Existing Conditions

CONNECTICUT STATEWIDE BUS STUDY

PREPARED FOR

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1 Introduction

1.1 Study Purpose

In 2015, the Governor announced *Let's GO CT*, a vision and call to action for the future of the State's transportation system which:

- recognizes bus service as the foundation of Connecticut's transit system,
- calls for a complete evaluation of the State's bus system, and
- establishes the goal of increasing bus service availability by 25 percent in urbanized areas

The *2016 Connecticut Statewide Bus Study* will assess travel needs and evaluate performance of the State's bus system. At its completion, this study will provide an understanding of the current and future direct, fixed route transit travel needs of the state's residents and employees, and provide recommendations to better align the existing bus system to meet these needs while providing the planning framework for a more interconnected and user-friendly multi-modal transit network that supports economic growth and environmental goals.

The study will include several types of analyses, including:

- Identify service coverage gaps, evaluate interconnectivity between regional transit agencies, and to identify inconsistencies between fare structures, technology, and passenger amenities;
- Develop Statewide Bus Service Guidelines to evaluate performance of individual bus routes; and
- Conduct performance analyses for the highest and lowest performing bus routes.

Based on the system and route level performance and gap analyses, areas of improvement and specific route recommendations will be developed.

1.2 Existing Transit Service in Connecticut

Connecticut is served by a multi-modal system of passenger rail, fixed-route bus, paratransit, and van services. Several transit expansions are in the planning/implementation stage. A summary of the statewide system is provided in this section. Detailed profiles of each of the State's fixed route bus systems and their operators is discussed in Chapter 2.

1.2.1 Passenger Rail Service

The state is served by two commuter rail lines (the New Haven Line and Shore Line East) and by two intercity passenger rail lines (the Northeast Corridor and the New Haven-Springfield Line). A new regional rail service operated by the Connecticut Department of Transportation (CTDOT), called the Hartford Line, is in the construction stage.

Commuter rail service is operated on the New Haven Line and its branches (New Canaan Branch, Danbury Branch, and Waterbury Branch) by MTA Metro-North Railroad under contract to CTDOT, and on the Shore Line East by Amtrak under contract to CTDOT. In general, commuter rail service is primarily oriented towards serving the Connecticut – New York City commuter market.

Intercity passenger rail is operated by Amtrak on the Northeast Corridor (Boston – Washington, D.C.) and regional rail service is provided on the New Haven-Springfield Line by Amtrak under reimbursement contract to the state. Upon completion of the Hartford Line commuter rail project, intercity rail service on the New Haven-Springfield Line will have improved frequency, span of service, and travel times.

CTDOT's Role in Bus Service

CTDOT plays a number of roles in the provision of statewide bus services. CTDOT owns the bus systems serving Hartford, New Haven, Stamford, Waterbury, New Britain, Bristol, Meriden and Wallingford which operate under the brand names "CT*transit*" and "CT*fastrak*." The bus service is provided through contracts with private operators. CTDOT contracts directly for federally-mandated complementary Americans with Disabilities Act (ADA) paratransit services in the CT transit service areas, and significantly subsidizes the transit district fixed-route and ADA operations in the non-CT transit service areas.

The CTDOT Capital Program funds infrastructure projects, including improvements to bus infrastructure such as bus fleet replacements, bus facility improvements, and construction of new bus maintenance facilities for the state-owned CT transit operations in eight urban areas, transit district-owned services in seven other urban areas, rural services in five areas around the state, and paratransit operations in 14 transit districts.

CTDOT enters into transit operating assistance contracts with local transit districts/agencies to cover operating deficits up to a predetermined budget amount. While some local transit districts/agencies contribute some financial support to their bus operations, the state supports approximately 96 percent of the deficit funding in the urban systems, and the state and federal government over 83 percent of the deficit funding in the rural systems.

Subsidized rail service in Connecticut is largely concentrated in the southern part of the state. This results in bus being the only available mode of transit in the majority of the state.

The Hartford Line is a planned commuter rail service between and Springfield, Massachusetts. It will operate over Amtrak's New Haven–Springfield Line and supplement existing intercity rail services between the two cities. It will also provide new commuter rail service to communities in the central portion of the state. The line will initially serve nine stations including six existing stations (five in Connecticut) and three replacement/new stations in Berlin, Meriden and Wallingford. Four additional stations are contemplated in Enfield, West Hartford, Newington and North Haven. The service is anticipated to begin in January 2018.

1.2.2 Fixed Route Bus Service

Within Connecticut, there are 19 transit properties (nine properties operated by the State under the CT*transit* and CT*fastrak* brands and ten non-state properties) that provide fixed route public transportation, including local bus, express bus and Bus Rapid Transit (BRT) service. (See Table 1) These 19 transit properties provide 271 routes. In addition, three private carriers, Greyhound Lines, Peter Pan Bus, and Stagecoach U.S.A. doing business as Megabus, offer intercity bus service within the state. The 19 transit properties, combined, provide more than 42 million bus passenger trips annually[1], with anticipated growth in coming years. (See Figure 1)

In urban markets, bus service is the primary means of commuting to work for transit dependent workers[2] . It is also the mode of choice for many suburban residents who use express buses to travel to major centers of employment, including cities and office parks. In cities with rail service such as Stamford, Bridgeport, and New Haven, public buses and private, employer sponsored shuttles expand the reach of rail service by transporting rail passengers to workplaces located beyond walking distance (typically ¼ mile) from the train station. Fixed route bus services also provide access and mobility for the elderly, people with disabilities, and rural residents.

Urban bus systems with annual passenger trips over 5,000,000 include:

- CT*transit* – Hartford
- CT*transit* – New Haven
- Greater Bridgeport Transit (GBT)

[1] Connecticut Department of Transportation 2014 ridership data

[2] Transit-dependent populations typically are defined as persons in households that do not own a car, or persons who falls in the locally-defined lowest income bracket.

Urban bus systems with annual passenger trips between 2,000,000 and 5,000,000 include:

- CT*transit* – Stamford
- CT*transit* – Waterbury

Urban bus systems with annual passenger trips from 750,000 to 2,000,000 include:

- CT*transit* – New Britain
- Norwalk Transit District (NTD)
- Southeast Area Transit District (SEAT)
- Housatonic Area Regional Transit (HART)

Urban bus systems with annual passenger trips less than 750,000 include:

- CT*transit* - Bristol
- CT*transit* – Meriden
- CT*transit* – Wallingford
- Milford Transit District (MTD)
- Middletown Transit District (MAT)
- Windham Region Transit District (WRTD)

Rural bus systems include:

- Estuary Transit District (ETD)
- Northwestern Connecticut Transit District (NWCTD)
- Northeastern Connecticut Transit District (NECTD)

The 19 transit properties are complex organizations comprised of owners, operators, and managers. Their organizational structures are presented in Table 1. The owner is defined as the entity who owns the equipment and has the rights to provide bus service along a route(s). The Manager is the entity responsible for overseeing and managing bus operations and transportation service providers. The transportation service provider is the entity that is responsible for operating the bus service.

Generally, owners include transit agencies, transit districts, or other governmental agencies responsible for providing transportation services. Bus system owners may manage and operate the bus system or contract with a private company to oversee transportation service providers and/or operate the bus service.

Table 1: Transit Properties in the State of Connecticut

Transit Provider	Service Area/Route	Owner	Operator	Manager
CT*fastrak*	New Britain, West Hartford, Newington, Hartford Routes 101, 102, 121, 128, 140, 144, 153, 161	Connecticut Department of Transportation (CTDOT)	HNS Management/DATTCO	First Transit
CT*transit* – Bristol	Bristol Routes 541, 542, 543	CTDOT	New Britain Transportation (NBT)	NBT
CT*transit* – Hartford	Bloomfield, East Hartford, Farmington, Glastonbury, Hartford, Manchester, Middletown, Newington, New Britain, South Windsor, West Hartford, Wethersfield and Windsor Local Routes 30, 31, 32, 33, 34, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 50, 52, 53, 54, 55, 56, 58, 59, 60, 61, 62, 63, 64, 66, 69, 72, 74, 76, 80, 82, 83, 84, 85, 86, 87, 88, 91, 92, 94, 95, 96	CTDOT	HNS	First Transit
	Express Routes 901-916			
CT*transit* – Hartford	Express Route 917	CTDOT	Collins Bus Service	Collins Bus Service
CT*transit* – Hartford	Express Routes 918, 950	CTDOT	Peter Pan/Arrow	Peter Pan/Arrow

Table 1: Transit Properties in the State of Connecticut (Continued)

Transit Property	Service Area/Route	Owner	Operator	Manager
CT*transit* – Hartford	Express Routes 919, 921, 923, 924, 925, 928	CTDOT	DATTCO	DATTCO
	Express Routes 926, 927		Kelley Transit	Kelley Transit
CT*transit* – Meriden	Meriden Routes A, B, C	CTDOT	Northeast Transportation (NET)	NET
	Express Route 919		DATTCO	Meriden Transit District
CT*transit* – New Britain	Berlin, New Britain, Cromwell, Newington, Plainville, Bristol and Meriden Route 41, 501,502, 503, 505, 506, 509, 510, 512	CTDOT	NBT/DATTCO/HNS	NBT/DATTCO/ HNS
CT*transit* – New Haven	New Haven Metro Area Route B,C, D, F, G, J, L M, O, Q, S, Z, Union Station Shuttle, Commuter Connection Downtown	CTDOT	HNS	First Transit
CT*transit* – Stamford	Stamford Metro Area Route 11, 13,21, 22, 24, 26,27,31, 32, 33, 34, 35, 41, 42, 43, 45, Commuter Connection Central, I-Bus	CTDOT	HNS	First Transit
CT*transit* – Wallingford	Wallingford Route WL	CTDOT	NET	NET

Table 1: Transit Properties in the State of Connecticut (Continued)

Transit Property	Service Area/Route	Owner	Operator	Manager
CT*transit* – Waterbury	Waterbury, Watertown, Naugatuck Route 11, 12, 15,16, 18, 20,22, 25 26/27/28, 31, 32, 33, 35, 36,40, 42, 44, J, N1, N2, T114, T17, T49, T74, T81	CTDOT	NET	NET
Estuary Transit District (ETD)	Chester, Clinton, Deep River, Durham, Essex, East Haddam, Haddam, Killingworth, Lyme, Old Lyme, Old Saybrook and Westbrook Routes 1, 2, 3, 4	ETD	ETD	First Transit
Greater Bridgeport Transit (GBT)	Bridgeport, Fairfield, Stratford, and Trumbull Routes 1, Coastal Link, 3, 4, 5, 6, 7, 8, 9, 10, 13, 14, 15, 16, 19X, 20, 22X, 23	GBT	GBT	GBT
Milford Transit District (MTD)	Milford, Stratford, Bridgeport Routes 1-Coastal Link, 2, 3, 4	MTD	MTD	MTD
Middletown Area Transit (MAT)	Routes A, B, C, D, E, F, H, I, M-Link	MAT	MAT	MAT

Table 1: Transit Properties in the State of Connecticut (Continued)

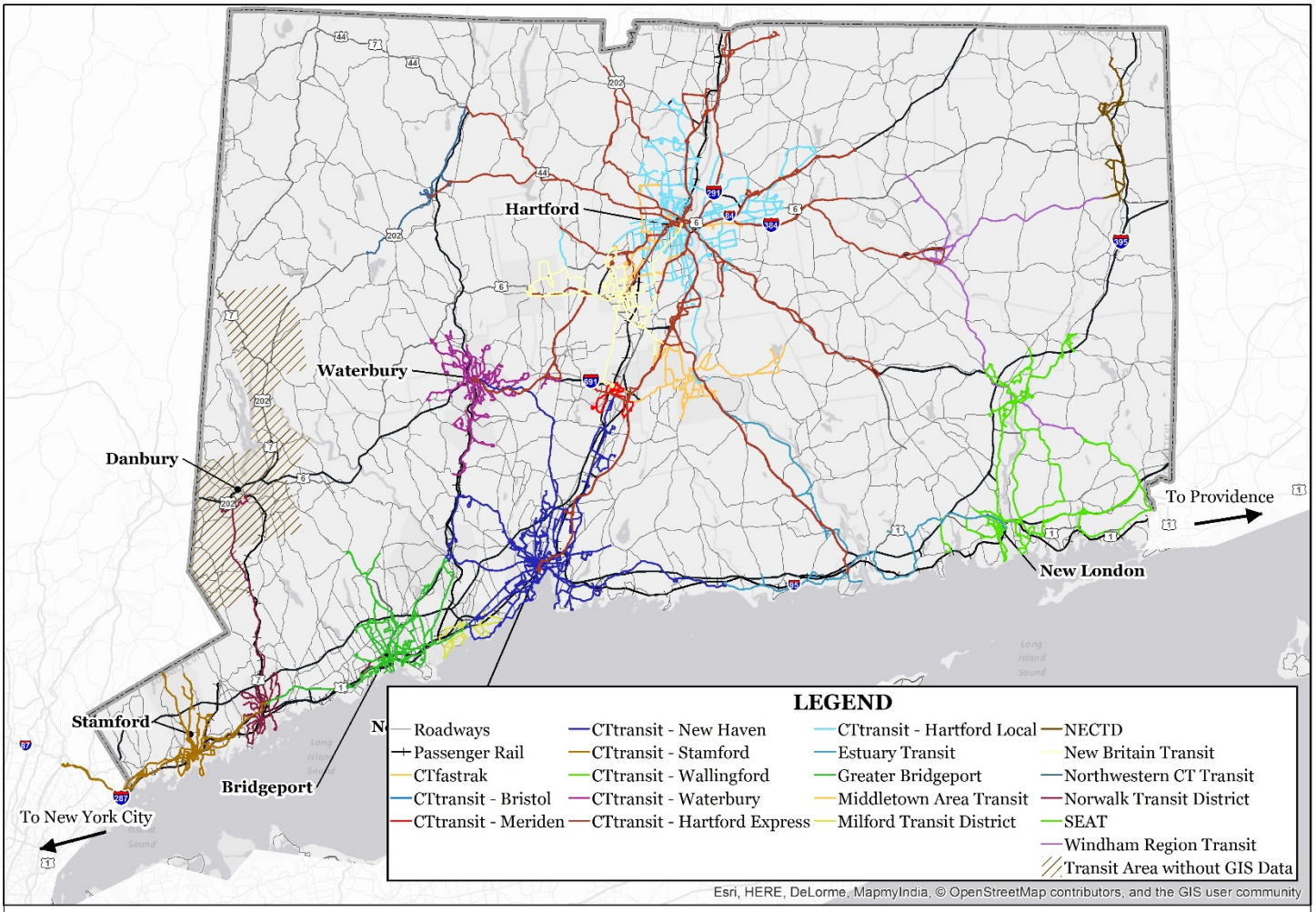
Transit Property	Service Area/Route	Owner	Operator	Manager
Housatonic Area Regional Transit District (HART)	Danbury, Bethel, Brookfield, New Fairfield, New Milford, Newtown, Bethel, Redding, Roxbury, New Fairfield, and Ridgefield Routes 1, 2, 3, 4, 5, 6, 7, 7Link, Hospital – Danbury Mall Loop, Bethel-Newtown Rd Loop, New Milford Loop, Danbury-Brewster Shuttle, Ridgefield-Katonah Shuttle, New Fairfield-Southeast Shuttle	HART	HART	HART
Northeastern Connecticut Transit District (NECTD)	Brooklyn, Canterbury, Killingly, Putnam, Thompson, Eastford, Plainfield, Pomfret, Woodstock, and Union Routes Northern Loop, Southern Loop, North Shuttle, South Shuttle	NECTD	NECTD	NECTD
Northwestern CT District (NWCTD)	Litchfield, Torrington and Winsted Routes 1, 2, 3, 4, 5, Saturday route	NWCTD	Kelley Transit	NWCTD

Table 1: Transit Properties in the State of Connecticut (Continued)

Transit Property	Service Area/Route	Owner	Operator	Manager
Southeast Area Transit District (SEAT)	Norwich, New London, Groton, Waterford, East Lyme, Griswold, Montville, Ledyard, and Stonington Route 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 101, 108	SEAT	SEAT	First Transit
Norwalk Transit District (NTD)	Norwalk, Westport, Wilton, Greenwich, and via the Coastal link to Fairfield, Bridgeport, Stratford, and Milford Routes 1, 2, 3, 4, 5/6, 7, 8, 9, 10, 11, 12, 13, Main Avenue and CT Avenue (evening and Sunday only), Merritt 7/Glover Avenue shuttle, Norwalk Hospital/Belden Avenue shuttle, 10/20 Westport Road shuttle, CT Avenue/Norwalk Community College shuttle, Norden Park shuttle, Westport Commuter shuttles (G1, G2, S1, S2, S3, S4, Imperial Avenue), Greenwich Commuter Central and West Loop, Coastal Link, Route 7 Link, 41	NTD	NTD	NTD

Transit Property	Service Area/Route	Owner	Operator	Manager
Windham Region Transit District (WRTD)	Southwest Windham County, southeast Tolland County, and northwest New London County Routes Willimantic City, Storrs-Willimantic, Willimantic- Danielson	WRTD	WRTD	First Transit

Figure 1: Statewide Bus Service Map



1.2.3 CT*fastrak*

CT*fastrak* is Connecticut's first Bus Rapid Transit (BRT) system. It is comprised of a system of bus routes that utilize a bus-only roadway for a portion of the entire trip. Ten BRT stations serve the core of the system and CT*fastrak* buses are able to exit the bus-only roadway at certain locations to deliver passengers to their destination/local stops. CT*fastrak* routes are integrated with the CT*transit* bus system to facilitate connections and transfers.

There are several types of routes and services available to riders:

- **CTfastrak Route 101** operates between downtown Hartford and downtown New Britain, stopping at all ten stations on the busway.
- **CTfastrak Route 102** operates between downtown Hartford and downtown New Britain, making all stops on the busway, and then makes limited stops along Farmington Avenue in Hartford and all CT*fastrak* stations. From New Britain, Route 102 continues on semi-express route (making no stops) to Plainville Center and downtown Bristol via CT-72.
- **Circulator routes (Routes 121 and 128)** use the bus-only roadway for a portion of the trip, exiting the bus-only roadway at certain locations to provide service to destinations in Central Connecticut like UConn Health, Westfarms Mall, and Manchester Community College.
- **Connector routes** link stations with other destinations, such as St. Francis and Hartford Hospitals (Routes 161), West Hartford Center and Copaco in Bloomfield (Route 153), and Newington Center (Route 144).

All routes on the bus-only roadway circulate through the downtown Hartford area to provide access to downtown destinations. CT*fastrak* began service on March 28, 2015.

1.2.4 Intercity Bus Operators

Intercity bus service in Connecticut is provided by Peter Pan Bus Lines, Inc. (Peter Pan); Greyhound Lines, Inc. (Greyhound); and Stagecoach U.S.A. doing business as Megabus.

Peter Pan and Greyhound operate together under a revenue-pooling agreement, and so they each show the other carrier's schedules as part of a unified system. However, Peter Pan (which is headquartered in Springfield, Massachusetts) is the dominant regional carrier with most of the service provided in the state, as shown in Table 2 Megabus has only two stops in the state, Hartford and New Haven. It should be noted that both Peter Pan and Greyhound provide full timetables showing all services, while Megabus shows only the buses with seats available on any particular day, and only for a specified origin-destination pair, so one must construct or impute an overall service pattern. Until recently there were also "Chinatown" curbside services, but currently the

only such operator is Boston Deluxe which operates between New York and Boston with a Hartford stop on Friday, Saturday, Sunday and holidays.

Table 2: Summary of Intercity Bus Services

Carrier	Route/Timetable	Frequency	Travel Time
Greyhound Lines	105 Boston-Hartford-New York Express	One daily round trip (RT) stops in Hartford (G 1908/G1966)	1:50 (1 hour and 50 minutes) Boston-Hartford, 2:30 Hartford-NY
Greyhound Lines	67-White River Junction-Hartford	One daily RT (multiple stops in Vermont and Massachusetts)	White River Junction-Hartford: 4:25
Greyhound Lines	104 Boston-NY via Hartford & New Haven	Boston-Hartford-New York: 1 daily RT Springfield-Hartford-NY: 1 daily	Springfield-Hartford: 0:35 Boston-Hartford: 2:30 Hartford-NYC Express: 2:30
Greyhound Lines	108 Boston/Providence-Foxwoods-NYC (stops in Foxwoods Casino, Mohegan Sun, New London, New Haven, Bridgeport, Stamford)	Boston-New York Local (all Connecticut Stops): 4 daily RT, plus one RT Providence-NYC with stops at Foxwoods and Mohegan Sun	Foxwoods-Stamford local: 2:50, New Haven-NYC: 2:50
Peter Pan Bus Lines	2017 Boston-Hartford-New Haven-Waterbury-New York	Boston-Hartford: 8 daily RT, plus 2 southbound (SB) 5 & 7 express, 2 SB express college; 19 daily RT Hartford-NYC (6 stop in New Britain, 6 stop in New Haven, 5 stop in Farmington, 8 in Waterbury, 6 in Southbury, 9 in Danbury)	Boston-Hartford: 2:30; Hartford-NYC: Express 2:30, Local 3:15-3:20 depending on stops
Peter Pan Bus Lines	2018 Greenfield-Amherst-Northampton-Springfield-Hartford-New Haven-Waterbury-New York	Greenfield-Hartford: 4 daily RT; Amherst-Hartford: 6 daily RT; plus 2 college specials, Hartford-New York: 19 daily RT Hartford-NYC (6 stop in New Britain, 6 stop in New Haven, 5 stop in Farmington, 8 in Waterbury, 6 in Southbury, 9 in Danbury)	Greenfield-Hartford: 2:25 (Local) Hartford-NYC: Express 2:30, Local 3:15-3:20 depending on stops

Source: Intercity Bus Operator websites

Table 2: Summary of Intercity Bus Services (continued)

Carrier	Route/Timetable	Frequency	Travel Time
Peter Pan Bus Lines	6A, 6B and 17A services to Foxwoods Casino	6A: One daily RT Boston-Foxwoods, 6B: One daily RT Concord, NH-Foxwoods, 17A: One daily (plus one additional on Sat.) Amherst-UMass to Foxwoods (stop in Enfield, CT)	Varies by route
Peter Pan Bus Lines	2036 Providence-Mansfield-Storrs-Hartford-Waterbury-NYC	Providence-Hartford: 1 daily RT, plus 3 Mansfield, CT, plus 1 Friday only to UC-Storrs—connections in Hartford to New York schedules	Mansfield-Storrs: 0:45
Peter Pan Bus Lines	53A and 53B: Boston-Storrs	One Friday RT College Express (NB connects to Logan)	
Peter Pan Bus Lines	2042: Williamstown, MA to NYC via Canaan, Winsted, Torrington, Waterbury, Southbury, and Danbury	Williamstown-NYC: 2 daily RT	Canaan, CT-NYC: 3:15
Megabus	Stops in Hartford and New Haven only on routes from NYC to Burlington, VT, and on routes from Boston to Hartford through Rhode Island	Hartford-NYC: 3 RT New Haven-NYC: 1 RT Hartford-New Haven-Boston: 2 RT	Hartford-NYC: 3 hours Hartford-New Haven:0:45
Boston Deluxe	Hartford stop on services between Boston and NYC	Friday, Saturday, Sunday and Holidays only	

Source: Intercity Bus Operator websites

The basic Peter Pan /Greyhound service pattern involves two corridors which meet in Hartford. The Boston-Worcester-Hartford corridor generally is eight daily round-trips, with additional service on Fridays and Saturdays that are either express or college specials (with campus stops). The Greenfield-Amherst-Springfield-Hartford corridor is basically four services each from Greenfield and Amherst. These two corridors meet in Hartford, with the two corridors combining into 18-19 daily trips to New York City. Six to eight of these trips travel via Waterbury/Southbury/Danbury, and six stop in New Haven, and a number run as express service. In addition, Peter Pan operates between Providence and Hartford via the University of Connecticut in Storrs, with a stop in

Mansfield, continuing on to New York City (as part of the 18-19 daily trips). As can be seen in Table 2, Peter Pan also provides service to the Foxwoods Casino from Concord, New Hampshire; Amherst, Massachusetts; and from Boston. Greyhound also serves Foxwoods and Mohegan Sun (Uncasville and Ledyard) on trips from Boston and Providence. On the western side of the state, Peter Pan has two daily round-trips from Williamstown, Massachusetts to New York, with Connecticut stops in New Canaan, Winsted, Torrington, Waterbury, Southbury and Danbury. Megabus operates on through routes between New York and Boston, and New York and Burlington, Vermont.

The intercity bus carriers have become much more sophisticated in pricing, with fares varying based on the demand for a particular schedule on a particular day. Generally walk-up fares for trips today or tomorrow are the highest, with lower fares for trips booked well in advance. Table 3 presents some sample fares. Greyhound and Peter Pan are part of the National Bus Traffic Association national interline system, and they sell through tickets to anywhere in the country served by member carriers. Megabus does not interline with other carriers.

In general Connecticut has extensive, frequent service to major regional cities such as Boston and New York. However, the route network is not designed to facilitate intra-state trips unless they are between points on the major corridors. Trip making between corridors are more difficult—for example, a trip from Torrington to Storrs requires two transfers (at Waterbury and Hartford) and takes approximately six hours to complete the trip.

Table 3: Typical Intercity Bus Fares

Carrier	Origin-Destination	Fare Range for a Trip Tomorrow	Fare Range for a Trip in a Month
Greyhound/Peter Pan	Hartford-New York City	$13-$18	$10-$16
	Hartford-Boston	$12-$16	$9-$13
	Hartford-Providence	$24-$25	$12
	Hartford-Springfield	$8-$11	$7
Megabus	Hartford-New York City	$21	$15
	New York City-Hartford	$19	$15
	Hartford-New Haven	$13	$13
Boston Deluxe	New York-Hartford	$15	$15

Source: Intercity Bus Operator websites

1.2.5 Paratransit

Paratransit (on demand) services are provided by 12 transit operators in various areas throughout the state. The Americans with Disabilities Act (ADA) paratransit program provides mobility to people with qualifying disabilities who travel within the service area of the regular fixed-route bus system.

An assessment of paratransit services in the state will be undertaken in a separate study and is not included in the scope of this study.

1.2.6 Bus Stops and Transfer Locations

Bus stops in Connecticut have a mix of signage types and passenger amenities. It is the responsibility of the transit provider to install signage at bus stops. The stop types and their amenities range from a full package of amenities such as on the CTfastrak system (passenger shelters, real time bus information, ticket vending machines and bicycle parking) to basic amenities (bus stop signs and posts,) in smaller and rural transit districts such as Northwestern Connecticut Transit District and Middletown Area Transit. Additionally, there are several major bus transfer facilities in the state. These facilities typically feature sheltered waiting areas, bus route information, and bays for buses to layover. Major bus facilities include:

- SEAT Norwich Transportation Center
- Bridgeport Intermodal Transportation Center
- Stewart B. McKinney Transportation Center in Stamford
- Wheels Hub Norwalk
- MAT Station in Shapiro Square
- CT*fastrak* Downtown New Britain Station

In addition to these formalized transfer locations, multiple transit providers have informal transfer locations between routes on the street. Examples of this type of operation include downtown Waterbury and New Haven, where all bus service converges on each town's green, providing a pulse transfer between bus routes.

1.2.7 Intermodal Connections

Intermodal connectivity is a key feature of functional transportation systems as it provides linkages between at least two modes of transportation (e.g., auto and transit, rail and bus, bus and bicycle). This connectivity extends the reach of the transit system.

Intermodal connectivity between train and bus services complements both modes and promotes increased ridership and operating revenue on both modes. Intermodal connections between train stations and bus routes in the state are listed in Table 4.

Bus connections are provided at nearly all New Haven Line stations and some branch line stations (Metro-North Railroad Waterbury, Danbury and New Canaan branches) being served by bus. There are also bus connections available at some Amtrak and Shore Line East stations.

Bicycles are an important transportation option and has a role in the overall transportation system. The following bus systems allow bicycles on-board its vehicles: CT*fastrak*, CT*transit*, GBT, HART, MAT, and NECTD.

Bradley International Airport is served by CT*transit* Route 30 Bradley Flyer originating in Hartford.

Table 4: Intermodal Connections by Train Station

Train Station	Train Service	Bus Connections
Ansonia	Metro-North Waterbury Branch	CT*transit* F route/ Valley Transit (Call ride only)
Berlin	Amtrak Springfield Line	CT*transit* route 512
Bethel	Metro-North Danbury Branch	Housatonic Area Regional Transit (HART) route 5
Branchville	Metro-North Danbury Branch	Norwalk Transit Route 7 Link
Bridgeport	Amtrak Northeast Regional/Metro-North New Haven Line	Greater Bridgeport Transit routes 1, 3, 4, 5, 6, 7, 8, 9, 10,13,15,17, 19X, 22X, 23 Coastal Link, Greyhound, Peter Pan
Cannondale	Metro-North Danbury Branch	Norwalk Transit Route 7 Link
Danbury	Metro-North Danbury Branch	HART routes 1, 2, 3, 4 , 5, 6, Route 7 Link, Danbury-Brewster Shuttle, Loop: Newtown Rd / South St, Mall/Hospital, New Milford (at Pulse Point)
Darien	Metro-North New Haven Line	CT*transit* routes 41 and 42
Derby–Shelton	Metro-North Waterbury Branch	CT*transit* F route/ Valley Transit (Call ride only)
East Norwalk	Metro-North New Haven Line	Norwalk Transit routes 8 and 12
Fairfield	Metro-North New Haven Line	Greater Bridgeport Transit routes 7 and Coastal Link
Fairfield Metro	Metro-North New Haven Line	Greater Bridgeport Transit routes 5 and 7
Glenbrook	Metro-North New Canaan Branch	CT*transit* route 42
Green's Farm	Metro-North New Haven Line	Norwalk Transit G1 and G 2 routes
Greenwich	Metro-North New Haven Line	CT*transit* route 11 and I-Bus/ Norwalk Transit
Hartford (Union Station)	Amtrak Springfield Line	CTtransit/CT*fastrak*/Greyhound/Peter Pan
Meriden	Amtrak Springfield Line	CT*transit* Route A1
Merritt	Metro-North Danbury Branch	Norwalk Transit Route 7 Link, route 3, Norwalk Commuter Connection - Merrit 7
Milford	Metro-North New Haven Line	CT*transit* route J/Milford Area Transit routes 2, 3, 4, Coastal Link/Milford Commuter Connection - Orange-Milford
Naugatuck	Metro-North Waterbury Branch	CT*transit* routes N1, N2, T-74 (Limited)
New Haven - State Street	Shore Line East/Metro-North New Haven Line	CT*transit* routes D, F, G, Q, Z, New Haven Commuter Connection - Downtown, Sargent Drive
New Haven - Union Station	Amtrak Springfield Line /Amtrak Northeast Corridor/ Shore Line East/Metro-North New Haven Line	CT*transit* J and 950, New Haven Commuter Connection - Downtown, Sargent Drive/Greyhound/Peter Pan
New London	Amtrak Northeast Regional/Shore Line East	Southeast Area Transit, Greyhound
Noroton Heights	Metro-North New Haven Line	CT*transit* route 42
Old Greenwich	Metro-North New Haven Line	CT*transit* route 24 B (Limited)
Old Saybrook	Amtrak Northeast Regional/Shore Line East	9 Towns Transit routes 1, 2, 3, 4, CT*transit* Hartford route 921
Rowayton	Metro-North New Haven Line	Norwalk Transit route 12

Table 4: Intermodal Connections by Train Station (Continued)

Train Station	Train Service	Bus Connections
Seymour	Metro-North Waterbury Branch	CT*transit* Route F
South Norwalk	Metro-North New Haven Line	Norwalk Transit NCC to CT Ave., Norwalk Hospital / Belden Ave, Merrit 7, Westport Road; routes 10, 11, 12, Evening Shuttle, Sunday Shuttle
Stamford	Amtrak Northeast Corridor/Metro-North New Haven Line	CT*transit* Stamford Commuter Connection - Central, Bulls Head, North, Rte 1 East; routes 11, 13, 21, 22/24, 26, 27, 31, 32, 33, 34, 35,41, 42, 43, 45, I-BUS/Greyhound/Peter Pan
Stratford	Metro-North New Haven Line	Greater Bridgeport Transit routes 16 and 23
Wallingford	Amtrak Springfield Line	CT*transit* route Wallingford Local
Waterbury	Metro-North Waterbury Branch	CT*transit* (New Haven) J, 28, T-17, T-47 (Ltd), T-49 (Ltd), T-74 (Ltd), T-81 (Ltd), T-114 (Ltd); CTtransit (Waterbury) 11, 12, 13, 15, 16, 18, 20, 22, 25, 26, 27, 31, 32, 33, 35, 36, 40, 42, 44, 45, CTtransit (Hartford) route 925
West Haven	Metro-North New Haven Line	CT*transit* route B - Congress Avenue
Westport	Metro-North New Haven Line	Norwalk Transit routes N, IL, S1, S2, S3, S4
Wilton	Metro-North Danbury Branch	Norwalk Transit route 7 Link
Windsor	Amtrak Springfield Line	CT*transit* routes 32 and 34
Windsor Locks	Amtrak Springfield Line	CT*transit* route 905

In addition to these intermodal connections, there are 82 park and rides that are located throughout the state. (See Table 5). These park and rides enable transfers between automobiles and local and express bus routes. Unlike the intermodal connections with rail service which are concentrated in the southern portion of the state, park and ride locations are evenly distributed throughout the state and provide connectivity to areas not served by rail service.

Table 5: Park and Ride Locations with Bus Service

Park and Ride Lot	Location	Bus Connections
Andover	Route 6 and Route 316	CT*transit* 918
Avon	Route 44 @ Walmart	CT*transit* 901
Barkhamsted	Route 44 @ Winchester Town Line	Northwestern CT Candystriper 1
Bloomfield	Route 189, Sacred Heart Church	CT*transit* 50-54, 56-58
Bolton	Route 6, 44 & I-384	CT*transit* 918, 918
Branford	Route 1 @ Cherry Hill	CT*transit* F, S
Bristol	Todd Street North of Route 72	CT*fastrak* 102, 923
Bristol	Route 229 @ Lake Avenue	CT*fastrak* 102, 923
Canton	Route 179 @ Route 44	CT*transit* 901
Cheshire	I-84 @ Route 70	CT*transit* J, CT*fastrak* 924, 925. 928

Table 5: Park and Ride Locations with Bus Service (Continued)

Park and Ride Lot	Location	Bus Connections
Cheshire	Route 10 @ I-691	CT*fastrak* 924, 925, 928
Chester	Route 9 @ Route 148	CT*transit* 921
Colchester	Route 2 and 11	CT*transit* 914
Colchester	Old Hartford Road @ Town Garage	CT*transit* 914
Columbia	Route 6 @ Route 66	CT*transit* 918
Coventry	Route 44 @ 2nd Congregational Church	Peter Pan Bus Lines
Danbury	Route 7 @ Federal Road	Hartransit 4, 7
Danbury	I-84 @ Routes 6 & 202	Hartransit 3
Danbury	I-84 @ Segar St.	Hartransit 3, 6
East Hampton	Route 66 @ Route 16	Middletown Area Transit F
East Harford	Route 5 @ Main Street	CT*transit* 87, 95, CT*fastrak* 121
East Haven	Route 1 @ Kimberly Avenue	CT*transit* S
Enfield	I-91 Exit 48	CT*transit* 905, Peter Pan
Essex	Route 9 @ Exit 4	CT*transit* 921
Farmington	Routes I-84 & 4	CT*transit* 60-66
Farmington	Route 4 @ St. Marys Church	CT*transit* 60-66, 909
Farmington	Route 4 @Town Farm Road	CT*transit* 60-66, 909
Glastonbury	Route 2 & 3, Main Street	CT*transit* 91, 95, 904, 914
Glastonbury	St. Pauls Church, Main Street	CT*transit* 95, 904, 914
Glastonbury	St. Augustine's, Hopewell Road	CT*transit* 904
Granby	Route 189, North Granby Road	CT*transit* 912
Guilford	I-95 @ Route 1	CT*transit* S
Hartford	Parkville Station	CT*fastrak* 101, 102, 121, 128, 923, 924, 925
Manchester	I-84 @ Buckland St.	CT*transit* 82-84, 83, 91, 903, 917
Manchester	I-384 @ Spencer Street	CT*transit* 83, 85, CTfastrak 121
Mansfield	Route 195 @ South Frontage Road	WRTD Storrs-Willimantic
Marlborough	Route 2 @ West Rd.	CT*transit* 914
Meriden	I-91 @ Bee St.	CT*transit* 919
Middletown	Industrial Park Road (off Route 372)	CT*transit* 906
Middletown	Route 9 @ Silver Street	CT*transit* 53-55, 921
Middletown	I-91 @ Country Club Road	CT*transit* 950
Milford	I-95 @ Old Gate Lane	CT*transit* 55
New Britain	Route 71 south of Westfarms Mall	CT*transit* 128, 144, 902
New Britain	Downtown New Britain Station	CT*fastrak* 128, 102, 101, 923, 924, 925, 928
New Britain	East Street Station	CT*fastrak* 101, 102, 140
New Britain	Corbin Park & Ride	CT*fastrak* 128
Newington	Route 15 @ DOT Headquarters	CT*transit* 45
Newington	Newington Junction Station	CT*fastrak* 121, 101, 102

Table 5: Park and Ride Locations with Bus Service (Continued)

Park and Ride Lot	Location	Bus Connections
Newington	Cedar Street Station	CT*fastrak* 121, 101, 102, 144
North Haven	Route 40 @ Devine Street	CT*transit* M, 950
North Stonington	I-95 @ Route 2	SEAT 10, 108
Norwalk	Route 15 @ Route 123	Norwalk Transit 2
Norwalk	I-95 @ Hendricks Avenue	Norwalk Transit 8, 11
Norwich	I-395 @ West Town St.	SEAT 5
Norwich	I-395 @ Route 82	SEAT 6
Norwich	W. Main Street @ Falls Avenue	SEAT 5, 6, 7, 10
Old Saybrook	Route 154 @ D.O.T. Maint. Garage	CT*transit* 921
Orange	Route 15 @ Route 34	CT*transit* F
Preston	Route 12, north of Route 2A	SEAT 2
Ridgefield	Main St (Rt. 35) @ King Lane, United Methodist Church	Ridgefield-Katonah Shuttle
Shelton	Route 8 @ Bridgeport Avenue	CT*transit* F, GBT 15
Simsbury	Route 10 north of Rt. 185	CT*transit* 912
Simsbury	Route 10 @ Hwy. Maint. Garage	CT*transit* 912
Simsbury	Iron Horse Boulevard	CT*transit* 912
Southington	I-84 @ Route 10	CT*fastrak* 924, 925, 928
Stamford	Route 15 @ Route 137	CT*transit* 31
Stonington	I-95 @ Routes 2 & 78	SEAT 10
Stratford	I-95 @ Route 113	GBT 10
Torrington	W. Torringford & Charles St., St. Paul Church	CT*transit* 927
Torrington	Routes 4, 8 & 202	Peter Pan
Trumbull	Route 25 @ Route 111	GBT 14, 19X, 20
Trumbull	Route 15 @ Route 127	GBT 19X
Vernon	I-84 @ Route 31	CT*transit* 917
Vernon	I-84 @ Route 30	CT*transit* 917
Waterbury	I-84 @ Route 69	CT*transit* 31, 928
Waterbury	I-84 @ Chase Parkway	CT*transit* 40/42
Waterbury	I-84 @ Scott Rd. & E. Main St.	CT*transit* J, 26-28
Waterbury	Waterbury/Hamilton Avenue Park and Ride	CT*fastrak* 925
West Hartford	Elmwood Station	CT*fastrak* 128, 121, 102, 101
West Hartford	Flatbush Avenue Station	CT*fastrak* 128, 121, 102, 101
Westport	Route 15 @ Route 33	Westport Transit S2
Westport	Route 15 @ Route 57	Westport Transit S3
Wethersfield	Wolcott Hill Road @ Jordan Lane	CT*transit* 43, 47, 950
Windsor	I-91 @ Kennedy Road	CT*transit* 30, 905
Windsor	I-91 @ Route 75	CT*transit*, 30, 32-36, 50-54, 905
Windsor Locks	I-91 @ Route 159	CT*transit* 905

1.2.8 Fleet Characteristics

CTDOT is responsible for the purchase of vehicles for its operating divisions and allows other transit properties in the state to include their own orders for vehicles under CT*transit* procurements. The state received an American Recovery and Reinvestment Act (ARRA) Grant in 2009 that allowed them to finance the purchase of multiple new vehicles for properties throughout the state. The total number of vehicles in the fleet by Transit Provider, their length, propulsion and year of manufacture is shown in Table 6.

Table 6: Vehicles by Transit Provider

Transit Provider	Vehicle Type	Number of Vehicles	Vehicle Length	Propulsion	Manufacture Year
CT*transit* – Express (includes HNS, DATTCO, Collins, Nason/Kelley)	Commuter Bus	67	40-45 Feet	Diesel	1993-2010
CT*transit* – Hartford	Motorbus	252	30-60 Feet	Diesel/Diesel-Electric Hybrid	2001-2015
CT*transit* – New Britain/Bristol	Motorbus	22	35-40 Feet	Diesel	2001-2010
CT*transit* – New Haven	Motorbus	129	40-60 Feet	Diesel/Diesel-Electric Hybrid	1995-2014
CT*transit* – Stamford (includes I-Bus)	Motorbus	59	40-60 Feet	Diesel/Diesel-Electric Hybrid	1995-2014
CT*transit* – Waterbury (includes CT*transit* Meriden and Wallingford)	Motor Bus	39	35-40 Feet	Diesel/Diesel-Electric Hybrid/Gasoline	2004-2010
Northwestern CT*transit* District (NWCTD)	Motor Bus	5	1 Bus (25 Feet) 4 Vans	Not Available	2006-2012

Source: Fleet data provided by CTDOT

Table 6: Vehicles by Transit Provider (continued)

Transit Provider	Vehicle Type	Number of Vehicles	Vehicle Length	Propulsion	Manufacture Year
Greater Bridgeport Transit (GBT)	Motor Bus	55	35-40 Feet	Diesel/Diesel-Electric Hybrid	1998-2012
Housatonic Area Regional Transit District (HART)	Motor Bus	45	30-40 Feet	Diesel/Gasoline	2002-2014
Middletown Transit District (MAT)	Motor Bus	7	30-35 Feet	Diesel	2003-2015
Milford Transit District (MTD)	Motor Bus	9	35-40 Feet	Biodiesel	2003-2010
Southeast Area Transit District (SEAT)	Motor Bus	27	30-40 Feet	Diesel/Diesel-Electric Hybrid	2003-2013
Norwalk Transit District (NTD)	Motor Bus	64	30– 40 Feet	Diesel/Gasoline	2003-2015
Windham Region Transit District (WRTD)	Motor Bus	5	30 Feet	Diesel	2006-2008
Northeastern Connecticut Transit District (NECTD)	Motor Bus	10	25-27 Feet	Not Available	2008-2010
Estuary Transit District (ETD)	Motor Bus	10	30 Feet	Not Available	2010-2015

Source: Fleet data provided by CTDOT

1.2.9 Vehicle Modernization

Under the 2016 Transit Capital Infrastructure Program, two modernization projects were being advanced, an automated vehicle location project and a fare collection system replacement project.

CTDOT in collaboration with the Department of Emergency Services and Public Protection has completed the Statewide Bus Communications Project. This project developed a communication system that shares the backbone of the State Police radio system. It provides two-way communication between each bus and the bus operations center that dispatches it. The enhanced communication system is used to provide real-time bus location information to the customer and to the bus operations centers.

CTDOT is in the process of implementing a Fare Collection System for the CT*transit* and CT*fastrak* systems. This included procurement of up to 600 new fare-boxes, ticket vending machines and related equipment which will offer a wide array of customer service improvements. This new technology will increase payment options including smart cards and mobile payment, and make it easier and faster for customers to use the system. CTDOT is in the process of acquiring/installing a new fare collection system. Currently, approximately 40 buses in the Hartford Division are testing the new farebox equipment, which in addition to reading/issuing magnetic stripe tickets and proximity cards, will also be able to validate bar-coded and Quick Response-coded fare media with an integrated optical scanner. Upon completion of the farebox testing, the new farebox equipment will be integrated on all CTDOT-owned vehicles, including the express buses that currently do not have fareboxes installed onboard vehicles.

As part of *Let's Go CT*, proposed bus modernization projects include life cycle replacements of the CT*transit* and transit district bus fleets system wide. The new fleet may be comprised of Clean Diesel Electric Hybrid or other green technology.

Automated Vehicle Location (AVL) technology and automated stop announcements developed for CT*fastrak* are being expanded to all divisions of CT*transit*. Automatic Passenger Count (APC) devices are being installed on CT*transit* buses, most recently on the Hartford Division. The devices will automatically count passengers boarding and alighting and will allow in-depth usage analysis by route.

All CT*transit* Hartford Division buses are equipped with active AVL and APC. In addition, the state-owned DATTCO bus fleet (Hartford Express and CT*transit* New Britain Divisions have AVL and APC installed, however, this equipment is only active on the bus routes that operate on the CT*fastrak*.

The state-owned Collins bus fleet (Hartford Express), the state-owned Kelley Transit bus fleet (Hartford Express) and majority of the state-owned New Britain

Transportation Company bus fleet (CT*transit* New Britain and Bristol Divisions) have AVL and APCs installed on vehicles, however, this equipment is not yet active.

Installation of AVL and APCs is planned on the CT*transit* New Haven Division, the CT*transit* Waterbury, and CT*transit* Meriden Divisions.

The CT*transit* Stamford Division bus fleet has AVL and APCs installed on vehicles, however, this equipment is not yet active, as this a separate City of Stamford contract and project.

Greater Bridgeport Transit has AVL equipment on board all of its buses. Nearly one-quarter of its fleet is equipped with has APC equipment. Greater Bridgeport Transit desires to expand the number of buses with APC, but funding to purchase this equipment is a constraint.

The Norwalk Transit District has recently installed AVL equipment on all of its vehicles. Approximately 20 percent of the fixed-route fleet has APC equipment installed. However, all future fleet purchases will include APC equipment.

In addition, significant improvements and replacement of CT*transit* bus maintenance facilities and regional/local transit facilities has been proposed to support the increase and modernization of the bus fleets.

1.2.10 Fixed Route Vehicle Maintenance Facilities

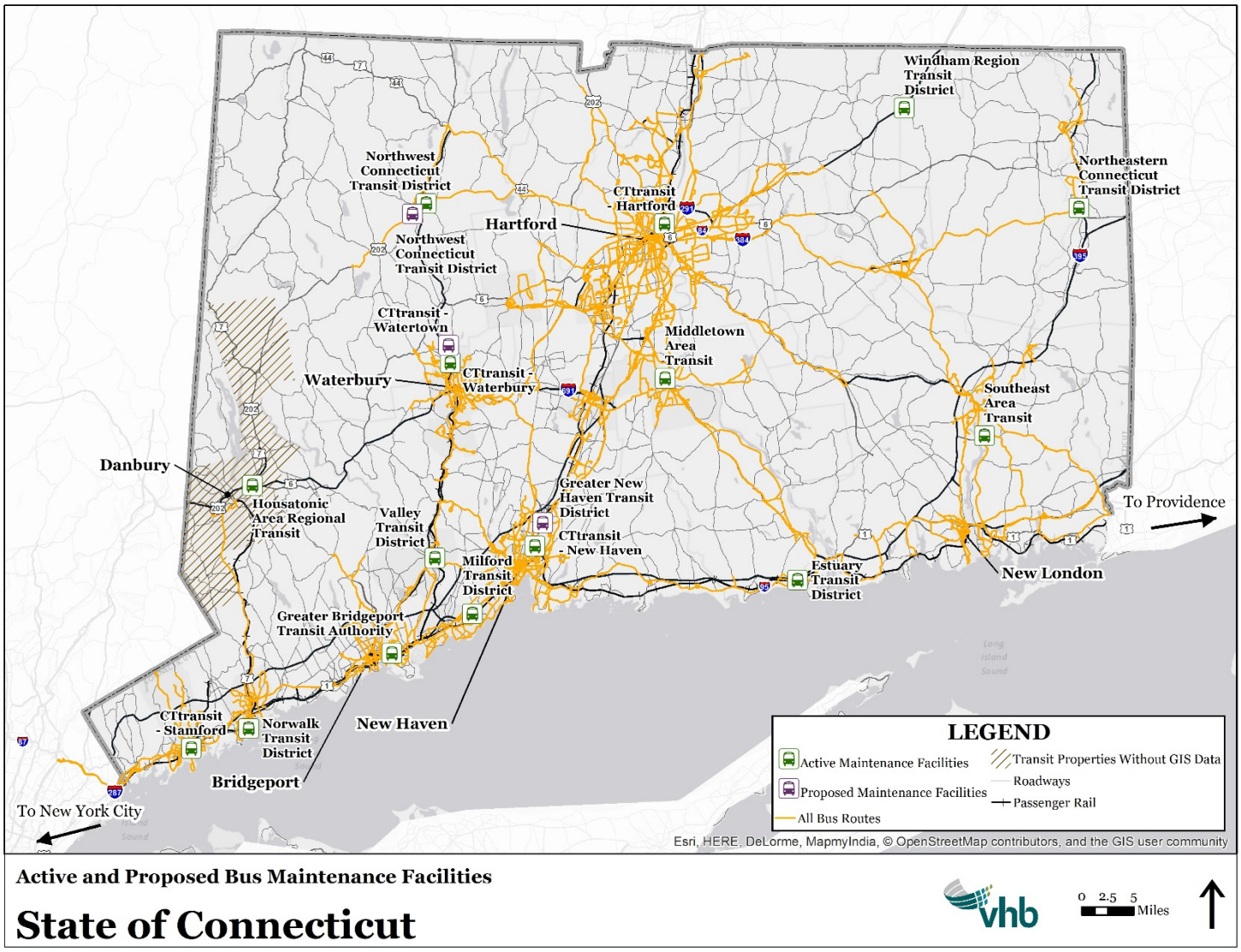
Bus maintenance and storage facilities are provided by the transit properties and located throughout the state. Each bus facility is listed in Table 7 and shown in Figure 2.

Table 7: Statewide Bus Facilities

Agency/Operator	Bus Garage or Facility Function	Location	Owner	Total Number of Vehicles	Storage Capacity	Year Opened
CT transit - Hartford Division	Bus maintenance and storage facility	100 Leibert Road, Hartford, CT 06141	State	270 buses and 34 support vehicles	199,700 s.f.	1990
CT transit - New Haven Division	Bus maintenance and storage facility	2061 State Street, Hamden, CT 06517	State	144 buses, 2 mini-buses, and 19 support vehicles	172,000 s.f.	2010
CT transit – Stamford Division	Bus maintenance and storage facility	26 Elm Court, Stamford, CT 06902	State	77 buses and 11 support vehicles	43,550 s.f.	2004
CT transit – Waterbury Division	Bus garage and maintenance facility	1717 Thomaston Avenue, Waterbury, CT 06704	Leased space	not available	not available	not available
South East Area Transit (SEAT)	Bus maintenance and storage facility	21 Route 12, Preston, CT 06365	State	32 buses and 9 support vehicles	15,600 s.f.	1982
Valley Transit District (VTD)	Bus maintenance and storage facility (State owns the property, not the building)	41 Main Street, Derby, CT 064418	State	14 mini-buses, 1 support vehicle	6,200 s.f.	1981
Windham Region Transit District (WRTD)	Bus maintenance and storage facility	25 South Frontage Road, Mansfield, CT 06250	State	5 buses and 15 mini-buses	14,500 s.f.	2015
Greater Bridgeport Transit Authority (GBTA)	Bus maintenance and storage facility	One Cross Street, Bridgeport, CT 06610	GBTA	61 buses, 27 mini-buses, and 19 support vehicles	60,000 s.f.	1987
Norwalk Transit District (NTD)	Bus maintenance and storage facility	275 Wilson Avenue, Norwalk, CT 06854	NTD	47 buses, 30 mini-buses, and 4 support vehicles	30,000 s.f.	2001
Housatonic Area Regional Transit (HART)	Bus maintenance and storage facility	62 Federal Road, Danbury, CT 06810	HART	30 buses, 37 mini-buses, and 10 support vehicles	36,000 s.f.	1998
Middletown AreaTransit District (MAT)	Bus maintenance and storage facility	91 North Main Street, Middeltown, CT 06457	MAT	10 buses, 10 mini-buses, and 2 support vehicles	12,000 s.f.	2014
Milford Transit District (MTD)	Bus maintenance and storage facility	259 Research Drive, Milford, CT 06460	MTD	9 buses, 18 mini-buses, and 3 support vehicles	19,000 s.f.	1999
Estuary Transit District (ETD)	The ETD maintenance agrement identifies Mal's Auto & Truck Repair as the "Contractor".	6 Center Rd, Old Saybrook, CT 06475	Leased space	13 mini-buses, 2 support vehicles	not available	not available
Northwest Connecticut Transit District (NWCTD)	Bus maintenance and storage facility	957 East Main Street, Torrington, CT 06790	Privately owned	23 mini-buses	not available	not available
Northeastern Connecticut Transit District (NECTD)	Bus garage and maintenance facility	Killingly, CT	NECTD	not available	not available	not available
Bus Storage Facilities under construction or proposed	**Status**	**Location**	**Owner**	**Total Number of Vehicles**	**Storage Capacity**	**Anticipated Opening Year**
Greater New Haven Transit District (GNHTD) Sackett Point Road Facility	Environmental analysis at site underway	450/460 Sackett Point Road, North Haven, CT 06473	GNHTD		76,000 s.f.	not available
CT transit Watertown Bus Maintenance and Storage Facility	Under construction. Will replace the existing bus storage facility on 1717 Thomaston Avenue in Waterbury. The project is expected to be completed in April 2017.	Frost Bridge Road in Watertown, CT 06787	State	86 buses	not available	April 2017
Northwest Connecticut Transit District Torrington Bus Maintenance and Storage Facility	Was under design, on-hold since June 2014. The State is seeking acquiring two parcels, demolish the existing buildings and build a 10,000-square foot maintenance garage to be operated by the Transit District. Residents want to preserve the buildings. SHPO found demolishing the buildings would create an adverse effect.	200 Litchfield Street, Torrington, CT 06790	CTDOT		30 buses	not available

Source: CTDOT

Figure 2: Statewide Bus Maintenance Facilities



1.3 Public Funding for Bus Projects

CTDOT provides funding for bus capital projects through local programs or by distributing federally allocated grant funds (specifically for CT*transit* divisions). The State of Connecticut funds the majority of operating deficits for all bus properties. More information on state specific subsidies for transit service are discussed in Chapter 3.

CTDOT's Capital Plan for Transit for the Fiscal Years between 2016 and 2020 includes over $4 Billion in funding for capital projects. (See Table 8).

Table 8: CTDOT Capital Plan Bus and Rail Projects

Funding Source	2016	2017	2018	2019	2020
Federal Funding	$159,272,301	$143,954,061	$149,254,061	$149,254,061	$149,254,061
Carryover Federal Funding	$212,870,556	$11,844,850	$0	$0	$0
Subtotal Federal Funding	$372,142,857	$155,798,641	$149,254,061	$149,254,061	$149,254,061
State Funding	$646,875,387	$649,356,330	$440,690,000	$635,715,000	$767,440,000
Total Funding	$1,019,018,244	$805,154,971	$589,944,061	$784,969,061	$916,694,061
Programmed for Projects	**$997,519,835**	**$805,154,971**	**$585,444,061**	**$780,469,061**	**$897,194,061**

Source: CTDOT 2016-2020 Capital Plan

CTDOT has multiple bus-related capital projects planned and funded, including:

- Upgrading CT*transit* and the CT*fastrak* fare collection system with the procurement of up to 600 new fare-boxes, ticket vending machines and related equipment offering new payment options, ultimately to include payment with smart phone and smart cards.
- Upgrading the Statewide Bus Communications System to provide real-time bus location information for customers and dispatcher.
- Construction of the new CT*transit* bus maintenance and storage facility in the Waterbury area.
- CT*transit* and (non-CT*transit*) Transit District bus replacements
- Construction of a bus facility in the Northwestern Connecticut Transit District and improvements to bus facilities for CT*transit* Hartford and Southeast Area Transit

In addition to the CTDOT's Capital Plan, Connecticut has launched a major transportation initiative called "*Let's Go CT*." This effort includes additional capital projects that will be advanced during a five year ramp-up period from Fiscal Year (FY) 2016 to FY 2020. The plan includes a 30-year vision for bus service that seeks to:

- Expand bus service by 25 percent in urbanized areas, providing residents access to bus within half-mile of home
- Modernize state-owned bus maintenance facilities
- Extend CT*fastrak* east of Hartford, and study CTfastrak applications elsewhere in the state

- Implement coastal express priority bus service in southwest Connecticut
- Integrate services, information, customer service statewide, including consolidated, coordinated paratransit services
- Coordinate state-of-the art service and information delivery, i.e., real-time multimodal information and smart card fare collection systems

1.4 Other Planning Efforts

Since the *2000 Statewide Bus Study*, multiple planning efforts have been undertaken by transit agencies, municipalities, and regional planning organizations. Additionally, there are a number of ongoing studies that cover topics related to the *Statewide Bus Study*. These studies include **service planning studies** that look at how and where bus service should operate, **corridor studies** that look at building physical infrastructure for transit (including both bus and rail service), **multimodal studies** (that cover non-transit infrastructure such as transit access plans), and finally, **other studies** that cover a variety of topics including funding and organizational issues.

Service Planning Studies

- Greater Bridgeport Transit. Transit Master Plan
- Capitol Region Council of Governments (CRCOG). Hartford Comprehensive Transit Service Analysis
- Naugatuck Valley Council of Governments (NVCOG). Waterbury Area Transit Study (WATS)
- Southeast Area Transit (SEAT). SEAT Bus Study. 2015
- Housatonic Area Regional Transit (HART). 7 Link Efficiency Study. January 2016
- Western CT Council of Governments (WestCOG). Westport Bus Service Operations and Needs Study. 2015
- WestCOG, Stamford Bus & Shuttle Study. 2015
- Southeastern CT Council of Governments. Southeast Area Transport Bus Study: Service Evaluations. January, 2015.
- CRCOG. Manchester Transit Study: Final Report. January, 2013
- CRCOG. Downtown Hartford Bus Circulation Study. December 2012
- CRCOG. Windsor TMA Final Report: Hartford Transit Enhancement Bus Study. August, 2012
- Southwest Regional Planning Association (SWRPA). Coastal Corridor Bus Study: Recommended Service Plan. May, 2012
- CRCOG. Enfield Transit Study: Final Report. August, 2012
- HART. HART Fixed Route Efficiency Study. 2011
- HART. Bus Service Plan. March, 2010

- Regional Plan Association and Transit for Connecticut Coalition. Missing Links: Prioritized Bus Service Expansion Plan. January, 2010
- HART. Expanding Bus Transit to Bridgeport and Waterbury: Final Report. December, 2007
- HART, Harlem Line Shuttle Bus Study, 2006

Corridor Studies

- CTDOT. State Rail Plan Update 2017 - 2021
- CTDOT. CTfastrak Expansion Study. 2016
- CTDOT. I-84 Hartford Study. 2016
- South Western Regional Planning (SWRP). Greenwich-Norwalk BRT Feasibility Study
- CTDOT. Central Connecticut Rail Study
- SWRP. Greenwich/Norwalk Bus Rapid Transit Study. October, 2009
- City of New Haven. New Haven Alternatives Analysis

Multimodal Studies

- City of Stamford, Stamford Bicycle and Pedestrian Master Plan
- WestCOG. Darien Noroton Heights Train Station Access Study
- Tripnet. Connecticut Transportation by the Numbers: Meeting the State's Need for Safe and Efficient Mobility. December, 2014
- South Central Regional Council of Governments (SCRCOG). City of New Haven Two-way Conversion. Final Report. June, 2014
- Southeastern Connecticut Council of Governments (SECCOG). Intermodal Connections Study Southeast. February, 2005

Other

- Statewide Governance Alternatives
- CTDOT. Connecticut Statewide Household Transportation Study. 2016
- Naugatuck Valley Council of Governments. Waterbury Area Transit Study
- Naugatuck Valley Council of Governments and North East Transportation Company. Waterbury Regional Bus Ridership Study. 2013
- New Haven City Planning Commission. Comprehensive Plan Update, Databook. June, 2013

These studies will be used to inform the identification of deficiencies and the development of recommendations in the *2016 Statewide Bus Study*. The number of studies pending, underway or completed show that there is great interest in improving the regional bus transit system. However, each of these studies focus

primarily on a discreet segment of the system. The *2016 Statewide Bus Study* aims to look at the entire system comprehensively.

2

Statewide Demographics Analysis

2.1 Overview of Demographics Analysis

A focused review of the spatial distribution of population and households in relation to the state's bus network provides the foundation for how well the existing services are meeting the state's transportation needs. Identification of areas with a higher concentrations of population that demonstrate characteristics linked to higher transit usage is useful in determining where transit service could be added if service is not currently available. While these analyses cannot determine the exact need for transit services, they can provide evidence for areas that could support new service or expanded service.

Demographic data for Connecticut was obtained from the US Census Bureau and household attribute and employment-related data is from the 2014 American Community Survey (ACS)[3]. This data can be used to identify the levels and locations of transit-dependent populations in the state. The ridership demand for a transit system is typically correlated to several demographic characteristics. Higher concentrations of persons demonstrating these demographic characteristics indicate areas with potentially high demand for transit service. They are:

- Population Density
- Employment Density
- Older Adults
- Households under the poverty line – for the purposes of this study, this variable was computed using the state's poverty standards (roughly an annual income under $25,000 for a family of four.)
- Households without access to a vehicle

3 The American Community Survey is ongoing statistical survey by the U.S. Census Bureau.

Additionally, *Let's Go CT* has set a goal to improve and expand urban bus service by 25 percent to the large majority of urban residents are within a half-mile of bus service.

Based on data provided by the transit properties, an analysis of existing bus network coverage was undertaken and compared with the demographic characteristics. The state's bus system has 271 bus routes. Bus service is primarily concentrated in urban areas with some limited intercity bus routes and routes with bus-rail connections.

The demographic analysis was conducted for all transit properties except for Housatonic Area Regional Transit and Middletown Area Transit because GIS data was not available.

2.2 Population Density

Household density closely matches population density, and is useful in identifying areas where large concentrations of potential riders may be located (See Figure 3). Areas with higher household densities often have land use patterns that are supportive of fixed route transit, such as compact development and multi-family residences. In 2014, the state's population was 3,592,053 residents living in 1,356,206 households (See Figure 4). These households are largely geographically concentrated into urban centers in the southwestern portion of the state, most proximate to New York City.

Figure 3: Bus and Rail Networks Compared to Household Density

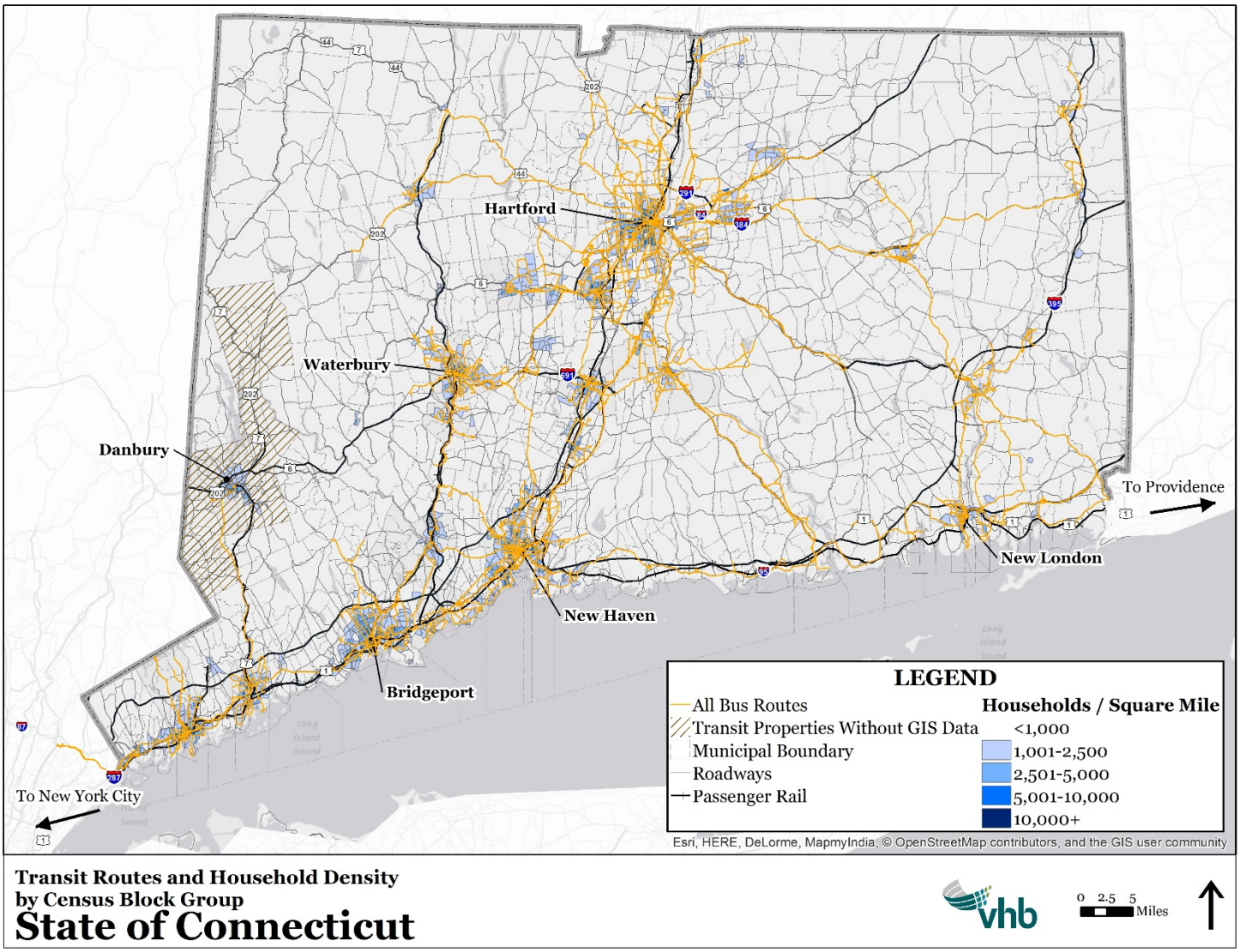
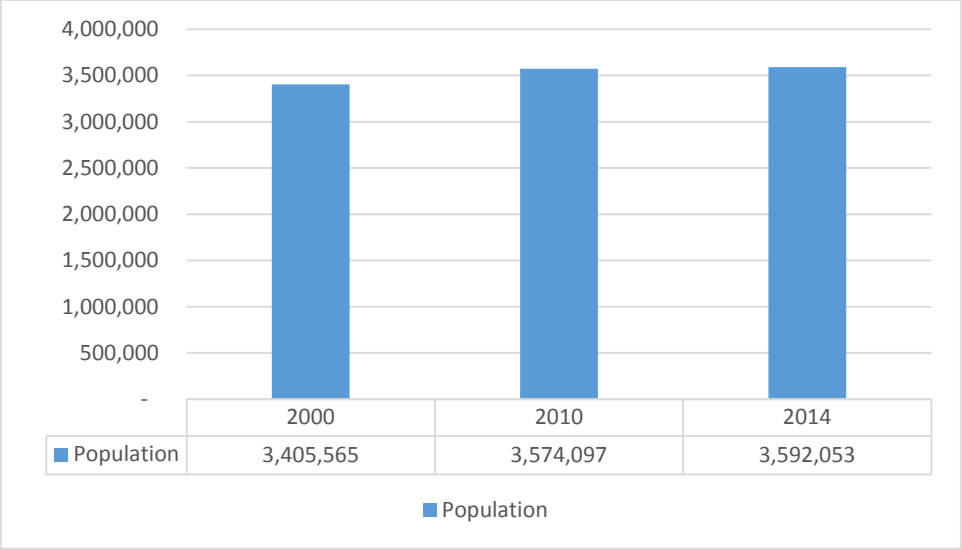


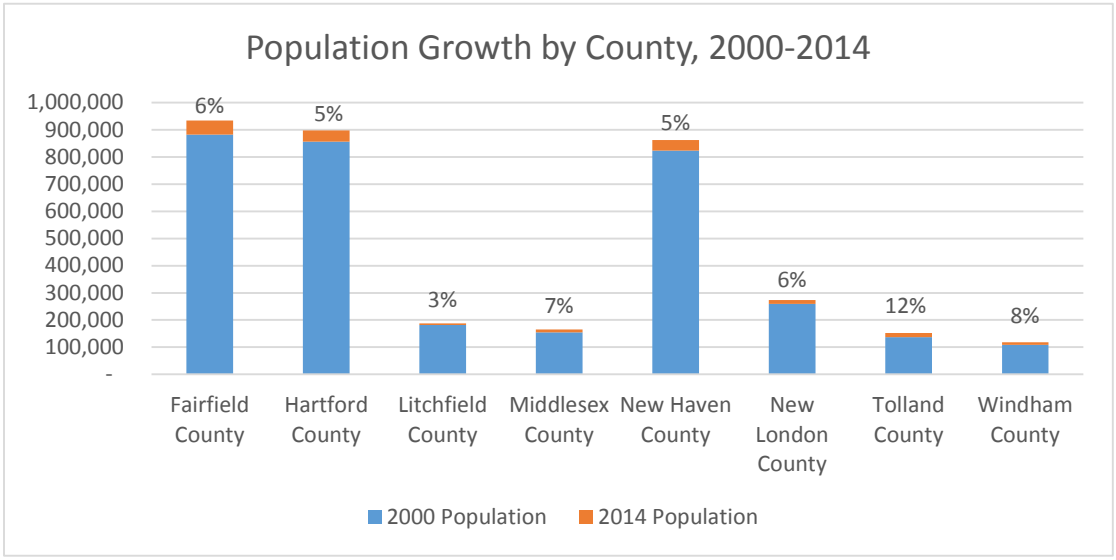
Figure 4: Connecticut Population by Year 2000-2014



Source: U.S. Census Bureau

Over the last fifteen years, the state's population has not changed significantly, adding roughly 187,000 residents since 2000, representing a five percent increase, from 3,405,000 residents to 3,592,000 residents as illustrated in Figure 4. Fairfield County saw the greatest absolute change in population, adding nearly 52,000 residents. Hartford and New Haven Counties each grew by approximately 40,000 residents. The remaining counties experienced increases in population between 5,400 (Litchfield County) to 16,000 residents (Tolland County). (See Figure 5)

Figure 5: Population Growth by County (2000-2014)



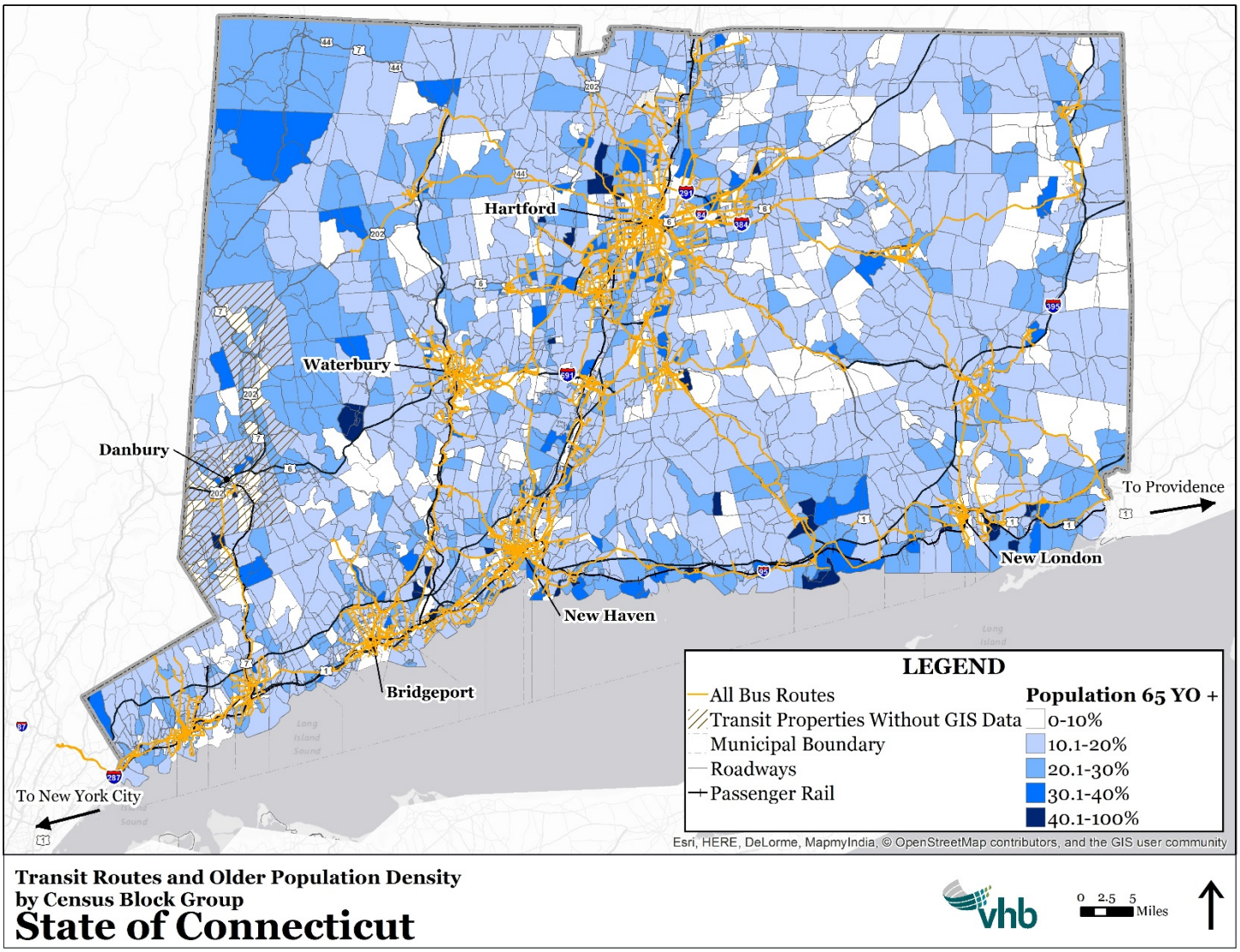
Source: U.S. Census Bureau

2.3 Older Adults

Older adults may be more reliant on public transportation due to medical conditions that make them unable to rely on automobiles for their main mode of transportation. Unlike other transit dependent users, older adults are located in various locations across the state, with large concentrations in rural/suburban areas outside of cities (including the suburbs west of Hartford, Litchfield County and Middlesex County). A total of 531,079 people in the state are over the age of 65. [4] (See Figure 6)

4 US Census, 2014 5-Year American Community Survey Data

Figure 6: Bus and Rail Networks Compared to Locations with Populations Above 65 Years Old

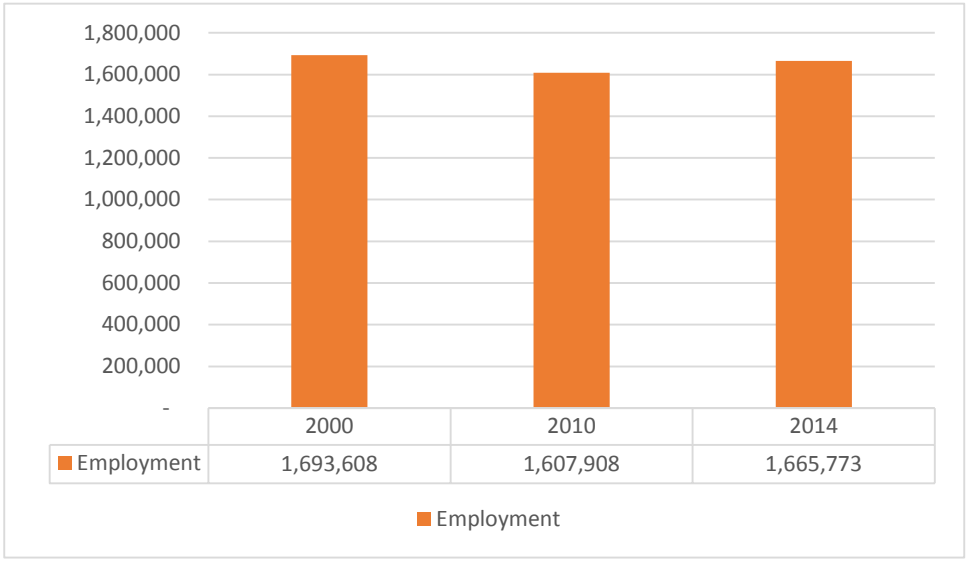


2.4 Employment Density

Employment data was collected at the zip code level from the ACS. This data were joined to existing zip code boundaries to illustrate the number of jobs per zip code. A high concentration of jobs in one location indicates that the area functions as an employment center and has high potential transit service demand. Large populations of workers are found in the major urban centers of the state, notably Stamford, Bristol, New Haven, Danbury, West Haven, Bridgeport, Milford, Middletown, Hartford, and Wallingford.

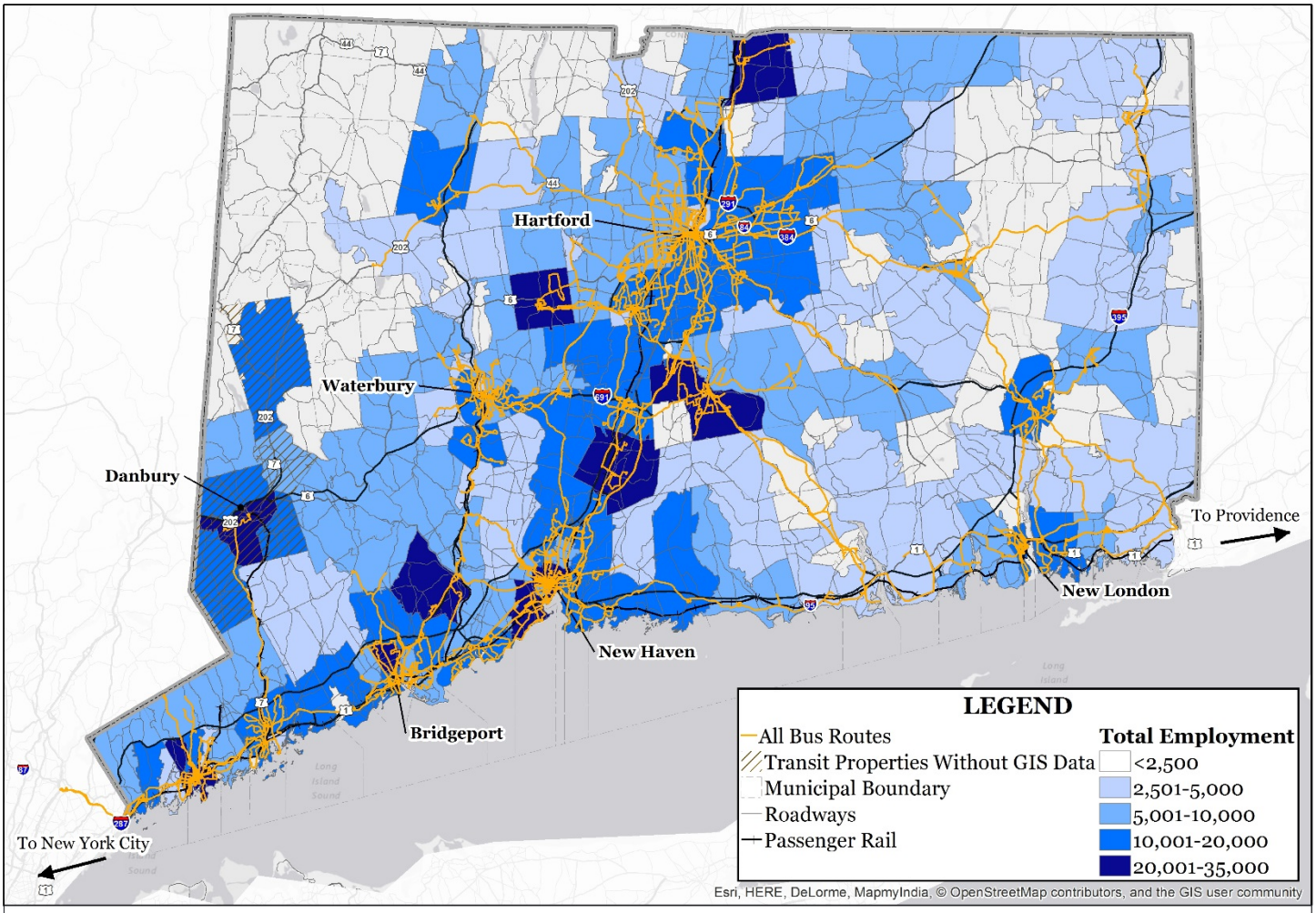
A review of historic employment data from the state's Department of Labor shows that Connecticut is still recovering the jobs it lost during the recession. Employment data from 2000 to 2014 shows that 2010 was the low point in terms of number of jobs with 1,608,000 jobs. However, more recent data from 2014 indicates that a trend towards adding jobs is occurring with nearly 58,000 jobs added between 2010 and 2014 (See Figure 7). A comparison of bus and rail networks to employment locations is shown in Figure 8.

Figure 7: Connecticut Employment 2000-2014



Source: Connecticut Department of Labor

Figure 8: Bus and Rail Networks Compared to Locations with Employment

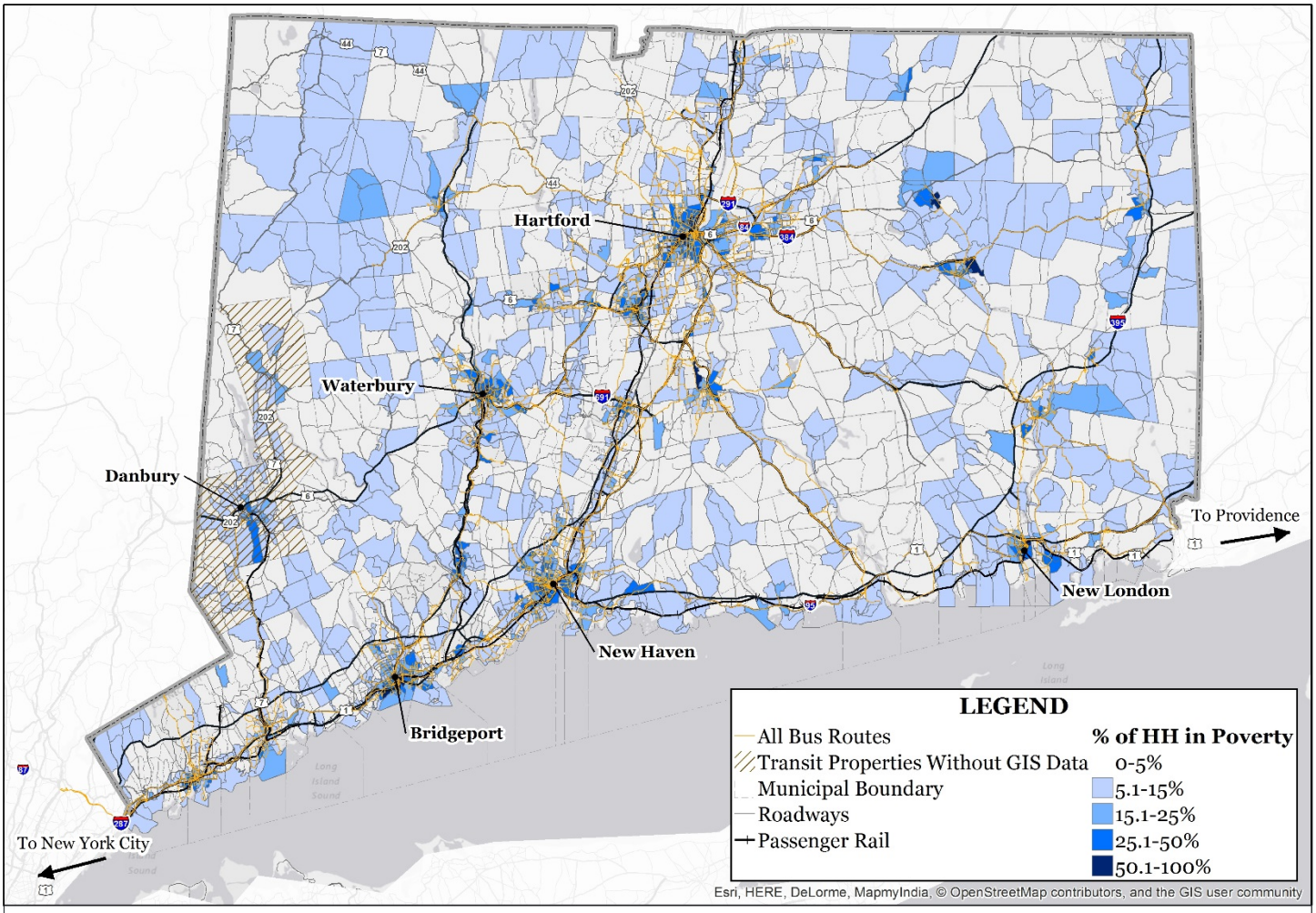


2.5 Households in Poverty

Persons living below the poverty line may have difficulty affording private transportation, such as a car, but still need to make daily trips for work and other purposes, which makes them good candidates for transit. Since many people falling in this category may not have transportation options other than public transportation, often they will choose to live near existing bus routes. Households in poverty were largely concentrated in the following urban areas: Hartford, Bridgeport, New Haven, New London, Waterbury, and New Britain. Middletown, Groton, and Willimantic also had significant areas of poverty. (See Figure 9) A total of 7.5 percent of all families in Connecticut fall below the poverty line.[5]

5 US Census, 2014 5-Year ACS Estimates

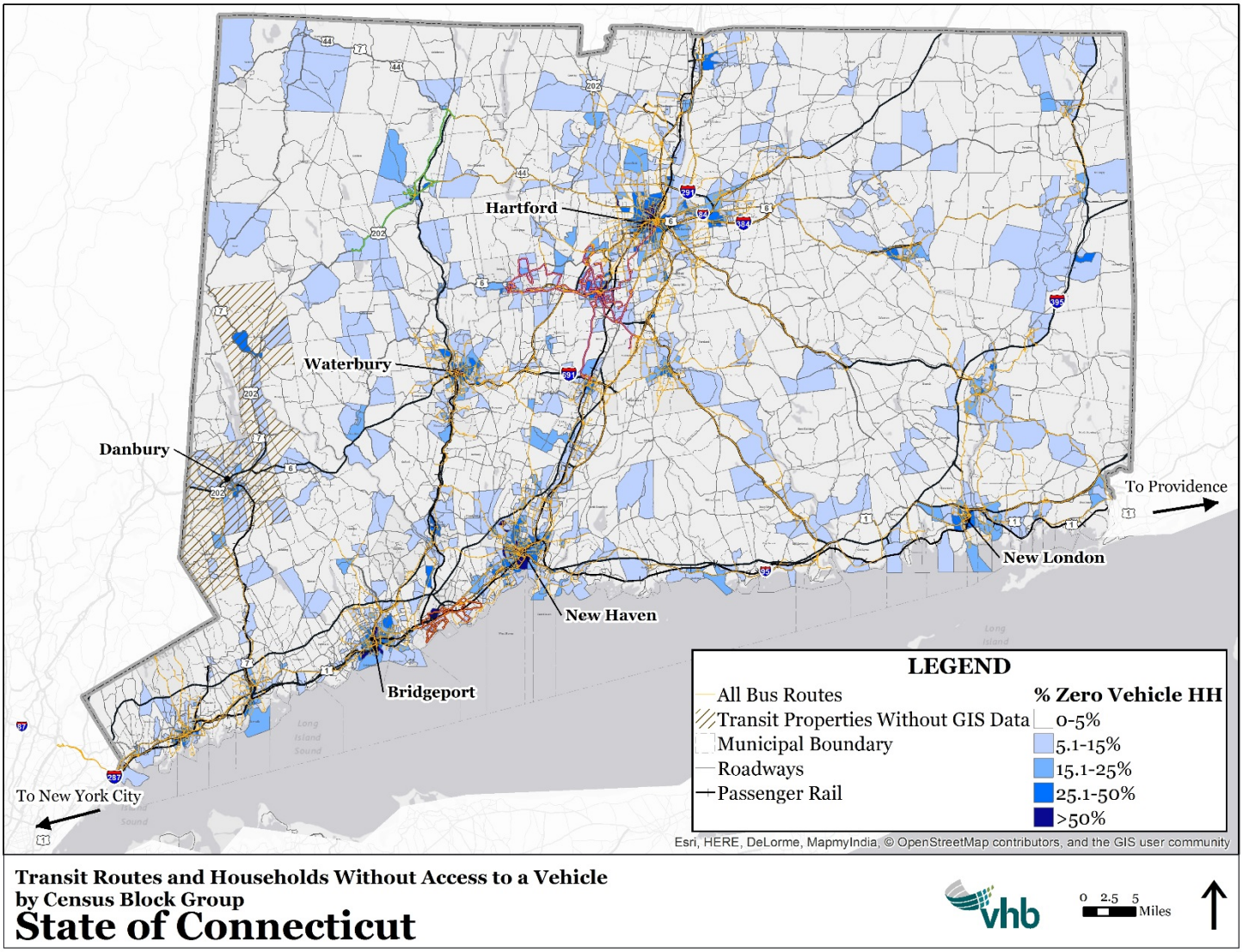
Figure 9: Bus and Rail Networks Compared to Locations of Households in Poverty



2.6 Households without Access to a Vehicle

A household without access to an automobile will almost certainly require its residents to use some form of alternative transportation—often transit—for travel. Residents without private vehicles will likely choose to live near transportation facilities that enable them to travel throughout the region, if they have a choice. Since this demographic characteristic is directly related to transportation resources—or lack thereof—it follows that the members of households without vehicles may travel only to areas served by existing transit, emphasizing the need for greater accessibility and coverage. (See Figure 10) A total of 123,437 households (9.1 percent) reported they owned no vehicle. These households were almost exclusively located in the urban centers of the state, including: Hartford, Bridgeport, New Haven, New Britain, and Waterbury.

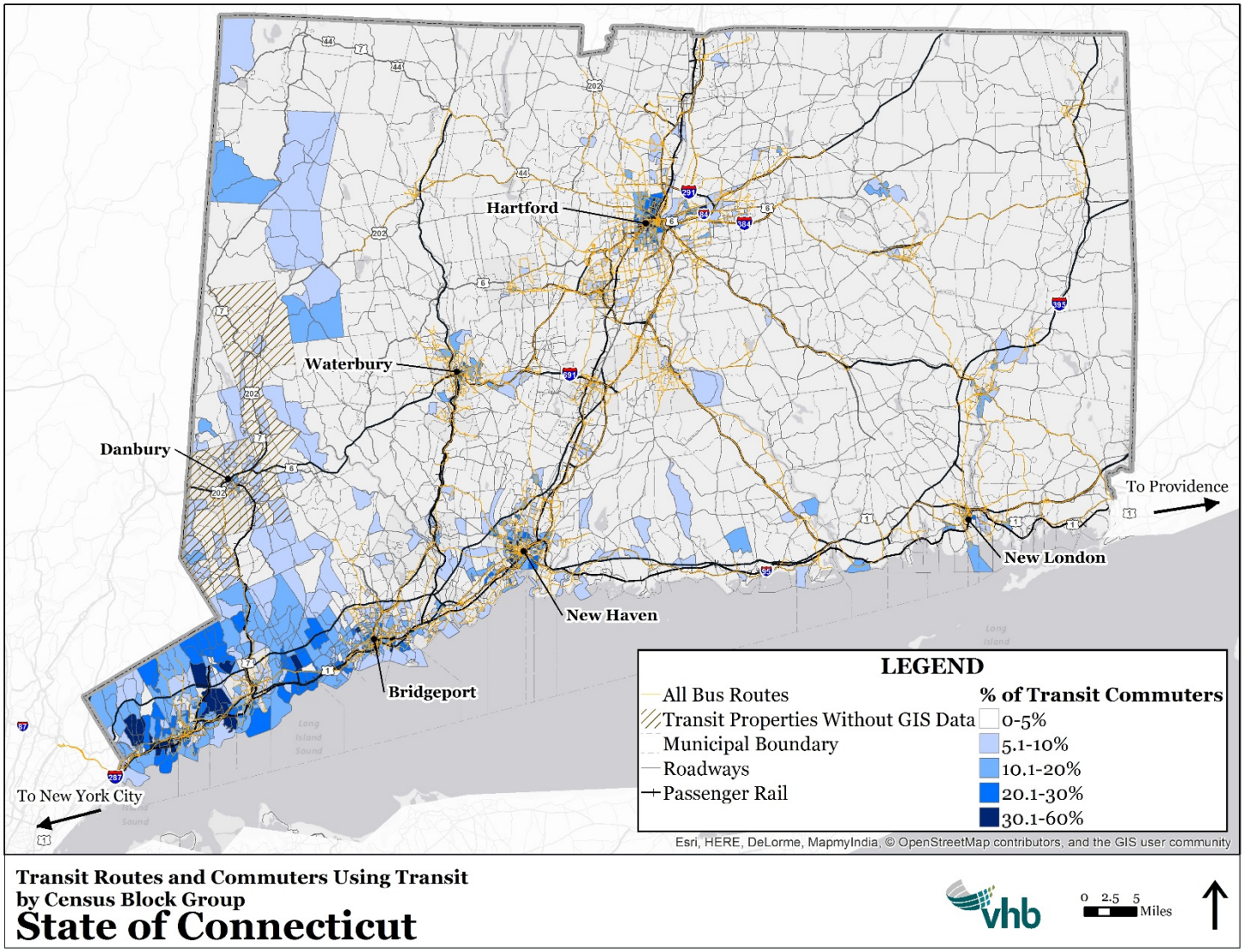
Figure 10: Bus and Rail Networks Compared to Locations of Zero Vehicle Households



2.7 Households with Commuters that Use Transit

Existing transit use for commuting purposes suggests that these individuals would consider transit for other types of travel such as shopping or recreation, if transit is considered a convenient alternative. According to census data, 1,734,798 workers commuted to work. The overwhelming majority of these workers use an automobile to travel to their place of work. However 81,585 respondents (4.7 percent) reported using some mode of transit to commute to work, and of those, 44,878 (2.6 percent) reported using bus service. These rates of public transportation use for commuting are in line with national averages. The location of bus and rail networks in relation to the locations of transit users is shown in Figure 11.

Figure 11: Bus and Rail Networks Compared to Locations of Transit Users



2.8 Existing Bus Coverage

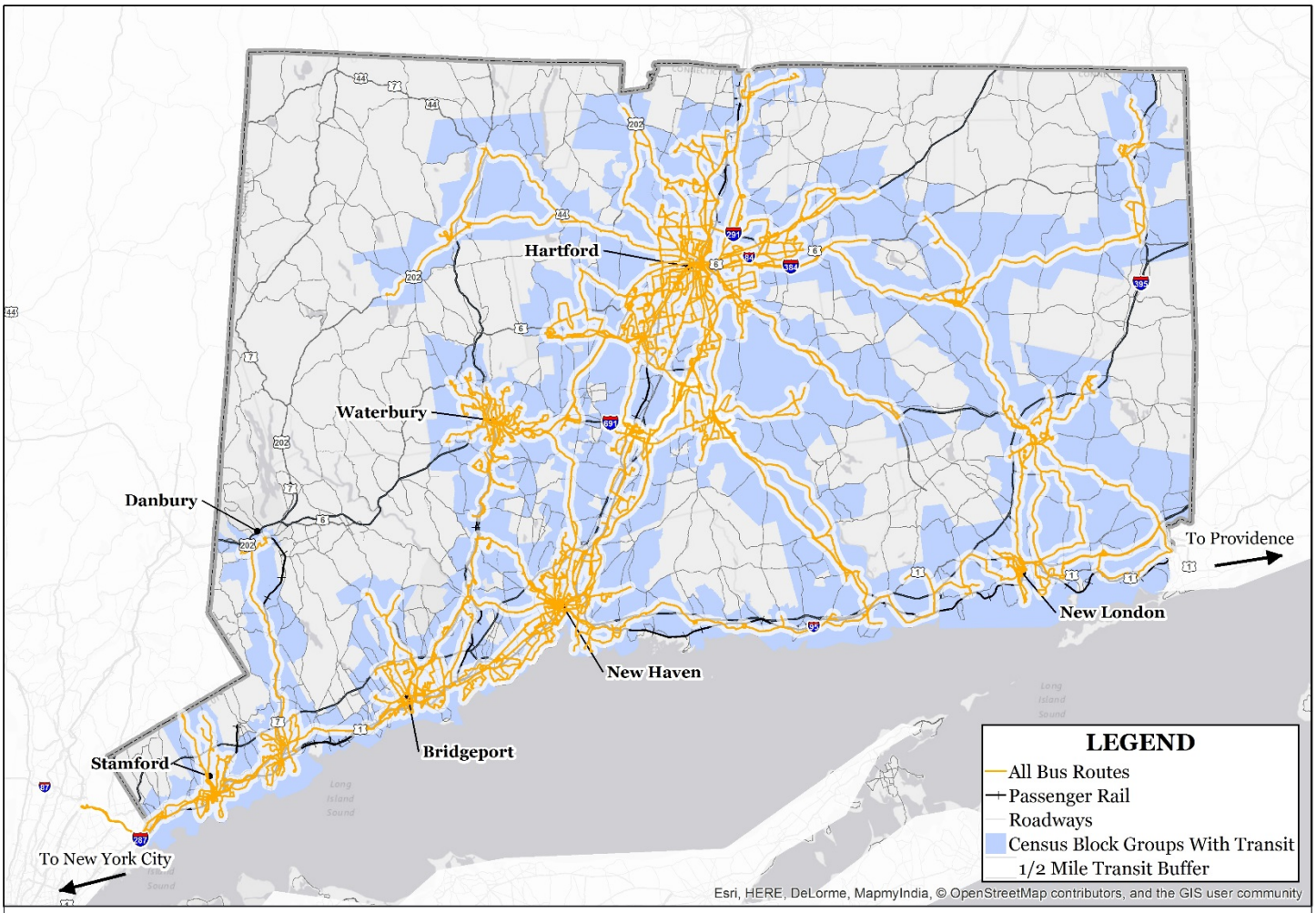
Consistent with the *Let's Go CT* goal of "increasing bus service availability in urbanized areas by 25 percent," an analysis of the population in the state within 1/2-mile from bus service was conducted. Using GIS, a 1/2-mile boundary was drawn around each bus route. Census block groups that fell within the 1/2-mile buffer of the route were assumed to have some bus service; if a block group was located outside of a bus route buffer, it was considered not to have bus service.[6] (See Figure 12)

This analysis found that 2,547 square miles of Connecticut are located within 1/2-mile of bus service (based on census block groups). This represents 50 percent of the state area, although it is largely concentrated in urban areas of the state. The areas with bus service within 1/2-mile of bus include 2,813,909 people (78.3 percent of total population) spread across 1,073,607 households (79.2 percent of the total).

Existing bus routes are located within 1/2-mile and serve 90.4 percent (126,575 households) of the populations at or below the state poverty line and serve 93.1 percent (114,974) of the zero-car households.

6 Due to the lack of information on population distribution in a block group, if a block group was only partially located within the 1/ mile buffer, all of the population of that block group was assumed to be fully served.

Figure 12: Census Blocks Served by Transit



2.9 Future Population Growth

Since the last Census in 2010, the State of Connecticut has seen its total population grow by five percent. In the next 20 years, population is projected to grow by an additional five percent (see Table 9). The majority of this population growth in the ten year period between 2000 and 2010 occurred in Middlesex, New London, Tolland and Windham County, which are largely rural and suburban areas of the state.

All counties are projected to grow by 2025 with rates ranging from two percent (Litchfield) to nine percent (Windham). While Tolland has the highest percentage of growth from 2000-2010, that growth only represented 16,000 residents versus Hartford County's growth of more than 36,000 residents. Counties with increased population in urban areas indicate a need to continue to invest in the current transit system, while growth in rural counties may indicate the need for new transit services.

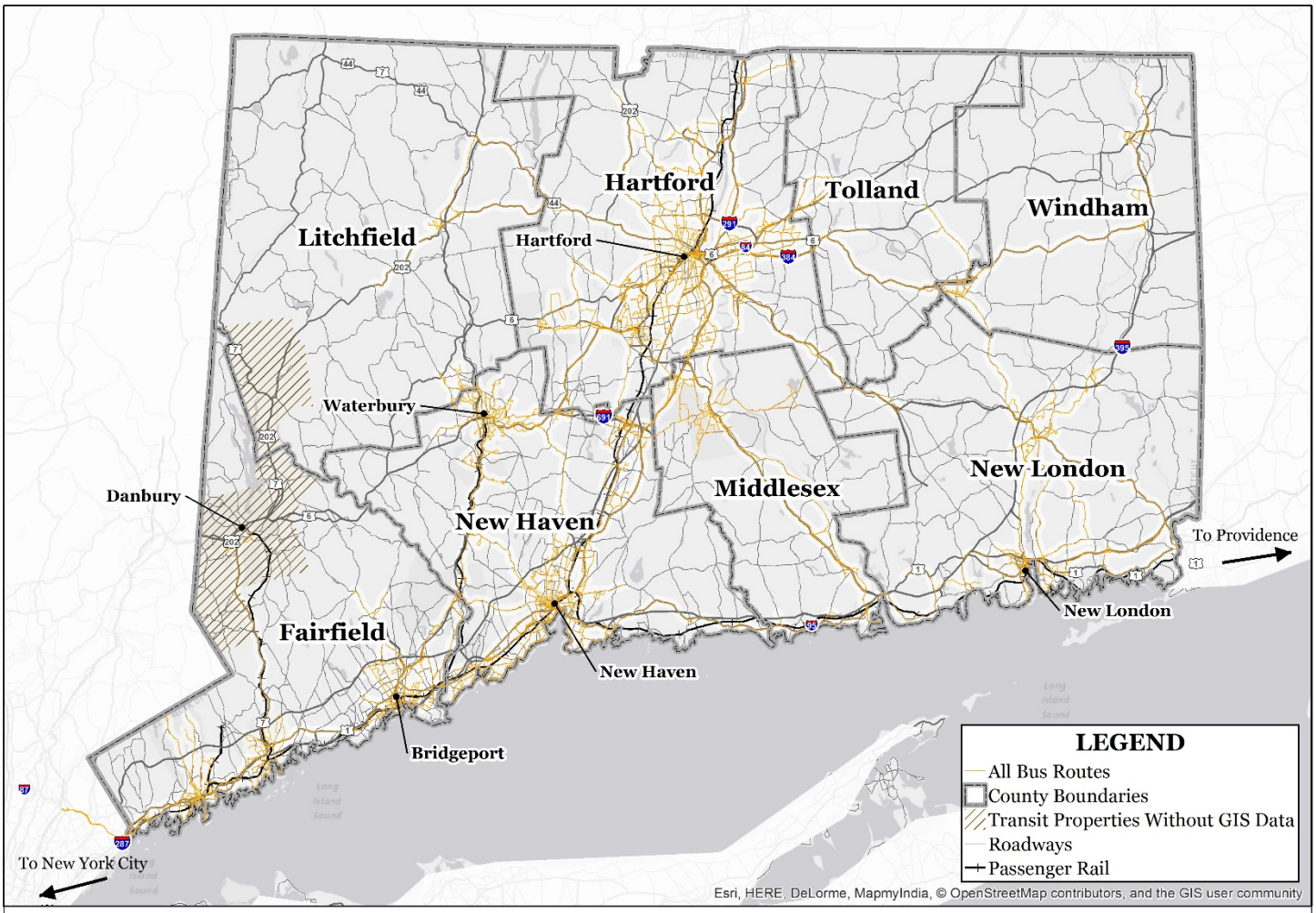
Figure 13 shows the areas currently covered by bus routes by county.

Table 9: Population Trends and Projected Growth in Connecticut

County	2000 Actual	2010 Actual	Historical Growth (2000 - 2010)		2015 Projected	2020 Projected	2025 Projected	Future Growth (2010 - 2025)		Future Growth (2015 - 2025)	
			Actual	%				Actual	%	Actual	%
Fairfield	882,567	916,829	34,262	4%	932,377	944,692	954,479	37,650	4%	22,102	2%
Hartford	857,183	894,014	36,831	4%	910,924	925,492	936,810	42,796	5%	25,886	3%
Litchfield	182,193	189,927	7,734	4%	192,188	193,116	193,112	3,185	2%	924	0.5%
Middlesex	155,071	165,676	10,605	7%	168,833	170,518	170,976	5,300	3%	2,143	1%
New Haven	824,008	862,477	38,469	5%	881,374	898,514	912,056	49,579	6%	30,682	3%
New London	259,088	274,055	14,967	6%	279,755	283,665	285,773	11,718	4%	6,018	2%
Tolland	136,364	152,691	16,327	12%	155,924	158,606	160,759	8,068	5%	4,835	3%
Windham	109,091	118,428	9,337	9%	122,718	126,432	129,527	11,099	9%	6,809	6%
Total	**3,405,565**	**3,574,097**	**168,532**	**5%**	**3,644,093**	**3,701,035**	**3,743,492**	**169,395**	**5%**	**99,399**	**3%**

Sources: US Census, 2000 and 2010 Decennial Census, UCONN, 2015-2025 Population Projections

Figure 13: Transit Routes by County



2.10 Future Employment Growth

The State of Connecticut's Department of Labor Office of Research creates ten year industry employment forecasts. The employment forecasts consider historical trends and other forecasts to help project Connecticut's employment changes. The most recent employment projections range between 2012 and 2022.

Connecticut municipalities are grouped by Workforce Investment Areas (WIA) covering geographical divisions. Each Workforce Investment Areas and the municipalities included in them may be found on the Connecticut Department of Labor website (https://www.ctdol.state.ct.us/wia/TownListing.htm).

Overall, for all occupations, the Department of Labor projects a 9.4 percent increase by 2022. Nearly all of the Workforce Investment Areas are projected to grow between nine and ten percent. The Workforce Investment Area will the lowest growth in all occupations is the Eastern Workforce Investment Area with a nearly seven percent increase. (See Table 10). Employment growth will result in increased travel demand, and proportionally demand for transit service.

Table 10: Projected Employment Levels by Workforce Investment Area

All Occupations	2012 (Estimated)	2022 (Projected)	Percent Change
Eastern WIA	199,714	213,131	6.7%
North Central WIA	582,508	640,174	9.9%
Northwest WIA	237,065	261,012	10.1%
South Central WIA	365,401	400,578	9.6%
Southwest WIA	391,112	428,197	9.5%
State Total	**1,775,800**	**1,943,092**	**9.4%**

Source: Connecticut Department of Labor and VHB

3

Overview of Local Fixed Route Bus Service in Connecticut

3.1 Data Source

Ridership, cost and fleet data for Connecticut transit properties is based on data collected by CTDOT as reported by the transit properties.

3.2 Ridership Trends

Annual ridership information from 2007 to 2014 is shown in Table 11 and illustrated in Figures 14 and 15. This data is based on total system annual boardings. Full year ridership data for CTfastrak is not yet available since the service started on March 28, 2015.

All CT*transit* Divisions have experienced a growth in ridership except for CT*transit* Meriden and CT*transit* Wallingford. Between 2007 and 2014, annual boardings on the CT*transit* Waterbury Division grew by over 68 percent, CT*transit* Bristol Division experienced growth by over 48 percent, and C*TTransit* New Britain increased by 21.5 percent. The CT*transit* Hartford, New Haven and Stamford Divisions each experienced increases by 8.2 percent, 14.3 percent and 16.7 percent respectively. CT*transit* Meriden experienced a 22 percent decline in annual boardings and CT*transit* Wallingford fell by over four percent.

With one exception, annual boardings on non-CT*transit* systems have increased over time. The exception is the Northwestern Connecticut Transit District, where annual boardings in that declined by 24 percent.

Between 2007 and 2014, boardings for the following non-CT*transit* service providers increased as follows:

- Estuary Transit District experienced an 127 percent increase in annual boardings
- Northeastern Connecticut Transit District saw a 93 percent increase
- Windham Region Transit District's annual boardings grew by over 81 percent
- Middletown Area Transit annual boardings grew by nearly 47 percent
- Greater Bridgeport Authority increased by 40 percent
- Norwalk Transit District had a nearly 25 percent increase
- Milford Transit District's annual boardings rose by 22 percent
- Southeast Area Transit rose by 18 percent
- Housatonic Area Regional Transit experienced an almost 17 percent increase

Table 11: Annual Boarding Trends by Transit Provider

Transit Provider	2007	2008	2009	2010	2011	2012	2013	2014	% Change 2007-2014
CT*transit* - Hartford	13,911,614	14,299,660	13,937,559	13,740,479	14,438,683	15,122,918	14,863,495	15,054,976	8.2%
CT*transit* - New Haven	8,338,138	8,598,344	8,933,612	8,595,357	8,749,911	9,453,992	9,562,320	9,526,686	14.3%
CT*transit* - Stamford	3,080,685	3,285,089	3,341,841	3,227,449	3,167,948	3,422,864	3,630,949	3,595,554	16.7%
CT*transit* - Waterbury	1,267,836	1,391,994	1,411,312	1,327,923	1,386,742	1,876,481	2,044,917	2,138,580	68.7%
CT*transit* - Meriden	153,099	164,452	166,845	166,993	165,869	177,519	144,723	118,817	-22.4%
CT*transit* - Wallingford	15,182	15,428	13,791	13,407	14,033	14,261	14,388	14,521	-4.4%
CTtransit - New Britain	786,712	774,797	735,260	703,180	826,526	895,525	908,120	956,226	21.5%
CT*transit* - Bristol	43,898	39,280	49,038	44,489	49,749	66,014	5,086	65,111	48.3%
Greater Bridgeport Transit	4,427,697	4,064,480	4,790,572	4,726,733	4,946,257	5,259,599	5,298,806	6,197,806	40.0%
Norwalk Transit District	1,289,297	1,301,733	1,316,942	1,283,028	1,324,885	1,346,452	1,308,013	1,610,191	24.9%
South East Area Transit	833,180	910,452	895,205	886,695	891,890	1,027,633	894,591	986,877	18.4%
Housatonic Area Regional Transit	705,174	738,566	772,912	700,494	728,077	761,276	685,642	823,343	16.8%
Middletown Area Transit	268,834	331,310	339,993	311,767	301,448	295,570	378,072	394,744	46.8%
Windham Region Transit District	138,948	165,507	191,593	184,041	217,311	233,294	237,645	252,343	81.6%
Milford Transit District	125,473	129,034	128,617	145,846	156,670	155,404	140,078	153,268	22.2%
Northwestern Connecticut Transit District	113,794	114,572	106,167	90,081	90,557	87,410	76,555	86,098	-24.3%
Estuary Transit District	35,503	20,270	27,448	41,931	51,340	67,756	73,300	80,721	127.4%
Northeastern Connecticut Transit District	25,102	30,044	29,869	32,563	35,721	44,021	44,298	48,482	93.1%

Source: CTDOT
CT*fastrak* not included.

Figure 14: CT*transit* Annual Passenger Trips - 2007 to 2014

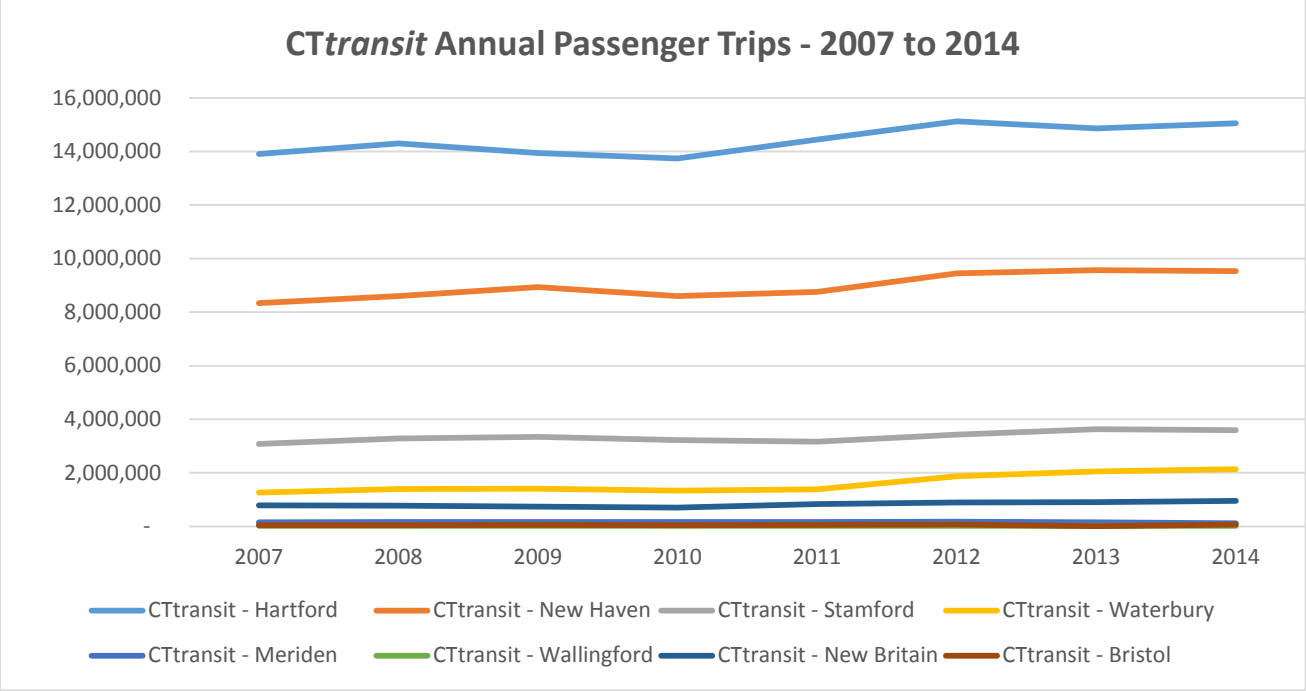
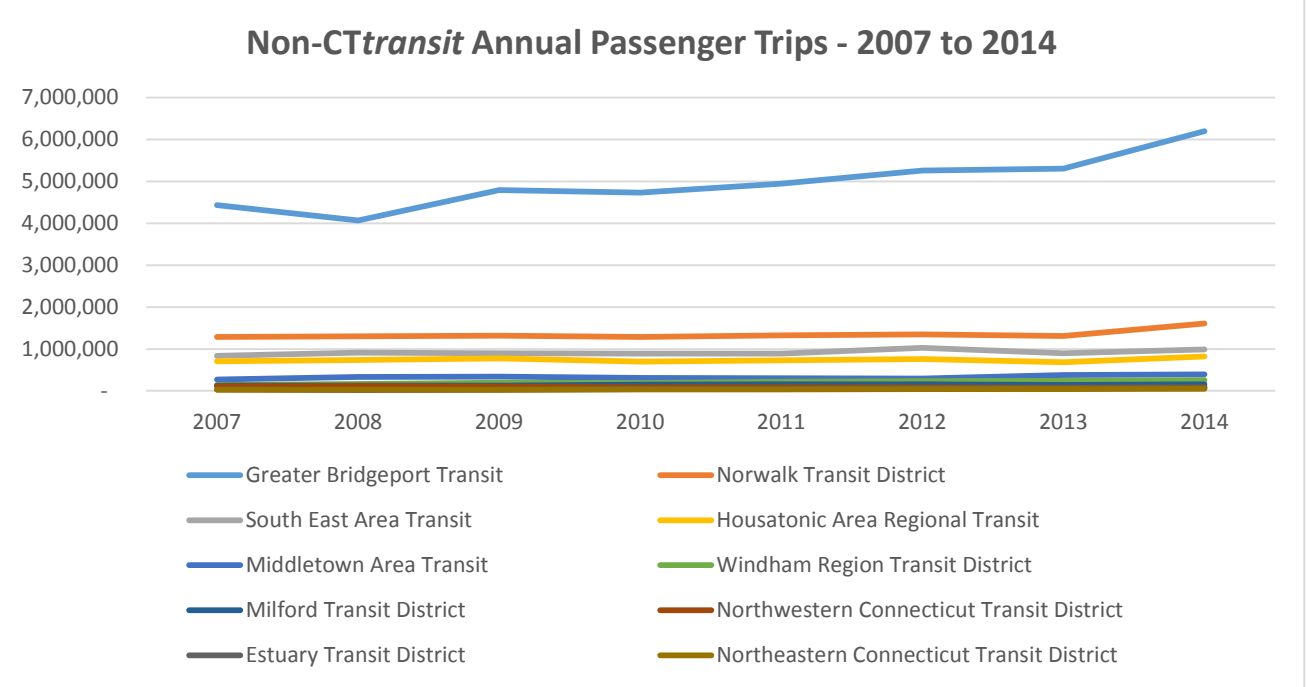


Figure 15: Non-CT*transit* Annual Passenger Trips - 2007 to 2014



3.3 Transit Properties Profiles

This section presents specific information on the fixed route transit properties in the state, including information about the service coverage area, number of routes, span of service, headways and fare structure, operating cost and ridership.

Transit properties have been grouped into the following categories based size: urban bus systems with over 5,000,000 annual passenger trips, urban bus systems with between 2,000,000 and 5,000,000 annual passenger trips, urban bus systems with between 750,000 and 2,000,000 annual passenger trips, urban bus systems with less than 750,000 annual passenger trips, and rural bus systems.

- **Urban bus systems with annual passenger trips over 5,000,000 (3 Properties)**. These major bus systems cover three of the state's largest cities and include CT*transit* – Hartford (15.0 million annual passenger trips), CT*transit* – New Haven (9.5 million annual passenger trips) and Greater Bridgeport Transit (6.2 million annual passenger trips).

- **Urban bus systems with annual passenger trips between 2,000,000 and 5,000,000 (2 Properties).** There are two large bus systems carrying significant numbers of passenger trips annually; CT*transit* – Stamford (3.6 million annual passenger trips) and CT*transit* – Waterbury (2.1 million annual passenger trips). These systems serve major cities in the state.

- **Urban bus systems with annual passenger trips from 750,000 to 2,000,000 (4 Properties).** Midsize urban bus systems include: Norwalk Transit District (1.6 million annual passenger trips), Southeast Area Transit District (986,000 annual passenger trips), CT*transit* – New Britain (1.0 million annual passenger trips), and Housatonic Area Regional Transit (823,000 annual passenger trips). These properties cover the remaining major cities in Connecticut, as well as some of the denser suburban areas.

- **Urban bus systems with annual passenger trips less than 750,000 (6 Properties).** Smaller urban bus systems include: Middletown Transit District (395,000 annual passenger trips), Windham Region Transit District (252,000 annual passenger trips), Milford Transit District (153,000 annual passenger trips), CT*transit* – Meriden (119,000 annual passenger trips), CT*transit* – Bristol (65,000 annual passenger trips), and CT*transit* – Wallingford (14,500 annual passenger trips).

- **Rural bus systems (3 Properties).** Rural bus systems include: Northwestern Connecticut Transit District (86,000 annual passenger trips), Estuary Transit District (81,000 annual passenger trips), and Northeastern Connecticut Transit District (48,000 annual passenger trips).

3.3.1 CT*transit* Divisions

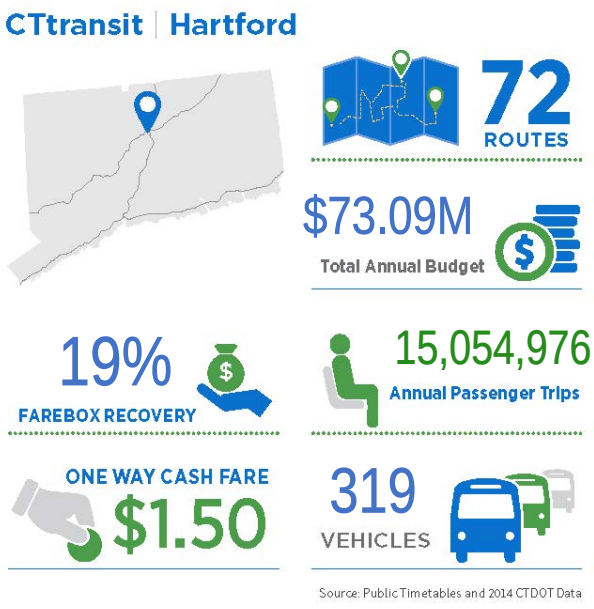
The CT*transit* is organized into the following divisions: Hartford, New Haven, Stamford, Waterbury / Meriden / Wallingford, New Britain, and Bristol. CT*fastrak* is included in this section as it is marketed similarly to the CT*transit* service, and it took over routes from CT*transit* systems.

3.3.2 Urban Bus Systems with Over 5,000,000 Annual Passenger Trips

3.3.2.1 CT*transit* – Hartford Division

The CT*transit* Hartford Division (CTTH) services 26 towns in Connecticut's Capital Region in Hartford County, Connecticut. This region is approximately 664 square miles in size with a total population of 851,535.

CTTH is owned by CTDOT, operated by HNS, Collins Bus Service, Peter Pan/Arrow, DATTCO, and Kelley Transit; and is managed by First Transit.



CTTH operates 47 fixed local routes (see Figure 16) and 24 express routes (see Figure 17) with connections to CT*transit* – New Britain-Bristol, CT*transit* Waterbury via routes 925 and 928, CT*fastrak*, and Middletown Area Transit. CTTH also operates a free circulator bus in downtown Hartford known as the "dash" bus. Bus service generally spans from 6:00 AM to 1:00 AM Monday through Friday, with most routes operating on weekends as well, Headways vary greatly by route and type of service and can range anywhere between every 10 minutes to every 90 minutes.

Local bus route fares are the same for all CT*transit* buses with regular cash fares of $1.50, Children (Age 4 & under, maximum of three with each adult) ride free, reduced fare for children between 5-18 years of age of $1.20, and free transfers for unlimited

rides on local buses going in any direction within two hours of the time of fare payment. CT*transit* also provides reduced fare for seniors and the disabled, 10-ride tickets packages, all-day passes, two-hour passes, 3-day passes, 5-day passes, 7-day passes, and monthly passes which are valid for unlimited rides during the specified time period.

The express bus routes have a zone fare structure (ranging from $2.70 to $5.15 per trip) with free transfers from an express to a local bus and an upcharge to the express fare on a transfer from a local to an express bus. Children (Age 4 & under, maximum of three with each adult) ride free and seniors and the disabled are charged a reduced fare. Passes in 10-trip and 31-day increments are available and priced within each zone.

CTTH has a fleet of 319 buses available for service (272 buses for local service and 67 buses for express service. In 2014, CTTH operated 9,646,988 annual revenue miles of service and 658,767 annual revenue hours of service. FY2014 annual fare revenues totaled $14,058,873, based on 15,054,976 annual passenger trips.[7]

[7] All data is from public schedules and timetables or provided by CTDOT unless otherwise noted.

Figure 16: CT*transit* Hartford Local Routes

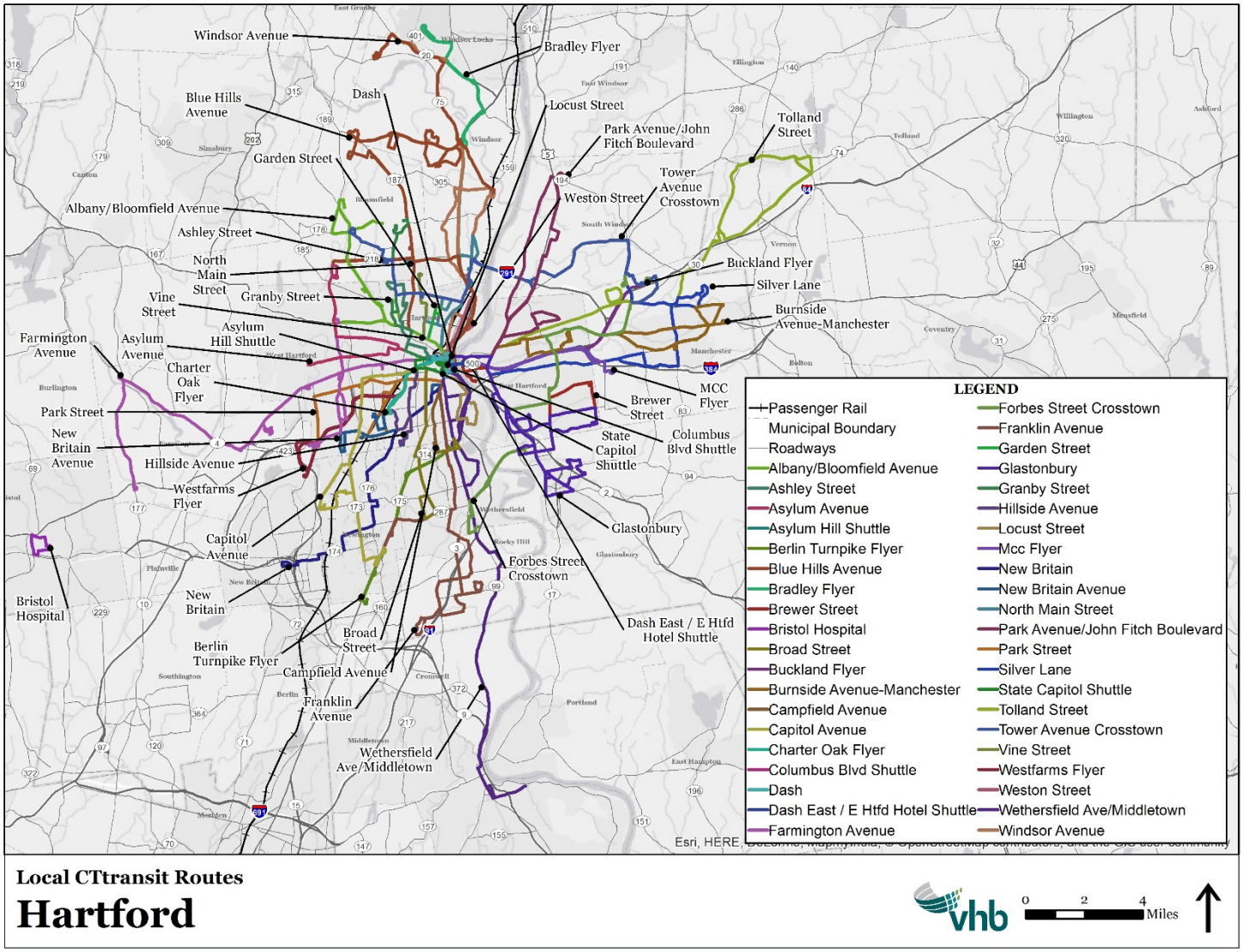
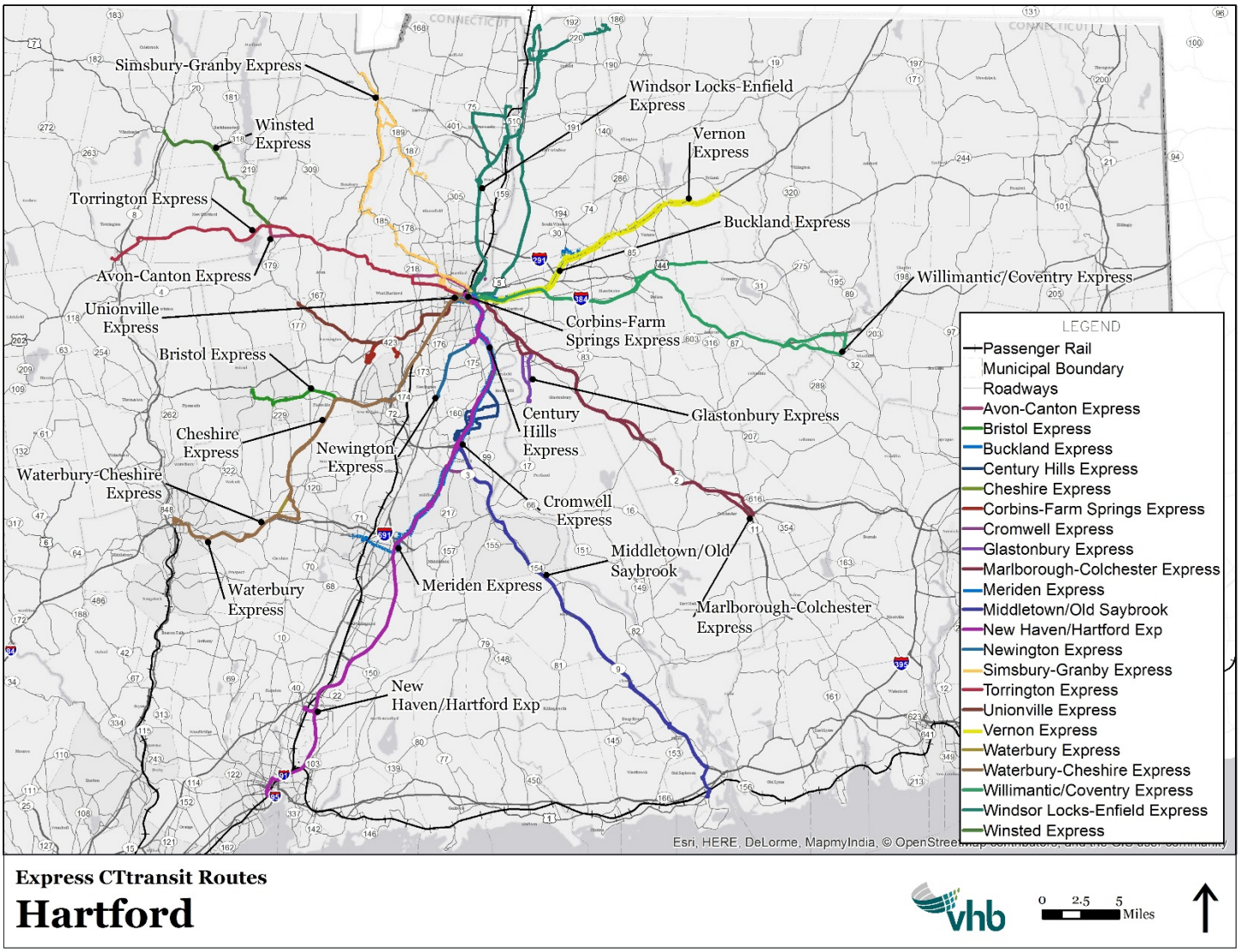


Figure 17: CT*transit* Hartford Express Routes



In 2014 CTTH's annual operating expenses totaled $73,094,826 for operations. CTTH received operational funding of $52,781,794 from the State of Connecticut (including CTTH's share of federal formula funds), and no operational funds from the local governments. Fare revenue covers 19.2 percent of operating expenses.

3.3.2.2 CT*fastrak*

CT*fastrak* is Connecticut's first bus rapid transit (BRT) system. Launching in March 2015, the regional system offers service to and from Waterbury, Cheshire, Southington, Bristol, Plainville, New Britain, Newington, West Hartford, Hartford and Manchester. It also connects to the New Haven-Waterbury branch rail in Waterbury, as well as Amtrak and the Bradley Flyer airport service. Since CT*fastrak* is a new service, information similar to that listed for other transit properties was not available from the National Transit Database. CT*fastra*k is owned by CTDOT, managed by First Transit and operated by HNS Management and DATTCO.

CT*fastrak* provides service along 13 routes, which consist of eight local routes and five express routes. Buses operate on a 9.4 mile dedicated busway with ten stations. Service begins as early as 4:05 AM, with the last bus ending service around 1:30 AM the following morning. Supplemental late night or off-peak service is also provided as needed, for special events. (See Figure 18).

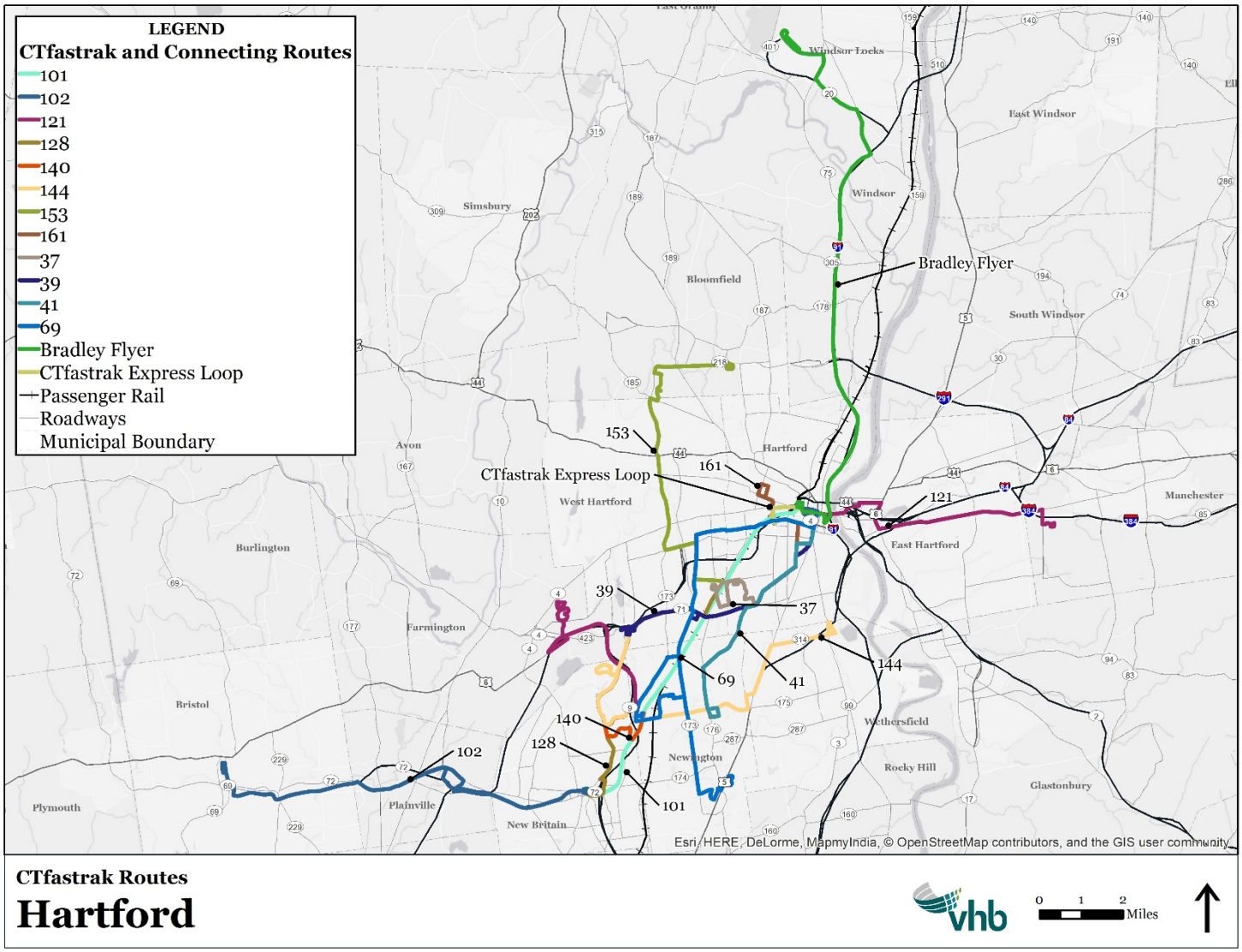
CT*fastrak* operates with 48 dedicated, low-floor, hybrid diesel-electric coaches ranging in size from 60 foot articulated buses, to 45 foot coaches, to 40 and 30 foot transit buses.

CT*fastrak* uses a proof-of-payment system, where passengers purchase tickets at CT*fastrak* stations prior to boarding. Periodic checks by fare inspectors ensure the correct fare is paid. Fares on local routes are the same as CT*transit* fare rates, which is currently $1.50 for a one-way ride (seniors and disabled passengers pay reduced rates).

Express route fares are based on a zone scheme. Travel within the Zone 2 area requires $2.70 fare. The fare increases to $3.50 for travel within Zone 3 and to $4.30 for travel within Zone 4. CT*transit* passes can also be used on CT*fastrak* routes and CT*fastrak* tickets can be used on CT*transit*.

CTDOT has been collecting monthly ridership information for CT*fastrak* since May 2015. A total of 1,917,315 passenger trips were made on CT*fastrak* from May through December 2015. The average number of passenger trips each month during this period (on both CT*fastrak* local and express routes) was 239,664.

Figure 18: CT*fastrak* System



3.3.2.3 CT*transit* New Haven

CT*transit* New Haven (CTTNH) is a division of CT*transit* that serves New Haven and its surrounding towns, including North Haven, East Haven, West Haven, Orange, Milford, Hamden, and Woodbridge. The service area is 456 square miles in size and has a population of 531,314.

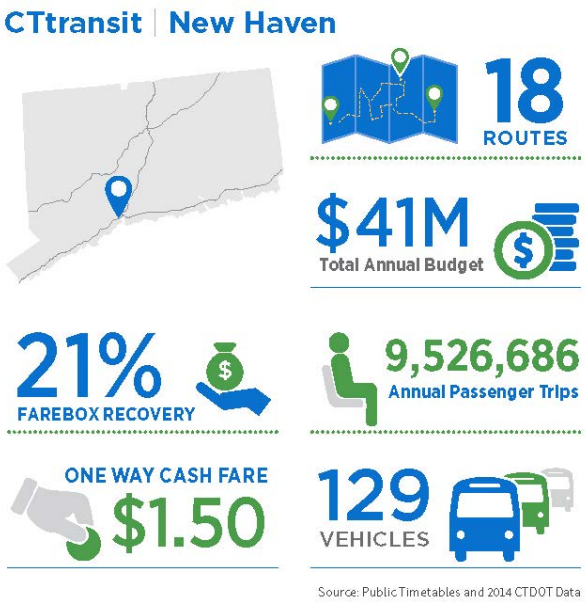
CTTNH is owned by CTDOT, operated by HNS Management) and managed by First Transit.

CTTNH operates 18 local routes, including two commuter shuttles. (See Figure 19) It also offers connections with other bus service in Meriden, Waterbury, Wallingford, Milford, and lower Naugatuck Valley (including CT*transit,* 9 Town Transit, and Milford Transit District). The majority of routes operate seven days a week, with Weekday and Saturday service spanning 5:00 AM until 1:00 AM the next day and Sunday service spanning 6:00 AM to 11:59 PM or earlier. Headways range between 15 and 90 minutes.

Local service fares are the same for all CT*transit* buses with regular cash fares of $1.50, Children (Age 4 & under, maximum of three with each adult) ride free, reduced fare for children between 5-18 of $1.20, and free transfers for unlimited rides on local buses going in any direction within two hours of the time of fare payment. CT*transit* also provides reduced fare for seniors and the disabled, 10-ride tickets, all-day passes, two-hour passes, 3-day passes, 5-day passes, 7-day passes, and 31-day passes which are valid for unlimited rides during the specified time period.

The Route 950 express service uses a zone fare structure with free transfers from an express to a local bus and an upcharge to the express fare on a transfer from a local to an express bus. Children (Age 4 & under, maximum of three with each adult) ride free and seniors and the disabled are charged a reduced fare. 10-trip and monthly passes are available and priced within each zone.

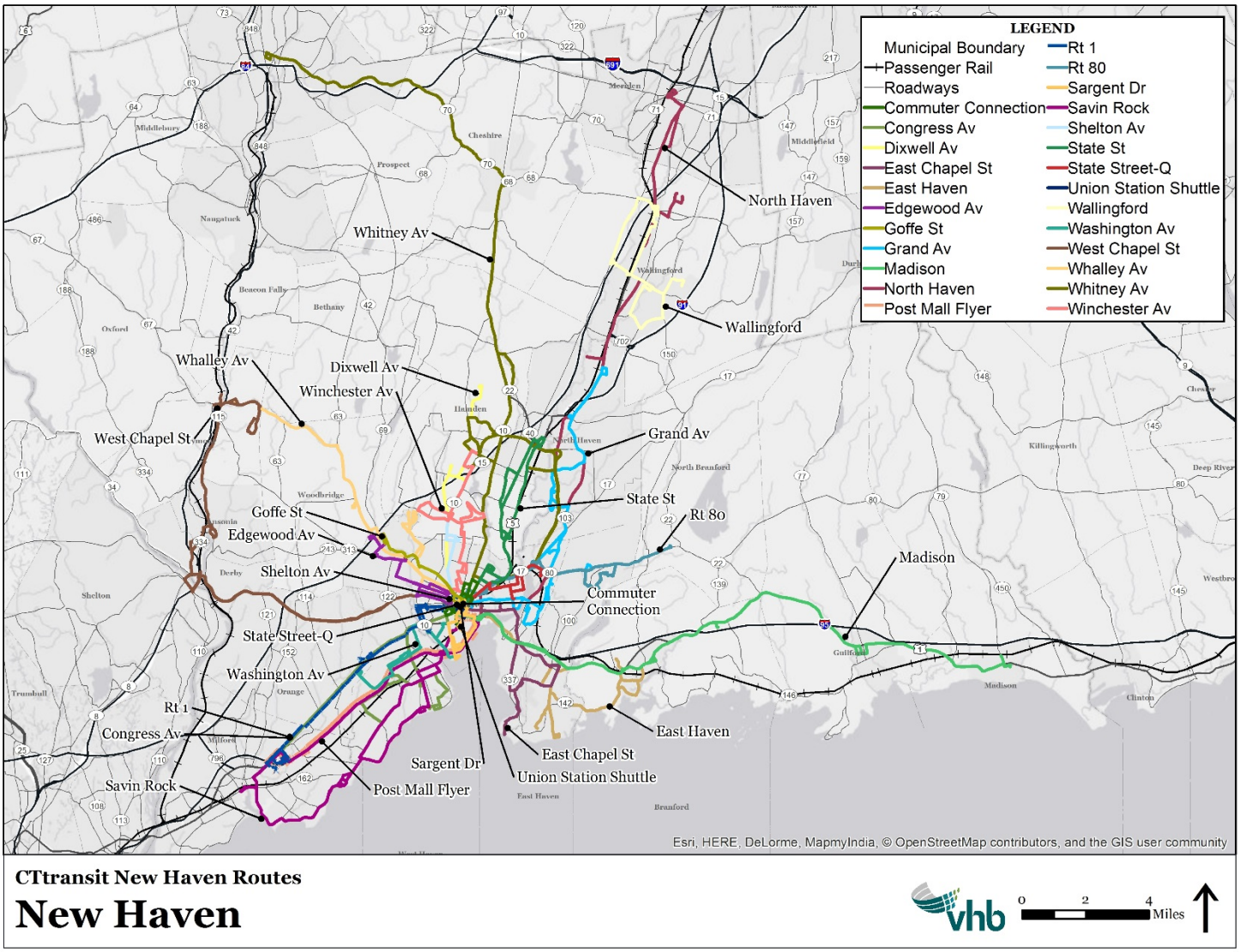
In 2014, CTTNH owned a fleet of 129 vehicles. This fleet operated 3,971,086 vehicle revenue miles and 348,183 vehicle revenue hours. In FY2014, CTTNH earned $8,510,000 in fare revenue, based 9,526,686 annual passenger trips.[8]



Annual Expenses in the FY2014 for CTTNH totaled $41,194,070 for operations. CTTNH received operational funding of $30,579,939 from the State of Connecticut (including CTTNH's share of federal formula funds). Fare revenue covers 20.7 percent of operating expenses.

8 All data is from public schedules and timetables or provided by CTDOT unless otherwise noted.

Figure 19: CT*transit* New Haven Routes



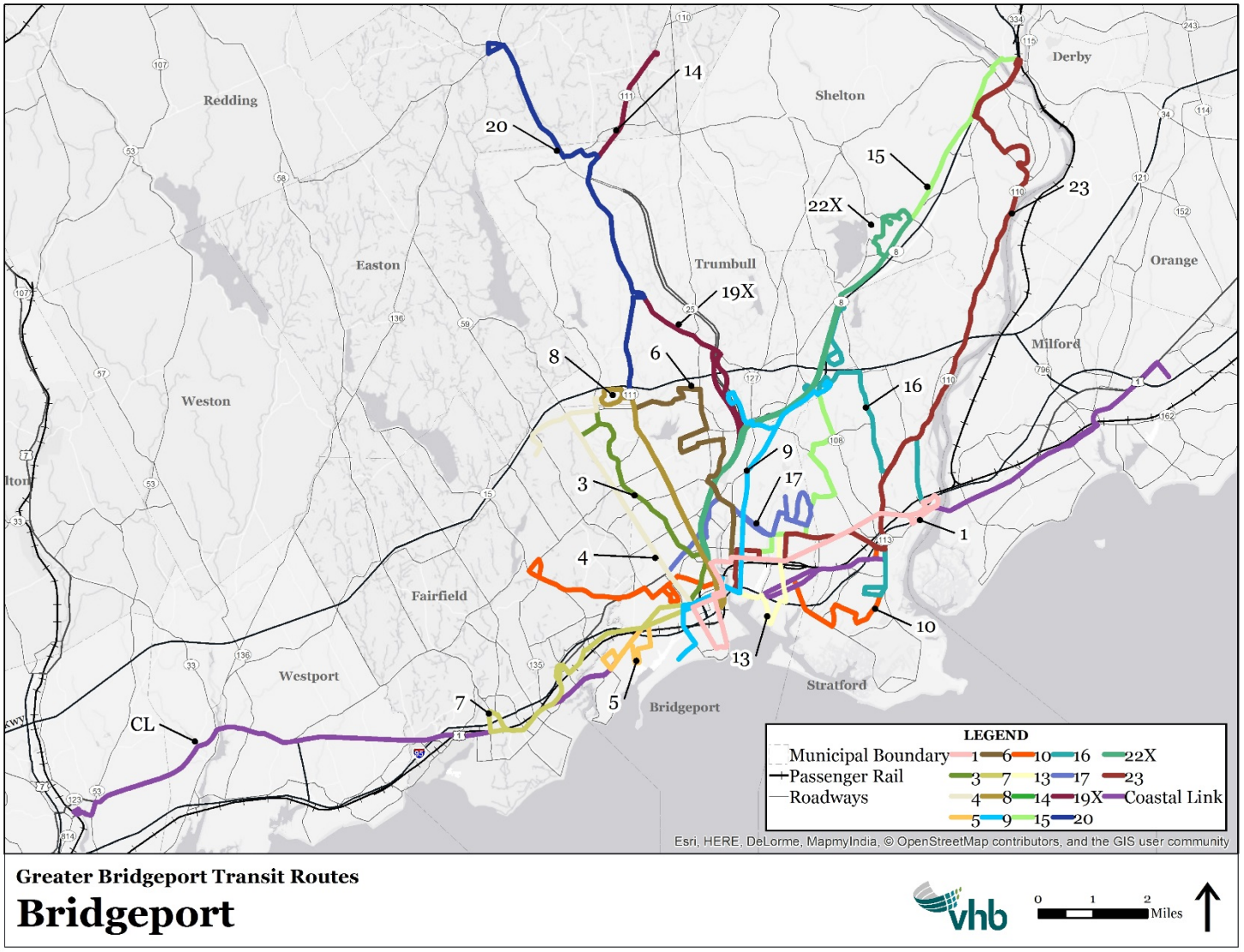
3.3.2.1 Greater Bridgeport Transit Authority

Greater Bridgeport Transit (GBT) provides local and regional bus service, as well as paratransit service, in and around the City of Bridgeport. GBT service extends to Bridgeport and portions of Fairfield, Stratford, and Trumbull; there is limited service to parts of Milford, Monroe, Shelton, Derby, Westport, and Norwalk. This service area is approximately 90 square miles with a total population of 291,035.

GBT is owned, operated, and managed by GBT. GBT provides bus service along 19 routes, which include 16 local, two express, and one regional route. (See Figure 20) Most local routes operate weekdays from 5:30 AM through 11:30 PM, with some routes offering Saturday service from 5:00 AM through 11:30 PM, and Sunday service from 8:00 AM through 8:00 PM. Express routes operate weekdays only during peak morning (6:00 AM through 9:00 AM) and evening (2:30 PM through 6:30 PM) commuting periods. The regional route operates as part of the Coastal Link regional bus system (travelling along I-95), which provides service seven days a week. Headways vary greatly and can range anywhere between 20 and 60 minutes per hour.

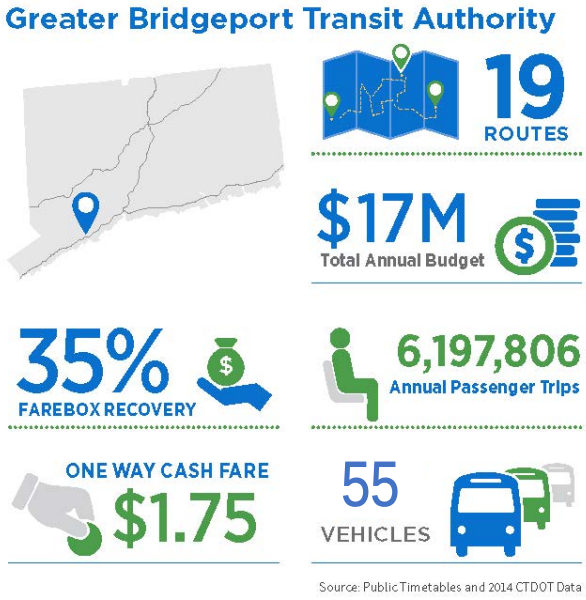
The cash fare for GBT is $1.75 for 90-minutes of unlimited travel. Passes are also available for 1-day, 7-day, or 31-day unlimited travel (these passes range from $4 - $70). Reduced fare passes are available for seniors, persons with disabilities, and youths under 17.

Figure 20: Greater Bridgeport Transit Authority Routes



In 2014, GBT had a fleet of 55 vehicles. This fleet operated 2,262,091 revenues miles and 219,095 revenue hours. Fare revenue totaled $5,859,905, based on 6,197,806 annual passenger trips.[9]

Annual Expenses in FY2014 for GBT totaled $16,846,960 for operations. GBT received operational funding of $10,975,436 from the State of Connecticut, and $11,619 from the local government. Fare revenue covered 34.8 of operating expenses.



9 All data is from public schedules and timetables or provided by CTDOT unless otherwise noted.

3.3.1 Urban Bus Systems with 2,000,000 to 5,000,000 Annual Passenger Trips

3.3.1.1 CT*transit* – Stamford Division

The CT*transit* Stamford Division (CTTS) serves the City of Stamford and the surrounding towns. This region together is approximately 133 square miles in size with a total population of 281,327.

The CT*transit* Stamford Division is owned by CTDOT, operated by HNS Management and managed by First Transit.

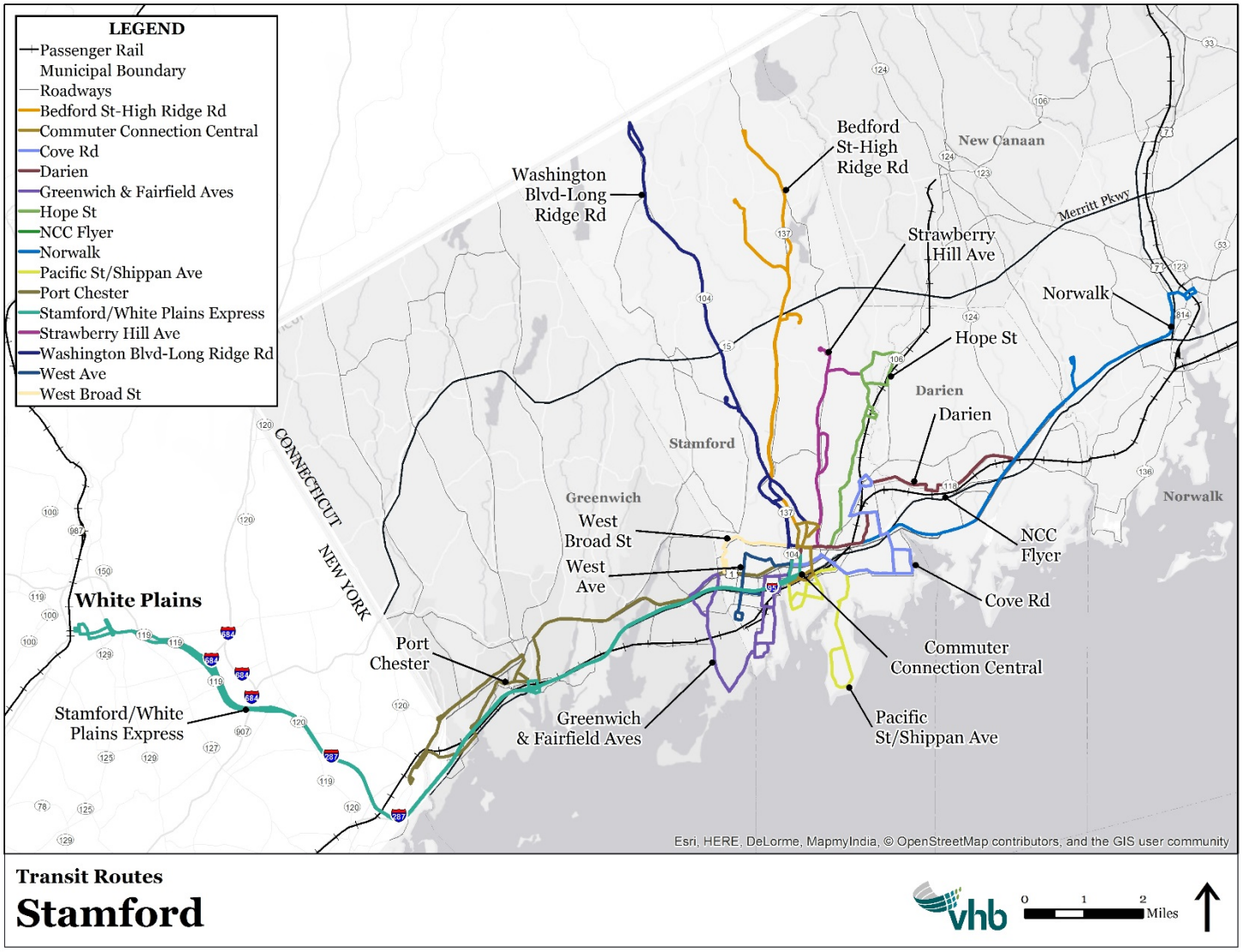
CTTS operates 16 local routes, the Commuter Connection Central route, and the I-BUS Express Service. The commuter connection only operates weekdays but many of the local routes and the I-BUS Express Services seven days a week. Service operates between 5:00 AM – midnight generally with a 30 minute headway on weekdays and weekends (see Figure 21).

CTTS connects with Norwalk Transit District's WHEELS bus routes in Norwalk, with the Harlem and New Haven Lines on Metro-North Railroad, and with Bee-Line buses in Westchester County, New York. CTTS is located in the southwest portion of Connecticut, in Fairfield County, near its border with New York State.

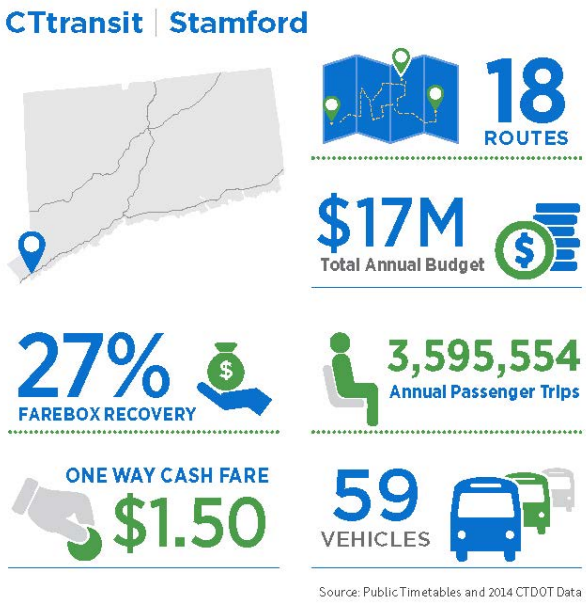
Local bus route fares are the same for all CT*transit* buses with regular cash fares of $1.50, Children (Age 4 & under, maximum of three with each adult) ride free, reduced fare for children between 5-18 years of age of $1.20, and free transfers for unlimited rides on local buses going in any direction within two hours of the time of fare payment. CT*transit* also provides reduced fare for seniors and the disabled, 10-ride tickets packages, all-day passes, two-hour passes, 3-day passes, 5-day passes, 7-day passes, and 31-day passes which are valid for unlimited rides during the specified time period.

The I-BUS Express operates on a zone fare structure charging $2.70 with free transfers from an express to a local bus and an upcharge to the express fare on a transfer from a local to an express bus. Children (Age 4 and under, maximum of three with each adult) ride free and seniors and the disabled are charged a reduced fare. In addition, 10-trip and 31-day passes are available and priced within each zone.

Figure 21: CT*transit* Stamford Routes



CTTS has a fleet of 59 vehicles. CTTS operates 1,785,486 annual revenue miles of service and 150,846 annual revenue hours of service. FY2014 annual fare revenues totaled $4,647,543 based on 3,595,554 annual passenger trips. [10]



Annual Expenses in the FY2014 for the district totaled $17,447,085 for operations. The transit district received operational funding of $11,007,805 from the State of Connecticut (including CTTS's share of federal formula funds). Fare revenue covered 26.6 percent of operating expenses.

10 All data is from public schedules and timetables or provided by CTDOT unless otherwise noted.

3.3.1.2 CT*transit* – Waterbury / Meriden / Wallingford Divisions

The CT*transit* Waterbury / Meriden / and Wallingford Divisions are all operated and managed by the Northeast Transportation Company (NET) and are summarized together in this report. The CT*transit* Waterbury Division provides service to the towns of Waterbury, Watertown, and Naugatuck. The CT*transit* Meriden and Wallingford Divisions provide bus service in Meriden and Wallingford and provides connections to the CT*transit* New Haven Division and to Middletown Area Transit in Meriden. This region together (Waterbury / Meriden / Wallingford) is approximately 90 square miles in size with a total population (in 2010) of 194,535.

All three divisions operate local fixed routes. CT*transit* Waterbury is owned by CTDOT, and managed and operated by NET under contract to CTDOT. CT*transit* Meriden/Wallingford is owned by CTDOT, and managed and operated by NET under contract to CTDOT. In addition to local service, CT*transit* Meriden operates an express bus service with DATTCO as the operator.

The Waterbury Division operates 22 local routes and six tripper (part-time) routes. Bus service spans from 5:30 AM to 11:59 PM Monday through Friday, with partial weekend service and varying headways between 10 and 90 minutes.

The Meriden Division operates three routes Monday through Friday with Saturday service on several routes. The weekday local routes have varying headways between 30 and 90 minutes with a service span from 6:30 AM – 6:00 PM. The Saturday routes have varying headways from every 40 to 90 minutes between 9:40 AM – 5:40 PM.

The Wallingford Division operates one route on 60 minute headways on Monday to Friday only from 9:00AM – 4:15 PM.

The routes for these divisions are shown in Figure 22 and Figure 23.

Figure 22: CT*transit* Waterbury Routes

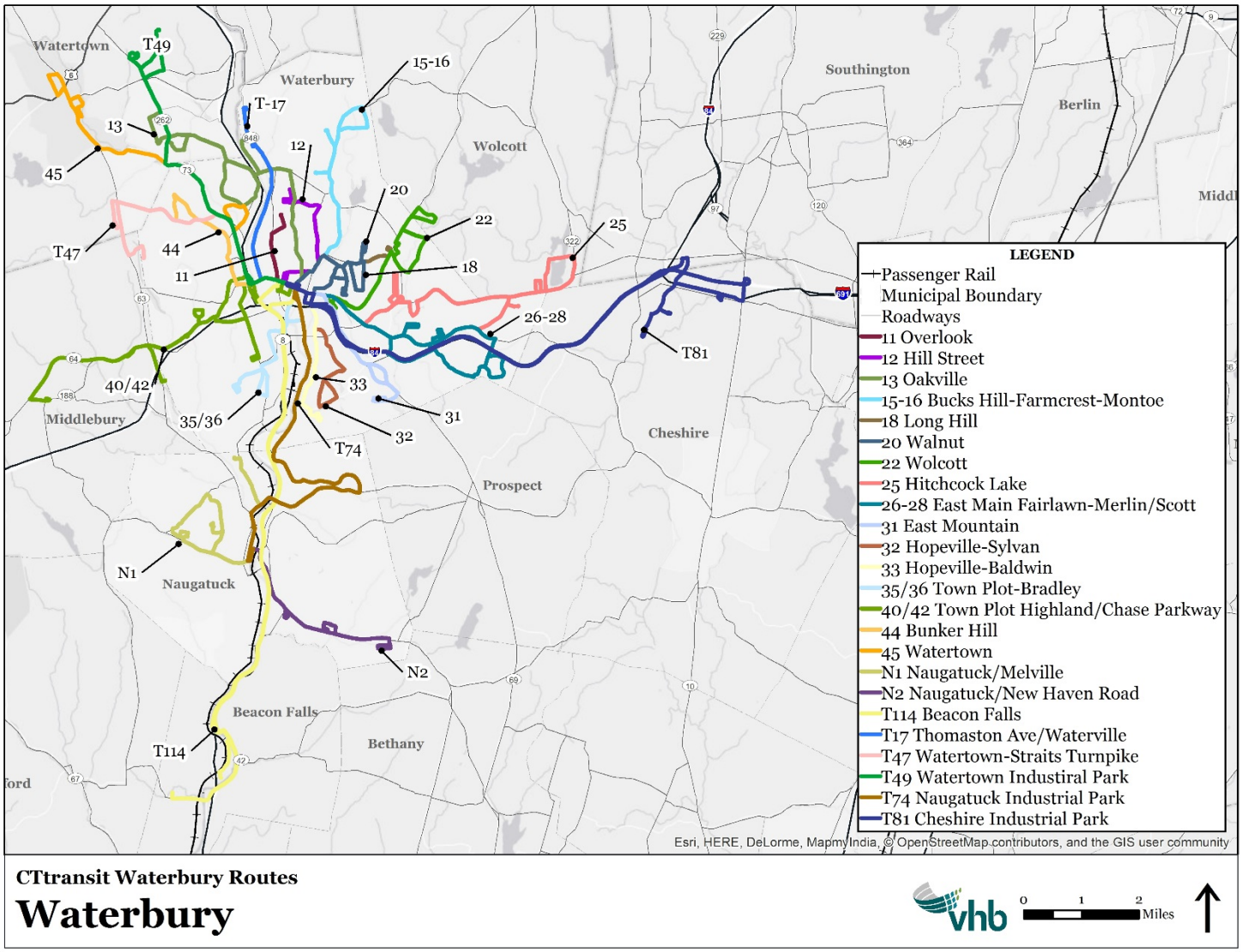
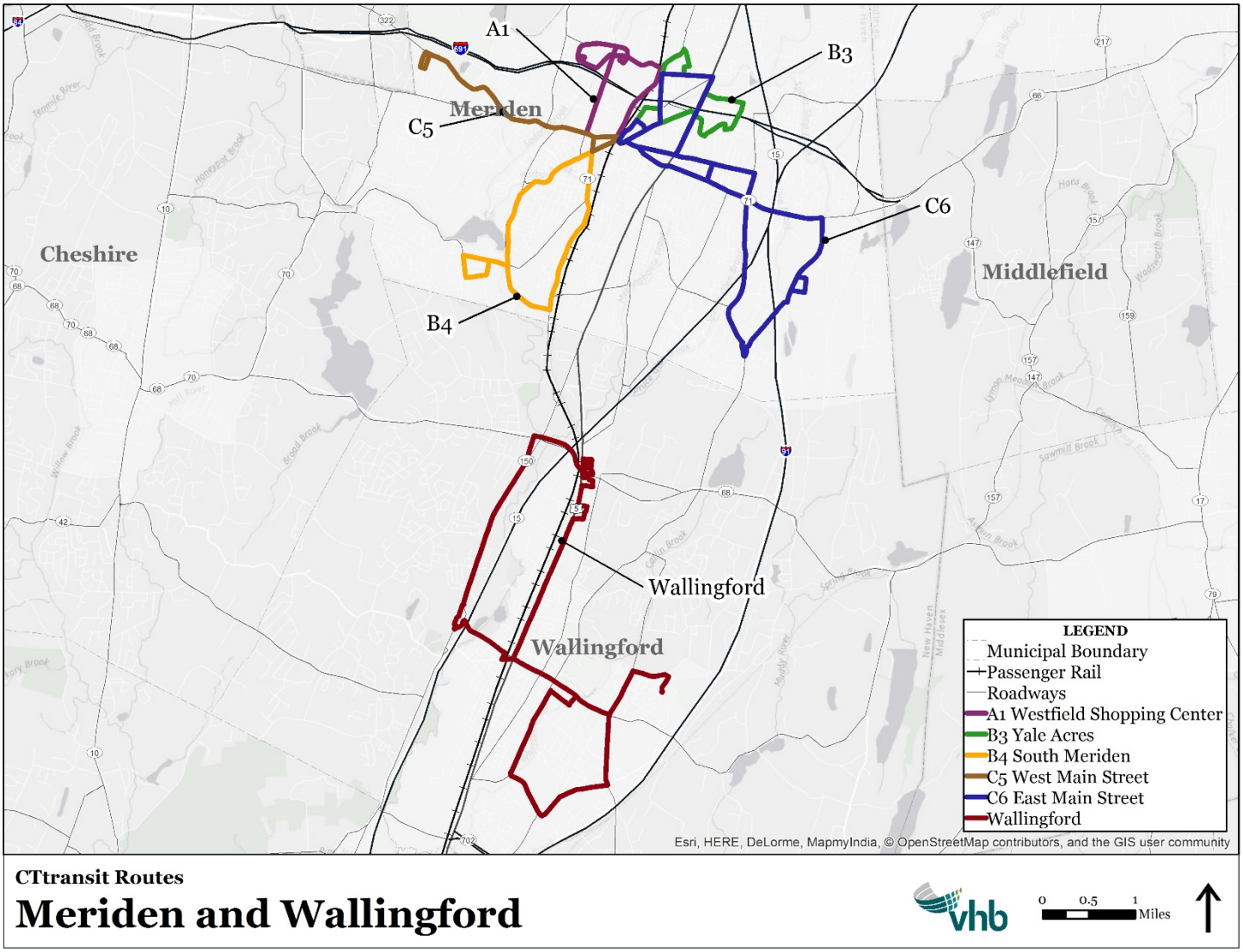
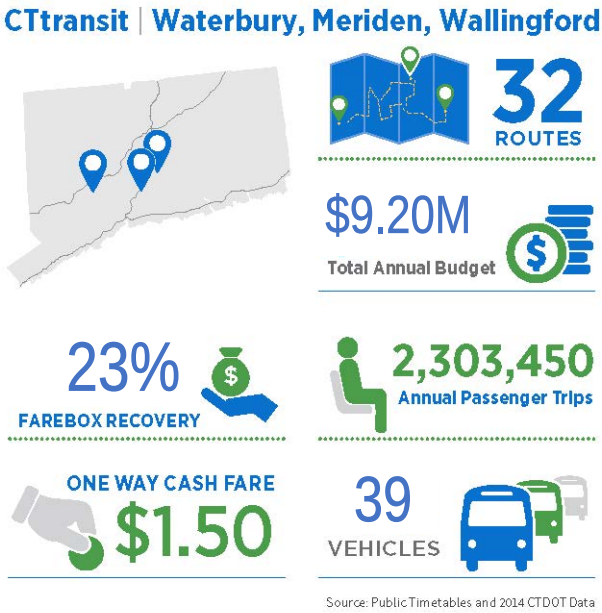


Figure 23: CT*transit* Meriden and Wallingford Routes



Local bus route fares are the same for all CT*transit* buses with regular cash fares of $1.50, Children (Age 4 & under, maximum of three with each adult) ride free, reduced fare for children between 5-18 years of age of $1.20, and free transfers for unlimited rides on local buses going in any direction within two hours of the time of fare payment. CT*transit* also provides reduced fare for seniors and the disabled, 10-ride tickets packages, all-day passes, two-hour passes, 3-day passes, 5-day passes, 7-day passes, and 31-day passes which are valid for unlimited rides during the specified time period.

Combined, the divisions have a fleet of 39 vehicles. In 2014, the divisions operated 1,392,242 annual revenue miles of service and 110,910 annual revenue hours of service. FY2014 annual fare revenues totaled $2,141,854 based on 2,271,918 annual passenger trips. [11]



For FY2014, Annual Expenses for the districts totaled $9,204,354 for operations. The transit districts received operational funding of $60,000 from local governments, $7,066,495 from the State of Connecticut (including the divisions' share of federal formula funds). Fare revenue covered 22.6 percent of operating expenses.

11 All data is from public schedules and timetables or provided by CTDOT unless otherwise noted.

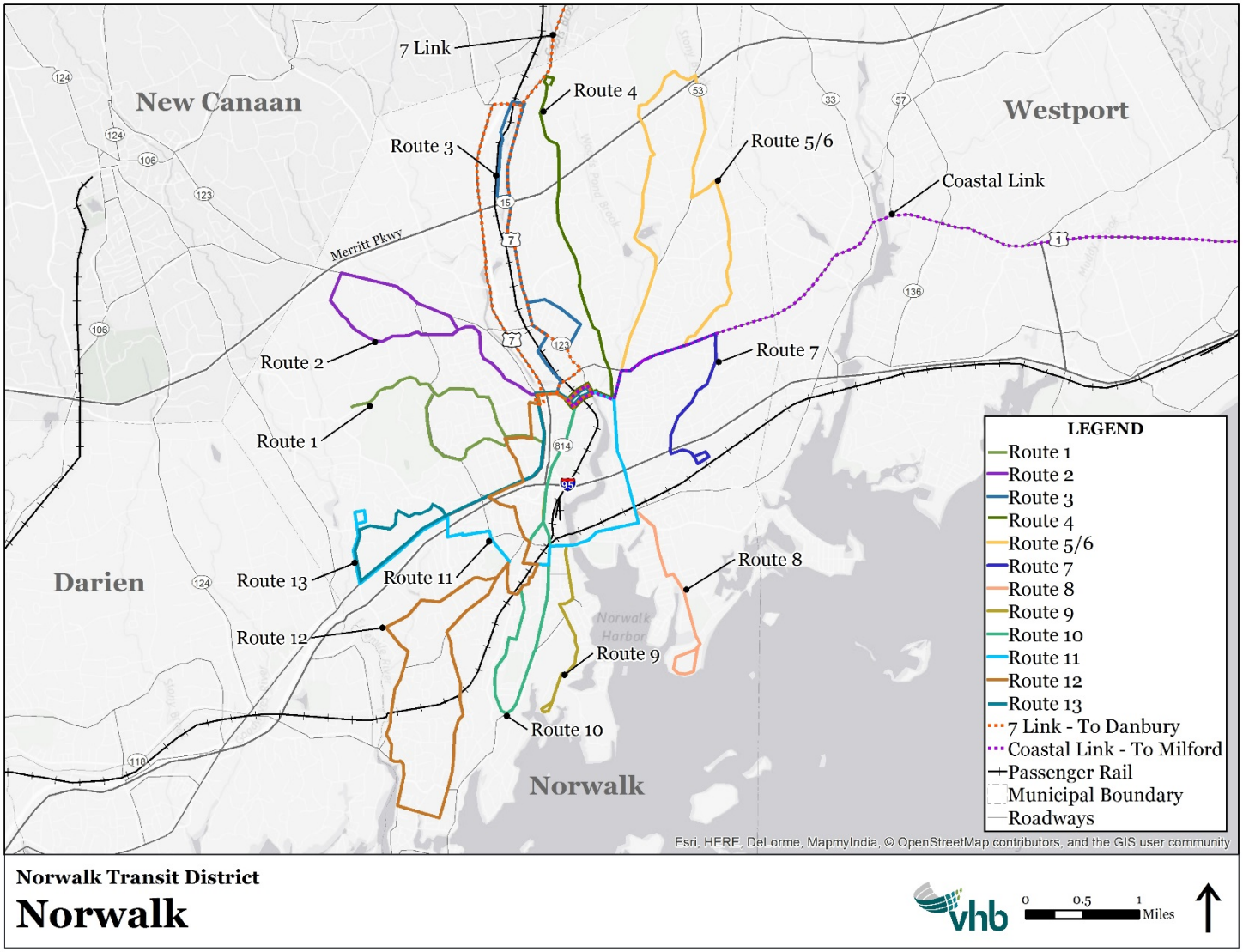
3.3.2 Urban Bus Systems with 750,000 to 2,000,000 Annual Passenger Trips

3.3.2.1 Norwalk Transit District

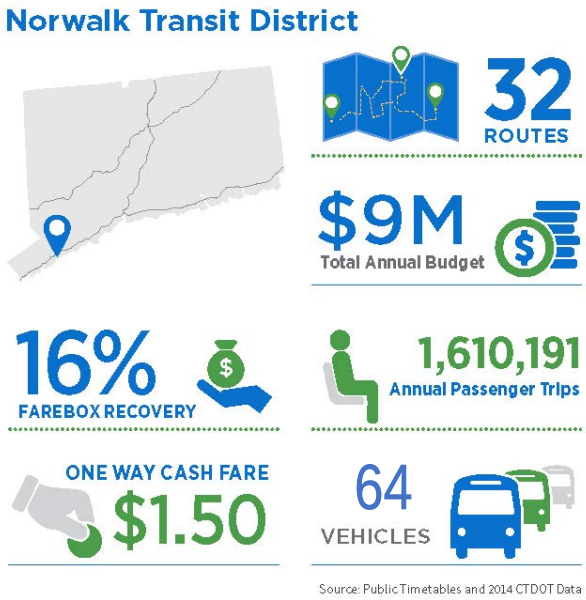
The Norwalk Transit District (WHEELS) serves Norwalk and Southwestern Connecticut, including Greenwich and Westport. This service area is 45 square miles in size with a total population of 111,994.

WHEELS is owned, operated, and managed by Norwalk Transit District. WHEELS operates 12 local bus routes, 17 shuttles, and two regional routes. There is also a connection at the pulse point linking with CTTRANSIT Route 41 on varying headways during the course of the day. (See Figure 24) Local bus service operates within Norwalk and operates on weekdays and Saturdays from approximately 6:00 AM to 7:30 PM, with supplemental evening shuttle service until 10:20 PM. This shuttle also runs on Saturdays from 6:30 PM to 9:30 PM and Sundays from 9:00 AM to 6:00 PM. WHEELS Commuter shuttles serve an expanded area (Norwalk, Greenwich, and Westport) on weekdays only during peak morning and evening commuting hours. One of the regional routes that WHEELS operates is part of the Coastal Link regional bus system, which is a collaboration between the Norwalk Transit District, the Greater Bridgeport Transit Authority, and the Milford Transit District and runs parallel to I-95. The hours of operation are Monday through Saturday from 5:45 AM to 10:45 PM and Sundays from 9:00 AM to 7:00 PM. The route provides service seven days a week along the Route 1 corridor through Norwalk, Westport, Fairfield, Bridgeport, Stratford, and Milford. In cooperation with the Housatonic Area Regional Transit District, WHEELS operates the Route 7 Link, a fixed route bus service between Norwalk and Danbury. The service runs on a peak schedule on weekdays from 6:00 AM to 11:50 AM and 3:00 PM to 7:00 PM. The cash fare for WHEELS is $1.50 for one-way travel. Passes are also available for 10-rides and 40 rides. Half-fare reduced passes are available for seniors, and persons with disabilities.

Figure 24: Norwalk Transit District Routes



In 2014, the WHEELS fleet was comprised of 64 vehicles and several purchased transportation contractors adding to the fleet needs. Over the course of 2014, the fleet accounted for 104,009 revenue hours and 1,055,111 revenue miles of service. Fare revenue totaled $1,574,977 based on 1,610,191 annual passenger trips.[12]



Annual Expenses in the FY2014 for WHEELS totaled $9,536,363 for operations. WHEELS received operational funding of $25,000 from the Federal Government, $6,887,835 from the State of Connecticut, and $988,851 from local government. Fare revenue covered 16.5 percent of operating expenses.

12 All data is from public schedules and timetables or provided by CTDOT unless otherwise noted.

3.3.2.2 Southeast Area Transit

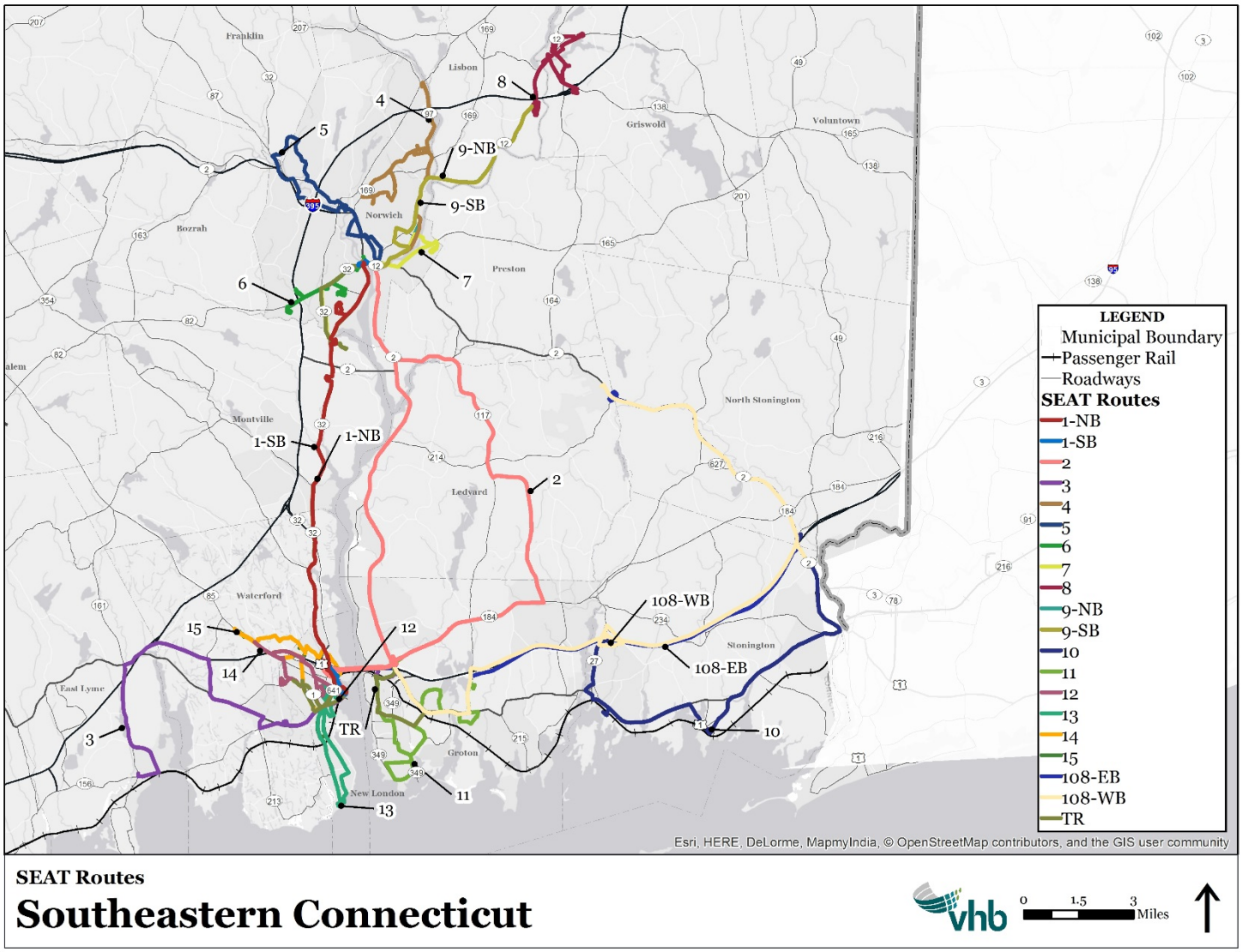
The Southeast Area Transit (SEAT) serves nine municipalities in the Southeast part of the state, including East Lyme, Griswold, Groton, Ledyard, Montville, New London, Norwich, Stonington, and Waterford. This transit district covers 305 square miles in size and has a population of 216,360.

The SEAT bus system is owned and operated by SEAT, and managed by First Transit. SEAT operates 17 local routes, including a shuttle bus to Three Rivers Community College, and paratransit service to passengers who live within three-quarters of a mile of a route but are unable to use the fixed-route services. (See Figure 25) Fixed-route service typically runs Monday through Saturday, with select routes operating on Sundays. Service hours and headways vary depending upon the area being served.

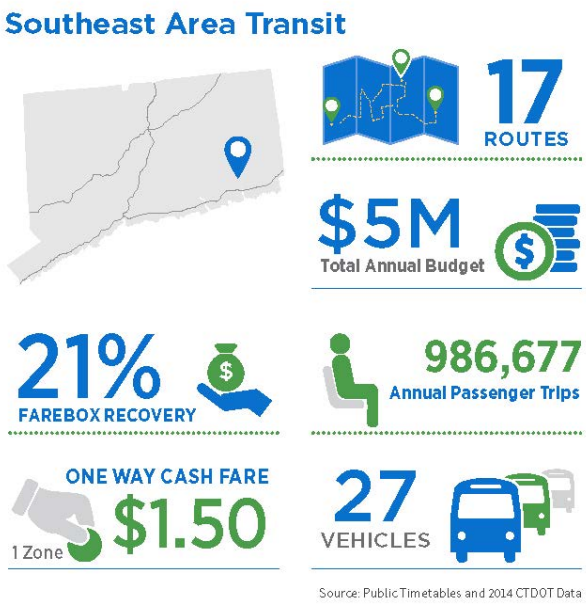
Routes serving major corridors operate Monday through Saturday between 6:00 AM to 10:00 PM. A single route (Route 101) provides service during morning peak commuting hours (6:00 AM to 9:00 AM) and late evening hours (7:00 PM to 11:00 PM). Routes serving New London operate Monday through Saturday between 8:00 AM to 7:00PM, with a single supplemental route providing evening service from 7:00 PM to 11:00 PM.

Routes serving Norwich typically operate Monday through Saturday from 6:00 AM to 7:00 PM, with a single route providing supplemental evening service until 11:00 PM. SEAT also operates a shuttle to Three Rivers Community College that operates weekdays when school is in session and during winter break. Morning service spans from 7:50 AM to approximately 9:00 PM, and evening service spans from 1:00 PM to 7:00 PM. Headways are generally 60 minutes in length.

Figure 25: Southeast Area Transit District Routes



Fares for SEAT bus service is based on a zone scheme. The transit district is divided into three zones, with one-way travel within Zone 1 costing $1.50. The fare increases to $2.00 for travel within Zone 2, and to $2.50 in Zone 3. An additional fare is required to travel between zones. Youth and Senior/disabled riders can ride at reduced rates. Fare for the Three Rivers shuttle is a flat fee of $2.00.



In 2014, SEAT's fleet was comprised of 27 vehicles. The fleet operated 863,429 revenue miles and 57,769 revenue hours. During FY2014, the property earned $1,026,391 in fare revenue, based on 986,877 annual passenger trips.[13]

Annual Expenses in the FY2014 for SEAT totaled $4,882,472 for operations. SEAT received operational funding of $3,423,416 from the State of Connecticut, and $377,907 from the local government. Fare revenue covered 21 percent of operating expenses.

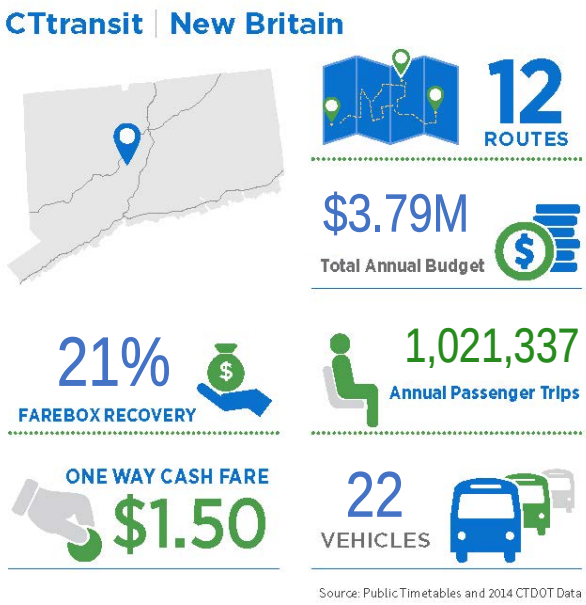
3.3.2.3 CT*transit* New Britain (Including DATTCO and CT*transit* Bristol)

CT*transit* New Britain (CTTNB) provides fixed route bus service specifically to New Britain and surrounding towns. The service area within the jurisdiction is 81 square miles and has a population of 203,562. CTTNB also contracts with DATTCO to provide express bus service on certain routes (CT*transit* New Britain also operates service for CT*transit* Bristol.)

CTTNB is owned by CTDOT and managed and operated by the New Britain Transportation Company, DATTCO and HNS Management under contract to CTDOT.

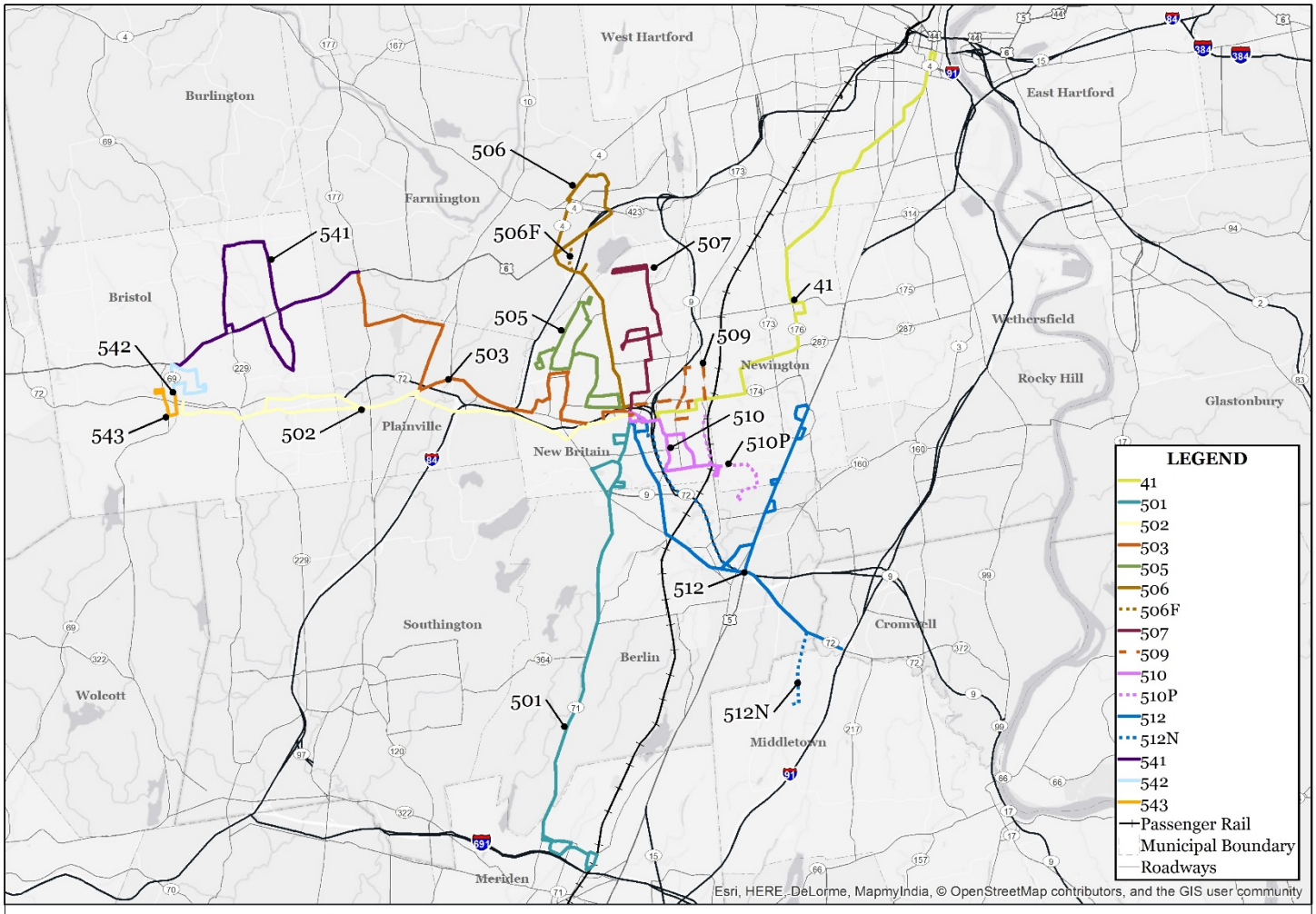
13 All data is from public schedules and timetables or provided by CTDOT unless otherwise noted.

CTTNB operates 12 local routes with connections to bus service in Hartford, and Meriden. (See Figure 26) Bus service is available seven days a week, typically from 5:00 AM to 1:00 AM the following day. Select routes have limited hours of service on Saturdays and Sundays. Headways range from between 30 and 60 minutes



Local bus route fares are the same for all CT*transit* buses with regular cash fares of $1.50, Children (Age 4 & under, maximum of three with each adult) ride free, reduced fare for children between 5-18 years of age of $1.20, and free transfers for unlimited rides on local buses going in any direction within two hours of the time of fare payment. CT*transit* also provides reduced fare for seniors and the disabled, 10-ride tickets packages, all-day passes, two-hour passes, 3-day passes, 5-day passes, 7-day passes, and 31-day passes which are valid for unlimited rides during the specified time period.

Figure 26: CT*transit* New Britain and Bristol Routes



In 2014, CTTNB had a fleet of 22 vehicles. CTTNB operated 819,002 vehicle revenue miles and 54,228 vehicle revenue hours over the course of the year. During FY2014, fare revenues totaled $787,178, based on 1,021,337 annual passenger trips.[14]

Annual Expenses in the FY2014 for CTTNB totaled $3,799,726 for operations. CTTNB received operational funding of $2,826,911 from the State of Connecticut (including CTTNB's share of federal formula funds). Fare revenue covered 20.7 percent of operating expenses.

14 All data is from public schedules and timetables or provided by CTDOT unless otherwise noted.

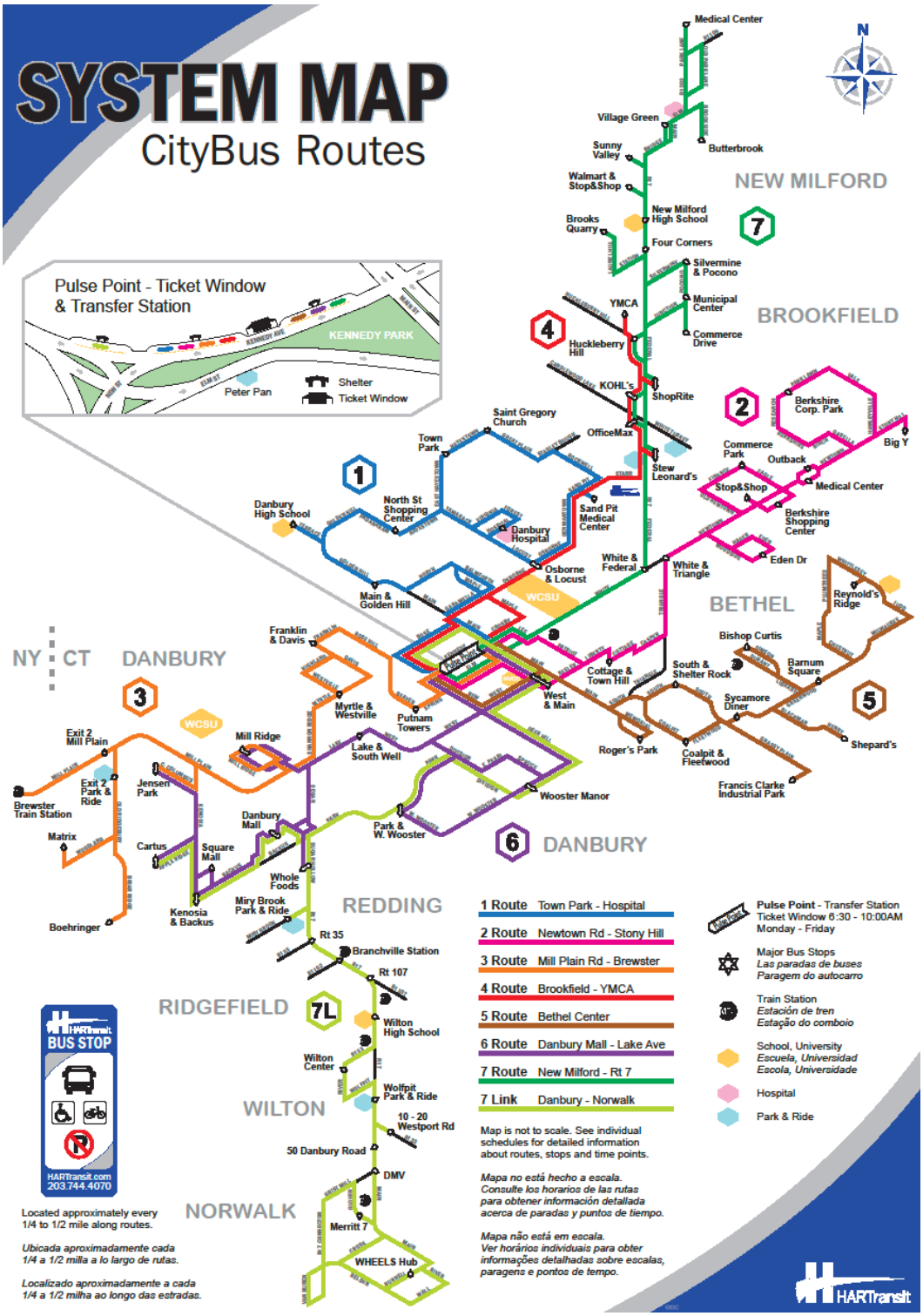
3.3.2.1 Housatonic Area Regional Transit

The Housatonic Area Regional Transit (HART) operates fixed routes and demand response service around the City of Danbury located in the northwest portion of Fairfield County, Connecticut, north of Norwalk on the border of New York State. The main roads in the service area are I-84, US Route 6, US Route 7, and US Route 202. This region together is approximately 124 square miles in size with a total population of 154,855.

HART is owned, operated, and managed by HART. HART operates seven local CityBus routes Monday through Friday with limited service Saturday, one CityBus Link to Norwalk Monday through Friday, three night-time LOOPs Monday through Friday with limited service Saturday and Sunday, and three Metro North connection shuttles Monday through Friday. (See Figure 27) CityBus Monday through Friday services generally have headways of 20 to 40 minutes, LOOPs and City Bus Link have headways of approximately 60 minutes, and the Shuttles have varying headways coinciding with Metro North New Haven Line Service. CityBus Routes generally operate from 6:00 AM to 6:00 PM Monday through Friday and from 8:00 AM to 5:00 PM Saturday. The CityBus Link route operates from 6:00 AM to 11:50 AM and 3:00 PM to 7:30 PM Monday through Friday. LOOPs generally operate from 6:30 PM to 10:30 PM from Monday through Friday, 5:30 PM to 10:30 PM on Saturday, and 9:00 AM to 7:00 PM on Sundays. Shuttle services generally operate from 5:20 AM to 8:30 AM and from 4:00 PM to 9:45 PM Monday through Friday

Regular single ride fares are $1.50 with children under five riding free, students (Kindergarten through Twelfth Grade) charged $1.10, and the elderly and persons with disabilities charged a reduced fare of $0.75. 10 ride passes and monthly passes are available at regular and reduced prices. Transfers are free at the pulse point to passengers who upon boarding the bus request a transfer from the driver. Free transfers are available to the WHEELS system, CT*transit*, the Coastal Link, the BeeLine, and the Putnam Area Rapid Transit (PART) system.

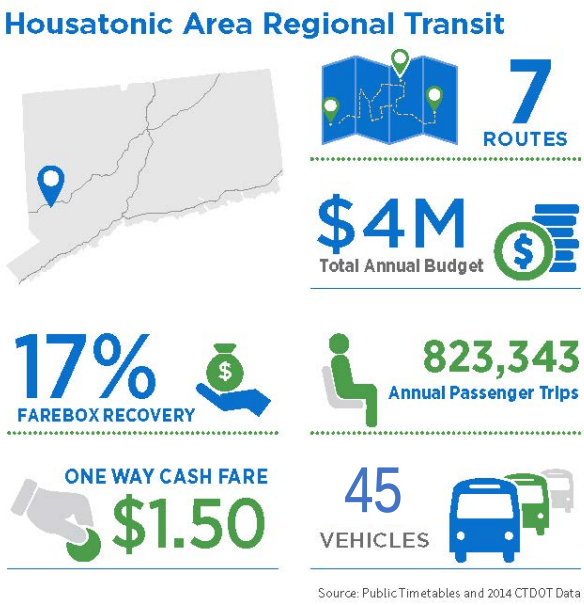
Figure 27: HART Routes



(GIS data was not available for mapping purposes)

In 2014, HART possessed a fleet of 45 vehicles. HART operated 914,645 annual revenue miles of service and 54,162 annual revenue hours of service. FY2014 annual fare revenues totaled $718,991 based on 823,343 annual passenger trips.[15]

Annual Expenses in the FY2014 for the district, totaled $4,178,013 for operations. HART received operational funding of $$2,788,249 from the State of Connecticut and $670,722 from the local government. Fare revenue covered 17.2 percent of operating expenses.



15 All data is from public schedules and timetables or provided by CTDOT unless otherwise noted.

3.3.3 Urban Bus Systems with less than 750,000 Annual Passenger Trips

3.3.3.1 Middletown Area Transit

Middletown Area Transit (MAT) operates fixed and demand response routes around the City of Middletown located in the northwest portion of Middlesex County of Connecticut, south of Hartford and east of Meriden. MAT is a quasi-municipal agency and serves the towns of Middletown, Middlefield, East Hampton, Portland, Durham and parts of Cromwell and Meriden with connections available to Higganum, Chester, Essex, and Old Saybrook via 9 Town Transit and to Wethersfield, Rocky Hill, Hartford, and New Haven via CT*transit*. This region together is approximately 193 square miles in size with a total population of 90,320.

MAT is owned, operated, and managed by MAT. MAT operates six weekday local routes, two Monday through Saturday PM routes, three Saturday only routes, and one Monday through Saturday M-Link Route. Local weekday services generally have headways of 45 minutes while the M-Link route, and the Saturday routes generally have headways of 60 minutes. Services generally span from 5:45 AM – 6:50 PM (see Figure 28).

Regular single ride fares are $1.50 with children under six riding free and the elderly and handicapped charged a reduced fare of $0.75. All day passes, 10 ride passes, and monthly passes are available at regular and reduced prices. Transfers are issued free of charge when requested by the passengers upon boarding but must be used for the next schedule connection at the first point where the route intersects.

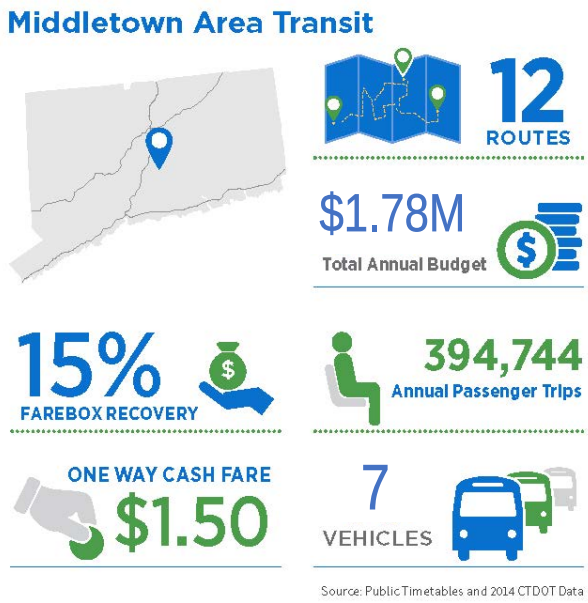
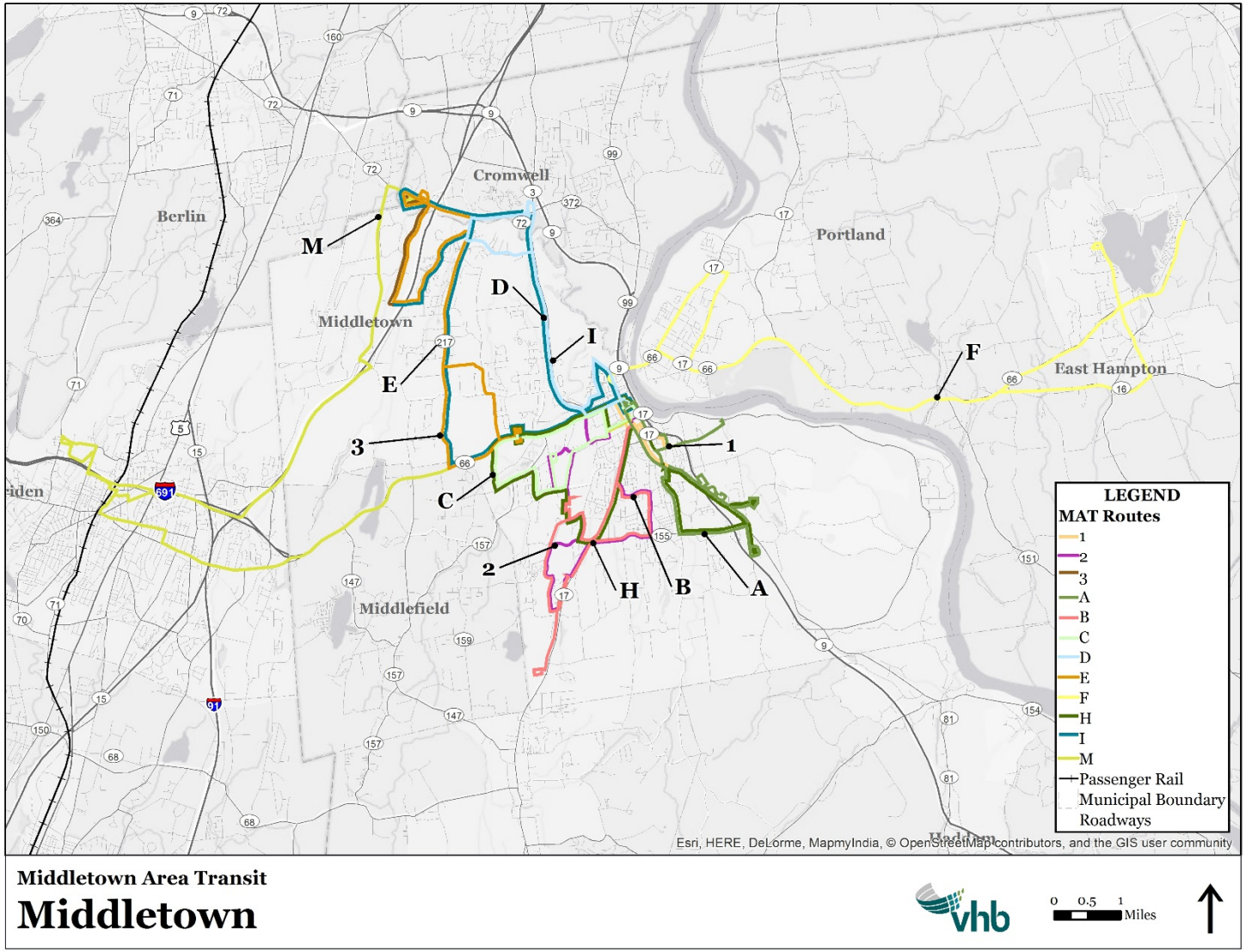


Figure 28: Middletown Area Transit Routes



In 2014, MAT possessed a fleet of 7 vehicles. MAT operated 444,939 annual revenue miles of service and 26,053 annual revenue hours of service. FY2014 annual fare revenues totaled $271,347 based on 394,744 annual passenger trips.[16]

Annual Expenses in the FY2014 for the district, totaled $1,785,607 for operations. MAT received operational funding of $318,403 from local government sources and $1,097,178 from the State of Connecticut. Fare revenue covered 15.2 percent of operating expenses.

3.3.3.2 Windham Region Transit District

The Windham Region Transit District (WRTD) provides service to the ten towns of the Windham Region of Connecticut, comprising the southwest portion of Windham County, the southeast portion of Tolland County, and the northwest portion of New London County. WRTD operates two local bus service routes and two commuter services routes. The towns included in the service area are: Ashford, Chaplin, Columbia, Hampton, Lebanon, Mansfield, Scotland, Willington, and Windham (see Figure 29). This region together is approximately 325.8 square miles in size with a total population of 91,240.

WRTD is owned and operated by WRTD and managed First Transit. The bus routes generally focus on the Village of Willimantic. Both commuter routes begin/terminate in Willimantic and the two local routes both serve Willimantic. One of the commuter routes operates a single morning run and a single afternoon run with, Monday through Friday. The other commuter route operates six trips beginning at 5:55 AM and terminating at 12:55 AM, with a two hour headway, every day. Both local city routes operate Monday through Saturday from 6:00 AM to 9:35 PM with headways generally between 30 and 120 minutes depending on the route.

The one-way trip fare for adults is $1.00 on local routes and $2.50 on commuter routes. Children under 4 (maximum of three children per adult) and the elderly are not charged on either route. The local route offers free transfers but a charge of $1.50 is levied on customers for transfers to a commuter route and vise-versa. The district also provides local and commuter ten-rides and monthly tickets.

WRTD operates a fleet of five revenue vehicles for fixed route service. WRTD operated 416,207 annual revenue miles of service and 24,634 annual revenue hours of service for local service and commuter bus in 2014. FY2014 aggregate annual fare revenues totaled $197,662 based on 252,343 annual passenger trips.[17]

16 All data is from public schedules and timetables or provided by CTDOT unless otherwise noted.
17 All data is from public schedules and timetables or provided by CTDOT unless otherwise noted.

Annual Expenses in the FY2014 for the district, including demand response, totaled $1,459,939 for operations. WRTD received operational funding of $355,375 from the State of Connecticut, $386,001 from the local government and $482,051 from the federal government. Operating revenue (including fares, donations, and contract revenue) covered 13.5 percent of operating expenses.

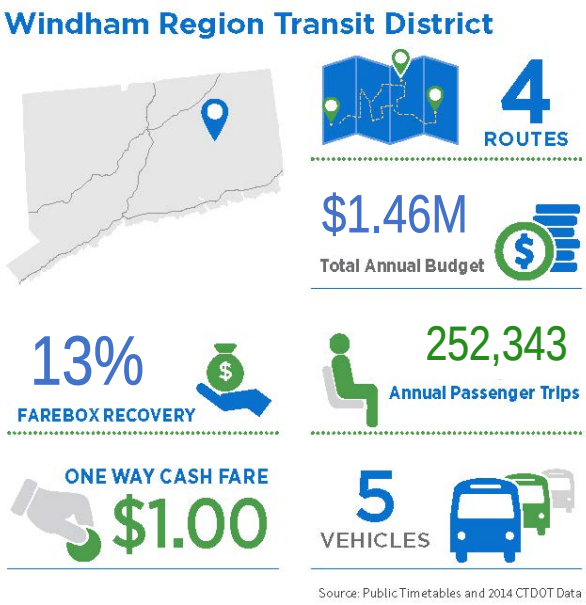
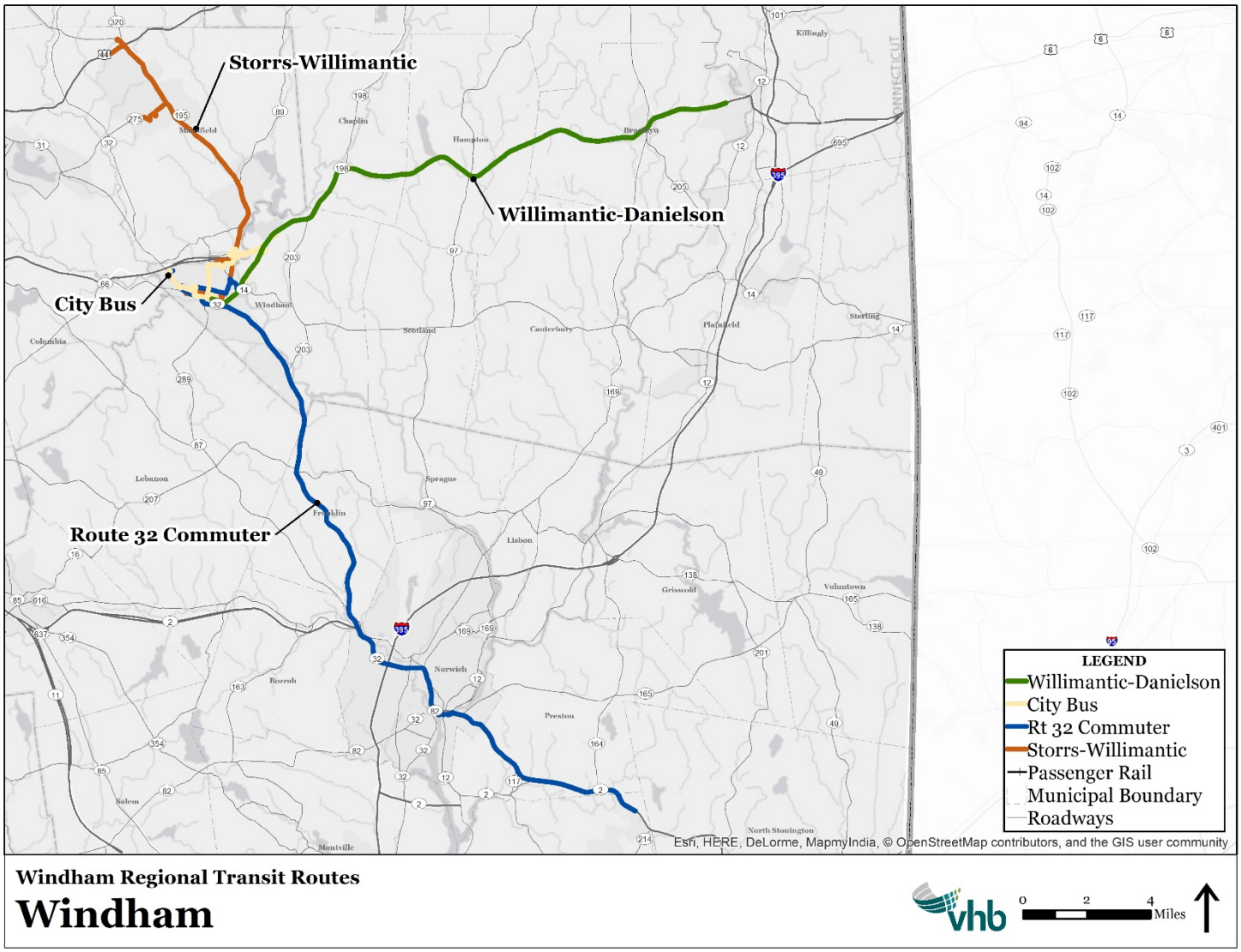


Figure 29: Windham Region Transit District Routes



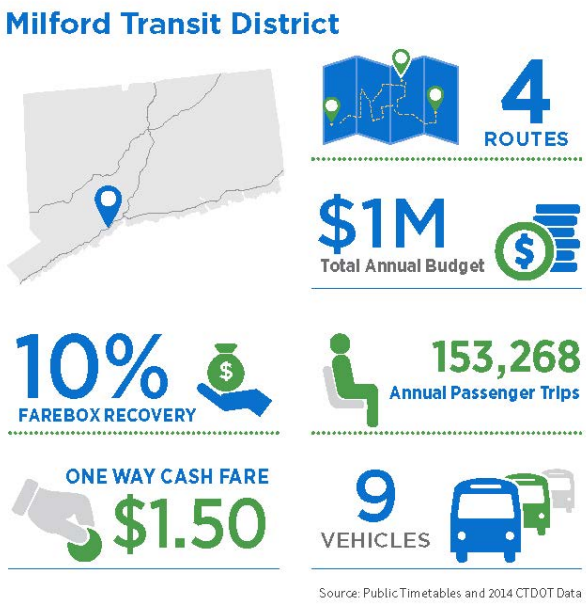
3.3.3.3 Milford Transit District

The Milford Transit District (MTD) operates local and regional fixed route bus service, as well as paratransit service, in the Milford, Stratford, and Bridgeport areas. This service area is 24 square miles, with a population of approximately 51,000.

MTD is owned, operated, and managed by MTD. MTD operates three local routes and one regional route, in addition to door-to-door paratransit service for the elderly (age 60 years and older) and persons with disabilities (See Figure 30). The three local routes operate from 6:00 AM to 10:30 PM on weekdays, and 8:00 AM to 5:00 PM on Saturdays. The remaining route is a regional route that functions as part of the Coastal Link regional bus service that generally follows the Route 1 corridor. The regional route operates seven days a week, with weekday and Saturday service typically spanning from 6:00 AM to 10:30 PM. Sunday service on this route is limited to between 9:00 AM and 7:00 PM. Headways vary from 20 to 60 minutes.

The cash fare for MTD is $1.50 for one-way travel. Passes are also available for 10-rides and monthly travel. Half-fare reduced passes are available for seniors, and persons with disabilities.

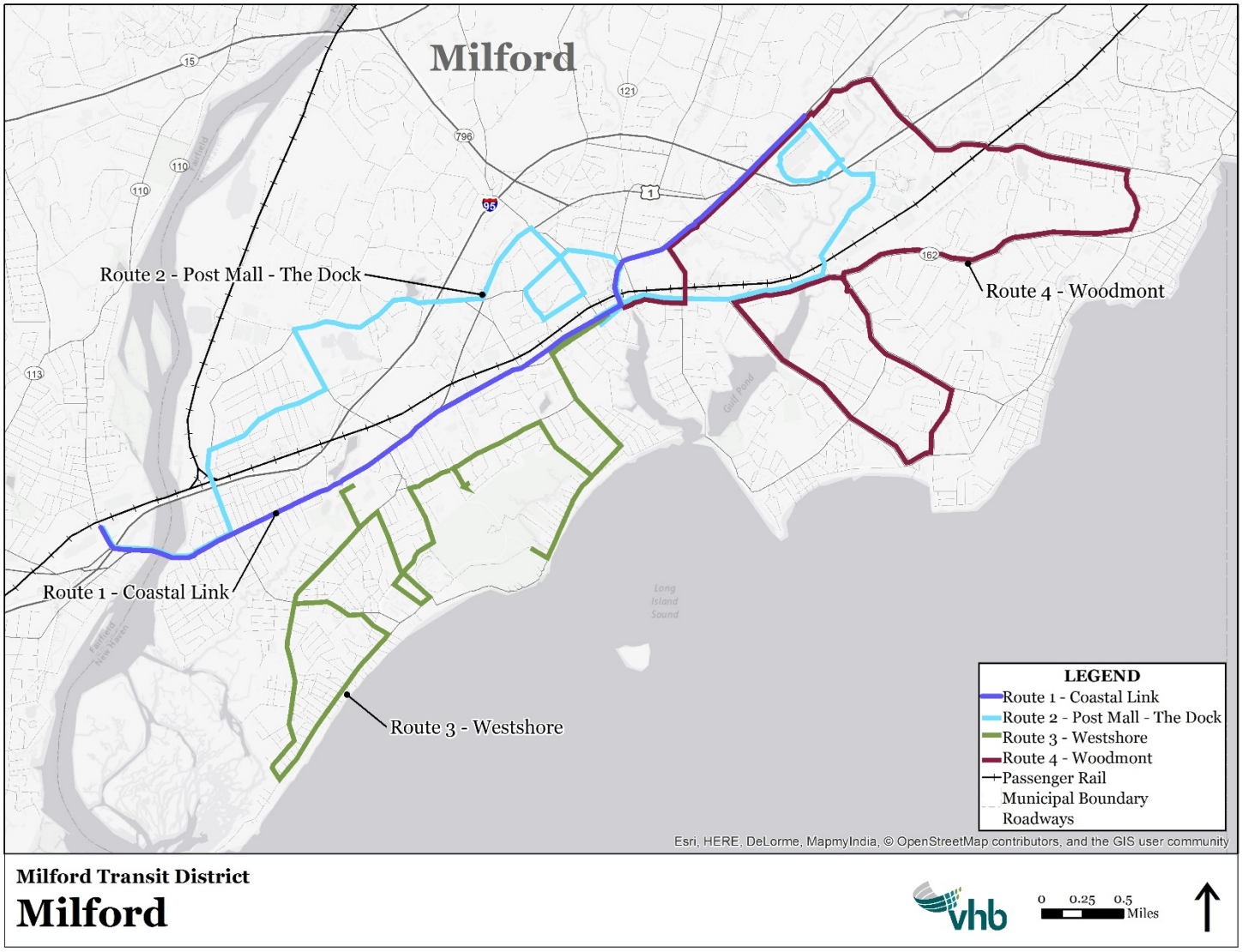
In FY2014, MTD's fleet included nine vehicles. This fleet accounted for 223,137 vehicle revenue miles and 14,962 vehicle revenue hours. In FY2014, the transit district earned $115,561 in fare revenue, based on 153,268 annual passenger trips.[18]



Annual Expenses in the FY2014 for MTD totaled $1,170,702 for operations. MTD received operational funding of $864,630 from the State of Connecticut and $190,422 from the local government. Fare revenue covers 9.9 percent of operating expenses.

18 All data is from public schedules and timetables or provided by CTDOT unless otherwise noted.

Figure 30: Milford Transit District Routes

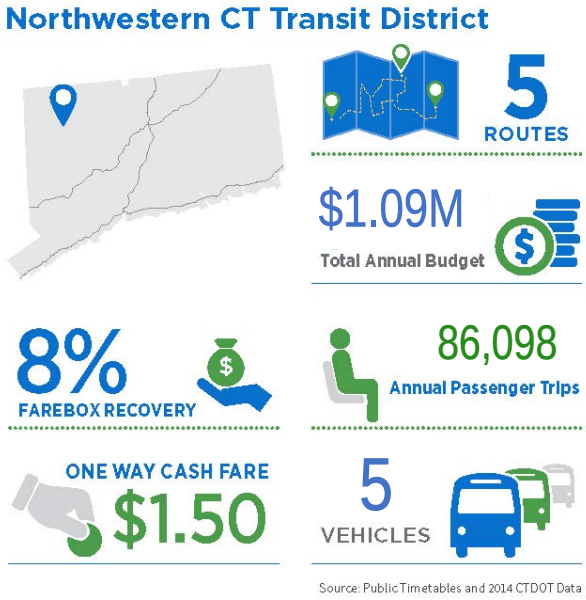


3.3.4 Rural Bus Systems

3.3.4.1 Northwestern Connecticut Transit District

The Northwestern Connecticut Transit District (NWCTD) provides service to a 17 town region in the northwest portion of Connecticut near its border with New York, northwest of the City of Hartford in Litchfield County. NWCTD operates a deviated flexible route service in Torrington, Winsted, and Litchfield and demand response service for all 17 towns. The towns included in the service area are: Barkhamsted, Canaan / North Canaan, Colebrook, Cornwall, Falls Village, Goshen, Harwinton, Kent, Litchfield, Morris, New Hartford, Norfolk, Salisbury, Sharon, Torrington, and Warren. This region together is approximately 597.4 square miles in size with a total population of 93,766.[19]

NWCTD is owned and managed by NWCTD and operated by Kelley Transit. NWCTD operates five deviated flexible bus routes, referred to as the "Candystriper." The Candystriper local bus service primarily serve the communities of Torrington, Winsted, and Litchfield with three of the five routes designated for Torrington, one designated for Litchfield, and one designated for Winsted. (See Figure 31)



The Candystriper service spans from 6:30 AM to 6:25 PM Monday through Friday, with a special Torrington route running Saturday from 8:00 AM to 3:55 PM. The Torrington routes generally have a headway of one hour (including the Saturday route) while the Winsted and Litchfield routes have a varying headway between 75 and 120 minutes.

One-way trip fares for adults are $1.50 with students and the elderly charged a reduce fare and children riding free. The commuter service is $2.00 and transfers are free. The Candystriper service also provides a monthly unlimited ride fare of $47.00 and a reduced fare of $23.50.

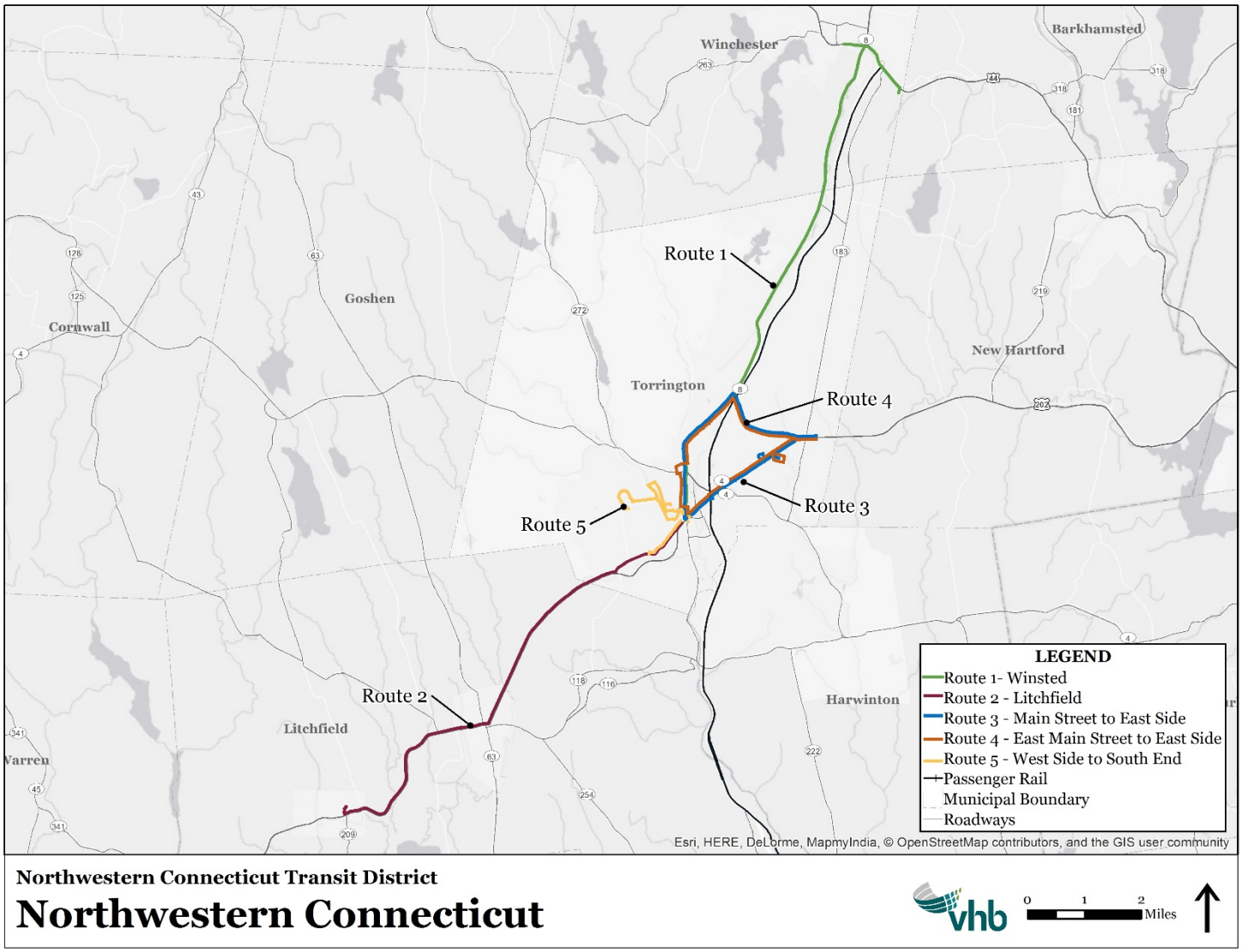
19 Information on population and land area aggregated and estimated based on land area and population of each town provided by 2010 census.

NWCTD operates a fleet of 5 revenue vehicles for fixed route service. For their fixed service NWCTD operated 332, 707annual revenue miles of service and 28,065 annual revenue hours of service. FY2014 annual fare revenues totaled $88,788 based on 86,098 annual passenger trips. [20]

Annual Expenses in FY2014 for NWCTD, including demand response, totaled $1,090,753 for operations. NWCTD received operational funding of $279,875 from the State of Connecticut, $266,379 from the local government and $424,053 from the federal government. Fare revenue covered 8.1 percent of operating expenses.

20 All data is from public schedules and timetables or provided by CTDOT unless otherwise noted.

Figure 31: Northwestern Connecticut Transit District Routes

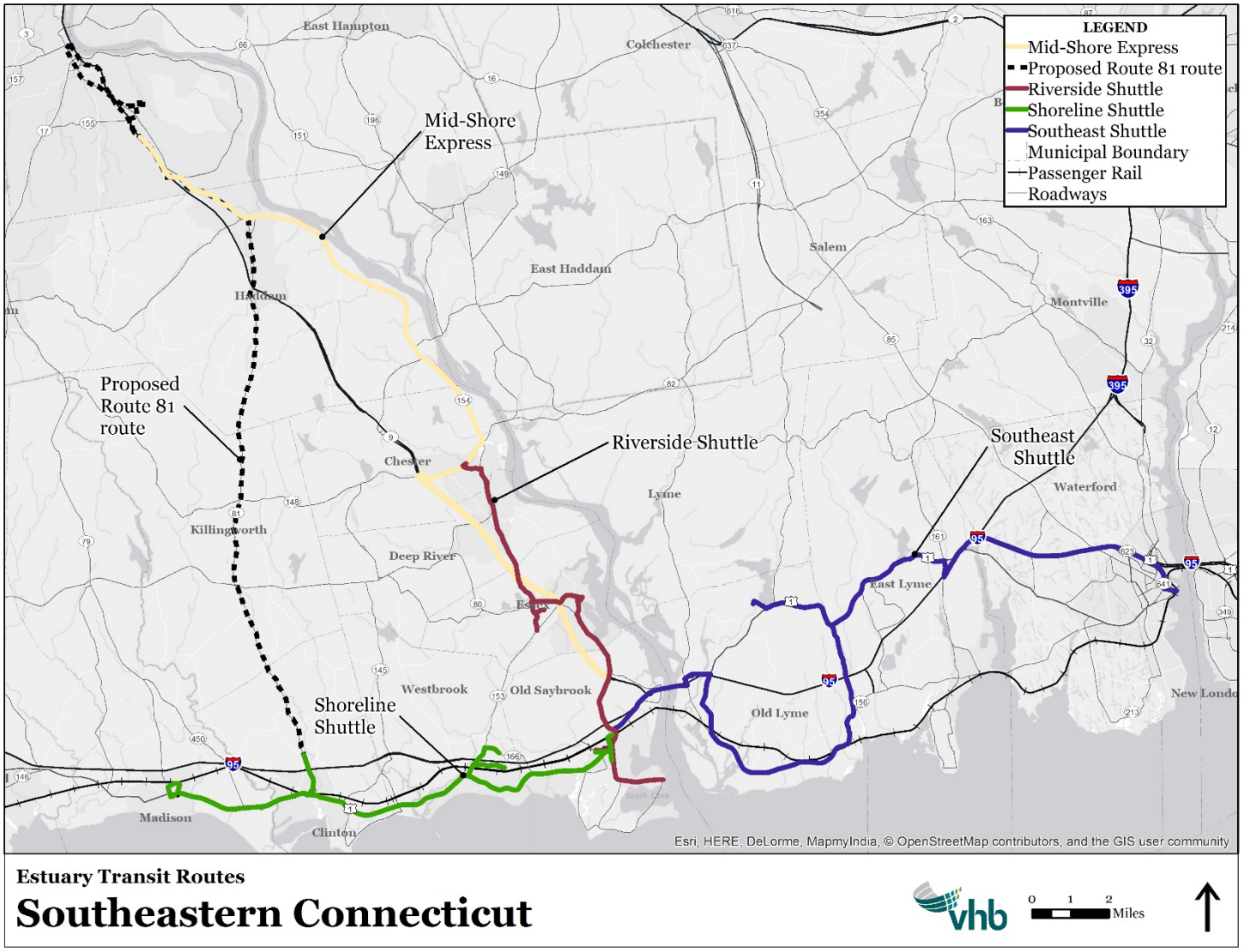


3.3.4.2 Estuary Transit District

The Estuary Transit District (known as 9 Town Transit) provides coordinated public transit service in the Connecticut River Estuary Region. The system serves the nine towns on the Connecticut Shoreline that created the agency: Chester, Clinton, Deep River, Essex, Killingworth, Lyme, Old Lyme, Old Saybrook, and Westbrook. The property also provides services on a contractual basis with the following towns: Durham, East Haddam, Haddam, and Madison. This service area is approximately 367.5 square miles, with a population of approximately 105,538.

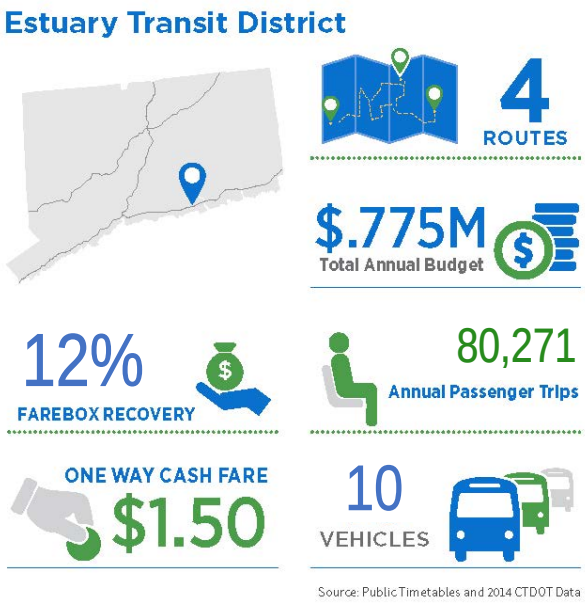
9 Town Transit is owned and operated by Estuary Transit District and managed by First Transit. 9 Town Transit operates four flexible routes (fixed stops with deviations) Monday through Friday between 6:30 AM and 7:30 PM. Saturday service from 7:30 AM to 6:00 PM is provided on two routes. 9 Town Transit also offers a demand response service (Dial-A-Ride) that operates Monday through Friday from 6:00 AM through 6:00 PM. (See Figure 32) Headways vary from 35 to 120 minutes.

Figure 32: Estuary Transit Routes



The cash fare for 9 Town Transit is $1.50 for one-way travel. Passes are also available for 10-rides and monthly travel. Half-fare reduced passes are available for seniors, and persons with disabilities.

In FY2014, 9 Town Transit's fleet included 10 vehicles used for fixed route service, information on the number of vehicles required for maximum service was not available. This fleet accounted for 355,627vehicle revenue miles and 19,864 vehicle revenue hours. In FY2014, the transit district earned $115,135 in fare revenue, based on 80,721 annual passenger trips.[21]



Annual Expenses in the FY2014 for 9 Town Transit totaled $991,618 for operations. Nine Town Transit received operational funding of $464,526 from the State of Connecticut, $16,655 from the local government and $383,210 from the federal government. Operating revenue covered 11.6 percent of operating expenses.

21 All data is from public schedules and timetables or provided by CTDOT unless otherwise noted.

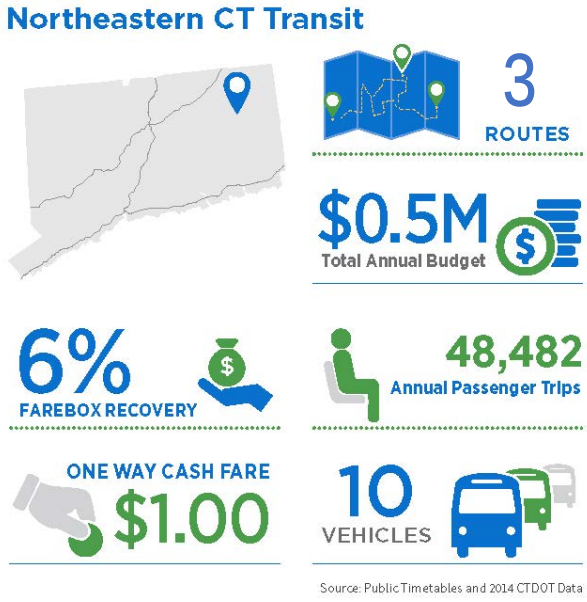
3.3.4.3 Northeastern Connecticut Transit District

The Northeastern Connecticut Transit District (NECTD) provides service to the northeast portion of Windham County, Connecticut and borders Rhode Island and Massachusetts. The district operates a flexible route bus and a dial-a-ride service. The towns included in the service area are: Brooklyn, Canterbury, Killingly, Putnam, Thompson, Eastford, Plainfield, Pomfret, Woodstock, and Union (see Figure 33). This region together is approximately 392.8 square miles in size with a total population of 79,753.

NECTD is owned, operated and managed by NECTD. NECTD operates three shuttle routes which provide service between the towns of Thompson and Brooklyn, the Northern Loop service for Putnam, and the Southern Loop service for Killingly/Brooklyn, and a North-South Shuttle route . The routes generally operate Monday through Friday with 60 minute headways. Service generally spans from 7:30 AM – 5:20 PM.

The cash fare for the transit district is $1.00 for one-way travel. Discounts are available for multiple rides.

NECTD operates a fleet of ten vehicles for fixed route service, information on the number of vehicles used in maximum service was not available. For their deviated fixed routes the district operated 153,387 annual revenue miles of service and 9,641 annual revenue hours of service. FY2014 aggregate annual fare revenues totaled $31,656 based on 48,482 annual passenger trips.[22]

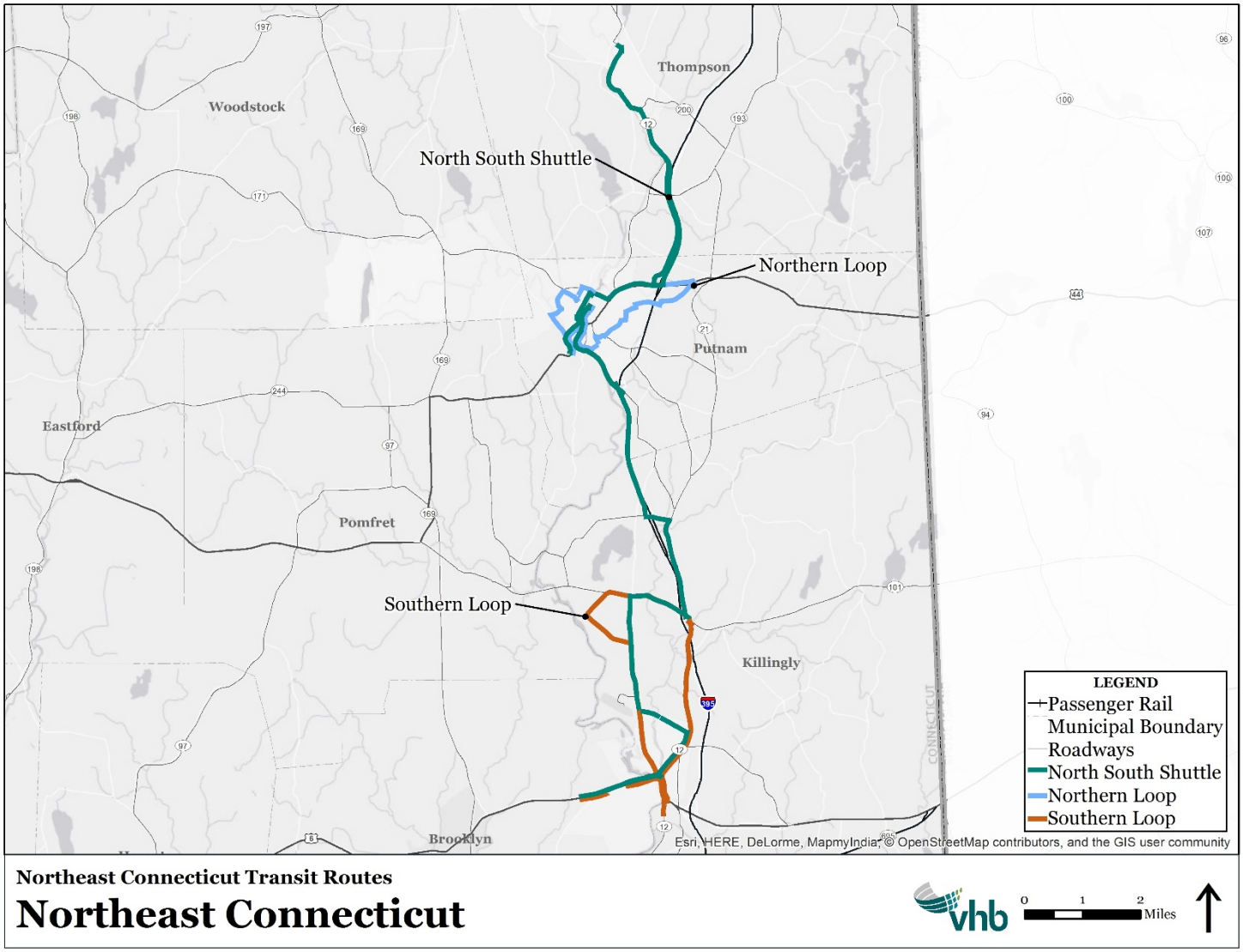


Annual Expenses in FY2014 for the district, including demand response, totaled $550,878 for operations. NECTD received

22 All data is from public schedules and timetables or provided by CTDOT unless otherwise noted.

operational funding of $166,285 from the State of Connecticut, 12,381 from the local government and $251,947 from the federal government. Fare revenue covered 5.7 percent of operating expenses)

Figure 33: Northeastern Connecticut Transit District Routes



4

Statewide Comparison of Transit Properties

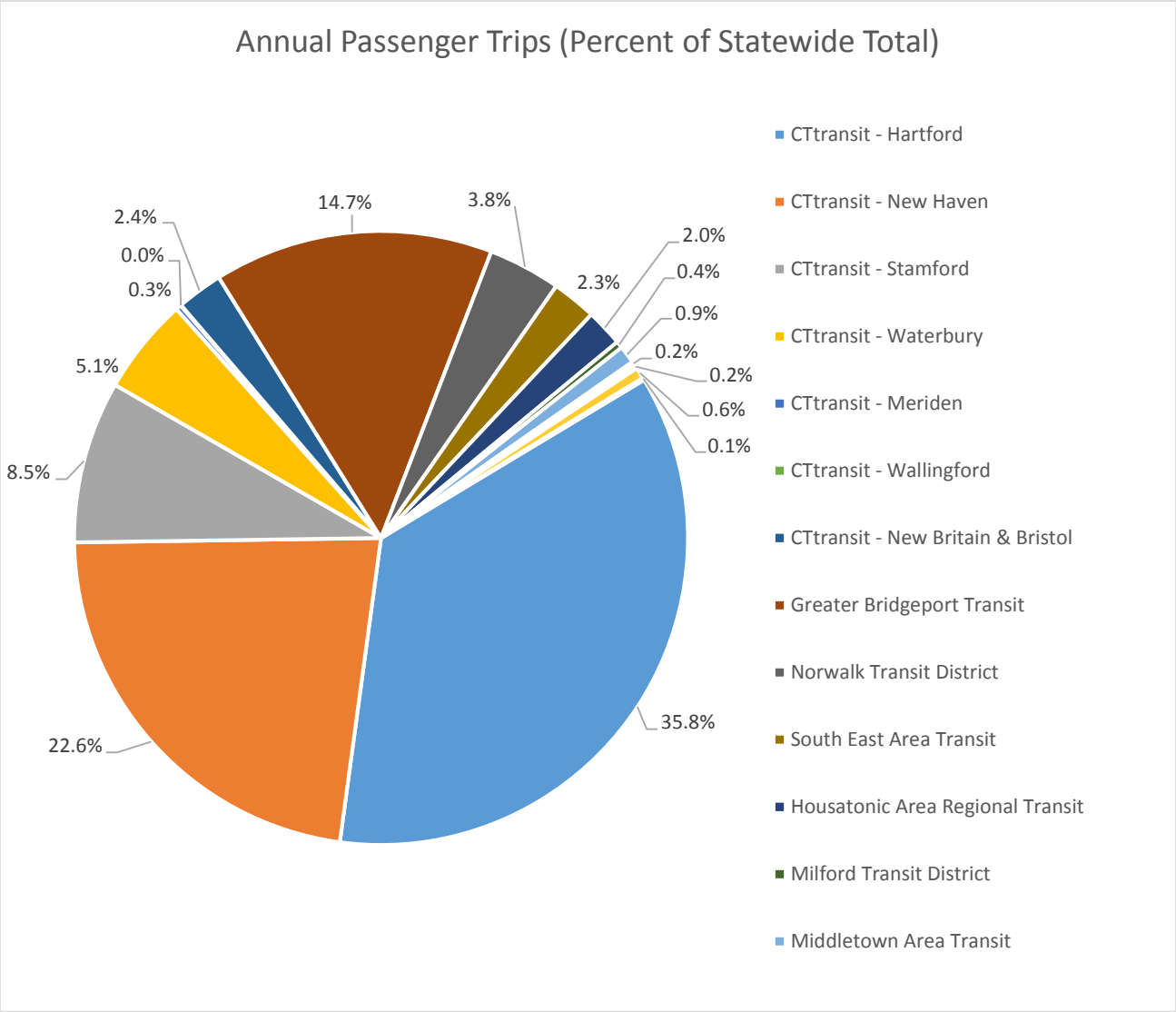
4.1 Transit Property Summary

This section summarizes some key metrics of the transit properties that comprise the statewide system. Four metrics are used: Annual Ridership, Total Number of Routes, Fleet Size, and Total Annual Operating Budget.

4.1.1 Ridership

Annual passenger trips based on total (weekday and weekend) ridership is summarized in this section. CT*transit* Hartford and CT*transit* New Haven divisions (combined) provide for almost 60% of the statewide fixed route transit trips, while all seven of the CT*transit* divisions provided for slightly less than 75% of the total fixed route bus ridership in the State of Connecticut. CT*transit* properties provided for more than 31 million annual passenger trips in the 2014 reporting period. Greater Bridgeport Transit is an additional significant provider of trips, with nearly 15% of the total statewide fixed route bus transit trips. Conversely, the small and rural transit properties account for more than 467,000 annual passenger trips. A breakdown of ridership by transit property is shown in Figure 34.

Figure 34: 2014 Annual Passenger Trips (Percent of Statewide Total)



Source: CTDOT, 2014 Data
Note: CT*fastrak* not included and CT*transit* Bristol included in CT*transit* New Britain

4.1.2 Total Number of Routes

The total number of routes in a system is also a useful metric to compare system size, and is useful when compared to the total annual ridership to determine overall system efficiency (See Table 12). CT*transit* accounts for nearly 60 percent of the routes in the state. The next transit property with the most routes is NTD with 32 routes.

Table 12: Comparison of Routes by Transit Property and Annual Passenger Trips

Transit Property	Number of Routes by Transit Property	Percentage of Total Routes (Statewide)	Annual Passenger Trips
CT*transit* - Hartford	72	28%	35.4%
CT*transit* - New Haven	18	7%	22.6%
CT*transit* - Stamford	8	7%	8.5%
CT*transit* - Waterbury / Meriden / Wallingford	32	12%	5.5%
CT*transit* - New Britain / Bristol	12	5%	2.6%
Greater Bridgeport Transit Authority	19	7%	14.7%
Norwalk Transit District	32	12%	3.8%
Southeast Area Transit	17	7%	2.3%
Housatonic Area Regional Transit	7	3%	2.0%
Middletown Area Transit	12	5%	0.9%
Windham Region Transit District	4	2%	0.7%
Milford Transit District	4	2%	0.4%
Northwestern Connecticut Transit District	5	2%	0.3%
Estuary Transit District	4	2%	0.2%
Northeastern Connecticut Transit District	3	1%	0.1%

Source: CTDOT, 2014 Data

As shown in Figure 35, while the CT*transit* properties and systems with 750,000 annual riders and above provide over 97.5 percent of total ridership, they operate 88 percent of the total routes in the state. This shows the relative efficiency of the larger properties that serve the major cities in the state (including Hartford, New Haven, and Bridgeport) over those serving the smaller, more suburban/rural part of the state. The non-CT*transit* systems with 750,000 annual riders and above properties are 29 percent

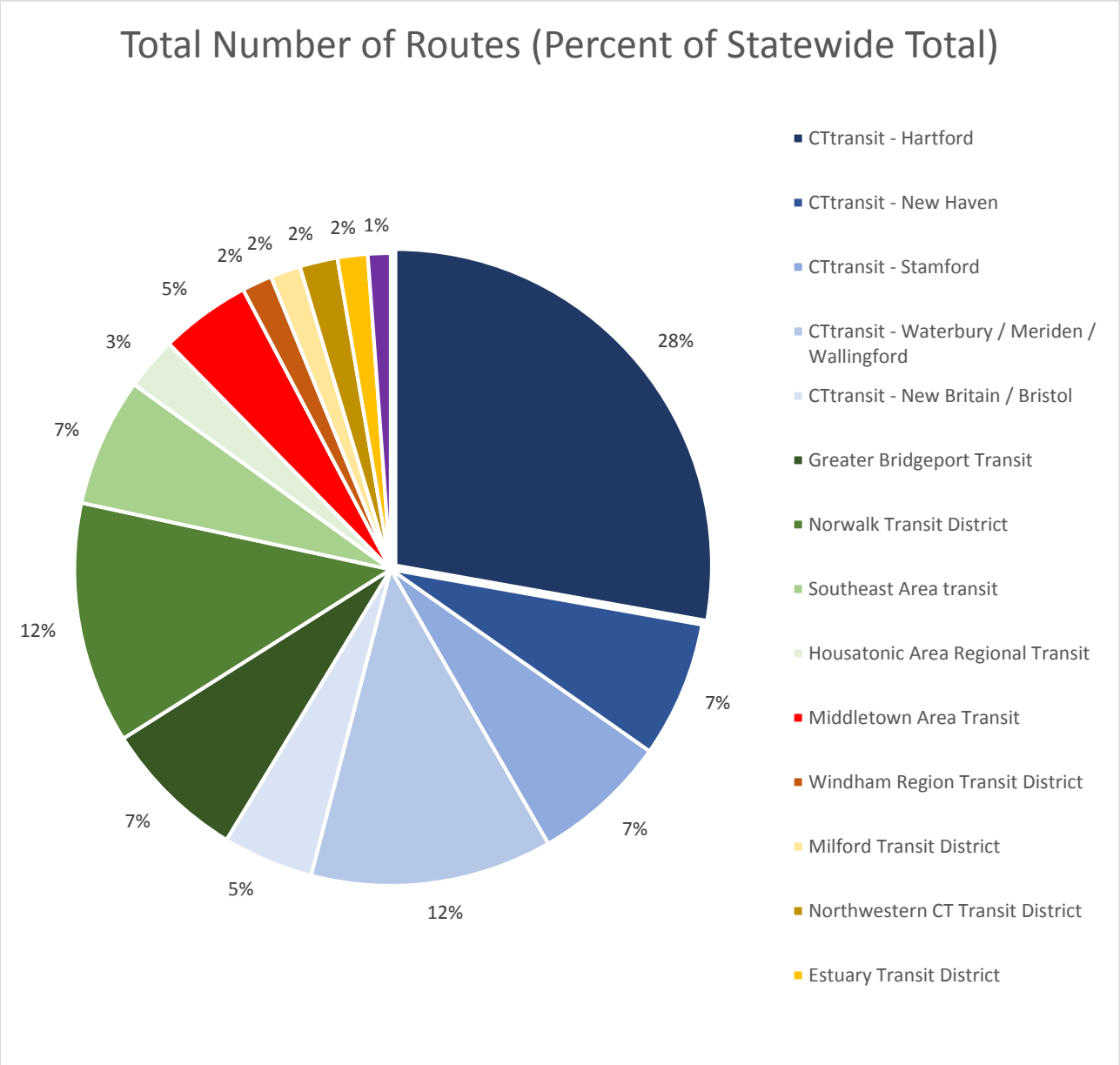
of the total routes in the state, and 23 percent of total ridership. Finally, the smaller and rural properties in the state are just 2.5 percent of total ridership and 12 percent of total routes.

In general, there are imbalances throughout the state between the total number of routes operated by transit providers and annual passenger trips. There are cases where the number of routes operated appears to exceed ridership demand. CT*transit* Waterbury/Meriden/Wallingford and Norwalk Transit District each account for 12 percent (combined total of 24 percent) of the total routes statewide, but the annual passenger trips on these bus systems are only five and a half percent and four percent, respectively (combined total of 9.3 percent). A similar pattern can be seen with Southeast Area Transit and Middletown Area Transit. Both of these properties represent a modest share of total bus routes statewide (7 percent and 5 percent, respectively), but their share of annual passenger trips are low (2.3 percent for Southeast Area Transit and 0.9 percent for Middletown Area Transit). This suggests that these transit properties are providing more service than there is demand and there may be opportunities for these properties to increase efficiencies. It should be noted while no properties achieve an even balance between routes operated and annual passenger ridership, some properties come close (within two percent), such as CT*transit* Stamford, CT*transit* New Britain/Bristol, Housatonic Area Regional Transit, and Milford Transit District.

Conversely, CT*transit* New Haven and Greater Bridgeport Transit experience a high level of annual passenger trips (23% and 15%, respectively) but they represent a modest percentage of total number of routes operated by transit providers (each representing 7%). In these cases, it appears that ridership demand could be exceeding service provided which may indicate opportunities to add or expand bus service.

The rural transit properties (Estuary Transit District, Northwestern Connecticut Transit District, Windham Region Transit District, and Northeastern Connecticut Transit District) each account for only two percent of the total routes statewide (operating between four and five routes per property) and they have corresponding low percentages annual transit trips (less than one percent).

Figure 35: Total Number of Routes (Percent of Statewide Total)



Source: CTDOT, 2014 data

4.1.3 Fleet Size

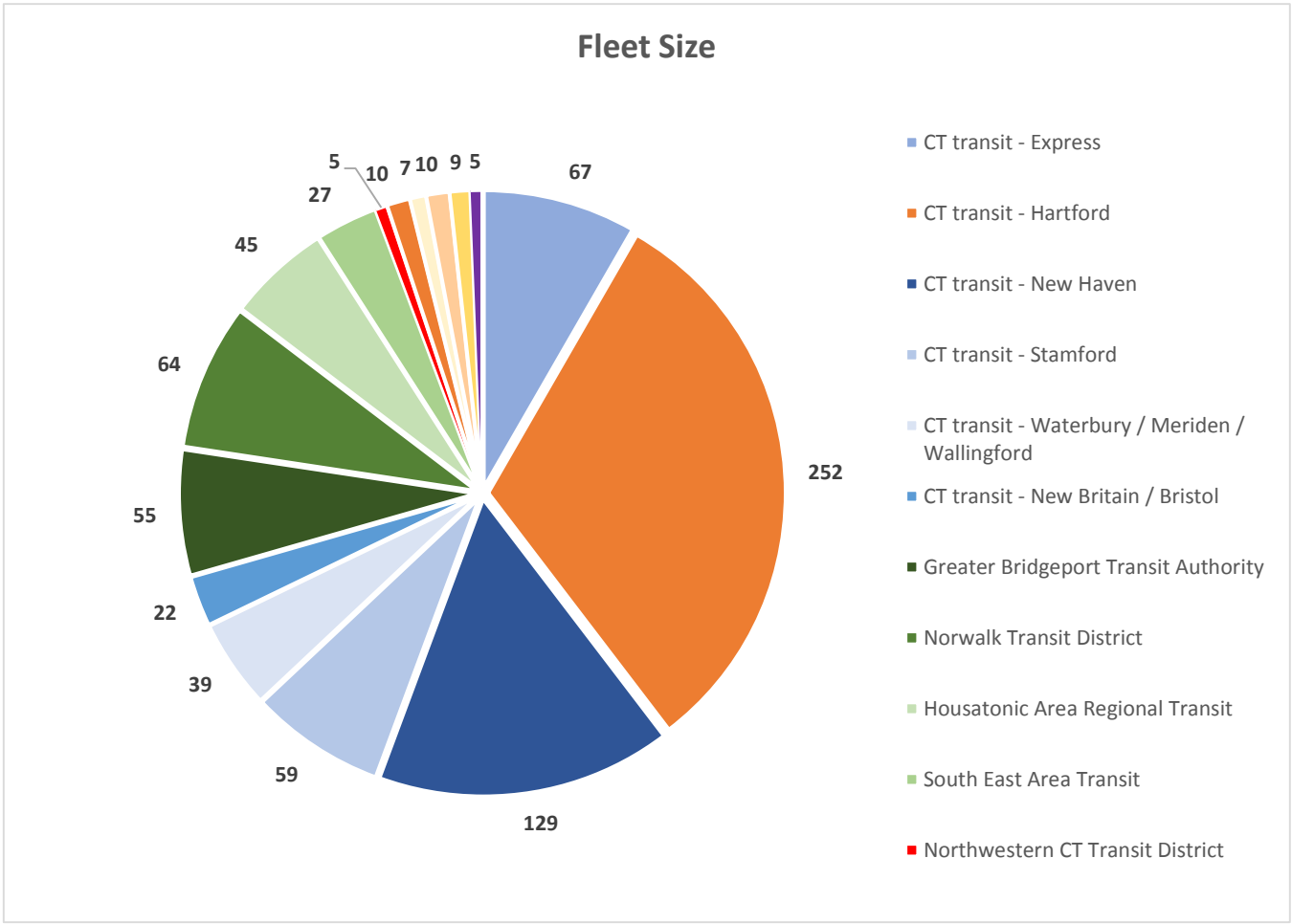
Fleet size, or the total number of vehicles used by each system to provide service also describes overall system size. This metric, as shown in Figure 36 includes both vehicles used for revenue service and vehicles that are kept in reserve as spares. CT*transit* properties account for 71 percent of the total fleet in the state, compared to almost 75 percent of total ridership in the state.

Non-CT*transit* properties with 750,000 annual riders and above (GBT, NTD, SEAT, and HART) account for nearly 23 percent of total ridership in the state and 24 percent of the total fleet in the state,

Non-CT*transit* properties with less than 750,000 annual riders (MAT, WRTD, and MTD) account for two percent of total ridership in the state and three percent of the total fleet in the state.

The rural properties (NWCTD, ETD, and NECTD) account for only 0.5 percent of the total ridership in the state, but represent three percent of the total fleet in the state. The mismatch between fleet size and ridership for rural transit properties is likely due to varying vehicle sizes (smaller vehicles carry fewer people).

Figure 36: Fleet Size



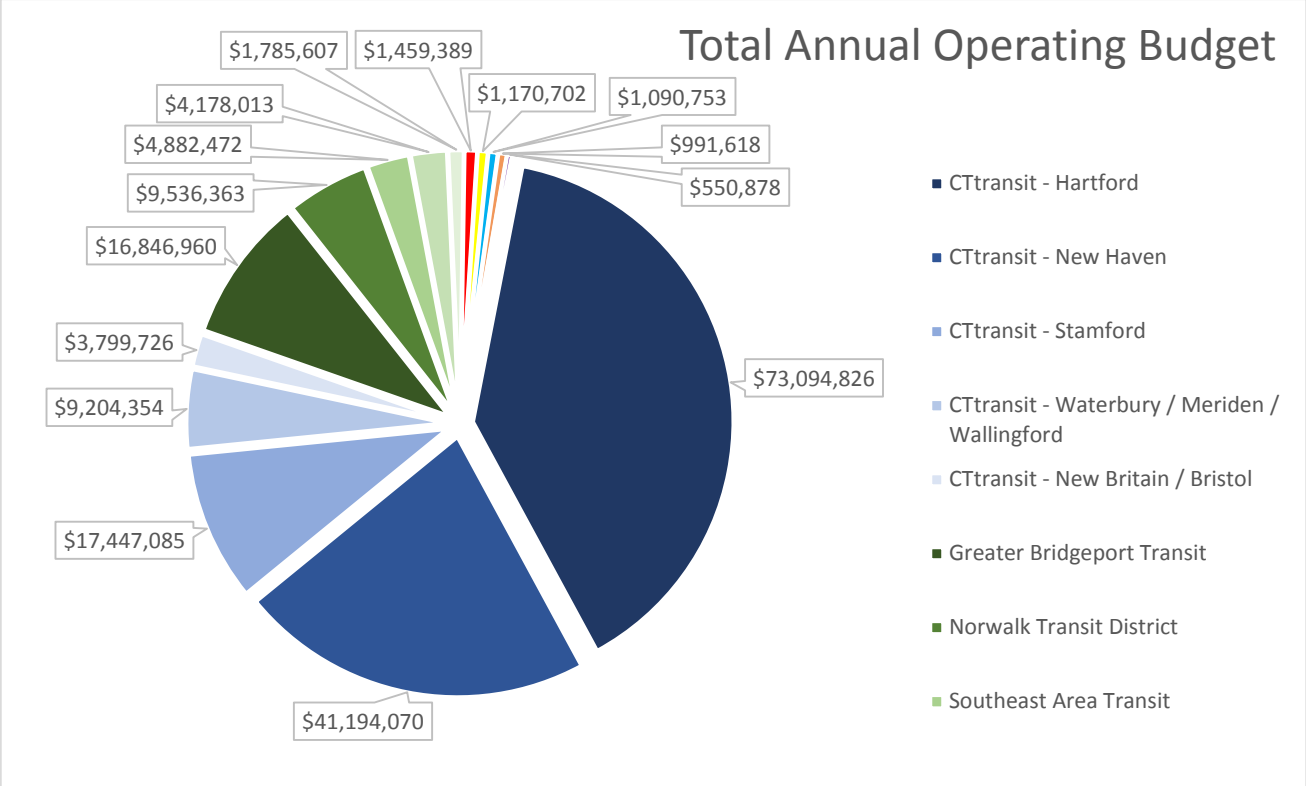
Source: CTDOT, 2014 Data

4.1.4 Total Annual Budget

Another metric of system size that can be used to compare agencies is the total annual operating budget. This metric reflects the total cost of operating bus service. As with other metrics, CT*transit* properties make up the majority of operating costs in the state, with the other large transit districts making up the next largest part of the cost.

All properties appear to have budgets that match ridership fairly well. As shown in Figure 37, the CT*transit* properties are 77 percent of the total operating budget in the state, which is well matched to the amount of total ridership that they carry. Non-CT*transit* properties with 750,000 annual riders and above are 19 percent of total budget, and 23 percent of total ridership, non-CT*transit* properties with less than 750,000 annual riders account for 2.4 percent of the total budget and 2 percent of the total ridership. Rural properties represent 1.4 percent of the total budget and 0.5 percent of the total ridership.

Figure 37: Total Annual Operating Budget



Source: CTDOT, 2014 Data

4.1.5 Fare

Almost all of the agencies providing fixed route bus transit in the state charge an equivalent one-way fare of $1.50. Three properties differ, as follows:

- Greater Bridgeport Transit: $1.75
- Windham Region Transit: $1.00
- Northeastern Connecticut Transit District: $1.00

Fares are generally consistent across the state. The rural transit properties charge lower fares as they are operated in areas with lower transit demand and operate on less frequent schedules and generally have lower operating costs compared the larger and mid-size properties.

Consistency among fare structures enables ease of understanding and conveys unity of the system on a statewide level while providing for an ease of use when traveling between one system and the adjacent system.

5

Conclusions and Next Steps

5.1 Conclusions

Connecticut is comprised of a wide range of bus service, from small transit properties serving rural areas to larger properties serving urban areas. The majority of service is provided by the five major transit properties in the CT*transit* system. These properties primarily serve urbanized areas and their routes are effective in serving metropolitan population and employment as well as transit dependents. Greater Bridgeport Transit, SEAT and Norwalk Transit District are also large properties which carry a significant percentage of the statewide ridership. The mid-sized and rural transit properties are more dispersed, serving fewer riders due to their non-urbanized geographies and demographics, but they play an important role in providing for access to transit throughout the state.

With nineteen total properties throughout the state, many with different owners, operators, and managers, there is the potential for some inefficiencies and gaps in coverage on the boundaries between service areas. Additionally, there could be confusion for riders on how to benefit from the system on a statewide basis including how to travel across different systems. However, there are many consistencies between the properties including (for the most part) fare structure, ridership as compared with route and fleet distribution, and the ability to serve as intermodal links to each other at transit hubs, at park and rides and at rail stations.

5.2 Next Steps

Based on the data gathered under this task, a gap analysis will be performed to identify statewide needs and overall areas of system deficiencies. Statewide Bus Service Guidelines will be developed so that a consistent benchmark for performance across the state can be implemented and used to provide annual evaluations of system performance. These guidelines will be initially applied, on a route (and in some

cases, a system) level as this study advances. The route performance analyses will be used to assess if specific routes may require modification or further investment.