

---

# SCRCOG Congestion Management Process

---

June, 2010



**Prepared by:**

**VN Engineers, Inc.**

116 Washington Avenue

North Haven, CT 06473

(203) 234-7862



**Prepared for:**

**South Central Regional Council of Governments**

127 Washington Avenue 4<sup>th</sup> Floor West

North Haven, CT 06473

(203) 234-7555



# FINAL REPORT

for the

## SCRCOG Congestion Management Process

June, 2010

**Prepared By:**

**VN Engineers, Inc.**

116 Washington Avenue

North Haven, CT 06473

(203) 234-7862

**Prepared For:**

**South Central Regional Council of Governments**

127 Washington Avenue 4<sup>th</sup> Floor West

North Haven, CT 06473

(203) 234-7555

# TABLE OF CONTENTS

<b>1</b>	<b>INTRODUCTION</b> .....	<b>4</b>
<b>2</b>	<b>CONGESTION MANAGEMENT OBJECTIVES</b> .....	<b>5</b>
<b>3</b>	<b>AREA OF APPLICATION</b> .....	<b>5</b>
<b>4</b>	<b>SYSTEM OF INTEREST</b> .....	<b>5</b>
<b>4.1</b>	<b>Defining the Transportation Modes</b> .....	<b>5</b>
<b>5</b>	<b>SYSTEM PERFORMANCE</b> .....	<b>6</b>
<b>5.1</b>	<b>Performance Measures</b> .....	<b>7</b>
<b>5.2</b>	<b>Defining Congested Corridors</b> .....	<b>8</b>
<b>5.3</b>	<b>Congested Corridor Overview</b> .....	<b>9</b>
<b>6</b>	<b>PERFORMANCE MONITORING PLAN</b> .....	<b>41</b>
<b>7</b>	<b>CONGESTION MITIGATION STRATEGIES</b> .....	<b>41</b>
<b>8</b>	<b>SELECTED STRATEGIES AND SYSTEM MANAGEMENT</b> .....	<b>42</b>
<b>8.1</b>	<b>Operational Level Application</b> .....	<b>42</b>
<b>8.2</b>	<b>Policy Level Application</b> .....	<b>43</b>
<b>9</b>	<b>MONITORING EFFECTIVENESS</b> .....	<b>47</b>
<b>10</b>	<b>CONCLUSIONS</b> .....	<b>47</b>

**APPENDIX A: 2004 CONGESTED CORRIDOR TRAVEL TIME STUDIES  
(EXCERPTED FROM SCRCOG 2004 CMS REPORT)**

## LIST OF TABLES

Table 1: Facility type and threshold speed (mph).....	7
Table 2: I-91 Congested Corridor V/C Characteristics .....	10
Table 3: I-95 Congested Corridor V/C Characteristics .....	11
Table 4: Rt. 1 Congested Corridor V/C Characteristics .....	12
Table 5: Rt. 5 Congested Corridor V/C Characteristics .....	13
Table 6: Rt. 22 Congested Corridor V/C Characteristics .....	14
Table 7: Rt. 34 Congested Corridor V/C Characteristics .....	15
Table 8: Rt. 63-Rt. 69 Congested Corridor V/C Characteristics .....	16
Table 9: Rt. 68 Congested Corridor V/C Characteristics .....	17
Table 10: Rt. 80 Congested Corridor V/C Characteristics .....	18
Table 11: Rt. 150 Congested Corridor V/C Characteristics .....	19
Table 12: Rt. 162 Congested Corridor V/C Characteristics .....	20
Table 13: Rt. 10 Congested Corridor V/C Characteristics .....	21
Table 14: Rt. 15 Congested Corridor V/C Characteristics .....	22
Table 15: Rt. 17 Congested Corridor V/C Characteristics .....	23
Table 16: Rt. 66 Congested Corridor V/C Characteristics .....	24
Table 17: Rt. 71 Congested Corridor V/C Characteristics .....	25
Table 18: Rt. 79 Congested Corridor V/C Characteristics .....	26
Table 19: Rt. 100 Congested Corridor V/C Characteristics .....	27
Table 20: Rt. 103 Congested Corridor V/C Characteristics .....	28
Table 21: Rt. 121 Congested Corridor V/C Characteristics .....	29
Table 22: Rt. 122 Congested Corridor V/C Characteristics .....	30
Table 23: Rt. 243 Congested Corridor V/C Characteristics .....	31
Table 24: Rt. 691 Congested Corridor V/C Characteristics .....	32
Table 25: Rt. 706/N. Frontage Rd. Congested Corridor V/C Characteristics .....	33
Table 26: Rt. 707/Whitney Ave. Congested Corridor V/C Characteristics.....	34
Table 27: Rt. 715/Montowese Ave. Congested Corridor V/C Characteristics.....	35
Table 28: Rt. 717/Dixwell Ave. Congested Corridor V/C Characteristics .....	36
Table 29: Rt. 729/Broadway Congested Corridor V/C Characteristics .....	37
Table 30: Rt. 745/First Ave./Kimberly Ave. Congested Corridor V/C Characteristics.....	38
Table 31: Rt. 753/Dixwell Ave. Congested Corridor V/C Characteristics .....	39
Table 32: Rt. 796/Milford Connector Congested Corridor V/C Characteristics.....	40
Table 33: Projects Funded or Obligated in SCRCOG FY 2010-2013 TIP by Corridor .....	44
Table 34: I-95 New Haven Harbor Crossing (NHHC) Corridor Improvement Program ...	46

## LIST OF FIGURES

Figure 1: SCRCOG Road Network.....	6
Figure 2: SCRCOG Congested Corridors.....	9
Figure 3: I-91 Congested Corridor Segments .....	10
Figure 4: I-95 Congested Corridor Segments .....	11
Figure 5: Rt. 1 Congested Corridor Segments .....	12
Figure 6: Rt. 5 Congested Corridor Segments .....	13
Figure 7: Rt. 22 Congested Corridor Segments .....	14
Figure 8: Rt. 34 Congested Corridor Segments .....	15
Figure 9: Rt. 63-Rt. 69 Congested Corridor Segments.....	16
Figure 10: Rt. 68 Congested Corridor Segments .....	17
Figure 11: Rt. 80 Congested Corridor Segments .....	18
Figure 12: Rt. 150 Congested Corridor Segments .....	19
Figure 13: Rt. 162 Congested Corridor Segments .....	20
Figure 14: Rt. 10 Congested Corridor Segments .....	21
Figure 15: Rt. 15 Congested Corridor Segments .....	22
Figure 16: Rt. 17 Congested Corridor Segments .....	23
Figure 17: Rt. 66 Congested Corridor Segments .....	24
Figure 18: Rt. 71 Congested Corridor Segment.....	25
Figure 19: Rt. 79 Congested Corridor Segment.....	26
Figure 20: Rt. 100 Congested Corridor Segment.....	27
Figure 21: Rt. 103 Congested Corridor Segments .....	28
Figure 22: Rt. 121 Congested Corridor Segment.....	29
Figure 23: Rt. 122 Congested Corridor Segments .....	30
Figure 24: Rt. 243 Congested Corridor Segments .....	31
Figure 25: Rt. 691 Congested Corridor Segments .....	32
Figure 26: Rt. 706/N. Frontage Rd. Congested Corridor Segment .....	33
Figure 27: Rt. 707/Whitney Ave. Congested Corridor Segments.....	34
Figure 28: Rt. 715/Montowese Ave. Congested Corridor Segments .....	35
Figure 29: Rt. 717/Dixwell Ave. Congested Corridor Segments .....	36
Figure 30: Rt. 729/Broadway Congested Corridor Segment .....	37
Figure 31: Rt. 745/First Ave./Kimberly Ave. Congested Corridor Segments.....	38
Figure 32: Rt. 753/Dixwell Ave. Congested Corridor Segment .....	39
Figure 33: Rt. 796/Milford Connector Congested Corridor Segment .....	40
Figure 34: I-95 New Haven Harbor Crossing (NHHC) Corridor Improvement Program .	45

## 1 INTRODUCTION

This 2010 Congestion Management Process (CMP) report represents a continuation of the South Central Regional Council of Governments' (SCRCOG) effort to better understand the transportation system in the South Central Connecticut region. This report takes a systematic approach to identify and address congested areas within the region. The CMP is used to monitor and evaluate transportation system performance and congestion management strategies in a regional context in order to make the best use of federal, state, and regional funding resources.

The CMP provides a framework for measuring system performance and managing congestion for a region. This report is just a snapshot of an ongoing process. Activities that are part of the CMP include data collection for quantifying system performance, determination of causes of congestion, consideration of alternatives to reduce congestion, implementation of programs and projects, and ongoing assessment to determine effectiveness of strategies. Inherent with a CMP is the focus on operations and management strategies to address congestion, rather than large scale capacity improvements.

The 2005 Safe, Accountable, Flexible, Efficient, Transportation Equity Act: A Legacy for Users (SAFETEA-LU) requires that CMPs be maintained for all Transportation Management Areas (urban areas with a population of at least 200,000) including the SCRCOG region. This is an evolution of the previous requirement for a Congestion Management System (CMS). In 2008, the Federal Highway Administration (FHWA) provided guidelines for implementing a CMP as part of the metropolitan planning process. The enhancement of a CMS to CMP most notably includes the initial task of developing congestion management objectives. The last time SCRCOG updated their CMS report was in 2004. Therefore, this update will include not only a more current evaluation of the region's roadways, but will also set congestion management objectives, integrate the CMP into the regional planning process, and discuss methods to monitor and measure effectiveness of management strategies.

The 2004 CMS for the SCRCOG region was developed using travel time and speed data collected by SCRCOG using GIS based measurements. No new travel time runs have been conducted since the 2004 report. However, this 2010 CMP includes the use of a new performance measure: volume to capacity ratios (V/C) to supplement the existing data for the known congested corridors and identify additional congested roadways for further consideration. The V/C performance measure is calculated annually by the Connecticut Department of Transportation (ConnDOT) in their CMP Congestion Screening and Monitoring report. The V/C values are calculated using traffic volumes and roadway characteristics for each segment of each state route in Connecticut. Segment limits are defined wherever there is a change in traffic volume, a change in number of lanes, at town lines, and at locations of existing ConnDOT count stations. A congested roadway for Connecticut is considered one with a V/C value of 0.9 or higher.

Congested corridors in the SCRCOG region are well known and have been extensively documented. Travel patterns are relatively stable for the region and growth in Vehicles Miles Traveled (VMT) has been relatively consistent. The state is experiencing funding shortfalls and there is a large investment being made in the New Haven area with the construction of the Pearl

Harbor Memorial Bridge and the I-95/I-91/Route 34 Interchange Improvement Project. Additionally, a number of studies have been conducted since 2004 focused on the region's congested corridors, and several improvement projects associated with these studies have been included on the subsequent Transportation Improvement Program (TIP). Although there is limited funding for data collection to supplement what is already available for the CMP, congestion management and the spirit of the CMP is already at the forefront of the SCRCOG planning process.

## **2 CONGESTION MANAGEMENT OBJECTIVES**

The goals developed for this CMP have originated from those documented in the 2007 Long Range Transportation Plan for the region. However, the goals highlighted in this report are those that most directly address congestion and are more focused on measurable and attainable results.

- Make wise use of available funding to bring the most benefit to the region through effective project prioritization and the identification of additional funding needs.
- Maintain, enhance, and upgrade the aging infrastructure in the region for all modes of transportation to ensure system safety and functionality.
- Preserve existing transportation resources to ensure that modes and service options are available for future operation.
- Promote enhancement and interconnection of alternative transportation modes to allow for multiple travel options and freight movement through the region.
- Encourage interagency cooperation to effectively link transportation and land use planning to locate development in areas with infrastructure that is more able to support additional demand.

## **3 AREA OF APPLICATION**

The area of application for the CMP corresponds with the South Central Region Council of Governments Planning area boundary. This boundary encompasses 15 municipalities: Bethany, Branford, East Haven, Guilford, Hamden, Madison, Meriden, Milford, New Haven, North Branford, North Haven, Orange, Wallingford, West Haven, and Woodbridge. These cities and towns have a total population of approximately 550,000 and are home to a diverse range of institutions including universities, hospitals, and major corporations. The transportation network in the region includes highways, rail, bus, water, and air facilities.

## **4 SYSTEM OF INTEREST**

### **4.1 Defining the Transportation Modes**

The system coverage for the CMP includes all state highways in the region. State roadways in the SCRCOG region are shown in Figure 1. This coverage is consistent with ConnDOT's Congestion Management Process 2009 Congestion Screening and Monitoring Report, the source of most of the data referenced in this report. It is the Department's intention that future CMPs include all facilities of functional classification "minor arterial" and above, however, more extensive data collection programs will need to be initiated in cooperation with member municipalities. There are also plans to update the travel demand model for the SCRCOG region with information on transit facilities and usage. In future CMPs it may be possible to include



The roadway segments identified in this study as congested include those with a V/C ratio of 0.90 or greater. According to the ConnDOT 2009 CMP report, 97.6 mile of state routes within the South Central Region met this criterion, or about 25% of the 384.45 total miles for the region. Each of the segments that comprise the 97.6 miles of congested routes in the region is itemized in Section 5.3.

## 5.1 Performance Measures

Travel time studies were conducted six years ago for the 2004 SCRCOG Congestion Management System (CMS) report. They were conducted on specific corridors to determine travel speeds, using GPS-assisted collection with GIS-assisted data processing. Those runs were the first data collection effort performed using these technology-enhanced methods (previous collection and data entry had been manual) and any additional travel time studies conducted for this CMP update should be comparable in order to maximize use of the data and accurately evaluate changes in congestion.

Travel time/speed data collected and processed within the GPS/GIS system can be summarized by road segments defined by SCRCOG staff based upon travel patterns and road characteristics. The summarized speed data has information by segment on segment name, cross street name, segment distance (mile), travel time (minute), average speed (mph), minimum speed (mph), maximum speed (mph), and standard deviation of speed (mph). For each road segment, in consideration of posted speed limits, area characteristics and road classification, a threshold speed (mph) is established to represent a reasonable peak hour speed standard or goal. Table 1 shows the relationship between facility type and threshold speed.

**Table 1: Facility type and threshold speed (mph)**

Facility Type	Threshold Speed (mph)
Arterial Central Business District	15
Arterial Urban	20
Arterial Suburban	25
Arterial Rural	35
Freeway-Urban	45
Freeway- Suburban	50
Freeway-Rural	55

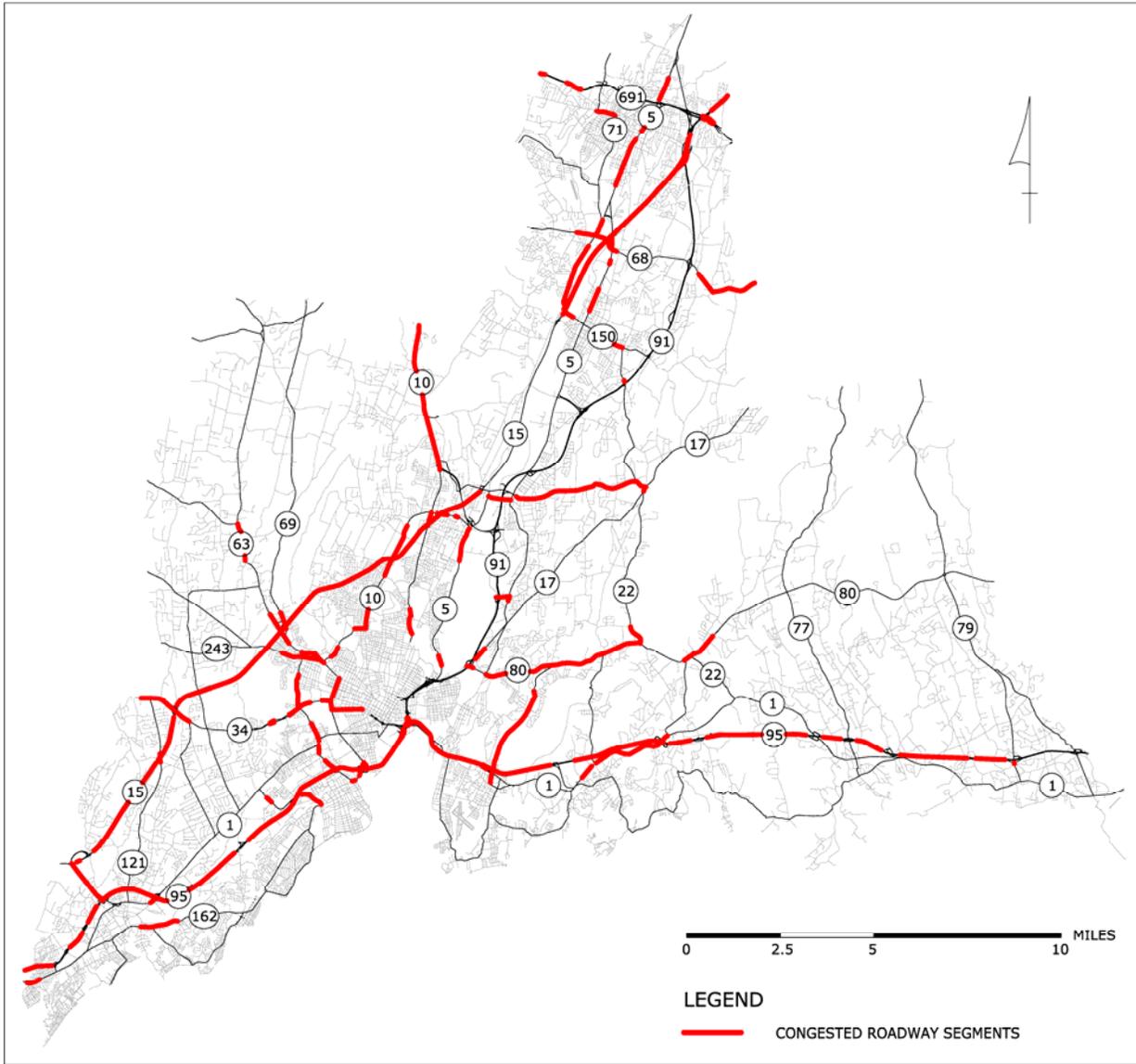
As part of ConnDOT's 2009 Congestion Screening and Monitoring report, ConnDOT staff calculated volume to capacity (V/C) ratios for all state roadways in Connecticut. Road segment limits for the analysis have been defined by ConnDOT and break where AADTs change, where the number of lanes changes, at town lines, and where there is a Highway Performance Monitoring System station. Therefore, some road segments are very short. For example, a segment along a freeway can begin where a deceleration lane for an off ramp is added and end where the lane exits.

The V/C ratios used as a performance measure in this CMP report are for the 2009 peak hour and were calculated by ConnDOT. The volumes are calculated based on actual traffic counts, K factors determined from the count data, and assumed directional splits of 55% / 45%. Capacities are estimated using the 2000 Highway Capacity Manual procedures.

In the 2004 CMS report, transportation performance was measured by comparing segment average speed with segment threshold speed. Congestion was defined where average speed falls below threshold speed. Transportation performance in this report is measured by examining V/C ratios for the region's roadways. Congestion is defined where a V/C ratio is greater than 0.9, a threshold that is consistent with ConnDOT's analysis.

## **5.2 Defining Congested Corridors**

V/C ratios for all state roads in the SCRCOG region have been obtained from the ConnDOT's 2009 Congestion Screening and Monitoring Report. The roadways were screened, and those segments with V/C ratios above 0.9 were identified as congested, a value consistent with ConnDOT thresholds. The congested corridors identified in the 2004 CMS report were based on speed data, collected on travel time runs conducted in 2004. If the average speed for a roadway segment was below a threshold speed (for a given roadway classification) then the corridor was considered congested. The congested corridor segments identified in the 2004 CMS report are not entirely consistent with those identified in this report, due to the use of differing performance measures. Neither measure should be considered the correct measure. Both are useful for preliminary screening to identify corridors of interest in the region and to establish a baseline to evaluate performance year after year. The corridors identified in the 2004 CMS have been included in Appendix A of this report for reference and can be used as a baseline for comparison to any additional travel time data. Congested corridors in the SCRCOG region based on the latest V/C ratio data are shown in Figure 2.



**Figure 2: SCRCOG Congested Corridors**

### 5.3 Congested Corridor Overview

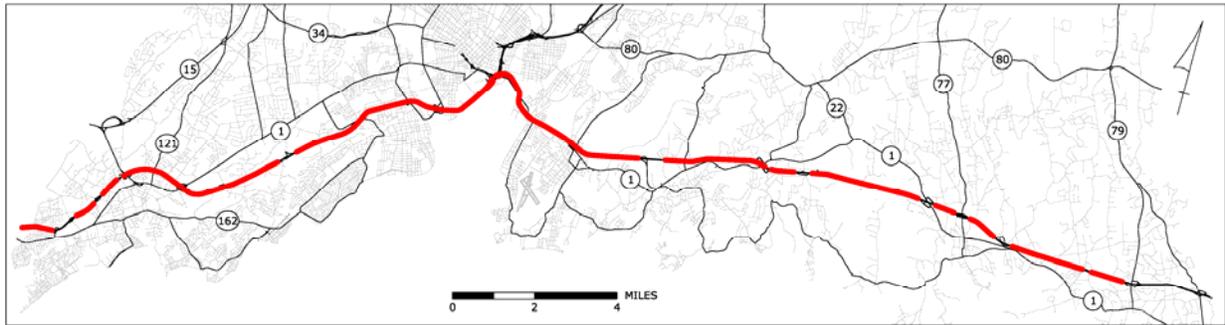
The results of the congested corridor screening based on ConnDOT’s latest V/C ratios are shown in the following figures and tables. The congested corridors identified in the 2004 CMS based on speed study data are included in Appendix A.



**Figure 3: I-91 Congested Corridor Segments**

**Table 2: I-91 Congested Corridor V/C Characteristics**

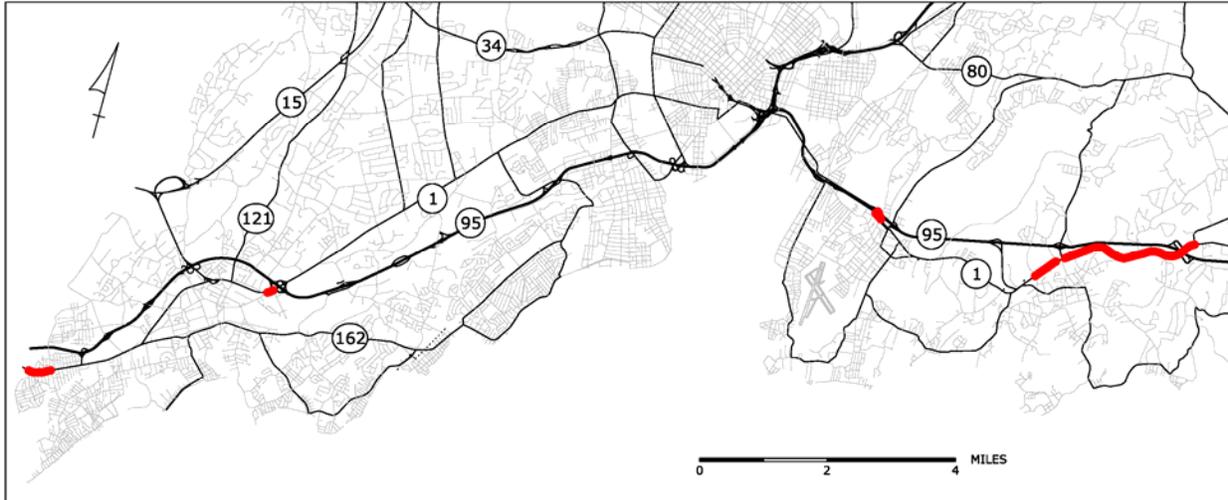
Segment Location	Segment Length	Segment Limits		Existing Peak Hour V/C
New Haven at I-95 Interchange	0.07 mi	Mile 0.14 <i>US-1/Water St. Overpass</i>	Mile 0.21 <i>SB US 34/I-95 Underpass</i>	1.14
New Haven between Exits 1 and 2	0.04 mi	Mile 0.37 <i>On Ramp from I-95 SB</i>	Mile 0.41 <i>Just north of Chapel St.</i>	0.96
Meriden between Exits 18 and 19	0.59 mi	Mile 20.41 <i>NB on-ramp from EB I-691</i>	Mile 21 <i>NB on-ramp from Baldwin Ave.</i>	1.00



**Figure 4: I-95 Congested Corridor Segments**

**Table 3: I-95 Congested Corridor V/C Characteristics**

Segment Location	Segment Length	Segment Limits		Existing Peak Hour V/C
Milford, between exits 33 and 34	0.75 mi	Mile 34.54 <i>Stratford-Milford Town Line</i>	Mile 35.29 <i>NB Exit to US-1</i>	0.92
Milford, between exits 35 and 36	0.53 mi	Mile 36.01 <i>Schoolhouse Rd.</i>	Mile 36.54 <i>Plains Rd.</i>	1.01
Milford, between exits 36 and 37	0.48 mi	Mile 36.86 <i>Plains Rd.</i>	Mile 37.34 <i>High St.</i>	0.95
Milford/Orange, between exits 38 and exits 41	4.50 mi	Mile 37.57 <i>Milford Pkwy</i>	Mile 42.07 <i>Marsh Hill Rd.</i>	1.02
Orange/West Haven/New Haven between exits 41 and 47	5.35 mi	Mile 42.11 <i>Marsh Hill Rd.</i>	Mile 47.46 <i>Rt. 34</i>	1.12
New Haven at Exit 47 (Rt. 34)	0.05 mi	Mile 47.53 <i>Rt. 34</i>	Mile 47.58 <i>I-91</i>	1.02
New Haven at Exit 48 (I-91)	0.08 mi	Mile 47.72 <i>US-1 Overpass</i>	Mile 47.8 <i>I-91 Overpass</i>	1.11
New Haven/East Haven/Branford, between exits 48 and 53	4.26 mi	Mile 47.87 <i>Northbound on-ramp from I-91</i>	Mile 52.13 <i>Branford Connector</i>	1.04
Branford, between exits 54 and 55	2.29 mi	Mile 52.97 <i>Cherry Hill Rd.</i>	Mile 55.26 <i>US-1/E. Main St.</i>	0.96
Branford, between exits 55 and 56	0.51 mi	Mile 55.48 <i>US-1/E. Main St.</i>	Mile 55.99 <i>Leetes Island Rd.</i>	1.01
Branford/Guilford, between exits 56 and 57	2.68 mi	Mile 56.43 <i>Leetes Island Rd.</i>	Mile 59.11 <i>US-1/Boston Post Rd.</i>	1.08
Guilford, between exits 57 and 58	0.71 mi	Mile 59.3 <i>US-1/Boston Post Rd.</i>	Mile 60.01 <i>Rt. 77/Church St.</i>	1.08
Guilford, between exits 58 and 59	0.96 mi	Mile 60.4 <i>Rt. 77/Church St.</i>	Mile 61.36 <i>Goose Ln.</i>	0.92
Guilford/Madison, between exits 59 and 60	1.94 mi	Mile 61.73 <i>Goose Ln.</i>	Mile 63.64 <i>Mungertown Rd.</i>	0.95
Madison, between exits 60 and 61	0.73 mi	Mile 63.78 <i>Fort Path Rd.</i>	Mile 64.51 <i>Rt. 79/Durham Rd.</i>	0.99



**Figure 5: Rt. 1 Congested Corridor Segments**

**Table 4: Rt. 1 Congested Corridor V/C Characteristics**

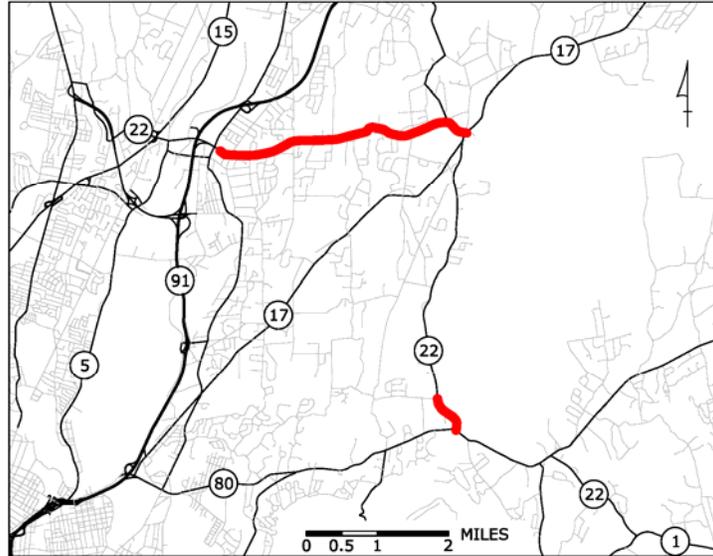
Segment Location	Segment Length	Segment Limits		Existing Peak Hour V/C
Milford East of Housatonic River	0.33 mi	Mile 35.5 <i>East of Rivercliff Dr.</i>	Mile 35.83 <i>Naugatuck Ave.</i>	1.12
Milford South of I-95 Interchange 39	0.10 mi	Mile 39.8 <i>Cherry St.</i>	Mile 39.9 <i>N. of Home Acres Ave.</i>	1.06
East Haven east of I-95 Interchange 51	0.14 mi	Mile 51.11 <i>South of Cherry St.</i>	Mile 51.25 <i>South of Pine St.</i>	0.9
Branford east of Branford Connector	0.42 mi	Mile 54.33 <i>Cherry Hill Rd.</i>	Mile 54.75 <i>North of Todds Hill Rd.</i>	1.01
Branford near I-95 interchange 55	2.24 mi	Mile 54.83 <i>North of Cedar St.</i>	Mile 57.07 <i>Rt. 139/North Branford Rd.</i>	1.02



**Figure 6: Rt. 5 Congested Corridor Segments**

**Table 5: Rt. 5 Congested Corridor V/C Characteristics**

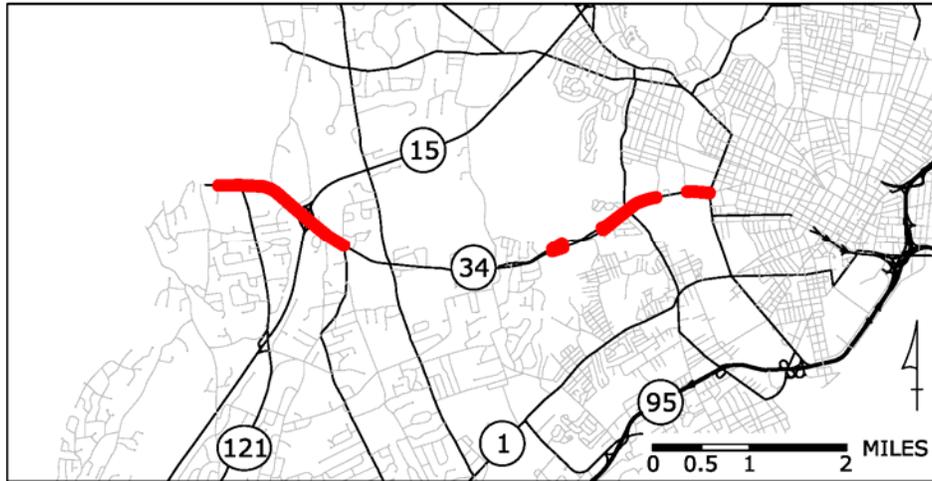
Segment Location	Segment Length	Segment Limits		Existing Peak Hour V/C
New Haven north of I-95	0.39 mi	Mile 0.74 <i>Lyman St.</i>	Mile 1.13 <i>Park Rd.</i>	1.06
North Haven south of Rt. 40	0.90 mi	Mile 3.71 <i>Skiff St.</i>	Mile 4.61 <i>South of Dixwell Ave.</i>	1.18
Wallingford between Rt. 150 and Rt. 68	1.04 mi	Mile 11.82 <i>Christian St.</i>	Mile 12.86 <i>North of North Plains Hwy</i>	1.30
Wallingford south of Rt. 68	0.16 mi	Mile 13.29 <i>North of Pent Hwy</i>	Mile 13.45 <i>North of Ives Rd.</i>	1.75
Wallingford between Rt. 68 and Rt. 15	0.13 mi	Mile 13.71 <i>Con to Rt. 68</i>	Mile 13.84 <i>Yale Ave.</i>	1.29
Meriden between Rt. 15 and E. Main St.	1.45 mi	Mile 15.35 <i>South Broad Ter.</i>	Mile 16.8 <i>Silver St.</i>	1.08
Meriden south of East Main St.	0.05 mi	Mile 17.06 <i>South of East Main St.</i>	Mile 17.11 <i>East Main St.</i>	1.33
Meriden north of I-691	0.63 mi	Mile 17.92 <i>North of I-691</i>	Mile 18.55 <i>Clark St.</i>	1.18



**Figure 7: Rt. 22 Congested Corridor Segments**

**Table 6: Rt. 22 Congested Corridor V/C Characteristics**

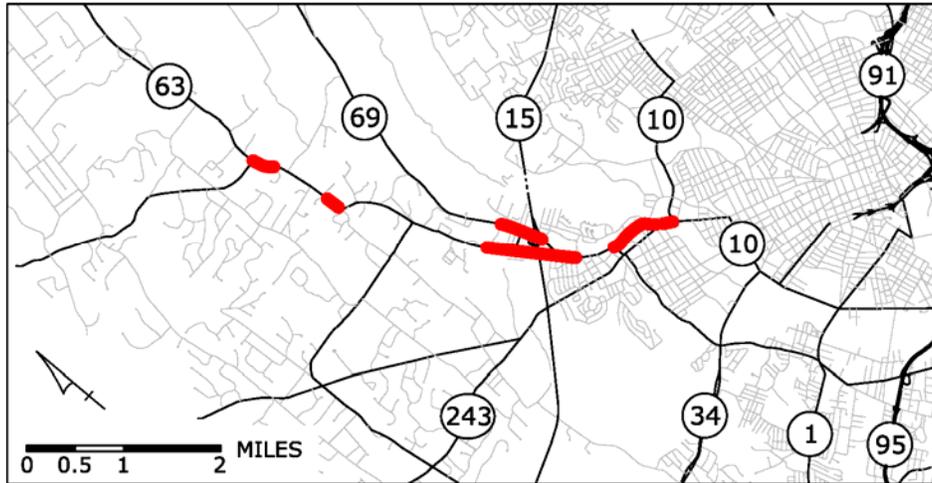
Segment Location	Segment Length	Segment Limits		Existing Peak Hour V/C
North Haven/North Branford	3.66 mi	Mile 2.77 <i>East of US-5/Washington Ave.</i>	Mile 6.43 <i>Rt. 17/Middletown Ave.</i>	1.06
North Branford, north of Rt. 80	0.40 mi	Mile 10.32 <i>Mill Rd.</i>	Mile 10.72 <i>Rt. 80</i>	0.92



**Figure 8: Rt. 34 Congested Corridor Segments**

**Table 7: Rt. 34 Congested Corridor V/C Characteristics**

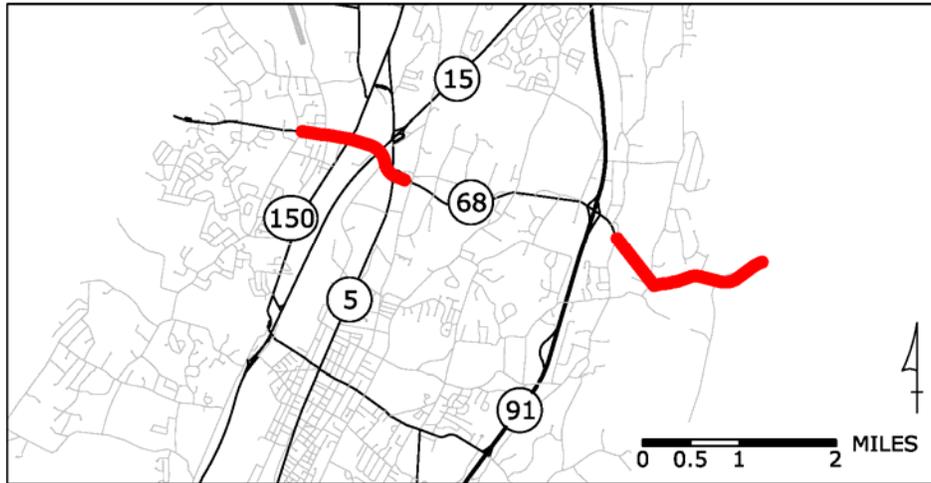
Segment Location	Segment Length	Segment Limits		Existing Peak Hour V/C
Orange, near Rt. 15 exits 57/58	1.92 mi	Mile 16.46 <i>Fernbrook Rd.</i>	Mile 18.38 <i>Rt 114/ Racebrook Rd.</i>	1.06
West Haven, near Maltby Lake	0.18 mi	Mile 20.13 <i>Orange/West Haven town line</i>	Mile 20.31 <i>East of town line</i>	1.03
West Haven, near Rt. 122	0.64 mi	Mile 20.69 <i>Elizabeth St.</i>	Mile 21.33 <i>Central Ave.</i>	1.04
New Haven, near Rt. 10	0.23 mi	Mile 21.65 <i>Yale Ave.</i>	Mile 21.88 <i>Rt. 10</i>	0.92



**Figure 9: Rt. 63-Rt. 69 Congested Corridor Segments**

**Table 8: Rt. 63-Rt. 69 Congested Corridor V/C Characteristics**

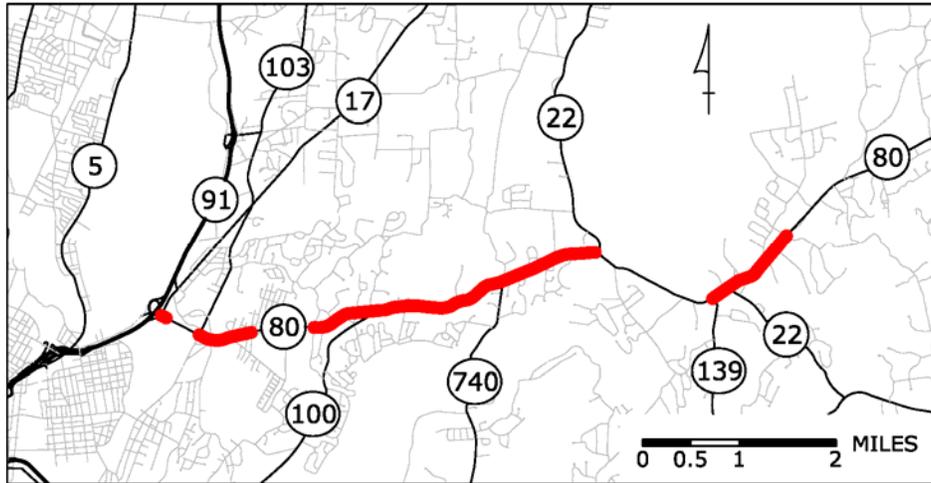
Segment Location	Segment Length	Segment Limits		Existing Peak Hour V/C
<b>Rt. 63</b>				
New Haven, west of Rt. 10	0.11 mi	Mile 0.0 (Rt. 10)	Mile 0.11 (Rt. 243/Fountain St.)	1.20
New Haven, west of Rt. 243	0.52 mi	Mile 0.19 (Central Ave.)	Mile 0.71 (Rt. 122/Dayton St.)	1.25
New Haven, east of Rt. 69	0.17 mi	Mile 1.12 (Ramsdell St.)	Mile 1.29 (Rt. 69/Whalley Ave.)	1.35
New Haven/Woodbridge, under Rt. 15	0.66 mi	Mile 1.31 (Wright St.)	Mile 1.97 (Bradley Rd.)	1.12
Woodbridge, south of Rt. 67	0.97 mi	Mile 3.72 (Pease Rd.)	Mile 4.69 (Rt. 67/Seymour Rd.)	0.96
<b>Rt. 69</b>				
New Haven, at Rt. 15 interchange 59	0.45 mi	Mile 0.25 (Exit from NB Rt. 15)	Mile 0.7 (Bradley Rd.)	1.25



**Figure 10: Rt. 68 Congested Corridor Segments**

**Table 9: Rt. 68 Congested Corridor V/C Characteristics**

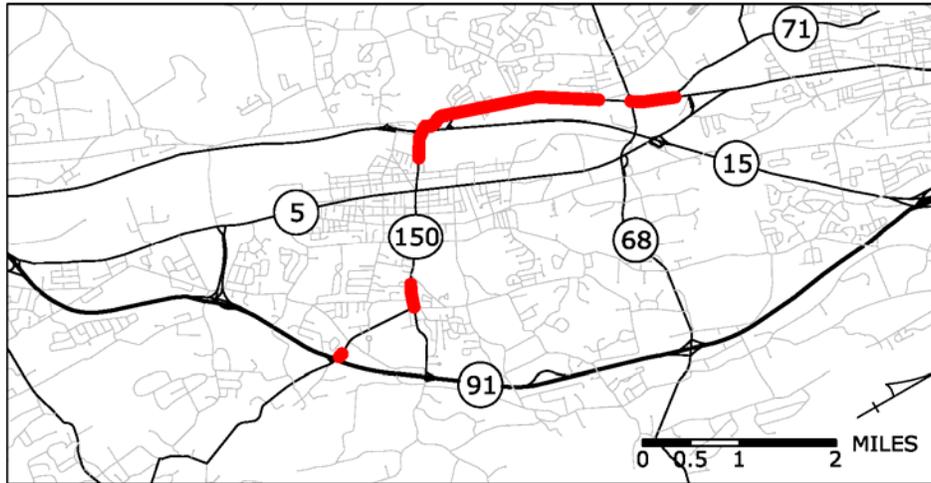
Segment Location	Segment Length	Segment Limits		Existing Peak Hour V/C
Wallingford, west of Rt. 150/Main St.	0.53 mi	Mile 13.5 <i>Hope Hill Rd.</i>	Mile 14.03 <i>Rt. 150/Main St.</i>	1.07
Wallingford, under Rt. 15	0.62 mi	Mile 14.04 <i>Rt. 150/Main St.</i>	Mile 14.66 <i>Connector from US 5</i>	1.41
Wallingford, east of I-91	1.91 mi	Mile 17.16 <i>Williams Rd.</i>	Mile 19.07 <i>Wallingford-Durham town line</i>	1.27



**Figure 11: Rt. 80 Congested Corridor Segments**

**Table 10: Rt. 80 Congested Corridor V/C Characteristics**

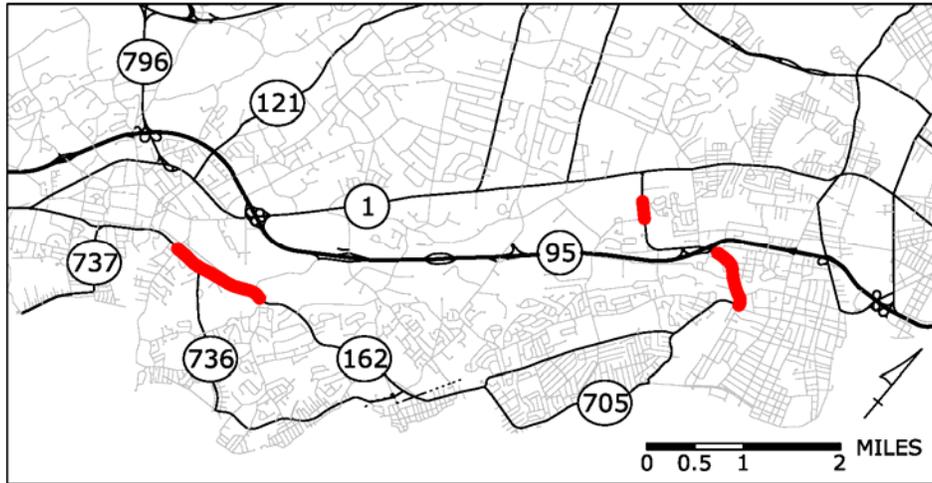
Segment Location	Segment Length	Segment Limits		Existing Peak Hour V/C
New Haven, east of I-91:	0.15 mi	Mile 0.0 Rt. 17/ Middletown Ave.	Mile 0.15 East of Rt. 17/Middletown Ave.	1.67
New Haven/East Haven town line:	1.06 mi	Mile 0.38 Rt. 103/ Quinnipiac Ave.	Mile 1.44 Green St.	1.05
East Haven, west of Rt. 100:	0.85 mi	Mile 1.74 Mill St.	Mile 2.59 East of Rt. 100/N. High St.	1.16
East Haven/North Branford	1.91 mi	Mile 2.74 East of Rt. 100	Mile 4.65 West of Rt. 22	0.98
North Branford east of Rt. 139	1.02 mi	Mile 6.11 Rt. 139/Branford Rd.	Mile 7.13 W. Pond Rd.	1.05



**Figure 12: Rt. 150 Congested Corridor Segments**

**Table 11: Rt. 150 Congested Corridor V/C Characteristics**

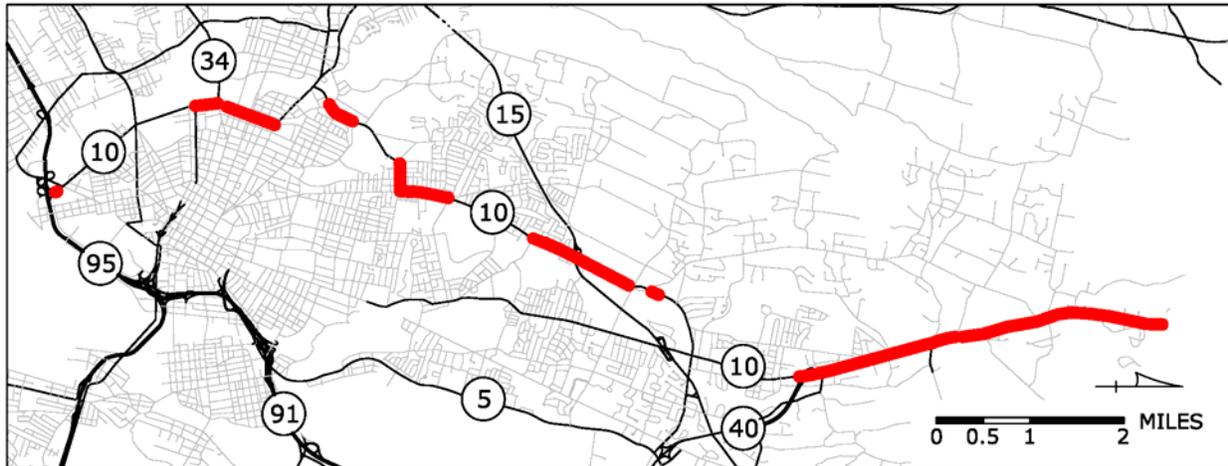
Segment Location	Segment Length	Segment Limits		Existing Peak Hour V/C
Wallingford, at I-91	0.18 mi	Mile 3.01 <i>SB I-91</i>	Mile 3.19 <i>South of Aldon Ln.</i>	0.97
Wallingford, between Rt. 738 and Rt. 5	0.69 mi	Mile 3.96 <i>SR 738/E. Center St.</i>	Mile 4.65 <i>N. Elm St.</i>	1.00
Wallingford, between Rt. 5 and Rt. 68	2.19 mi	Mile 5.51 <i>Bull Ave.</i>	Mile 7.70 <i>Hill Ave.</i>	1.02
Wallingford, north of Rt. 68	0.47 mi	Mile 8.03 <i>Rt. 68/Church St.</i>	Mile 8.50 <i>Rt. 71/Old Colony Rd.</i>	1.00



**Figure 13: Rt. 162 Congested Corridor Segments**

**Table 12: Rt. 162 Congested Corridor V/C Characteristics**

Segment Location	Segment Length	Segment Limits		Existing Peak Hour V/C
Milford, near Rt. 736/Buckingham Ave.	1.03	Mile 1.63 <i>Gulf St.</i>	Mile 2.66 <i>Pond Point Ave.</i>	0.96
West Haven, east of I-95	0.83	Mile 7.95 <i>W. Main St.</i>	Mile 8.78 <i>W. of Greta St.</i>	0.95
Orange/West Haven town line	0.24	Mile 9.84 <i>Meadowbrook Rd.</i>	Mile 10.08 <i>East of West Haven/Orange town line</i>	0.99



**Figure 14: Rt. 10 Congested Corridor Segments**

**Table 13: Rt. 10 Congested Corridor V/C Characteristics**

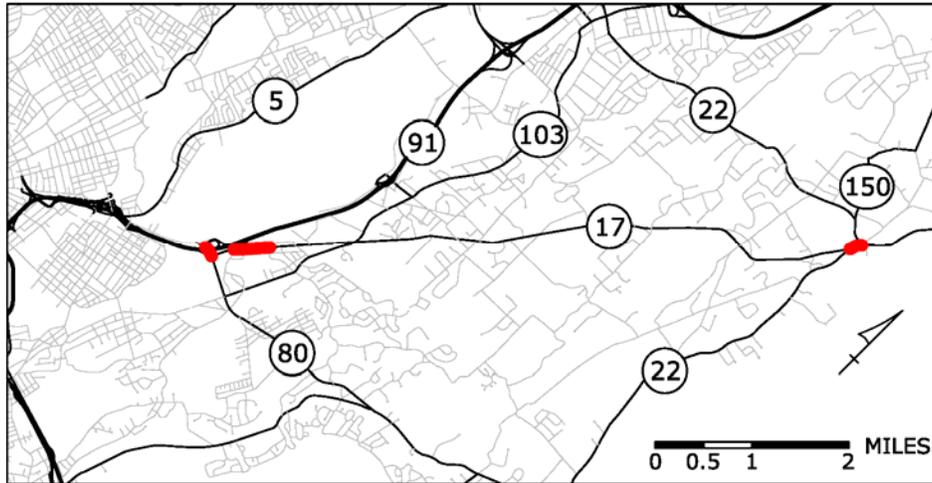
Segment Location	Segment Length	Segment Limits		Existing Peak Hour V/C
New Haven, Near I-95 interchange 45	0.07 mi	Mile 0.13 <i>On Ramp to SB I-95</i>	Mile 0.20 <i>Off Ramp from SB I-95</i>	1.21
New Haven, at overlap with Rt. 34	0.25 mi	Mile 1.95 <i>Rt. 706 NB Frontage Road</i>	Mile 2.2 <i>Rt 34/Derby Ave.</i>	1.02
New Haven, between Rt. 34 and Whalley Ave.	0.55 mi	Mile 2.3 <i>South of Irving St.</i>	Mile 2.85 <i>Whalley Ave.</i>	1.19
New Haven, near SCSU	0.32 mi	Mile 3.68 <i>Blake St.</i>	Mile 4.00 <i>SCSU parking lot</i>	1.01
South Hamden	1.01 mi	Mile 4.7 <i>Arch St.</i>	Mile 5.71 <i>Scott St.</i>	1.09
Hamden, near Rt. 15 interchange 60	1.18 mi	Mile 6.53 <i>Mather St.</i>	Mile 7.71 <i>Rt. 753/Dixwell Ave.</i>	1.07
Hamden, at trail underpass, north of Rt. 753/Dixwell Ave.	0.08 mi	Mile 7.95 <i>North of Rt. 753/Dixwell Ave.</i>	Mile 8.03 <i>North of Rt. 753/Dixwell Ave.</i>	1.50
Hamden, north of Rt. 40	1.62 mi	Mile 10.11 <i>Junction Rt. 40 NB</i>	Mile 11.73 <i>Todd St.</i>	1.13
North Hamden	2.17 mi	Mile 11.8 <i>North of Todd St.</i>	Mile 13.97 <i>Hamden/Cheshire town line</i>	1.37



**Figure 15: Rt. 15 Congested Corridor Segments**

**Table 14: Rt. 15 Congested Corridor V/C Characteristics**

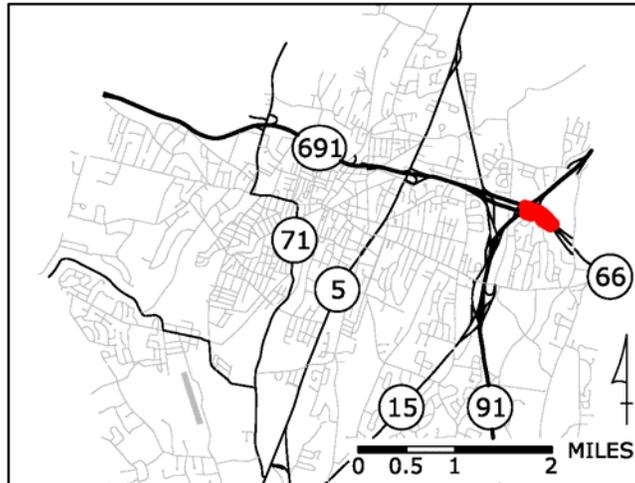
Segment Location	Segment Length	Segment Limits		Existing Peak Hour V/C
Milford, west of exit 54	0.14 mi	Mile 37.53 <i>Stratford/Milford town line</i>	Mile 37.67 <i>NB exit to SB Rt. 796</i>	0.91
Milford, exit 54 to exit 55A	0.18 mi	Mile 37.96 <i>NB on ramp from Rt. 796</i>	Mile 38.14 <i>NB exit to Whellers Farm Rd.</i>	1.00
Milford/Orange, exit 55B to exit 56	2.83 mi	Mile 38.49 <i>NB exit to Wolf Harbor Rd.</i>	Mile 41.32 <i>NB exit to Rt. 121</i>	0.91
Orange, exit 56 to exit 57	1.32 mi	Mile 41.37 <i>NB Acceleration from Rt. 121</i>	Mile 42.69 <i>NB exit to Rt. 34</i>	0.98
Orange/Woodbridge/New Haven/Hamden/North Haven, exit 57 to exit 63	10.46 mi	Mile 42.77 <i>NB Acceleration from Rt. 34</i>	Mile 53.23 <i>NB exit to Rt. 22</i>	1.06
Wallingford/Meriden, exit 65 to exit 68	6.08 mi	Mile 58.55 <i>NB exit to River Rd. (137)</i>	Mile 64.63 <i>NB exit to Rt. 91</i>	1.01



**Figure 16: Rt. 17 Congested Corridor Segments**

**Table 15: Rt. 17 Congested Corridor V/C Characteristics**

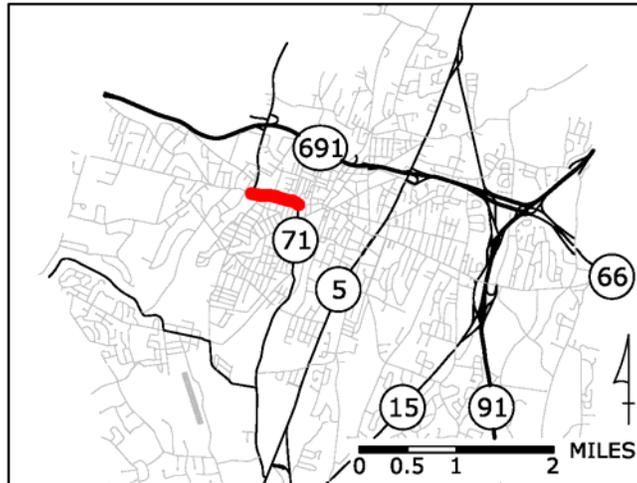
Segment Location	Segment Length	Segment Limits		Existing Peak Hour V/C
New Haven, near I-91 SB Ramps	0.15 mi	Mile 0.09 <i>SB I-91</i>	Mile 0.24 <i>Rt. 80/Foxon Blvd.</i>	1.42
New Haven, near I-91 NB On Ramp	0.42 mi	Mile 0.41 <i>Barnes Ave.</i>	Mile 0.83 <i>Cross St.</i>	1.24
North Branford, at Rt. 22	0.06 mi	Mile 6.98 <i>S. Junction Rt. 22/Forest Rd.</i>	Mile 7.04 <i>N. Junction Rt. 22/Clintonville Rd.</i>	0.94



**Figure 17: Rt. 66 Congested Corridor Segments**

**Table 16: Rt. 66 Congested Corridor V/C Characteristics**

Segment Location	Segment Length	Segment Limits		Existing Peak Hour V/C
Meriden, at junction with I-691	0.04 mi	Mile 0.00 <i>Junction I-691</i>	Mile 0.04 <i>EB exit from I-91 NB</i>	0.91
Meriden, east of I-91	0.09 mi	Mile 0.18 <i>East of WB access to I-91 NB</i>	Mile 0.27 <i>EB exit to Preston Ave.</i>	1.08



**Figure 18: Rt. 71 Congested Corridor Segment**

**Table 17: Rt. 71 Congested Corridor V/C Characteristics**

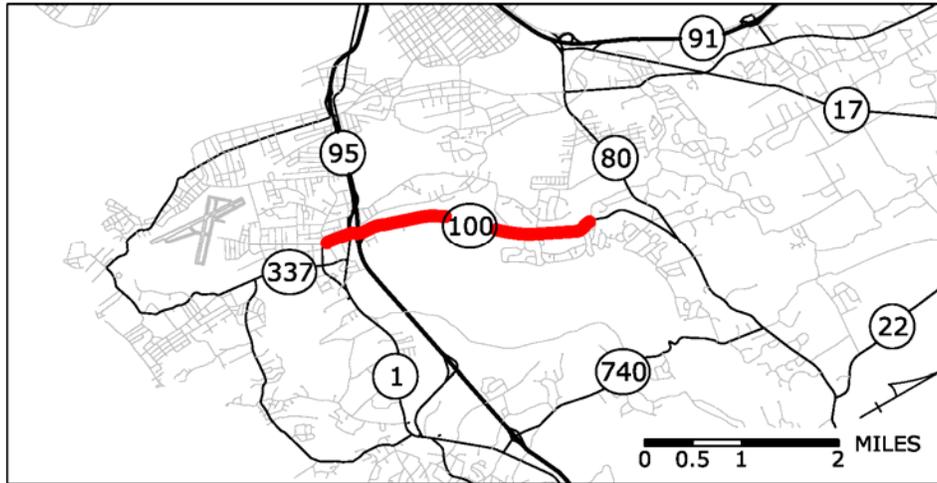
Segment Location	Segment Length	Segment Limits		Existing Peak Hour V/C
		Mile 3.30 <i>W. Main St. #1</i>	Mile 3.84 <i>W. Main St. #2</i>	
Meriden, Main St.	0.54 mi	Mile 3.30 <i>W. Main St. #1</i>	Mile 3.84 <i>W. Main St. #2</i>	0.98



**Figure 19: Rt. 79 Congested Corridor Segment**

**Table 18: Rt. 79 Congested Corridor V/C Characteristics**

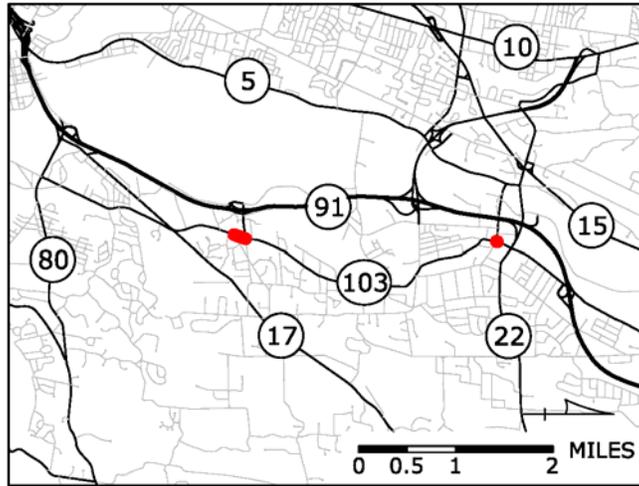
Segment Location	Segment Length	Segment Limits		Existing Peak Hour V/C
		Mile 0.50 <i>Woodland Rd.</i>	Mile 0.54 <i>Access to NB I-95</i>	
Madison, near I-95 interchange 61	0.04 mi	Mile 0.50 <i>Woodland Rd.</i>	Mile 0.54 <i>Access to NB I-95</i>	0.99



**Figure 20: Rt. 100 Congested Corridor Segment**

**Table 19: Rt. 100 Congested Corridor V/C Characteristics**

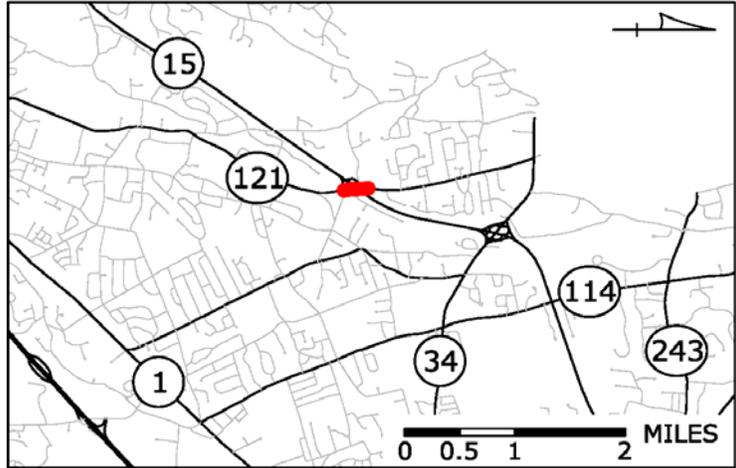
Segment Location	Segment Length	Segment Limits		Existing Peak Hour V/C
East Haven, from I-95 interchange 52 north	2.82 mi	Mile 0.61 <i>Messina Dr.</i>	Mile 3.43 <i>Mill St.</i>	1.11



**Figure 21: Rt. 103 Congested Corridor Segments**

**Table 20: Rt. 103 Congested Corridor V/C Characteristics**

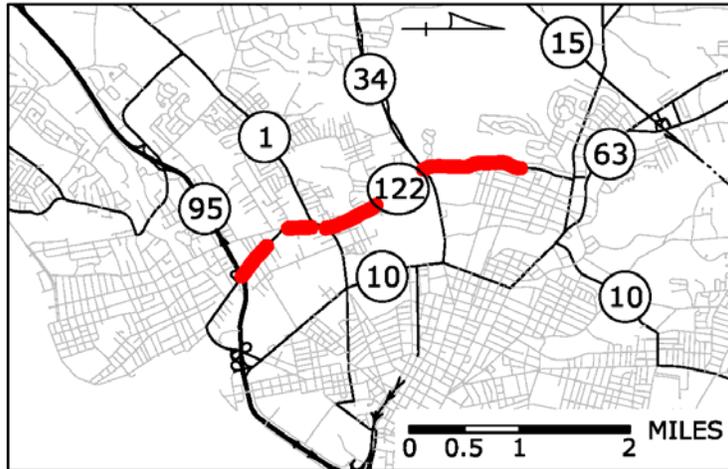
Segment Location	Segment Length	Segment Limits		Existing Peak Hour V/C
North Haven, near Rt. 715/Montowese Ave.	0.08	Mile 2.17 <i>Fitch St.</i>	Mile 2.25 <i>Rt. 715/ Montowese Ave.</i>	0.91
North Haven, south of Rt. 22	0.01	Mile 5.15 <i>Rt. 719/ Broadway EB</i>	Mile 5.16 <i>Rt. 719/ Broadway WB</i>	1.26



**Figure 22: Rt. 121 Congested Corridor Segment**

**Table 21: Rt. 121 Congested Corridor V/C Characteristics**

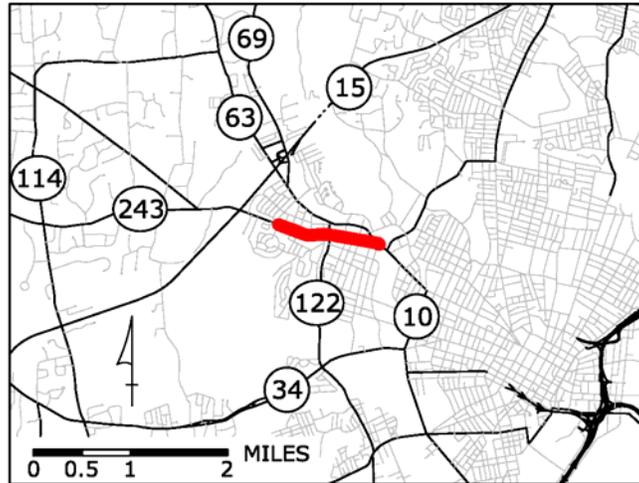
Segment Location	Segment Length	Segment Limits		Existing Peak Hour V/C
		Mile 3.91 <i>Rt. 15 NB Access</i>	Mile 4.09 <i>Rt. 15 SB Access</i>	
Orange, near Rt. 15 interchange 56	0.18	Mile 3.91 <i>Rt. 15 NB Access</i>	Mile 4.09 <i>Rt. 15 SB Access</i>	0.95



**Figure 23: Rt. 122 Congested Corridor Segments**

**Table 22: Rt. 122 Congested Corridor V/C Characteristics**

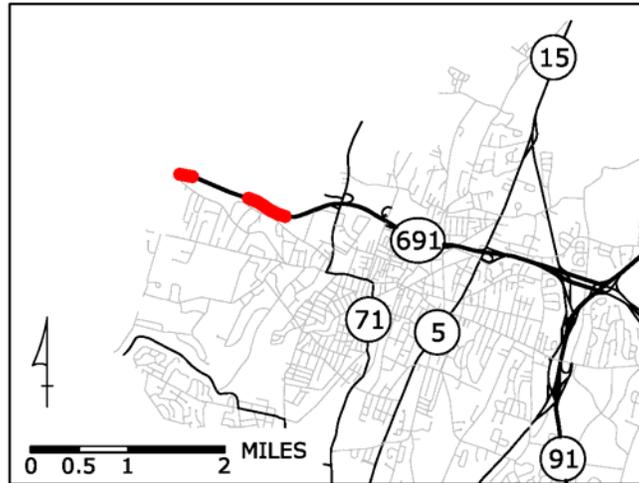
Segment Location	Segment Length	Segment Limits		Existing Peak Hour V/C
West Haven, north I-95 interchange 43	0.32 mi	Mile 0.00 <i>Rt. 745/First Ave.</i>	Mile 0.32 <i>Alling St.</i>	1.08
West Haven, south of Rt. 1	0.16 mi	Mile 0.63 <i>North of Ruden St.</i>	Mile 0.79 <i>Smith Ct.</i>	1.32
West Haven, north of Rt. 1	0.49 mi	Mile 0.93 <i>End of Overlap with Rt 1</i>	Mile 1.42 <i>North of Paul Ave.</i>	1.23
West Haven/New Haven, town line	0.90 mi	Mile 1.98 <i>Rt. 34/Derby Ave.</i>	Mile 2.88 <i>Edgewood Ave.</i>	0.95



**Figure 24: Rt. 243 Congested Corridor Segments**

**Table 23: Rt. 243 Congested Corridor V/C Characteristics**

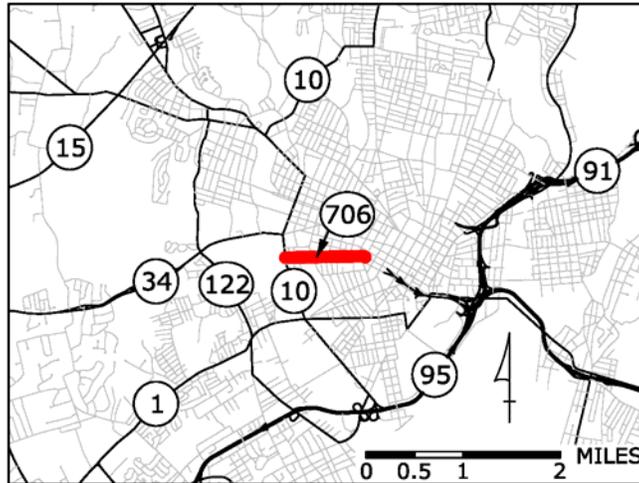
Segment Location	Segment Length	Segment Limits		Existing Peak Hour V/C
New Haven, west of Rt. 122	0.56 mi	Mile 5.66 <i>Lowin Ave.</i>	Mile 6.22 <i>End overlap Rt. 122</i>	0.92
New Haven, west of Whalley Ave.	0.38 mi	Mile 6.32 <i>East of Rt. 122</i>	Mile 6.70 <i>Rt. 63/Whalley Ave.</i>	0.96



**Figure 25: Rt. 691 Congested Corridor Segments**

**Table 24: Rt. 691 Congested Corridor V/C Characteristics**

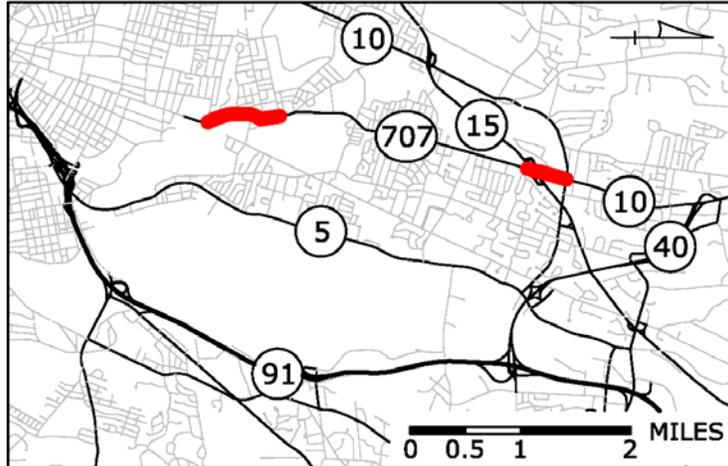
Segment Location	Segment Length	Segment Limits		Existing Peak Hour V/C
Meriden, west of Rt. 15	0.09 mi	Mile 0.48 <i>WB access from NB Rt 15</i>	Mile 0.57 <i>EB Exit to SB Rt. 15</i>	1.36
Meriden, west of exit 5	0.47 mi	Mile 3.31 <i>West of Rt. 71 exit</i>	Mile 3.78 <i>West of Reservoir Ave.</i>	0.96
Meriden, east of exit 4	0.09 mi	Mile 4.58 <i>WB exit to Rt. 322</i>	Mile 4.67 <i>Meriden/Southington town line</i>	0.93



**Figure 26: Rt. 706/N. Frontage Rd. Congested Corridor Segment**

**Table 25: Rt. 706/N. Frontage Rd. Congested Corridor V/C Characteristics**

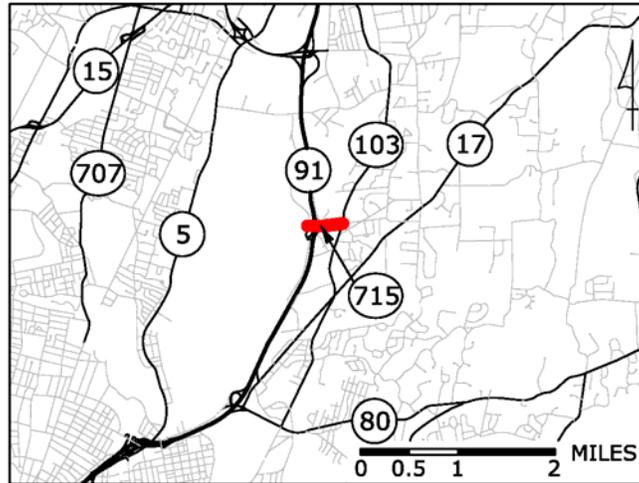
Segment Location	Segment Length	Segment Limits		Existing Peak Hour V/C
New Haven, east of Rt. 10	0.82 mi	Mile 0.00 <i>Howe St.</i>	Mile 0.82 <i>Rt. 10/Ella T. Grasso Blvd.</i>	0.97



**Figure 27: Rt. 707/Whitney Ave. Congested Corridor Segments**

**Table 26: Rt. 707/Whitney Ave. Congested Corridor V/C Characteristics**

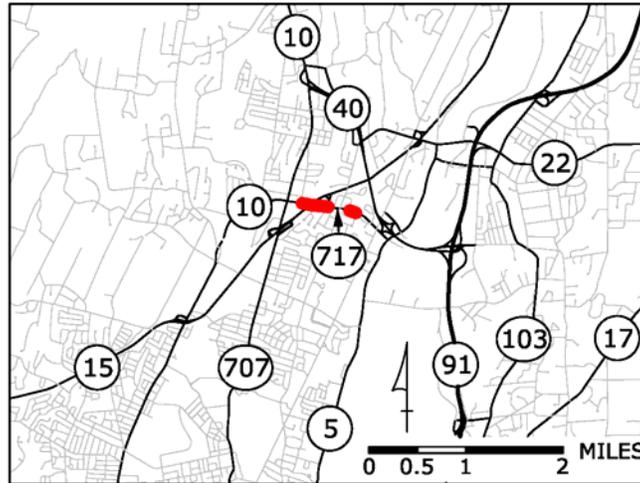
Segment Location	Segment Length	Segment Limits		Existing Peak Hour V/C
South Hamden	0.68 mi	Mile 0.26 Armory St.	Mile 0.94 Putnam Ave.	0.96
Hamden, near Rt 15 interchange 61	0.35 mi	Mile 3.27 <i>Access to NB Rt. 15</i>	Mile 3.62 <i>Rt. 10/Dixwell Ave.</i>	0.90



**Figure 28: Rt. 715/Montowese Ave. Congested Corridor Segments**

**Table 27: Rt. 715/Montowese Ave. Congested Corridor V/C Characteristics**

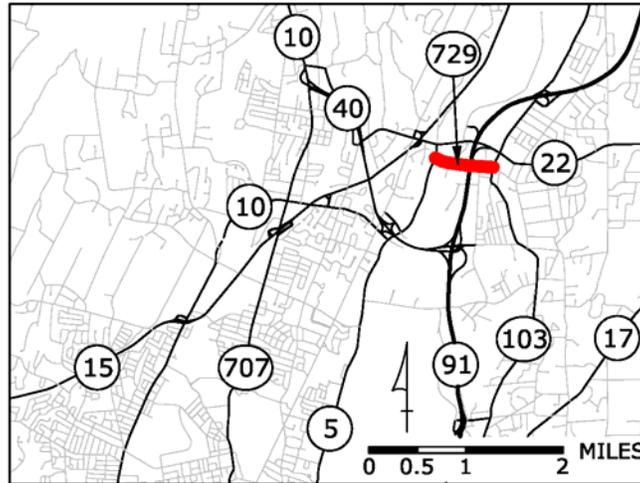
Segment Location	Segment Length	Segment Limits		Existing Peak Hour V/C
North Haven, at I-91 interchange 9	0.09	Mile 0.16 <i>Universal Dr. N.</i>	Mile 0.25 <i>Access to NB I-91</i>	1.27
North Haven, east of I-91	0.19	Mile 0.32 <i>Clark Ave.</i>	Mile 0.51 <i>Rt. 103/ Quinnipiac Ave.</i>	1.42



**Figure 29: Rt. 717/Dixwell Ave. Congested Corridor Segments**

**Table 28: Rt. 717/Dixwell Ave. Congested Corridor V/C Characteristics**

Segment Location	Segment Length	Segment Limits		Existing Peak Hour V/C
Hamden/North Haven, near Rt. 15 interchange 62	0.25 mi	Mile 0.18 <i>East of Washington Ave.</i>	Mile 0.43 <i>Access to Rt. 15 NB</i>	1.02
North Haven, between Rt. 15 and Rt. 40	0.06 mi	Mile 0.65 <i>East of Carafa Ter</i>	Mile 0.71 <i>West of Falcon Crest Dr.</i>	0.99



**Figure 30: Rt. 729/Broadway Congested Corridor Segment**

**Table 29: Rt. 729/Broadway Congested Corridor V/C Characteristics**

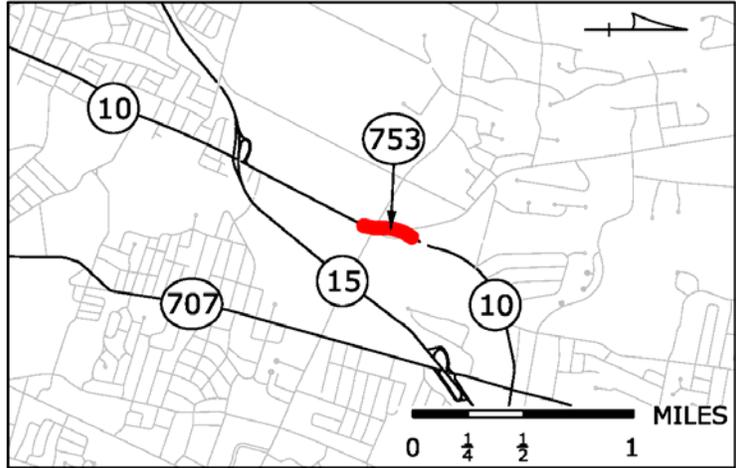
Segment Location	Segment Length	Segment Limits		Existing Peak Hour V/C
		Mile 0.00 <i>Rt. 5/State Street</i>	Mile 0.42 <i>Washington Ave.</i>	
North Haven, near I-91	0.42 mi	Mile 0.00 <i>Rt. 5/State Street</i>	Mile 0.42 <i>Washington Ave.</i>	0.98



**Figure 31: Rt. 745/First Ave./Kimberly Ave. Congested Corridor Segments**

**Table 30: Rt. 745/First Ave./Kimberly Ave. Congested Corridor V/C Characteristics**

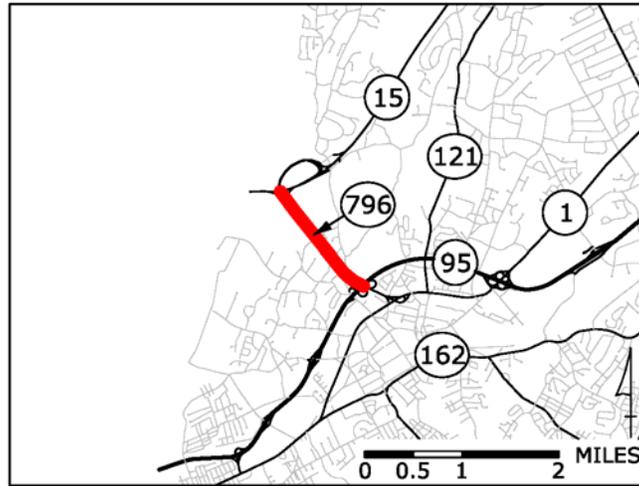
Segment Location	Segment Length	Segment Limits		Existing Peak Hour V/C
West Haven, near I-95 interchange 43	0.08 mi	Mile 0.00 <i>Rt 122/Exit from I-95 SB</i>	Mile 0.08 <i>Access to I-95 NB</i>	1.17
West Haven, east of First Ave.	0.11 mi	Mile 0.59 <i>Elm St. and First Ave.</i>	Mile 0.70 <i>East of Water St.</i>	1.13
West Haven/New Haven town line	0.11 mi	Mile 0.81 <i>Beginning of West River Overpass</i>	Mile 0.92 <i>Access to I-95 NB</i>	0.95
New Haven, north of I-95 interchange 44	0.18 mi	Mile 1.03 <i>Exit from I-95 SB</i>	Mile 1.21 <i>Rt. 10/Ella T. Grasso Blvd.</i>	1.16



**Figure 32: Rt. 753/Dixwell Ave. Congested Corridor Segment**

**Table 31: Rt. 753/Dixwell Ave. Congested Corridor V/C Characteristics**

Segment Location	Segment Length	Segment Limits		Existing Peak Hour V/C
		Mile 0.03 <i>Dixwell Ave. #2/ Rt. 10 NB</i>	Mile 0.17 <i>Dixwell Ave. #2/ Rt. 10 NB</i>	
Hamden, north of Skiff St.	0.14 mi			1.00



**Figure 33: Rt. 796/Milford Connector Congested Corridor Segment**

**Table 32: Rt. 796/Milford Connector Congested Corridor V/C Characteristics**

Segment Location	Segment Length	Segment Limits		Existing Peak Hour V/C
Milford, between I-95 and Rt. 15	1.11 mi	<i>Mile 0.67 NB exit from I-95 SB</i>	<i>Mile 1.78 Rt. 15 underpass</i>	0.96

## **6 PERFORMANCE MONITORING PLAN**

The SCRCOG CMP will primarily rely on ConnDOT's annual congestion screening and monitoring report for system performance measures (mainly V/C ratios). The ConnDOT report is updated yearly and has comprehensive coverage of all state roadways. The report uses a consistent method for analysis statewide and year to year, so it should be useful for long-term comparisons. Using data from the ConnDOT report is also cost effective for the region as minimal funds are available to develop other performance measures.

Although the ConnDOT report is a good source of information, there are some limitations to the data. While information on the primary roads is reasonably accurate, information for secondary roads is based on a lot of assumptions and potentially outdated characteristics. Capacities of secondary roads are difficult to estimate, particularly with signalized intersections and lots of cross streets and driveways. It is also difficult to maintain accurate traffic counts at so many locations along the roadways. Additionally, the methods used to calculate V/C ratios will not effectively capture the impact of small scale improvements (such as adjusting signal timings) that could be proposed to improve the efficiency of a congested corridor.

To supplement the ConnDOT performance measures, travel time runs will be conducted to estimate travel speeds on some of the congested corridors from year to year as funding allows. These runs can be used to verify travel conditions on the corridors and to provide more information on the problem areas. These runs can also be made on corridors before and after planned projects in order to help measure the effectiveness of the selected congestion mitigation strategies.

## **7 CONGESTION MITIGATION STRATEGIES**

Strategies for addressing congestion fall into three main categories:

- Increasing capacity of the transportation system
- Improving efficiency of the existing transportation system
- Influencing travel patterns to reduce and/or spread peak demand

Projects to increase system capacity could include roadway widening, roadway construction on a new alignment, redesign of bottleneck areas, reconfiguration of intersections, adding transit service with shorter headways or new routes, constructing HOV lanes, and upgrading freight rail facilities. These projects have an important role in regional transportation planning, however financial and environmental issues often limit their feasibility. Additionally, Transportation Management Areas (TMA) in nonattainment for carbon monoxide or ozone are prohibited from using federal funds for projects that significantly increase capacity for single occupant vehicles unless management and operations strategies will not adequately address the congestion. So generally, a project to add capacity should not be considered as the first option for improving congestion.

Improving system efficiency could be accomplished with several types of improvements including optimizing signal timings, implementing access management standards, prohibiting

turning movements in problem areas, upgrading roadway and intersection geometry, anticipating special events and weather patterns to better accommodate travel needs, providing travelers real-time information on work zones, incidents, congestion, and transit schedules, reconfiguring urban roadways into one-way pairs, and improving management of incidents. These types of projects can help get the most out of the existing transportation system. Some of these projects may be low cost and localized in their impact. Others can have a regional impact and may be moderately priced, but would require considerable coordination between many agencies and municipalities.

Demand management strategies seek to reduce existing or future congestion by limiting Single Occupant Vehicle (SOV) travel during the peak hours. Some of the strategies to reduce or spread demand include allowing flexible working hours and working from home, developing carpooling programs, instituting parking fees and restrictions, revising zoning regulations, supporting transit-oriented development, and implementing growth restrictions. Many of these strategies require policy changes for private companies, municipalities, and/or the state.

## **8 SELECTED STRATEGIES AND SYSTEM MANAGEMENT**

### **8.1 Operational Level Application**

Many of the congested corridors identified in this report are in various stages of improvement, whether initial studies are being conducted, study recommendations have been programmed as improvement projects, or plans are currently under construction.

SCRCOG conducts studies to evaluate traffic operation and management issues for local towns as part of the Unified Planning Work Program (UPWP). Following is a list of recently completed (or currently underway) studies relating to the congested corridors identified in this report:

- City of New Haven Whalley Avenue/Rt. 10/Rt. 63 Corridor Study (2009)
- Town of Wallingford Route 68 Corridor Study (2009)
- Town of East Haven I-95, Route 1, Route 100 Corridor Study (2009)
- Route 10 Corridor Study for Hamden and New Haven (2008)
- I-691 Interchange 5, 6, and 7 Study (2008)
- Route 1/North Main Street Access Management Plan for Branford (2008)
- Route 34 Corridor Study (2007)
- Route 162 Corridor Study (2007)
- Route 5 Planning and Preliminary Design Study (2006)
- Route 22 Corridor Planning Study (2006)

Based on results of these initial studies, suggestions and recommendations to mitigate congestion along the congested corridors will be incorporated in the future UPWP and programmed into the Transportation Improvement Program (TIP) for implementation. A list of projects that are currently included in the SCRCOG 2010-2013 TIP for the congested corridor segments identified in this report (excluding those associated with the Quinnipiac bridge replacement) are included in Table 33.

The ongoing I-95 New Haven Harbor Crossing (NHHC) Corridor Improvement Program is one of the major efforts in the region aimed to ease traffic congestion and improve safety along a complicated section of I-95 and improve interchange operations where I-95 connects to Route 34 and I-91. Figure 34 shows the locations of the projects that comprise this effort and Table 34 includes descriptions and construction dates for the projects. The improvements associated with these projects have not yet been accounted for in the V/C ratio performance measure calculations. As these projects continue to be finalized, ConnDOT will update the data for roadways in the area and the improvements will be reflected in the resulting V/C ratios for those segments.

## **8.2 Policy Level Application**

Congestion can be tackled by either supply-side or demand-side tactics. Supply-side tactics include increasing road capacity, increasing transit capacity, and better managing incidents and accidents. Demand-side tactics are designed to reduce or manage the number of persons or vehicles traveling during peak periods, or change the mode or length of the trip. They include pricing and market-oriented strategies, land use policies, and local growth management policies. SCRCOG is endeavoring in both directions to find appropriate anti-congestion strategies for the region.

On the supply-side, SCRCOG is working to use the findings and implement the recommendations of a long-range transit enhancement study that was recently conducted. The study sought to identify strategies for improving transit service and increasing transit capacity. Additionally, SCRCOG is promoting the use of the Unified Response Manual for Highway Incidents in the State of Connecticut, which was updated in June of 2008. This manual is intended as a practical reference for first responders and coordination agencies to identify resources, minimize confusion, and encourage communication. The manual provides general and agency specific actions for improving incident management which can diminish non-recurring congestion by reducing the time to detect, respond to, and clear incidents.

On the demand-side, SCRCOG is establishing a regional housing committee to pursue the affordable housing strategies outlined in the Regional Housing Market Assessment (adopted by SCRCOG in July, 2004). Additionally, the Regional Planning Commission (RPC) of SCRCOG is involved with regional land use planning and deals with zoning and subdivision referrals and updates to the Regional Plan of Conservation and Development. The RPC reports consider inter-municipal concerns such as traffic, density, and environmental impact in order to provide advisory recommendations to the municipalities. The Regional Plan provides regional policy guidance for conservation and context-sensitive development. The plan is intended to enhance assets and quality of life for this diverse region and was most recently updated in 2008.

**Table 33: Projects Funded or Obligated in SCRCOG FY 2010-2013 TIP by Corridor**

Corridor	Location	TIP Project Name	TIP Project Description	Funding Year
Rt. 796/Milford	Milford	Rt 796 (Milford Connector) Sign Replacement	Replace signs and sign supports between US 1 and Merritt Parkway (Route 15)	FY2010
I-95	Milford/Orange	I-95: Plains Rd to Marsh Hill Rd. Resurfacing	Resurfacing to prevent roadway deterioration, bridge and safety improvements	FY2010
I-95	New Haven	I-95 West River Bridge BR #00163A	Superstructure replacement and widening.	FY2014
Rt. 63	New Haven	Reconstruction of Rt. 63 (Whalley Ave.)	Widen Whalley Ave. to 4 full lanes between Emerson St. and Amity Rd.	FY 2010
I-95	Milford/Straford	Housatonic River Bridge Replacement	Replace current six-lane bridge with a new structure.	FY 2011- FY2014
Rt. 15/Rt. 150	Wallingford	CT 15/150 Exit 64/65 Reconfiguration (River Road)	Widen and reconstruct River Rd. from Quininiac St. to R. 150, close NB exit 65 and reconstruct NB entrance	FY 2011- FY2014
Rt. 122	West Haven	Rt. 122: US 1 Realignment	Realign Route 122 northbound approach to US 1 to improve geometry, capacity, and safety.	FY2014
I-95	West Haven	I-95: Greta St. to West River Resurfacing	Resurface and related safety improvements.	FY2014
Rt. 63	Woodbridge	Rt. 63: Rt 67 Intersection Improvements	Add northbound left turn lane on Rt. 63 at Rt. 67.	FY2010
I-95	Milford/	I-95: Exit 24 and 47 Sign Upgrade	Replace/upgrade signs between exit 24 (Fairfield) and exit 47 (New Haven).	FY 2010

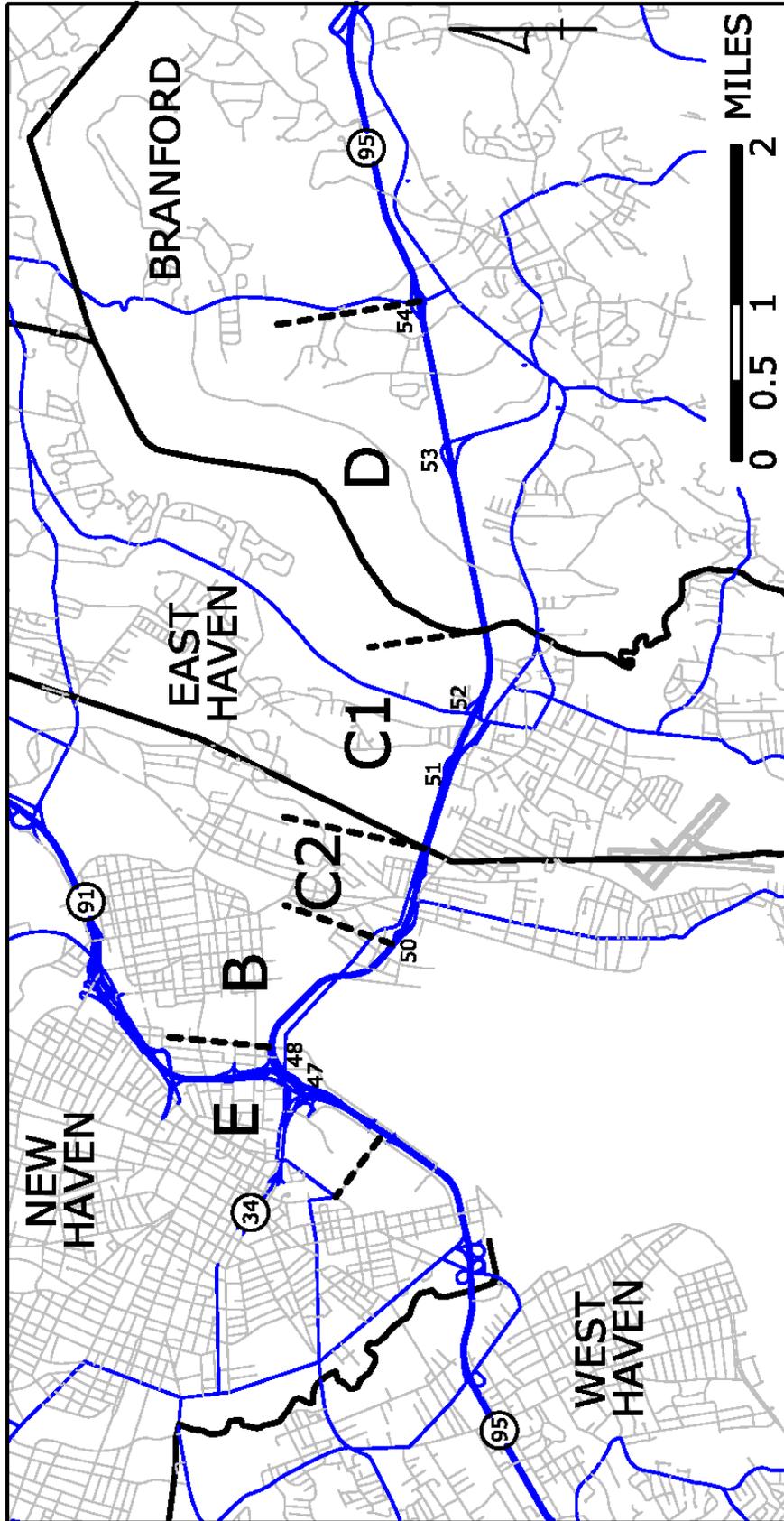


Figure 34: I-95 New Haven Harbor Crossing (NHHC) Corridor Improvement Program

**Table 34: I-95 New Haven Harbor Crossing (NHHHC) Corridor Improvement Program**

<b>Contract</b>	<b>Project Limits</b>	<b>Description</b>	<b>Start</b>	<b>Finish</b>
A	State Street Station	New station to serve Shore Line East rail commuters	10/2000	6/2002
D	I-95, Saltonstall to Interchange 54	Reconstruct 2.1 miles of I-95 to provide three travel lanes in each direction	6/2002	7/2004
C1	I-95, East Haven/New Haven Line to Lake Saltonstall Bridge	Reconstruct 1.25 miles of I-95 to provide three travel lanes in each direction	9/2003	8/2006
E1	I-95/I-91/Rt. 34 Interchange	Soil preparation and utility relocations for contract E area.	11/2004	12/2006
C2	I-95, Woodward/Stiles Interchange to East Haven/New Haven Line	Reconstruct 1.0 miles of I-95 to provide five travel lanes in each direction	9/2005	10/2008
D1	I-95, Saltonstall to Interchange 54	Final paving and re-striping of Contract D area	2/2008	11/2008
GNHWPCA	North of the Q Bridge under the harbor	New sewer force main installation	12/2007	4/2009
Howard Avenue	Howard Avenue Bridge over I-95	Reconstruct bridge	7/2008	10/2010*
B1	I-95, Pearl Harbor Memorial Bridge (off-line)	Bridge foundations and I-95 Northbound approach structures	4/2008	9/2011*
E2	I-95/I-91/Rt. 34 Interchange	I-95 Northbound to Route 34 Westbound "flyover" ramp	10/2008	11/2011*
B	I-95, Pearl Harbor Memorial Bridge (on-line)	New 10-lane bridge across the Quinnipiac River	11/2009	6/2015*
E	I-95/I-91/Rt. 34 Interchange	Reconstruct interchange to accommodate new Quinnipiac River Bridge	3/2011*	11/2016*
Various	Branford, Clinton, Guilford, and Madison	Shoreline East Train Station Improvements	Various	Various

\* Expected

Source: [www.i95newhaven.com](http://www.i95newhaven.com)

## **9 MONITORING EFFECTIVENESS**

An integral part of the CMP is the continuous monitoring of many aspects of area congestion and the effectiveness of the management strategies. The most fundamental element in system monitoring would be the collection of data before and after strategy implementation to evaluate the impact on congestion. The data assembled in this CMP report provide a good baseline for existing conditions in the region, and as strategies are implemented from year to year the updated and comparable performance measures should account for major improvements made. However, using the same performance measures from report to report (V/C and travel speeds) is critical for evaluating strategy effectiveness. Although the region-wide data presented in this report is useful for large scale strategies, some congestion management enhancements may be difficult to evaluate with such high level performance measures. Improvements such as coordinating traffic signals or moving bus stop locations may require some project-specific data collection to supplement the V/C and travel speed data used for this report. In addition to answering the basic question of how strategies influence congestion, additional monitoring of the process can consider how well strategies were implemented and what factors contributed to their success or failure. The tools and analysis procedures involved in the process should be monitored as well to ensure that current standard practices are being used.

Future updates to this report should include a review of ConnDOT's latest CMP Congestion Screening and Monitoring report to compare the latest V/C ratios to the "baseline" values included in section 5.3 of this report. As funding allows, a data collection program should also be implemented to supplement the V/C ratio data available from ConnDOT. This effort could involve conducting travel time runs to compare average travel speeds to those observed in 2004 (included in Appendix A). Other types of data could also be collected or compiled such as the percentage of roads and bridges below acceptable operating condition (to assess system preservation efforts) or customer perceptions of transit service (to prioritize potential multimodal improvements). Data collection could also be developed on a much smaller scale to evaluate individual improvement projects in the region.

## **10 CONCLUSIONS**

The CMP is an ongoing program of activities and an integral part of the overall planning process for the region. SCRCOG is in various stages of addressing congestion in the region: conducting studies, advancing the process of improvement plans, and constructing and implementing multimodal improvements. Although funding for maintaining an extensive data collection program is limited, the region's objectives to effectively prioritize projects, to maintain aging infrastructure, to preserve multimodal transportation facilities, to promote interconnection of modes, and to encourage integrated land use and transportation planning are all directly in line with values espoused in CMP guidelines. The travel patterns are relatively stable and transportation system infrastructure is well established in the region, there are few opportunities for large scale capacity improvements. Therefore, projects funded in the region primarily involve maintenance, operations, and management improvements. These are all types of projects that are further justified using the CMP.

**APPENDIX**

**A**

**2004 CONGESTED CORRIDOR TRAVEL TIME STUDIES**

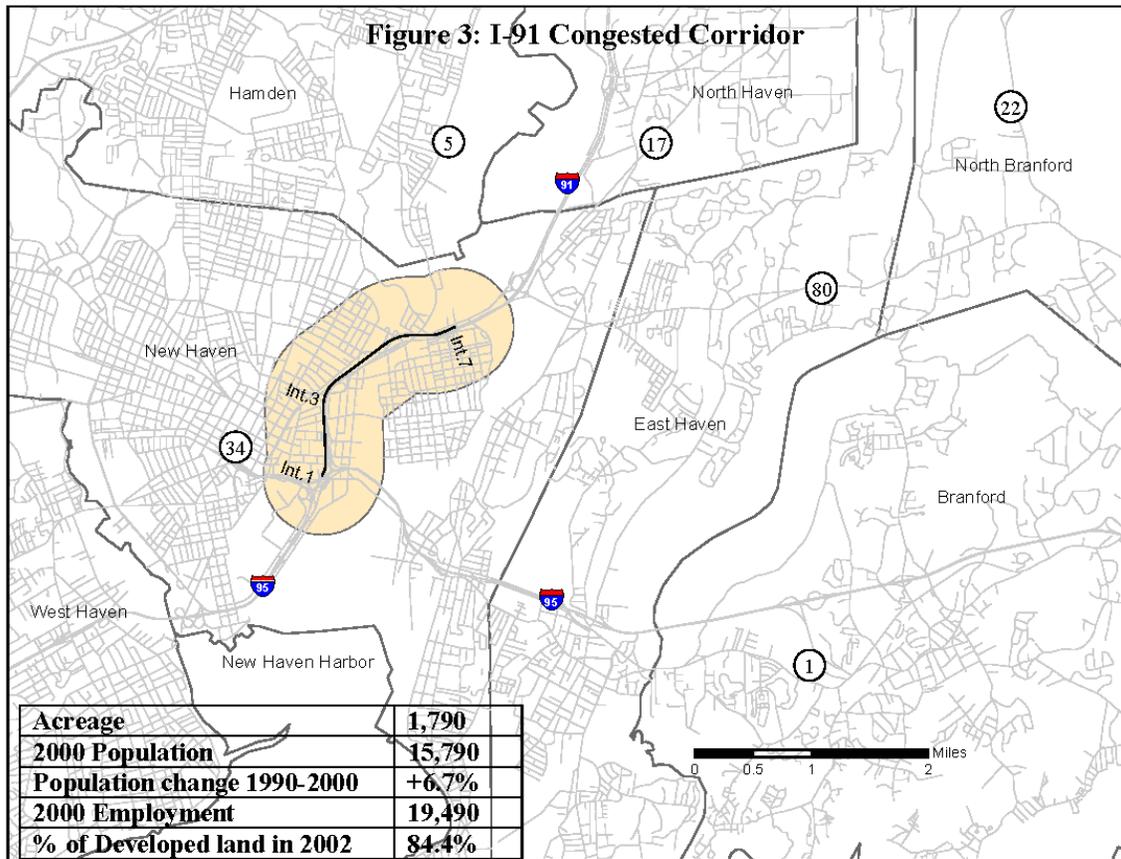
**(EXCERPTED FROM SCRCOG 2004 CMS REPORT)**

## LIST OF TABLES

- Table A.1: I-91 Congested Corridor Speed Scenario (2004)**
- Table A.2: I-95 Congested Corridor Speed Scenario (2004)**
- Table A.3: Rt. 1 Congested Corridor #1 Speed Scenario (2004)**
- Table A.4: Rt. 1 Congested Corridor #2 Speed Scenario (2004)**
- Table A.5: Rt. 5 Congested Corridor #1 Speed Scenario (2004)**
- Table A.6: Rt. 5 Congested Corridor #2 Speed Scenario (2004)**
- Table A.7: Rt. 22 Congested Corridor Speed Scenario (2004)**
- Table A.8: Rt. 34 Congested Corridor Speed Scenario (2004)**
- Table A.9: Rt. 63-Rt. 69 Congested Corridor Speed Scenario (2004)**
- Table A.10: Rt. 68 Congested Corridor Speed Scenario (2004)**
- Table A.11: Rt. 80 Congested Corridor Speed Scenario (2004)**
- Table A.12: Rt. 150 Congested Corridor Speed Scenario (2004)**
- Table A.13: Rt. 162 Congested Corridor Speed Scenario (2004)**
- Table A.14: Main Street (Meriden) Congested Corridor Speed Scenario (2004)**

## LIST OF FIGURES

- Figure A.1: I-91 Congested Corridor (2004 CMS)**
- Figure A.2: I-95 Congested Corridor (2004 CMS)**
- Figure A.3: Rt. 1 Congested Corridor #1 (2004 CMS)**
- Figure A.4: Rt. 1 Congested Corridor #2 (2004 CMS)**
- Figure A.5: Rt. 5 Congested Corridor #1 (2004 CMS)**
- Figure A.6: Rt. 5 Congested Corridor #2 (2004 CMS)**
- Figure A.7: Rt. 22 Congested Corridor (2004 CMS)**
- Figure A.8: Rt. 34 Congested Corridor (2004 CMS)**
- Figure A.9: Rt. 63-Rt. 69 Congested Corridor (2004 CMS)**
- Figure A.10: Rt. 68 Congested Corridor (2004 CMS)**
- Figure A.11: Rt. 80 Congested Corridor (2004 CMS)**
- Figure A.12: Rt. 150 Congested Corridor (2004 CMS)**
- Figure A.13: Rt. 162 Congested Corridor (2004 CMS)**
- Figure A.14: Main Street (Meriden) Congested Corridor (2004 CMS)**



**Figure A.1: I-91 Congested Corridor (2004 CMS)**

**Table A.1: I-91 Congested Corridor Speed Scenario (2004)**

Segment	Direction/Time	Average Speed (mph)	Threshold Speed (mph)
Interchange 1 (Rt34) to Interchange 3 (Trumbull St)	Southbound AM	15	45
Interchange 3 (Trumbull St) to Interchange 7 (Ferry St)	Southbound AM	35	45
Interchange 1 (Rt34) to Interchange 3 (Trumbull St)	Southbound PM	25	45
Interchange 3 (Trumbull St) to Interchange 7 (Ferry St)	Southbound PM	60	45

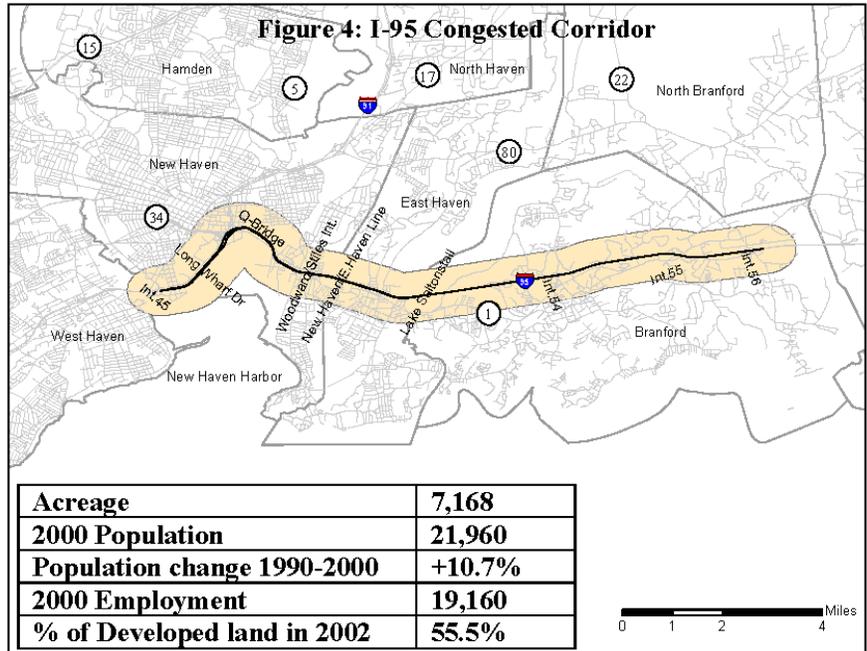
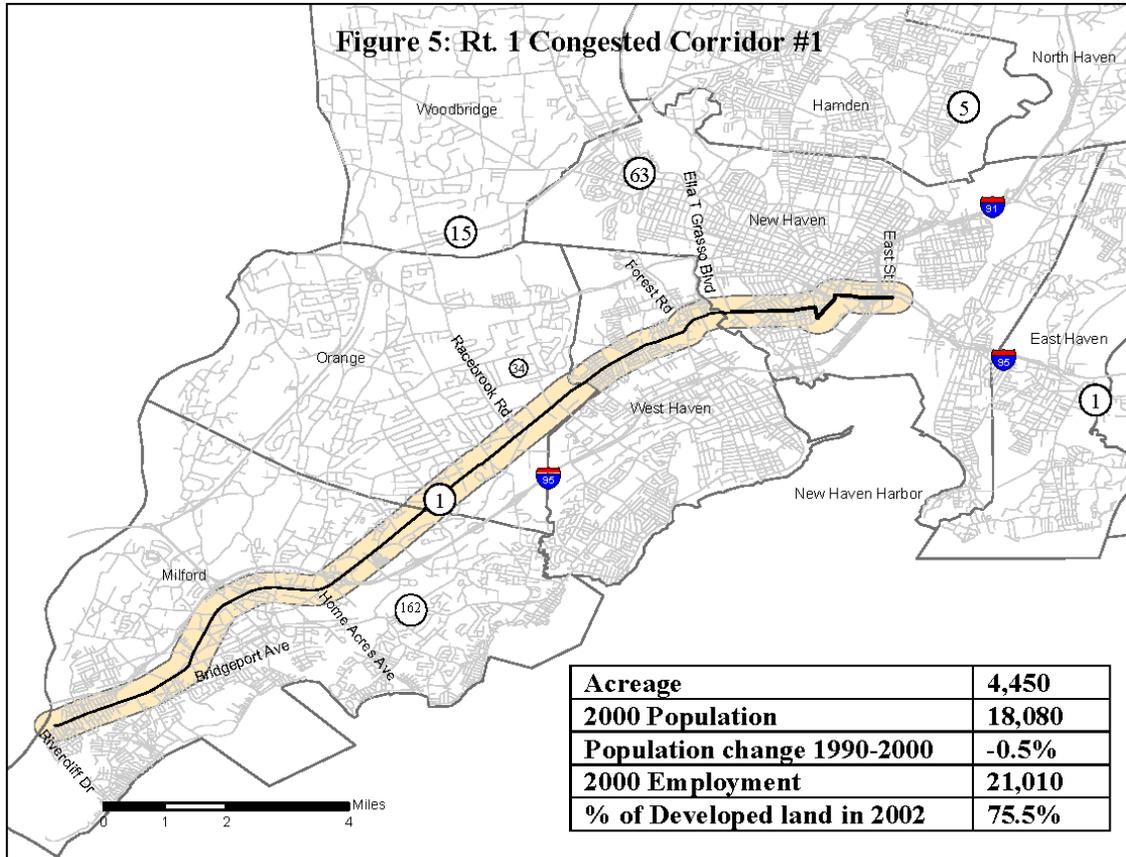


Figure A.2: I-95 Congested Corridor (2004 CMS)

Table A.2: I-95 Congested Corridor Speed Scenario (2004)

Segment	Direction/Time	Average speed (mph)	Threshold Speed (mph)
Interchange 45 to Canal Dock Dr	Southbound AM	55	45
I-95/I-91/Rt.34 Interchange		53	45
Pearl Harbor Memorial Bridge (Q Bridge)		43	45
Woodward/Stiles Int. to E. Haven/New Haven Line		30	45
East Haven/New Haven Line to Lake Saltonstall		18	45
Saltonstall to Interchange 54		20	45
Interchange 54 to Interchange 55		26	45
Interchange 55 to Interchange 56		30	45
Interchange 45 to Canal Dock Dr	Southbound PM	36	45
I-95/I-91/Rt.34 Interchange		43	45
Pearl Harbor Memorial Bridge (Q Bridge)		53	45
Woodward/Stiles Int. to E. Haven/New Haven Line		53	45
East Haven/New Haven Line to Lake Saltonstall		55	45
Saltonstall to Interchange 54		44	45
Interchange 54 to Interchange 55		60	45
Interchange 55 to Interchange 56		65	45
Interchange 45 to Canal Dock Dr	Northbound AM	45	45
I-95/I-91/Rt.34 Interchange		55	45
Pearl Harbor Memorial Bridge (Q Bridge)		56	45
Woodward/Stiles Int. to E. Haven/New Haven Line		60	45
East Haven/New Haven Line to Lake Saltonstall		60	45
Saltonstall to Interchange 54		58	45
Interchange 54 to Interchange 55		63	45
Interchange 55 to Interchange 56		64	45

Interchange 45 to Canal Dock Dr	Northbound PM	38	45
I-95/I-91/Rt.34 Interchange		26	45
Pearl Harbor Memorial Bridge (Q Bridge)		41	45
Woodward/Stiles Int. to E. Haven/New Haven Line		50	45
East Haven/New Haven Line to Lake Saltonstall		31	45
Saltonstall to Interchange 54		49	45
Interchange 54 to Interchange 55		64	45
Interchange 55 to Interchange 56		62	45

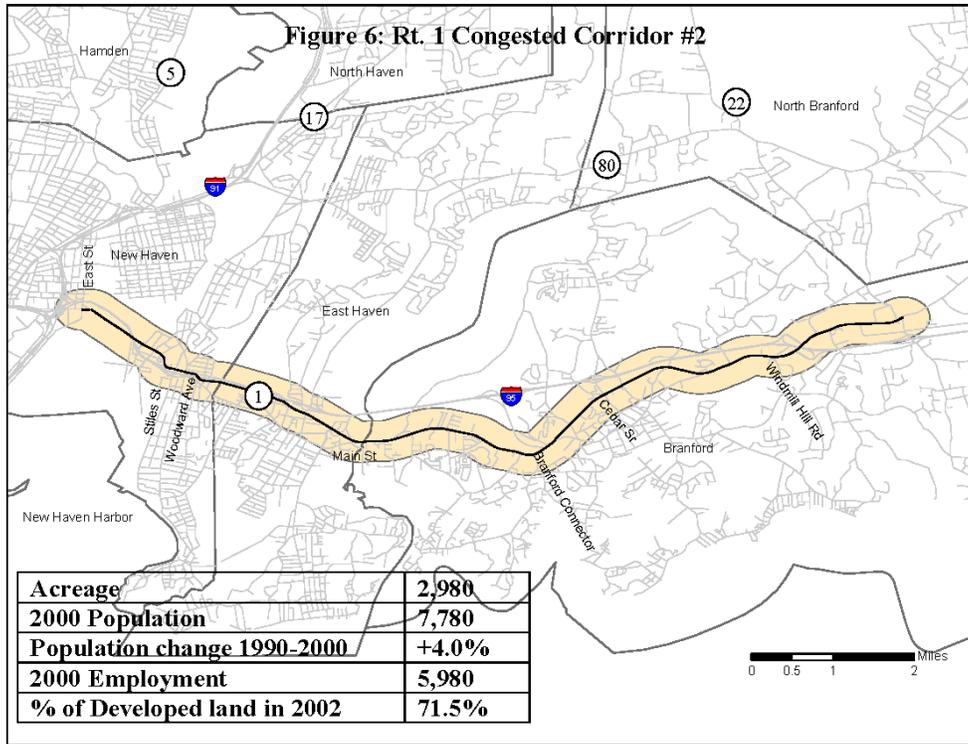


**Figure A.3: Rt. 1 Congested Corridor #1 (2004 CMS)**

**Table A.3: Rt. 1 Congested Corridor #1 Speed Scenario (2004)**

Segment	Direction/Time	Average speed (mph)	Threshold Speed (mph)
Rivercliff Dr to Rt 162 (Bridgeport Ave)	Southbound AM	25	25
Rt 162 (Bridgeport Ave) to Home Acres Ave		28	25
Home Acres Ave to Rt 114 (Racebrook Rd)		41	25
Rt 114 (Racebrook Rd) to Rt 122 (Forest Rd)		33	25
Rt 122 (Forest Rd) to Ella T. Grasso Blvd		20	25
Ella T. Grasso Blvd to East St		13	25
Rivercliff Dr to Rt 162 (Bridgeport Ave)	Southbound PM	19	25
Rt 162 (Bridgeport Ave) to Home Acres Ave		26	25
Home Acres Ave to Rt 114 (Racebrook Rd)		30	25
Rt 114 (Racebrook Rd) to Rt 122 (Forest Rd)		29	25
Rt 122 (Forest Rd) to Ella T. Grasso Blvd		18	25
Ella T. Grasso Blvd to East St		10	25
Rivercliff Dr to Rt 162 (Bridgeport Ave)	Northbound AM	21	25
Rt 162 (Bridgeport Ave) to Home Acres Ave		32	25
Home Acres Ave to Rt 114 (Racebrook Rd)		34	25
Rt 114 (Racebrook Rd) to Rt 122 (Forest Rd)		33	25
Rt 122 (Forest Rd) to Ella T. Grasso Blvd		15	25
Ella T. Grasso Blvd to East St		21	25

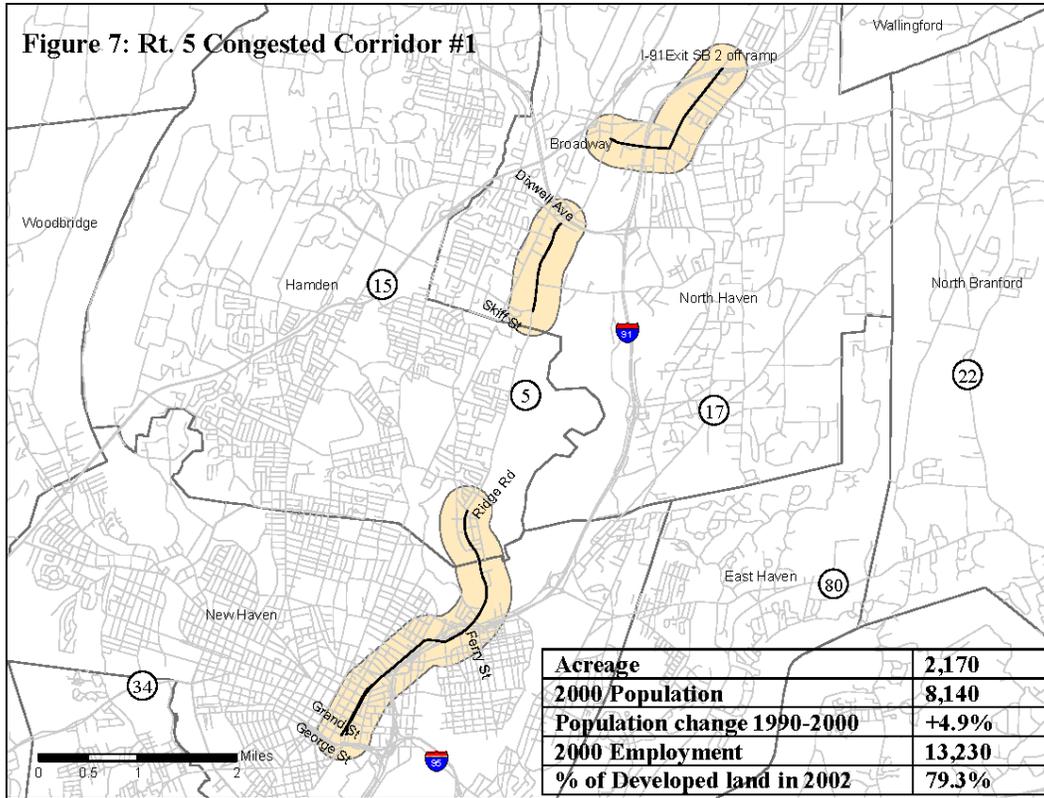
Rivercliff Dr to Rt 162 (Bridgeport Ave)	Northbound PM	11	25
Rt 162 (Bridgeport Ave) to Home Acres Ave		24	25
Home Acres Ave to Rt 114 (Racebrook Rd)		24	25
Rt 114 (Racebrook Rd) to Rt 122 (Forest Rd)		23	25
Rt 122 (Forest Rd) to Ella T. Grasso Blvd		11	25
Ella T. Grasso Blvd to East St		16	25



**Figure A.4: Rt. 1 Congested Corridor #2 (2004 CMS)**

**Table A.4: Rt. 1 Congested Corridor #2 Speed Scenario (2004)**

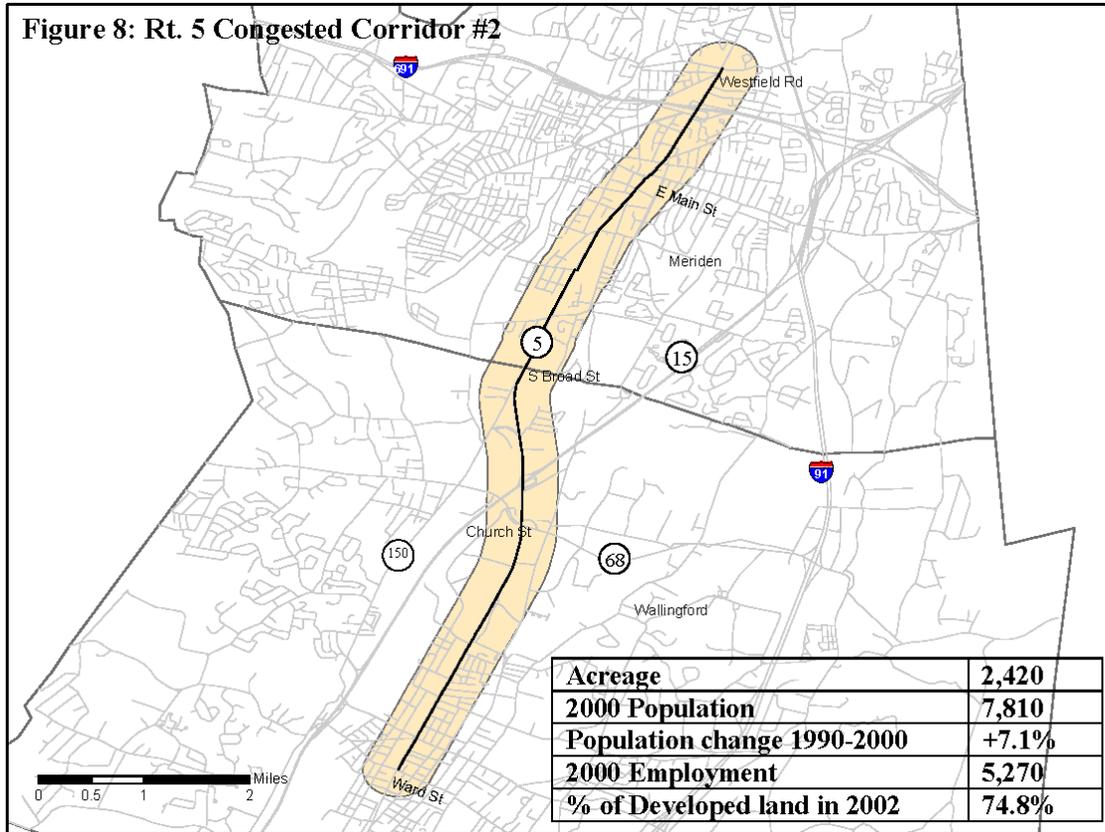
Segment	Direction/Time	Average speed (mph)	Threshold Speed (mph)
East St to Stiles St	Southbound AM	19	25
Stiles St to Woodward Ave		25	25
Woodward Ave to Main St		28	25
W. Main St to Branford Connector		45	25
Branford Connector to Cedar St		26	25
Cedar St to Windmill Hill Rd		25	25
East St to Stiles St	Southbound PM	45	25
Stiles St to Woodward Ave		34	25
Woodward Ave to Main St		33	25
W. Main St to Branford Connector		28	25
Branford Connector to Cedar St		31	25
Cedar St to Windmill Hill Rd		35	25
East St to Stiles St	Northbound AM	39	25
Stiles St to Woodward Ave		27	25
Woodward Ave to Main St		29	25
W. Main St to Branford Connector		33	25
Branford Connector to Cedar St		28	25
Cedar St to Windmill Hill Rd		29	25
East St to Stiles St	Northbound PM	26	25
Stiles St to Woodward Ave		24	25
Woodward Ave to Main St		23	25
W. Main St to Branford Connector		25	25
Branford Connector to Cedar St		25	25
Cedar St to Windmill Hill Rd		29	25



**Figure A.5: Rt. 5 Congested Corridor #1 (2004 CMS)**

**Table A.5: Rt. 5 Congested Corridor #1 Speed Scenario (2004)**

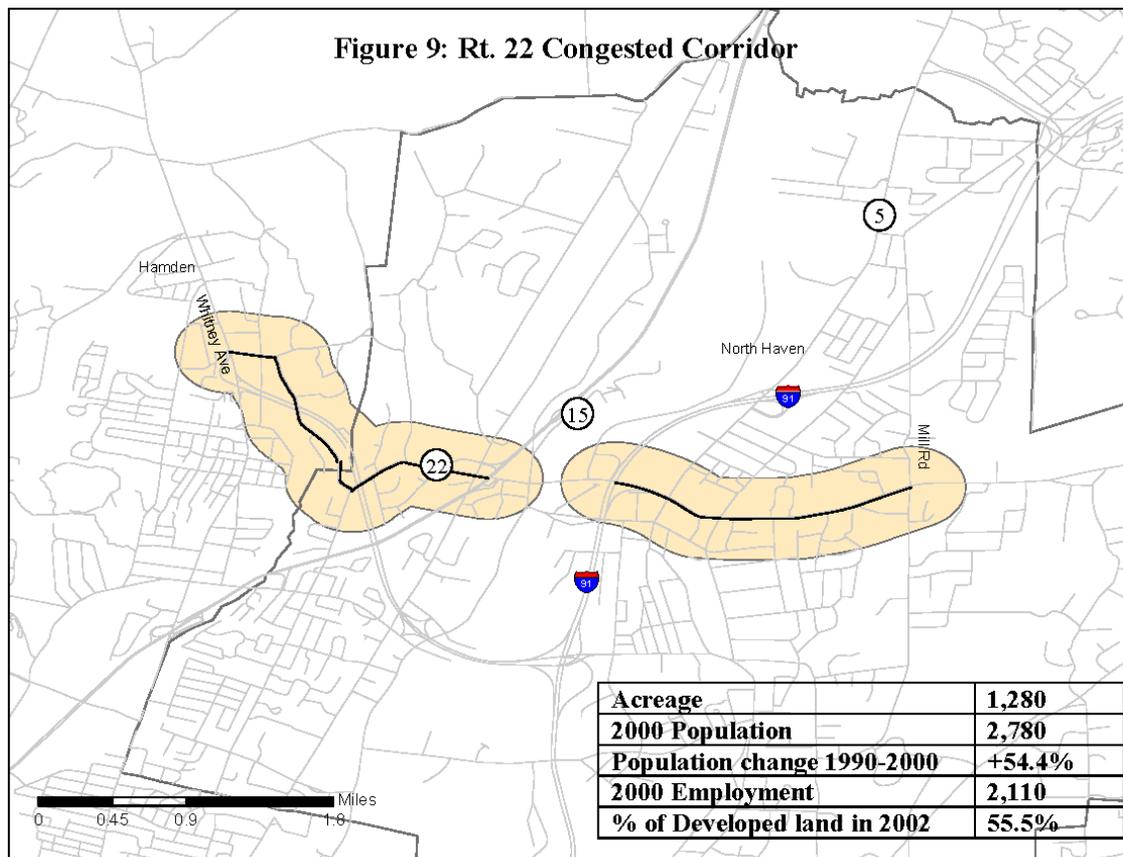
Segment	Direction/Time	Average speed (mph)	Threshold Speed (mph)
George St to Grand Ave	Southbound AM	24	25
Grand Ave to Ferry St		20	25
Ferry St to Ridge Rd		27	25
Skiff St to Dixwell Ave		34	25
Broadway to I-91 SB Exit 12 off ramp		29	25
George St to Grand Ave	Southbound PM	19	25
Grand Ave to Ferry St		18	25
Ferry St to Ridge Rd		25	25
Skiff St to Dixwell Ave		28	25
Broadway to I-91 SB Exit 12 off ramp		25	25
George St to Grand Ave	Northbound AM	11	25
Grand Ave to Ferry St		19	25
Ferry St to Ridge Rd		31	25
Skiff St to Dixwell Ave		27	25
Broadway to I-91 SB Exit 12 off ramp		24	25
George St to Grand Ave	Northbound PM	11	25
Grand Ave to Ferry St		17	25
Ferry St to Ridge Rd		27	25
Skiff St to Dixwell Ave		27	25
Broadway to I-91 SB Exit 12 off ramp		25	25



**Figure A.6: Rt. 5 Congested Corridor #2 (2004 CMS)**

**Table A.6: Rt. 5 Congested Corridor #2 Speed Scenario (2004)**

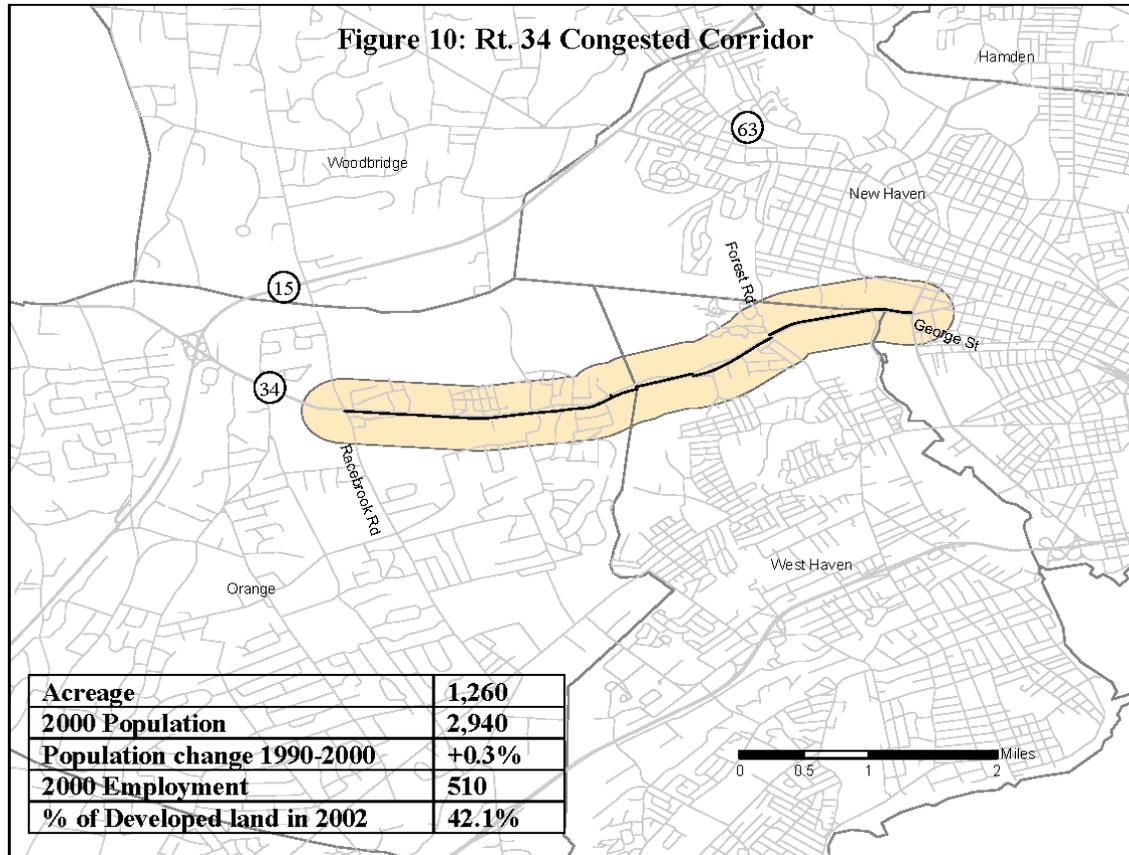
Segment	Direction/Time	Average speed (mph)	Threshold Speed (mph)
Ward St to Rt68 (Church St)	Southbound AM	25	25
Rt68 (Church St) to Rt150 (S. Broad St)		31	25
Rt150 (S. Broad St) to E. Main St		28	25
E. Main St to Westfield Rd		20	25
Ward St to Rt68 (Church St)	Southbound PM	21	25
Rt68 (Church St) to Rt150 (S. Broad St)		25	25
Rt150 (S. Broad St) to E. Main St		27	25
E. Main St to Westfield Rd		18	25
Ward St to Rt68 (Church St)	Northbound AM	27	25
Rt68 (Church St) to Rt150 (S. Broad St)		34	25
Rt150 (S. Broad St) to E. Main St		28	25
E. Main St to Westfield Rd		21	25
Ward St to Rt68 (Church St)	Northbound PM	26	25
Rt68 (Church St) to Rt150 (S. Broad St)		21	25
Rt150 (S. Broad St) to E. Main St		21	25
E. Main St to Westfield Rd		18	25



**Figure A.7: Rt. 22 Congested Corridor (2004 CMS)**

**Table A.7: Rt. 22 Congested Corridor Speed Scenario (2004)**

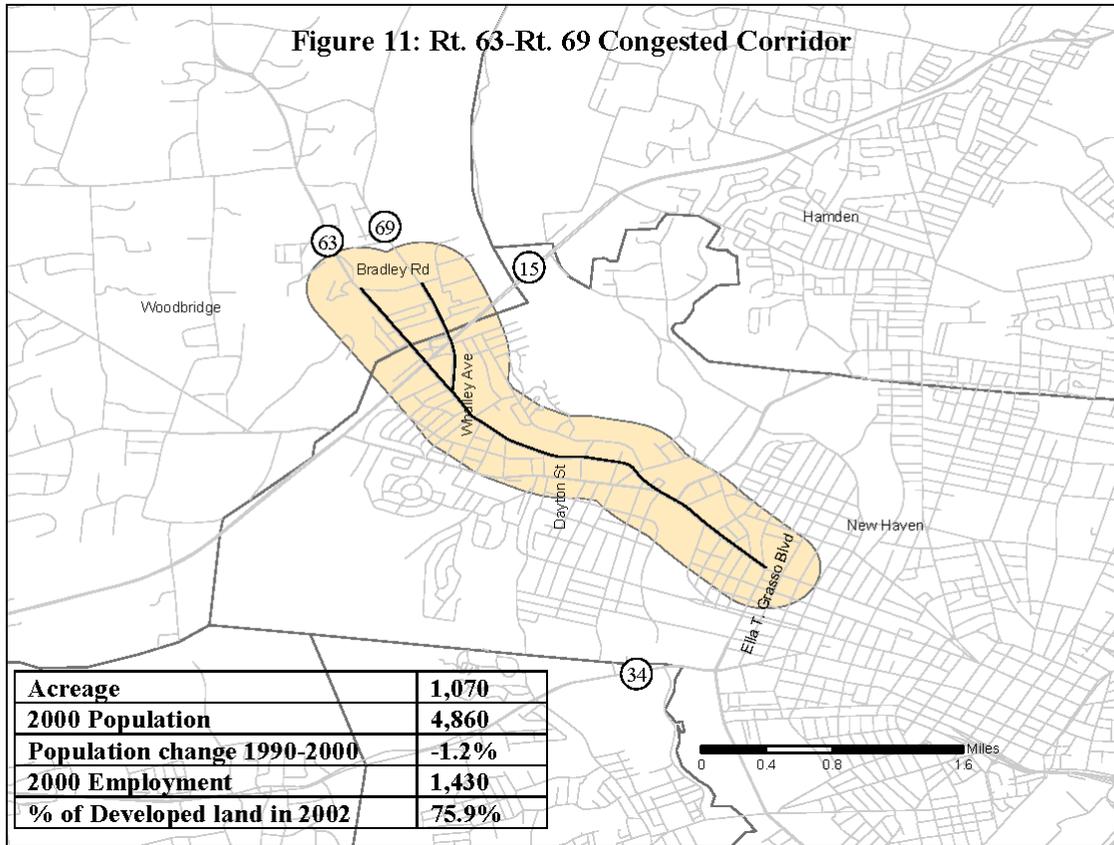
Segment	Direction/Time	Average speed (mph)	Threshold Speed (mph)
Whitney Ave to Rt. 15 Exit 63	Westbound AM	32	25
I-91 Exit 11 to Mill Rd		27	25
Whitney Ave to Rt. 15 Exit 63	Westbound PM	23	25
I-91 Exit 11 to Mill Rd		22	25
Whitney Ave to Rt. 15 Exit 63	Eastbound AM	33	25
I-91 Exit 11 to Mill Rd		30	25
Whitney Ave to Rt. 15 Exit 63	Eastbound PM	25	25
I-91 Exit 11 to Mill Rd		23	25



**Figure A.8: Rt. 34 Congested Corridor (2004 CMS)**

**Table A.8: Rt. 34 Congested Corridor Speed Scenario (2004)**

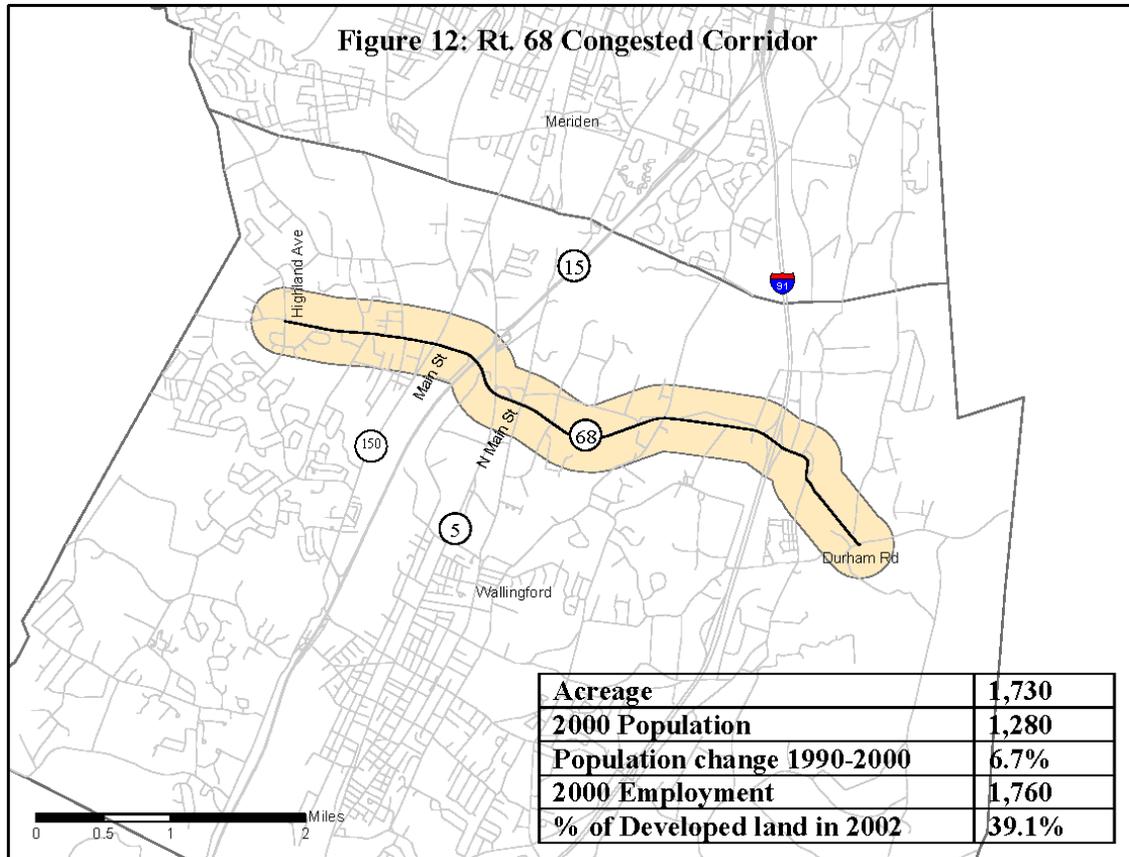
Segment	Direction/Time	Average speed (mph)	Threshold Speed (mph)
Racebrook Rd to Forest Rd	Westbound AM	43	25
Forest Rd to George St		28	25
Racebrook Rd to Forest Rd	Westbound PM	36	25
Forest Rd to George St		14	25
Racebrook Rd to Forest Rd	Eastbound AM	24	25
Forest Rd to George St		27	25
Racebrook Rd to Forest Rd	Eastbound PM	36	25
Forest Rd to George St		27	25



**Figure A.9: Rt. 63-Rt. 69 Congested Corridor (2004 CMS)**

**Table A.9: Rt. 63-Rt. 69 Congested Corridor Speed Scenario (2004)**

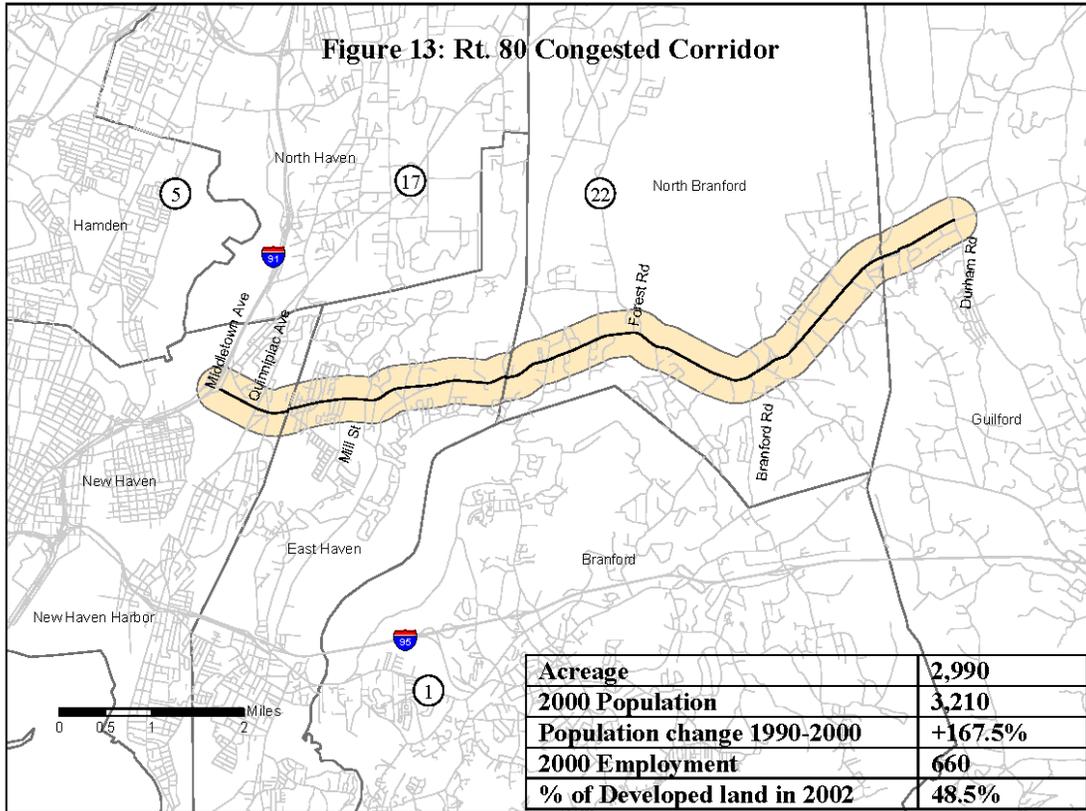
Segment	Direction/Time	Average speed (mph)	Threshold Speed (mph)
<b>Rt. 63</b>			
Ella T Grasso Blvd to Dayton St	Southbound AM	17	25
Dayton St to Whalley Ave		18	25
Whalley Ave to Bradley Rd		24	25
Ella T Grasso Blvd to Dayton St	Southbound PM	20	25
Dayton St to Whalley Ave		17	25
Whalley Ave to Bradley Rd		29	25
Ella T Grasso Blvd to Dayton St	Northbound AM	23	25
Dayton St to Whalley Ave		18	25
Whalley Ave to Bradley Rd		22	25
Ella T Grasso Blvd to Dayton St	Northbound PM	20	25
Dayton St to Whalley Ave		20	25
Whalley Ave to Bradley Rd		23	25
<b>Rt. 69</b>			
Amity Rd to Bradley Rd	Southbound AM	7	25
Amity Rd to Bradley Rd	Southbound PM	7	25
Amity Rd to Bradley Rd	Northbound AM	18	25
Amity Rd to Bradley Rd	Northbound PM	15	25



**Figure A.10: Rt. 68 Congested Corridor (2004 CMS)**

**Table A.10: Rt. 68 Congested Corridor Speed Scenario (2004)**

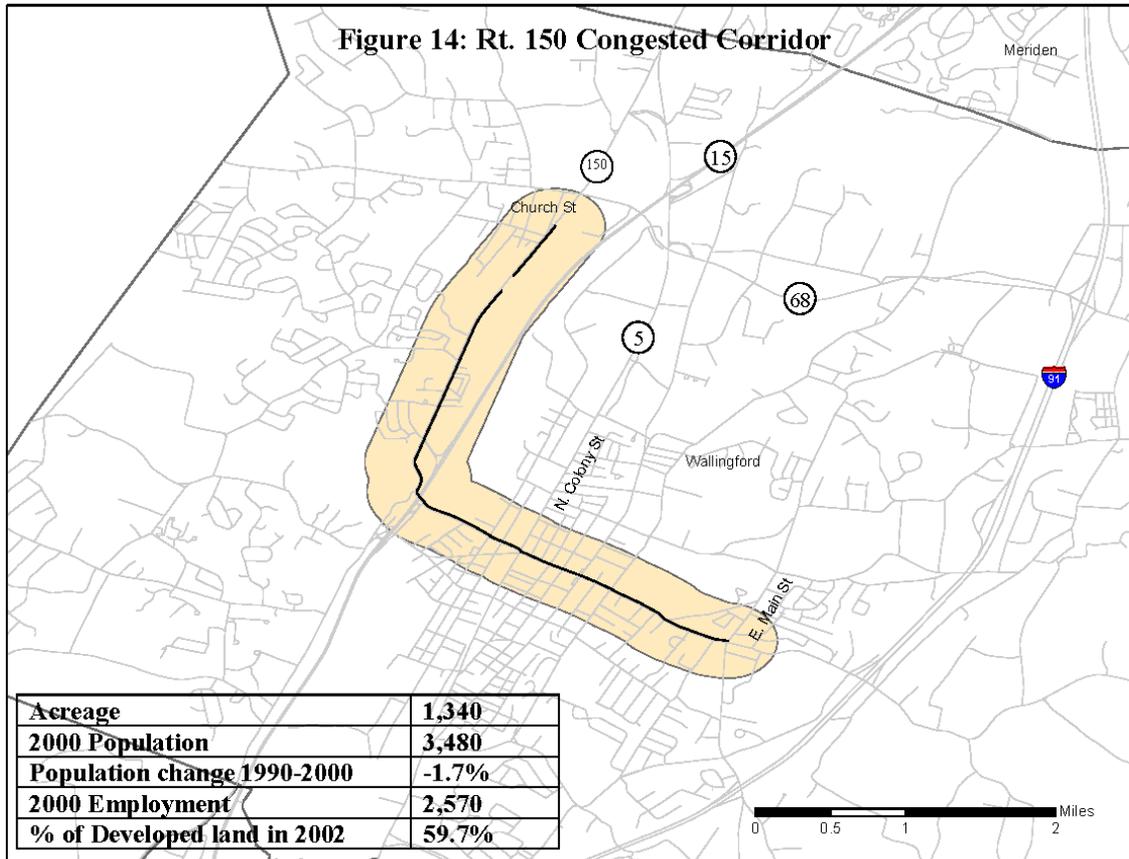
Segment	Direction/Time	Average speed (mph)	Threshold Speed (mph)
Highland Ave to Rt. 150 (Main St)	Westbound AM	33	30
Rt. 150 (Main St) to N. Main St		10	30
N. Main St to I-91 Exit 15		26	30
I-91 Exit 15 to Durham Rd		23	30
Highland Ave to Rt. 150 (Main St)	Westbound PM	33	30
Rt. 150 (Main St) to N. Main St		11	30
N. Main St to I-91 Exit 15		18	30
I-91 Exit 15 to Durham Rd		24	30
Highland Ave to Rt. 150 (Main St)	Eastbound AM	21	30
Rt. 150 (Main St) to N. Main St		23	30
N. Main St to I-91 Exit 15		31	30
I-91 Exit 15 to Durham Rd		22	30
Highland Ave to Rt. 150 (Main St)	Eastbound PM	28	30
Rt. 150 (Main St) to N. Main St		25	30
N. Main St to I-91 Exit 15		30	30
I-91 Exit 15 to Durham Rd		18	30



**Figure A.11: Rt. 80 Congested Corridor (2004 CMS)**

**Table A.11: Rt. 80 Congested Corridor Speed Scenario (2004)**

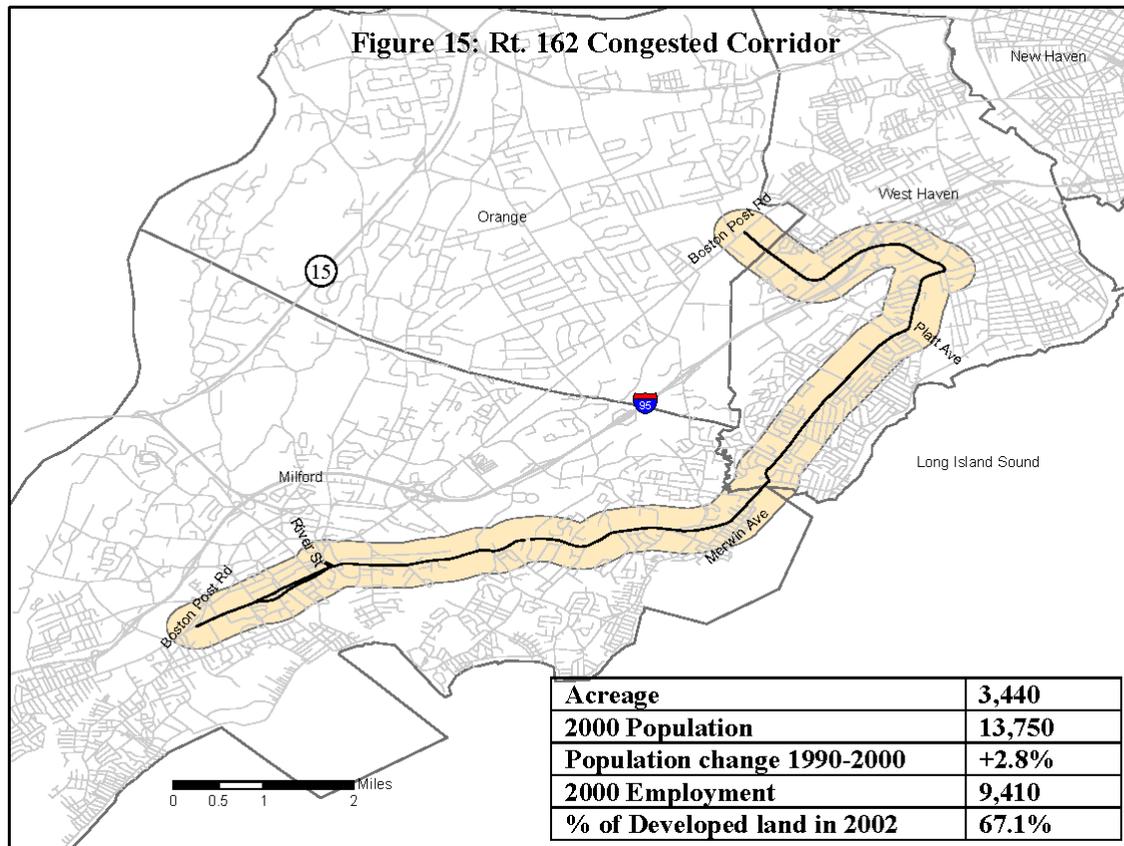
Segment	Direction/Time	Average speed (mph)	Threshold Speed (mph)
Middletown Ave to Quinnipiac Ave	Westbound AM	30	30
Quinnipiac Ave to Mill St		34	30
Mill St to Forest Rd		27	30
Forest Rd to Branford Rd		30	30
Branford Rd to Durham Rd		44	35
Middletown Ave to Quinnipiac Ave	Westbound PM	22	30
Quinnipiac Ave to Mill St		33	30
Mill St to Forest Rd		36	30
Forest Rd to Branford Rd		34	30
Branford Rd to Durham Rd		40	35
Middletown Ave to Quinnipiac Ave	Eastbound AM	24	30
Quinnipiac Ave to Mill St		21	30
Mill St to Forest Rd		33	30
Forest Rd to Branford Rd		35	30
Branford Rd to Durham Rd		35	35
Middletown Ave to Quinnipiac Ave	Eastbound PM	10	30
Quinnipiac Ave to Mill St		19	30
Mill St to Forest Rd		30	30
Forest Rd to Branford Rd		22	30
Branford Rd to Durham Rd		34	35



**Figure A.12: Rt. 150 Congested Corridor (2004 CMS)**

**Table A.12: Rt. 150 Congested Corridor Speed Scenario (2004)**

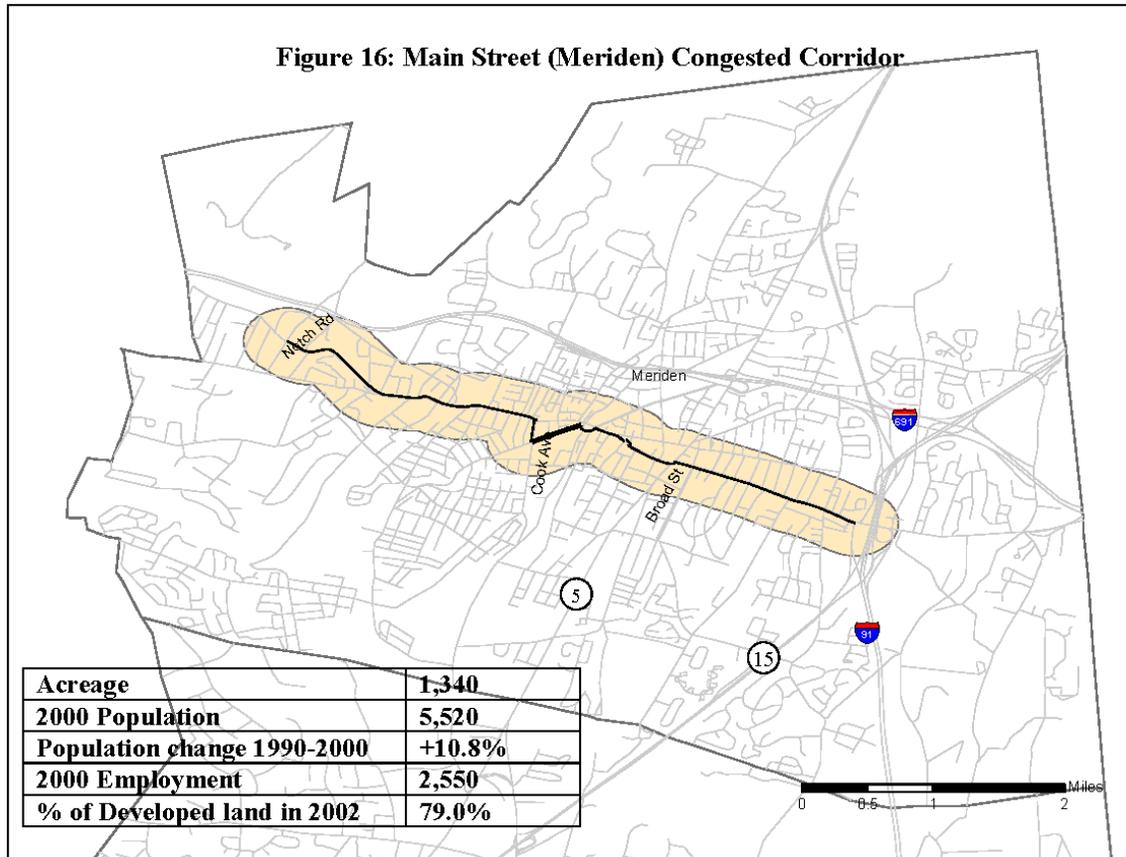
Segment	Direction/Time	Average speed (mph)	Threshold Speed (mph)
E. Main St to N. Colony St	Southbound AM	22	25
N. Colony St to Church St		28	25
E. Main St to N. Colony St	Southbound PM	20	25
N. Colony St to Church St		29	25
E. Main St to N. Colony St	Northbound AM	21	25
N. Colony St to Church St		29	25
E. Main St to N. Colony St	Northbound PM	20	25
N. Colony St to Church St		22	25



**Figure A.13: Rt. 162 Congested Corridor (2004 CMS)**

**Table A.13: Rt. 162 Congested Corridor Speed Scenario (2004)**

Segment	Direction/Time	Average speed (mph)	Threshold Speed (mph)
Boston Post Rd to River St	Southbound AM	27	25
River St to Merwin Ave		22	25
Merwin Ave to Platt Ave		20	25
Platt Ave to Boston Post Rd		23	25
Boston Post Rd to River St	Southbound PM	24	25
River St to Merwin Ave		22	25
Merwin Ave to Platt Ave		29	25
Platt Ave to Boston Post Rd		22	25
Boston Post Rd to River St	Northbound AM	26	25
River St to Merwin Ave		26	25
Merwin Ave to Platt Ave		30	25
Platt Ave to Boston Post Rd		20	25
Boston Post Rd to River St	Northbound PM	19	25
River St to Merwin Ave		25	25
Merwin Ave to Platt Ave		31	25
Platt Ave to Boston Post Rd		21	25



**Figure A.14: Main Street (Meriden) Congested Corridor (2004 CMS)**

**Table A.14: Main Street (Meriden) Congested Corridor Speed Scenario (2004)**

Segment	Direction/Time	Average speed (mph)	Threshold Speed (mph)
Notch Rd to Cook Ave	Westbound AM	40	25
Cook Ave to Broad St		19	25
Broad St to I-91/Rt.15 ramp		24	25
Notch Rd to Cook Ave	Westbound PM	37	25
Cook Ave to Broad St		24	25
Broad St to I-91/Rt.15 ramp		15	25
Notch Rd to Cook Ave	Eastbound AM	23	25
Cook Ave to Broad St		15	25
Broad St to I-91/Rt.15 ramp		20	25
Notch Rd to Cook Ave	Eastbound PM	21	25
Cook Ave to Broad St		12	25
Broad St to I-91/Rt.15 ramp		20	25

# **SCRCOG Congestion Management Process**

**Prepared by:**

**VN Engineers, Inc.**

116 Washington Avenue

North Haven, CT 06473

(203) 234-7862

