedestrians and bicyclists and safely allow for pedestrian and bicycle facilities to be introduced.

The following are descriptions of the various design elements included in the concept plan (C1 – C8 are referenced on the Centerbrook improvement plan):

- C1. Conversion of Deep River Road.** Reducing speeds through reduced speed limits is rarely as effective as passive design cues in the roadway. Deep River Road is a one-way “couplet” roadway, intersecting with Main Street at two locations in a triangular pattern. The existing northbound road is a wide one-way road with enough width to be converted into a two-way street. Realigning its intersection with Main Street into a ‘T-intersection’ and tightening the curb radii improves vehicle operations and safety at this location. Transformation from a wide one-way into a narrow two-way street will more likely result in slower traffic than a decrease in the posted speed limit. This will also allow for the closure of the southbound leg at its existing intersection with Main Street (further described below). A new sidewalk on the east side of the northbound leg is also proposed, which can be accommodated in the existing right-of-way adjacent to the road surface.
- C2. Convert Deep River Road into a Shared Street.** The southbound leg of Deep River Road runs from the two-way split through the heart of Centerbrook to a misaligned intersection with Westbrook Road at Main Street. As a result of the proposed two-way conversion of the existing northbound leg of Deep River Road, the southbound leg becomes an unnecessary through road allowing for a closure of the misaligned intersection and a repurposing of the driveway behind the Visiting Nurses building as a village street. This driveway and the remaining section of the southbound leg of Deep River Road present a perfect opportunity for a shared minor village street, allowing vehicles to access the businesses along this stretch at slow speeds, shared with pedestrians and bicyclists.
- C3. Create a Village Green.** The former southbound leg of the Deep River Road intersection with Main Street can be converted to public green space to be used for community events, concerts, a farmer’s market or other activities and improve the sense of Centerbrook as a village center.
- C4. Establish T-Intersections.** The reconfigured intersections of Deep River Road with Main Street and Westbrook Road with Main Street will be re-aligned to create approaches at nearly 90-degrees to each other. This will ensure that cars on the minor T approach come to a complete stop or slow down significantly as they reach these intersections. The narrowed alignments also will reduce the crossing distances for pedestrians.

C5. Consolidate and Narrow Driveways. At the intersection of Westbrook Road and Deep River Road, sidewalks and landscaping are extended to consolidate the numerous driveway curb cuts – particularly at the Cumberland Farms gas station/market. Fewer curb cuts means that there are fewer cars turning in and out of numerous locations, providing a safer atmosphere for motorists, pedestrians, and bicyclists, as fewer curb cuts reduces the number of points of conflict at driveways. Several other driveways in Centerbrook also are excessively wide, such as those at the Mobil gas station/market. Keeping in mind that large delivery trucks need to access both gas stations, it is still possible to reduce the width of their large curb cuts. This will reduce the speeds when entering and exiting, add vegetation for aesthetic and stormwater management purposes, and prevent vehicles from cutting through the stations to avoid traffic signals.

C6. Add Sharrows and Bicycle Lanes. Adding bicycle lanes on Main Street will give bicyclists a dedicated area to ride, as well as make motorists more aware that there may be bicyclists present. Another bike treatment is the sharrow, or “shared arrow,” which indicates to bicyclists where to ride on the street, and also reminds drivers to share the road. Sharrows are proposed in the segment between the Westbrook Road and Deep River Road intersections to allow for the width of turn-pockets and a median.

C7. Add an Off-Set Mid-Block Crossing on Main Street. It is not easy or safe to cross a major street without a pedestrian signal, but often it is not convenient to walk a block out of the way to a signal. A median placed half way between the signalized intersections at the heart of pedestrian desire lines with a pedestrian refuge will cut the single crossing into two short crossings, which makes it much easier to engage. The crossings would be off-set at an angle to make pedestrians automatically look at and assess oncoming traffic before stepping into the roadway.

C8. Add Street Parking. The reconfigurations of Main Street, Deep River Road and Westbrook Road allow for on-street parking opportunities. Such parking helps to define the village as a destination for drivers, as well as an area to slow down and watch for pedestrians crossing to their cars or businesses. New parking is likely to help local businesses and possibly stimulate future retail development.

Operational Benefits

- The proposed redesign of Centerbrook village is expected to improve vehicular level-of-service in the future, moving from a projected LOS F for the existing four-way off-set intersection under the no-build scenario to LOS C or better at the two intersections with the proposed enhancements in place. The primary reason for this improvement is the reduction of vehicle conflicts at the existing intersection resulting from the elimination of one entire leg of the intersection. Detailed level-of-service analysis results are provided in the appendix.
- Similarly, pedestrian level-of-service is expected to improve dramatically from the existing LOS F at the single crossing of Main Street to no worse than LOS C at any of three future crossings. With less delay and more crossing opportunities, Centerbrook becomes a noticeably safer and appealing place to walk.
- Most notably, overall vehicular, pedestrian, and bicycle safety would improve dramatically in Centerbrook, mostly as a result of reduced vehicle speeds and improved pedestrian and bicycle accommodations.

Intersection	Existing (2010)		Do Nothing		Redesign	
	AM	PM	AM	PM	AM	PM
Main St (Rte 154) & Westbrook Rd	D	E	F	F	C	C
Main St (Rte 154) & Deep River Rd	N/A	N/A	N/A	N/A	B	C

Figure 5 Centerbrook – Existing



C1-C8 are described on the preceding pages.

Figure 6 Centerbrook Enhancement Plan



Figure 7 Centerbrook – Existing Bird's Eye



Figure 8 Centerbrook – Enhancement Bird's Eye



Emergence of a 4th Village Center

Although Bokum Corner is currently a shopping destination, it lacks the character of a village center as compared to Centerbrook, Ivoryton, or Essex Village. Nonetheless, its locally-serving retail establishments appear to have the potential to anchor a more vibrant and pedestrian friendly node of activity within the Town. Bokum Corner is a key commercial crossroads in town and there is and will likely continue to be development pressure here. As such there is an opportunity to enhance this corner from its current auto-dominated and outdated retail “strip” into a cohesive, attractive, and safer activity node.

Key Issues Addressed

Bokum Corner’s businesses are all set back from the roadway, and most have fields of parking between the roadway and the front door. These characteristics are dramatically different than those of Essex’s traditional village centers and present a number of issues, many of which were documented in the Needs Assessment (Volume II), including:

Placemaking

- Bokum Corner lacks any center or key gateway feature, other than the street intersection itself
- The shopping center is hidden behind a bank building and a large parking lot that wraps most of the mall
- Most buildings are noticeably separated from each other and the roadways, more akin to a suburban commercial strip than a village center

Transportation

- The above placemaking characteristics make Bokum Corner an uninviting pedestrian atmosphere. Adjacent parcels are not connected by any walkways, sidewalks, or even driveways, which discourages multiple-stop trips on foot and leads to additional vehicle traffic out of proportion with the district’s size.
- Pedestrian safety is entirely overlooked, with few marked crosswalks, long roadway crossing distances, and a complete lack of sidewalks. Even the large parking field serving the shopping center has no pedestrian walkways and no marked crossings to business’ front doors.
- Most existing curb cuts incorporate large-radii entrances, allowing higher-speed entry and exit, which reduces driver awareness of on-coming bicycles or pedestrians.
- The Westbrook Road approach to the intersection with Plains Road is mis-aligned, with through traffic opposing a left-turn lane on Bokum Road. This is a safety concern leading to potential angle collisions.
- With the exception of the shopping center, the lack of connectivity between adjacent parcels by any form of transportation has compounded the traffic effects of this relatively small commercial center. With each use acting like a stand-alone isolated trip attractor that can only be served by cars – yet placed immediately adjacent to other stand-alone uses – all trips are made by cars which must circulate and maneuver through curb cuts in close proximity to each other and the primary intersection. Every added turning movement contributes to delay and congestion, while the lack of connectivity forces many to make more than one driving trip between destinations on each visit to the district. Essentially, Bokum Corner’s existing design and built environment is the reason this area is congested, and no further development will reduce this unless the existing land use strategy and zoning is modified significantly and eventually the design of the roads and sites themselves are also modified.

- Parking supply in the Corner is overbuilt, with each stand-alone use served by an exclusive field of parking. Only the shopping center lot experiences heavy peak utilization, though vacant spaces can always be found on the Bokum Road frontage and out back. All other lots in the Corner are sized to accommodate their individual highest possible peak demand. However, few peaks overlap, leaving scores of empty spaces available in one Corner lot or another at any time throughout the day which cannot be shared due to the lack of connections. This contrasts with Essex's more mixed-use, compact, and walkable villages where one parking space serves multiple destinations. As a result, Bokum Corner cannot accommodate significant new development without improving walking connections and sharing parking.

Overview of Proposed Changes

In order to create a village where an auto-centric suburban commercial area exists, a combination of transportation and land use changes are needed. Elements such as installing pedestrian and bicycle infrastructure, allowing clustered development, and bringing parking to the rear of new buildings can help shape this crossroads into a village center over time. The following summarizes the major elements of a potential Bokum Corner enhancement plan (B1 – B5 are referenced on the Bokum plans):

- B1. Add Crosswalks and Pedestrian Refuges.** No crosswalks exist in Bokum Corner, although they are warranted and there are plenty of opportunities. In fact, there are pedestrian ramps at all four corners of the Plains/Westbrook/Bokum intersection in anticipation of future crosswalks and sidewalks. Each leg of the intersection should be striped with an international standard (zebra) crosswalk and countdown pedestrian signal heads installed to allow for exclusive/protected pedestrian crossing phases. On Westbrook Road, two pedestrian refuges can be added—one as a median and one as an island on the edge of the right-turn slip-lane off of southbound Plains Road. The crossing at the slip-lane can include a raised crosswalk to slow turning vehicles, improving visibility of crossing pedestrians. Adding these pedestrian refuges makes it much easier for pedestrians to cross in stages, rather than crossing over a wide road in one movement.
- B2. Add Sidewalks and Curb Extensions.** Sidewalks should be added to both sides of the road on Plains Road and Bokum Road to allow for safe pedestrian travel to Bokum Corner and between destinations in the area. Westbrook Road only has sufficient right-of-way to have one sidewalk, which would ideally be placed on the east side of the street along the wetland in Bokum Corner (and ideally continuing all the way to Main Street in Centerbrook). Additionally, the current intersection has very wide turning radii. Building curb extensions will narrow the vehicle right-of-way thereby improving safety by both reducing the crossing distance for pedestrians and slowing vehicle traffic.
- B3. Add Sharrows and Bike Lanes.** The roadway is wide enough for bike lanes to be installed on Plains Road. Providing dedicated lanes east to Exit 3 will dramatically improve the environment for bicyclists, and the treatment can continue some distance to the west. Narrower Westbrook and Bokum Roads should have sharrows installed to create a fully bicycle accessible Bokum Corner.
- B4. Re-Align Intersection.** As a result of adding curb extensions, Westbrook Road can be re-aligned with Bokum Road to meet Plains Road at an angle closer to 90-degrees, which will greatly improve motorist sightlines at the intersection as well as slow turning movements. With Bokum Road's left-turn lane shadowed by the crossing island at Westbrook road, through traffic is properly aligned to help minimize angle crashes.
- B5. Encourage Clustered Development.** The Town of Essex should concentrate new development in Bokum Corner as clustered infill, occupying much of the existing front-yard set-backs and front-yard parking with sufficient density and an orientation towards the street. Requirements for parking and front and side

setbacks will need to be significantly reduced in order to create village-style development and a comfortable pedestrian realm. Incentives should be developed to allow existing landowners to build more floor area on their parcels in return for public infrastructure improvements that may include providing property for the installation of needed on-street parking. Stakeholders should also consider creating a plaza or central node to define Bokum Corner as a village center.

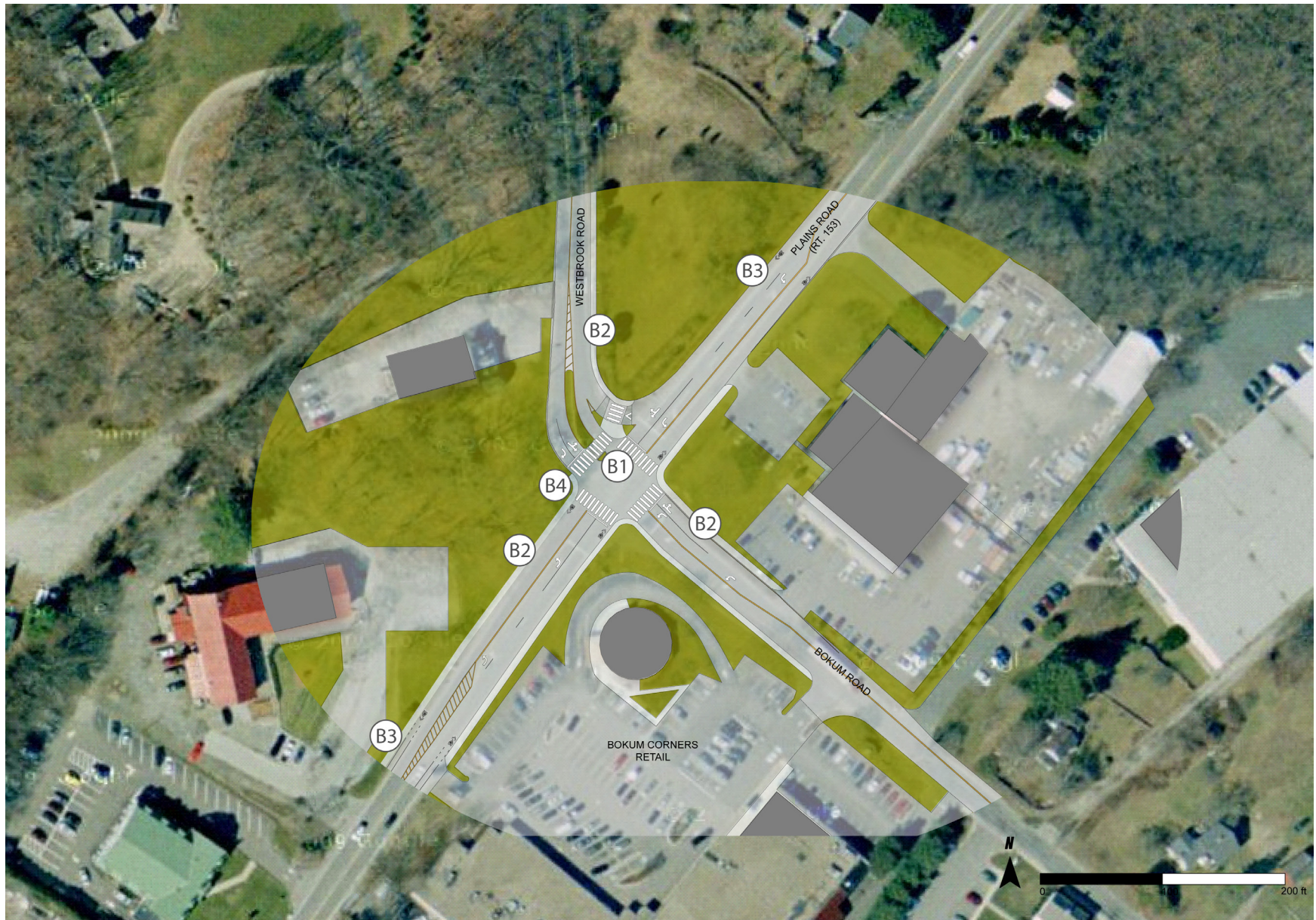
Operational Benefits

- A new development paradigm is possible for Bokum Corner that sees it become a true village of Essex. Denser, mixed-use development in a connected and walkable context can produce less vehicle trips than exist in the Corner today. This results in new tax base, economic development opportunities, and notable public infrastructure improvements. Without the appropriate changes to zoning and other regulations (or repeated special permit waivers), any new development in the current Corner will only continue to increase congestion.
- As a clear gateway for Essex, new biking and walking infrastructure in Bokum Corner will serve to warn motorists to slow their speeds and operate more safely in the town's unique environment.

Figure 9 Bokum Corner – Existing



Figure 10 Bokum Corner Enhancement Plan



B1-B4 are described on the preceding pages

Figure 11 Bokum Corner – Clustered Development



B5 is described on the preceding pages

Figure 12 Bokums Corner – Existing Intersection



Figure 13 Bokum – Proposed Intersection Improvements



Crafting a Village for the Arts

Ivoryton's unique architectural and community character can be better showcased and developed through the introduction of traffic calming elements to slow traffic as well as new streetscape enhancements to create more of a destination. Cultural and economic activity in Ivoryton has the potential to increase by adding a gateway, elements to slow traffic, on-street parking, and amenities for pedestrian safety.,

Key Issues Addressed

While Ivoryton is already an attraction for the arts, a number of notable issues limit its potential:

Placemaking

Approaching from the east or west along Main Street, there is no clear indication of arrival until encountering the roadway bend and adjacent landscaped parking lot, which is encountered well after entering and passing businesses in the district.

Most retail establishments are not very visible from passing motorists, placed either on the inside of the Main Street curve or on intersecting Summitt Street.

The triangle park is largely cut-off from most Ivoryton establishments by the parking lot and the intervening grade.

The playhouse has a swath of curb cuts and a vehicle repair lot directly across the street.

Transportation

- Crossing Main Street in Ivoryton can be challenging as many desire lines are on or just after the bend in Main Street, leaving

- pedestrians potentially exposed to traffic with poor sightlines.
- The design of the North Main and Main intersection is too large, allowing high-speed turns onto North Main while dominating any nearby pedestrian activity with roadway pavement.
- The intersection of Summitt and Main is too large, unnecessarily exposing any crossing pedestrians to cars. The splitter island on Summitt at Main also is too large, contributing to some driver confusion about which way to circle it.
- The end of Summitt is very wide for a low-volume street, further contributing to pedestrian safety issues, especially since marked on-street spaces are across the street from the retail spaces they are intended to serve.
- There are under 20 public parking spaces in all of Ivoryton, forcing reliance on private parking for village events.

Overview of Proposed Changes

There are two proposed designs for Ivoryton. Most elements of the design are the same in each option with a few differences relating to the treatment of the Main and North Main Street intersection, outlined below. In its existing condition, North Main intersects Main Street at a significantly skewed three-way intersection with high vehicle speeds, creating a dangerous intersection for both drivers and pedestrians. In addition to a lack of crossing facilities at this intersection and elsewhere in Ivoryton, sidewalks are broken up by large driveway curb cuts and/or have steep slopes. Elements of the recommended enhancement plan include (I1 – I10 are referenced on the Ivoryton plans):

- I1. Add Crosswalks and Curb Extensions.** Crossings should be added at the intersection of Summitt and Main, across Main Street at the Post Office, and at the intersection with North Main. The crossing at the Post Office should take advantage of the roadway with to create a traffic calming crossing island/median to make crossings simpler and safer for pedestrians. This island would also have low-level landscaping and possibly signage to notify drivers that they are entering Ivoryton.

- I2. Add Sidewalks.** Sidewalks should be added along all roadways to allow for safe pedestrian travel. This includes the northern side of Main Street east of the intersection with North Main as well as the west side of Main Street south of Summitt Street.
- I3. Add Bicycle Facilities.** Ivoryton would mark the western terminus of a continuous bicycle facility connecting the three villages of Essex. Bicycle lanes would terminate at the eastern gateway crossing island and sharrows would continue to the intersection of North Main. Main Street from North Main to Summitt would incorporate large “bicycle boulevard” treatments which warn drivers that bicyclists must travel in the vehicle lanes through this stretch of narrowed right-of-way. Such treatments will greatly elevate drivers’ awareness of bicycling activity.
- I4. Make Summit Street a “Shared Street”.** At Summitt and Main, Summitt would be realigned to intersect Main at a right angle, and their intersection would be “raised” as a large traffic calming table. Raising the intersection will require cars to slow as they approach from the west forcing an increased awareness of pedestrian activity in Ivoryton. Paving materials and markings will also alert motorists to the change in the environment. The treatments should continue up Summit Street itself away from the intersection for a couple hundred feet, making Summit a shared street with expanded on-street parking. This creates a unique public space and a new “node” of activity that encourages people to spend time in Ivoryton.
- I5. Reorganize the Summit/Main Parking Lot.** The parking lot on the south side of Main Street is completely open for its entire street frontage and could be better organized for circulation and efficient use. One smaller combined entrance and exit point will allow this length of sidewalk to be returned to pedestrians and reduce the conflicts created by haphazard vehicle movements in and out of the lot. A new layout of parking spaces can increase the lot’s capacity, and Ivoryton visitors could park once and feel comfortable walking to multiple destinations in the village. This parking lot is currently privately held and would

require an agreement be reached with the current property owner in order to make geometric changes and ensure it is a publicly-accessible lot. One mutually-beneficial incentive to the property owner would be permitting new construction along the back of the sidewalk, helping to fill the streetscape void between Ivoryton shops on Main and Summitt (see concept plan). Parking would continue to be out back.

- I6. Add Pedestrian Refuge Gateway Treatments.** Strategically locating crosswalks with pedestrian refuges along Main Street will frame the center of Ivoryton, creating a feeling of “you are here” and alerting motorists in advance that they are entering a zone of activity where there is likely to be more pedestrian activity, requiring slower travel speeds.
- I7. Realign Private Road.** The Town should consider working with property owners to re-align the private road north of Ivory Street to intersect Main at Ivory, which would improve drivers’ sightlines and visibility of turning movements.

Re-Aligning Main and North Main: Option A

Option A proposes that the intersection of Main Street and North Main Street is reoriented so that Main hits North Main at a 90-degree angle.

- I8. Realign Main Street.** Changing the eastbound approach of Main Street to North Main will force vehicles traveling through the center of Ivoryton to travel at slow speeds, improving safety and increasing the sense of place. The realignment transforms Main Street between North Main Street and Summit Street into a safe and inviting village street. This configuration would require drivers traveling west on Main Street to turn left to continue their trip.
- I9. Create Public Space on Main and North Main.** Realigning the intersection of Main and North Main allows an opportunity to create a sizable public space on the south side of Main Street that can mirror the public green on the north side of the intersection, helping to create a clear “center” of Ivoryton.

Re-Aligning Main and North Main: Option B

Option B proposes that the intersection of Main Street and North Main Street is reoriented so that North Main Street intersects with Main Street at a 90-degree angle. This alignment is closer to the existing intersection operations but reduces the size of the intersection, requiring slower travel speeds and shorter pedestrian crossing distances than exist today.

I10. Realign North Main Street. By creating an intersection where cars need to slow down significantly to turn from Main Street to North Main, this design creates an atmosphere easier for pedestrians to cross and a safer intersection than the existing configuration.

Operational Benefits

Regardless of the chosen intersection alignment, the proposed treatments throughout Ivoryton have a number of benefits:

- Reduced vehicle speeds on Main Street
- Clear gateways, helping to provide a sense of arrival before passing many Ivoryton destinations.
- Enhanced pedestrian safety throughout the village, helping to promote connections between destinations.
- New bicycle facilities to connect Ivoryton safely by bicycle to Essex's other village.
- New on- and off-street parking.

Figure 15 Ivoryton – Existing



Figure 16 Ivoryton Enhancement Plan – Option A



I1.-I9. are described on the preceding pages

Figure 17 Ivoryton Enhancement Plan – Option B



11.-110. are described on the preceding pages

SPEED AND SAFETY IMPROVEMENTS

A number of areas were identified over the course of the study as needing attention to address speed and safety issues. These locations include:

- Route 9 Exit 3 Gateway Area
- Dennison Road at North Main Street near Essex Village
- North Main Street, West Avenue, and Grove Street in Essex Village
- Dennison Road at Main Street near Centerbrook
- Mares Hill Road / Walnut Street Corridor

Dennison Road at North Main Street

Concerns at this location include poor sightlines on southbound River Road due to the road's curvature, plus high vehicle speeds along River Road and North Main Street, which make exiting Dennison Road difficult. The current geometry includes a large splitter island which effectively creates two intersections and thus increases the number of conflicting vehicle movements in a small area. For a low-volume road, the current design is more complex and larger than is required, particularly in a residential environment.

Option 1

Option 1 simplifies the intersection to a conventional four-way stop-controlled intersection. This reduces the size of the intersection, includes Mill Road in the intersection, and improves sight lines for the Dennison Road approach. A four-way controlled stop will slow traffic, as a stop is required for all approaches. This is also a fairly low cost and simple option to construct. A four-way intersection at this location can also serve as a gateway into the Essex Village by serving as the first traffic-calming intervention along North Main Street and down to Grove Street.

Figure 18 Option 1



Figure 19 Option 2



Option 2

Option 2 suggests the construction of a mini traffic circle with four “legs” entering the circle. This option is a slight reduction in the overall footprint for the intersection and halves the number of potential vehicle conflict points from the four-way stop option on account of the simple “roundabout” yielding operations. A mini traffic circle can also serve as a more prominent gateway to the village area and has added aesthetic benefits over the four-way stop option. It also allows for vehicles to slow but not come to a complete stop. It is more expensive than a four-way stop and will require more regular maintenance.

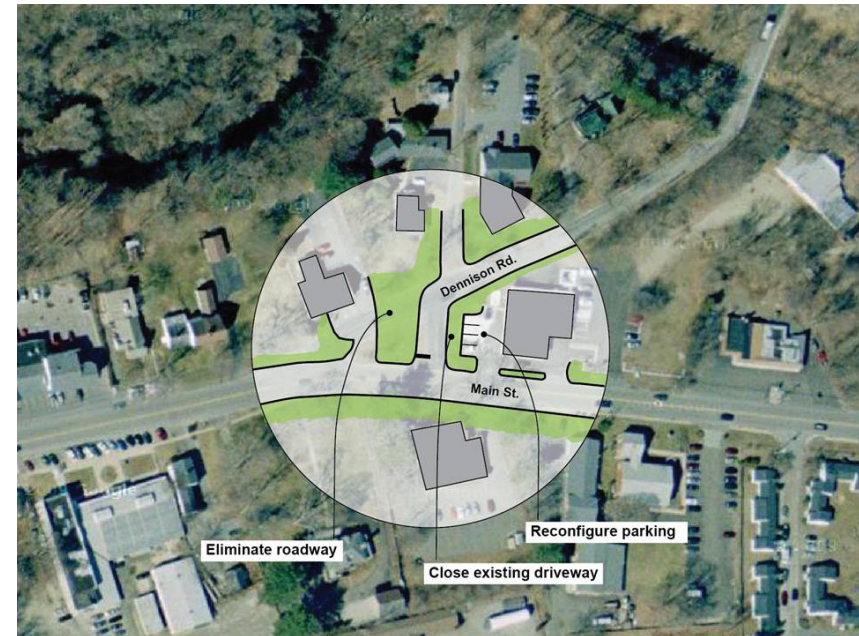
Both options are expected to improve safety, slow speeds, and provide a gateway into the village and both would address the concerns voiced by residents.

Dennison Road at Main Street

Concerns at this location include the awkward configuration of the intersection and the excessive speeds of some vehicles travelling eastbound on Main Street and turning left into Dennison Road. Vehicles have been observed travelling so fast on this turn that they “bottom out” as the grade of the road slopes down slightly from the intersection. These concerns are compounded by the location of the ambulance garage on the corner, which needs the ability to exit quickly and safely for emergency calls.

The recommendations for this intersection are to realign the intersection to eliminate the existing skewed angle and “T-up” the geometry in a more conventional right-angled alignment. This modification would reconfigure the ambulance garage driveway to access directly onto Main Street and would eliminate some of the pavement in the area creating a vegetative buffer on the corner. The most significant benefit of this realignment is the improved safety resulting from the improved visibility that the right-angled intersection offers, as well as the reduced turning speeds. Situated on the outside of a slight bend in Main Street, drivers waiting to turn from Dennison Road would have very clear sightlines.

Figure 20 South Dennison Road



North Main Street, West Avenue, and Grove Street in Essex Village

Residents have expressed significant concern related to high traffic speeds on North Main Street and on Grove Street in Essex Village. Both streets serve as vital connections to the village, the residential neighborhoods along River Road, and to the Route 9 interchange. As a result, a significant portion of the traffic on these roads – whether local residents or visitors – is considered “through traffic” from the perspective of residents living along these streets. The overall roadway network necessitate that these two streets continue to serve as both local roads and through roads. However, measures can be taken to address speed issues.

It is recommended that North Main Street, West Avenue, and Grove Street be the subject of a more in-depth traffic calming study. This study would include an extensive neighborhood collaboration effort in concert with traffic engineering advice and guidance to devise a plan of traffic calming elements that addresses speed and enhances the neighborhood’s character and safety. The limits of the study would be North Main Street from Dennison Road to Pratt Street in Essex Village, West Avenue from Sunset Terrace to Essex Village, and Grove Street from North Main Street to West Avenue. A basic traffic calming study scope should include:

1. Identification of the goals of the traffic calming project
2. Assessment of existing conditions, including traffic volume, speed, roadway geometrics, signage, sidewalks, and surrounding land uses
3. Assessment of existing issues from detailed observations and resident insights
4. Consideration of a broad range of traffic calming strategies, including horizontal deflections, vertical deflections, reduction in roadway width, pedestrian enhancements, signage, striping, and landscaping
5. Screening of potential options to determine the most appropriate applications in the given environment, taking into account cost, aesthetics, effectiveness, maintenance considerations, and emergency response needs

6. Packaging of appropriate traffic calming elements into a comprehensive traffic calming plan for the neighborhood

The traffic calming project should integrate both pedestrian and bicycle facilities into the design.

Mares Hill Road/Walnut Street Corridor

Mares Hill Road at Route 153 leads into a wooded residential area. A short zigzag section connects Mares Hill Road to Walnut Street, which then travels through more residential neighborhoods and ends at Main Street slightly west of Ivoryton Center. This corridor is heavily travelled by local residents and some regional traffic because it provides one of very few north-south connections in town. It is also heavily travelled by high-school aged drivers headed towards Valley Regional High School from the neighborhoods in the area.

The road is winding and hilly with no shoulder and has several locations that have limited sightlines. Many locations are extremely narrow with rock outcroppings or large trees close to the road. This is particularly problematic at the very end of Mares Hill Road near Route 153 in a particularly steep section where drainage issues (freezing sheet flow across the road) cause significant hazards. Nonetheless, many vehicles travel extremely fast for these roadway conditions and pose safety issues to other drivers and pedestrians. There are no sidewalks, yet pedestrians are frequently observed walking in the roadway along its entirety.

At the intersection of Mares Hill Road and Route 153, sightlines are limited by overgrowth and a skewed intersection alignment, which is dangerous for vehicles attempting to make left turns from Mares Hill Road onto Route 153. With increased volumes projected in the future years on Route 153, safety at this location is an even larger concern as vehicles experience excessive delay and begin to take risks to enter the travel flow on Route 153.

Recommendations for this intersection and the Mares Hill Road/Walnut Street Corridor include:

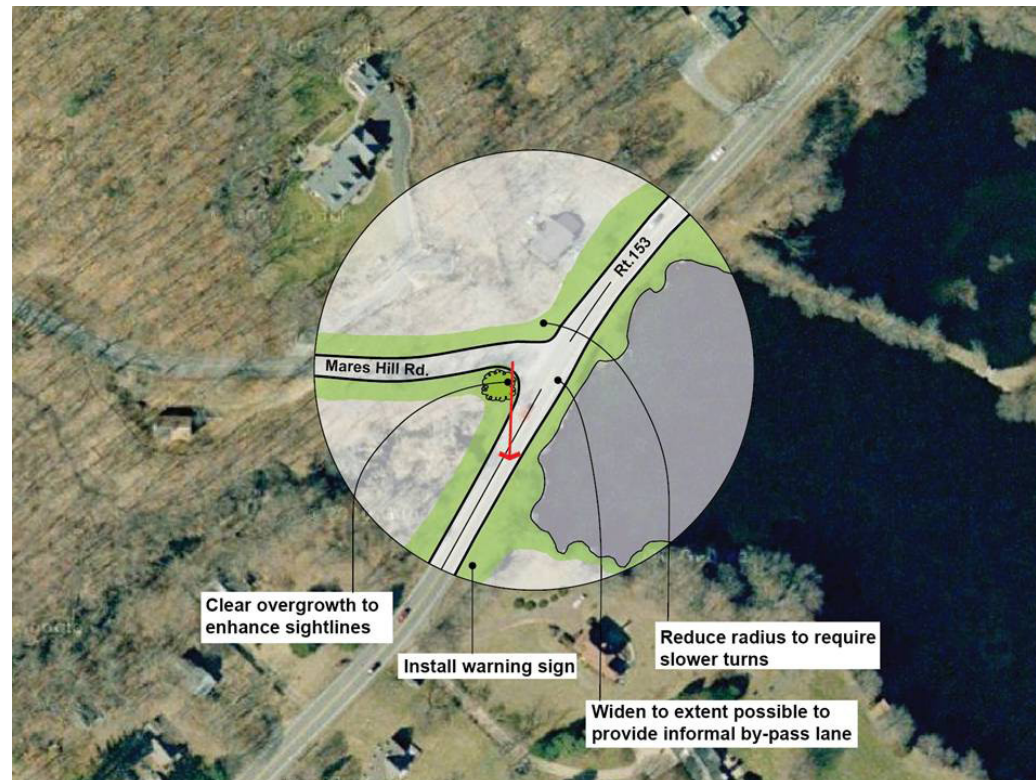
Intersection Improvements

- Reduce the radius of the northwest corner of the intersection to require slower right turns from Route 153 onto Mares Hill Road
- Clear the overgrowth on the southwest corner of the intersection to improve sightlines for drivers exiting Mares Hill Road
- Widen Route 153 to the maximum extent possible (with limitations due to wetlands) to provide a larger shoulder for higher-speed through traffic to bypass vehicles waiting to turn left from Route 153 onto Mares Hill Road
- Install warning signage on the Route 153 northbound approach to the intersection

Corridor Improvements

- Cut back the ledge and widen Mares Hill Road along its northern edge through the steep section close to Route 153 in order to increase sightlines on the road; also provides space for a slightly reduced centerline radius for oncoming vehicles (downhill) which today often cross the centerline
- Address drainage and freezing issues on the downhill portion of Mares Hill Road
- Construct an informal off-road trail or pathway along one side of the entire length of Mares Hill Road, with highest priority given to the stretch between Old Dobbin Lane and Birch Mill Trail
- Construct a sidewalk along one side of Walnut Street for its entire length

Figure 21 Mares Hill



Route 9 Exit 3 Gateway Area

The Route 9 Exit 3 Gateway area contains three intersections. One intersection, Route 154/Route 153/West Avenue, is signalized; another, Route 153/Route 9 southbound on ramp/Frontage Road, is controlled by a flashing warning signal; and the last intersection, the Route 9 southbound off ramp at Route 154, is controlled by a stop sign. There are a variety of operational and safety issues in this area including:

- Notable number of crashes at all three locations, with the signalized intersection experiencing the highest number of crashes of all intersections studied in Essex
- Safety and delay issues at the Route 9 southbound off ramp at Route 154 caused by the sharp sightline angle looking west on Main Street for exiting motorists as well as the conflict of oncoming traffic from the frontage road
- Safety concerns related to vehicles “darting across” Route 153 to the Route 9 southbound on-ramp from the frontage road – often crossing high speed traffic

In addition to operational and safety issues, this area has confusing signage for visitors and poor aesthetics to serve as a “gateway” to Essex from the highway. The future plans for the old park and ride facility to be used as a basketball park highlights the need to improve safety and aesthetics in this area. Finally, the area is extremely unfriendly for pedestrians and bicyclists given the excessive amount of pavement, vehicle dominance, and lack of comprehensive sidewalks and crosswalks.

A number of recommendations are suggested in this area, including:

- Eliminate the frontage road on the west side of Route 9 and convert the area into a multiuse pathway connecting Route 154 and Route 153 for non-motorized uses. This creates two 3-way “T” intersections at the Route 9 ramp intersections and simplifies and improves safety at both of these locations.
- Realign the Route 9 southbound ramp at Route 154 slightly to the west to square of the intersection to a true 90-degree angle to improve sightlines looking west from the ramp

- Extend the median on Route 154 from under the Route 9 overpass through the Route 9 southbound off ramp intersection with a break at the ramp to provide a merge area facilitating left turns onto Route 154 from the ramp
- Remove the flashing warning signal from the intersection of Route 153 and Route 9 southbound on ramp (no longer needed with 3-way intersection)
- Install medians and opposing left-turn only lanes on the West Avenue and Plains Road approaches to the Route 154/153 intersection which are shadowed by the opposing median, eliminating confusion and possible crashes caused by eastbound drivers indicating a left turn in the Route 154 intersection when they are actually continuing through to turn left onto the nearby northbound Route 9 on-ramp.
- Add an exclusive right-turn lane on the southbound Route 154 approach under the bridge to better accommodate the additional traffic that will be redirected here with the closure of the frontage road
- Add/upgrade crosswalks at the Route 154/Route 153 intersection
- Install a sidewalk on the southeast side of Main Street connecting West Street with the park & ride / future recreation facility
- Continue the Plains Road and Main Street bicycle facilities through this intersection

These changes are expected to increase safety in the area and improve operations by simplifying each intersection. Detailed level-of-service analysis is presented in the appendix. Alterations in the Gateway will increase green space, provide for a more attractive entrance to Essex from the highway, and make the area more pedestrian and bicycle friendly.

Figure 22 Gateway



Figure 23 Gateway - Route 9 Off Ramp Improvements

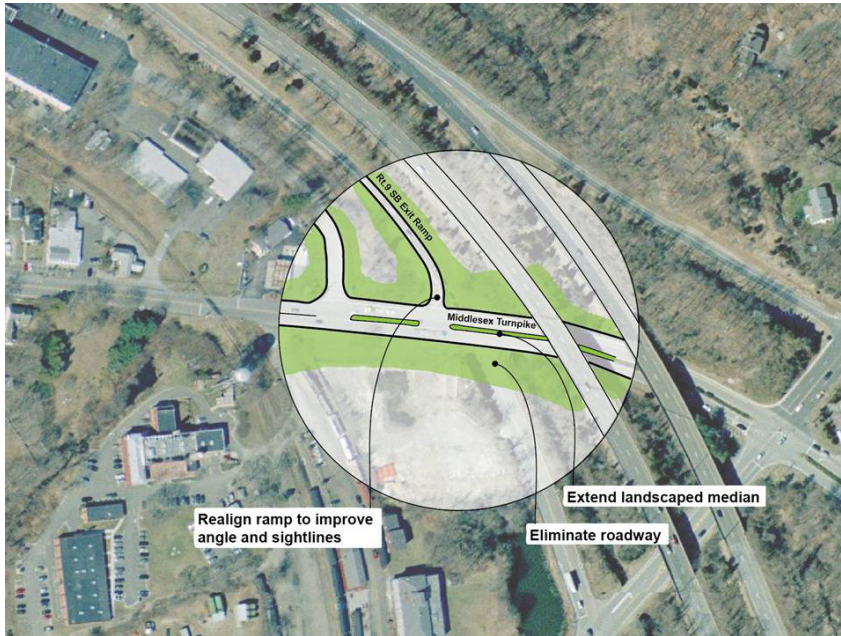


Figure 24 Gateway - Eliminate Frontage Road

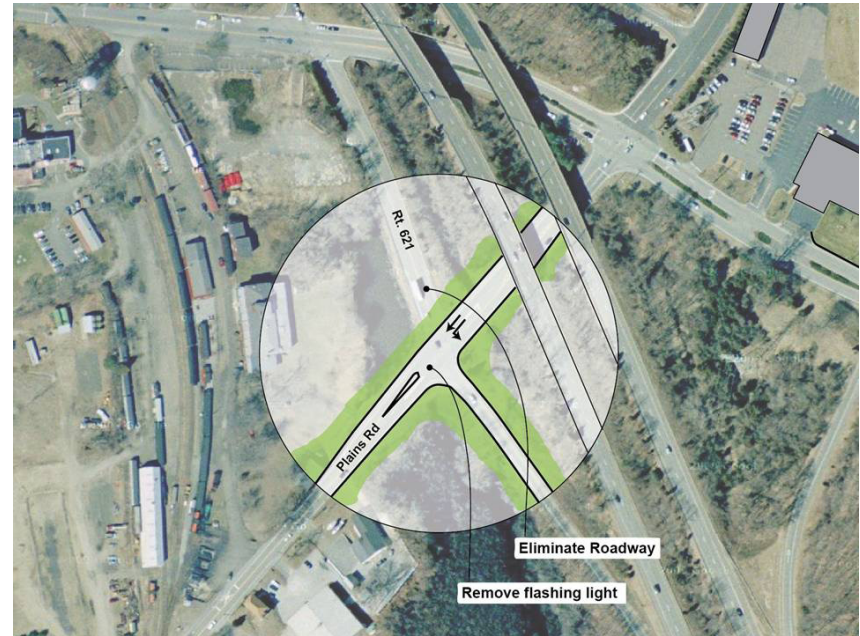
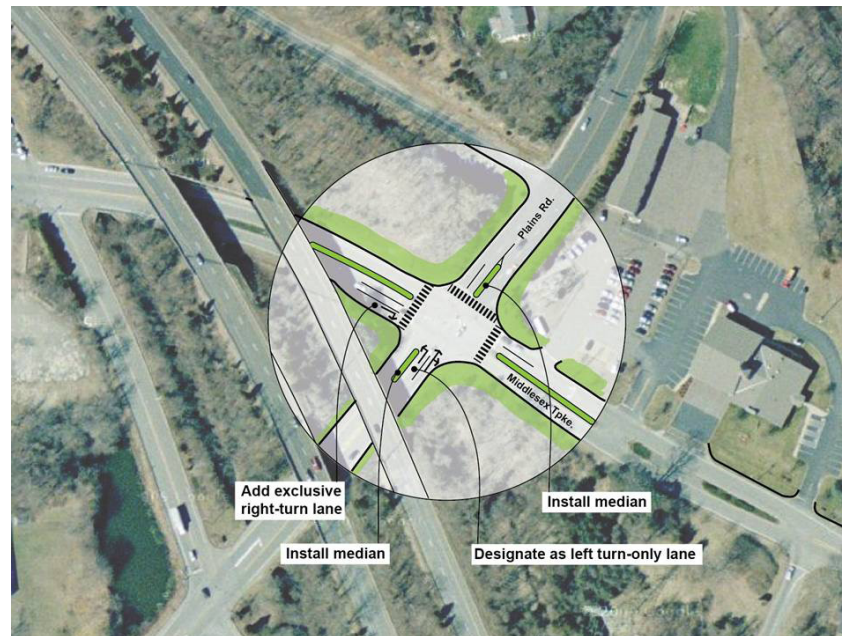


Figure 25 Gateway - Four-Way Intersection Improvements



Part III. Implementation Plan

The policies, programs, and design concepts described in Part II are all intertwined and at some point dependent on each other. To be most effective, it is important to have an implementation plan that supports multiple projects in the most efficient way possible. This section outlines a process for implementing the Part II elements in an organized manner that maintains consistency with the overall goals of the Town Transportation Plan.

The following implementation plan has three primary components:

- A Procedural Framework
- An Action Plan
- Potential Funding Mechanisms

PROCEDURAL FRAMEWORK

The Town Transportation Plan was developed through a competitive grant awarded to the Town by the State of Connecticut. The grant was sought by the Essex Planning Commission to develop a strategic transportation component of the Plan of Conservation and Development. However, the Planning Commission recognizes that the Plan is truly a product of a number of stakeholders and cannot be implemented without their support and participation. These include at a minimum:

- Planning Commission
- Town Planner
- Economic Development Commission
- Zoning Commission
- Land Use Department
- Park & Recreation Commission
- Public Works
- Conservation Commission
- Essex Town Planner

- Safe Routes to School Committee
- Nine Town Transit/Estuary Transit District
- Friends in Service Here (FISH)
- Connecticut River Estuary Regional Planning Agency
- Police Department
- Health Department
- Ancient Order of Essex Weeders
- Tree Committee/Tree Warden
- Highway Department
- Board of Selectmen
- Water Pollution Control Authority
- Connecticut Department of Transportation

The Planning Commission expects to be responsible for kicking-off any new policies, programs, or Town infrastructure projects in a manner consistent with this Plan or any future amendments. The Commission recognizes that most efforts will require the support and leadership of one or more separate stakeholders, such as those listed above. In an attempt to anticipate who the primary stakeholders might be, any new policies and each program outlined in Part II has a lead stakeholder(s) suggested in the table below.

Program/Policy	Lead Stakeholder(s)
Pedestrian Enhancements Program	Planning Commission, Public Works Department, Zoning Board
Bicycle Infrastructure Program	Planning Commission, Public Works Department, Zoning Board
Safe Routes to School	Town Planner, Essex Elementary School, CTDOT
Local Transit Program	Estuary Transit, Planning Commission, Board of Selectmen
Traffic Calming Program	Town Planner, Public Works Department
Parking Management Plan	Zoning Board, Planning Commission, business owners
Transportation Demand Management Program	Planning Commission, Connecticut River Estuary RPA
Transportation Management Association	Connecticut River Estuary MPO, Chamber of Commerce and/or major employer
Placemaking with Shared Streets	Planning Commission, Public Works Department, Zoning Board
Street Sign Design Guidelines	Public Works Department, Town Planner
Branded Wayfinding Program	Board of Selectmen, Economic Development Commission, local businesses
Zoning Code Changes	Zoning Board
Access Management Program	Zoning Board, Planning Commission

ACTION PLAN

An action plan matrix helps to identify priorities, costs and other details of the overall concepts down to their detailed elements.

Viewing this information for multiple strategies at one time will help the Planning Commission and key stakeholders prioritize elements that are most important to the future of Essex.

The matrix has been coded with planning-level cost estimates and approximate timeframes. Interested parties should only use the cost estimates to gauge the level of effort associated with certain strategies relative to other strategies. More detailed cost-estimated is required when more detailed scopes are developed for each strategy in the Plan. Similarly, the suggested timeframes will be refined in the future depending on the Town's ability to organize stakeholders and find funding. For this Plan, the following categories classify each strategy into immediate, short-term, and long-term actions:

- **Immediate Actions:** These strategies are recommended to be pursued as soon as possible. They represent actions that can

begin to be undertaken by Essex's stakeholders today, and they are considered to be the most critical for improving Essex's pedestrian, bicycling, vehicular, and/or transit environment.

- **Short-Term Actions:** These strategies should be suggested for integration in short-term planning work. While several could begin to be implemented today, most will require a degree of planning and coordination to be successfully implemented. Several will require the identification of funding sources.
- **Long-Term Actions:** These strategies require a greater degree of planning, stakeholder coordination, and/or financial support. While these strategies will greatly benefit Essex's environment, they are not expected to be implemented in the short-term.

The following two tables comprise the action planning matrix. The first is organized by category corresponding to the recommendations described in early sections. The second is organized by timeframe to begin the process of prioritizing projects.

Action Plan

Recommendation		
Centerbrook Enhancement Plan		
Roadway modifications, signals, sidewalk	\$\$\$	2
Shared street improvements	\$\$\$\$	3
Public green space	\$\$	2
Curb extensions, crossing islands	\$	2
Markings, signage	\$	2
Bokum Center Enhancement Plan		
Widening for on-street parking	\$\$\$	3
Curb extensions, crossing islands	\$	2
Sidewalks	\$\$	2
Markings	\$	1
Ivoryton Enhancement Plan		
Roadway realignment	\$\$\$	2
Shared street	\$\$\$	3
Raised device	\$\$	2
New sidewalk	\$\$	2
Curb extensions, crossing islands	\$	1
Markings, landscaping	\$	1
Gateway Enhancement Plan		
Street closure and new curbs	\$	1
Signal removal and modifications	\$	1
Park and multi-use path	\$\$	2
Markings, landscaping, signage	\$\$	1
Mares Hill Road Safety Improvements and Trail		
Embankment, roadway widening	\$\$\$	2
Drainage	\$\$	2
New sidewalk	\$\$	2
Off-road trail	\$	1
Dennison Road East		
Roadway modifications	\$\$	2
Drainage	\$	2
Markings, signage	\$	2

Legend	
1	Immediate Actions
2	Short-Term Actions
3	Long-Term Actions
Approximate Cost	
\$	\$0-100,000
\$\$	\$100,000-250,000
\$\$\$	\$250,000-\$1M
\$\$\$\$	\$1M+

Action Plan (continued)

Recommendation		
Dennison Road West		
Roadway modifications	\$\$	2
Drainage	\$	2
Markings, signage	\$	2
North Main, West Avenue, Grove Street Traffic Calming		
Design	\$	2
General budget estimate	\$\$\$	2
Pedestrian Enhancements Program		
Sidewalks Centerbrook to Ivoryton	\$\$\$	2
Sidewalks Exit 3 to Bokum Corner	\$\$\$	3
Essex Village missing sidewalks	\$	2
Bicycle Infrastructure Program		
Three on-street bike facilities	\$	1
Facilities at three intersections	\$	1
Short-term bicycle racks	\$	1
Long-term lockers at Exit 4	\$	1
Safe Routes to School		
EES walkway	\$	1
Sidewalk from EES to Earl Street	\$\$	1
Local sidewalk improvements	\$	1
Markings, signage	\$	1
Local Transit Program		
Local shuttle	\$\$\$	3
Traffic Calming Program (besides Main/Grove)		
Mares Hill/Walnut Street traffic calming	\$\$	3
Westbrook Road sightline improvements	\$\$	2
West Street safety improvements	\$\$	3
Parking Management Program		
Essex Village resident parking program	\$	2
Transportation Demand Management Program		
Coordination efforts	N/A	1

Legend	
1	Immediate Actions
2	Short-Term Actions
3	Long-Term Actions
Approximate Cost	
\$	\$0-100,000
\$\$	\$100,000-250,000
\$\$\$	\$250,000-\$1M
\$\$\$\$	\$1M+

Action Plan (continued)

Recommendation		
Placemaking With Shared Streets		
Main Street in Essex Village	\$\$\$\$	3
Street Sign Design Guidelines		
Sign design and installation, townwide	\$	2
Branded Wayfinding Program		
Sign design and installation	\$	2

Legend	
1	Immediate Actions
2	Short-Term Actions
3	Long-Term Actions
Approximate Cost	
\$	\$0-100,000
\$\$	\$100,000-250,000
\$\$\$	\$250,000-\$1M
\$\$\$\$	\$1M+

Action Plan Priorities

Priorities		
Immediate Actions		
Bokum Center Enhancement Plan	Markings	\$
Ivoryton Enhancement Plan	Curb extensions, crossing islands	\$
Ivoryton Enhancement Plan	Markings, landscaping	\$
Gateway Enhancement Plan	Street closure and new curbs	\$
Gateway Enhancement Plan	Signal removal and modifications	\$
Gateway Enhancement Plan	Markings, landscaping, signage	\$\$
Mares Hill Road Safety Improvements and Trail	Off-road trail	\$
Bicycle Infrastructure Program	Three on-street bike facilities	\$
Bicycle Infrastructure Program	Facilities at three intersections	\$
Bicycle Infrastructure Program	Short-term bicycle racks	\$
Bicycle Infrastructure Program	Long-term lockers at Exit 4	\$
Safe Routes to School	EES walkway	\$
Safe Routes to School	Sidewalk from EES to Earl Street	\$\$
Safe Routes to School	Local sidewalk improvements	\$
Safe Routes to School	Markings, signage	\$
Transportation Demand Management Program	Coordination efforts	N/A
Short-Term Actions		
Centerbrook Enhancement Plan	Roadway modifications, signals, sidewalk	\$\$\$
Centerbrook Enhancement Plan	Public green space	\$\$
Centerbrook Enhancement Plan	Curb extensions, crossing islands	\$
Centerbrook Enhancement Plan	Markings, signage	\$
Bokum Center Enhancement Plan	Curb extensions, crossing islands	\$
Bokum Center Enhancement Plan	Sidewalks	\$\$
Ivoryton Enhancement Plan	Roadway realignment	\$\$\$
Ivoryton Enhancement Plan	Raised device	\$\$
Ivoryton Enhancement Plan	New sidewalk	\$\$
Gateway Enhancement Plan	Park and multi-use path	\$\$
Mares Hill Road Safety Improvements and Trail	Embankment, roadway widening	\$\$\$
Mares Hill Road Safety Improvements and Trail	Drainage	\$\$
Mares Hill Road Safety Improvements and Trail	New sidewalk	\$\$
Dennison Road East	Roadway modifications	\$\$
Dennison Road East	Drainage	\$
Dennison Road East	Markings, signage	\$

Legend	
Approximate Cost	
\$	\$0-100,000
\$\$	\$100,000-250,000
\$\$\$	\$250,000-\$1M
\$\$\$\$	\$1M+

Action Plan Priorities (continued)

Priorities		
Dennison Road West	Roadway modifications	\$\$
Dennison Road West	Drainage	\$
Dennison Road West	Markings, signage	\$
N. Main, West, Grove Traffic Calming	Design	\$
N. Main, West, Grove Traffic Calming	General budget estimate	\$\$\$
Pedestrian Enhancements Program	Sidewalks Centerbrook to Ivoryton	\$\$\$
Pedestrian Enhancements Program	Essex Village missing sidewalks	\$
Traffic Calming Program (besides Main/Grove)	Westbrook Road sightline improvements	\$\$
Parking Management Program	Essex Village resident parking program	\$
Street Sign Design Guidelines	Sign design and installation, townwide	\$
Branded Wayfinding Program	Sign design and installation	\$
Long-Term Actions		
Centerbrook Enhancement Plan	Shared street improvements	\$\$\$\$
Bokum Center Enhancement Plan	Widening for on-street parking	\$\$\$
Ivoryton Enhancement Plan	Shared street	\$\$\$
Pedestrian Enhancements Program	Sidewalks Exit 3 to Bokum Corner	\$\$\$
Local Transit Program	Local shuttle	\$\$\$
Traffic Calming Program (besides Main/Grove)	Mares Hill/Walnut Street traffic calming	\$\$
Traffic Calming Program (besides Main/Grove)	West Street safety improvements	\$\$
Placemaking With Shared Streets	Main Street in Essex Village	\$\$\$\$

Legend	
Approximate Cost	
\$	\$0-100,000
\$\$	\$100,000-250,000
\$\$\$	\$250,000-\$1M
\$\$\$\$	\$1M+

POTENTIAL FUNDING MECHANISMS

The action plan represents a significant investment in Essex's future that cannot be reasonably completed in its entirety without significant new funding. Ultimately, the Town will need to select the most important projects, given constrained funding opportunities. Most of this funding will come from outside sources as only a few projects can be supported within existing Town budgets.

The table below contains some current funding opportunities that the Town might pursue now and in future years to complete projects in the Action Plan. While this list is by no means the entire universe of potential sources, it is a good starting point for Town staff to consider when executing the Plan's vision and Action Plan.

Program Fund Source	Funding Purpose	Applicability to Essex	Comments
Federal & State Sources			
FTA Section 5309 Capital Program (Congressional Earmarks)	Provides Federal funds for buses and bus facilities and New Rail Starts	Potential for funding bus shelters, sidewalks, and bicycle network infrastructure related to transit connections.	Large projects and even small scale project may be positioned to receive "earmarks" in the next funding cycle if they have regional support. Projects should be included in CRERPA's Regional Transportation Plan, and have political support to be well positioned for earmark funding.
FTA Section 5307 Urbanized Formula Funds	Provides funds for transit capital projects in urbanized areas over 200,000 in population and additionally for transit-related operating costs in small urbanized areas between 50,000-200,000 in population	Limited	These funds are used by local and regional transit services and are highly competitive. The Estuary Transit District receives formula funding to subsidize its services.
Congestion Mitigation/Air Quality (CMAQ)	Federal funding program that is typically limited to purchase of clean fuel buses	Highly unlikely	These funds are used by local and regional transit services and are highly competitive.
FTA Section 5310 Senior and Disabled Transportation Program	Federal funding for elderly and handicap transportation made available by formula through CTDOT.	Approximately \$12,000 per year is available to Essex to subsidize transportation for the elderly and handicapped.	Many communities in Connecticut do not take advantage of this program. Funds may be used for services such as those provided by FISH.
FTA Section 5316 Job Access and Reverse Commute (JARC) Program	Federal funding for local programs that offer job access services for low-income individuals.	Potential for transit service if tested in low income neighborhood	Since these funds are specifically intended for low-income individuals it would be difficult to secure these funds unless a demonstration was tailored to this market.

Program Fund Source	Funding Purpose	Applicability to Essex	Comments
FHWA Transportation Enhancements	Funding opportunities to help expand transportation choices and enhance the transportation experience through 12 eligible TE activities related to surface transportation.	Applicable for any pedestrian and bicycle infrastructure and safety programs, scenic and historic highway programs, landscaping and scenic beautification, historic preservation, and environmental mitigation.	Requires coordination with CTDOT. Projects must be at least \$300,000 with 20% provided by a local match (cannot be in-kind services).
Tiger III	Federal grant program available for almost any transportation project.	Highly-competitive, though merit-based. Smart and thorough applications are well-received, especially in regions with fewer applicants.	Solicitation for proposals will be mid-June 2011, with applications due in mid-October 2011. May change its name to National Infrastructure Investments.
HUD Sustainable Communities Planning Grant	Regional and local transportation, land use, and environmental planning efforts.	Highly applicable	Not officially released for 2011.
Community Development Block Grant: Small Cities	The development of viable urban communities by providing decent housing, a suitable living environment and expanding economic opportunities, principally for families or persons of low and moderate income.	Highly unlikely	2011 applications are due June 3.
Small Town Economic Assistance Program	State of CT funding for municipal capital projects only.	Appropriate for traffic calming roadway improvements.	2011 application are due June 23. Up to \$500,000 available annually.
Safe Routes to School (SR2S) Grant Funding Program.	National and state grant program to fund projects that increase the number and safety of children reaching school by walking and biking. It funds capital projects such as sidewalk improvements, traffic calming and pedestrian/bicycle crossing improvements, on-street bicycle facilities, off-street bicycle/pedestrian facilities, and traffic diversion improvements.	One grant has been awarded to Essex for improvements at and near the Essex Elementary School. Eligibility remains for future awards to be awarded to fund projects located within one mile of EES.	The successful implementation of projects associated with Essex's first SR2S award could warrant future grant awards if walking and biking to EES increases. The Town should continue to plan future grant applications. \$2M is available statewide.

Program Fund Source	Funding Purpose	Applicability to Essex	Comments
Private Sector Sources			
Bikes Belong Community Partnership Grants	Projects that support bicycling among all age groups and ability levels	Highly-applicable	Requires a collaboration between the Town, the non-profit and business(es).
Public/Private Partnerships	Public/private partnerships can increase overall funding by leveraging “outside” dollars and is mutually beneficial to both parties.	Most strategies will benefit from cooperative participation between the public and private sector.	The Essex Trolley was an example of a public/private partnership.
Retail and Merchant Contributions	Retailers may share in the cost of transportation improvements especially if one-time capital improvements or contributions.	Potential for contributions for many strategies especially for advertising and donating bicycles and related equipment for start-up phase.	Bike shops may be interested in donating bicycles for folding bikes. Advertisers could provide “free advertising” to market new services.
Employer Contributions	Employers may share in the cost of transportation improvements if beneficial to their employees; typically prefer to fund one-time contributions.	Employers could subsidize a re-start of the Essex Trolley, bike racks, transit shelters/info, etc.	Employers sometimes are willing to underwrite transportation to support their workers getting to/ from worksite. May require agreement between Town and employer or public/private partnership.