Environmental Status & Planning Report

2000 L.G. Hanscom Field Environmental Status and Planning Report (ESPR)

- A retrospective analysis
- An overview of environmental and planning status
- Projections of environmental conditions
- Evaluation of potential effects

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The framework for Airport Planning and Operations at Hanscom Field is based on:

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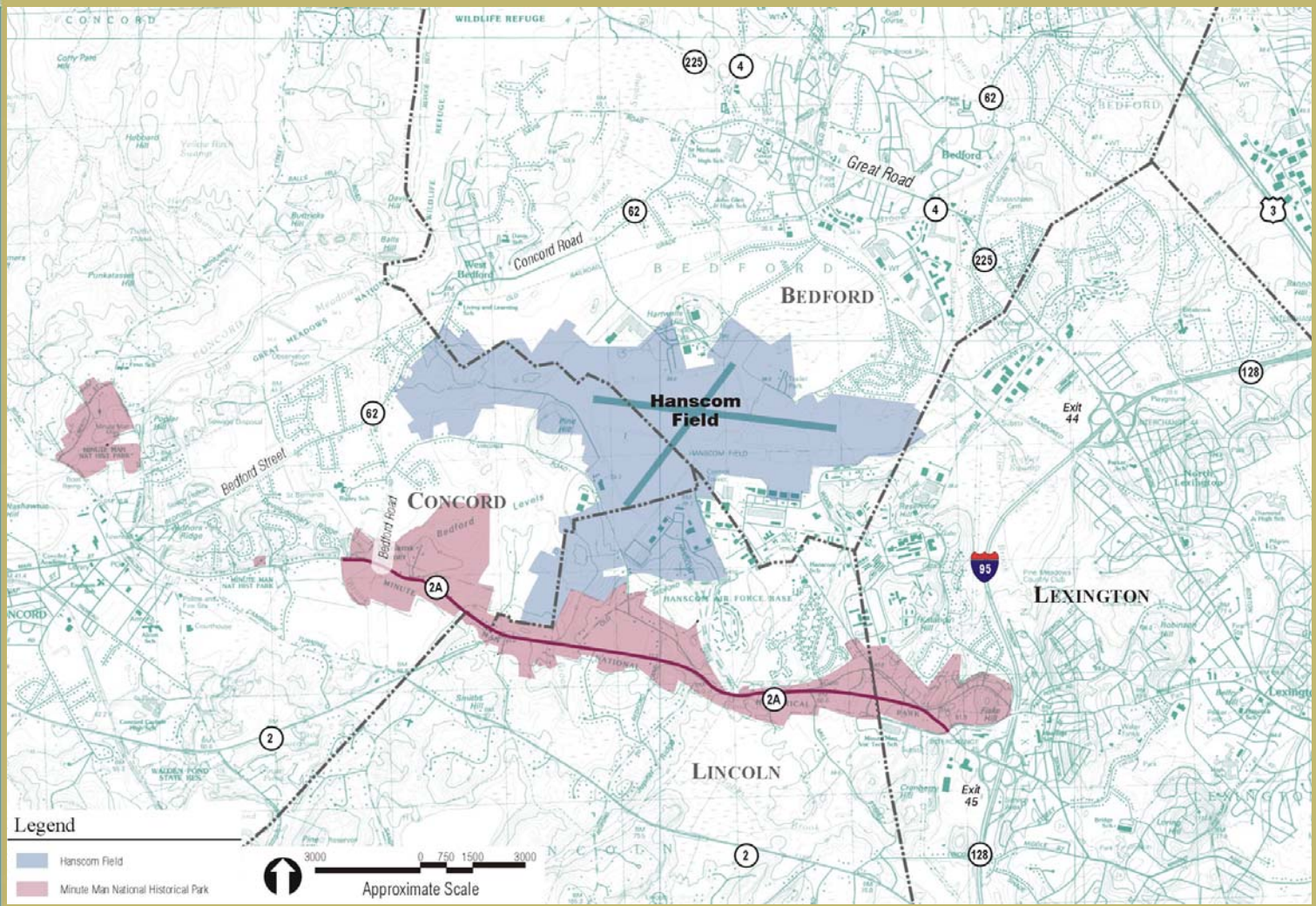
- **Hanscom Field 1978 Master Plan**
- **Massport's 1980 Rules & Regulations**



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Hanscom ESPR/GEIR History

1985 First Generic Environmental Impact Report (GEIR)

1995 GEIR Update

2000 Environmental Status and Planning Report (ESPR)

- Draft ESPR (July 2002)
- Final ESPR (February 2003)

2005 Next ESPR (filed in 2006)

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Community Review Process Coordination

- Developed Format of 2000 ESPR w/Communities and MEPA (2000)
- Preview of Draft Scope (March 2001)
- Extended Scoping Process (120 days)
  July – November 2001

- Extended Draft ESPR Review (100 days)
- Funding ($85K) for Community Technical Review Assistance
- 10 Technical Review Meetings
- Monthly HFAC/HATS Coordination

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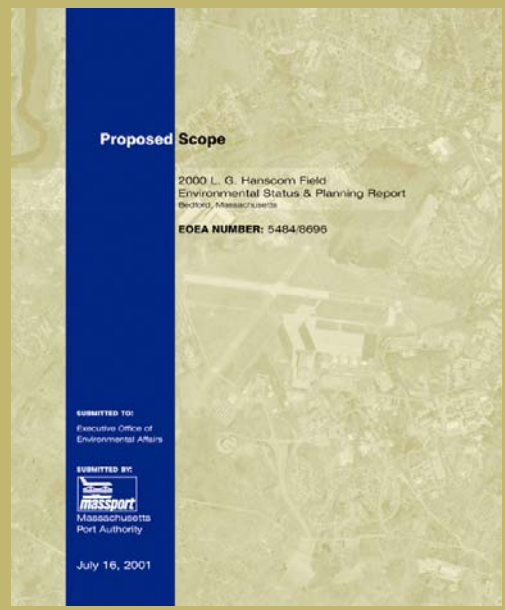
The process and schedule for the 2000 L. G. Hanscom Field ESPR:

- Proposed Scope
  - 7/16/01 Filing
  - 12/7/01 MEPA Scope
- Draft ESPR
  - July Filing
  - 10 Technical Workshops in September and October
  - MEPA Hearing
  - 10/31 End of Public Comment
  - 11/10 MEPA Draft Certificate
- Final ESPR
  - February 2003 Filing



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Per the Secretary's Certificate on the Scope, the ESPR is organized into 12 chapters with supporting appendices

Executive Summary

1. Introduction
2. Facilities and Infrastructure
3. Airport Activity Levels
4. Airport Planning
5. Regional Transportation Context
6. Ground Transportation
7. Noise
8. Air Quality
9. Wetlands/Wildlife/Water Quality
10. Cultural and Historical Resources
11. Sustainable Development
12. Mitigation

<u>Appendices:</u>

- Response to Comments
- MEPA Reviewers
- Other Tech. Appendices

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Airport Facilities and Infrastructure (Chapter 2) reviews existing inventory and catalogues changes since the 1995 GEIR:

- Terminal improvements (Shuttle America)
- FAA control tower under construction
- New hangars:
  - Jet Aviation
  - Mercury Air Center
  - New corporate hangar
  - New maintenance hangar

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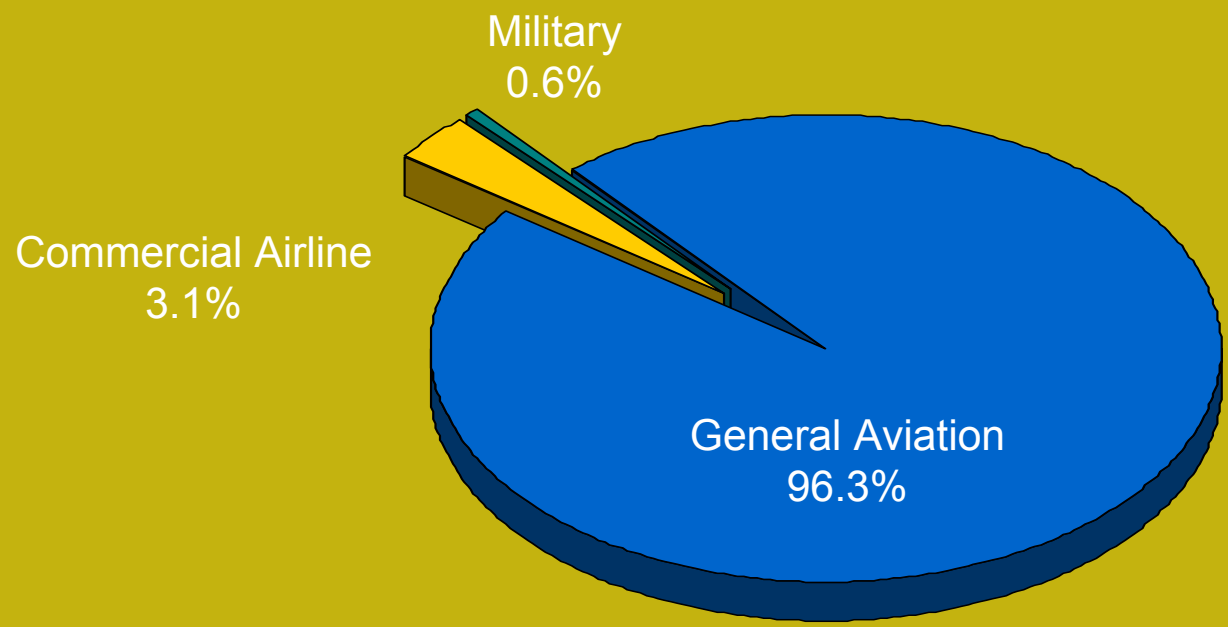
General Aviation accounted for 96.3-percent of aircraft operations in 2000

By Market Segment



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General Aviation accounted for 96.3% of aircraft operations in 2000

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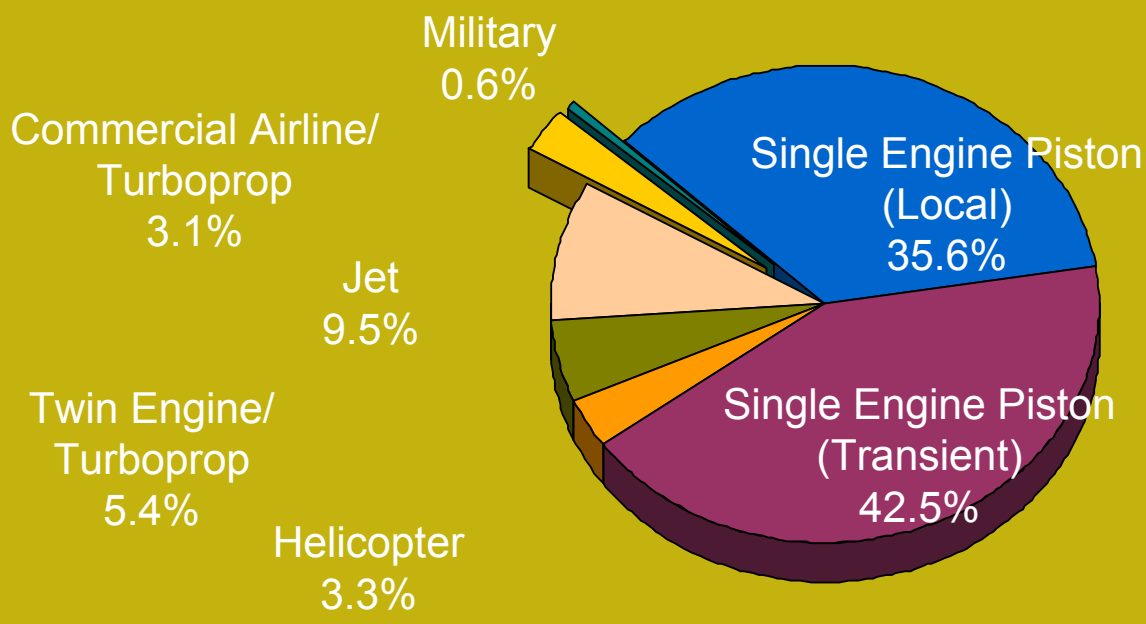
By Aircraft Category



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Shuttle America moved 162,000 passengers and performed 6,600 operations in 2000

Year	Operations	Passengers	Passengers per Operation
1999	1,164	22,924	19.7
2000	6,572	162,147	24.7
2001*	6,414	134,337	20.9
Percent Change			
2000-2001	-2.4%	-17.2%	-15.1%

* Reduction attributable to economic downturn and effect 9/11

Comparison of actual to forecast 2000 aircraft operations at Hanscom Field

	General Aviation								
Year	Single Engine	Twin-Engine Turbo	Jet	Heli	Sub-Total	Military	Regional Airline	Total	Airline Passengers
2000 Aircraft Operations (7AM to 11PM)									
Actual 2000	165,999	11,373	20,226	6,914	204,512	1,287	6,572	212,371	162,147
1995 GEIR Forecast									
No Growth	156,678	10,190	13,793	8,036	188,698	1,584	-	190,282	-
1% Growth	160,048	10,420	14,097	8,212	192,777	1,598	5,625	200,000	42,750
3% Growth	173,408	11,273	15,262	8,893	208,837	1,763	10,000	220,600	88,800

General Aviation is projected to remain the single largest category of aviation activity

	Base Year		Forecast 2005		Forecast 2015	
	2000	2001	Moderate	High	Moderate	High
Aircraft Operations (7AM - 11PM)						
General Aviation	205,512	197,770	213,793	223,402	248,074	265,306
Military	1,287	1,252	1,521	1,573	2,179	2,902
Scheduled Passenger Airline	6,572	6,414	15,170	20,063	21,168	26,060
Scheduled Cargo Airline	-	-	520	1,040	1,040	1,560
Total	**212,371**	**205,436**	**231,004**	**246,078**	**272,461**	**295,828**
Commercial Passengers	162,147	134,337	330,168	503,707	488,646	659,872
Based Aircraft	397	403	425	444	494	529
Percent of Total Operations						
General Aviation	96.3%	96.3%	92.5%	90.8%	91.0%	89.7%
Military	0.6%	0.6%	0.7%	0.6%	0.8%	1.0%
Scheduled Passenger Airline	3.1%	3.1%	6.6%	8.2%	7.8%	8.8%
Scheduled Cargo Airline	0.0%	0.0%	0.2%	0.4%	0.4%	0.5%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Forecast of General Aviation and Military Aircraft Operations at Hanscom Field

(7am to 11pm)

	Actual		2005		2015	
	2000	2001	Moderate	High	Moderate	High
Training/SE Local	75,676	72,605	77,975	75,000	93,204	75,000
Personal/SE Itinerant	90,323	84,785	88,578	92,496	98,818	114,982
Subtotal SE Piston	**165,999**	**157,390**	**166,553**	**167,496**	**192,022**	**189,982**
Twin Engine/Turboprop	11,373	12,041	12,098	12,793	12,432	13,362
Jet	20,226	22,839	28,141	36,114	36,620	54,961
Subtotal Businesses	**31,599**	**34,880**	**40,240**	**48,906**	**49,052**	**68,323**
Helicopter	6,914	5,500	7,000	7,000	7,000	7,000
Total GA	204,512	197,770	213,793	223,402	248,074	265,306
Military	1,287	1,252	1,521	1,573	2,179	2,902
Total GA and Military	205,799	199,022	215,314	224,975	250,253	268,208
Total	**212,781**	**205,436**	**231,004**	**246,078**	**272,461**	**295,828**

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Summary of Commercial Passenger Airline Service Assumptions

	2005		2015	
	Moderate	High	Moderate	High
Average Daily Operations *	49	64	68	84
Average Passengers per Flight	21.8	25.1	23.1	25.3
Aircraft Types	SF-340 J31	SF-340 J31 CRJ ER-145	SF-340 J31	SF-340 J31 CRJ ER-145

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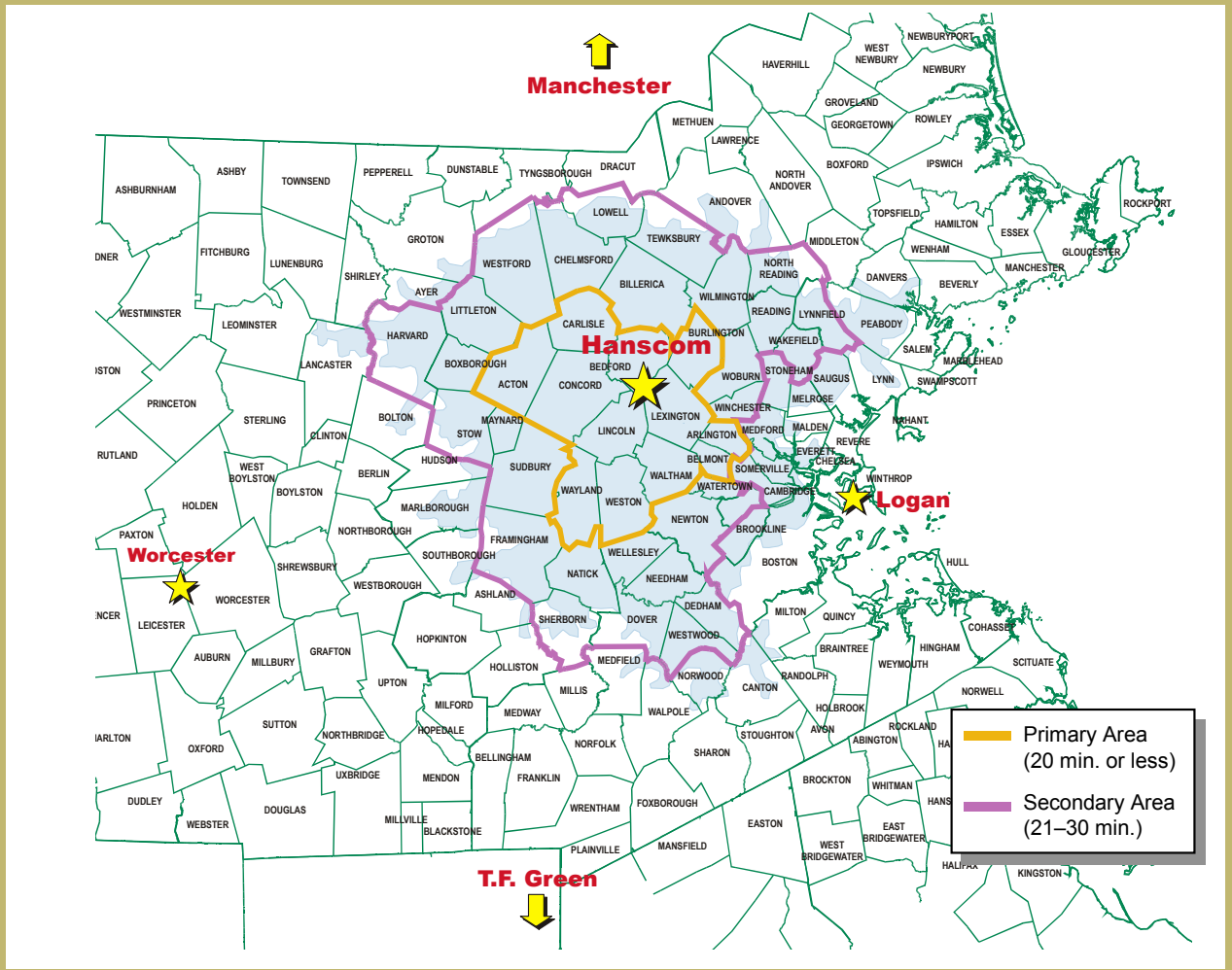
Air passenger forecasts are based on a catchment area defined by a 30-minute drive time radius



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Airport Planning (Chapter 4) describes potential future needs at Hanscom Field

- Additional General Aviation facilities and possible locations
- Civil Air Terminal capacity
- Cargo facilities
- Parking supply for future demand
- Utility needs

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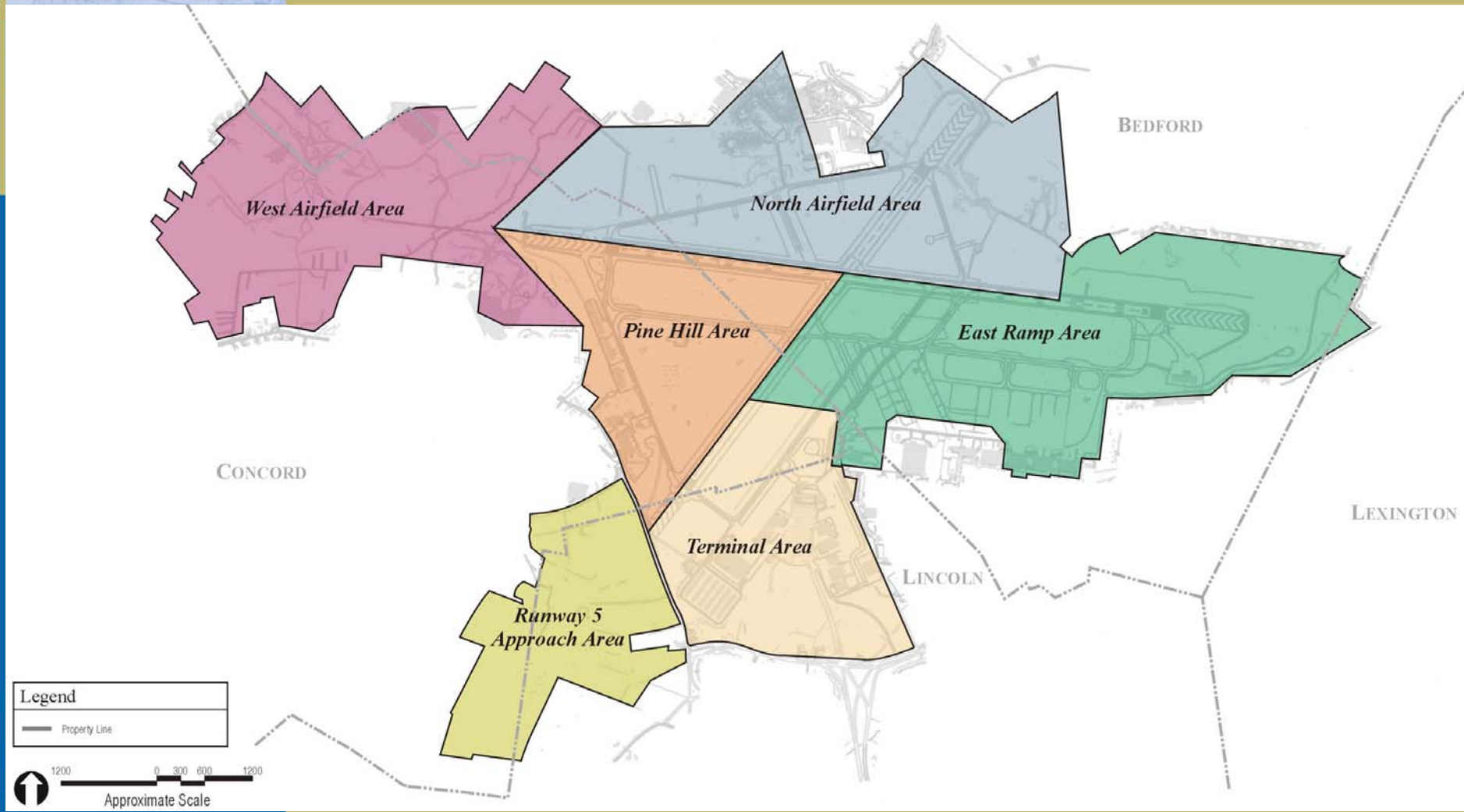
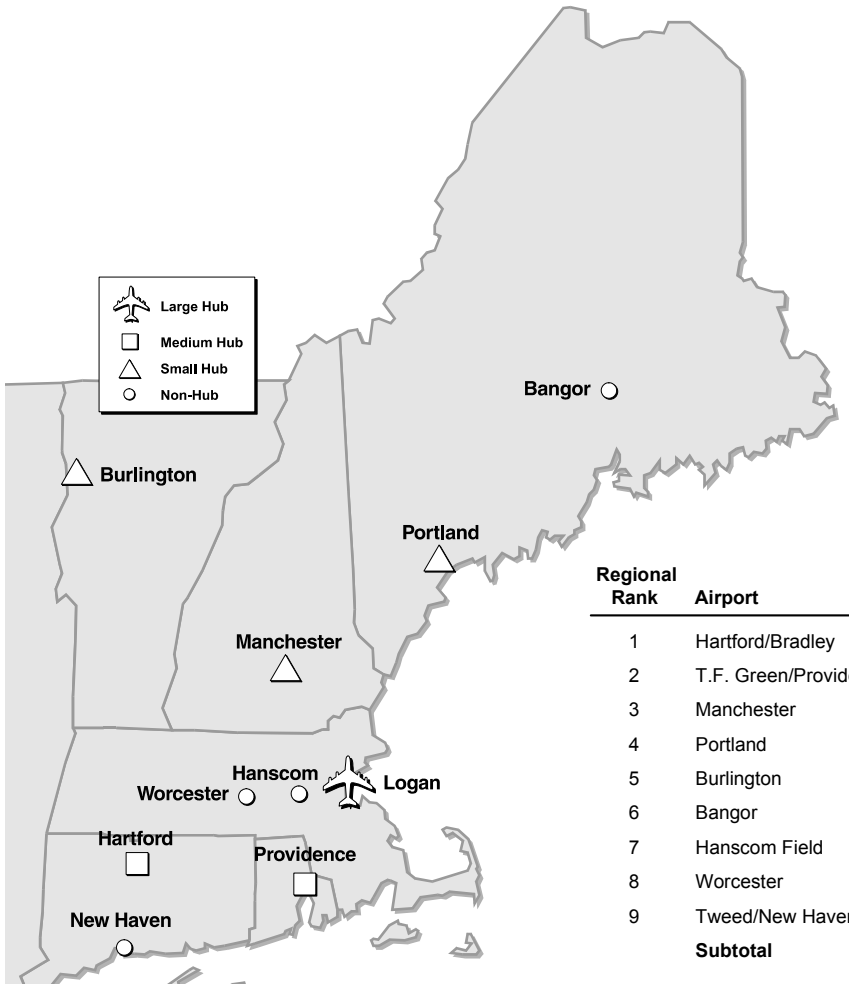
Hanscom Field planning and development areas



Hanscom Field's role in the regional transportation context (Chapter 5)



Regional Rank	Airport	CY 2000 Passengers
1	Hartford/Bradley	7,340,000
2	T.F. Green/Providence	5,430,000
3	Manchester	3,170,000
4	Portland	1,340,000
5	Burlington	900,000
6	Bangor	380,000
7	Hanscom Field	160,000
8	Worcester	106,000
9	Tweed/New Haven	80,000
	Subtotal	**18,906,000**
	Logan	27,406,000
	Total Region	**46,312,000**

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- Regional Airports
- Diversion to other modes
- GA Airport Network
- Relevant trans. projects

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Roadways are under construction and improvements are planned for the area near Hanscom Field

- Route 3 Reconstruction
- Route 2 A (Marrett Road) Improvement
- Route 2 Improvements
- Other Local Improvements

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The ESPR includes an evaluation of Ground Transportation (Chapter 6)

- Hanscom Field trip generation characteristics
- Existing and future traffic conditions
  - Background traffic growth
  - Hanscom Field traffic growth
- Travel Demand Management opportunities

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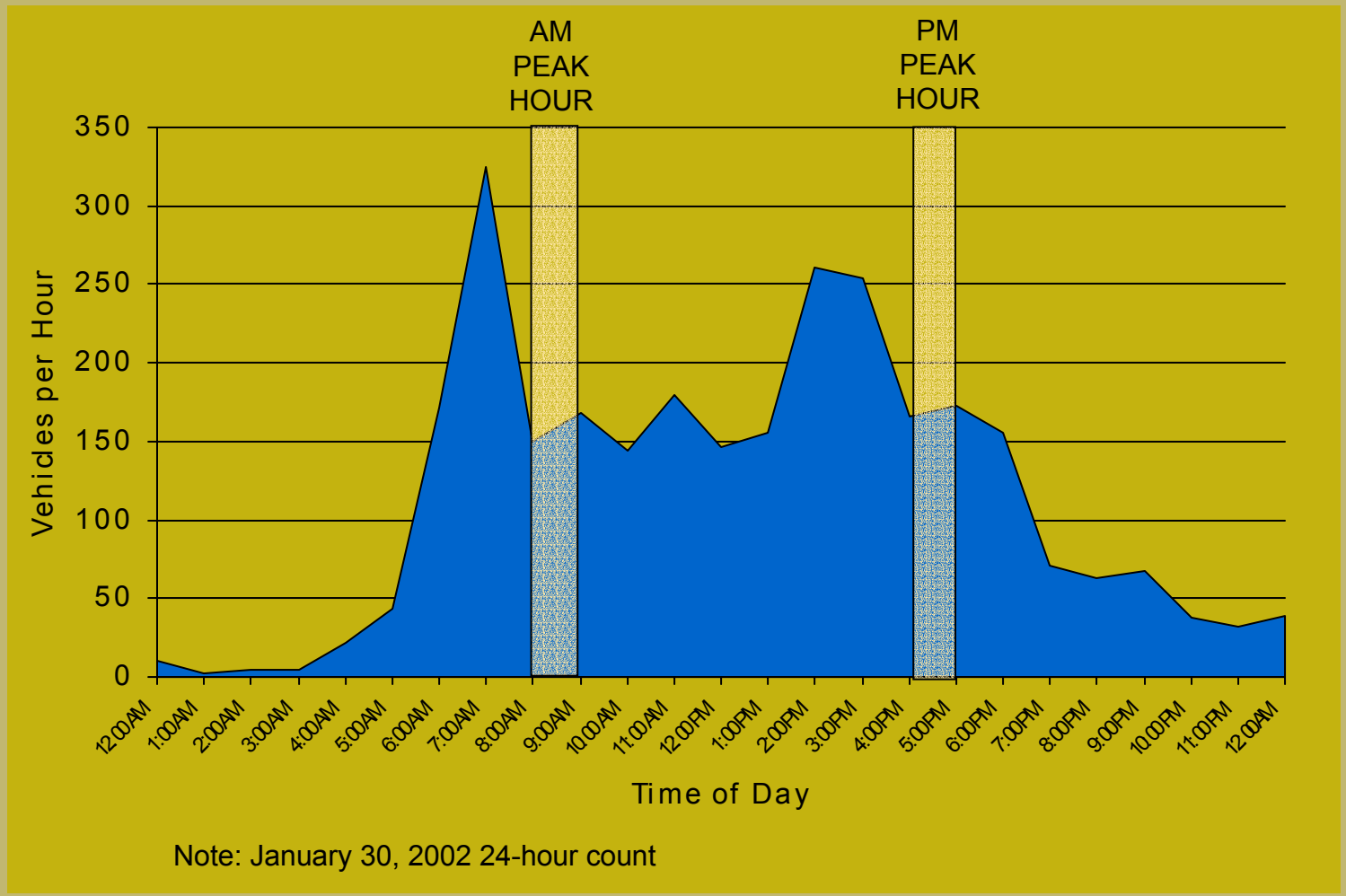
Hanscom Field is an off-peak traffic generator



Note: January 30, 2002 24-hour count

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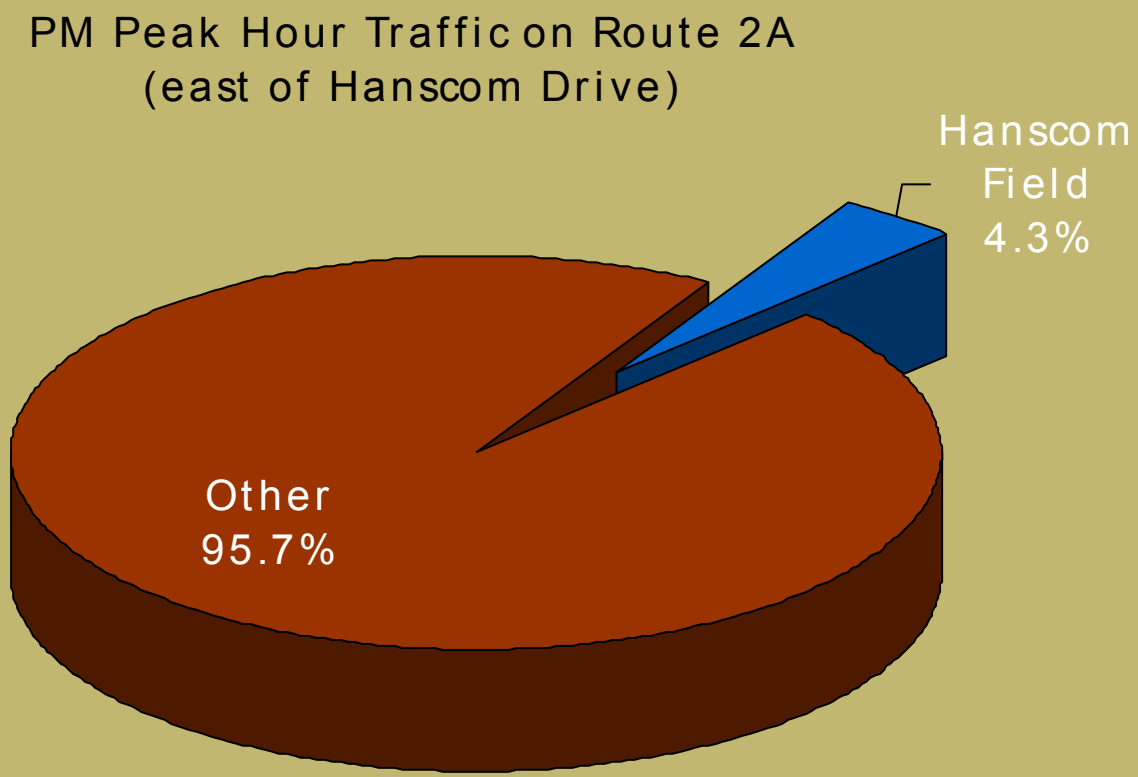
Hanscom Field represents 4.3% of PM peak hour traffic on Route 2A

(72 vehicles)



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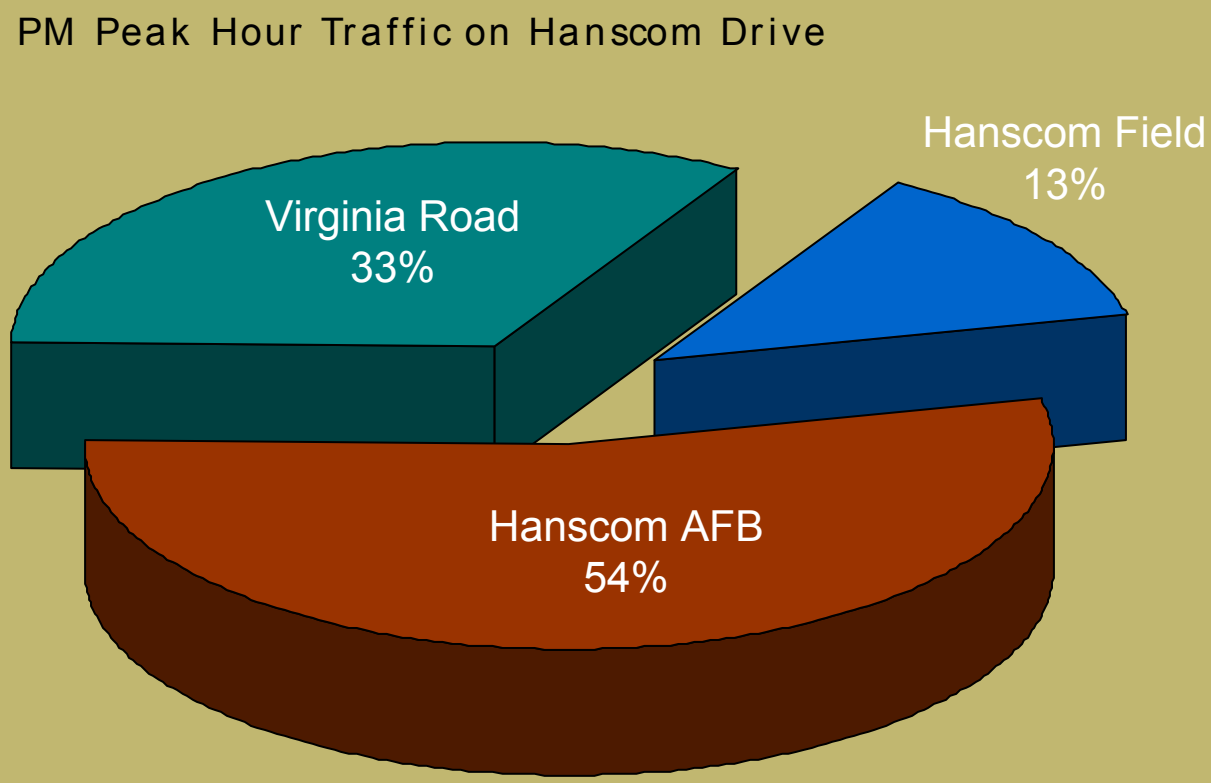
Hanscom Field represents 13% of PM peak hour traffic on Hanscom Drive (160 vehicles)



Note: Hanscom Field Traffic is 12% Average AM Peak Hour

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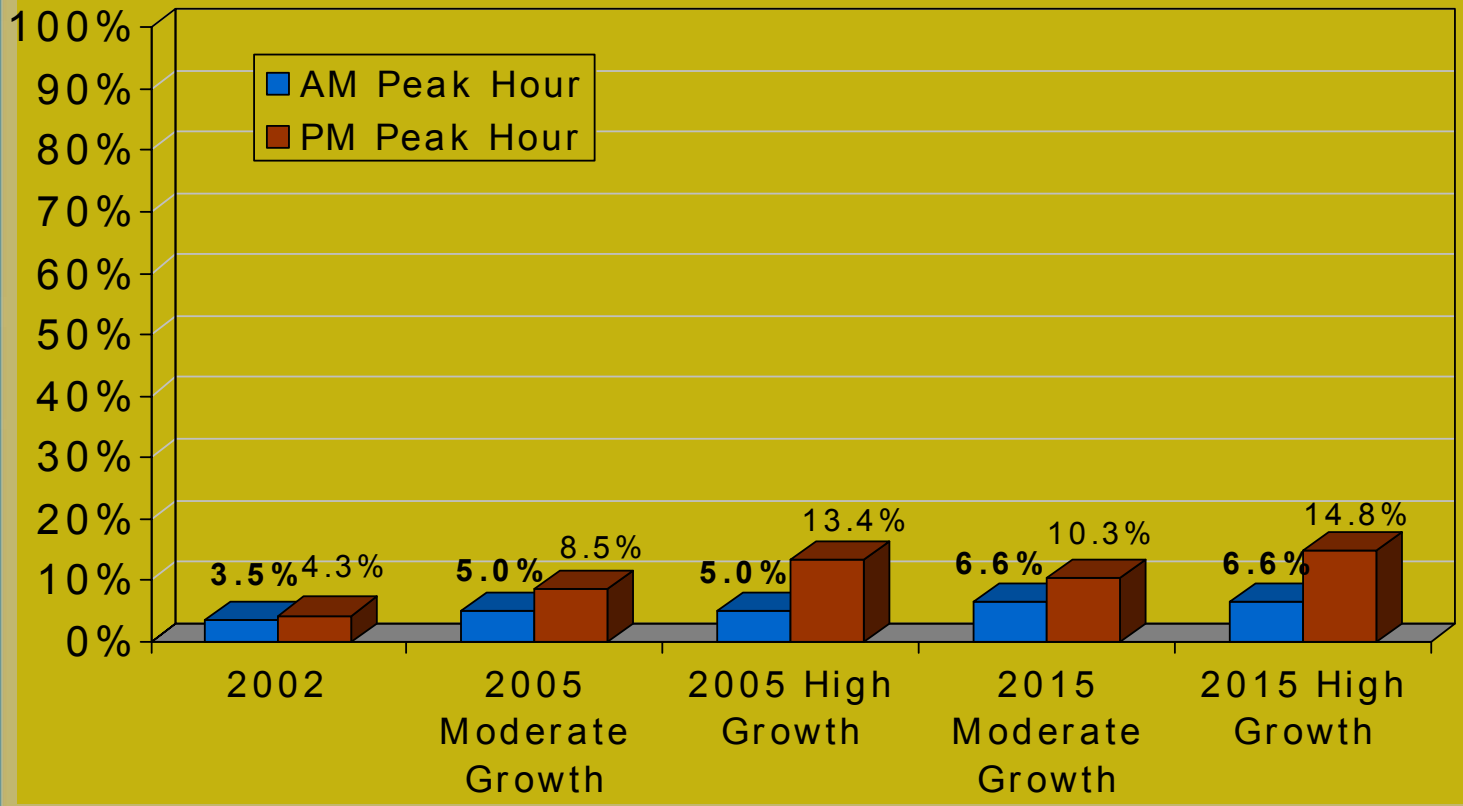
In future scenarios Hanscom Field traffic represents 5-15% of Route 2A traffic (east of Hanscom Drive)



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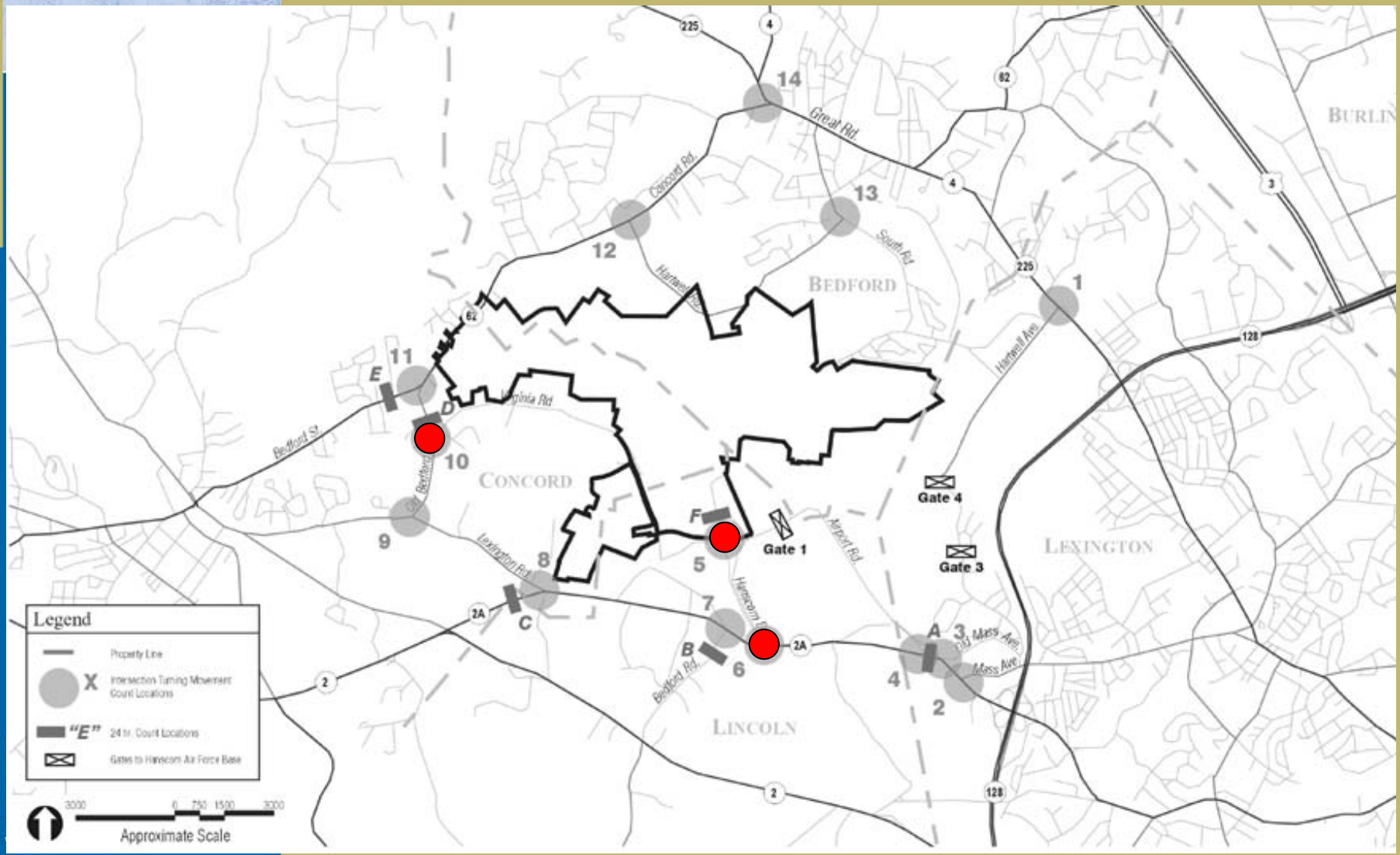
14 intersections were studied for 2000 Hanscom ESPR



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Evaluation of noise (Chapter 7) considers current and future noise conditions around Hanscom Field

- EXP (Hanscom noise exposure level)
- Day-Night average sound level (DNL) contours
- Time Above a Threshold
  - Minutes
  - Population
  - Area
- Single Event Level Distribution

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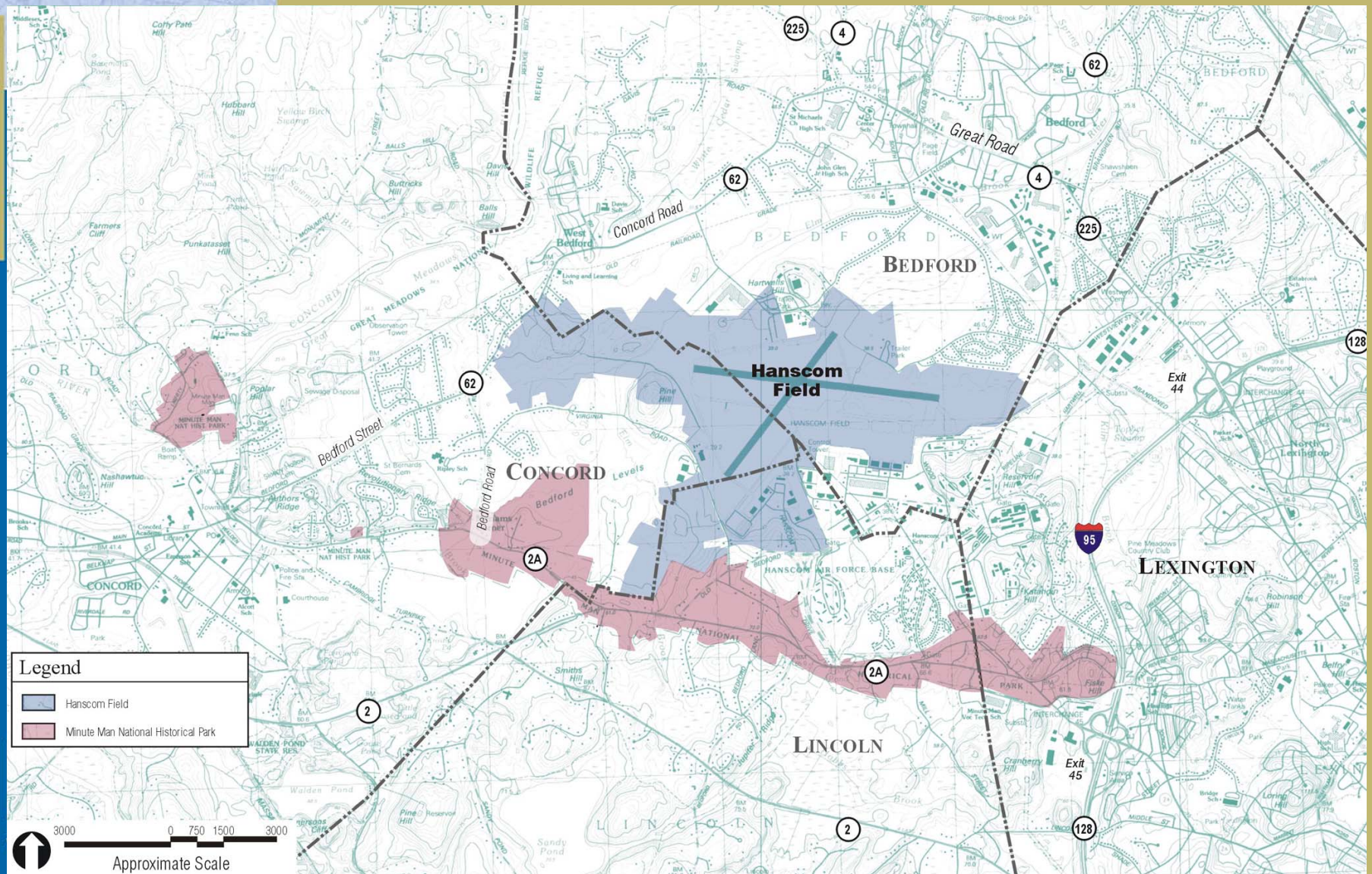
Noise level contours for 1995 and 2000:

26 people (Bedford) within 65 dB DNL Contour in 2000
17,745 people near Logan within 65 dB DNL Contour



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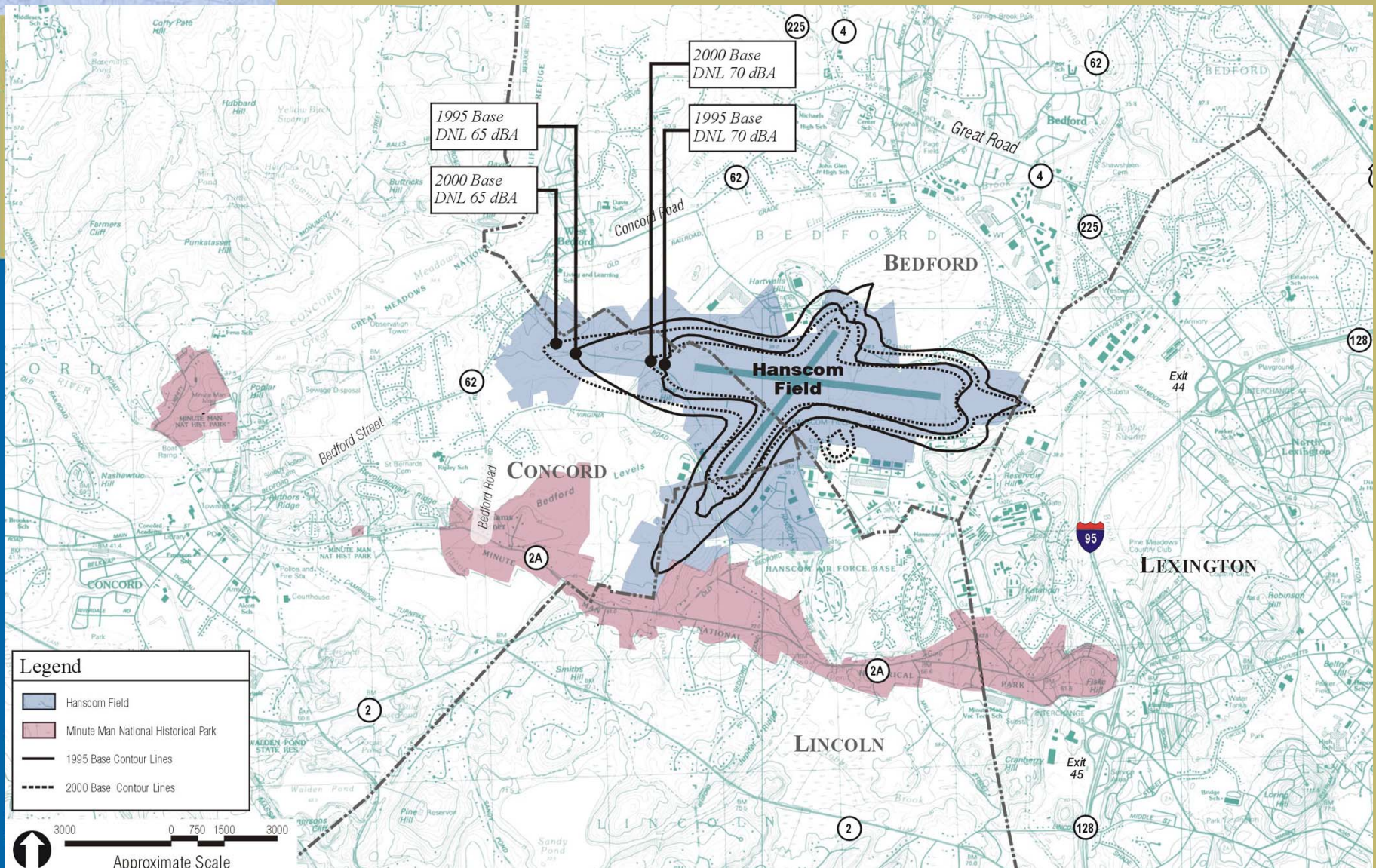

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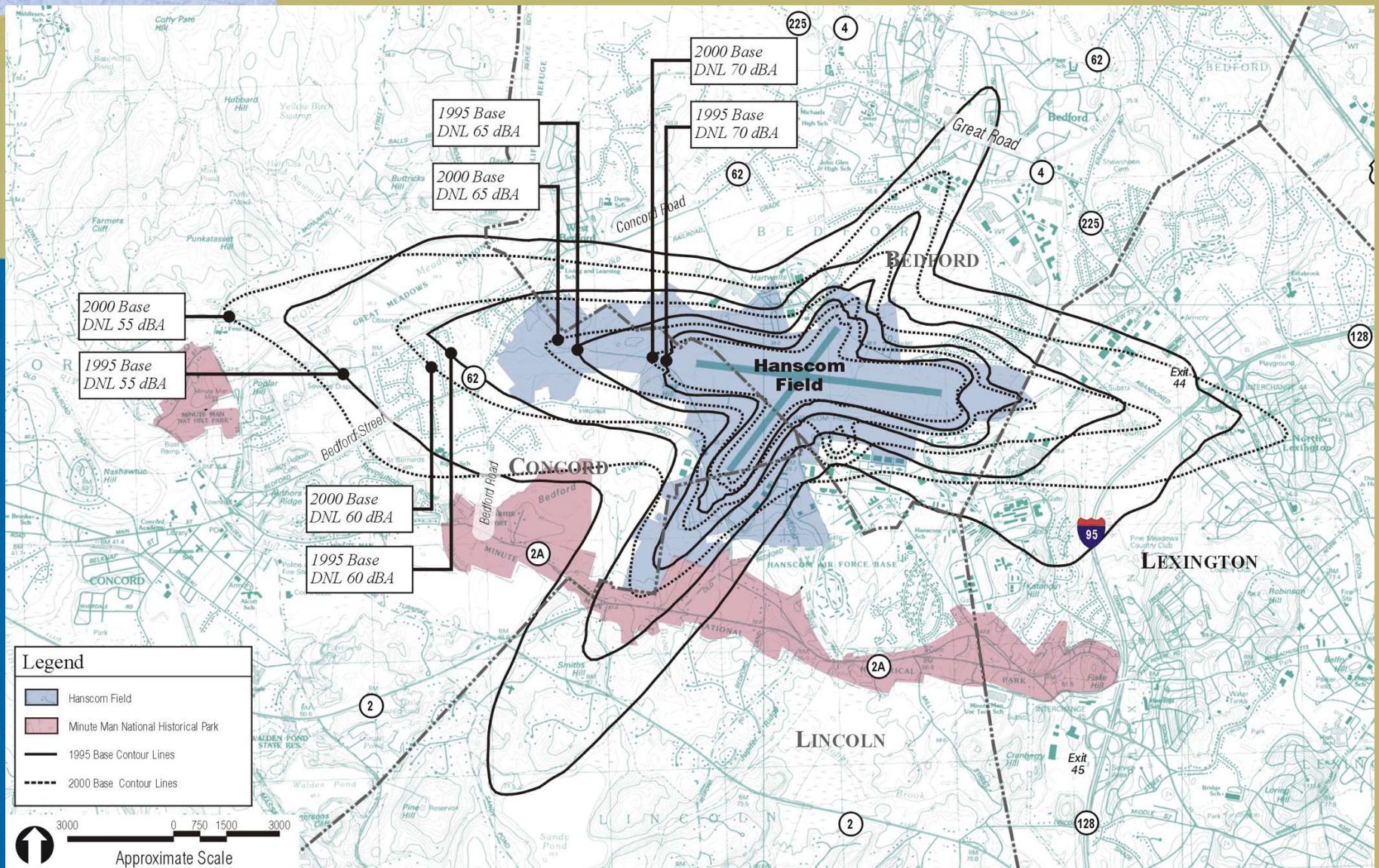

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2000 US Census Population within Forecast 65 dB DNL Contours

	2000	2005 Moderate Growth	2005 High Growth	2015 Moderate Growth	2015 High Growth
Bedford	26	45	83	51	125
Concord	0	2	20	2	78
Lexington	0	0	0	0	0
Lincoln	0	0	0	0	0
Total	**26**	**47**	**103**	**53**	**203**

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The air quality analysis (Chapter 8) uses the following indicators:

- Emissions Inventory for
  - Carbon Monoxide (CO)
  - Oxides of Nitrogen (NO_x)
  - Volatile Organic Compounds (VOCs)
  - Particulate Matter (PM10)
- Available monitoring results for
  - Ozone Precursors
  - Nitrogen Dioxide (NO_2)
- Forecasts using
  - Aviation activity level data
  - Traffic volumes

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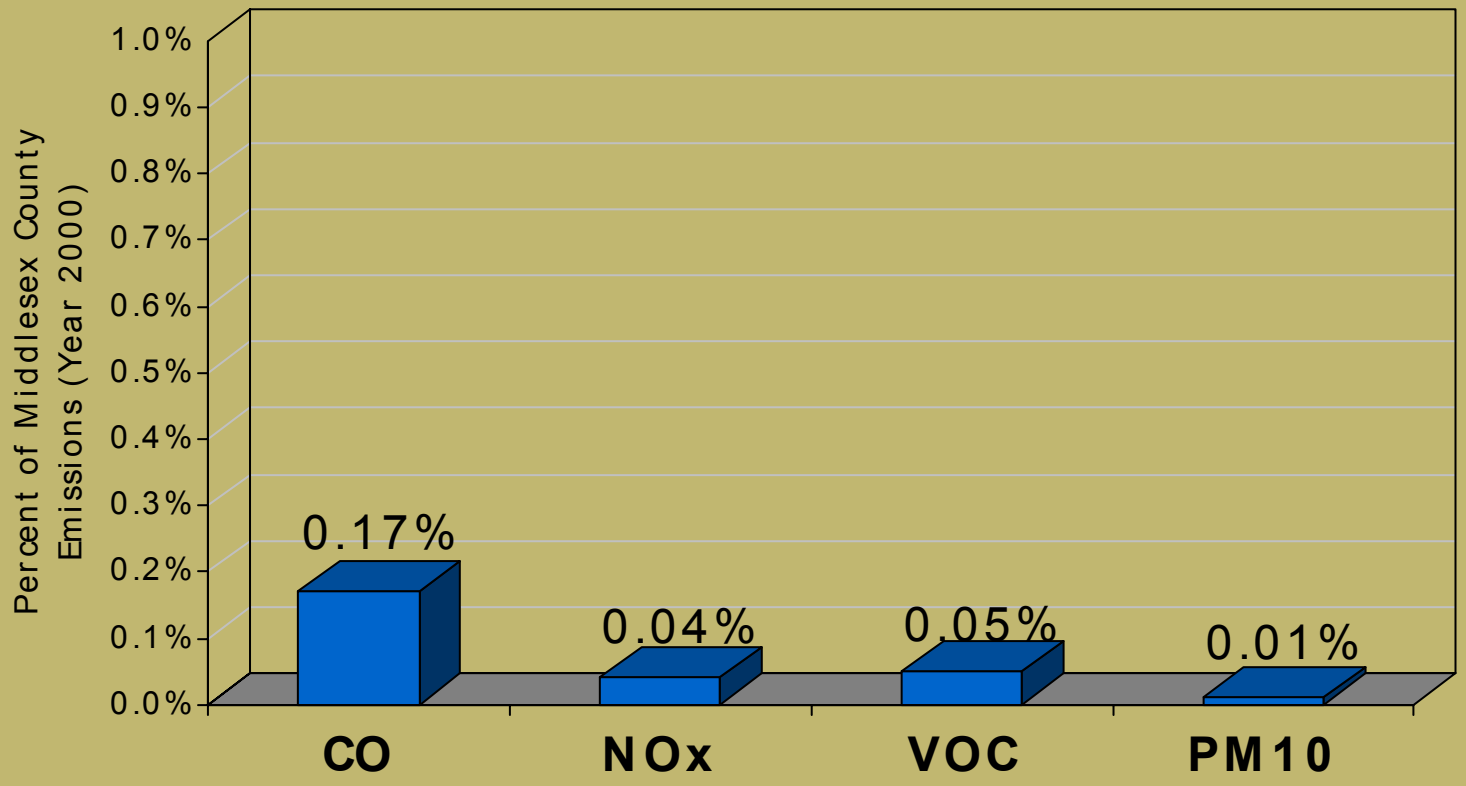
Year 2000 aircraft emissions are a less than 1% of Middlesex Co. emissions



Note: Emissions data for Middlesex County were obtained from the U.S. National Emission Trends Database

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Air quality analysis of 2005 and 2015 Moderate and High Growth scenarios:

- No adverse air quality effects.
- Safely in compliance with Massachusetts and National Ambient Air Quality Standards.
- Insignificant effect on the future attainment status of the new PM_{10} and eight-hour ozone standards.

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Current and future wetlands/wildlife/water resource conditions (Chapter 9):

- Most recent wetlands delineation indicate wetland resources are relatively unchanged since 1998
- Status of VMP
- Stormwater management issues (NPDES and SWPPP)
- One endangered species (Upland Sandpiper) and one threatened species (Grasshopper Sparrow) at Hanscom Field

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ESPR evaluates current and potential future effects of Hanscom Field on cultural and historic resources (Chapter 10)

- State Register, MHC, local data sources
- Minute Man National Historical Park
- Great Meadow National Wildlife Refuge
- Town conservation and recreation lands
- Agricultural resources

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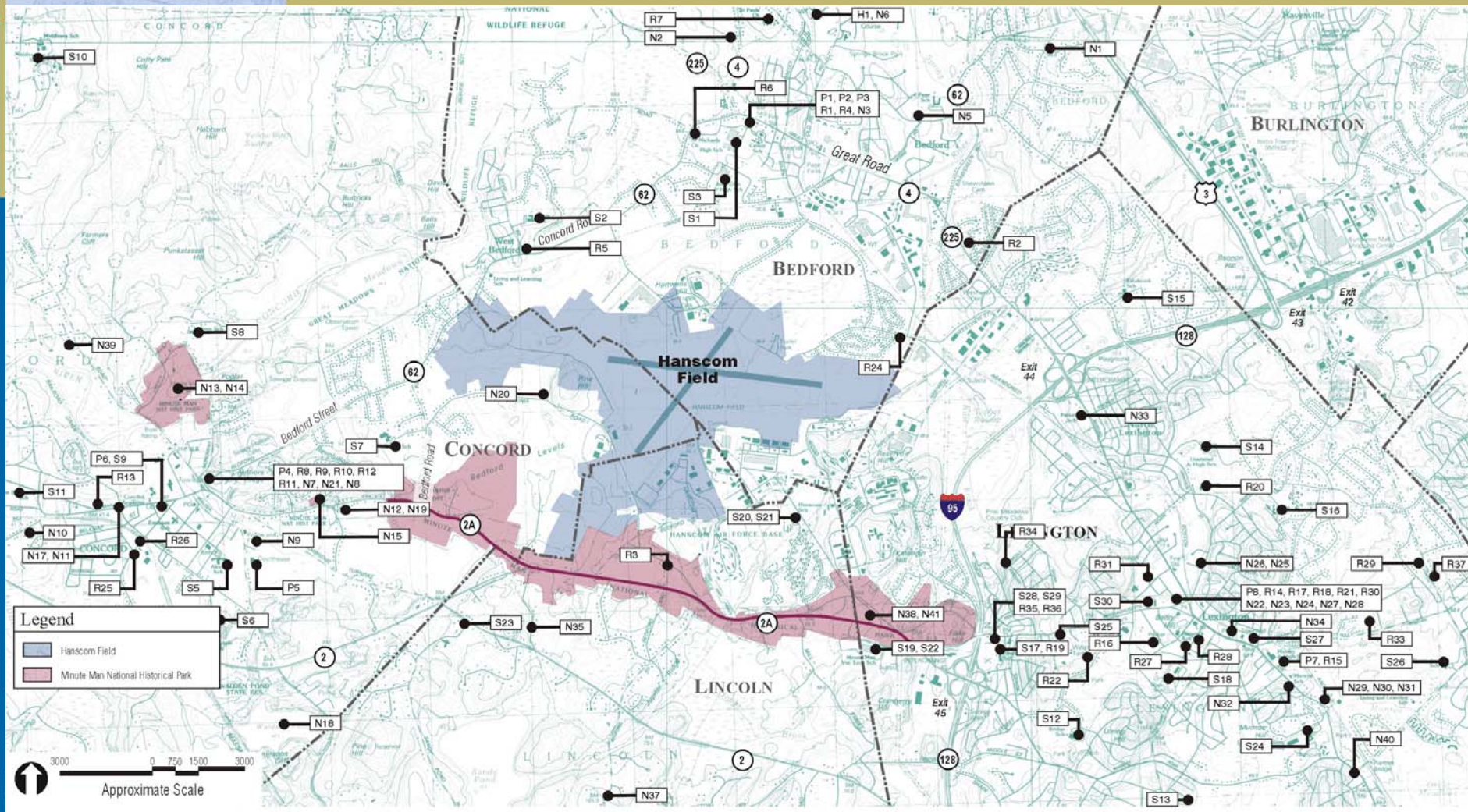
Community is sensitive to noise at existing cultural & historical resources



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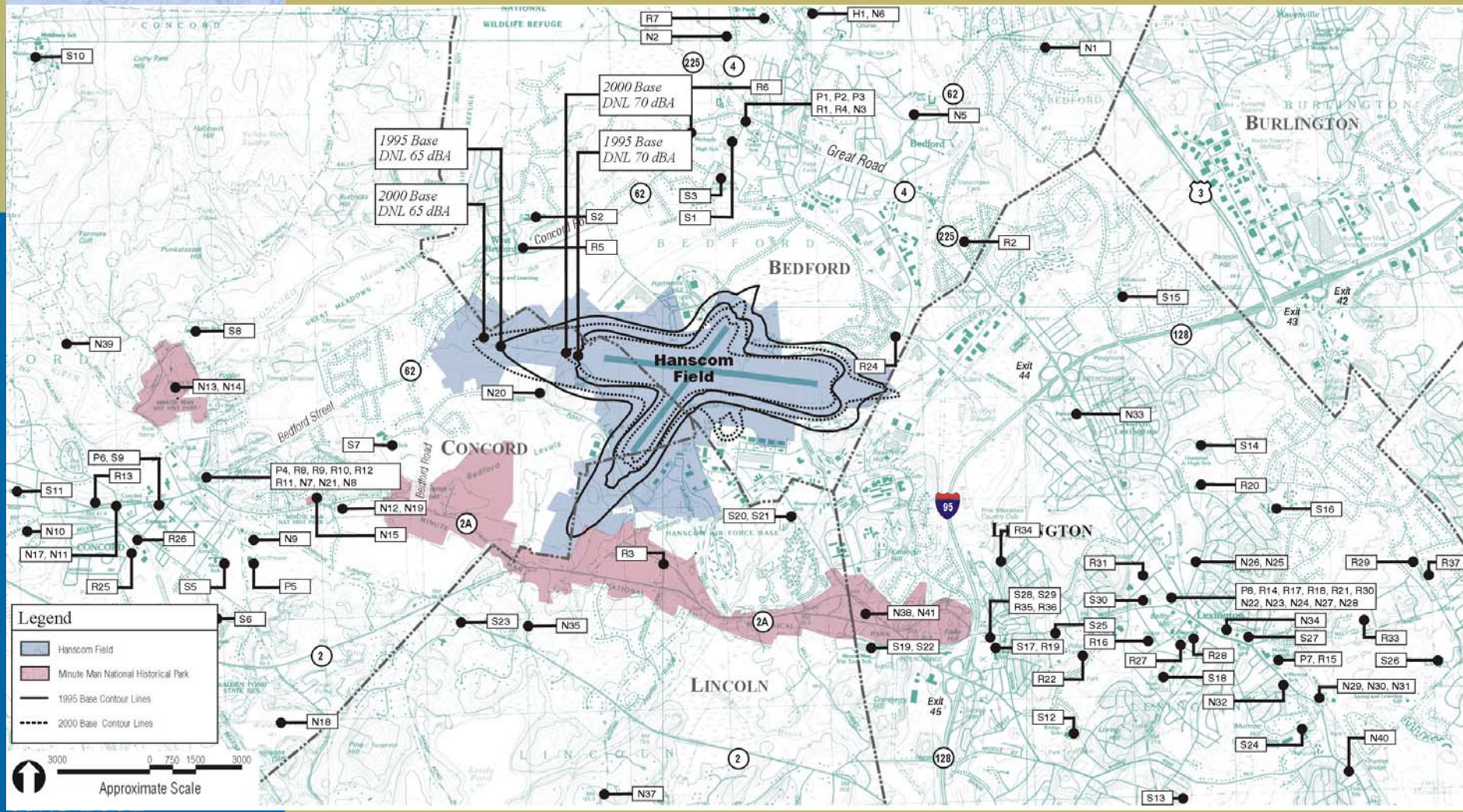

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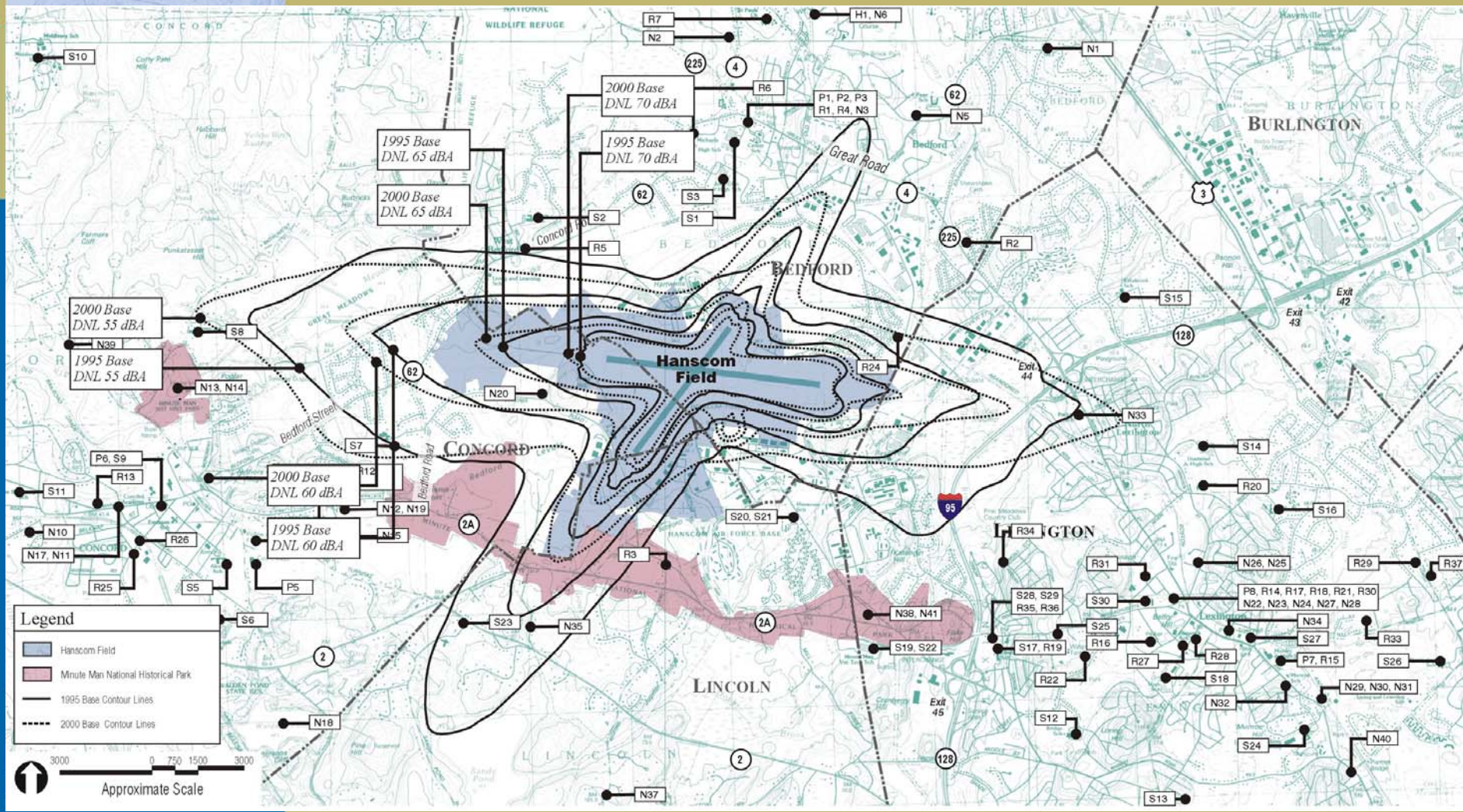

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EMS and Sustainable Development
(Chapter 11)

- ISO 14001 Certification
  - First Airport in U.S.
- Opportunities for Sustainable Development at Hanscom Field:
  - Planning and design
  - Construction
  - Operations
- Monitoring of environmental performance

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Conclusions: Hanscom Field environmental effects

- Traffic/Ground Transportation
  - Minimal effects
  - Access improvements strategies considered (e.g., Transportation Demand Management, traffic management)
- Noise:
  - Minimal effects
  - Continuation of previously implemented measures
- Air quality:
  - Minimal effects

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Next Steps:

- File ESPR in July 2002
- 10 Technical Workshops during September/October 2002
- MEPA Public Hearing
- End of Public Comment on October 31, 2002
- MEPA Draft Certificate in November

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