



March 18, 2013

MEMORANDUM: 031813

To: Gary J. Sojka and David M. Balzer, Bureau of Policy and Planning, Connecticut Department of Transportation

From: Pat Gallagher, Regional Planner

Subject: **Commuter Parking Lots in the Central Naugatuck Valley Region, Occupancy Analysis and Recommendations: 2012**

Summary

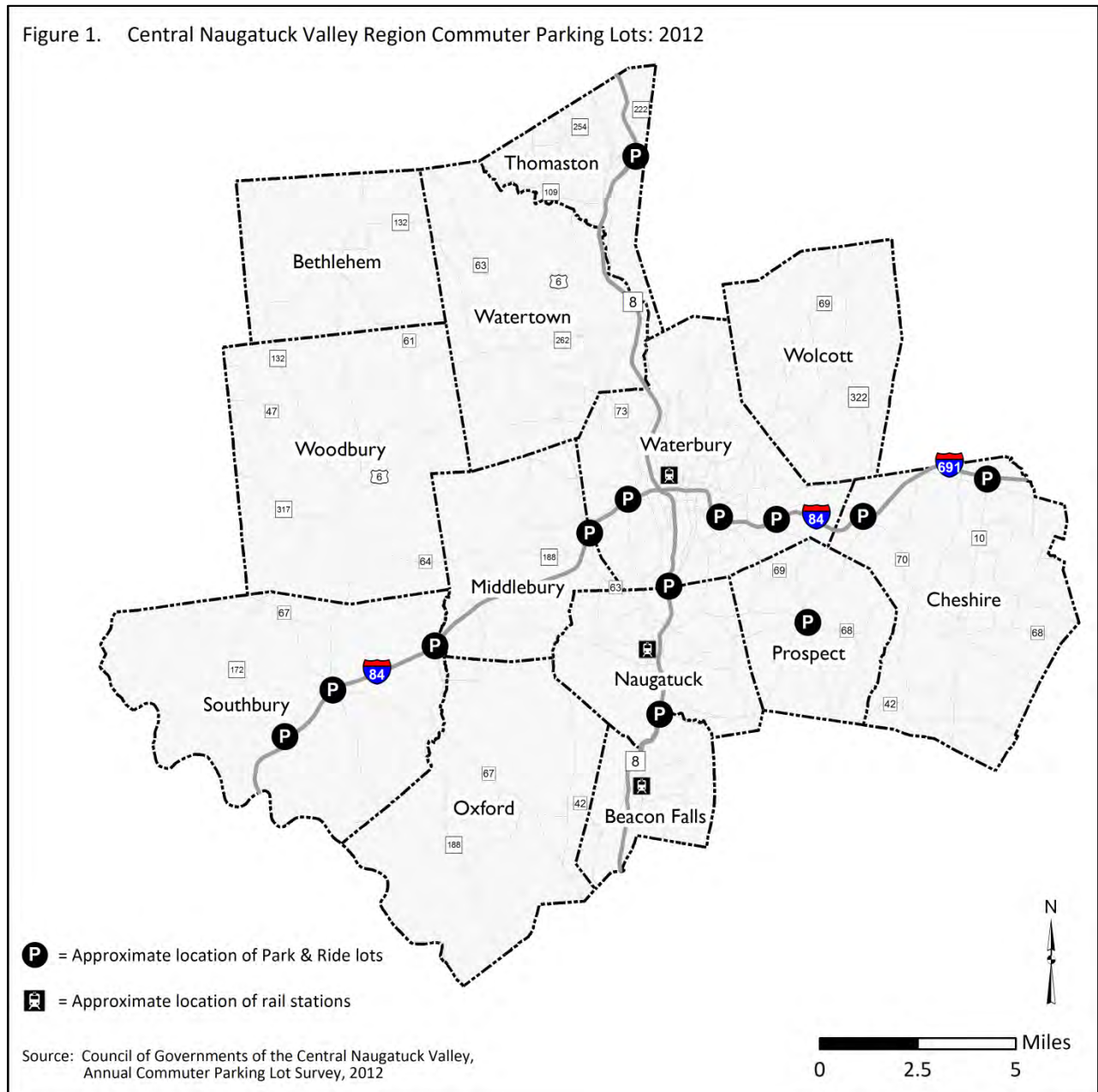
The Central Naugatuck Valley Region (CNVR) has thirteen state-designated commuter parking lots with a combined capacity of 1,009 vehicles. In addition, parking lots are located at the region's three Metro-North rail stations with a combined capacity of 309 vehicles. Eight of the lots are located along Interstate 84, three along the Route 8 expressway, one along Interstate 691, and one at the intersection of Route 69 and Route 68 in Prospect. Figure 1 shows the approximate location of the lots.

This memorandum analyzes use of the thirteen state commuter parking lots and three railroad parking lots in 2012 and recommends improvements to more effectively use the lots in the region. Commuter lots that, on average, operate at or above 75% of their capacity are considered to be candidates for expansion. In 2012, three lots surpassed the 75% threshold, while two additional lots experienced maximum occupancy above the 75% threshold.

Methodology

To evaluate the use of the region's commuter lots, field surveys were conducted quarterly at each location: in March, June, September, and November. Counts were made on Tuesdays, Wednesdays, or Thursdays between the hours of 9:00 AM and 3:00 PM. The results of the field surveys are summarized in Tables 1 and 2 and are described in the text.

Figure 1. Central Naugatuck Valley Region Commuter Parking Lots: 2012



Analysis

Average Occupancy

On an average weekday during 2012, 560 vehicles parked in the region's commuter lots, representing an increase of 6.3% from the 2011 occupancy of 528 vehicles. Nine out of the sixteen commuter lots experienced an increase in average occupancy during 2012 (Table 3). The highest average occupancy on a weekday was seen in 2008 when an average of 625 cars used the region's commuter lots.

The 2012 data shows that the system, on an average day, used 55% of its capacity (Table 1). Three lots were more than 75% occupied, five lots were between 50% and 74% occupied, and three lots were between 25% and 49% occupied. Two lots were less than 25% occupied.

The region's commuter lots with an average occupancy of 75% or greater are listed below:

- Middlebury, I-84 at Route 63 (Exit 17) 100%
- Thomaston, Route 8 at Route 6 (Exit 39) 92%
- Waterbury, Route 8 at South Main Street (Exit 29) 77%

The region's lots with the *lowest* average occupancy are listed below:

- Prospect, Route 69 at St. Anthony's Church 21%
- Waterbury, I-84 at Scott Rd. & East Main St. 20%

Maximum Occupancy

Maximum occupancy rates represent the highest surveyed occupancy in a given year. In 2012, five commuter lots experienced maximum occupancy rates exceeding 75% of their capacity; this is one more than in 2011 when four lots surpassed this threshold (Table 2). For 2012, the highest observed occupancy was 105% at the commuter lot on Route 63 in Middlebury off Interstate 84. This is the eighth time in nine years that maximum occupancy at this lot has exceeded its capacity.

Metro-North Commuter Lots

Over the past few years, Metro-North lot usage has been increasing. However, in 2012, the average number of cars parked in the parking lots on a normal weekday declined to 81, representing only 26% of capacity. This is down from an average of 136 in 2011, when 44% of capacity was used. A fare increase of 5.3%¹ on all Metro North trains went into effect on January 1, 2012, which could have affected rail ridership. Construction on the Waterbury Branch, which replaced rail service with bus service from July to September, may have also contributed to the decline in station parking use in 2012. Waterbury and Beacon Falls both saw their lowest commuter lot usage during September, which corresponded with the temporary bus service. Of the three lots, Beacon Falls had the highest average occupancy of 33%, and Naugatuck and Waterbury averaged 28% and 23%, respectively.

Funding has been approved for the demolition of 333 Meadow Street (the former SNET building) and parking lot improvements at the Waterbury train station. 333 Meadow Street blocks the Waterbury train station parking lot and platform from public view, creating safety concerns.

Gasoline Prices

In the past, gasoline prices have influenced commuter lot usage. Usually, if prices increase, drivers are more likely to park in the commuter lots and participate in a rideshare program. Since 2009, gas prices have been on the rise and the average price per gallon has increased to \$3.74, up from \$2.93 in 2010 and \$3.69 in 2011². The increase in the number of cars utilizing the commuter lots is reflected in the rise in price of gasoline.

Employment and Commuting Trends

The 6.3% increase in commuter lot usage may have also been directly related to the small increase in employed CNVR residents in the past year. In 2010, the average travel time to work for CNVR residents was 25.3 minutes, up from 24.3 minutes in 2000. 2010 also marked the first time when a majority of CNVR residents worked outside the region. All of these factors may contribute to an increase in commuter lot usage.

Vanpool Use at Commuter Lots

There are eight *Easy Street* vanpools in the region that use the Park & Ride lots along I-84. Five routes travel to Hartford, two to Danbury, and one to Windsor Locks. The lots at Hamilton Avenue and Chase Parkway in Waterbury, the Route 10 and Route 70 lots in Cheshire, and the lot on Route 172 in Southbury all serve as stops for the region's vanpools.

Recommendations

Lot Expansion

The commuter lot on Route 63 at I-84 (Exit 17) in Middlebury has recorded average occupancy rates of over 90% in 8 of the last 10 years. This lot should be considered for future expansion

¹ New Haven Line Fare Increase Effective January 1, 2012, Metropolitan Transportation Authority

² Average New England Mid-Grade Unleaded Price, U.S. Department of Energy, "New England Weekly Retail"

given its tendency to exceed capacity in recent years. There is currently a proposal to redesign the split interchange at Exit 17 by adding a new connector road linking both ends of the interchange (Project 174-309). An expanded commuter parking lot could be built along the new connector road providing easy access to both directions of I-84.

While the nearby lot on Chase Parkway could accommodate the additional demand, it remains less popular among commuters, most likely due to poor egress. Advertising this lot for overflow at the Route 63 lot may increase its use.

Signage and Publicity

Driver awareness of the commuter parking lots in the Interstate 84 and Route 8 corridors is desperately needed. COGCNV staff continued to observe a lack of signs on Interstate 84 and Route 8 informing travelers of commuter lot locations. Installing more “Park & Ride” signs along Interstate 84 and Route 8 would encourage use of the facilities, which were created to help alleviate traffic congestion, and reduce fuel consumption and auto emissions. According to the Manual of Uniform Traffic Control Devices (MUTCD), these signs should include the standard “Park & Ride” text, the carpool logo, and the exit number.

Table 1: CNVR Commuter Parking Lot Study — Quarterly Occupancy: 2012

Municipality	Location of Lot	Capacity	2012 Lot Occupancy				Average Occupancy				
			March	June	Sept.	Nov.	2012	2011	2010	2009	2008
Cheshire	I-691 @ Route 10 (Exit 3)	118	50	43	55	49	49	53	48	50	68
Cheshire	I-84 @ Route 70 (Exit 26)	146	79	76	88	82	81	67	68	61	71
Middlebury	I-84 @ Route 63 (Exit 17)	61	61	59	64	61	61	58	57	46	62
Naugatuck	Route 8 @ Cotton Hollow Rd. (Exit 25)	50	52	38	50	43	46	36	35	40	43
Prospect	Route 68 & Route 69 @ St. Anthony's Church	75	20	12	15	15	16	13	14	8	9
Southbury	I-84 @ Route 188 (Exit 16)	42	18	16	18	18	18	17	18	20	29
Southbury	I-84 @ Route 67 (Exit 15)	25	15	14	15	21	16	14	12	15	18
Southbury	Route 172 @ Main Street South (Exit 14)	84	49	63	45	35	48	54	53	67	68
Thomaston	Route 8 @ Route 6 (Exit 39)	48	33	30	34	36	33	39	29	34	45
Waterbury	I-84 @ Chase Parkway (Exit 18)	118	59	79	82	71	73	69	65	64	92
Waterbury	I-84 @ Route 69 (Exit 23)	178	72	73	101	61	77	71	79	84	85
Waterbury	I-84 @ Scott Rd. & East Main St. (Exit 25)	19	6	4	1	4	4	4	4	4	2
Waterbury	Route 8 @ South Main Street (Exit 29)	45	44	40	41	28	38	35	27	34	35
Total System Occupancy		1009	558	547	609	524	560	528	510	525	625
Percent			55%	54%	60%	52%	55%	52%	50%	52%	62%

Municipality	Metro North Rail Station	Capacity	Lot Occupancy				Average Occupancy				
			March	June	Sept.	Nov.	2012	2011	2010	2009	2008
Beacon Falls	RR Station - Railroad Ave	28	10	14	4	9	9	15	n/a	10	15
Naugatuck	RR Station - Water St	125	41	32	36	33	36	61	36	41	53
Waterbury	RR Station - Meadow St	156	41	40	30	35	37	59	37	38	36
Total System Occupancy		309	92	86	70	77	81	136	72	90	104
Percent			30%	28%	23%	25%	26%	44%	23%	29%	33%

Source: Council of Governments of the Central Naugatuck Valley, Quarterly Surveys: 2012

Table 2: CNVR Commuter Parking Lot Study – Average and Maximum Occupancy: 2012**Average Occupancy By Lot: 2012**

Municipality	Location of Lot	Capacity	Average Occupancy	Percent Occupied
Cheshire	I-691 @ Route 10 (Exit 3)	118	49	42%
Cheshire	I-84 @ Route 70 (Exit 26)	146	81	56%
Middlebury	I-84 @ Route 63 (Exit 17)	61	61	100%
Naugatuck	Route 8 @ Cotton Hollow Rd. (Exit 25)	50	46	92%
Prospect	Route 68 & Route 69 @ St. Anthony's Church	75	16	21%
Southbury	I-84 @ Route 188 (Exit 16)	42	18	42%
Southbury	I-84 @ Route 67 (Exit 15)	25	16	65%
Southbury	Route 172 @ Main Street South (Exit 14)	84	48	57%
Thomaston	Route 8 @ Route 6 (Exit 39)	48	33	69%
Waterbury	I-84 @ Chase Parkway (Exit 18)	118	73	62%
Waterbury	I-84 @ Route 69 (Exit 23)	178	77	43%
Waterbury	I-84 @ Scott Rd. & East Main St. (Exit 25)	19	4	20%
Waterbury	Route 8 @ South Main Street (Exit 29)	45	38	85%
Total System Occupancy		1,009	560	55%

Rail Stations

Beacon Falls	RR Station - Railroad Avenue	28	9	33%
Naugatuck	Water St @ RR Station	125	36	28%
Waterbury	Meadow St @ RR Station	156	37	23%
Total System Occupancy		309	81	26%

Source: Council of Governments of the Central Naugatuck Valley, Quarterly Commuter Parking Surveys: 2012

Maximum Occupancy By Lot: 2012

Municipality	Location of Lot	Capacity	Maximum Occupancy	Percent Occupied
Cheshire	I-691 @ Route 10 (Exit 3)	118	55	47%
Cheshire	I-84 @ Route 70 (Exit 26)	146	88	60%
Middlebury	I-84 @ Route 63 (Exit 17)	61	64	105%
Naugatuck	Route 8 @ Cotton Hollow Rd. (Exit 25)	50	52	104%
Prospect	Route 68 & Route 69 @ St. Anthony's Church	75	20	27%
Southbury	I-84 @ Route 188 (Exit 16)	42	18	43%
Southbury	I-84 @ Route 67 (Exit 15)	25	21	84%
Southbury	Route 172 @ Main Street South (Exit 14)	84	63	75%
Thomaston	Route 8 @ Route 6 (Exit 39)	48	36	75%
Waterbury	I-84 @ Chase Parkway (Exit 18)	118	82	69%
Waterbury	I-84 @ Route 69 (Exit 23)	178	101	57%
Waterbury	I-84 @ Scott Rd. & East Main St. (Exit 25)	19	6	32%
Waterbury	Route 8 @ South Main Street (Exit 29)	45	44	98%
Total System Occupancy		1,009	650	64%

Rail Stations

Beacon Falls	RR Station - Railroad Ave	28	14	50%
Naugatuck	RR Station - Water St	125	41	33%
Waterbury	RR Station - Meadow St	156	41	26%
Total System Occupancy		309	96	31%

Source: Council of Governments of the Central Naugatuck Valley, Quarterly Commuter Parking Surveys: 2012

Table 3: CNVR Commuter Parking Lot Study, Average Lot Occupancy: 2002-2012

Municipality	Location of Lot	Capacity	Average Occupancy										
			2012	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002
Cheshire	I-691 @ Route 10 (Exit 3)	118	49	53	48	50	68	49	41	46	41	42	35
Cheshire	I-84 @ Route 70 (Exit 26)	146	81	67	68	61	71	60	56	40	35	40	61
Middlebury	I-84 @ Route 63 (Exit 17)	61	61	58	57	46	62	58	61	62	55	46	54
Naugatuck	Route 8 @ Cotton Hollow Rd. (Exit 25)	50	46	36	35	40	43	35	41	34	24	27	31
Prospect	Route 68 & Route 69 @ St. Anthony's Church	75	16	13	14	8	9	6	11	12	15	16	21
Southbury	I-84 @ Route 188 (Exit 16)	42	18	17	18	20	29	30	31	20	23	27	33
Southbury	I-84 @ Route 67 (Exit 15)	25	16	14	12	15	18	14	16	11	11	13	16
Southbury	Route 172 @ Main Street South (Exit 14)	84	48	54	53	67	68	58	56	50	54	56	51
Thomaston	Route 8 @ Route 6 (Exit 39)	48	33	39	29	34	45	46	44	38	38	47	38
Waterbury	I-84 @ Chase Parkway (Exit 18)	118	73	69	65	64	92	79	85	68	65	66	76
Waterbury	I-84 @ Route 69 (Exit 23)	178	77	71	79	84	85	76	83	81	78	119	99
Waterbury	I-84 @ Scott Rd. & East Main St. (Exit 25)	19	4	4	4	4	2	2	1	2	3	2	3
Waterbury	Route 8 @ South Main Street (Exit 29)	45	38	35	27	34	35	31	32	36	44	30	23
Total System Occupancy		1,009	560	528	510	525	625	542	558	501	486	529	541
<i>Rail Stations</i>													
Beacon Falls	RR Station - Railroad Ave	28	9	15	n/a	10	15	7					
Naugatuck	RR Station - Water St	125	36	61	42	41	53	60					
Waterbury	RR Station - Meadow St	156	37	59	57	38	36	63					
Total System Occupancy		309	81	136	99	90	104	99					

Source: Council of Governments of the Central Naugatuck Valley, Quarterly Commuter Parking Surveys: 2002-2012

Table 3A: CNVR Commuter Parking Lot Study, Average Lot Occupancy Percentages: 2002-2012

Municipality	Location of Lot	Capacity	Average Occupancy (%)										
			2012	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002
Cheshire	I-691 @ Route 10 (Exit 3)	118	42%	45%	41%	42%	58%	41%	35%	39%	35%	36%	30%
Cheshire	I-84 @ Route 70 (Exit 26)	146	56%	46%	47%	42%	49%	41%	39%	27%	24%	27%	42%
Middlebury	I-84 @ Route 63 (Exit 17)	61	100%	94%	93%	75%	101%	95%	100%	102%	90%	75%	89%
Naugatuck	Route 8 @ Cotton Hollow Rd. (Exit 25)	50	92%	72%	71%	79%	86%	69%	82%	69%	48%	54%	62%
Prospect	Route 68 & Route 69 @ St. Anthony's Church	75	21%	17%	18%	10%	12%	8%	15%	16%	20%	21%	28%
Southbury	I-84 @ Route 188 (Exit 16)	42	42%	40%	43%	48%	68%	72%	74%	48%	55%	64%	79%
Southbury	I-84 @ Route 67 (Exit 15)	25	65%	56%	49%	59%	72%	57%	64%	44%	44%	52%	64%
Southbury	Route 172 @ Main Street South (Exit 14)	84	57%	64%	63%	79%	81%	69%	67%	60%	64%	67%	61%
Thomaston	Route 8 @ Route 6 (Exit 39)	48	69%	81%	61%	70%	93%	95%	92%	79%	79%	98%	79%
Waterbury	I-84 @ Chase Parkway (Exit 18)	118	62%	58%	55%	54%	78%	67%	72%	58%	55%	56%	64%
Waterbury	I-84 @ Route 69 (Exit 23)	178	43%	40%	44%	47%	48%	42%	47%	46%	44%	67%	56%
Waterbury	I-84 @ Scott Rd. & East Main St. (Exit 25)	19	20%	22%	22%	18%	11%	8%	5%	11%	16%	11%	16%
Waterbury	Route 8 @ South Main Street (Exit 29)	45	85%	77%	61%	76%	78%	69%	71%	80%	98%	67%	51%
<i>Rail Stations</i>													
Beacon Falls	RR Station - Railroad Ave	28	33%	54%	n/a	36%	54%	25%					
Naugatuck	RR Station - Water St	125	28%	49%	36%	33%	41%	48%					
Waterbury	RR Station - Meadow St	156	23%	38%	41%	25%	23%	21%					

Source: Council of Governments of the Central Naugatuck Valley, Quarterly Commuter Parking Surveys: 2002-2012

Table 4: CNVR Commuter Parking Lot Study, Maximum Lot Occupancy: 2002-2012

Municipality	Location of Lot	Capacity	Maximum Occupancy										
			2012	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002
Cheshire	I-691 @ Route 10 (Exit 3)	118	55	66	59	59	80	57	51	52	50	46	39
Cheshire	I-84 @ Route 70 (Exit 26)	146	88	72	80	81	85	78	69	52	43	53	72
Middlebury	I-84 @ Route 63 (Exit 17)	61	64	64	65	47	73	68	66	70	66	57	56
Naugatuck	Route 8 @ Cotton Hollow Rd. (Exit 25)	50	52	38	42	45	45	43	46	42	31	29	38
Prospect	Route 68 & Route 69 @ St. Anthony's Church	75	20	15	22	9	12	8	13	15	18	19	25
Southbury	I-84 @ Route 188 (Exit 16)	42	18	22	19	27	40	33	32	27	34	35	40
Southbury	I-84 @ Route 67 (Exit 15)	25	21	16	16	22	20	20	18	15	16	18	19
Southbury	Route 172 @ Main Street South (Exit 14)	84	63	62	56	72	80	60	58	65	63	61	58
Thomaston	Route 8 @ Route 6 (Exit 39)	48	36	45	34	41	50	54	47	44	42	48	48
Waterbury	I-84 @ Chase Parkway (Exit 18)	118	82	85	73	87	107	85	101	73	79	70	93
Waterbury	I-84 @ Route 69 (Exit 23)	178	101	85	95	113	97	87	117	112	105	137	119
Waterbury	I-84 @ Scott Rd. & East Main St. (Exit 25)	19	6	6	5	4	4	1	1	3	6	3	4
Waterbury	Route 8 @ South Main Street (Exit 29)	45	44	40	31	39	39	46	39	43	47	39	28
Total System Occupancy		1,009	650	616	597	646	732	640	658	613	600	615	639
<i>Rail Stations</i>													
Beacon Falls	RR Station - Railroad Ave	28	14	15	n/a	12	18	11					
Naugatuck	RR Station - Water St	125	41	49	45	44	62	92					
Waterbury	RR Station - Meadow St	156	41	36	64	44	49	34					
Total System Occupancy		309	96	100	109	100	129	137					

Source: Council of Governments of the Central Naugatuck Valley, Quarterly Commuter Parking Surveys: 2002-2012

Table 4A: CNVR Commuter Parking Lot Study, Maximum Lot Occupancy Percentages: 2002-2012

Municipality	Location of Lot	Capacity	Maximum Occpancy (%)										
			2012	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002
Cheshire	I-691/Route10	118	47%	56%	50%	50%	68%	48%	43%	44%	42%	39%	33%
Cheshire	I-84/Route 70	146	60%	49%	55%	55%	58%	53%	47%	36%	29%	36%	49%
Middlebury	I-84/Route 63	61	105%	105%	107%	77%	120%	111%	108%	115%	108%	93%	92%
Naugatuck	Route 8/Cotton Hollow Road	50	104%	76%	84%	90%	90%	86%	92%	8%	62%	58%	76%
Prospect	Route 68/Route 69 at St. Anthony's Church	75	27%	20%	29%	12%	16%	11%	17%	56%	24%	25%	33%
Southbury	I-84/Route 188	42	43%	52%	45%	64%	95%	79%	76%	64%	81%	83%	95%
Southbury	I-84/Route 67	25	84%	64%	64%	88%	80%	80%	72%	60%	64%	72%	76%
Southbury	Route 172/ Main Street South	84	75%	74%	67%	86%	95%	71%	69%	77%	75%	73%	69%
Thomaston	Route 8/ Route 6	48	75%	94%	71%	85%	104%	113%	98%	92%	88%	100%	100%
Waterbury	I-84/Chase Parkway	118	69%	72%	62%	74%	91%	72%	86%	62%	67%	59%	79%
Waterbury	I-84/Route 69	178	57%	48%	53%	63%	54%	49%	66%	63%	59%	77%	67%
Waterbury	I-84/Scott Road/East Main Street	19	32%	32%	26%	21%	21%	5%	5%	16%	32%	16%	21%
Waterbury	Route 8/South Main Street	45	98%	89%	69%	87%	87%	102%	87%	96%	104%	87%	62%
<i>Rail Stations</i>													
Beacon Falls	RR Station - Railroad Ave	28	50%	54%	n/a	43%	64%	39%					
Naugatuck	RR Station - Water St	125	33%	39%	36%	35%	50%	74%					
Waterbury	RR Station - Meadow St	156	26%	23%	41%	28%	31%	22%					

Source: Council of Governments of the Central Naugatuck Valley, Quarterly Commuter Parking Surveys: 2002-2012