

5 PARK-AND-RIDE LOTS

Park-and-ride lots provide commuters with an opportunity to take a higher-occupancy mode of travel for at least a portion of their commute. The MBTA system is served by these facilities, which play a key role in attracting riders and reducing vehicle-miles traveled. Park-and-ride lots are especially appealing to commuters in suburban locations, which often have residential neighborhoods that are too far from stations to support walking as a mode choice.

Park-and-ride lots are also maintained by other agencies, such as MassHighway and the Massachusetts Port Authority (Massport), private transit companies, and municipalities. MassHighway operates five lots in the Boston Region MPO area designed to encourage carpooling and vanpooling. Massport owns and operates park-and-ride lots in order to support the Logan Express service, which shuttles travelers from the lots to Logan Airport. Private transportation companies use park-and-ride lots to support express bus services to Boston and to other employment centers.

The CMS report presents the status of both MBTA-related and MassHighway park-and-ride lots. The performance data for the MBTA lots come from a CMS-sponsored effort, while the data for the MassHighway lots are taken from a previous effort and report.¹

5.1 PARK-AND-RIDE LOT PERFORMANCE MEASURES

The performance measures used for assessing park-and-ride lots are *percent lot utilization* and the *observed time that a lot fills up*.

5.1.1 Lot Utilization

The CMS classifies lot utilization results for each station into one of three categories:

- Full – 85 percent or more of the general spaces (as opposed to disability spaces) are typically filled
- Partially Full – 50 to 85 percent of the general spaces are filled; the lot is well utilized but there would still be spaces available if demand were to increase
- Underutilized – Less than 50 percent of the general spaces are filled.

A mobility concern is defined as a situation where a lot is full or underutilized according to the above definitions. (Note: several stations are served by more than one lot; in such cases, the available parking for all lots, regardless of owner [for example, MBTA, private, or town ownership], is combined into one utilization measure.)

5.1.2 The Time a Lot Fills Up

The most recent CMS survey included recording the time a lot reached capacity. This measure may be an indication of the level of commuter parking demand. In other words, a lot's filling up before the last morning peak-period train might indicate unmet demand.

¹ Alicia P. Wilson et al., *MassHighway Park-and-Ride Lots: Status and Recommendations*, produced by the Central Transportation Planning Staff for the Boston MPO and the Massachusetts Highway Department, June 2003.

5.1.3 Data Collection Method

Park-and-ride lots at transit stations were monitored during the fall of 2002; CTPS staff collected information about the lot utilization at MBTA commuter rail stations, rapid transit stations, and ferry terminals. The 2002 survey was limited to stations in the Boston MPO region.² A previous survey from 2000 was used to complement the more recently acquired information.³

The types of information collected include parking fees, the number of parking spaces, lot ownership, and the time a lot fills up. Each station was surveyed one time, during the morning peak commuting period on a normal commute day.

5.2 PARK-AND-RIDE LOTS AT TRANSIT STATIONS: MONITORING RESULTS

5.2.1 Park-and-Ride Lot Utilization

The most recent results of the inventories of park-and-ride lots are provided in Table 5.1 (commuter rail and ferry) and Table 5.2 (rapid transit). Out of the 107 MBTA commuter park-and-ride lots that were surveyed, 76 of them (71 percent) filled to 85 percent or more of capacity, and 49 of the lots (46 percent) reached capacity well before the last morning peak-period inbound train.⁴ Figure 5.1 graphically depicts the lot utilization at transit stations.

5.2.2 Comparison With Past Findings

The 1998 CMS park-and-ride inventory⁵ found that 80 percent of MBTA park-and-ride lots fill to over 85 percent of capacity, whereas the more recent inventories (as noted above) found that 71 percent of them do so.

Several large-scale parking lot expansions/openings took place between the two inventories. These expansions include the following:

- Anderson RTC opened with 1,500 parking spaces, replacing the 205 at Mishawum.
- Hamilton/Wenham lot expanded to 188 parking spaces from 8 parking spaces.
- Route 128 Station garage expanded from 1,047 parking spaces to 2,883 parking spaces.
- Ashland and Southborough lots opened, adding 695 and 362 parking spaces, respectively. Parking lots at Grafton and Westborough also opened on the Worcester Line. (They were not included in the 2002 inventory because they are located outside the MPO region.)

² Stations that are not located in the Boston MPO region were not included in the survey. Some of the stations that were not included but that serve Boston-bound commuters are: Abington, Attleboro, Ayer, Bridgewater, Fitchburg, Kingston, Lawrence, Mansfield, North Leominster, South Attleborough, and Whitman.

³ A survey conducted in the spring of 2000 for *Commuter Rail and Rapid Transit Parking and Ridership Demand Forecasts: Final Report*, produced by the Central Transportation Planning Staff for the MBTA, January 2002.

⁴ In January 2003, the MBTA increased its daily parking fees at commuter lots. For rapid transit stations, the fee was increased by fifty cents; at commuter rail stations the fee was increased by one dollar.

⁵ Conducted for the 2000 Congestion Management System report, *Mobility in the Boston Region*, CTPS, January 2001.

Table 5.1. MBTA Commuter Rail and Ferry Transit Park-and-Ride Lot Inventory, Boston MPO Region (page 1 of 3)

Station	# of Parking Spaces ¹	# of Cars Parked	% Full (at time of last observation)	Time of Last Observation ²	Time of Last Morning Peak Period Inbound Departure ³	Date of Observation
Newburyport Line						
Ipswich	129	149	116	7:00 AM	8:07	Fall 2002
Hamilton/Wenham	188	156	83	8:14 AM	8:14	Fall 2002
North Beverly	84	60	71	8:18 AM	8:18	Fall 2002
Rockport Line						
Rockport	105	96	91	7:25 AM	7:25	Fall 2002
Gloucester	185	185	100	9:00 AM	7:33	Fall 2002
West Gloucester	42	30	71	1:05 PM	7:38	Spring 2000
Manchester	68	80	118	7:44 AM	7:44	Spring 2000
Beverly Farms ⁴	60	36	60	7:49 AM	7:49	Fall 2002
Prides Crossing	10	7	70	7:15 AM	7:51	Spring 2000
Montserrat	112	111	99	7:56 AM	7:56	Fall 2002
Newburyport/Rockport Line						
Beverly Depot ⁴	252	210	83	8:23 AM	8:23	Fall 2002
Salem	556	557	100	8:27 AM	8:27	Spring 2000
Swampscott	153	151	99	2:30 PM	8:34	Spring 2000
Lynn	952	366	38	11:00 AM	8:37	Spring 2000
River Works	NP	NP	NP	NP	8:40	Fall 2002
Chelsea	NP	NP	NP	NP	8:48	Fall 2002
Haverhill Line						
North Wilmington	70	70	100	8:59 AM	9:09	Fall 2002
Reading	414	412	100	9:10 AM	9:17	Fall 2002
Wakefield	127	128	101	7:26 AM	9:23	Fall 2002
Greenwood	58	58	100	9:26 AM	9:26	Spring 1996
Melrose Highlands	108	89	82	9:25 AM	9:28	Fall 2002
Cedar Park	68	68	100	9:30 AM	9:30	Fall 2002
Wyoming Hill	32	27	84	9:30 AM	9:32	Fall 2002
Malden Center	196	198	101	7:25 AM	9:35	Fall 2002
Lowell Line						
Wilmington	80	73	91	8:41 AM	8:41	Spring 2000
Anderson RTC	1,500	366	24	8:45 AM	8:45	Fall 2003
Winchester	193	163	84	8:53 AM	8:53	Fall 2002
Wedgemere	170	170	100	8:55 AM	8:55	Spring 2000
West Medford ⁵	65	47	72	7:59 AM	8:59	Fall 2002

NP : No parking at station

1. Parking for persons with disabilities excluded.

2. Times in bold indicate the lot filled to 100 percent.

3. Peak period: as defined by commuter rail schedule.

4. All spaces are private permit-only parking spaces.

5. Thirty spaces are resident-only permit parking. All non-permit parking was full.

Table 5.1. MBTA Commuter Rail and Ferry Transit Park-and-Ride Lot Inventory, Boston MPO Region (page 2 of 3)

Station	# of Parking Spaces ¹	# of Cars Parked	% Full (at time of last observation)	Time of Last Observation ²	Time of Last Morning Peak Period Inbound Departure ³	Date of Observation
Fitchburg Line						
Littleton/I-495	99	99	100	7:45 AM	7:50	Fall 2002
South Acton	288	297	103	8:10 AM	8:41	Fall 2002
West Concord	190	190	100	8:10 AM	8:46	Fall 2002
Concord	83	92	111	7:00 AM	8:50	Fall 2002
Lincoln	237	202	85	10:00 AM	8:56	Fall 2002
Hastings	8	3	38	1:30 PM	9:00	Spring 1996
Kendal Green	6	2	33	1:55 PM	9:02	Spring 1996
Brandeis-Roberts	68	31	46	2:15 PM	9:05	Spring 1996
Waltham	82	102	124	8:25 AM	9:09	Fall 2002
Waverly	<i>NP</i>	<i>NP</i>	<i>NP</i>	<i>NP</i>	9:14	-
Belmont	112	111	99	9:16 AM	9:16	Fall 2002
Worcester Line						
Southborough	362	319	88	8:41 AM	8:41	Fall 2002
Ashland	695	258	37	8:45 AM	8:45	Fall 2002
Framingham ⁶	123	123	100	7:30 AM	8:53	Fall 2002
West Natick	175	178	102	6:47 AM	8:57	Fall 2002
Natick ⁷	72	72	100	11:30 AM	9:02	Fall 1997
Wellesley Square	377	322	85	9:06 AM	9:06	Fall 2002
Wellesley Hills	69	69	100	7:25 AM	9:09	Fall 2002
Wellesley Farms	198	198	100	8:40 AM	9:12	Fall 2002
Auburndale	81	81	100	8:54 AM	8:54	Fall 2002
West Newton	350	270	77	9:00 AM	8:58	Fall 2002
Newtonville ⁸	158	108	68	11:00 AM	9:01	Spring 2000
Needham Line						
Needham Heights	243	95	39	8:30 AM	8:28	Fall 2002
Needham Center	32	32	100	8:25 AM	8:32	Fall 2002
Needham Junction	171	171	100	8:36 AM	8:36	Fall 2002
Hersey	309	314	102	8:39 AM	8:39	Fall 2002
West Roxbury	59	59	100	8:20 AM	8:44	Fall 2002
Highland	287	194	68	9:10 AM	8:47	Fall 2002
Bellevue	35	35	100	8:00 AM	8:50	Fall 2002
Roslindale Village	139	131	94	8:53 AM	8:53	Fall 2002
Forest Hills	714	671	94	9:10 AM	8:56	Fall 2002

NP : No parking at station

1. Parking for persons with disabilities excluded.
2. Times in bold indicate the lot filled to 100 percent.
3. Peak period: as defined by commuter rail schedule.

6. MBTA parking only. Other lots, including town and private lots, are not included.

7. Town lot.
8. On-street meter parking.

Table 5.1. MBTA Commuter Rail and Ferry Transit Park-and-Ride Lot Inventory, Boston MPO Region (page 3 of 3)

Station	# of Parking Spaces ¹	# of Cars Parked	% Full (at time of last observation)	Time of Last Observation ²	Time of Last Morning Peak Period Inbound Departure ³	Date of Observation
Franklin Line						
Forge Park/I-495	688	608	88	7:45 AM	7:45	Fall 2002
Franklin	201	199	99	9:00 AM	7:52	Fall 2002
Norfolk	538	532	99	8:45 AM	7:59	Fall 2002
Walpole	531	531	100	9:00 AM	8:05	Fall 2002
Plimptonville	5	1	20	Not recorded	6:58	Spring 2000
Windsor Gardens	NP	NP	NP	NP	7:56	-
Norwood Central	765	656	86	8:46 AM	8:46	Fall 2002
Norwood Depot	247	218	88	11:30 AM	8:48	Spring 2000
Islington	37	30	81	11:15 AM	8:51	Spring 2000
Dedham Corp. Ctr.	486	404	83	11:45 AM	8:53	Spring 2000
Endicott	48	48	100	8:13 AM	8:55	Fall 2002
Fairmount Line						
Readville	339	277	82	9:01 AM	9:00	Fall 2002
Fairmount	25	24	96	8:38 AM	9:03	Fall 2002
Morton Street	NP	NP	NP	NP	9:07	-
Uphams Corner	NP	NP	NP	NP	9:12	-
Stoughton Line						
Stoughton	537	544	101	9:20 AM	8:28	Fall 2002
Canton Center	211	214	101	8:30 AM	8:36	Fall 2002
Providence Line						
Sharon	742	632	85	8:47 AM	8:47	Fall 2002
Canton Junction	775	779	101	8:45 AM	8:54	Fall 2002
Route 128	2,883	660	23	Not recorded	8:59	Spring 1996
Hyde Park	135	135	100	8:15 AM	9:04	Fall 2002
Middleborough/Lakeville Line						
Holbrook/Randolph	342	319	93	8:34 AM	8:34	Fall 2002
Quincy Center	844	862	102	8:48 AM	8:59	Fall 2002
Plymouth/Kingston Line						
South Weymouth	522	522	100	8:40 AM	9:02	Fall 2002
Braintree	1,262	1268	100	7:50 AM	9:08	Fall 2002
Hingham boat	1,829	1699	93	9:15 AM	9:15	Fall 2002

NP : No parking at station

1. Parking for persons with disabilities excluded.

2. Times in bold indicate the lot filled to 100 percent.

3. Peak period: as defined by commuter rail schedule.

Table 5.2. MBTA Rapid Transit Park-and-Ride Lot Inventory

Station	# of Parking Spaces ¹	# of Cars Parked	% Full (at time of last observation)	Time of Last Observation ^{2,3}	Date of Observation
Blue Line					
Wonderland	2,439	1,943	80	9:15 AM	Fall 2002
Beachmont	413	413	100	8:35 AM	Fall 2002
Suffolk Downs	102	104	102	8:19 AM	Fall 2002
Orient Heights	414	416	100	8:28 AM	Fall 2002
Wood Island	110	107	97	1:40 PM	Spring 2000
Maverick	102	89	87	1:00 PM	Spring 2000
Orange Line: North					
Oak Grove	797	809	102	7:07 AM	Fall 2002
Malden Center	196	198	101	7:25 AM	Fall 2002
Wellington	2,817	2,748	98	9:00 AM	Fall 2002
Sullivan Square ⁴	221	223	101	6:15 AM	Fall 2002
Orange Line: South					
Forest Hills	714	671	94	9:10 AM	Fall 2002
Green Street ⁵	137	102	74	9:00 AM	Fall 2002
Red Line: Mattapan					
Mattapan	214	62	29	9:10 AM	Fall 2002
Cedar Grove	12	2	17	9:20 AM	Fall 2002
Milton	35	36	103	9:00 AM	Fall 2002
Butler	40	31	78	9:00 AM	Fall 2002
Red Line: Ashmont					
Savin Hill	33	36	109	7:48 AM	Fall 2002
Red Line: Braintree					
Braintree	1,262	1,268	100	7:50 AM	Fall 2002
Quincy Adams	2,479	2,344	95	9:00 AM	Fall 2002
Quincy Center	844	862	102	8:48 AM	Fall 2002
Wollaston	563	566	101	7:25 AM	Fall 2002
North Quincy	1,187	1,191	100	8:55 AM	Fall 2002
Red Line: North					
Alewife	2,489	2,504	101	11:00 AM	Fall 2002
Green Line					
Riverside	932	701	75	9:30 AM	Fall 2002
Woodland	442	388	88	9:50 AM	Fall 2002
Waban	71	71	100	8:41 AM	Fall 2002
Eliot	54	54	100	7:33 AM	Fall 2002
Chestnut Hill	69	69	100	6:59 AM	Fall 2002

1. Parking for persons with disabilities excluded.

2. Times in bold indicate the lot filled to 100 percent.

3. For all rapid transit lines, the MBTA defines the end of the morning peak period at 8:59 AM.

4. MBTA parking only. Private lots not included.

5. All spaces are private, permit-parking only.

5.3 MASSHIGHWAY PARK-AND-RIDE LOTS: MONITORING RESULTS

5.3.1 Park-and-Ride Lot Utilization

Utilization of the five MassHighway park-and-ride lots in the Boston Region MPO area⁶ is presented in Table 5.3.⁷ Only the Milton lot fills to 85 percent of capacity or more, whereas three of the lots are underutilized, where more than 50 percent of spaces remain available. The lot in Pembroke is the least utilized; it is also the only location out of the five without any transit service. Figure 5.2 shows the MassHighway park-and-ride lots and other inventoried lots that are intended for vehicular ridesharing; the utilization of each lot is indicated.

5.3.2 Comparison with Past Findings

Table 5.3 also presents the results of the inventory conducted in 1998. Utilization of these five MassHighway park-and-ride lots was approximately the same in 1998 as in 2001.

Table 5.3. MassHighway Park-and-Ride Lot Inventory, Boston Region MPO Area

Municipality	Lot Location	Approx. Number of Spaces	Parked Vehicles		Percent Spaces Occupied (2001)
			1998	2001	
Canton	Route 138, north of Blue Hill River Rd.	155	39	46	30
Framingham	Route 9 at Flutie Pass (Shoppers World)	114	54	43	38
Milton	MassHighway depot, Granite Ave. at Thistle Ave. (at I-93 South, Exit 11)	58	49	56	97
Pembroke	Riverside Drive at Route 139 (near Route 3, Exit 12)	90	6	8	9
Rockland	Route 228 at Pond St. (at Route 3, Exit 11)	450	257	258	57

1. MassHighway lots in Arlington and Needham are not included in this table (though they are in the Official Massachusetts Park-and-Ride Map [EOTC, 1999]): these lots are in the process of becoming inactive or reclassified due to underutilization.
2. All the listed lots, except for Pembroke, offer connections to transit (public or private) services.
3. Framingham lot: MassHighway reduced the number of spaces from 300 to 114 in 2002.
4. Milton lot: Entire lot size is approximately 200 spaces, of which 58 are designated for commuters.

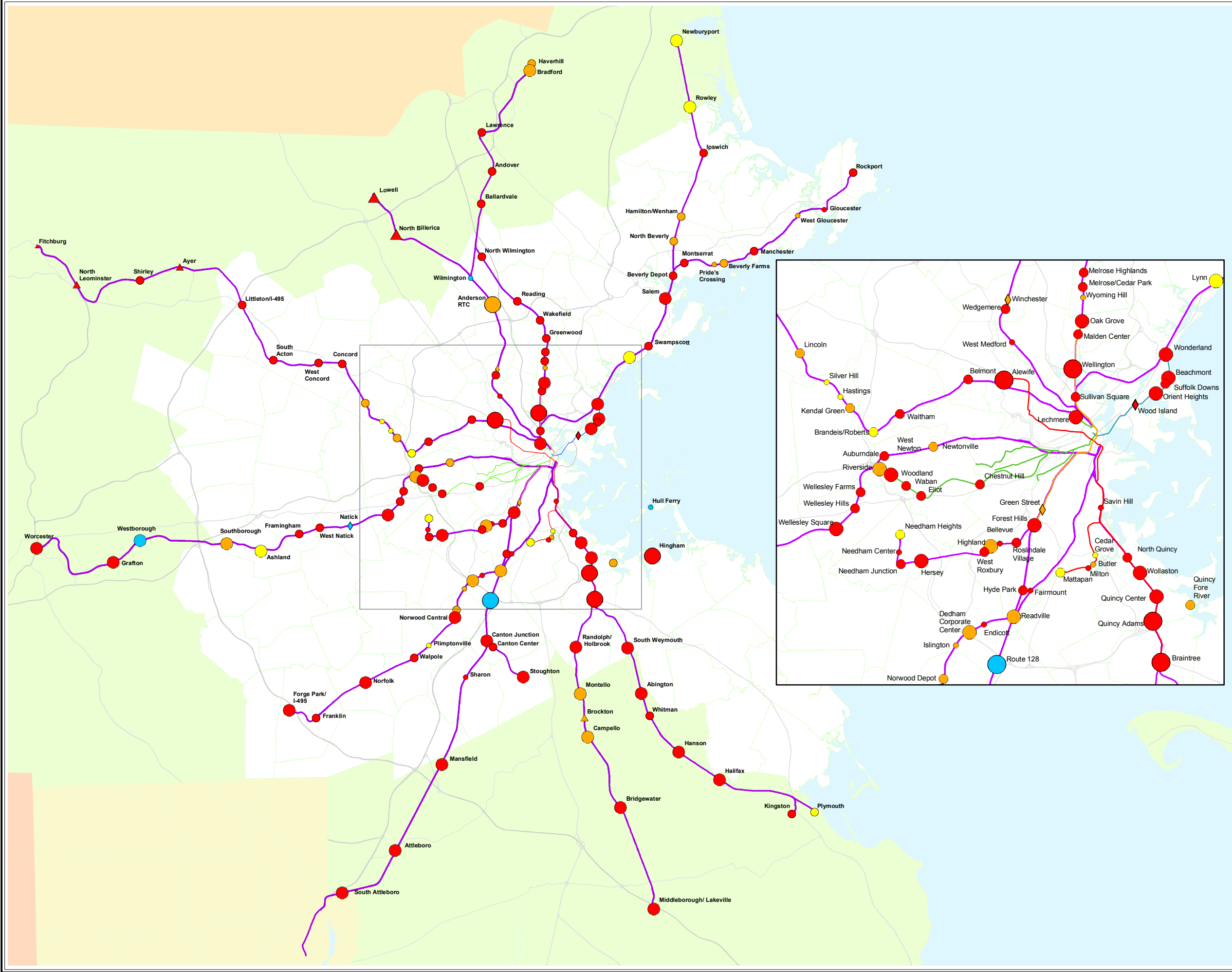
⁶ MassHighway operates other lots outside of the Boston Region MPO area, including lots in the following nearby communities: Andover, Berlin, Bridgewater, Methuen, Newburyport, Plymouth, and West Bridgewater.

⁷ Alicia P. Wilson et al., *MassHighway Park-and-Ride Lots: Status and Recommendations*, produced by the Central Transportation Planning Staff for the Boston MPO and the Massachusetts Highway Department, June 2003.

FIGURE 5.1

PARK-AND-RIDE LOT UTILIZATION

LOTS AT PUBLIC TRANSIT STATIONS



- LOT UTILIZATION ***
- Full (>85%)
 - Partially utilized (50%-85%)
 - Underutilized (<50%)
 - No data
 - Not active

- LOT SIZE**
- 1,001-2,500
 - 251-1,000
 - 51-250
 - 1-50

- LOT OWNERSHIP**
- MBTA/municipality
 - ▲ Regional transit authority
 - ◆ Other

*Utilization based on fall 2002 survey.

FIGURE 5.2

PARK-AND-RIDE LOT UTILIZATION

RIDESHARING LOTS



LOT UTILIZATION*

- Full (>85%)
- Partially utilized (50%-85%)
- Underutilized (<50%)
- No data
- Not active

LOT SIZE

- 1,001-2,500
- 251-1,000
- 51-250
- 1-50

LOT OWNERSHIP

- MassHighway
- Massport
- ▲ MassPike
- ◆ Other

*Utilization based on 2001 survey