

APPENDIX D-5

JOURNEY-TO-WORK TRAVEL PATTERNS

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MAJOR FINDINGS

- From 1990 to 2000, in the Mid–North Shore Subregional Transportation Study area (Lynn, Swampscott, Salem):
 - Population *increased* by 8% (133,000 to 143,900)
 - Jobs *decreased* by 16% (57,300 to 48,000)

For workers *residing* in the study area:

- Study area residents work further away today:
 - in 1980, 59% of employed residents worked in the study area (34,170 workers)
 - in 1990, 47% did so (29,180 workers), and
 - in 2000, 37% did so (24,640 workers)
- Towns close by where study area residents increasingly work, from 1980 to 2000:
 - Peabody: 2,330 to 4,140 (+78%)
 - Beverly: 1,450 to 2,630 (+83%)
 - Marblehead: 980 to 1,550 (+59%)
- Towns further away where study area residents increasingly work, from 1980 to 2000:
 - Boston: 6,280 to 9,210 (+47%)
 - Cambridge: 320 to 1,410 (+341%)
 - Andover: 230 to 1,150 (+400%)
 - Gloucester: 200 to 680 (+240%)
 - Burlington: 340 to 610 (+79%)
 - Ipswich: 20 to 360 (+1,700%)
 - Lawrence: 120 to 740 (+517%)
- Shifts in modes of travel to work by study area residents between 1980 and 2000:
 - Drive alone: 57% to 71%
 - Carpools: 21% to 11%
 - Transit: 8% to 9%
 - Walk: 11% to 5%
 - Worked at home: 1% to 2%

For workers *working* in the study area:

- Just under one-half of all workers employed in the study area consistently originate from outside the study area:
 - in 1980, 43% of study area workers lived elsewhere (25,920 workers)
 - in 1990, 49% did so (28,100 workers), and
 - in 2000, 49% did so (23,350 workers)

- The distribution of towns from which study area workers originate has remained essentially unchanged between 1980 to 2000. Most neighboring towns had fewer absolute numbers of workers in the study area in 2000 than in 1980 as a result of the overall decrease in study area jobs. However, a small number of more distant towns showed increases in persons working in the study area (see "**Journey-to-Work to Study Area Jobs from all Towns of Origin**" below).
- Shifts in modes of travel to work to the study area between 1980 and 2000:
 - Drive alone: 61% to 78%
 - Carpools: 21% to 9%
 - Transit: 5% to 3%
 - Walk: 10% to 5%
 - Worked at home: 1% to 3%

BACKGROUND

The total number of persons living in the Mid-North Shore Subregional Transportation Study area increased by 8% between 1990 and 2000 (from 133,000 to 143,900).¹ However, although the number of residents increased, the total number of jobs in the three study area towns decreased by a combined 16% during the same decade (from 57,300 to 48,000).² Much of this decrease was due to a significant decline in the manufacturing and trade employment sectors dating back to the 1980s.³ Since that time, while the government and service employment sectors grew somewhat, jobs in manufacturing and the trades decreased significantly from a combined 33,000 in 1985 to 17,500 in 2000, resulting in a total net decrease in study area jobs.⁴

The following sections analyze the changes in journey-to-work travel patterns between 1980 and 2000 for the study area. The shift in travel patterns over time is discussed by showing how an increasing number of study area residents work further away from their town of residence in 2000 than in 1990 or in 1980. A breakdown of the changes in travel modes used for the work trips is also presented.

This analysis is intended to provide a general explanation regarding current work-related travel patterns to and from the study area. It is also intended that this information will be a context within which recommendations for transportation improvements will be based later in the study (Task 5).

JOURNEY-TO-WORK BY STUDY AREA RESIDENTS

Fewer study area residents tend to work locally today, primarily due to the reduction and transformation of the local job market, as discussed above. In 1980, 60% of employed residents

¹ 2000 U.S. Census.

² 2000 Census Transportation Planning Package.

³ EDIC/LYNN, "A Brownfields Partnership for the City of Lynn, Massachusetts," 1997.

⁴ Commonwealth of Massachusetts, Division of Employment and Training (ES-202 Series), 2004 (www.detma.org/lmi/local/Lynn.html, www.detma.org/lmi/local/Swampsco.html, and www.detma.org/lmi/local/Salem.html) .

worked in the study area, while in 1990 47%, and in 2000 37%, did so (see Table D-5-1). This implies that travel distances, and presumably travel times, have increased for a growing number of study area workers who have found jobs in towns further away. It may also mean that newly arrived residents are already employed in towns other than those in the study area.

Table D-5-1 shows that the total number of employed study area residents increased from 57,390 to 67,040 workers (+17%) between 1980 and 2000. While the total number of working residents increased, the number of residents working at jobs within the study area decreased from 34,170 to 24,640 (-39%). That residents are working further from the study area today than in previous decades is borne out by the fact that, for instance, Boston increased as a destination for study area residents from 6,280 to 9,210 employees (+47%), and that Peabody increased from 2,330 to 4,140 employees (+78%). Danvers, Saugus, Marblehead, Beverly, and Cambridge all grew as employment destinations as well, ranging from +20% to +340%.

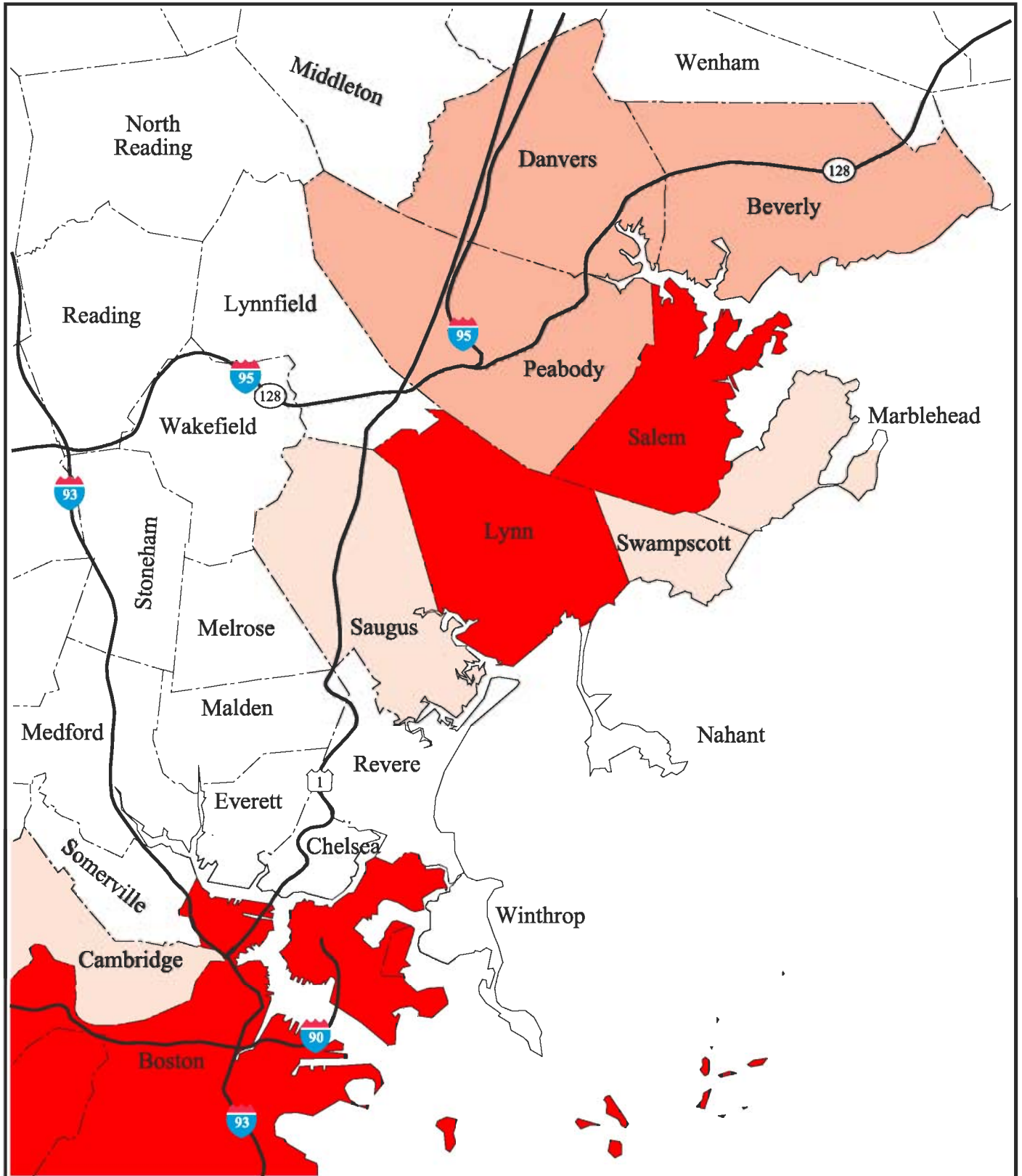
TABLE D-5-1
Major Employment Destinations for Study Area Residents
(from Lynn, Swampscott, and Salem, combined) 1980, 1990 and 2000

| Employment Destination | 1980 | | 1990 | | 2000 | |
|------------------------|-----------|------------|-----------|------------|-----------|------------|
| | Employees | % of Total | Employees | % of Total | Employees | % of Total |
| Lynn | 21,850 | 38 | 17,480 | 28 | 13,340 | 20 |
| Salem | 10,060 | 18 | 9,360 | 15 | 8,980 | 13 |
| Swampscott | 2,260 | 4 | 2,340 | 4 | 2,320 | 3 |
| Study Area | 34,170 | 60 | 29,180 | 47 | 24,640 | 37 |
| Boston | 6,280 | 11 | 7,890 | 13 | 9,210 | 14 |
| Peabody | 2,330 | 4 | 3,700 | 6 | 4,140 | 6 |
| Danvers | 2,240 | 4 | 2,420 | 4 | 2,690 | 4 |
| Beverly | 1,450 | 3 | 1,680 | 3 | 2,630 | 4 |
| Cambridge | 320 | 1 | 1,340 | 2 | 1,410 | 2 |
| Marblehead | 980 | 2 | 1,320 | 2 | 1,550 | 2 |
| Saugus | 990 | 2 | 1,230 | 2 | 1,500 | 2 |
| Other towns | 8,630 | 15 | 12,760 | 21 | 19,270 | 29 |
| All towns | 57,390 | 100 | 61,530 | 100 | 67,040 | 100 |

Source: 1980, 1990, and 2000 Census Transportation Planning Packages

The share of “Other towns” as work place destinations increased from 15% to 29% between 1980 and 2000. A closer look at the list of “Other towns” reveals that far-away destinations such as Andover (230 to 1,150 employees), Haverhill (150 to 630 employees), Lawrence (120 to 740 employees), and Gloucester (200 to 680 employees) all grew significantly during the same two decades (not shown in Table D-5-1).

Figures D-5-1 and D-5-2 show the distribution of employment destinations for all employees living in the study area in 2000 and 1980, respectively. These figures show graphically the changes in work destinations over the two decades, primarily due to the shifting job market. The study area, as well as Boston, do remain as important employment centers for local residents; however, Figures D-5-1 and D-5-2 show that Cambridge and the study area’s neighboring towns have grown significantly as work destinations.



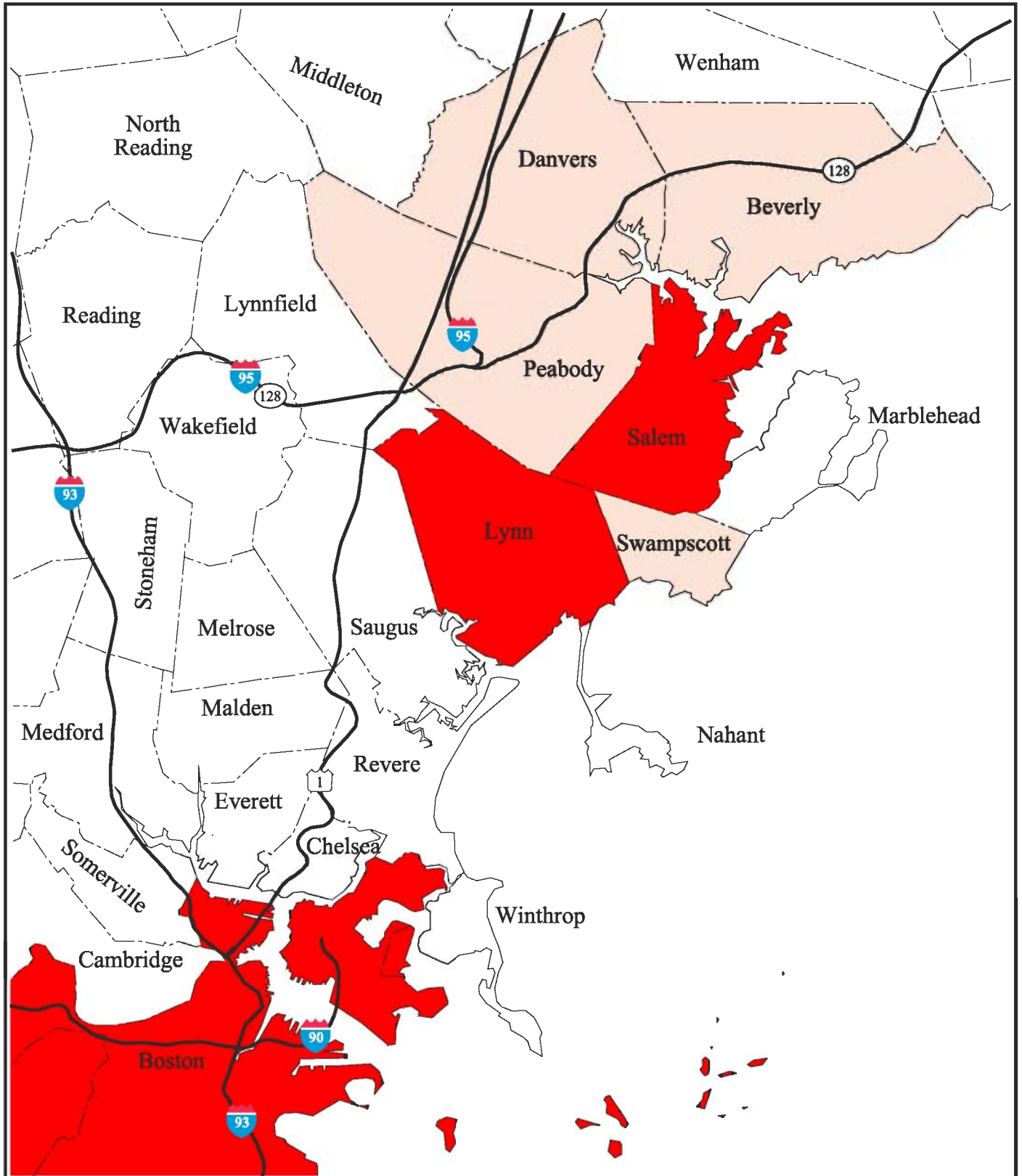
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**FIGURE D-5-1
Employment Destinations for
Study Area Residents (2000)**

- > 5,000 employees
- 2,500 – 5,000 employees
- 1,000 – 2,500 employees
- < 1,000 employees



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**FIGURE D-5-2
Employment Destinations for
Study Area Residents (1980)**

- > 5,000 employees
- 2,500 – 5,000 employees
- 1,000 – 2,500 employees
- < 1,000 employees

MODE OF TRANSPORTATION TO WORK BY STUDY AREA RESIDENTS

Table D-5-2 matches employed study area residents with mode of transportation used to travel to work for the years 1980, 1990, and 2000. The table shows that the share of workers driving alone increased from 57% in 1980, to 71% in both 1990 and 2000. Carpoolers decreased during the same time from 21% in 1980, to 12% in 1990, and to 11% in 2000. The share of public transportation users stayed about the same, 8% in both 1980 and 1990, and 9% in 2000. Employees who walked decreased from 11% in 1980, to 6% in 1990, and 5% in 2000.

This general trend makes sense, in that the increase in workers driving alone over time coincides with the simultaneous decrease in local jobs, and thus the need to travel further away to find employment. As the share of workers driving alone has increased, the share of workers carpooling or walking to work has decreased commensurately.

Tables D-5-3 through D-5-6 provide additional detail on work destinations and travel modes for Lynn, Swampscott, and Salem residents for the year 2000.

TABLE D-5-2
Mode of Transportation to Work for Study Area Residents
(from Lynn, Swampscott, and Salem, combined) 1980, 1990 and 2000

| Mode of Transportation | 1980 | | 1990 | | 2000 | |
|------------------------|---------------|------------|---------------|------------|---------------|------------|
| | Employees | % of Total | Employees | % of Total | Employees | % of Total |
| Drive Alone | 32,680 | 57 | 43,550 | 71 | 47,820 | 71 |
| Carpool | 12,050 | 21 | 7,440 | 12 | 7,650 | 11 |
| Transit* | 4,670 | 8 | 5,110 | 8 | 6,140 | 9 |
| Taxi | 280 | 0 | 240 | 0 | 170 | 0 |
| Motorcycle | 70 | 0 | 110 | 0 | 20 | 0 |
| Bicycle | 390 | 1 | 130 | 0 | 150 | 0 |
| Walk | 6,310 | 11 | 3,540 | 6 | 3,190 | 5 |
| Other Mode | 220 | 0 | 340 | 1 | 480 | 1 |
| Worked Home | 730 | 1 | 1,100 | 2 | 1,490 | 2 |
| Total | 57,390 | 100 | 61,530 | 100 | 67,040 | 100 |

* Includes bus, streetcar, subway, commuter rail, and commuter boat

Source: 1980, 1990, and 2000 Census Transportation Planning Packages

TABLE D-5-3

**2000 Journey-to-Work in the Mid-North Shore Subregional Transportation Study Area
Residents of Study Area by Major Towns of Employment and Mode of Transportation to Work**

| Town of Employment | Mode Of Transportation To Work, Percent of Town of Employment Total: | | | | | | | | | |
|--------------------|--|-------------|---------|----------|------|------------|---------|------|------------|-------------|
| | Total | Drive Alone | Carpool | Transit* | Taxi | Motorcycle | Bicycle | Walk | Other Mode | Worked Home |
| Beverly | 2630 | 2255 | 293 | 43 | 0 | 0 | 4 | 15 | 20 | 0 |
| % of all towns | 4% | 86% | 11% | 2% | 0% | 0% | 0% | 1% | 1% | 0% |
| Danvers | 2694 | 2135 | 377 | 78 | 4 | 0 | 15 | 35 | 50 | 0 |
| % of all towns | 4% | 79% | 14% | 3% | 0% | 0% | 1% | 1% | 2% | 0% |
| Lynn | 13337 | 9235 | 1493 | 495 | 75 | 0 | 25 | 1354 | 115 | 545 |
| % of all towns | 20% | 69% | 11% | 4% | 1% | 0% | 0% | 10% | 1% | 4% |
| Marblehead | 1548 | 1210 | 274 | 34 | 0 | 0 | 10 | 10 | 10 | 0 |
| % of all towns | 2% | 78% | 18% | 2% | 0% | 0% | 1% | 1% | 1% | 0% |
| Peabody | 4141 | 3230 | 602 | 145 | 10 | 0 | 14 | 75 | 65 | 0 |
| % of all towns | 6% | 78% | 15% | 4% | 0% | 0% | 0% | 2% | 2% | 0% |
| Salem | 8983 | 5940 | 1039 | 254 | 30 | 0 | 30 | 1070 | 25 | 595 |
| % of all towns | 13% | 66% | 12% | 3% | 0% | 0% | 0% | 12% | 0% | 7% |
| Saugus | 1504 | 1125 | 165 | 169 | 0 | 0 | 0 | 30 | 15 | 0 |
| % of all towns | 2% | 75% | 11% | 11% | 0% | 0% | 0% | 2% | 1% | 0% |
| Swampscott | 2316 | 1565 | 169 | 99 | 4 | 0 | 10 | 109 | 25 | 335 |
| % of all towns | 3% | 68% | 7% | 4% | 0% | 0% | 0% | 5% | 1% | 14% |
| Cambridge | 1413 | 910 | 174 | 309 | 0 | 0 | 0 | 20 | 0 | 0 |
| % of all towns | 2% | 64% | 12% | 22% | 0% | 0% | 0% | 1% | 0% | 0% |
| Boston | 9206 | 4500 | 743 | 3773 | 25 | 15 | 0 | 115 | 35 | 0 |
| % of all towns | 14% | 49% | 8% | 41% | 0% | 0% | 0% | 1% | 0% | 0% |
| Other Towns | 19266 | 15705 | 2311 | 734 | 17 | 0 | 42 | 347 | 110 | 0 |
| % of all towns | 29% | 82% | 12% | 4% | 0% | 0% | 0% | 2% | 1% | 0% |
| ALL TOWNS | 67038 | 47810 | 7640 | 6133 | 165 | 15 | 150 | 3180 | 470 | 1475 |
| | 100% | 71% | 11% | 9% | 0% | 0% | 0% | 5% | 1% | 2% |

* Includes bus, streetcar, subway, commuter rail, and commuter boat.

Source: 2000 Census Transportation Planning Package

(R. Sievert, 060828, J-to-WbyModeTabD-5-3)

TABLE D-5-4

**2000 Journey-to-Work in the Mid-North Shore Subregional Transportation Study Area
Residents of Lynn by Major Towns of Employment and Mode of Transportation to Work**

| Town of Employment | Mode Of Transportation To Work, Percent of Town of Employment Total: | | | | | | | | | |
|--------------------|--|-------------|---------|----------|------|------------|---------|------|------------|-------------|
| | Total | Drive Alone | Carpool | Transit* | Taxi | Motorcycle | Bicycle | Walk | Other Mode | Worked Home |
| Beverly | 993 | 755 | 189 | 24 | 0 | 0 | 0 | 15 | 10 | 0 |
| % of all towns | 3% | 76% | 19% | 2% | 0% | 0% | 0% | 2% | 1% | 0% |
| Danvers | 1393 | 1055 | 204 | 74 | 0 | 0 | 0 | 20 | 40 | 0 |
| % of all towns | 4% | 76% | 15% | 5% | 0% | 0% | 0% | 1% | 3% | 0% |
| Lynn | 11265 | 7405 | 1360 | 415 | 75 | 0 | 25 | 1325 | 115 | 545 |
| % of all towns | 29% | 66% | 12% | 4% | 1% | 0% | 0% | 12% | 1% | 5% |
| Marblehead | 485 | 305 | 140 | 30 | 0 | 0 | 0 | 0 | 10 | 0 |
| % of all towns | 1% | 63% | 29% | 6% | 0% | 0% | 0% | 0% | 2% | 0% |
| Peabody | 2143 | 1620 | 324 | 105 | 0 | 0 | 4 | 35 | 55 | 0 |
| % of all towns | 6% | 76% | 15% | 5% | 0% | 0% | 0% | 2% | 3% | 0% |
| Salem | 2415 | 1845 | 385 | 160 | 0 | 0 | 0 | 25 | 0 | 0 |
| % of all towns | 6% | 76% | 16% | 7% | 0% | 0% | 0% | 1% | 0% | 0% |
| Saugus | 1229 | 890 | 140 | 169 | 0 | 0 | 0 | 15 | 15 | 0 |
| % of all towns | 3% | 72% | 11% | 14% | 0% | 0% | 0% | 1% | 1% | 0% |
| Swampscott | 678 | 560 | 50 | 49 | 4 | 0 | 0 | 15 | 0 | 0 |
| % of all towns | 2% | 83% | 7% | 7% | 1% | 0% | 0% | 2% | 0% | 0% |
| Cambridge | 754 | 480 | 144 | 120 | 0 | 0 | 0 | 10 | 0 | 0 |
| % of all towns | 2% | 64% | 19% | 16% | 0% | 0% | 0% | 1% | 0% | 0% |
| Boston | 5180 | 2820 | 450 | 1780 | 15 | 0 | 0 | 90 | 25 | 0 |
| % of all towns | 14% | 54% | 9% | 34% | 0% | 0% | 0% | 2% | 0% | 0% |
| Other Towns | 11825 | 9260 | 1664 | 534 | 1 | 0 | 41 | 225 | 100 | 0 |
| % of all towns | 31% | 78% | 14% | 5% | 0% | 0% | 0% | 2% | 1% | 0% |
| ALL TOWNS | 38360 | 26995 | 5050 | 3460 | 95 | 0 | 70 | 1775 | 370 | 545 |
| | 100% | 70% | 13% | 9% | 0% | 0% | 0% | 5% | 1% | 1% |

* Includes bus, streetcar, subway, commuter rail, and commuter boat.

Source: 2000 Census Transportation Planning Package

(R. Sievert, 060828, J-to-WbyModeTabD-5-4)

TABLE D-5-5**2000 Journey-to-Work in the Mid-North Shore Subregional Transportation Study Area****Residents of Swampscott by Major Towns of Employment and Mode of Transportation to Work**

| Town of Employment | Mode Of Transportation To Work, Percent of Town of Employment Total: | | | | | | | | | |
|--------------------|--|-------------|---------|----------|------|------------|---------|------|------------|-------------|
| | Total | Drive Alone | Carpool | Transit* | Taxi | Motorcycle | Bicycle | Walk | Other Mode | Worked Home |
| Beverly | 215 | 205 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % of all towns | 3% | 95% | 5% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Danvers | 134 | 130 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % of all towns | 2% | 97% | 3% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Lynn | 864 | 820 | 4 | 15 | 0 | 0 | 0 | 25 | 0 | 0 |
| % of all towns | 12% | 95% | 0% | 2% | 0% | 0% | 0% | 3% | 0% | 0% |
| Marblehead | 428 | 385 | 39 | 4 | 0 | 0 | 0 | 0 | 0 | 0 |
| % of all towns | 6% | 90% | 9% | 1% | 0% | 0% | 0% | 0% | 0% | 0% |
| Peabody | 280 | 225 | 55 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % of all towns | 4% | 80% | 20% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Salem | 559 | 520 | 20 | 4 | 0 | 0 | 0 | 15 | 0 | 0 |
| % of all towns | 8% | 93% | 4% | 1% | 0% | 0% | 0% | 3% | 0% | 0% |
| Saugus | 45 | 45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % of all towns | 1% | 100% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Swampscott | 1249 | 700 | 89 | 10 | 0 | 0 | 0 | 90 | 25 | 335 |
| % of all towns | 17% | 56% | 7% | 1% | 0% | 0% | 0% | 7% | 2% | 27% |
| Cambridge | 209 | 180 | 0 | 29 | 0 | 0 | 0 | 0 | 0 | 0 |
| % of all towns | 3% | 86% | 0% | 14% | 0% | 0% | 0% | 0% | 0% | 0% |
| Boston | 1589 | 690 | 109 | 775 | 0 | 15 | 0 | 0 | 0 | 0 |
| % of all towns | 22% | 43% | 7% | 49% | 0% | 1% | 0% | 0% | 0% | 0% |
| Other Towns | 1798 | 1575 | 165 | 48 | 0 | 0 | 0 | 10 | 0 | 0 |
| % of all towns | 24% | 88% | 9% | 3% | 0% | 0% | 0% | 1% | 0% | 0% |
| ALL TOWNS | 7370 | 5475 | 495 | 885 | 0 | 15 | 0 | 140 | 25 | 335 |
| | 100% | 74% | 7% | 12% | 0% | 0% | 0% | 2% | 0% | 5% |

* Includes bus, streetcar, subway, commuter rail, and commuter boat.

Source: 2000 Census Transportation Planning Package

(R. Sievert, 060828, J-to-WbyModeTabD-5-5)

TABLE D-5-6

**2000 Journey-to-Work in the Mid-North Shore Subregional Transportation Study Area
Residents of Salem by Major Towns of Employment and Mode of Transportation to Work**

| Town of Employment | Mode Of Transportation To Work, Percent of Town of Employment Total: | | | | | | | | | |
|--------------------|--|-------------|---------|----------|------|------------|---------|------|------------|-------------|
| | Total | Drive Alone | Carpool | Transit* | Taxi | Motorcycle | Bicycle | Walk | Other Mode | Worked Home |
| Beverly | 1422 | 1295 | 94 | 19 | 0 | 0 | 4 | 0 | 10 | 0 |
| % of all towns | 7% | 91% | 7% | 1% | 0% | 0% | 0% | 0% | 1% | 0% |
| Danvers | 1167 | 950 | 169 | 4 | 4 | 0 | 15 | 15 | 10 | 0 |
| % of all towns | 5% | 81% | 14% | 0% | 0% | 0% | 1% | 1% | 1% | 0% |
| Lynn | 1208 | 1010 | 129 | 65 | 0 | 0 | 0 | 4 | 0 | 0 |
| % of all towns | 6% | 84% | 11% | 5% | 0% | 0% | 0% | 0% | 0% | 0% |
| Marblehead | 635 | 520 | 95 | 0 | 0 | 0 | 10 | 10 | 0 | 0 |
| % of all towns | 3% | 82% | 15% | 0% | 0% | 0% | 2% | 2% | 0% | 0% |
| Peabody | 1718 | 1385 | 223 | 40 | 10 | 0 | 10 | 40 | 10 | 0 |
| % of all towns | 8% | 81% | 13% | 2% | 1% | 0% | 1% | 2% | 1% | 0% |
| Salem | 6009 | 3575 | 634 | 90 | 30 | 0 | 30 | 1030 | 25 | 595 |
| % of all towns | 28% | 59% | 11% | 1% | 0% | 0% | 0% | 17% | 0% | 10% |
| Saugus | 230 | 190 | 25 | 0 | 0 | 0 | 0 | 15 | 0 | 0 |
| % of all towns | 1% | 83% | 11% | 0% | 0% | 0% | 0% | 7% | 0% | 0% |
| Swampscott | 389 | 305 | 30 | 40 | 0 | 0 | 10 | 4 | 0 | 0 |
| % of all towns | 2% | 78% | 8% | 10% | 0% | 0% | 3% | 1% | 0% | 0% |
| Cambridge | 450 | 250 | 30 | 160 | 0 | 0 | 0 | 10 | 0 | 0 |
| % of all towns | 2% | 56% | 7% | 36% | 0% | 0% | 0% | 2% | 0% | 0% |
| Boston | 2437 | 990 | 184 | 1218 | 10 | 0 | 0 | 25 | 10 | 0 |
| % of all towns | 11% | 41% | 8% | 50% | 0% | 0% | 0% | 1% | 0% | 0% |
| Other Towns | 5643 | 4870 | 482 | 152 | 16 | 0 | 1 | 112 | 10 | 0 |
| % of all towns | 26% | 86% | 9% | 3% | 0% | 0% | 0% | 2% | 0% | 0% |
| ALL TOWNS | 21308 | 15340 | 2095 | 1788 | 70 | 0 | 80 | 1265 | 75 | 595 |
| | 100% | 72% | 10% | 8% | 0% | 0% | 0% | 6% | 0% | 3% |

* Includes bus, streetcar, subway, commuter rail, and commuter boat.

Source: 2000 Census Transportation Planning Package

(R. Sievert, 060828, J-to-WbyModeTabD-5-6)

JOURNEY-TO-WORK TO STUDY AREA JOBS FROM ALL TOWNS OF ORIGIN

The total number of jobs in the study area decreased between 1980 and 2000 from 60,070 to 47,990 jobs (-20%) (see Table D-5-7). This gradual decline of the study area as a regional employment center has impacted virtually all surrounding towns in the region. Table D-5-7 shows that most towns in the region, including the three study area towns, contributed fewer workers to local jobs over the two decades between 1980 and 2000. This decrease included from 1,140 to 900 workers from Boston (-21%), and from 990 to 540 workers from Revere (-45%). The only town in the vicinity which contributed more workers in 2000 than in 1980 was Gloucester, which showed an increase from 230 to 730 workers (+217%).

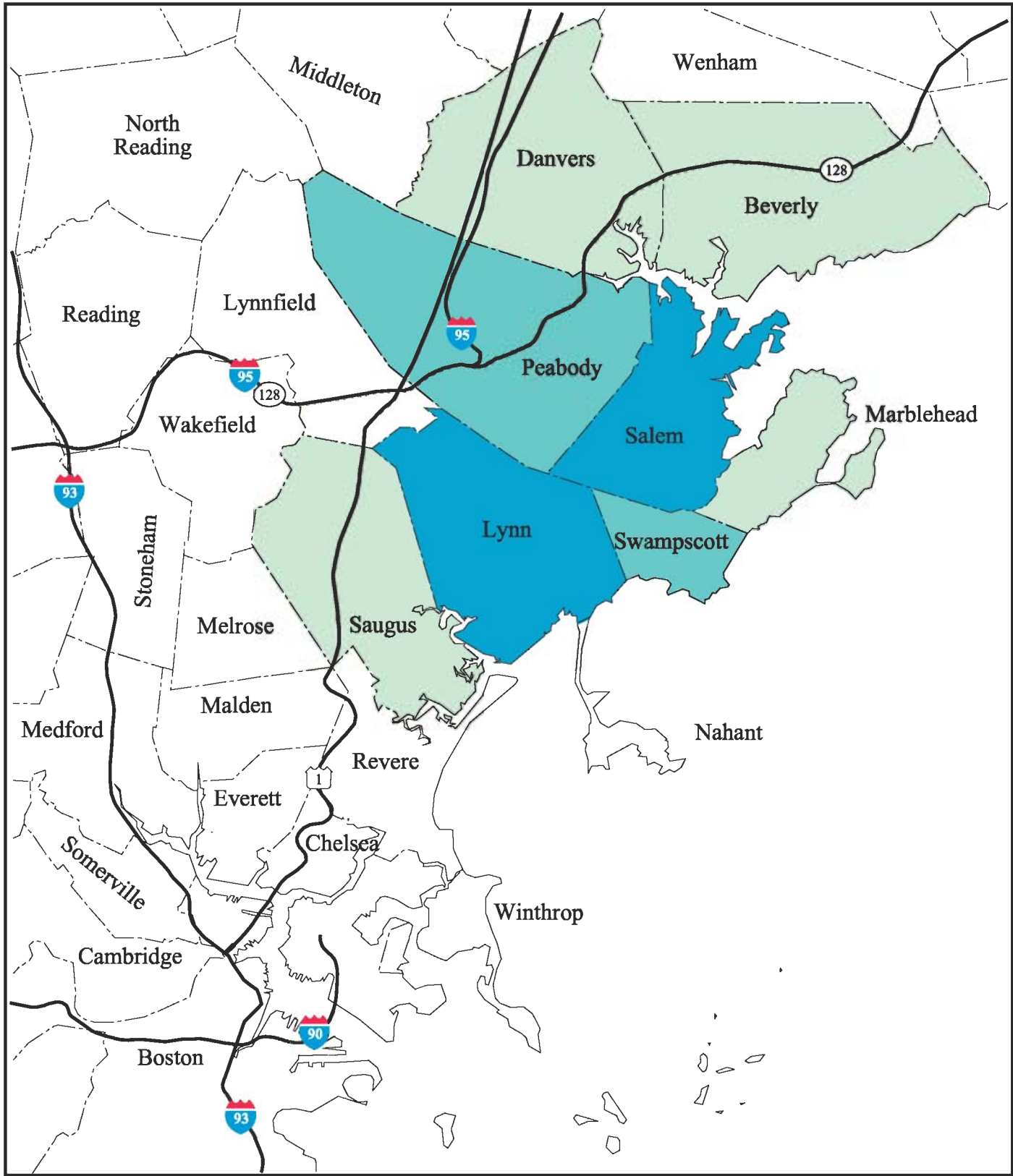
TABLE D-5-7
Major Towns of Origin for all Employees Working in the Study Area
(in Lynn, Swampscott, and Salem, combined) 1980, 1990 and 2000

| Town of Origin | 1980 | | 1990 | | 2000 | |
|----------------|-----------|------------|-----------|------------|-----------|------------|
| | Employees | % of Total | Employees | % of Total | Employees | % of Total |
| Lynn | 20,780 | 35 | 17,960 | 31 | 14,370 | 30 |
| Salem | 10,160 | 17 | 8,130 | 14 | 7,610 | 16 |
| Swampscott | 3,210 | 5 | 3,090 | 5 | 2,670 | 6 |
| Study Area | 34,170 | 57 | 29,180 | 51 | 24,640 | 51 |
| Boston | 1,140 | 2 | 1,650 | 3 | 900 | 2 |
| Peabody | 4,230 | 7 | 4,170 | 7 | 2,900 | 6 |
| Danvers | 1,790 | 3 | 1,400 | 2 | 1,180 | 2 |
| Beverly | 2,750 | 5 | 2,530 | 4 | 1,850 | 4 |
| Revere | 990 | 2 | 790 | 1 | 540 | 1 |
| Marblehead | 2,390 | 4 | 2,080 | 4 | 1,520 | 3 |
| Saugus | 1,490 | 2 | 1,500 | 3 | 1,060 | 2 |
| Gloucester | 230 | 0 | 450 | 1 | 730 | 2 |
| Other towns | 10,910 | 18 | 13,530 | 24 | 12,660 | 26 |
| All towns | 60,070 | 100 | 57,280 | 100 | 47,990 | 100 |

Source: 1980, 1990, and 2000 Census Transportation Planning Packages

Table D-5-7 also shows that the proportional contributions of employees by most nearby towns decreased slightly, by about 1-2%. The category "Other towns" represents towns located further away from the study area. The fact that its proportional share increased from 18% in 1980 to 26% in 2000 reflects the overall trend that commuters in the region are traveling longer to work in general, both in terms of distance as well as time. Although there was an overall decline in study area jobs between 1980 and 2000, there were individual examples of "Other towns" which did increase in contributing to the jobs in the study area. These included Amesbury (90 to 230 jobs), Gloucester (230 to 740 jobs), Haverhill (290 to 690 jobs), Lawrence (150 to 630 jobs), and Methuen (220 to 450 jobs) (not shown in Table D-5-7).

Figures D-5-3 and D-5-4 show the distribution of towns of origin for commuters working in the study area in 2000 and 1980, respectively. As can be seen, the figures are nearly identical, with the only changes being Boston and Beverly each having moved to a lower category. This

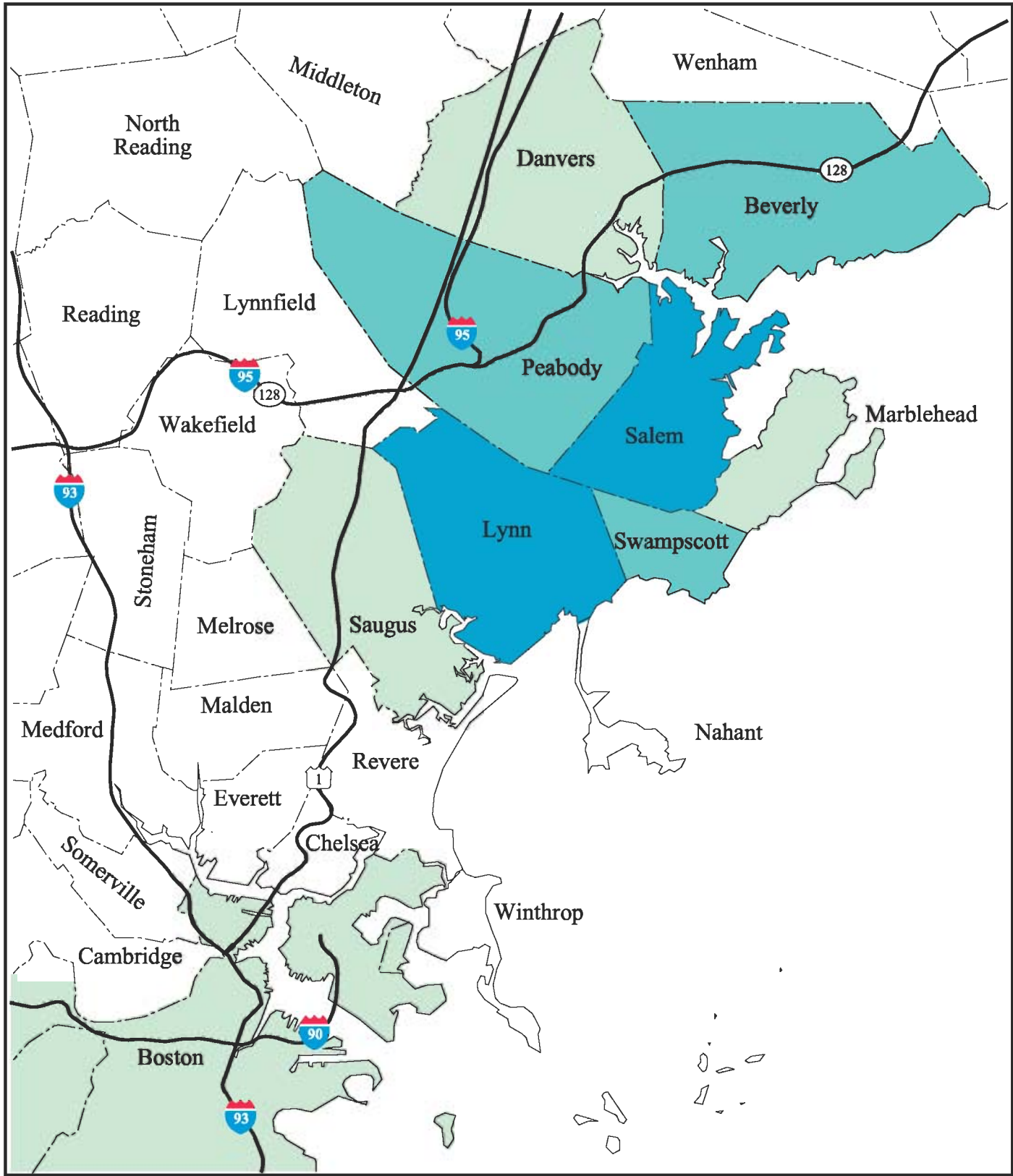


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FIGURE D-5-3
Towns of Origin for
Study Area Employees (2000)

- > 5,000 employees
- 2,500 – 5,000 employees
- 1,000 – 2,500 employees
- < 1,000 employees



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**FIGURE D-5-4
Towns of Origin for
Study Area Employees (1980)**

- > 5,000 employees
- 2,500 – 5,000 employees
- 1,000 – 2,500 employees
- < 1,000 employees

echoes the findings above in Table D-5-7 that most towns nearby decreased only slightly as origins of study area workers.

MODE OF TRANSPORTATION FOR ALL EMPLOYEES WORKING IN THE STUDY AREA

Table D-5-8 matches all employees working in the study area with mode of transportation used to travel from their town of origin for the years 1980, 1990, and 2000. The table shows that the percentage of workers driving alone increased from 61% in 1980, to 76% in 1990, and to 78% in 2000. At the same time, nearly all other mode shares decreased. Workers carpooling to the study area decreased from 21% in 1980, to 11% in 1990, and 9% in 2000. The share of public transportation users decreased slightly from 5% in 1980 to 3% in both 1990 and 2000. The percentage of workers walking also decreased, from 10% in 1980, to 6% in 1990, and 5% in 2000.

Tables D-5-9 through D-5-12 provide additional detail on towns of origin and travel modes used for commuters working in Lynn, Swampscott, and Salem for the year 2000.

TABLE D-5-8
Mode of Transportation for All Employees Working in the Study Area
(in Lynn, Swampscott, and Salem, combined) 1980, 1990 and 2000

| Mode of Transportation | 1980 | | 1990 | | 2000 | |
|-------------------------------|------------------|-------------------|------------------|-------------------|------------------|-------------------|
| | Employees | % of Total | Employees | % of Total | Employees | % of Total |
| Drive Alone | 36,650 | 61 | 43,440 | 76 | 37,450 | 78 |
| Carpool | 12,900 | 21 | 6,300 | 11 | 4,390 | 9 |
| Transit* | 2,790 | 5 | 1,920 | 3 | 1,500 | 3 |
| Taxi | 260 | 0 | 200 | 0 | 140 | 0 |
| Motorcycle | 100 | 0 | 80 | 0 | 0 | 0 |
| Bicycle | 400 | 1 | 170 | 0 | 180 | 0 |
| Walk | 6,140 | 10 | 3,720 | 6 | 2,630 | 5 |
| Other Mode | 110 | 0 | 340 | 1 | 280 | 1 |
| Worked Home | 730 | 1 | 1,090 | 2 | 1,490 | 3 |
| Total | 60,080 | 100 | 57,260 | 100 | 48,060 | 100 |

* Includes bus, streetcar, subway, commuter rail, and commuter boat

Source: 1980, 1990, and 2000 Census Transportation Planning Packages

TABLE D-5-9**2000 Journey-to-Work in the Mid-North Shore Subregional Transportation Study Area****Employees Working in the Study Area by Major Towns of Origin and Mode of Transportation to Work**

| Town of Origin | Mode Of Transportation To Work, Percent of Town of Origin Total: | | | | | | | | | |
|----------------|--|-------------|---------|----------|------|------------|---------|------|------------|-------------|
| | Total | Drive Alone | Carpool | Transit* | Taxi | Motorcycle | Bicycle | Walk | Other Mode | Worked Home |
| Beverly | 1851 | 1645 | 108 | 34 | 10 | 0 | 35 | 19 | 0 | 0 |
| % of all towns | 4% | 89% | 6% | 2% | 1% | 0% | 2% | 1% | 0% | 0% |
| Danvers | 1175 | 1085 | 80 | 10 | 0 | 0 | 0 | 0 | 0 | 0 |
| % of all towns | 2% | 92% | 7% | 1% | 0% | 0% | 0% | 0% | 0% | 0% |
| Lynn | 14358 | 9810 | 1795 | 624 | 79 | 0 | 25 | 1365 | 115 | 545 |
| % of all towns | 30% | 68% | 13% | 4% | 1% | 0% | 0% | 10% | 1% | 4% |
| Marblehead | 1527 | 1445 | 20 | 25 | 0 | 0 | 15 | 12 | 10 | 0 |
| % of all towns | 3% | 95% | 1% | 2% | 0% | 0% | 1% | 1% | 1% | 0% |
| Peabody | 2905 | 2685 | 184 | 12 | 0 | 0 | 10 | 10 | 4 | 0 |
| % of all towns | 6% | 92% | 6% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Salem | 7606 | 4890 | 793 | 195 | 30 | 0 | 40 | 1038 | 25 | 595 |
| % of all towns | 16% | 64% | 10% | 3% | 0% | 0% | 1% | 14% | 0% | 8% |
| Saugus | 1054 | 875 | 120 | 34 | 0 | 0 | 25 | 0 | 0 | 0 |
| % of all towns | 2% | 83% | 11% | 3% | 0% | 0% | 2% | 0% | 0% | 0% |
| Swampscott | 2672 | 2040 | 113 | 29 | 0 | 0 | 0 | 130 | 25 | 335 |
| % of all towns | 6% | 76% | 4% | 1% | 0% | 0% | 0% | 5% | 1% | 13% |
| Cambridge | 124 | 110 | 4 | 10 | 0 | 0 | 0 | 0 | 0 | 0 |
| % of all towns | 0% | 89% | 3% | 8% | 0% | 0% | 0% | 0% | 0% | 0% |
| Boston | 892 | 580 | 140 | 158 | 0 | 0 | 10 | 0 | 4 | 0 |
| % of all towns | 2% | 65% | 16% | 18% | 0% | 0% | 1% | 0% | 0% | 0% |
| Other Towns | 13822 | 12270 | 1018 | 366 | 16 | 4 | 10 | 51 | 87 | 0 |
| % of all towns | 29% | 89% | 7% | 3% | 0% | 0% | 0% | 0% | 1% | 0% |
| ALL TOWNS | 47986 | 37435 | 4375 | 1497 | 135 | 4 | 170 | 2625 | 270 | 1475 |
| | 100% | 78% | 9% | 3% | 0% | 0% | 0% | 5% | 1% | 3% |

* Includes bus, streetcar, subway, commuter rail, and commuter boat.

Source: 2000 Census Transportation Planning Package

(R. Sievert, 060828, J-to-WbyModeTabD-5-9)

TABLE D-5-10

**2000 Journey-to-Work in the Mid-North Shore Subregional Transportation Study Area
Employees Working in Lynn by Major Towns of Origin and Mode of Transportation to Work**

| Town of Origin | Mode Of Transportation To Work, Percent of Town of Origin Total: | | | | | | | | | |
|----------------|--|-------------|---------|----------|------|------------|---------|------|------------|-------------|
| | Total | Drive Alone | Carpool | Transit* | Taxi | Motorcycle | Bicycle | Walk | Other Mode | Worked Home |
| Beverly | 588 | 510 | 49 | 4 | 0 | 0 | 10 | 15 | 0 | 0 |
| % of all towns | 2% | 87% | 8% | 1% | 0% | 0% | 2% | 3% | 0% | 0% |
| Danvers | 495 | 460 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % of all towns | 2% | 93% | 7% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Lynn | 11265 | 7405 | 1360 | 415 | 75 | 0 | 25 | 1325 | 115 | 545 |
| % of all towns | 44% | 66% | 12% | 4% | 1% | 0% | 0% | 12% | 1% | 5% |
| Marblehead | 534 | 495 | 10 | 15 | 0 | 0 | 0 | 4 | 10 | 0 |
| % of all towns | 2% | 93% | 2% | 3% | 0% | 0% | 0% | 1% | 2% | 0% |
| Peabody | 1123 | 1085 | 30 | 8 | 0 | 0 | 0 | 0 | 0 | 0 |
| % of all towns | 4% | 97% | 3% | 1% | 0% | 0% | 0% | 0% | 0% | 0% |
| Salem | 1208 | 1010 | 129 | 65 | 0 | 0 | 0 | 4 | 0 | 0 |
| % of all towns | 5% | 84% | 11% | 5% | 0% | 0% | 0% | 0% | 0% | 0% |
| Saugus | 795 | 685 | 55 | 30 | 0 | 0 | 25 | 0 | 0 | 0 |
| % of all towns | 3% | 86% | 7% | 4% | 0% | 0% | 3% | 0% | 0% | 0% |
| Swampscott | 864 | 820 | 4 | 15 | 0 | 0 | 0 | 25 | 0 | 0 |
| % of all towns | 3% | 95% | 0% | 2% | 0% | 0% | 0% | 3% | 0% | 0% |
| Cambridge | 99 | 85 | 4 | 10 | 0 | 0 | 0 | 0 | 0 | 0 |
| % of all towns | 0% | 86% | 4% | 10% | 0% | 0% | 0% | 0% | 0% | 0% |
| Boston | 619 | 380 | 95 | 140 | 0 | 0 | 0 | 0 | 4 | 0 |
| % of all towns | 2% | 61% | 15% | 23% | 0% | 0% | 0% | 0% | 1% | 0% |
| Other Towns | 8017 | 7110 | 594 | 220 | 5 | 0 | 10 | 27 | 51 | 0 |
| % of all towns | 31% | 89% | 7% | 3% | 0% | 0% | 0% | 0% | 1% | 0% |
| ALL TOWNS | 25607 | 20045 | 2365 | 922 | 80 | 0 | 70 | 1400 | 180 | 545 |
| | 100% | 78% | 9% | 4% | 0% | 0% | 0% | 5% | 1% | 2% |

* Includes bus, streetcar, subway, commuter rail, and commuter boat.

Source: 2000 Census Transportation Planning Package

(R. Sievert, 060828, J-to-WbyModeTabD-5-10)

TABLE D-5-11**2000 Journey-to-Work in the Mid-North Shore Subregional Transportation Study Area****Employees Working in Swampscott by Major Towns of Origin and Mode of Transportation to Work**

| Town of Origin | Mode Of Transportation To Work, Percent of Town of Origin Total: | | | | | | | | | |
|----------------|--|-------------|---------|----------|------|------------|---------|------|------------|-------------|
| | Total | Drive Alone | Carpool | Transit* | Taxi | Motorcycle | Bicycle | Walk | Other Mode | Worked Home |
| Beverly | 80 | 65 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % of all towns | 2% | 81% | 19% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Danvers | 100 | 75 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % of all towns | 3% | 75% | 25% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Lynn | 678 | 560 | 50 | 49 | 4 | 0 | 0 | 15 | 0 | 0 |
| % of all towns | 18% | 83% | 7% | 7% | 1% | 0% | 0% | 2% | 0% | 0% |
| Marblehead | 209 | 180 | 0 | 10 | 0 | 0 | 15 | 4 | 0 | 0 |
| % of all towns | 6% | 86% | 0% | 5% | 0% | 0% | 7% | 2% | 0% | 0% |
| Peabody | 160 | 145 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % of all towns | 4% | 91% | 9% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Salem | 389 | 305 | 30 | 40 | 0 | 0 | 10 | 4 | 0 | 0 |
| % of all towns | 10% | 78% | 8% | 10% | 0% | 0% | 3% | 1% | 0% | 0% |
| Saugus | 70 | 70 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % of all towns | 2% | 100% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Swampscott | 1249 | 700 | 89 | 10 | 0 | 0 | 0 | 90 | 25 | 335 |
| % of all towns | 33% | 56% | 7% | 1% | 0% | 0% | 0% | 7% | 2% | 27% |
| Cambridge | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % of all towns | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Boston | 35 | 25 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 0 |
| % of all towns | 1% | 71% | 0% | 0% | 0% | 0% | 29% | 0% | 0% | 0% |
| Other Towns | 830 | 750 | 51 | 16 | 11 | 0 | 0 | 2 | 0 | 0 |
| % of all towns | 22% | 90% | 6% | 2% | 1% | 0% | 0% | 0% | 0% | 0% |
| ALL TOWNS | 3800 | 2875 | 275 | 125 | 15 | 0 | 35 | 115 | 25 | 335 |
| | 100% | 76% | 7% | 3% | 0% | 0% | 1% | 3% | 1% | 9% |

* Includes bus, streetcar, subway, commuter rail, and commuter boat.

Source: 2000 Census Transportation Planning Package

(R. Sievert, 060828, J-to-WbyModeTabD-5-11)

TABLE D-5-12

**2000 Journey-to-Work in the Mid-North Shore Subregional Transportation Study Area
Employees Working in Salem by Major Towns of Origin and Mode of Transportation to Work**

| Town of Origin | Mode Of Transportation To Work, Percent of Town of Origin Total: | | | | | | | | | |
|----------------|--|-------------|---------|----------|------|------------|---------|------|------------|-------------|
| | Total | Drive Alone | Carpool | Transit* | Taxi | Motorcycle | Bicycle | Walk | Other Mode | Worked Home |
| Beverly | 1183 | 1070 | 44 | 30 | 10 | 0 | 25 | 4 | 0 | 0 |
| % of all towns | 6% | 90% | 4% | 3% | 1% | 0% | 2% | 0% | 0% | 0% |
| Danvers | 580 | 550 | 20 | 10 | 0 | 0 | 0 | 0 | 0 | 0 |
| % of all towns | 3% | 95% | 3% | 2% | 0% | 0% | 0% | 0% | 0% | 0% |
| Lynn | 2415 | 1845 | 385 | 160 | 0 | 0 | 0 | 25 | 0 | 0 |
| % of all towns | 13% | 76% | 16% | 7% | 0% | 0% | 0% | 1% | 0% | 0% |
| Marblehead | 784 | 770 | 10 | 0 | 0 | 0 | 0 | 4 | 0 | 0 |
| % of all towns | 4% | 98% | 1% | 0% | 0% | 0% | 0% | 1% | 0% | 0% |
| Peabody | 1622 | 1455 | 139 | 4 | 0 | 0 | 10 | 10 | 4 | 0 |
| % of all towns | 9% | 90% | 9% | 0% | 0% | 0% | 1% | 1% | 0% | 0% |
| Salem | 6009 | 3575 | 634 | 90 | 30 | 0 | 30 | 1030 | 25 | 595 |
| % of all towns | 32% | 59% | 11% | 1% | 0% | 0% | 0% | 17% | 0% | 10% |
| Saugus | 189 | 120 | 65 | 4 | 0 | 0 | 0 | 0 | 0 | 0 |
| % of all towns | 1% | 63% | 34% | 2% | 0% | 0% | 0% | 0% | 0% | 0% |
| Swampscott | 559 | 520 | 20 | 4 | 0 | 0 | 0 | 15 | 0 | 0 |
| % of all towns | 3% | 93% | 4% | 1% | 0% | 0% | 0% | 3% | 0% | 0% |
| Cambridge | 25 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % of all towns | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Boston | 238 | 175 | 45 | 18 | 0 | 0 | 0 | 0 | 0 | 0 |
| % of all towns | 1% | 74% | 19% | 8% | 0% | 0% | 0% | 0% | 0% | 0% |
| Other Towns | 4975 | 4410 | 373 | 130 | 0 | 4 | 0 | 22 | 36 | 0 |
| % of all towns | 27% | 89% | 7% | 3% | 0% | 0% | 0% | 0% | 1% | 0% |
| ALL TOWNS | 18579 | 14515 | 1735 | 450 | 40 | 4 | 65 | 1110 | 65 | 595 |
| | 100% | 78% | 9% | 2% | 0% | 0% | 0% | 6% | 0% | 3% |

* Includes bus, streetcar, subway, commuter rail, and commuter boat.

Source: 2000 Census Transportation Planning Package

(R. Sievert, 060828, J-to-WbyModeTabD-5-12)