

## **APPENDIX D-4**

### **RESULTS OF VEHICLE LICENSE PLATE SURVEYS AT THE LYNN CENTRAL SQUARE STATION PARKING GARAGE AND AT THE SWAMPSCOTT STATION, SALEM STATION, AND WONDERLAND STATION PARKING LOTS**

# **RESULTS OF VEHICLE LICENSE PLATE SURVEYS**

## **SURVEY AT LYNN CENTRAL SQUARE STATION PARKING GARAGE**

### **Introduction**

The purpose of the license plate survey was threefold: (1) to identify the town of origin profile of the garage's users, (2) to determine the number of users who paid, or did not pay, a fee to park in the garage, and (3) to identify the town of origin profile of people being dropped off or picked up at Lynn Central Square Station.

This planning application consisted of recording the license plates via a tape recorder and matching them against the most recent Registry of Motor Vehicles (RMV) file, which lists the towns where registered vehicles are garaged. The purpose of finding out the distribution of garage users by town is helpful in devising strategies to attract more users to the underutilized parking garage at Lynn Central Square Station.

### **Data Collection**

Data were collected on Wednesday, 30 March, 2005, between 6:00 and 11:00 AM. This time period was selected in order to capture commuters who either work in downtown Lynn and park in the garage, or who continue their commute by transferring to the MBTA commuter rail or bus.

The two garage locations where data were collected were:

1. The entrance/exit ramp off of Union Street
2. The street-level drop off/pick up ramp inside the garage

### **Results of License Plates Matched to the Registry of Motor Vehicles File**

#### *Matched vehicles, entrance/exit ramp*

A total of 250 vehicles entered the garage between 6:00 and 11:00 AM. Of these vehicles, 163 (65%) were successfully matched to a town of origin. A total of 118 drivers paid \$2 to park in the garage during this time period, while 132 drivers parked without paying. The drivers who paid are assumed to be commuters working in downtown Lynn or who continued either on the MBTA commuter rail or local bus. The users who did not pay the parking fee are assumed to be North Shore Community College students, students from a nearby high school, or residents of an adjacent apartment complex, all having an arrangement with the garage management that they can use the garage for free.

Table D-4-1 shows the breakdown of all parked and matched vehicles in the garage, by town of origin of matched license plates, and by users who paid or did not pay to use the garage.

**TABLE D-4-1**  
**Results of License Plate Survey**  
**Lynn Central Square Station Parking Garage**  
**Entrance/Exit Ramp Only**

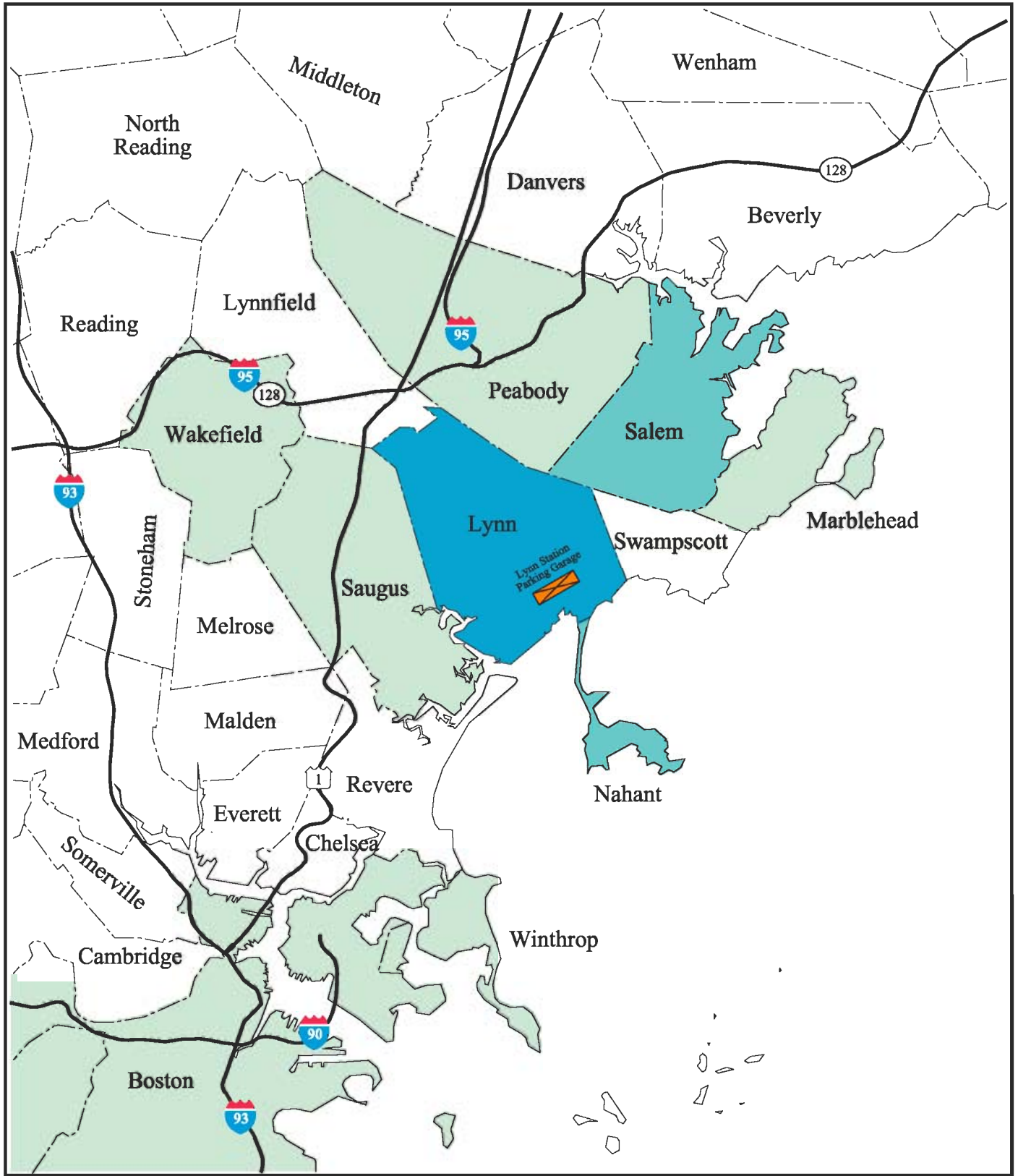
| <b>Town</b>          | <b>Matched Vehicles</b> | <b>% of Matched Vehicles</b> | <b>Vehicles that Paid</b> | <b>Vehicles that Did Not Pay</b> |
|----------------------|-------------------------|------------------------------|---------------------------|----------------------------------|
| Lynn                 | 58                      | 36                           | 33                        | 25                               |
| Nahant               | 16                      | 10                           | 16                        | 0                                |
| Salem                | 14                      | 9                            | 11                        | 3                                |
| Boston               | 7                       | 4                            | 3                         | 4                                |
| Marblehead           | 7                       | 4                            | 6                         | 1                                |
| Peabody              | 7                       | 4                            | 3                         | 4                                |
| Saugus               | 7                       | 4                            | 0                         | 7                                |
| Winthrop             | 7                       | 4                            | 3                         | 4                                |
| Wakefield            | 6                       | 4                            | 3                         | 3                                |
| Revere               | 4                       | 2                            | 0                         | 4                                |
| All others           | 30                      | 18                           | 10                        | 20                               |
| Matched plates:      | 163                     | 65                           | 88                        | 75                               |
| Unmatched plates:    | 87                      | 35                           | 30                        | 57                               |
| All parked vehicles: | 250                     | 100                          | 118                       | 132                              |

Source: CTPS, March 2005

Figure D-4-1 shows the distribution, by town, of all vehicles parked and matched at the Lynn Central Square Station parking garage. Figure D-4-2 shows the distribution of drivers who paid \$2 in order to park in the garage. Figure D-4-3 shows the distribution of drivers who did not pay to park in the garage.

*Matched vehicles, drop off/pick up ramp*

28 vehicles dropped off or picked up passengers inside the garage between 6:00 and 11:00 AM. Of these, 21 vehicles (75%) were successfully matched to a town of origin. There was no information recorded as to whether the dropped off/picked up persons continued as rail or bus passengers. Table D-4-2 shows the breakdown of the 28 recorded plates at this location.



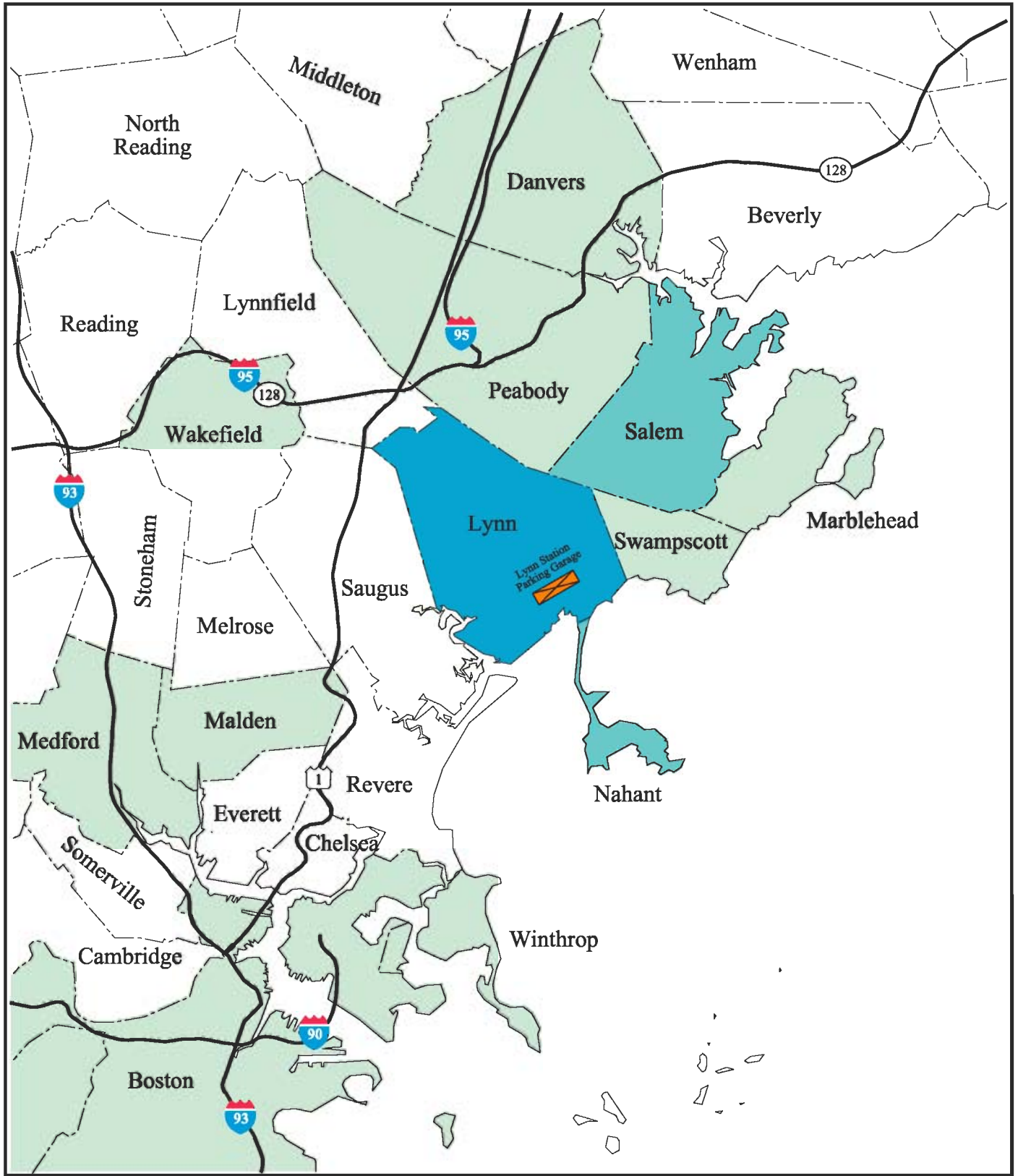
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**FIGURE D-4-1**  
All Vehicles Parked (Matched) at Lynn Central  
Square Station Parking Garage, 6:00–11:00 AM,  
March 2005, by Town of Origin

- > 20 vehicles
- 10 – 20 vehicles
- 5 – 10 vehicles
- < 5 vehicles

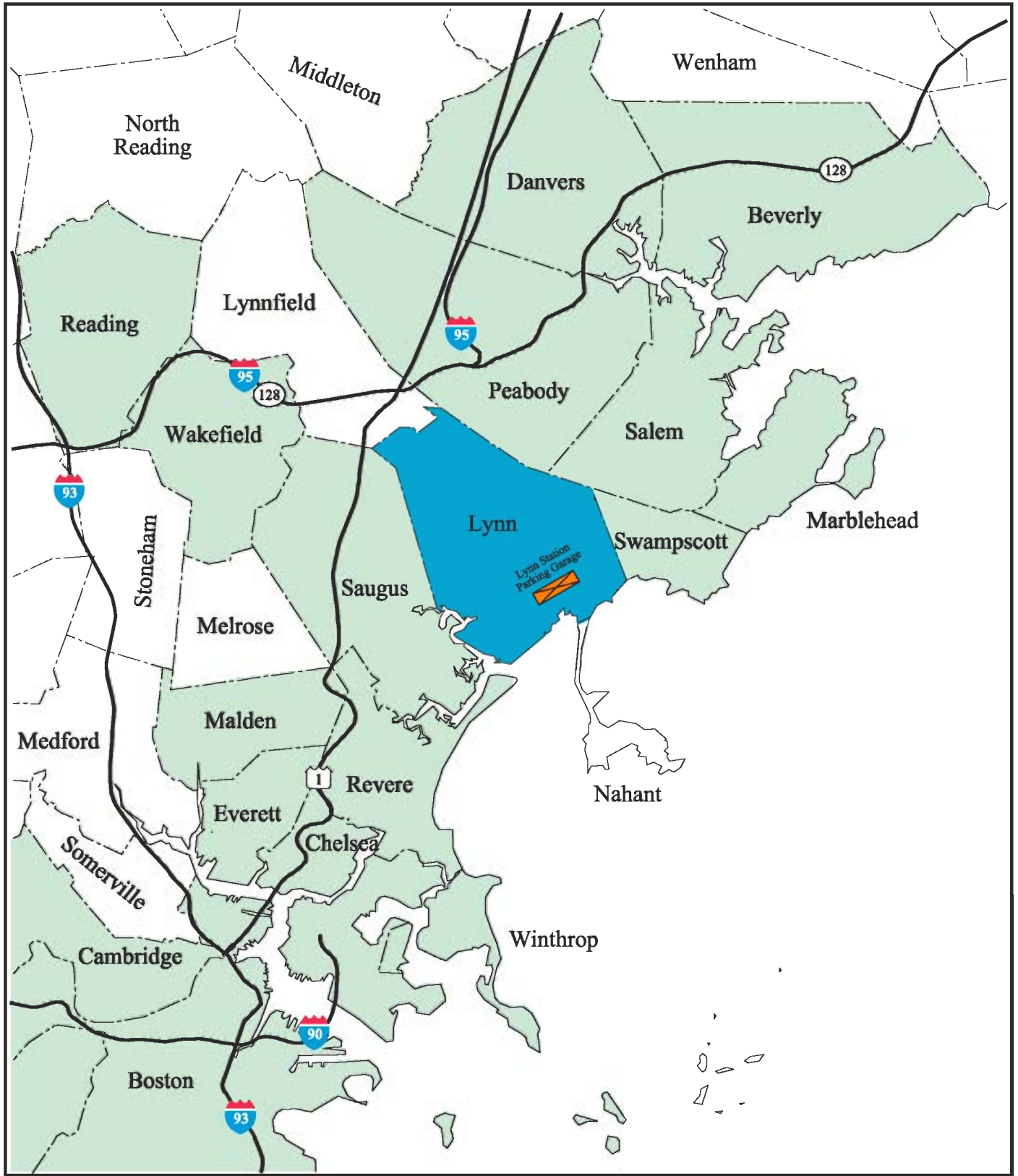


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**FIGURE D-4-2**  
 Paying Vehicles Parked (Matched) at Lynn Central  
 Square Station Parking Garage, 6:00–11:00 AM,  
 March 2005, by Town of Origin

- > 20 vehicles
- 10 – 20 vehicles
- 1 – 10 vehicles
- 0 vehicles



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**FIGURE D-4-3**  
Non-Paying Vehicles Parked (Matched) at Lynn  
Central Square Station Parking Garage,  
6:00–11:00 AM, March 2005, by Town of Origin

- > 20 vehicles
- 10 – 20 vehicles
- 1 – 10 vehicles
- 0 vehicles

**TABLE D-4-2**  
**Results of License Plate Survey**  
**Lynn Central Square Station Parking Garage**  
**Drop Off/Pick Up Ramp Only**

| <b>Town</b>       | <b>Matched Vehicles</b> | <b>% of all Vehicles</b> |
|-------------------|-------------------------|--------------------------|
| Lynn              | 9                       | 32                       |
| Nahant            | 7                       | 25                       |
| Salem             | 2                       | 7                        |
| Danvers           | 1                       | 4                        |
| North Reading     | 1                       | 4                        |
| Revere            | 1                       | 4                        |
| Matched plates:   | 21                      | 75                       |
| Unmatched plates: | 7                       | 25                       |
| All vehicles:     | 28                      | 100                      |

Source: CTPS, March 2005

*Summary and conclusions of vehicles parked (matched) at Lynn Central Square Station parking garage*

- Of all 250 license plates recorded at the parking garage entrance/exit ramp, 163, or 65%, were successfully matched to the RMV records.
- Of all 28 license plates recorded at the parking garage drop off/pick up ramp, 21, or 75%, were successfully matched to the RMV records.
- Of the 163 matched plates at the entrance/exit ramp, nearly half, or 75 (46%), were of vehicles which originated in the three study area communities. However, these vehicles were unevenly distributed, with 58 from Lynn (36%), 14 from Salem (9%), and just 3 from Swampscott (2%).
- 118 vehicles of a total of 250 parked vehicles paid the daily \$2 parking fee. Of these “paying vehicles,” 97, or 82%, arrived between 6:00 and 8:30 AM. Drivers of these vehicles are presumed to be workers in downtown Lynn, or passengers transferring to the MBTA commuter rail or bus.
- 132 vehicles of a total of 250 parked vehicles did not pay the daily \$2 parking fee. Of these “non-paying vehicles,” 109, or 83%, arrived between 8:30 and 11:00 AM. Drivers of these vehicles are presumed to be North Shore Community College students, students from a local high school, or residents of a local apartment complex.
- There are a total of 952 parking spaces in the garage. 250 vehicles entered the garage between 6:00 and 11:00 AM, an occupancy rate of 26%. The real rate was probably somewhat higher since vehicles that may already have been parked, such as local residents’ vehicles parked overnight, were not included. The two most recently observed weekday occupancy rates for the entire garage were 38%, recorded in the spring of 2000, and 34%, recorded in the fall of 2005.<sup>1</sup>

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<sup>1</sup> Source: CTPS

## SURVEYS AT THE SWAMPSCOTT STATION, SALEM STATION, AND WONDERLAND STATION PARKING LOTS

### Data Collection

The following license plate survey data were collected by CTPS at:

- Swampscott Station (commuter rail), Tuesday, 16 August, 2005
- Salem Station (commuter rail), Tuesday, 16 August, 2005
- Wonderland Station (Blue Line rapid transit), Thursday, 18 August, 2005

### Results of License Plates Matched to the Registry of Motor Vehicles File

#### *Swampscott Station*

A total of 132 vehicles were parked mid-morning at Swampscott Station on Tuesday, 16 August, 2005. Of these vehicles, 79 (60%) were successfully matched to a town of origin. Table D-4-3 shows the breakdown of all parked and matched vehicles in the station parking area, by town of origin of matched license plates.

**TABLE D-4-3**  
**Results of License Plate Survey**  
**Swampscott Station Parking Area**

| <b>Town of Origin</b> | <b>Matched Vehicles</b> | <b>% of Matched Vehicles</b> |
|-----------------------|-------------------------|------------------------------|
| Marblehead            | 28                      | 35                           |
| Salem                 | 18                      | 23                           |
| Swampscott            | 13                      | 16                           |
| Lynn                  | 8                       | 10                           |
| Boston                | 3                       | 4                            |
| All others            | 9                       | 11                           |
| Matched plates:       | 79                      | 60                           |
| Unmatched plates:     | 53                      | 40                           |
| All parked vehicles:  | 132                     | 100                          |

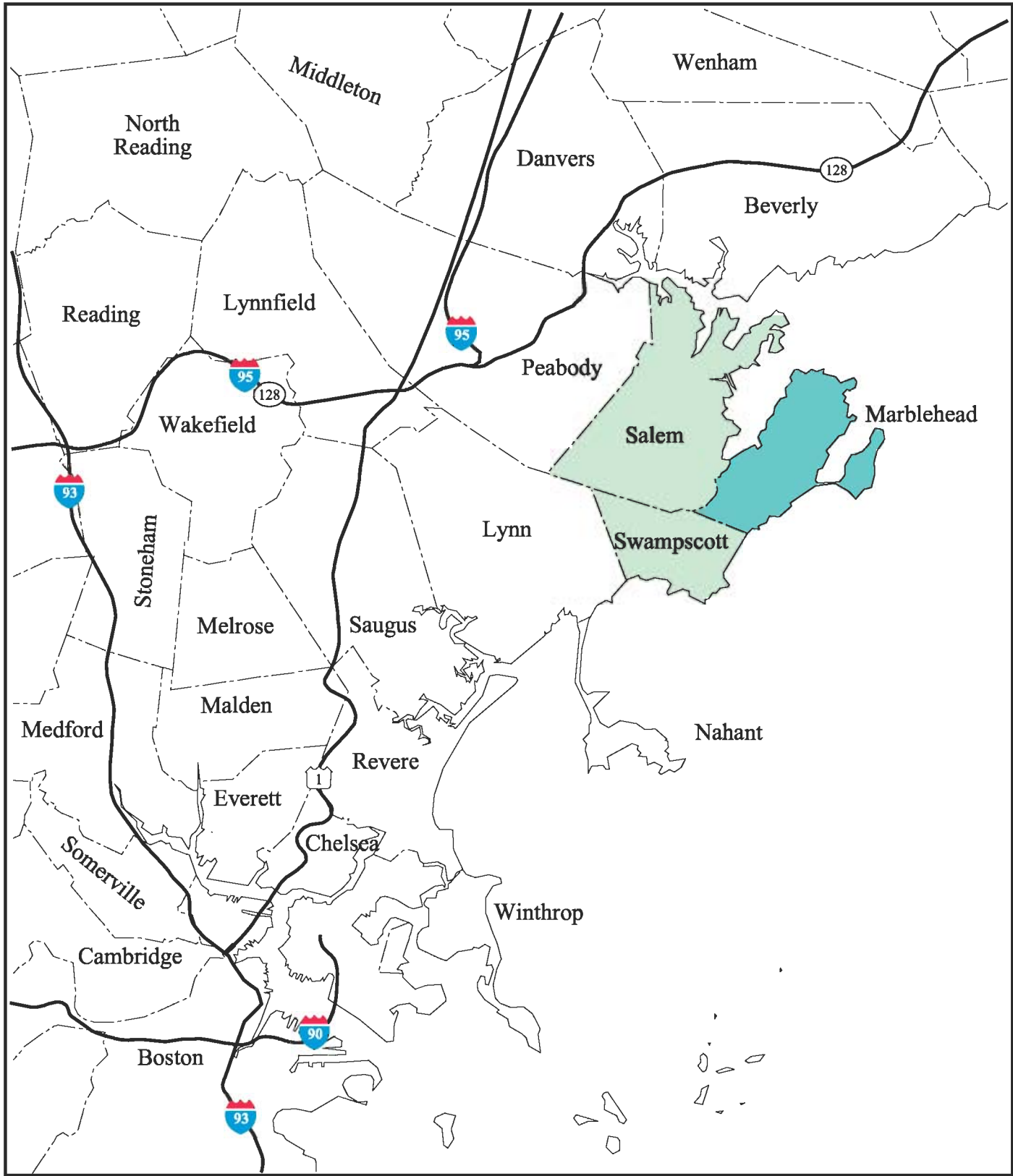
Source: CTPS, 2005

Figure D-4-4 shows the distribution, by town, of all vehicles parked and matched at the Swampscott Station parking area.

#### *Salem Station*

A total of 413 vehicles were parked mid-morning at Salem Station on Tuesday, 16 August, 2005. Of these vehicles, 272 (66%) were successfully matched to a town of origin. Table D-4-4 shows the breakdown of all parked and matched vehicles in the station parking area, by town of origin of matched license plates.





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**FIGURE D-4-4  
Towns of Origin for Parked Vehicles at  
Swampscott MBTA Station (2005)**

- > 20 parked vehicles
- 10 – 20 parked vehicles
- < 10 parked vehicles

**TABLE D-4-4**  
**Results of License Plate Survey**  
**Salem Station Parking Area**

| <b>Town of Origin</b> | <b>Matched Vehicles</b> | <b>% of Matched Vehicles</b> |
|-----------------------|-------------------------|------------------------------|
| Salem                 | 106                     | 39                           |
| Peabody               | 50                      | 18                           |
| Danvers               | 19                      | 7                            |
| Marblehead            | 13                      | 5                            |
| Beverly               | 11                      | 4                            |
| All others            | 73                      | 27                           |
| Matched plates:       | 272                     | 66                           |
| Unmatched plates:     | 141                     | 34                           |
| All parked vehicles:  | 413                     | 100                          |

Source: CTPS, 2005

Figure D-4-5 shows the distribution, by town, of all vehicles parked and matched at the Salem Station parking area.

*Wonderland Station*

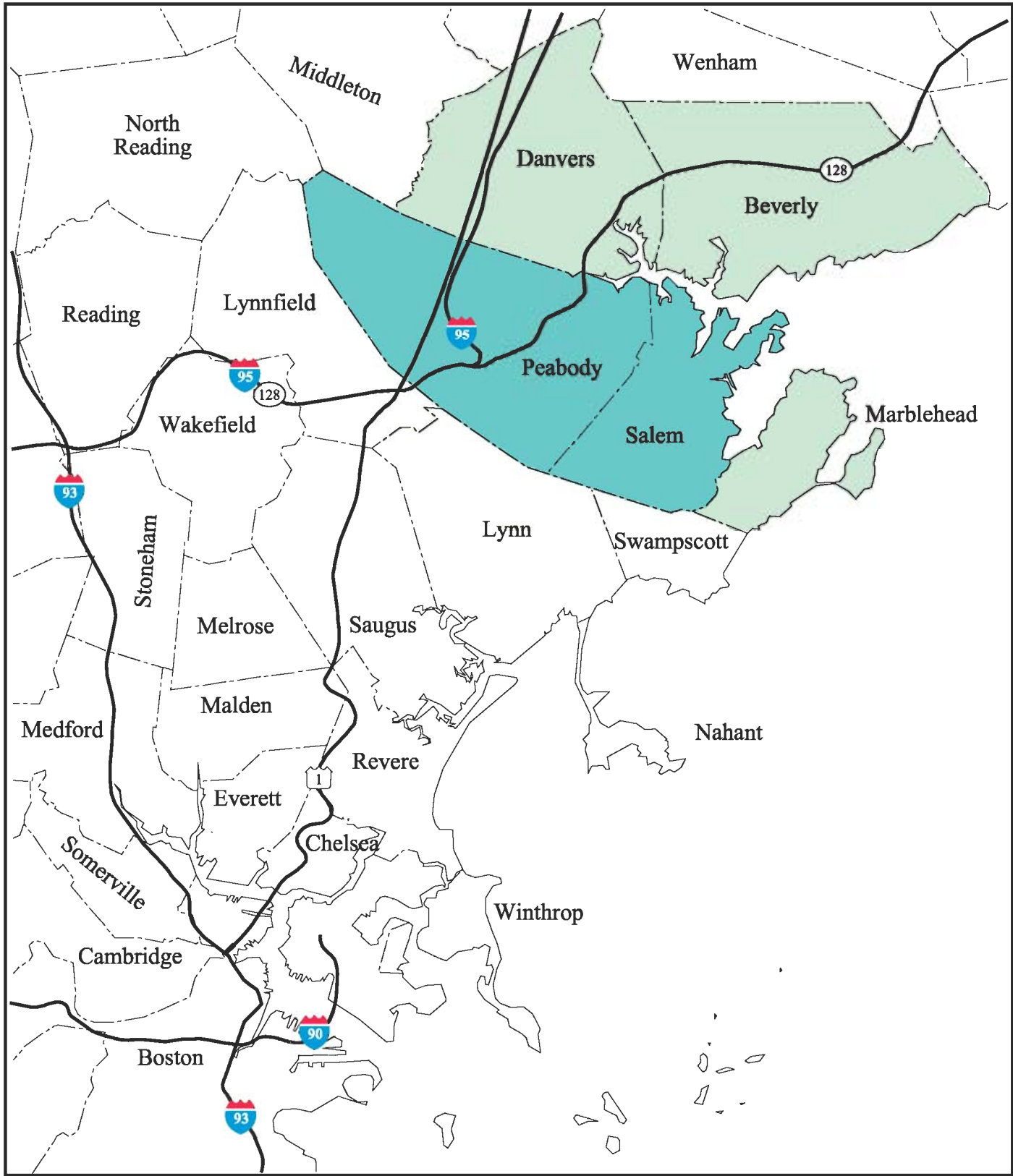
A total of 1,195 vehicles were parked mid-morning at Wonderland Station on Thursday, 18 August, 2005. Of these vehicles, 883 (74%) were successfully matched to a town of origin. Table D-4-5 shows the breakdown of all parked and matched vehicles in the station parking area, by town of origin of matched license plates.

**TABLE D-4-5**  
**Results of License Plate Survey**  
**Wonderland Station Parking Area**

| <b>Town of Origin</b> | <b>Matched Vehicles</b> | <b>% of Matched Vehicles</b> |
|-----------------------|-------------------------|------------------------------|
| Lynn                  | 238                     | 27                           |
| Marblehead            | 99                      | 11                           |
| Revere                | 88                      | 10                           |
| Swampscott            | 75                      | 8                            |
| Peabody               | 61                      | 7                            |
| Salem                 | 64                      | 7                            |
| Saugus                | 50                      | 6                            |
| All others            | 208                     | 24                           |
| Matched plates:       | 883                     | 74                           |
| Unmatched plates:     | 312                     | 26                           |
| All parked vehicles:  | 1,195                   | 100                          |

Source: CTPS, 2005

Figure D-4-6 shows the distribution, by town, of all vehicles parked and matched at the Wonderland Station parking area.



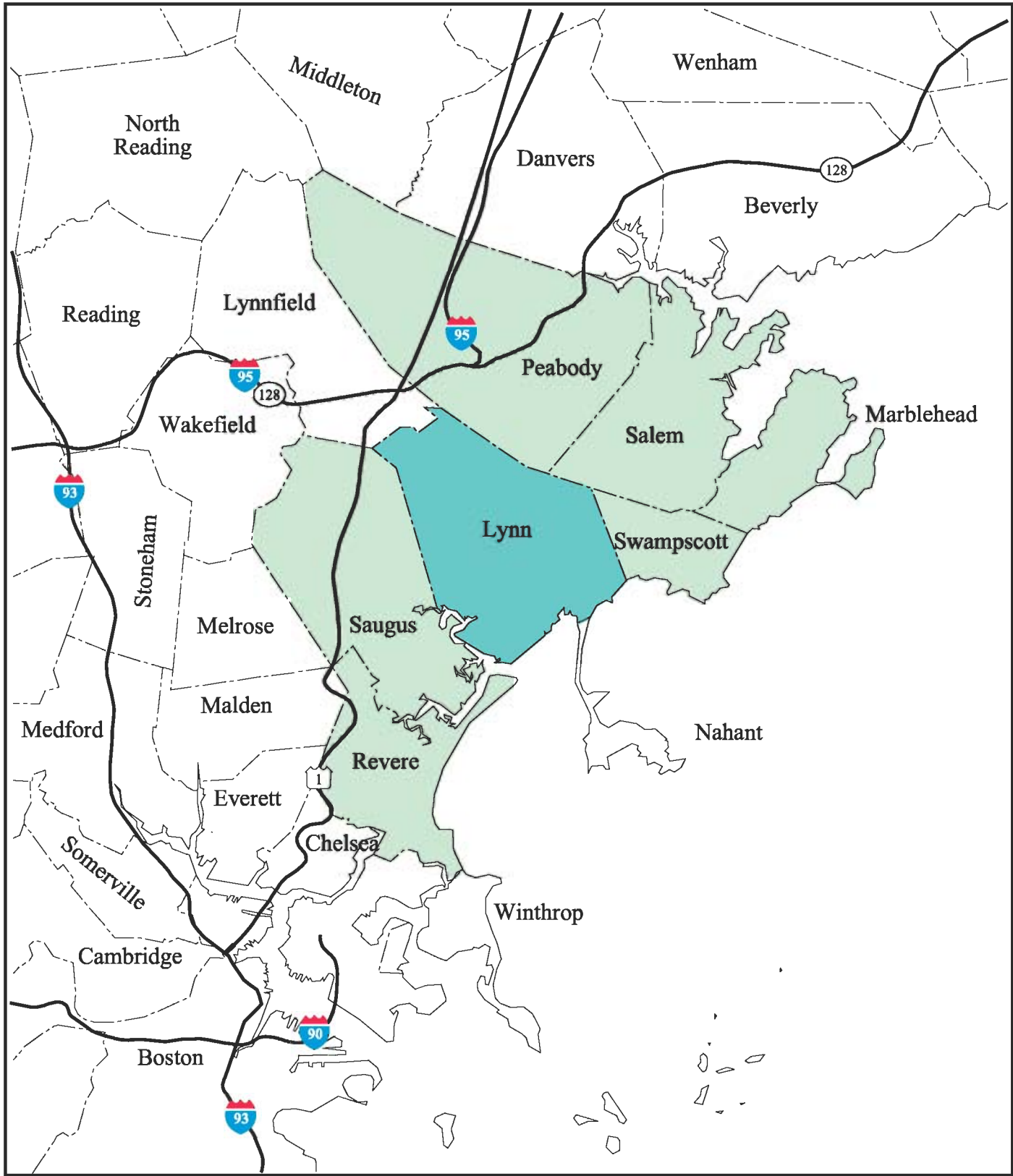
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**FIGURE D-4-5  
Towns of Origin for Parked Vehicles at  
Salem MBTA Station (2005)**

- > 25 parked vehicles
- 10 - 25 parked vehicles
- < 10 parked vehicles



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**FIGURE D-4-6  
Towns of Origin for Parked Vehicles at  
Wonderland MBTA Station (2005)**

- > 100 parked vehicles
- 50 – 100 parked vehicles
- < 50 parked vehicles