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# Investing in Economic Infrastructure

*Paul W. Shuldiner, D.E.*

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*The economic returns that the commonwealth of Massachusetts enjoys from its investments in transportation and other physical infrastructure result from the jobs that are created by these investments and from the enhanced utility of land that public works create. The integrative property of transportation in particular makes the comprehensive planning of transportation facilities an inordinately complex and essential public function. This function was the focus of the July 1992 workshop sponsored by the Executive Office of Economic Affairs and the University of Massachusetts. Among the principal themes the participants addressed were how the state's interest in economic development should be expressed; how local, regional, and state interest might be balanced; and how public and private investment relate to each other. The author presents conclusions and recommendations concerning these and closely related workshop themes. The significance of developments that have taken place since the workshop, especially those concerning a second major airport and Routes 2 and 7, are also reviewed.*

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**O**f the many issues that were discussed and debated at the July 21, 1992, workshop on Investing in Economic Infrastructure, the one point on which there appeared to be widespread agreement was that continued investment in infrastructure is essential to the continuing economic development of the commonwealth. This position is supported by a 1990 Federal Reserve Bank of Boston study, "Financing Capital Expenditures in Massachusetts."<sup>1</sup> But consensus was not nearly so universal regarding the specific applications of this general principle. A variety of views was expressed on such essentials as what the state's interest in economic development should be and how this interest should best be expressed; how local, regional, and state interests and concerns might be balanced and articulated; how private investment relates to public actions; and even on just what is meant by "infrastructure." These and other themes arising from the meeting are summarized in the following sections.

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## The Nature of Infrastructure Investment

The term "infrastructure" is used here to mean those physical structures and systems which facilitate the use of land and the movement of people, goods, and information

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from one place to another. This rubric includes highways, airports, rail and other transportation facilities, water supply and sewage treatment systems, and telecommunication networks. Among categories not included are so-called soft infrastructure systems such as education, public service, and finance.

The economic impact of infrastructure investments is threefold. In the first instance, investments in infrastructure create jobs as a direct consequence of the planning, design, and construction activities necessary to bring physical facilities into being. These first-order economic impacts are subsequently reflected throughout the economy in demands for goods and services necessary to support these primary investment activities. In both direct and indirect economic impacts, infrastructural spending adds to the commonwealth's economic product much as any other capital expenditure would do. But it is through the function as *facilitator* of other economic and social activities that infrastructural investments play a uniquely powerful role in fostering economic development.

Infrastructure creates time and place utility. Without water and sewerage systems, the efficient use of land would be impossible; without adequate transportation, our integrated productive structure would be little more than a set of isolated cottage industries employing local labor and distributing their products within a geographically limited market; and without modern telecommunications, many of the social and economic interactions that we take for granted simply could not take place.

The integrative functions of infrastructure are what make investment in these facilities and systems such a potentially powerful economic force. It is this integrative property that also makes effective planning of infrastructural investment so essential and so inordinately complex. Plans for infrastructural investments cannot be made in isolation. Major infrastructure systems have wide-ranging impacts whose effects are manifested over long periods of time. We today are the beneficiaries of infrastructural investments that were made decades ago; our investments, in turn, will profoundly affect the economic well-being of future generations.

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### **The State's Interest in Infrastructure Development**

The nature and extent of the state's interest in infrastructure and development depend on the specific type of infrastructure being considered. Traditionally, the construction and maintenance of major highway facilities has been deemed to be an essential state function. The Massachusetts Highway Commission (now the Massachusetts Highway Department), the oldest state highway agency in the nation, was established well before the 1916 federal law requiring the existence of such agencies as a precondition for receiving federal highway moneys. The state's interest in other public works, such as regional transit systems and rail and airport facilities, although not always as direct and clear cut as in highways, is also well established.

The nature of the state's interest in major transportation initiatives may be seen by surveying two distinctly different examples: relief of excessive congestion at Logan Airport through the construction of a second major airport or other facilities and elimination of long-standing barriers to the free flow of passenger and goods movements in sections of western Massachusetts by means of improvements to Routes 2, 7, and 8. Three issues are covered: integration of planning for complementary transport modes; the dynamics of local, regional, and state interests in transportation investments, including both "quality of life" and transportation access considerations; and the raising and use of highway revenues.



### *A Second Regional Airport*

The need for a second regional airport has been predicated on current and anticipated congestion at Logan Airport. Initial estimates prepared by the Massachusetts Port Authority in 1990 forecast a capacity deficit of 5 million passengers per year, assuming an annual growth rate in demand of 3 percent; at a growth rate of 4 percent, the deficit is expected to reach 19 million passengers per year. These rates are lower than the 5 percent annual growth rate that Logan has experienced over the past twenty years.

The initial estimates of demand for air transportation were the subject of intensive review in light of the New England Transportation Initiative<sup>2</sup> and renewed regional interest in high-speed ground transportation. The latter includes possibilities for much improved passenger rail service between New York City and Boston and ultra-high-speed magnetically levitated (Maglev) trains between Boston and other major cities in the Northeast. The potential impacts on demand at Logan of increasing use of telecommunications and economic and political developments in Eastern Europe and Pacific Rim countries were also factored into this reassessment, as were the implications of new air quality requirements embodied in the Federal Clean Air Act Amendments of 1990<sup>3</sup> and the Intermodal Surface Transportation Efficiency Act of 1991.<sup>4</sup>

Consideration had been given to accommodating anticipated increases in air transport demand through expansion of other New England regional facilities such as Pease Air Base in New Hampshire and T. F. Greene Airport in Providence and linking these outlying facilities by high-speed rail or Maglev to Boston. At first glance, integration of expanded regional air facilities by a high-speed ground transport network is an attractive prospect. However, there are several serious problems with such an approach. In the first instance, 70 percent of the region's air traffic is centered in Massachusetts. The airlines that serve this traffic much prefer to concentrate their facilities at one, or at most two locations rather than maintain duplicate facilities and services at several sites. Furthermore, Pease Air Base could not accommodate the anticipated traffic growth even if expanded to the full extent of its potential capacity, and even limited expansion of T. F. Greene Airport would impose severe noise impacts on surrounding communities.

Regardless of its location, a second regional airport would impose severe growth pressures, high volumes of ground traffic, and a measure of noise pollution on neighboring communities. In anticipation of these inevitable impacts, the primary objective of the second airport study<sup>5</sup> was to identify one or more sites of 5,000 acres or more that could be reserved well in advance of construction to accommodate staged development to serve future air traffic demands from an initial level of 5 million passengers per year to an ultimate capacity of 30 million. (Logan presently handles 22 million passengers per year on a 2,400-acre site.) The minimum of 5,000 acres for a new facility was chosen in the interest of limiting off-site noise impacts to the maximum extent feasible.

Two potential locations were tentatively identified: Fort Devens, at which a total of 9,000 acres could be made available at the central and south posts, and a 5,000-acre site in Winchendon and Gardner. Early identification of a specific site to be reserved for future development would be essential to allow the surrounding communities the opportunity to plan for the growth that would inevitably attend the creation of so large a facility. In this regard, a regional approach to growth management would be essential. It might even be necessary, therefore, to reconstitute the existing regional agencies into a form resembling the recently established Cape Cod Commission.

The strategic assessment by the Massachusetts Aeronautics Commission not only reexamined air traffic demand forecasts in the context of potential development of high-

speed ground transportation alternatives, but also analyzed the benefits and costs of reserving large tracts of land now phased for development in the future.<sup>6</sup> Although public and private investment in a major regional airport would have to be considerable, anticipated economic activity spurred by such investment could be expected to be substantial. In general terms, air access is essential for economic development. A Dow Jones survey, cited in the "Second Major Airport Siting Study,"<sup>7</sup> revealed that good air service is the single most important consideration in selecting a location for corporate headquarters. In more immediate and specific terms, a major airport is a powerful "economic engine." The Aeronautics Commission report estimates that, when operating at a level of 10 million passengers per year, a second regional airport would generate between \$1 billion and \$2 billion in economic product a year and create between 10,000 and 20,000 new jobs; at a traffic level of 30 million passengers per year, the economic impacts would rise to as much as \$5 billion and 50,000 jobs. Logan, with 22 million passengers per year, employs 16,000 workers on site at an average annual wage of \$30,000 per employee.

### ***Major Highways***

As with major airport development, the state's role in planning, funding, and constructing major highway facilities, and the importance of such facilities for regional growth, is generally acknowledged. Two major projects served as the focus of discussion at the 1992 workshop: upgrading Route 2 to four-lane-divided standards between Phillipston and Route I-91 and construction of a major north-south artery in the Berkshires between North Adams and the Massachusetts Turnpike. Both projects have been under consideration for many years. In both instances, local environmental and economic concerns have prevailed over regional and state interests, with the result that neither project has moved beyond the planning stage.

Impasses of the sort described above highlight the continuing need for a transportation planning process that, somehow, can overcome perceived differences among competing state, regional, and local interests. But even with all parties working together, major highway and other transportation projects take as many as eight or more years to plan, design, and construct. If transportation investments are to contribute in a timely fashion to economic development goals, ways must be found to expedite the state's procurement process, and accommodations to state and federal environmental regulations must continue to be developed. It will also be necessary for the state to move expeditiously, in concert with local communities and regional agencies, to meet the various planning performance requirements imposed by the Intermodal Surface Transportation Efficiency Act of 1991 as a condition of approval of federally aided transportation projects.

Given the long lead time involved in constructing new facilities on new rights of way, a prudent transportation investment strategy is seen as one which includes a mix of projects: new construction, particularly facilities that would provide good access between city and town centers and other major traffic generators and interstate highways; reconstruction or rehabilitation of older facilities; and maintaining existing inventory in serviceable conditions. Investments should focus primarily on strengthening existing centers, building upon infrastructure resources already in place.

There was strong support among those at the workshop with an interest in a vigorous highway program for funding such a program through gasoline taxes and user fees dedicated to the exclusive use of highway investment, and for moving expeditiously



to bring the outstanding \$400 million highway project authorizations to contract. All highway programs must compete directly with other programs under spending caps established by the state Office of Administration and Finance. Separate authority for highways, backed by adequate gasoline taxes and user fees, would provide relief from such restrictions, allow highway investments to be seen as clearly distinct from government social programs, and help ensure that expenditures on highways would more closely meet established needs. Furthermore, although the appropriateness of bonds to finance long-lived capital investments was acknowledged, participants were concerned about the high cost of debt service, the per capita cost of which is now higher than that of any other state. Currently, 25 percent of Massachusetts highway expenditures are for interest charges.

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### **Coordination of Economic Development**

Massachusetts is seen not only as lacking a comprehensive plan for economic development, but also as being ill organized and ill equipped to create such a plan. However, there appears to be little interest in having the state develop the specifics of an economic development plan from the top down. Rather, some workshop participants called for development by the state, in consultation with regional agencies, chambers of commerce, and other local and private-sector interests, of a general policy and strategy. Once established, this policy would guide state actions for an extended period of time, independent of changes in administration. A geographic-specific plan could emerge from the integration of regional plans developed by regional agencies working with their own communities and private interests under general policy guidance at the state level. For regional agencies to be effective in this role, they would need both political and financial support from the state.

Once developed, this articulated set of policies and regional-level plans could serve as a pragmatic, factual basis on which the state could market developmental potential. The process itself would provide evidence to prospective firms that we “had our act together” and help position us to secure a maximum of federal funds to support economic growth. An aggressive marketing program supported by a realistic budget and adequate staffing was seen by participants as a necessary ingredient in the process. The 1992 promotional budget of \$400,000 was considered to be much too small; something more in the order of \$3 million was suggested.

A logical counterpart to an integrated set of economic development initiatives would be a related, comprehensive plan for transportation facilities and services. Such a plan would ideally be guided by proposed economic initiatives and be fully multimodal, considering not only potential trade-offs among logically competitive modes, as is being done for air transport and high-speed ground transport in the strategic assessment study, but also the complementarity of modes and their physical integration, such as the integration of automobile parking and bus and rail transit at the Alewife terminal. The full realization of this comprehensive approach to transportation investment planning would be advanced by close collaboration among all agencies concerned with the provision of transportation facilities and services at state, regional, and local levels.

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### **A View from the Other Side**

The preceding discussion focused on the role of the state as a provider of infrastructure,

mainly transportation facilities. But, as been emphasized, the fundamental, sustained contribution that infrastructure investments make to economic development is through their capacity to facilitate the productive use of land. Consideration of development from the entrepreneur's point of view supports this assertion.

Workshop participants identified two of the most important factors in a firm's choice of location to be (1) the availability of a public sewage system and (2) good transportation. Public sewerage has become especially important since the passage of Chapter 21E, which imposes considerable potential liability on firms that do not have access to wastewater disposal and treatment facilities. The meaning of "good" transportation depends on the specialized accessibility needs of a given firm. Commercial development, for example, requires ready access to customers, often via public transportation as well as highways. Agglomeration of commercial enterprises is often sought as a means of creating a concentration of demand sufficient to support good public transportation service. Most new manufacturing is focused on research and development, for which ready access to major educational and academic research centers is considered to be essential. High-speed, high-capacity telecommunication data links are vital components of such access. This position is supported by responses to a 1991 survey of 340 major corporations, which cite a state's support of infrastructure — including water and sewage treatment facilities, adequate transportation for people and goods, and modern communication technology — as among the most important considerations in a firm's location decision.

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### **Nonstructural Infrastructure**

In addition to its role as a provider of physical infrastructure, Massachusetts can play an important coordinative role in facilitating what are essentially private-sector transactions. The commonwealth's part in the consortium of interests that led to the successful conclusion of the Genzyme relocation was often cited by conference participants as an example of this facilitative capacity.<sup>8</sup> The various activities of the Massachusetts Government Land Bank were also recognized as supporting private initiative. Another function in which state and private-sector collaboration was encouraged was in providing information to firms seeking sites on which to locate. Not much favor was found with arrangements that place the major burden for maintaining the requisite up-to-the-minute site information file on a state office. Rather, it was suggested that the state serve as the initial point of contact, referring applicants to the appropriate local chamber of commerce, regional agency, or public utility consortium for the specific information being sought. State support for the development of geographic information systems was also called for. Such a system could combine information about available industrial sites with data on the transportation and other infrastructure available, local labor force and industry structure, environmental constraints, and other considerations.

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### **Recommendations**

The following conclusions and recommendations are drawn from the July 21 meeting. As such, they are intended to represent the wide variety of views that were expressed; they should not be seen as necessarily representing the position of a given individual or institution.



1. The effective use of scarce public resources requires comprehensive planning, detailed analysis based on sound, current data, and a coordinated investment strategy. Massachusetts lacks the ability to address its infrastructure needs in such a broad and coordinated way. It is therefore essential, as a matter of highest priority, that the state develop the capacity, in concert with its regional agencies, to plan infrastructure investments comprehensively across all modes within the context of a larger vision embracing a plan for economic development and land use. The establishment of such a capacity and its use in articulating a comprehensive approach to public investment undergirds each of the more specific recommendations that follow. This approach to transportation investment planning is not only fully compatible with the requirements of the Inter-modal Surface Transportation Efficiency Act of 1991, but much of it is required by this legislation.

2. Greater managerial and financial integration of state transportation agencies is consistent with, but not a necessary concomitant of, the comprehensive approach to transportation investment planning and economic development recommended above. The benefits to be sought through more centralized management of transportation revenues and expenditures must be weighed against the expectations of economic efficiency and perceived equity associated with the dedicated application of gasoline taxes and user fees to the source of those revenues. Limitations imposed by federal legislation on the use of both federal and state highway and airport user taxes must also be considered. It is unlikely that these opposing views will be easily reconciled. Nevertheless, a thorough study of the ways in which transportation revenues are generated, invested, and distributed among modes and regions in the commonwealth should be undertaken as part of the comprehensive planning initiative called for in recommendation 1.

3. The network of transportation facilities needed to support an active, growing economy throughout Massachusetts is incomplete and inadequate. Ongoing studies directed toward rectifying these deficiencies, principally identification of major state highways as links in the federally mandated national highway system; the multimodal New England Transportation Initiative; the strategic assessment/second regional airport study; and an assessment of telecommunications links, should be coordinated and vigorously pursued in the interest of developing a well-articulated system of mutually supportive modal facilities tied to the larger New England regional complex of which they are a part.

4. The port of Boston will not fulfill its potential as a center of national and international trade until it is more fully competitive with the other ports along the eastern seaboard. The comprehensive study called for in recommendation 1 should include a realistic assessment of the latent demand for the use of Boston as a port of entry and exit and a detailed analysis of the appropriate mix of public and private investments that would be needed to reduce costs and improve access through the port and beyond to the point where this demand can be realized.

5. Although the eventual completion of the Central Artery and Third Harbor Tunnel projects will materially facilitate highway movements within and through Boston, major deficiencies will persist in other parts of the state. Debates over upgrading Routes 7 and 8 between the Massachusetts Turnpike and North Adams and Route 2 between



Phillipston and Route I-91 must consider the impact of these improvements on the economic well-being of the western and north central regions of the commonwealth. Selected improvements between town centers and major industrial and commercial traffic generators and the interstate highway system are also important in many areas.

6. Construction of major improvements in the state highway system has, in critical instances such as Routes 2 and 7, been thwarted by local concerns regarding the impacts that such construction would have on community and environmental values. Although it is essential that Massachusetts continue to take the lead in coordinating the planning and construction of state highway facilities, regional agencies should be encouraged and adequately funded to work actively with affected communities in seeking compromise locations and designs that satisfy regional and interregional transportation needs safely and expeditiously while reflecting due regard for local concerns. Full advantage should be taken of recently adopted federal procedures that give the state wider latitude in applying geometric design standards that are compatible with local settings.

7. Transportation investment should not be thought of solely in terms of the construction of new facilities on new rights-of-way. A balanced approach should be adopted that includes maintenance of existing facilities, conversion of existing assets — especially rail rights-of-way — to a mix of freight and passenger service, and disinvestment through the conversion of superfluous facilities to alternative public or private use. Focusing on obtaining the fullest use of existing infrastructure will maximize the economic impact of limited public expenditures.

8. The *de novo* construction of a second regional airport in central Massachusetts would involve unprecedented impacts on the community or communities in which this facility would be located and on neighboring towns. A thorough study of alternative ways of accommodating anticipated air transport demand — such as the strategic assessment currently being conducted by the Massachusetts Aeronautics Commission — should be completed prior to embarking on so massive and problematic an enterprise. This study should include a detailed, realistic analysis of the relative costs and benefits of various combinations of actions, including economic incentives to both freight carriers and general aviation to relocate operations away from Logan, and high-speed ground transport, including Maglev technologies, for the movement of passengers and high-value freight over short and intermediate distances.

9. Recommendations 1 through 8 deal explicitly with public infrastructure investment strategies that should be considered by the state in the interest of promoting its economic growth. Such a comprehensive infrastructure investment plan would, in itself, be seen by firms as practical evidence of the state's understanding of businesses' need for a sound public infrastructural base upon which to build private investment. The improvements that would result from the implementation of the plan would provide further direct support to specific firms seeking to locate in a given area. In addition to facilitating the movement of people and goods through improvements to the state's transportation infrastructure, public investment in and support of other forms of infrastructure would significantly enhance the state's ability to attract and retain commercial and industrial activity. Examples include:

- Developing, in collaboration with the regional planning agencies, a geographic information system to provide both private interests and public agencies with a comprehensive, geographic-specific data base, including land use, economic and demographic data, public improvements, and natural features.
- Establishing a highly visible point of contact through which firms seeking site information could be referred to the appropriate local or regional agency or public utility for current information regarding available sites and associated community characteristics.
- Aiding communities or groups of adjacent communities to develop wastewater transport and treatment facilities consistent with state and federal laws governing the disposal of commercial and industrial liquid waste.
- In concert with universities and private industry, develop a supercomputing facility and a supporting statewide network of high-speed, high-capacity data links providing access to universities, research facilities, data-intensive industries, and public agencies.
- The state should proceed expeditiously to move the entirety of the \$400 million in highway project funding from the authorization state to the contract stage. Full and prompt implementation of this highway program would serve not only to move badly needed funds into the economy, but would also provide an important signal to the business community that the Massachusetts economy is moving again.

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## **Coda and Update**

The previous discussion is an attempt to capture the essence of the interests and concerns of the participants at the July 1992 workshop, who represented local, regional, and state agencies, developers, public utilities, chambers of commerce, and a variety of other public and private interests. It is revealing of the economic and political processes that influence the course of infrastructure development to consider the changes that have taken place with respect to those issues of primary concern to the workshop participants in the two years since the workshop was held. The following is a brief review of the current status of the second regional airport and the related New England transportation initiative, improvements to Routes 2 and 7, and highway funding and the Central Artery/Harbor Tunnel Project.

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## **The Second Regional Airport and the New England Transportation Initiative**

The results of the strategic assessment that was designed to reassess the region's long-term air transportation and related high-speed ground transportation needs were released in July and November 1993.<sup>9</sup> The conclusions of this study differed in at least one major respect from those of the "Second Major Airport Siting Study." Although both studies accepted the premise that additional transportation facilities will be needed in Massa-



chusetts to meet future demands for high-speed intercity transportation, the *Strategic Assessment Report* concluded that a second major airport would not be necessary. Rather, a combination of capacity enhancements at Logan, such as those called for in the Boston Logan capacity enhancement plan,<sup>10</sup> and other regional improvements, among which might be high-speed rail or magnetically levitated ground transportation facilities, a large regional reliever airport, or vertiports for use by vertical takeoff and landing aircraft, would be adequate to meet future intercity high-speed travel demands, which the strategic reassessment determined would be significantly less than those posited by the original second major airport siting study.

The findings of the *Strategic Assessment Report* are consistent, in most essentials, with the thrust of the New England Transportation Initiative, a study of existing and potential demand for high-speed intercity transportation services in the region and of various technological alternatives that might be employed in meeting these demands. The initiative, an ongoing study that currently enjoys a half-million-dollar budget contributed by the commonwealth of Massachusetts and the other contributing New England states, is predicated on an initial assumption of high potential demand for high-speed intercity transportation services. This assumption would seem to be at variance with the strategic assessment's finding that "demand for high-speed travel will be significantly less than previously forecast."

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### Improvements to Routes 2 and 7

Essentially no progress can be reported with regard to Route 2. An attempt by state senator Stanley Rosenberg to include funds in the 1994 transportation bond legislation for the widening of the least controversial section of the Phillipston-Greenfield route — the portion between Phillipston and Orange — was not successful. Although improvements to Route 2 are included in the Franklin County Transportation Improvement Plan, it is unlikely that, without state funding, much, if anything, will be done in the near future.

The Route 7 situation is considerably more complex. During a reception in Pittsfield in the spring of 1993 at which the state's strategy for job creation and economic growth was presented,<sup>11</sup> Governor Weld expressed support for improvements to Route 7, including the construction of an interchange of it with the Massachusetts Turnpike in Stockbridge. However, Secretary James Kerasiotes of the Executive Office of Transportation and Construction, who was not present at the reception, was unconvinced that sufficient support existed among the communities that would be directly affected by proposed improvements to the route to warrant moving ahead with this project. As an alternative, a task force was established of some sixty mayors, selectpersons, and other officials in the Berkshire County cities and towns that would likely be affected by improvements to Route 7 — and to route 8 in the event that the entire north-south corridor from Stockbridge to North Adams were to be improved — to seek a clearer consensus.

The task force continues to meet in its search for consensus. In the meantime, the question of improvements in the Routes 7 and 8 corridor, known as the Western Bypass (west of Pittsfield), was placed on the November 1993 ballots in Pittsfield and North Adams. The results of the referenda were quite definitive: the vote in favor of the Western Bypass was 3-1 in Pittsfield and 9-1 in North Adams. This position was reaffirmed by voters throughout Berkshire County in the November 8, 1994, election, when a ballot measure instructing state representatives to vote in favor of the Western

Bypass, including a connection to the Massachusetts Turnpike, passed by a more than two-thirds majority.<sup>12</sup> Voters in thirty of the thirty-two communities in which the measure appeared on the ballot voted in favor, the majority in North Adams being almost 90 percent. Only Stockbridge and Mount Washington voted against this measure.

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### **Highway Funding and Central Artery/Tunnel Project**

Although Massachusetts was successful in bringing the balance of the fiscal year 1993 highway project authorization to contract, as called for by many workshop participants, the problem that concerned these participants persists. Almost all the money spent on transportation by Massachusetts public agencies — state, local, and regional — depends on funds authorized by biennial transportation bond bills; even federal moneys are made available as reimbursements for prior state expenditures financed by bonds. The most recent transportation bond bill, first introduced in the legislature in October 1993, failed of passage. Refiled in January 1994, the funding bill was partially passed in late August. Meanwhile, the cities and towns have been on short rations, and highway contractors must cope with a much truncated construction season.

Given the recurring highway funding problems faced by local communities as a consequence of the way the commonwealth currently finances transportation, it is not difficult to understand the workshop participants' interest in separating highway funding totally and unambiguously from other elements of the state's budget and supporting this fund through gasoline taxes and user fees dedicated to this purpose. The concerns of local communities, especially those outside the Boston ambit, however, go deeper than the problems imposed by the uncertainties in the timing of funding that attend the current financing process.

Competition for resources between geographic regions of a state is more the rule than the exception: New York City vies with upstate New York, northern California contends with southern California, and Boston competes with much of the rest of the state. In states such as Massachusetts, where the government center is located in the predominant metropolitan area, this competition for resources tends to favor the metropolis. This often causes the cities and towns outside Route 128 to feel that they receive less than their fair share. A persistent focus of this concern is the Central Artery/Harbor Tunnel Project.

Although there is general agreement throughout the commonwealth that the project is essential for the economic well-being of Boston and its immediate neighbors and that it will provide benefits to highway and airport users from the rest of the state, long-standing concerns of local officials over its enormous cost intensify as estimates of the cost-to-complete continue to rise.<sup>13</sup> These fears would seem to be justified in light of the state's proposals to devote large proportions of noninterstate federal-aid surface transportation program funds to the "big dig."

Reflection on the foregoing events suggests that the way in which the state approaches the development of transportation infrastructure depends strongly on the nature of the facilities being considered and the institutional setting in which their planning, financing, and construction take place. This seems to be particularly true in the context of the comprehensiveness of a statewide vision of transportation as a tool of economic development. Overcrowding at Logan Airport, for example, is treated as posing a threat to the state's economic well-being. As such, the problem has been approached at the state level in a comprehensive way that includes consideration of a mix of ground and



air technologies in cooperation with interrelated regional interests. In contrast, improvements to Routes 7 and 8 that would go a long way toward relieving the economic isolation of the western part of the state, and are of especial importance to Pittsfield and North Adams, seem to be viewed as an essentially local problem to be dealt with as just another element of a continuing program of highway betterments in which a state-wide view is found mainly in what appears to be a rather unequal competition for a state-administered pool of funds. A comparison of the state's singular dedication to Boston's Central Artery/Harbor Tunnel Project with its apparent reluctance to invest in the Western Bypass corridor seems to confirm the view that decisions to invest in public infrastructure are essentially, and quite properly, political decisions. Therefore, it appears to confirm the words of that consummate politician Tip O'Neill: "All politics is local." 🐷

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## Notes

1. Alicia Haydock Munnell and Lea M. Cook, "Financing Capital Expenditures in Massachusetts," in *Massachusetts in the 1990's: The Role of State Government*, Research Report No. 72, November 1990, Federal Reserve Bank of Boston, 295-364.
2. The New England Transportation Initiative is an ongoing study of existing and potential demands for high-speed intercity transportation in New England and of various high-speed ground and short-haul air transportation technologies intended to serve such demands. The initiative is a joint effort of the several New England states.
3. U.S. Government, Clean Air Act Amendments of 1990, PL 101-549.
4. U.S. Government, Intermodal Surface Transportation Efficiency Act of 1991, PL 102-240.
5. Commonwealth of Massachusetts, Massachusetts Aeronautics Commission, "Second Major Airport Siting Study, Part A Report," December 1990. The intended follow-on study, in which environmental analyses of candidate sites were to have been undertaken, was never initiated.
6. The strategic assessment was conducted on behalf of the Massachusetts Aeronautics Commission by Arthur D. Little, Inc., of Cambridge, Massachusetts. The study's findings were released by the commission in *Strategic Assessment Report, Volume 1: Executive Summary* and *Volume 2: Final Report*, on July 21, 1993, and in *Volume 3: Committee Comments*, on November 17, 1993.
7. Dow Jones and Company, *Business on the Move*, 1978, as reported in "Second Major Airport Siting Study, Part A Report," 45.
8. The facilitative assistance and financial accommodations provided by the state and Boston's Allston section, among others, are credited with helping to convince Genzyme's management to commit to the Allston location.
9. U.S. Government, Federal Aviation Administration, "Boston Logan Capacity Enhancement Plan," October 1992.
10. Commonwealth of Massachusetts, Massachusetts Aeronautics Commission, *Strategic Assessment Report, Vol. 2: Final Report*, July 1993.

11. Commonwealth of Massachusetts, *Choosing to Compete: A Statewide Strategy for Job Creation and Economic Growth*, May 1993, produced through the collaboration of the Executive Office of Economic Affairs and the University of Massachusetts.
12. The ballot measure read: "Shall the State Representative from this District be instructed to vote in favor of legislation requiring construction of a Western Bypass alternative Road in Pittsfield with a connection to the Massachusetts Turnpike as described in the 1993 County Transportation Plan?"
13. Escalations in the anticipated cost to complete the Central Artery/Harbor Tunnel Project arise primarily as a result of three factors: design changes required by accommodations to environmental/community concerns, modifications introduced as a result of more detailed engineering data than were available at the outset of the project, and inflation, a time-dependent phenomenon not unrelated to the first two causes.