

Existing Conditions - Interim Report for the “Creation of a Coordinated Rail & Bus Network on Eastern Long Island”

This document has been prepared by the Volpe National Transportation Systems Center on behalf of the Towns of East Hampton, Riverhead, Shelter Island, Southampton, and Southold. Funding was provided through a New York State Department of State Shared Municipal Services Incentive Grant.

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1. Introduction

The East End of Long Island, defined here as the Towns of East Hampton, Riverhead, Shelter Island, Southampton, and Southold and located at the extreme eastern end of Long Island, has longstanding traffic congestion and internal circulation problems. The East End's location and geography limit its roadway network. As a popular location for tourists and second home owners, the East End experiences significant seasonal traffic congestion. At the same time, the emphasis on tourism in the local economy and the desire to maintain a rural quality heightens the importance of scenic views and preservation of open space and makes roadway capacity increases difficult to implement. A number of public and private transportation providers serve the area, but uncoordinated schedules and service limitations make internal circulation difficult for those who do not or choose not to drive. This is of concern to local governments and residents, especially as the population ages.

The Towns of East Hampton, Riverhead, Shelter Island, Southampton, and Southold jointly applied for a New York State Department of State Shared Municipal Services Incentive Grant, with the Town of Southampton as the lead municipality. The grant requested funding for "planning and assessment activities associated with the creation of a coordinated rail-bus network on Eastern Long Island". Upon award of the grant, the five Towns then contracted with the U.S. Department of Transportation Volpe National Transportation Systems Center (Volpe Center) for assistance in analyzing the feasibility of providing more and better coordinated public transportation services using the rail and bus infrastructure now in place, and, alternately, evaluating different transportation concepts for the region.

Several previous studies have examined transportation issues in the region. As agreed in the Town-Volpe Statement of Work, a review of existing research, reports and plans is to form the basis of the initial analysis of conditions. Although the primary focus of this project is not merely to identify issues, an assessment of existing conditions is a necessary first step in developing, evaluating, and refining alternatives for improving alternative transportation in the region. To prepare this report, Volpe Center staff reviewed numerous previous local and regional studies, conducted a series of site visits, and interviewed staff from the five towns, transportation and planning agencies, and stakeholder groups.

This report is an interim product, which summarizes existing conditions; findings will be used to appropriately scale and evaluate transportation alternatives. Future reports will examine the rail-bus concept in detail and provide alternative concept evaluation. After additional input from regional stakeholders, the financial and management aspects of the selected concept will be detailed in a "road map" to assist the region in moving forward on public transit initiatives.

2. Demographics

2.1. Resident Demographics

This section provides a demographic overview of the East End, defined here as the five easternmost towns of Suffolk County: East Hampton, Riverhead, Southampton, Southold, and Shelter Island. It is designed to ensure that analysis of the East End’s transportation issues and evaluation of options proceeds from an understanding of the area’s population and the underlying demographic factors that influence travel demand. This section makes use of data from the U.S. Census, supplemented by data from the local jurisdictions. Census data is widely used in transportation planning as it provides detailed information on demographics and travel behavior and allows for “apples-to-apples” comparisons both locally and nationwide.

2.1.1. Population Overview

According to the 2000 Census, the East End has just over 120,000 residents. These figures reflect the population as of April 1 of that year, and thus may be thought of as reflecting the year-round rather than seasonal population. The East End has experienced high population growth in the past thirty years, and projections indicate that the growth will continue. The growth consists of both second home owners and primary residents. Some observers have also noted a trend toward the transition of seasonal residents to full-time residents. During the period between the 1990 and 2000 Census, the year-round population of the East End grew by about 18 percent. More recent Census figures are not available at the town level, but at the county level, the population of Suffolk County grew by 3.5 percent during the period from 2000 to 2006.

Population density and a spatial concentration of activities are typically regarded as essential for the viability of a transit system, particularly one based on fixed routes. The overall population density runs from 184 persons per square mile on Shelter Island to 411 in Riverhead, with an overall average of 361 persons per square mile for the five-town East End area. This figure reflects the fact that much of the East End’s acreage is farmland, protected open space, or wetlands. Residential densities are higher within the settled areas (land use is discussed in more detail in Section 4).

Table 1: Total Population and Population Density (persons per square mile)

	East Hampton	Riverhead	Shelter Island	Southampton	Southold
Total Population	19,719	27,680	2,228	54,712	20,599
Population Density (persons per square mile)	265	411	184	394	384

Source: U.S. Census 2000

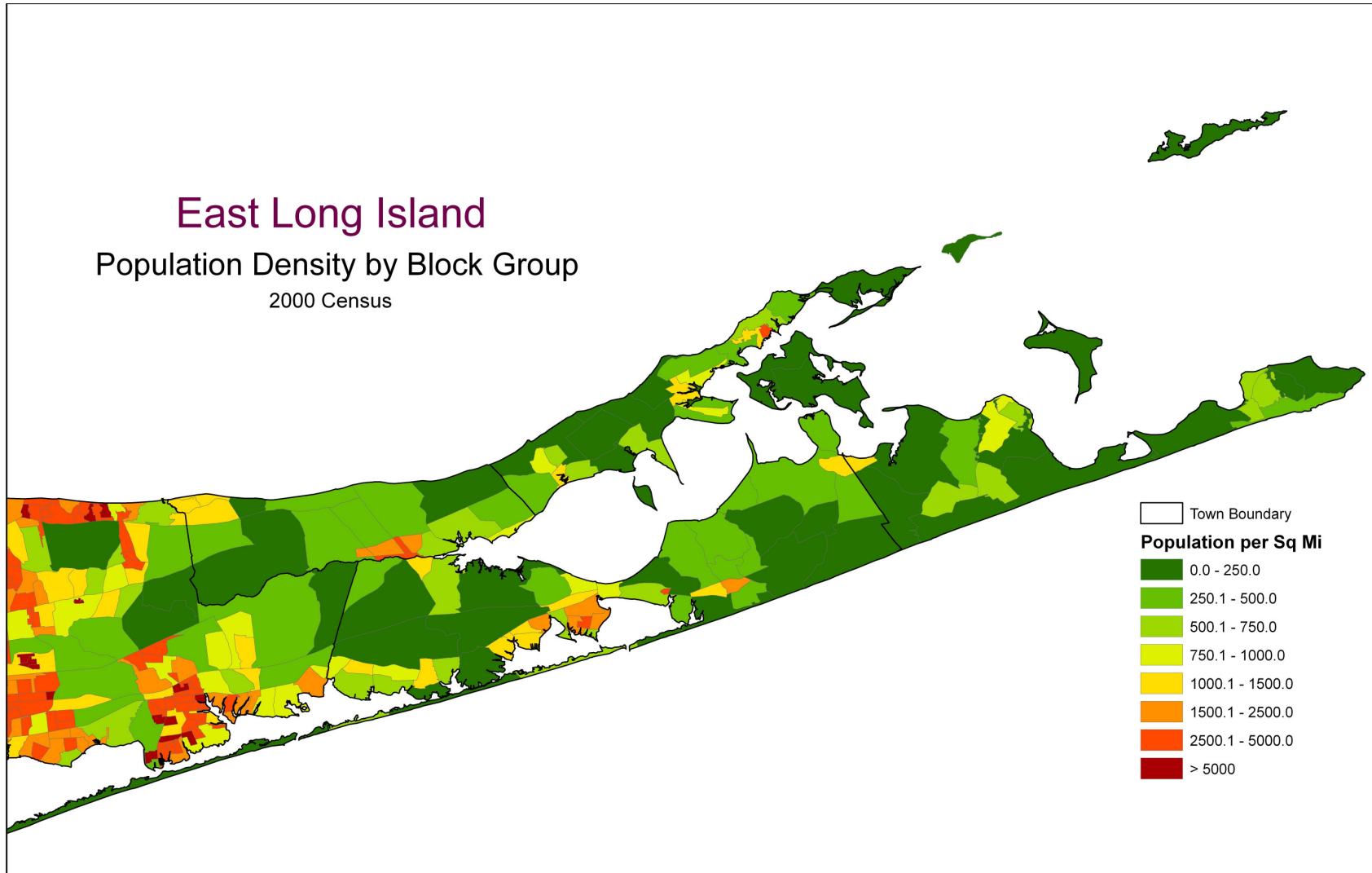


Figure 1: Eastern Long Island Population Density

As a point of comparison, the table below shows density statistics that are illustrative of different types of land-use patterns:

- Suffolk County as a whole, which includes the East End and the more thickly settled western towns
- Nassau County, a suburban area with generally denser development patterns
- Manhattan, a major urban center where over 80 percent of commuting trips are made on public transportation or on foot
- Martha’s Vineyard and Barnstable County, Massachusetts, which like the East End have large seasonal populations and village centers separated by extensive areas of protected open space. Martha’s Vineyard has a well-used, year-round bus transportation system. Barnstable County is served by several local transit routes, including the Flex, an innovative fixed-route line which may deviate by up to .75 miles.

Table 2: Population density comparisons (persons per square mile)

	East End: 5-Town Area	Suffolk County	Nassau County	Manhattan	Martha's Vineyard	Barnstable County
Total Population	123,938	1,419,369	1,334,544	1,537,195	14,987	222,230
Population Density (persons per square mile)	361	1,556	4,655	66,940	144	561.9
<i>Source: U.S. Census 2000</i>						

Age

The five towns of the East End have an older population than Suffolk County as a whole, with relatively smaller school-aged populations and relatively larger numbers of senior citizens. However, both the *Town of East Hampton Comprehensive Plan* and the *Sustainable East End Development Strategies (SEEDS) study* point to increases in the number of children and school enrollments, as well as moderating growth of the over-65 population. The latter trend is expected to reverse in a few years as large numbers of baby-boomers retire. Age distribution is an important variable for transportation planning because of the generally greater reliance on public transit among senior citizens and youth.

Table 3: Age Distribution (by percent of total population)

Age	East Hampton	Riverhead	Shelter Island	Southampton	Southold	Suffolk County
Under 18	14	23	18	21	22	26.1
18 to 24	4.5	6.1	4	7.7	5.2	7.6
25 to 44	23	28	20	29	24	31.2
45 to 65	31.3	24.2	29.1	26	26.5	23.3
65 and Over	27	19	29	17	23	11.8
Median Age	41.6	40.6	49.2	40.4	44.7	36.5

Source: U.S. Census 2000

Income

Census data indicate that the median household income in 2000 in the five East End towns ranged from \$46,195 to \$53,887. This is higher than the national average (\$41,944), but lower than that of Suffolk County (\$65,288).¹ The median marks the point at which half the households earn more per year and half earn less. Income differences between the East End and the rest of the county are due to a number of factors, including the greater number of retirees in the East End. A demographic report by the Long Island Regional Planning Board also discusses a rising divide between the rich and poor on Long Island in recent years².

¹ Reported in 1999 dollars.

² Long Island Regional Planning Board. Long Island Demographic Update: 2000-2006 Working Paper. September 2007.

Table 4: Household Income Distribution (by percent of total households)

Household Income	East Hampton	Riverhead	Shelter Island	Southampton	Southold	Suffolk County
Less than \$10,000	6.7	6.6	5.7	6.5	5.8	4.5
\$10,000 to \$14,999	5.5	6.4	4.6	4.8	7.7	3.5
\$15,000 to \$24,999	10.7	13.2	11	9.1	11.2	7.3
\$25,000 to \$34,999	10.2	12.3	8.7	10.6	11.8	8.1
\$35,000 to \$49,999	15.1	15	17.3	14.4	13.7	12.9
\$50,000 to \$74,999	16.8	18.1	17.5	19.5	18.3	21.7
\$75,000 to \$99,000	13.5	12.8	17.1	12.9	13.4	16.5
\$100,000 to \$149,000	12	10.1	8.8	12.7	12.1	16.2
\$150,000 or more	9.8	5.4	9.3	9.4	6.2	9.4
<i>Source: U.S. Census 2000</i>						

Race, Ethnicity, and Language

These variables influence transportation needs to the extent that they are correlated with housing and employment patterns. According to the 2000 Census, most of the East End’s population (85 to 90 percent) self-identifies as non-Hispanic white and similar proportions speak only English at home. However, just over 8 percent identify as Hispanic or Latino, and nearly 8 percent speak Spanish as the primary language at home. The *East End Transit Survey*, a study commissioned by Five Town Rural Transit Inc., included a Spanish-language session and survey questions targeting the East End’s Spanish-speaking population. The responses of this population were markedly different from those of other respondents, notably with regard to usage and familiarity with Suffolk County Transit services.

Spanish-Language Planning Workshops held as part of the SEEDS effort also identified different transportation characteristics of the Spanish-speaking population, such as low vehicle ownership and high reliance on public transportation³.

The *Town of East Hampton Comprehensive Plan* also cites an increase in ethnic diversity, especially of the Hispanic/Latino population since 1990, both within the town and throughout the county. This is supported by county-level Census data, which show an increase of nearly 24 percent in the population described as “Hispanic or Latino of any race” between 2000 and 2006. The geographic distribution within this category ranges

³ NYMTC. *Sustainable East End Development Strategies Summary Report*. June 2006

from 2.4 percent in Shelter Island, to 14.8 percent in East Hampton. The same variation appears with respect to language. In East Hampton, 20 percent of the population 5 years of age and older speak a language other than English as a primary language at home, three-quarters of whom are Spanish speakers. Of those, 8.1 percent are reported to speak English “less than well.” Such language considerations are important, particularly if, as reported in the focus group, travel patterns vary by demographic group.

2.1.2. Seasonal Patterns

The Sustainable East End Development Strategies (SEEDS) Study highlights some of the seasonal demographic trends not easily captured with Census data of year-round residents. According to the analysis conducted by SEEDS, the East End’s population is 2½ to 3 times higher during the peak summer season, with the breakout by town as shown below:

Table 5: Estimates of Year-Round vs. Seasonal Population

	Estimated Year-Round Population, 2003	Estimated Total Population in Season, 2003 (Year-Round plus Seasonal Residents)
East Hampton	20,275	93,756
Riverhead	31,203	44,294
Shelter Island	2,244	9,471
Southampton	56,760	160,230
Southold	20,945	49,466
East End Total	131,427	357,217
<i>Source: SEEDS Inventory and Analysis, Tables 2-28 and 2-30</i>		

This marked seasonal increase means that the overall population density in the East End rises to approximately 1040 persons per square mile during the peak of the summer. This suggests the potential for more favorable conditions for fixed-route transit during the season.

The SEEDS study also notes that second home ownership is rising, with approximately 38 percent of all homes classified as seasonal residences, roughly consistent with the 2000 Census data on seasonal use of housing units summarized in Table 8. This has been accompanied by a move toward larger seasonal homes and an extension of the season into the autumn and spring. The service economy related to these second homes – such as architecture and landscaping – is growing, which adds to demand for housing and traffic congestion. Under such development pressure, the study cites a loss of rural character and agricultural land, with development moving to the more rural North Fork.

Table 4: 2000 Census Data on East End Housing Stock

	Total Housing Units	Occupied Units (April 1)	Vacant as of April 1, but held for “seasonal, recreational, or occasional use”
East Hampton	19,640	8,101	10,693 (54%)
Riverhead	12479	10749	1,165 (9%)
Shelter Island	2,370	996	1,307 (55%)
Southampton	35836	21504	12,604 (35%)
Southold	13,769	8,461	4,689 (34%)
East End Total	84094	49811	30,458 (36%)

2.2. Visitor Demographics

In addition to year-long residents and seasonal inhabitants, Long Island attracts a number of leisure travelers, who contribute to the region’s economy and transportation demands⁴. In 1999, there were approximately 14.3 million person-days spent on the island in connection with leisure trips, with total visitor expenditures totaling just under \$1 billion. (The data do not permit an accounting of the East End’s share of these totals.)

Compared to a group of other East Coast vacation destinations, Long Island stands out for its relatively high share of visitors who are visiting friends and relatives (50%) and who stay in private homes (46 percent) rather than in commercial accommodation. The average length of stay is also a bit lower, at 3.8 days.

Visitors to Long Island tend to come from the middle age ranges (50 percent are between 35 and 54) and have higher-than-average incomes and educational attainments. They are drawn largely from nearby markets: New York, Scranton, Washington, Philadelphia, Hartford-New Haven, Boston, Albany, and Rochester. Of those not arriving by rail, most (88 percent) arrive by car, though 12 percent arrive by air.

⁴ The visitor statistics in this section are drawn from the *1999 Domestic Travel Report*, prepared by D.K. Shifflet & Associates Ltd. for Long Island Convention and Visitors Bureau and Sports Commission, October 2000.

3. Land Use

3.1. Overview

The natural and built environments of the East End are primary attractions for visitors and residents alike. Historically, the area was largely agricultural, with the cultivation of cauliflower and potatoes as major industries. Town, village, and hamlet centers were the commercial and community centers. Today, development patterns exhibit more suburban characteristics, but strong open space and agricultural protection programs have allowed the area to retain much of its rural character.

3.2. Development patterns

As noted in the demographic overview section, population densities today are still relatively low. Development controls also restrict significantly higher-density development. In addition, a review of the comprehensive planning documents and conversations with local planners suggests that preservation of open space and natural resources is a strong concern for local residents. For example, one of the three main land use recommendations of the SEEDS study was to reduce overall development potential, while focusing new development in already-developed areas.

Today, hamlet, village, and town centers still display traditional development patterns, with low-rise shops on small lots and residential areas within walking distance. Several of these areas are settled at densities of four to five dwelling units per residential acre, which is a common rule-of-thumb threshold for the viability of regular transit service.

While retail remains in many of these village and hamlet centers, many are almost exclusively dedicated to high-end retail, which contributes to the tendency of residents to drive to the major shopping destinations of Bridgehampton on the South Fork and Riverhead's CR 58 corridor, which have a wider variety of goods and services.

Residential development is largely single-family. Throughout the East End, 85 to 95 percent of the housing stock consists of detached single-family houses. (One exception is the Town of Riverhead, which has more multi-unit buildings and mobile homes, though even here detached single-family houses comprise 72 percent of residences.) Lot sizes in older neighborhoods tend to be smaller in acreage, while new developments are more typically on lots of one acre or more. Several studies have noted that newly built homes, particularly those intended as seasonal residences, have been growing larger in size and footprint. The increase in second-home ownership also means that many of these homes may be vacant much of the year.

Major employers are schools, hospitals, and local governments. There are relatively few other major generators aside from town, village, and hamlet centers and public beaches

(in season). As noted above, major shopping destinations, with a wider variety of goods and services, are in Bridgehampton on the South Fork and along Riverhead’s Route 58 corridor.

Housing costs vary significantly by area within the East End but are generally high. By one common measure of housing affordability – the share of household income that goes to housing payments – many East End households are heavily burdened by their housing costs. Across the East End, fully one-quarter of homeowners and over a third of renters dedicate more than 35 percent of their income to housing costs. A lack of affordable housing means that many employees cannot afford to live near their jobs. Several reports have also noted that the East End’s general lack of affordability increases demand for the reverse commute trip or so-called “trade parade” (i.e., traveling east in the morning and west in the evening).

3.3. Development controls

Aside from the normal zoning and subdivision development controls, many other regulations and programs impact development in the East End.

3.3.1. Wastewater

Much of the East End is served by septic systems. Article 6 of the Suffolk County Sanitary Code “established density limitations in unsewered areas to control nitrogen load from sewage disposal and the impact on ground surface water resources⁵.” Article 6 acts as an effective cap on development density, as it sets both minimum lot sizes and maximum dwelling units per acre. In those areas with sewer systems, capacity limitations also pose a potential barrier to new development. On the East End there are three sewage treatment systems operated by municipalities-in Riverhead, Greenport and Sag Harbor; one operated by the Air National Guard/Suffolk County at Gabreski Airport and some privately operated systems at select locations.

Table 5: Article 6 Development Constraints

	Minimum lot sizes	Maximum dwelling units per acre
Areas with public water	20,000 s.f.	2
Areas with no public water	40,000 s.f.	1

3.3.2. Central Pine Barrens

The Central Pine Barrens is a natural region of Suffolk County notable for unique vegetation patterns and especially important for its role in providing fresh drinking water for county residents. The 1993 New York State Long Island Pine Barrens Protection Act

⁵ AKRF. *SEEDS Inventory and Analysis*. 2004.

designates this area of 102,500 acres. Large portions of Southampton and some areas of Riverhead are included in the designated area.

The Pine Barrens Credit (PBC) Program is a transfer of development rights program intended to protect the area from development. The Pine Barrens Commission notes that “as of June 2006, 615 parcels totaling 1323 acres have been protected, with an average parcel size of 2.15 acres.”⁶

Protected open space

A variety of open space preservation tools is used by the county and the individual towns. For example, Southampton purchases open space property and preserves agricultural lands by buying development rights. This program is funded by the Community Preservation Fund, which draws from a 2% real estate transfer tax. All five study area towns participate in the Community Preservation Fund.

Table 6: Protected Open Space

Town	Farmland Preserved (acres)	Open Space Preserved (acres)	% of Town’s Total Area
Riverhead	2,600	7,400	25%
Southold	2,300	2,600	13%
Shelter Island	N/A	2,600	33%
Southampton	2,400	14,800	19%
East Hampton	700	12,500	27%
<i>Source: The New York Times, April 2001 (In AKRF. SEEDS Inventory and Analysis)</i>			

3.4. Future development

As noted above, a goal created in the SEEDS process was to reduce future development potential. Since SEEDS was completed, “upzoning”, or reducing the maximum allowable development in a zone, has been carried out in East Hampton and Riverhead. In the case of the latter, the population at buildout is projected to have been reduced from 51,000 to 43,000, as compared to a population of 27, 680 in 2000.

While SEEDS concluded that zoning changes were needed to concentrate new development in hamlet and village centers, with the goal of supporting future transit service and protecting open space, these have not yet been put into place. In general, increasing density increases the viability of transit service, as many people will share origins and destinations and the transportation times between them will be less. One obstacle are the density controls created by wastewater regulations, as noted in Section 3.3.1. Effecting land use change through zoning is a slow process; it may be many years after a zoning revision is complete that its effects begin to be felt.

The Calverton site

A 2900-acre site formerly home to the Grumman Corporation is now known as Enterprise Park at Calverton. The site has been the subject of various redevelopment plans and is currently rezoned for Light Industrial, Planned Industrial Park, Planned

⁶ Central Pine Barrens Commission. http://pb.state.ny.us/pbc/pbc_program_fact_sheet.pdf

Recreational Park, and Calverton Office uses. At build-out, the site could add significantly to local employment and traffic.

4. Transportation Network

4.1. Travel Patterns

A number of studies and reports, including the SEEDS process, have noted worsening traffic congestion in eastern Long Island, fueled by population growth, sprawling development, a shortage of workforce housing, and an extension of the usual summer season into the spring and autumn. This is occurring side-by-side with a growing service economy related to second homes.

Tables 8 and 9 summarize some of the most important Census questions related to transportation: journey-to-work mode choice and vehicle availability, again with Suffolk and Nassau counties and Manhattan shown as points of comparison. Although the commuting mode shares vary somewhat across the five towns, the general pattern is one where automobile commuting is prevalent and public transit usage is limited. This pattern is similar to that of Suffolk County as a whole, albeit with slightly less transit usage and more walking and working from home. In fact, within the five towns, more commuters work from home than use public transportation.

Table 7: Primary Mode of Commute to Work (by percent of workers over 16)

Commute to Work	East Hampton	South Hampton	Riverhead	Southold	Shelter Island	East End: 5 towns	Suffolk County	Nassau County	Manhattan
Car, Truck, Van (alone)	70.5	75.2	80.9	78.5	69.1	75.8	78.1	69.4	7.6
Car, Truck, Van (carpool)	12.9	10.5	9.7	8.4	12.3	10.4	10	8.6	3.4
Public Transport	2.7	3.7	2.6	3.2	1.4	3.2	6.8	15.7	59.6
Walked	3.1	3.8	2.4	3.6	4.2	3.4	1.7	2.7	21.9
Other	2.4	1.1	1	1.4	0.4	1.3	0.8	0.7	1.7
Worked at home	8.4	5.6	3.3	4.9	12.7	5.6	2.7	3	5.5
Mean Travel Time (minutes)	21.2	26.2	27.4	26.8	19.7	—	31.8	34.3	30.5

Source: U.S. Census 2000

Household vehicle availability is a major predictor of transit usage. In particular, residents of zero-vehicle households commute via public transit and carpooling at much

higher rates than the population as a whole. Just under 6 percent of East End households have no vehicles available, while a small majority of households have two or more available. This is broadly similar to Suffolk County as a whole. In comparison, in Manhattan, a dense area of high transit usage, a strong majority of households – nearly 78 percent – have no vehicles available at all.

Table 8: Vehicle Availability by Household (percent of households)

Vehicles available	East Hampton	South Hampton	Riverhead	Southold	Shelter Island	East End: 5 Towns	Suffolk County	Nassau County	Manhattan
0	3.9	5.4	8.5	5.4	3	5.7	5.4	7.7	77.5
1	36.9	36.7	35.9	32.9	37.3	35.9	26.8	29.8	20.2
2	39.5	41.1	35.1	44.5	43.4	40.2	45.2	43.9	1.8
3 +	19.7	17.1	20.4	17.2	16.3	18.2	22.5	18.6	0.5

Source: U.S. Census 2000

4.1.1. Journey-to-Work Flow

Work-related travel now represents a relatively small share of overall travel (just under 20 percent nationally), so commuting data should be regarded as only one component of the larger transportation picture. Still, the commute trip is important because it often takes place during peak periods and is still, for many people, the primary journey around which other activities are scheduled. Data from the 2000 Census were analyzed for patterns of travel between places of residence and places of work, both for those residing in the East End and for those commuting to work in the East End from elsewhere⁷.

The journey-to-work data reveal a few key facts about commute travel to, from, and within the East End.

- First, most commuting trips are quite local: the majority of trips are entirely within the East End, and most often they start and end within the same town. This reinforces the importance of assessing *local* transportation options and mobility strategies.
- The next largest group of commuter flows are between the East End and western Suffolk County. The number of western Suffolk commuters traveling into the East End (21,160) is roughly double the number traveling the other way (11,516). This is consistent with experiences of peak traffic congestion for travel eastbound in the morning and westbound in the afternoon.

⁷ The Census questionnaire is based on where the respondent worked most often in the previous week. There are some known methodological issues with this question, particularly in places such as the East End where workers in the building trades often visit multiple sites during a given week and do not have a fixed place of work in the conventional sense.

- There is a relatively small but significant number of regular long-distance commuters between the East End and New York City. About 4 percent of employed East End residents (2,500 people) commute to the city, while a smaller number (about 950) city residents regularly commute to the East End, largely to the Towns of Southampton and East Hampton.

More specifically, the Census 2000 Journey-to-Work data show that among residents of the five East End towns, the majority (55 percent) work within their town of residence. Another 16 percent work elsewhere within the East End, with Southampton-to-Riverhead constituting the largest single flow between towns. An additional 20 percent work elsewhere in Suffolk County.

Looking instead at the composition of the East End workforce, again most East End workers come from within the East End. But among those who live elsewhere and commute into the East End, these commuters overwhelmingly (88 percent) come from the western towns of Suffolk County.

The following tables summarize Journey-to-Work flows by town of residence and by town of employment.

Table 9: Journey to Work by Residence

Live in: Work In:	East Hampton	Southampton	Shelter Island	Riverhead	Southold	East End Totals
East Hampton	6325	1305	52	100	101	7883
Southampton	1127	14538	59	1561	616	17901
Shelter Island	25	56	696	0	112	889
Riverhead	136	2032	17	4708	1015	7908
Southold	52	368	34	583	4979	6016
Rest of Suffolk Co.	885	4510	98	4493	1530	11516
Nassau Co.	195	660	4	396	258	1513
Manhattan	300	1144	21	199	140	1804
Rest of NYC	76	405	23	127	78	709
Connecticut	5	8	0	0	4	17
Other	114	337	7	62	84	604
Total	9240	25363	1011	12229	8917	56760

Source: U.S. Census 2000

Table 10: Journey to Work by Employment Location

Work in Live In	East Hampton	Southampton	Shelter Island	Riverhead	Southold	East End Totals
East Hampton	6325	1127	25	136	52	7665
Southampton	1305	14538	56	2032	368	18299
Shelter Island	52	59	696	17	34	858
Riverhead	100	1561	0	4708	583	6952
Southold	101	616	112	1015	4979	6823
Rest of Suffolk Co.	1996	10130	102	7132	1800	21160
Nassau Co.	230	851	5	268	218	1572
Manhattan	127	132	0	14	0	273
Rest of NYC	157	306	12	105	100	680
Connecticut	7	29	0	0	150	186
Other	87	172	46	42	102	449
Total	10487	29521	1054	15469	8386	64917
<i>Source: U.S. Census 2000</i>						

4.1.2. SEEDS Origin-Destination Study

An origin-destination study was completed as part of the SEEDS study during the summer of 2002 by Eng-Wong, Taub & Associates. While the study had a very low 7% response rate, almost 1,800 surveys were received. It should be noted that the results were not weighted to represent the universe because of the low response rate. The survey was distributed at 10 locations on the South Fork to drivers and to local, express bus, LIRR, and ferry riders.

The following is a summary of major conclusions:

- 52% of auto drivers and 47% of local bus riders began and ended their trips in the South Fork while only 1% of LIRR and express bus riders and 6% of ferry riders had trips entirely within the South Fork.
- 64% of riders on the South Ferry had either an origin or destination outside of the South Fork; 31% had both origin and destination outside the South Fork.
- Most respondents (77%) stated home or second home as origin.
- Destinations were more varied (auto: 27% to shopping, 18% to social or recreation activities, 16% to home, 20% to other; local bus: 56% to work, 19% to shopping; express bus: 37% to home, 27% to summer home, 18% to social/recreation; LIRR: 42% to second home/vacation home, 39% to social/recreation; ferry: 33% to social/recreation, 16% to home, 23% to other)
- Most auto respondents were driving alone (42%) or had one passenger (30%)
- 21% of auto respondents make the same trip 5+ times per week, 21% 2-4 times per week. For bus riders 30% make the trip 5+ times per week and 30% 2-4 times per week. Other modes much less frequently (1-3 times per month or once per season).

- 52% of auto and 54% of local bus respondents were permanent residents of the South Fork.
- 60% of express bus, 80% of LIRR and 55% of ferry respondents were not a permanent or season resident of the South Fork.

Significantly, the survey revealed that most auto trips are shopping and recreation-oriented while local bus trips are work and shopping oriented. Furthermore, riders on the LIRR and express buses tended to be more likely traveling to second or vacation homes. This result may be skewed, however, since 85 surveys were returned from LIRR and 90% of those were heading eastbound, to the South Fork.

4.2. Roadway Conditions

Traffic congestion has been a long-standing concern in the East End. Geography and local opposition to roadway expansion restrict development of the roadway network and there is relatively little redundancy in the network. Congestion is driven by these physical capacity constraints, seasonal population fluctuations, dispersed land use patterns, and by physical bottlenecks such as the Shinnecock Canal on the South Fork.

I-495, the Long Island Expressway, terminates in Riverhead. Major roadways in the area include County Road (CR) 48 and State Route (SR) 25 on the North Fork; CR58 in Riverhead; and SR27 (Sunrise Highway), Montauk Highway, and CR39 on the South Fork. CR39 and SR27 run concurrently in sections.

Seasonal congestion along CR39 had led Suffolk County and the Town of Southampton to initiate the “Cops and Cones” program, wherein police manually placed traffic cones to create a second eastbound lane in the morning peak period. Construction on a second eastbound lane for almost the length of CR 39 began in the fall of 2007 and was completed in April 2008.

In order to better understand the seasonality in traffic volumes in the East End, several sources of data were considered. First, seasonal traffic patterns had been identified in the SEEDS study. These patterns reveal that traffic peaks during the summer months on both the North and South Forks, generally from June through September.

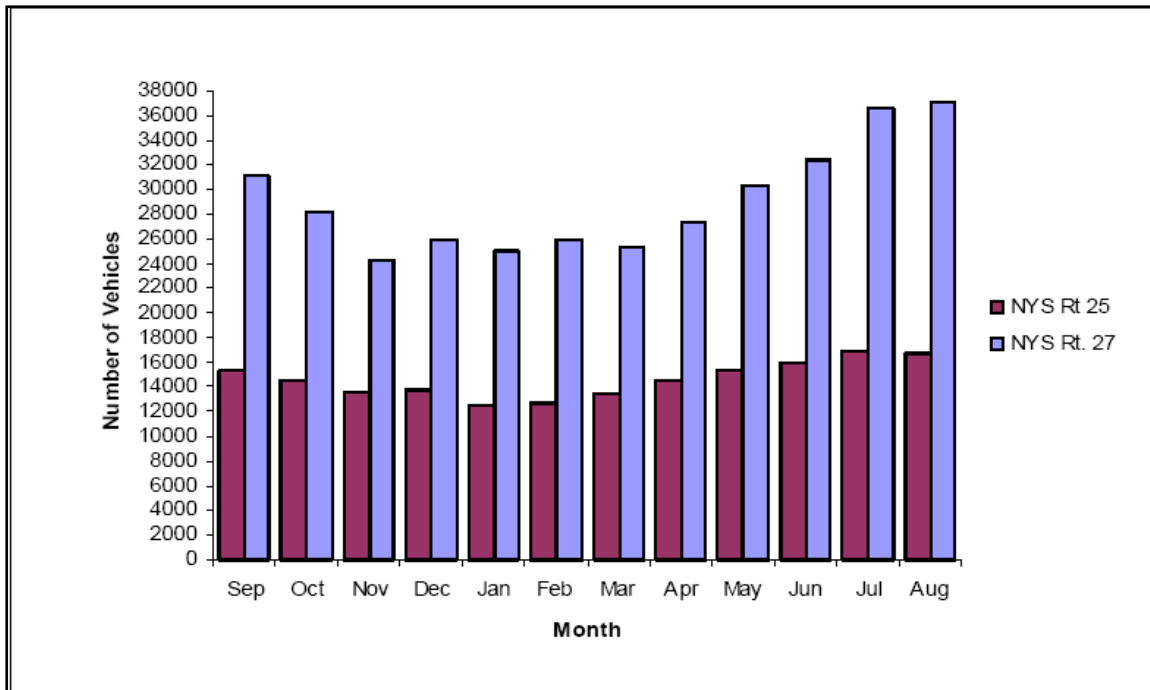


Figure 2: Comparison of Average Weekday Daily Traffic Volumes, NYS RT 25 (1998-1999) and NYS RT 27 (2000-2001), SEEDS Study

The traffic data from SEEDS were compared to more recent data available from the New York State Department of Transportation for 2006. Average daily traffic data for New York State Routes 25 and 27 was compiled and compared by month and is presented in the chart below⁸.

⁸ The traffic recorder for NYS 25 was located between Cross River Drive and South Jamesport Avenue and for NYS 27 between Peconic Drive and Tuckahoe Lane.

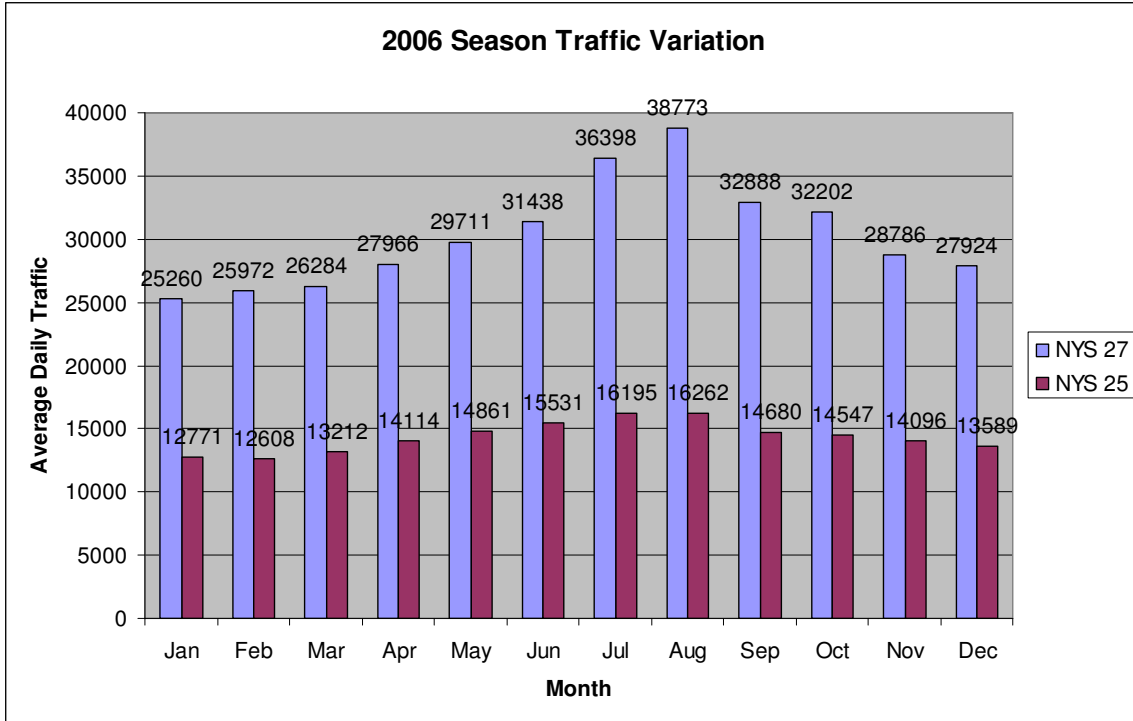


Figure 3: 2006 Average daily traffic by month

2006 monthly average daily traffic volumes closely match those recorded in 2000-2001, with a virtually identical seasonal pattern, indicating the traffic patterns in the East End have been consistent during this period.

In general, traffic congestion on the North Fork is less severe than on the South Fork. There is more redundancy in the roadway network and there is less demand, as the North Fork is less intensely developed than the South Fork. Interviewees noted that seasonal congestion on the North Fork is generally tied to special events, such as the Strawberry Festival, Maritime Festival, and pumpkin picking, concentrated on weekends during September through November. The vineyards along SR25 are also a major tourist attraction, especially in the fall. As noted in Section 3.2, big box and strip retail uses are concentrated along the CR58 corridor in Riverhead. The resultant traffic congestion on CR58 leads to secondary congestion along local roads.

On the South Fork, there is a degree of peak-hour traffic congestion year round. Traffic begins to noticeably increase around the end of March, as second homes are being prepared for occupancy during the summer season, and fall off in October.

4.3. Alternative Transportation

The study area is served by a number of public and private transportation providers, using three primary modes: local and intercity bus, commuter rail, and ferry. In general, local bus services account for most of the transit trips within the East End, while the commuter

rail and private intercity bus services are used for travel to and from New York City. Ferries provide connections to Shelter Island and New England. Unusually for an American city, private intercity bus service, operated by the Hampton Jitney and its main competitor, Hampton Luxury Liner, is a major component of transit service.

Each service will be briefly reviewed in this section.

4.3.1. Long Island Railroad

The Long Island Railroad (LIRR) operates commuter rail service between New York City and Long Island. It is a subsidiary of New York State's Metropolitan Transportation Authority, the MTA. The LIRR system consists of over 700 miles of track on 11 branches extending from Penn Station in Manhattan to Montauk on the eastern edge of Long Island. Within the East End, service is provided at 12 stations along two branches: the Ronkonkoma/Greenport Branch and the Montauk Branch.

Operations

The Long Island Railroad *Service Guidelines* sets the framework for its operations. These are goals, rather than guarantees, but generally guide the operation of the railroad. Stations are divided into four “level of service” categories (Level 1 being the highest and Level 4 the lowest) based on passenger boarding per day. Decisions about station amenities and frequency of service are linked to the station’s level of service. Stations within the study area fall into “Level 4: Fewer than 1,000 customers a day”.

The LIRR operates a fleet of bi-level commuter coaches with capacities of about 140 seats in the East End. The maximum length train is 12 cars, consisting of 3 locomotives and 9 passenger cars, for an effective capacity of 1,260 passengers. The “Cannonball,” which offers non-stop express service from Jamaica to Westhampton on Fridays (year-round) and on Thursdays in summer months, is the only train that regularly reaches this level of ridership.

As seen in Table 11, frequency of service in the study area is relatively low. The LIRR’s primary market is the commute trip to and from Manhattan. As described in the demographic summary above, relatively few East End residents work in Manhattan. Demand is somewhat greater in the summer months, due to the area’s attraction for tourists and the high number of second homeowners. In addition, infrastructure constraints restrict rail capacity along both the North and South Forks.

The LIRR timetable varies seasonally and, in some cases, by day of the week. Table 11 provides a general summary of service to and from the study area. The North Fork refers to the Ronkonkoma/Greenport branch from Riverhead to Greenport. The South Fork refers to the Montauk branch from Speonk to Montauk. Note that not all trains serve all stations on the South Fork (i.e., some runs skip Hampton Bays, Amagansett, Montauk, and/or other stops).

Moreover, several trains each day terminate at or originate from Speonk and do not serve study area destinations further east. The totals below do not include these Speonk trains (generally 6 eastbound and 10 westbound on weekdays; 5-6 eastbound and 7-8 westbound on weekends).

All figures represent the typical number of daily arrivals and departures and are based on current and past LIRR printed schedules. The figures do not reflect all schedule adjustments for the spring and fall shoulder periods or for holiday weekends.

Table 11: LIRR Service to and from the East End

		Summer			Winter	
		Mon. – Thurs.	Friday	Sat. – Sun.	Mon.-Fri.	Sat. – Sun.
North Fork	Eastbound	2 ^a	3 ^a	2	2 ^a	2
	Westbound	3 ^a	3 ^a	2	3 ^a	2
South Fork	Eastbound	6 ^b	10	5	6 ^{c, e}	5
	Westbound	5 ^d	5	4 on Sat., 8 on Sun.	5 ^e	4

a – One additional train to/from Riverhead

b – One additional train on Thursdays

c – One additional train on Fridays

d – One additional train on Mondays

e – Plus 3 South Fork Commuter Connection local trains during duration of SFCC (see below)

Freight Operations

New York and Atlantic Railway (NY&A) has leased the freight operation from the LIRR, and in the study area they run approximately one train per day, although this will vary. LIRR cannot deny freight operations but has scheduling priority.

Infrastructure

Service limitations in the study area exist due to infrastructure constraints, including non-electrification, areas of single track, and a lack of signalization. While much of the LIRR is electrified, the Oyster Bay Branch, the Port Jefferson Branch, the Montauk Branch, and the portions of the Ronkonkoma Branch in the study area are not. Operating in the East End requires use of diesel or dual-mode locomotives operating in diesel mode. The LIRR maintains diesel railyards in the study area at Greenport, Montauk, and Speonk.

The right-of-way (ROW) between Ronkonkoma and Greenport and between Speonk and Montauk is single-tracked with passing sidings. The passing sidings have hand-thrown switches. The ROW is generally 40-60 feet in width; track placement varies from being in the center of the ROW to being offset. Additionally, bridges and underpasses are generally much narrower.

A further service restriction is the lack of signalization beyond Ronkonkoma on the Ronkonkoma Branch and Babylon on the Montauk Branch. Without signals, the ROW is divided into blocks of between one and 14 miles and only one train may occupy a block at any time. The LIRR's 5-year Capital Improvement Plan (CIP) call for installation of signal control as far as Speonk on the Montauk Branch, but there are no plans to install signals beyond Speonk. With or without signalization, operations today are close to capacity on the South Fork with the additional shuttle service provided for the South Fork Commuter Connection. The primary capacity issue is the single-track limitation and the ability for trains operating in opposite directions to pass each other.

Ridership

As noted above, ridership in the study area is low and represents only a small part of the LIRR's customer base. For example, in Spring 2006, passengers at study area stations represented only 0.08% of all system passengers⁹. Table 12 divides the study area's LIRR stations into groups based on passenger counts performed in Spring 2006. It should be stressed that these counts are "point in time" and do not represent peak ridership, which is generally summer Fridays.

Table 12: East End LIRR Station Utilization - Spring 2006

Boardings & Alightings / Day	North Fork Stations	South Fork Stations
1-15	Greenport, Mattituck, Southold	Amagansett, Bridgehampton, Hampton Bays, Westhampton,
16-50		East Hampton, Southampton, Montauk
50-100	Riverhead	
100-300		Speonk

Source: LIRR 2006 Weekday Passenger Station Counts

Park and Ride

Parking at East End LIRR stations is provided by the LIRR or the local municipalities at no charge. Interviewees indicated that park-and-ride facilities in the study area are sparsely used during the year but are utilized more heavily in the peak summer months. The most recent park-and-ride usage data available suggest that park-and-ride lots typically do not reach capacity. Relatively few data points were available for this

⁹ LIRR 2006 Weekday Passenger Station Counts. Counts were performed between April and June 2006.

analysis and it should be understood to be illustrative rather than conclusive. Table 13 shows parking lot utilization rates for each East End LIRR station. It should be noted that several of the park-and-ride lots were expanded between the 1999 and 2005 surveys, so that results are not directly comparable. During the study team’s site visits (January, mid-day), observed off-peak usage was even lighter, ranging from 0% to an estimated 30% occupancy.

Table 13: LIRR Commuter Parking, East End Stations.

Station	2005 Capacity	2005 Occupancy	1999 Capacity	1999 Occupancy
Amagansett	35	77%	35	57%
Bridgehampton	139	56%	85	59%
East Hampton	451	63%	373	28%
Greenport	103	91%	111	44%
Hampton Bays	147	14%	190	16%
Mattituck	73	42%	71	45%
Montauk	60	25%	60	5%
Riverhead	24	33%	22	77%
Southampton	101	81%	74	59%
Southold	22	23%	20	5%
Speonk	335	23%	180	54%
Westhampton	114	11%	38	21%

Sources: LIRR Parking Database; DEIS, East Side Access, December 1999.

Interviews suggest that East End residents traveling to Manhattan may prefer to drive to Ronkonkoma Station, which marks the beginning of electrified train service and offers much more frequent service than East End stations (some 30 departures daily, as compared to the 2-5 available at East End stations). Ronkonkoma Station is a major transportation hub on Long Island with approximately 6,000 paid and unpaid commuter parking spaces, which are well-used.

Participants in the SEEDS project listed “improve parking at train stations” as one way of improving public transportation¹⁰. Based on the parking utilization data above and input from local residents, it is possible that this sentiment is directed at Ronkonkoma rather than the East End stations themselves.

The seasonal nature of travel in the area may also increase demand in the peak season. Not only are there more trips, but, at some stations, long-term parking may be used to store vehicles for second homeowners for extended periods, which would have a disproportionate impact on lot utilization.

South Fork Commuter Connection

During the recent reconstruction of County Road 39, a major east-west connector on the South Fork, the LIRR and the Town of Southampton jointly initiated the South Fork

¹⁰ NYMTC. SEEDS Final Report. June 2006. pp4-7

Commuter Connection (SFCC) as a congestion mitigation measure. The SFCC consisted of three additional eastbound trains from Speonk (6:11 am, 8:32 am, 2:44 pm), two terminating in Montauk and one in East Hampton. In addition, there are three additional westbound weekday trains – two originating from Montauk (12:28 pm and 4:22 pm) and one originating from East Hampton (7:26 am), all of which terminate at Speonk.), along with connecting shuttle bus service for some trains and supplementary “bus-in-lieu-of-rail” service. The pilot program began October 23, 2007 and was scheduled to operate weekdays through May 22, 2008. In April 2008, by mutual agreement of the parties, the service was extended to June 26th.

SFCC was promoted with major employers, particularly local school districts, and succeeded in garnering a few hundred riders per day. SFCC was also marked by an increase in the use of park-and-ride facilities on the South Fork (particularly Speonk, Westhampton and Hampton Bays). Anecdotally, many of these park-and-ride customers were commuters who live west of the Shinnecock Canal but work to the east of the Canal, and who used the train service as a way of avoiding the worst of the congestion. As noted in Section 4.1.1, local commuting patterns tend to flow west to east in the morning and east to west in the evening.

This pilot project offers an opportunity to assess the feasibility of increased transit and the affect of increased schedule coordination on transit usage on the South Fork. An evaluation of the service and considerations for implementation of similar service will be performed separately; findings are expected to inform development and evaluation of alternatives.



Figure 4: Long Island Railroad System Map (Source: Long Island Railroad)

4.3.2. Suffolk County Transit

Suffolk County Transit (SCT), managed by the Suffolk County Department of Public Works, provides local bus service throughout Suffolk County. SCT plans the service and owns the vehicles but contracts out the service to private companies. Contractors (primarily Hampton Jitney on the South Fork and Sunrise Coach on the North Fork) maintain staff and maintenance facilities. SCT operates six days a week with no Sunday or holiday service.

Service Overview

SCT service in the study area is concentrated in Riverhead. Southold, Southampton, and East Hampton are primarily served by the S92, 8A, and 10A/B/C/D/E routes. Shelter Island is not served by SCT, though SCT routes do serve the ferry terminals at Greenport and North Haven. On most routes, the frequency of service is generally in the range of one trip every 90 minutes and the span of service is generally 5AM or 6 AM to 8 PM or 9PM on weekdays and Saturdays, but this varies greatly by route.

Table 14: SCT East End Routes

Route #	Route	Approximate Headway	2006 total ridership
S-92	Orient Point – East Hampton	~30 min (peak); ~1 hour (offpeak)	403,296
S-66	Patchogue to Riverhead	~1 hour	235,579
S-58	East Northport – Riverhead	~1 hour	214,180
S-62	Hauppauge - Riverhead	~1 hour	141,691
8A	Riverhead – Calverton Hills	~1 hour	45,760
10C	East Hampton to Montauk	>1 hour (5-9 trips / day)	44,149
10B	Bridgehampton to East Hampton	>1 hour (7-8 trips / day)	42,917
S-90	Center Moriches – Riverhead	>1 hour (1-5 trips / day)	19,303
10A	Long Island University in Southampton to Sag Harbor to the North Haven South Ferry	>1 hour (2-5 trips / day)	11,114
10DE	East Quogue to Hampton Bays	>1 hour (5-6 trips / day)	3,797
10E	Hampton Bays local service	>1 hour (7 trips / day)	(included in above)
S-94	Montauk Village – Montauk Point Lighthouse (Summer only)	~1 hour (10AM - 5PM)	535

Within the study area, the major route is the S92, which provides line-haul service from Orient Point at the eastern end of the North Fork to East Hampton on the South Fork. Other routes provide limited feeder service or operate only seasonally. In recent years, SCT has seen an increase in travel by day laborers traveling from their homes along the North Fork to the South Fork, using the S92¹¹. These workers begin using the route in mid-March and generally continue through late Fall. These trips typically originate on the western end of the North Fork, around Aquebogue and Jamesport and travelers tend to alight at Hampton Bays, Southampton and Bridgehampton. In the afternoon, workers are dropped off along the route by employers and catch the S92 to return home.

Ridership

The busiest route is S92, which is the second busiest route in the SCT system. As described above, S92 is a long route that connects most East End communities from Orient Point on the North Fork to East Hampton on the South Fork. Additional trips were added to the S92 route, which has experienced demand in excess of capacity, in Spring 2008¹².

Throughout the study area, there is a significant increase in ridership during the high season between June and September, with the lowest ridership occurring during the winter months. This is to be expected considering the seasonal nature of activity in the East End. Most “S” routes connect Riverhead to points west, while the 8A, 10A, 10B, 10C and 10D/E are internal to the East End. Route S94 is seasonal, operating only in the summer, connecting Montauk Village to Montauk Point Lighthouse. Seasonal trends in ridership are more pronounced when looking at routes that are internal to the East End. As shown in Figure 4, SCT routes that operate wholly within the East End show more seasonal variation than the SCT system as a whole.

¹¹ Bob Shinnick, SCT. Personal communication. February 2008

¹² Greenberg, Susan J. “ Schedule Expanded For E. End Bus Riders” April 9, 2008. *Suffolk Life*.

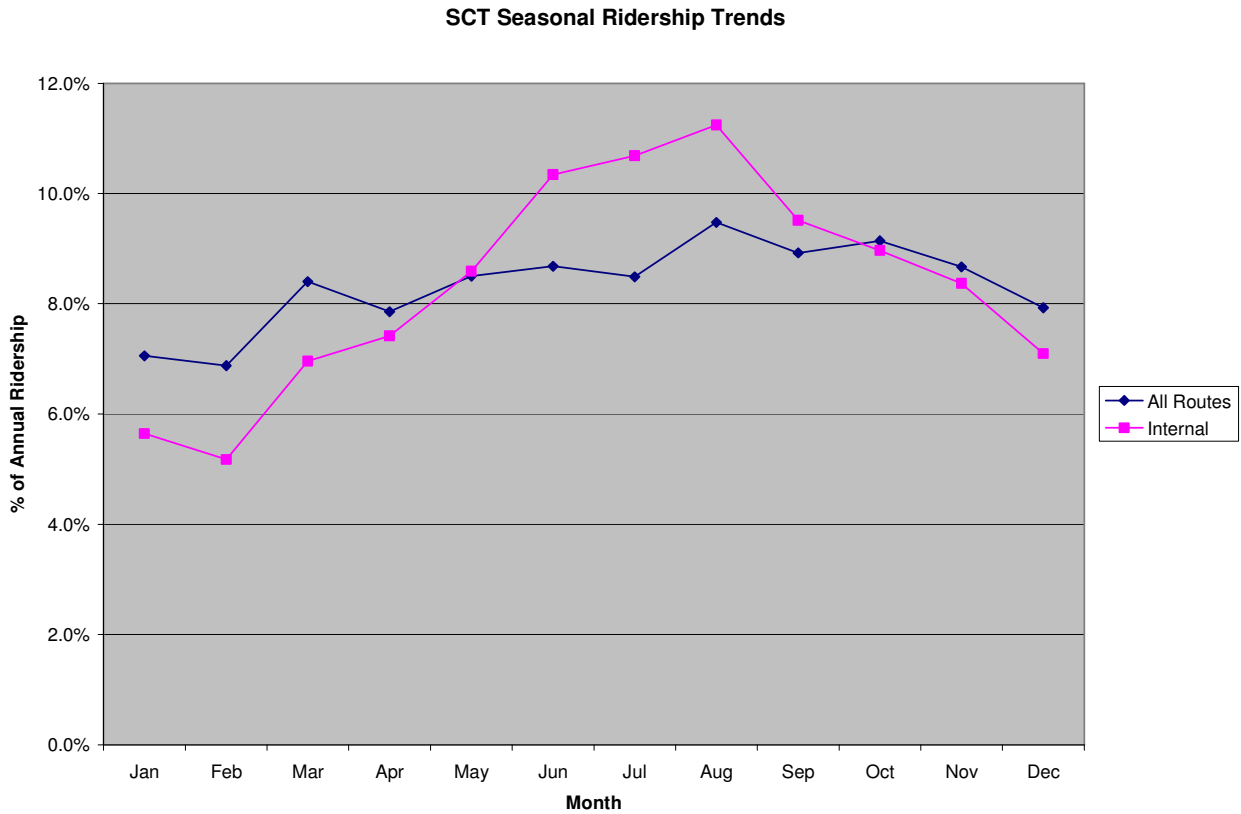


Figure 5: SCT seasonal ridership trends

Bus Route Configuration Study

SCT is currently working with a consultant team on a bus route configuration study, which should be substantially complete by summer 2008. The study will assess the fixed route system and consider changes or additions to service, including fare policy. New service standards may be an output of the study. They will include span of service and headways. Focus groups were held and a system-wide boarding count analysis has been done by a second consultant during fall 2007. The study will examine the impacts of land use and employment changes, such as the increasing popularity of the Tanger Outlets in Riverhead.

4.3.3. Intercity Bus

There are two intercity private bus operators that serve the East End: the Hampton Jitney and Hampton Luxury Liner. The former operates along both the North and South Forks while the latter serves the South Fork only. Both companies operate year-round with additional service in the summer.

Private bus operations play a large role in the East End – Manhattan travel market. Prices are higher than public transportation, but frequent departures, the comfort and amenities provided, convenient pick-up and drop-off locations, and express service to Manhattan make these services attractive to travelers in this market. Though much of the marketing is oriented to second home owners and vacationers, the bus services are also used by East End residents for their occasional trips to New York City, and in some cases for more regular commuting. Airport connections are available via Hampton Jitney’s stop in Queens, where passengers can complete their journey by taxi to LaGuardia or Kennedy airports. Hampton Jitney also provides service from the East End to the Connecticut casinos and, during the academic year, to Boston.

4.3.4. Paratransit

Paratransit services are typically more flexible than conventional fixed-route, fixed-schedule public transportation services and are often targeted at particular populations. Programs are usually funded by a variety of Federal, State, and local programs. In the East End, paratransit service is provided by Suffolk County, the Towns of Shelter Island, Riverhead, Southold, Southampton, and East Hampton, and private organizations.

Suffolk County Accessible Transportation

Suffolk County provides public transportation for those people with disabilities who have special transportation needs with the Suffolk County Accessible Transportation (SCAT). SCAT was designed to increase mobility for people who cannot use the SCT transit buses. Riders must be registered as an “ADA Eligible Rider” to use the service.

SCAT provides curb-to-curb transportation between any two points in Suffolk County that are within three-quarters of a mile of a Suffolk County Transit or HART bus route. SCAT reservation times are based upon a 30-minute pickup window. Sunday service is not available on the East End for SCT so SCAT is also not available.

Town-operated Transportation Services

All five towns in the study area operate paratransit services, largely targeted at senior citizens, but also for the disabled, and some youth and other community programs. Although the programs differ by town, by population, and by funding source, clients typically must book transportation 2-5 days in advance, are picked up from their homes, and are dropped off at senior centers, medical appointments, and shopping centers. Most programs are free of charge, but may have a nominal suggested donation. Sedans, vans, and 20-passenger buses are used for most trips. The Town of Southampton has a relatively large fleet, with 13 20-passenger buses, 3 Jeep Grand Cherokees, and a few other smaller vehicles.

Stony Brook Transportation

Southampton and East Hampton cooperatively run a shuttle to Stony Brook Medical Center. East Hampton operates the shuttle on Tuesday and Southampton on Thursday. Ridership is below capacity, with approximately 3-5 passengers each day. The number may grow as the service becomes better known.

Southold Travel Training

Southold has done limited travel training with younger, more active seniors. A staff member will board SCT buses with seniors and show them how to use the services available to them. Participants have subsequently begun to use SCT buses on their own.

Southampton Beach Shuttle

Southampton operates a summer beach shuttle from Bridgehampton High School parking lots to town ocean beaches. The beach shuttle is \$2 and 2 buses are used to provide service every 15 minutes.

4.3.5. Aviation

Within the five East End towns there are two airports which have limited commercial air service. Air transportation is not part of this study or future recommendations, but this information is included to round out the broad overview of the entire transportation network in the region.

Francis S. Gabreski Airport is a public, general aviation airport owned by Suffolk County. It is located in the western section of the Town of Southampton, near the villages of Westhampton, Westhampton Beach, and Quogue. It is used for a mixture of private, commercial, and air taxi services.

In 2007, working with Suffolk County and the community, the Town of Southampton adopted a Master Plan for the airport. This plan creates the framework for development of a high tech industrial park on the site; additional air services are not part of the long term plan. Hampton Jitney operates an intermodal park and ride facility on the property and taxis services are available. LIRR tracks cross through the south end of the property and the Westhampton LIRR station is about one-quarter mile west of the property grounds. The SEEDS study identified Gabreski as a potential future intermodal transportation hub.

East Hampton Airport is a Town-owned facility located just north of the Wainscott business and industrial center area. Both aviation and non-aviation uses, including an industrial park, are located on the property grounds. It is a general aviation airport utilized by corporate aircraft, private aviation, and air taxi services. Car rental and taxi services are available on site and the LIRR tracks are located just south of the airport grounds. The SEEDS study identified East Hampton Airport as a future potential intermodal transportation site; and included a draft rezoning plan for the airport area in support of the SEEDS concepts.

The Town of East Hampton is currently in the process of developing and adopting an updated Master Plan for the airport.

4.3.6. Ferry Service

Ferries provide an essential role in the transportation network in the East End of Long Island and additional ferry service has been proposed at varying locations in the area. However, transportation impacts of ferry service are controversial locally, as some residents are concerned about additional traffic congestion and parking spillover. For example, interviewees felt that the introduction of high-speed ferry service from Orient Point to New London, Connecticut, which largely serves the casinos in Connecticut, has dramatically increased ferry-related traffic congestion and the incidence of parking and pedestrian activity along State Route 25.

Orient Point

At Orient Point, ferry service is provided to New London, Connecticut, by the Cross Sound Ferry, a private operator. There are 10 to 15 roundtrips per day, 4 of which are high-speed “Sea Jet” passenger-only ferries. The Orient Point ferry terminal is located at the end of State Route 25 in Orient. Transit service is provided by SCT route S92 and the Hampton Jitney.

In New London, transit connections are available at the Multi-Modal Transportation Center located 200 yards from the New London Ferry Terminal. Service in New London includes Amtrak, Shoreline East commuter rail, local transit, and Greyhound¹³.

Montauk

The Montauk Point ferry terminal is located about 2 miles from the Montauk LIRR Station and 3 miles from Montauk Village. Passenger-only ferry service is provided by Viking Fleet during the summer season. Ferry service is provided daily between Montauk and New London, Connecticut and Block Island, Rhode Island. Crossing time is about 1 hour 45 minutes.

Viking Fleet offers limited excursion service between Montauk and Martha’s Vineyard, Massachusetts. In 2008, one trip to Martha’s Vineyard is planned for August, though service has been slightly more frequent in the past.¹⁴

Montauk Point is served by SCT route 10C. Additionally, the Hampton Jitney connects with Block Island ferries to provide a connection between New York City and Block Island.

Shelter Island Ferries

¹³ Long Island Rail Road East End Transportation Study, September 2000

¹⁴ Vikingfleet.com

There are no bridges connecting Shelter Island with the rest of Long Island. The relatively short distance between the North and South Forks, however, enables a quick (less than 10 minute) ferry ride shore to shore. Both ferries provide year-round service from early morning until around midnight, often running later on busy summer nights.

The North Ferry Company provides service for passengers and vehicles between Greenport and Shelter Island. The Greenport terminal is directly adjacent the Greenport LIRR Station; SCT bus service is available along Main Street. The Hampton Jitney also stops at Greenport Station.

The South Ferry Company provides service for passengers and vehicles between North Haven on the South Fork and Shelter Island. SCT route 10A serves the North Haven terminal with twice daily trips Monday-Saturday.

4.3.7. Non-Motorized Transportation

Bicycling

Only about 1 percent of East End residents regularly commute to work via “other means,” the Census category that includes bicycling. Nonetheless, bicycling is a popular way to get around the East End, particularly in summer, both as a form of recreation and for short local trips. Shelter Island is a popular spot for recreational bicycling among visitors, and there are several tour companies that bring visitors by bike through the North and South Forks.

There are some designated bike routes in the East End, most notably an 85-mile route from the Cold Spring Harbor LIRR station to Orient Point, running mostly along State Routes 25 and 25A. Separate bike lanes exist in a few locations around the East End, such as along Route 114 in North Haven (completed as part of a traffic calming project). There are also some off-road trails, including one at Orient Beach State Park, and numerous back roads whose low traffic volumes are conducive to cycling. Conversely, stakeholders noted that many main arteries are too heavily trafficked and lack the wide shoulders or bike lanes that would make them more suitable for bicycling.

The Town of Riverhead Comprehensive Plan noted that “in addition to recreational bike use, many of the seasonal farm workers and service industry employees (landscapers, nurserymen, etc.) in the Town utilize bicycles to travel to and from their places of employment. Many Town roadways lack even minimal shoulders for bike and pedestrian use.”¹⁵. This concern for bicycle safety was echoed by interviewees, although no data on cycling or cycling safety were available.

Bicycles can extend the catchment area for transit services. Holders of the MTA’s Cyn-Ride permit may bring their bicycles aboard LIRR trains during off-peak hours. (The permit costs \$5 and is available by mail or at Pennsylvania Station in New York.) The

¹⁵ Town of Riverhead Transportation Element Executive Summary (7).

LIRR also runs special “bicycle trains” on weekends, for which the usual limit of 8 bicycles per train is waived. SCT buses do not have bike racks.

Walking

According to the 2000 Census, just over 3 percent of the East End’s year-round workers commute to their jobs on foot, with the highest rate in the Town of Shelter Island. The most heavily-used bus route in the study area, the S92, runs on major roads. While some stops, particularly those in village and town centers, are pedestrian-accessible, many stops are located in areas not served by sidewalk networks and require patrons to cross busy streets to reach them.

The New York Metropolitan Transportation Commission (NYMTC) is currently conducting the Long Island Non-Motorized Transportation Study; results from the study will be considered in the development of alternatives, should they be available.

4.3.8. Service Connectivity and Itinerary Planning

While there are numerous service providers in the study area, car-free travel is not a straightforward matter. Services are oriented to different market segments and, even if they overlap geographically, schedules are frequently not timed so as to allow transfers between modes.

Aside from the dedicated bus-rail coordination provided for the South Fork Commuter Connection service, there is currently no bus-rail coordination on the East End. In interviews, staff from both LIRR and SCT cited scheduling impacts on their networks as a whole as a concern in instituting coordinated schedules. LIRR staff indicated that their services are directed to different markets and they do not believe that coordinating service would significantly increase ridership.

There is limited coordination for ferry service. SCT uses Orient Point as a layover for the S92 route, so departures are timed to coordinate with ferry arrivals as possible. In addition, some ferry lines outside the study area, such as Patchogue and Bay Shore to Fire Island, coordinate their service with the LIRR.

To assess the feasibility of making transit connections today, the study team reviewed connectivity between services at main locations, primarily major transportation centers including all LIRR stations and ferry terminals, using Winter 2007 schedules as a basis of comparison. Figure 5 shows the wait time for connections between modes for weekdays and Saturdays, respectively.

Weekday SCT-LIRR Connections Summary

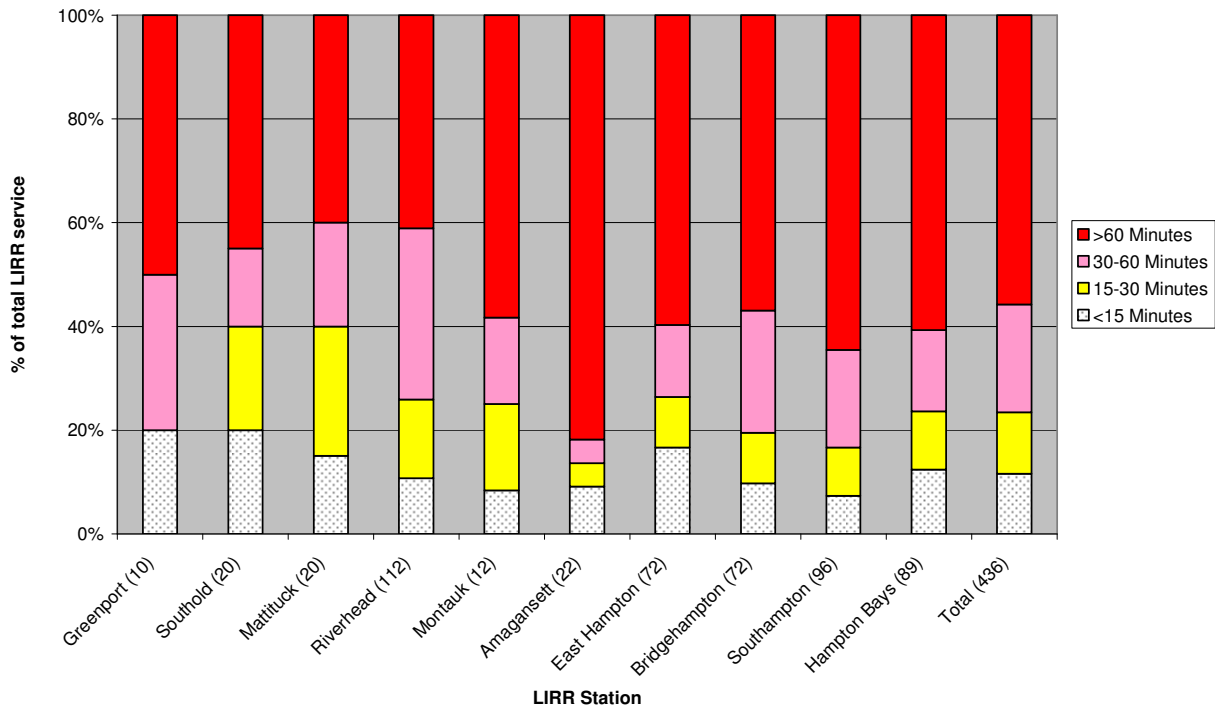


Figure 6: Bus / Rail connectivity, Winter 2007

As the figure indicates, transfers between Suffolk County Transit and Long Island Rail Road trains typically require lengthy waiting times. For example, at Greenport, of 10 possible transfers, 5 require more than 60 minutes’ wait, 3 have a 30 to 60 minute wait, and 2 have a wait of less than 15 minutes.

Given the number of public and private operators, there is no single source of travel information for the East End. This makes it difficult for travelers unfamiliar with the area to learn about services provided and to plan transit trips, which tends to further encourage the use of private automobiles.

4.3.9. Issues Identified

The SEEDS study (2006), *Access to Transportation on Long Island* study (2007) and the *Long Island Transportation Plan* (2000), all sponsored by NYMTC, identified a number of key issues and shortcomings of the existing public transportation network on Long Island. One recurring theme in these studies is the lack of coordination between transit modes, which results not only service that is less convenient (e.g. due to long connection times, as discussed above), but also in high travel costs when multiple fares must be paid. The SEEDS study in particular also stressed connectivity between hamlets and village centers. Another common finding is that the system as currently structured has insufficient frequency and span of service, and often has a radial orientation that makes it

ill-suited for local and intra-county trips or for the sorts of “trip-chaining” activities associated with child care. Regional services, such as LIRR, are not designed to serve the predominant commuting patterns in the study area, traveling west in the morning and east in the evening. All studies also agree on a need for greater information and outreach to the public, and for identifying ways (such as feeder buses from residential communities) to provide better access to existing rail stations. Some specific geographic gaps in service were also identified; one example within the East End is Montauk to Southampton.

5. Community Goals and Public Opinion

The success of a transportation system rests not only on its operational characteristics and financial sustainability, but also on its political acceptability and the extent to which it aligns with the goals and values of the population it serves. This section presents some of the major goals that East End communities have expressed in relation to transportation and related issues. It also summarizes the public-opinion survey work that has been conducted on more specific attitudes toward transportation in the region, as well as themes from the interviews that the Volpe Center team has conducted to date with local officials and residents. This qualitative information is intended to complement the more formal data presented earlier on the East End's demographics, travel patterns, and existing transportation services.

5.1. Community Goals

Each of the East End's five towns has its own particular set of issues, priorities, and goals, as expressed in community documents such as Master Plans, Comprehensive Plans, and Vision Statements. A review of these town-level documents¹⁶, as well those produced by regional efforts such as SEEDS, reveals a number of common themes in the region's goal statements as they relate to transportation, land use, and related issues.

Land Use

- Preserve open space and the existing rural character of the East End
- Preserve and enhance the built environment, particularly the historic villages and hamlets
- Protect the region's environmental resources: improve air quality and groundwater quality; protect sensitive areas such as shorelines and wetlands; promote biodiversity; and conserve energy
- Provide development opportunities to the extent that they are compatible with environmental and other goals

Transportation

- Create more multimodal and transit options, improve conditions for walking and bicycling, and generally reduce reliance on the automobile among both residents and visitors.
- Reduce traffic congestion and the intrusion of congestion onto local side roads
- Improve overall mobility and connectivity, especially for vulnerable populations
- Ensure the safety of the transportation system

¹⁶ Town of Southold, Master Plan Update; Riverhead Vision 2020; Southampton Final Comprehensive Plan Update; East Hampton Vision Statement.

Social

- Ensure that affordable housing and human services are available to support a diverse population, including youth and the elderly
- Ensure a healthy and sustainable local economy, including traditional industries such as fishing, as well as the seasonal economy related to second homes
- Promote a mix of shopping and services that provides necessities for year-round residents and specialty shopping for seasonal visitors
- Ensure the availability of recreation opportunities

5.2. Public Opinion

Public opinion research provides more detailed information on the attitudes of East End residents toward traffic, public transportation, and related issues. This work sheds light on some qualitative concerns that are not necessarily covered in the Census or other formal data-collection efforts, or even in public planning documents.

5.2.1. East End Transit Survey, 2005

The most comprehensive information available from recent years comes from a telephone survey¹⁷ conducted on behalf of Five Town Rural Transit, Inc., in 2005. Based on a sample of 1200 East End residents, the survey yielded the following major findings about existing transportation:

Most East End residents have little direct experience with the local public transportation system. Ninety-five percent of survey respondents said that their travel in the region is primarily by car rather than via any form of public transportation. A majority (54 percent) of respondents never use the Long Island Rail Road, and only 11 percent take the LIRR with any frequency (i.e., anything more than just a few times a year). A slightly larger share of respondents reported using private coach services such as Hampton Jitney at least occasionally. There are some significant differences by town, with Riverhead residents most likely to use the LIRR and least likely to use private coach services, and vice versa in East Hampton. In each town and across different population groups, however, use of these services is primarily on an occasional rather than regular basis.

The figures are even more striking with regard to the Suffolk County Transit bus network. Fully 88 percent of respondents never use this service. Even among those respondents with no access to a private vehicle, only about 28 percent use SCT at least twice per week.

¹⁷ “East End Transit Survey: Qualitative and Quantitative Transportation Surveys of the Five Towns on the East End of Long Island,” prepared by Appel Research, LLC for Five Town Rural Transit, Inc., August 15, 2005.

Whether related to this lack of direct experience or not, opinions toward the current public transportation network in the East End are largely negative. On a 5-point scale (with 1 as “the worst it could be” and 5 as “the best it could be”) East End survey respondents gave the current system an average score of 2.5. Unfavorable ratings exceeded favorable ones by a two-to-one margin, with only small differences across the towns. Interestingly, the most favorable ratings came from those without access to a car and from users of the current services. This suggests that opinions are more favorable when based on direct experience with the services rather than mere perception. There is also likely a degree of self-selection in that those who find the current services more convenient are more likely both to use them and to rate them favorably.

In informal focus group sessions that accompanied the 5TRT survey, the major drawbacks of the current public transportation services in the East End were identified by participants as including: the inconvenient scheduling of LIRR trains; the limited hours of SCT bus service and the lack of Sunday service; the lack of coordination between bus, train, and ferry schedules; and the fact that many homes and even some major destinations have no service within walking distance. A Spanish-language focus group session was conducted which included many frequent users of the SCT bus system. Although this group gave the current transit system a high numerical ranking (7.1 on a scale of 1 to 10), they also noted several major frustrations they encounter when using SCT: hours-long gaps in service; a route network that requires transfers for commonly made trips (e.g. Montauk to Riverhead); the lack of electronic fare collection and the “exact change only” rule; frequent exposure to weather while waiting for the bus; and an overall difficulty, as non-native speakers (or non-speakers) of English, to piece together all of the relevant schedule and connection information required to make a trip.

East End residents are open to, and indeed generally favor, many of the improvements to public transportation that have been discussed. The 5TRT-sponsored survey used some phrasing which arguably biased the results – for example, by using words like “sparkling new” and by describing the advantages of a proposed rail-bus system without presenting alternative viewpoints. The results are nevertheless illustrative of residents’ general receptiveness to concepts such as greater frequencies, expanded hours of service, better rail-bus coordination, and more park-and-ride options. Each of these received average favorability ratings of 3.8 or greater on a scale of 1 to 5.

5.2.2. Other Recent Public Opinion Research

Other recent public opinion surveys have addressed related topics including land use and housing. A 2004 survey by the Rauch Foundation¹⁸ found that ***residents of Long Island generally support efforts to preserve open space and ecologically sensitive areas, and to provide more affordable housing.*** Of most relevance for transportation planning is the finding that 62 percent of respondents favored zoning changes that would permit a greater number of rental apartments in downtown areas and near train stations and bus

¹⁸ “Where Do We Grow from Here? Land Use on Long Island: Regional Attitudes Toward Housing, Land Use, and Open Space,” Rauch Foundation, Garden City, N.Y., 2004.

terminals. An earlier survey, also from the Rauch Foundation, found that 49 percent of Long Island residents consider a walkable, bikable community to be very important. When asked who was to blame for the region's traffic congestion, a plurality (36 percent) placed the blame on drivers themselves.¹⁹ (For both Rauch surveys, the results are for Long Island as a whole; no cross-tabulations by town of residence were published.)

Finally, although the issue has not necessarily received much attention from major public opinion polls, it is worth noting that *ferry service is a controversial issue in the East End*. Although most East End residents are generally receptive to expanded transit service, many residents have concerns about the impacts of ferry services on traffic congestion, parking, and overall quality of life. In the 5TRT telephone survey, 65 percent of respondents favored the idea of incorporating passenger-only, seasonal water taxi service (between and along the North and South Forks) into the overall transit concept. However, support was only 57 percent among East Hampton residents, where concerns about ferries have been longstanding. Zoning ordinances in the Town of East Hampton place restrictions on the type and speed of passenger ferries that may dock in the Town; ferry terminals for vehicle-carrying vessels are banned outright. These restrictions have been the subject of a legal challenge from the Towns of Southold and Shelter Island. In 2006, the Town of Southold also filed suit against Cross Sound Ferry in a dispute over the permitted uses of the Orient Point site and the use of a high-speed passenger ferry.

5.2.3. Summary of Interview Findings

Although the focus of this study is not new data collection, an understanding of current local priorities is critical to developing appropriate transportation alternatives. In telephone and in-person interviews, town staff members and local residents were asked for their perception of transportation issues and priorities²⁰. Input was also gathered at meetings of the East End Supervisors' and Mayors' Association and the Nassau-Suffolk Transportation Coordinating Committee. Responses are summarized below. It should be understood that this summary is not exhaustive. Information received is qualitative in nature and the number of interviews was limited. As additional information is received throughout the study, these findings may be revised.

Major findings

There is a widespread belief that something needs to be done about local transportation. While specific priorities and emphases differed, interviewees shared a general sense that the East End's transportation system is not working as well as it could. Many interviewees feel that it is now time to begin taking practical steps to implement the transportation vision articulated in SEEDS.

¹⁹ "Long Islanders: Who Are We? A Quality of Life Survey of Long Island and the New York Metropolitan Region," Rauch Foundation, Garden City, N.Y., 2003

²⁰ A full list of interviewees may be found in Appendix III.

Traffic congestion impacts quality of life. Although congestion impacts are not felt uniformly across the East End, several interviewees stressed that congestion complicates internal circulation and negatively impacts quality of life. Congestion affects the main east-west routes and is increasingly spilling over into smaller local roads. Hamlet centers also experience congestion and parking shortages.

Local mobility and connectivity are key. While traffic congestion was frequently cited as an issue, it appears that internal mobility and connectivity for local residents are the primary goals for alternative transportation in the East End. The Town of Southampton plans to circulate a questionnaire to local stakeholders on alternative transportation priorities; results from this questionnaire should inform alternatives development.

Transportation issues and needs differ across the East End. Each of the five communities has its particular transportation issues and preferences, and differences are also apparent within each community. To a large extent these differences are driven by different geographic situations and demographics. For example, residents of one town felt that connectivity between the North and South Forks was a major issue; residents of another town felt that it was not a significant issue. Shelter Island, as an island community, has its own unique set of concerns while also sharing in the some of the region-wide issues. Balancing needs across communities will be an important factor in developing and evaluating alternatives.

Interviewees are concerned about spillover parking impacts associated with ferries and beaches. Interviewees felt that ferry terminals and public beaches lack sufficient parking for peak demand, causing parking to spillover, often onto neighborhood streets. This contributes to local controversy over the provision of existing or additional ferry service.

Other common themes

- Open space preservation and scenic views are highly valued by local residents.
- Residents of the East End feel that their communities are different from the rest of the New York metropolitan area, and many believe that their needs are not a priority for the large regional agencies.
- A number of interviewees mentioned that link between housing affordability and congestion, citing the “trade parade” of domestic workers, members of the building trades, and others who work in the East End but cannot afford to live there. (This impression is largely borne out by the 2000 Census data on housing costs and journey-to-work data flows, as summarized above).

6. Next Steps

An understanding of existing conditions lays the foundation for development of alternatives. For this project, the five Towns Boards are asked to serve in an Oversight and Advisory role; and the East End Transportation Council (EETC) and 5TRT as Technical Advisory Group to review findings and provide feedback. Feedback from these groups will be solicited before advancing to the next stage of the project, alternatives development.

Once feedback on this report is reviewed, working with the Technical Advisory Group, a range of alternatives will be developed and evaluated. Previous work, such as the transportation scenario proposed by SEEDS and 5TRT's coordinated rail-bus network proposal, will be integrated into the range of alternatives developed. Based on the results of the evaluation, an alternative will be selected for further development. A concept of operations for that alternative will be developed. The alternative selected for further development will influence the parameters of the concept of operations, but it is anticipated to include institutional issues and constraints, access and intermodal opportunities, operations and management considerations, and financial sustainability.

7. Appendix I: Previous Studies

Over the past decade, many organizations have studied transportation and development on Long Island in general and in the East End in particular. The results of these projects set the stage for the current study and are briefly reviewed below.

New York MTC, Access to Transportation on Long Island, April 2007: Assessed the extent to which residents of Long Island have “adequate access to transportation” and presented recommendations for addressing outstanding needs and service gaps.

New York MTC, New York Region Area-Wide Interim Coordination Public Transit – Human Service Transportation Plan, November 2006: A regional plan for coordinating mobility services for residents with limited private transportation options. For the East End, the following were identified as the top-ranked service enhancements: extended transit service hours and improved service frequencies; subsidized jitney/taxi service and childcare transportation; transportation cooperative services and marketing; and promotion of carpools as a TDM strategy.

New York MTC, Long Island Sound Waterborne Transportation Plan, 2005: Examined the role of water transportation in improving regional mobility. Within the East End, the report suggested further study on landside enhancements at Orient Point and Montauk and on the potential for service between New Haven and the north shore of Long Island. A proposed seasonal “Inner Forks” water taxi service was analyzed but deemed to be non-viable due to excessive travel times, though a Sag Harbor-Orient (“Shelter Island bypass”) route was suggested as meriting further study.

New York MTC, Regional Transportation Plan 2005-2030: Includes a Long Island Gateway concept with the following projects of relevance to the East End: Long Island Truck Intermodal facility in central Suffolk County; a Long Island Rapid Commute System (bus rapid transit with priority lanes); the SEEDS planning effort (see above); and the LISWTP (see below). (2005).

Town of East Hampton Comprehensive Plan. May 2005.

Five Town Rural Transit, Inc., survey and focus groups (June 2005): Gauged local public opinion on public transportation in the region and options for enhanced service. Measured opinions on the East End Shuttle concept.

Long Island Rail Road. *Service Guidelines*. November 2005.

Update to the Town of Southampton Comprehensive Plan – Transportation Element –
November 30, 2004

Town of Southold. *Local Waterfront Revitalization Plan*. November 2004.

Town of Riverhead Comprehensive Plan, November 2003

Long Island Rail Road, East End Transportation Study (2000): Analyzed existing conditions, issues with transportation in the East End, options and constraints for improving service. Recommendations included wayfinding signage, improved connections to SCT, service adjustments, supportive land use policies, marketing/promotion, and some medium- to long-term investments (e.g. new signal system and switches).

New York MTC, Long Island Transportation Plan 2000: Stakeholder-based process to develop mobility options for Long Island, with recommendations folded into the regional transportation plan (see below). Main components are LIRC, a bus rapid transit system with priority lanes; investments in LIRR and local bus improvements; selected roadway widening (including CR 39 in Southampton); intermodal freight center; bike and pedestrian amenities; travel demand management and traffic calming.

Sustainable East End Development Strategies, NYMTC report prepared by AKRF for the East End Supervisors & Mayors Association: March 2002 (rev. March 2004): Strategy document for the year 2025, examining options for sustainable development and transportation in the region. Recommendations focus on changing land use policies to emphasize compact, transit-oriented infill development in village/hamlet centers; and investing in the transportation system, with an emphasis on improved transit and multimodal connections between hamlets, traffic calming, intersection improvement and access management, and improvements to pedestrian/bicycle facilities.

Town of Southold. DGEIS done for the Comprehensive Implementation Study

Shelter Island Comprehensive Plan. December 1993.

8. Appendix II: List of Interviewees

East End Transportation Council (EETC)

Neboysa Brashich (Southold-Town Transportation Commission Chair & EETC representative)

NYMTC

Kevin Wolford

Gerry Bogacz

Nancy O'Connell (EETC representative)

Long Island Rail Road

Pamela Burford

Scott Howell (EETC representative)

Gus Da Silva

Suffolk County Transportation

Robert Shinnick

John Murray (EETC representative)

Town of East Hampton

Marguerite Wolffsohn

JoAnne Pahwul (EETC Vice-Chair)

Brian Frank

Tara Burke

Town of Southold

Heather Lanza (EETC representative)

Karen McLaughlin

Town of Riverhead

Karin Gluth (EETC representative)

Town of Shelter Island

Kathy Petersen

Town of Southampton

Thomas Neely (EETC Chair)

William C. Jones

Town of Shelter Island

Jim Dougherty

Five Towns Rural Transit, Inc

Patricia Shillingburg

Vince Taldone

James Ellwood
Margaret Brown
Hank de Cillia
Kathy Cunningham Faraone
Tom Ruhle

Members of the Nassau-Suffolk Transportation Coordinating Committee and East End Supervisors' and Mayors' Association