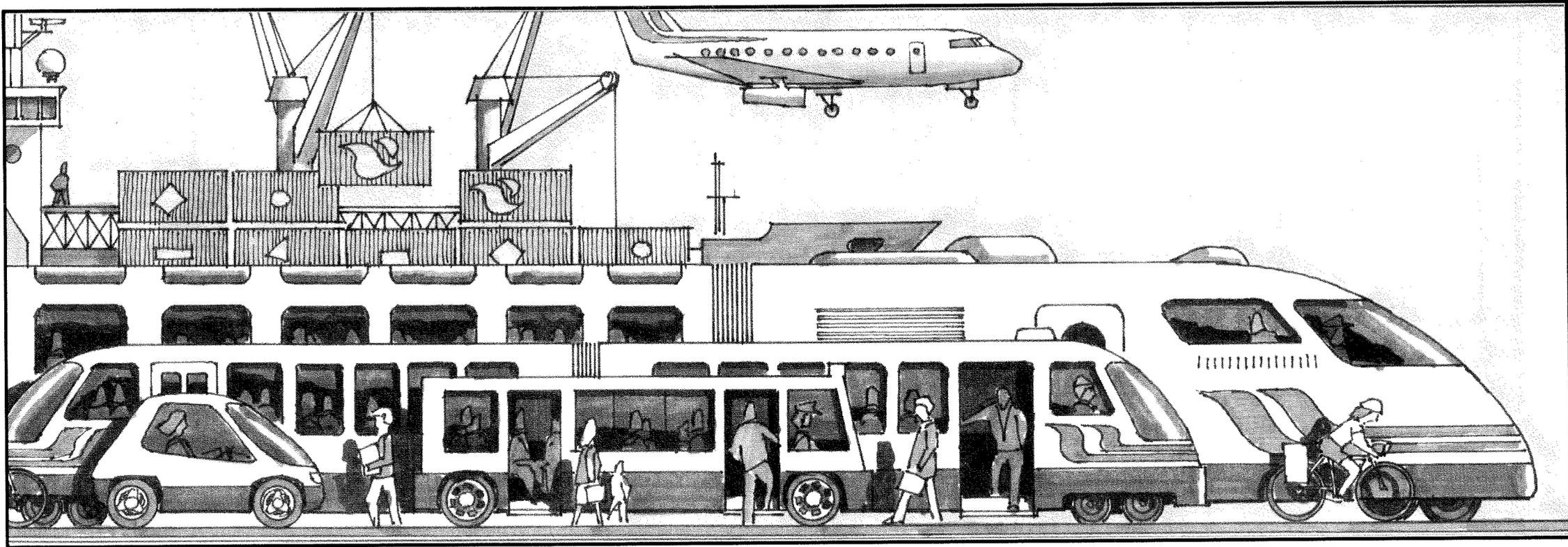


A TIME OF CHANGE: PORTLAND TRANSPORTATION PLAN



July 1993

A TIME OF CHANGE: PORTLAND TRANSPORTATION PLAN

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July, 1993

To: Honorable Anne Pringle, Mayor, and members of the Portland City Council; Citizens of Portland

On behalf of the Portland Comprehensive Transportation Plan Advisory Committee, I am pleased to submit this Transportation Plan for our City, entitled "A Time of Change." This Plan does, indeed, contemplate many changes — not only in the existing transportation infrastructure, but also in the way we think about transportation planning and the impacts that transportation projects have on our neighborhoods, our workplaces, and the economic vitality of our City.

The Committee

It is important to observe at the onset that this Plan is submitted by a Committee of citizens, not by traditional transportation planners. Although the Committee was ably served by a staff of professionals (from the City's Planning Department, the Portland Area Comprehensive Transportation Committee, the Greater Portland Council of Governments, the Maine Turnpike Authority, and the consulting firm of Market Decisions), the recommendations and proposals embodied in this Plan are being made by private citizens who live and work in Portland, and who are therefore directly affected by the transportation decisions made by federal, state and local governments. In this respect, the manner in which this Plan was developed was, itself, a fundamental change in the traditional transportation planning process.

The Process

The Comprehensive Transportation Plan Advisory Committee was appointed in late 1991 by then-Mayor Thomas H. Allen. Mayor Allen charged the Committee with developing a transportation plan for Portland that would encompass all modes of transportation, and address all of the ways in which transportation affects Portland as a residential and business community.

Mayor Allen also directed the Committee to listen intently to the people of Portland throughout the process, in order to ensure that this Plan gives voice to the residents who are most directly affected by the decision that will be made in the implementation of the Committee's proposals. To fulfill this mandate, the Committee engaged in two distinct public participation phases to solicit input in its planning process.

After several initial meetings at which the Committee received informational presentations and discussed overall goals and directions for its efforts, the Committee scheduled a series of public meetings throughout the City. This first "public participation" phase included evening meetings in every neighborhood in the City, and sessions with a number of focus groups representing diverse groups with an interest in transportation. At these meetings, the Committee solicited and received much valuable input.

Next, the Committee divided into six subcommittees to focus on specific transportation topics: Streets, Highways and Neighborhoods; Bikes and Pedestrians; Intermodal Connecting Centers; Land Use; Transportation Demand Management, and Process and Logistics. Following the completion of intensive work sessions in these subcommittees, the Committee reconvened as a whole to begin the process of fashioning this comprehensive Plan, using the information that had been gathered in the public sessions and carefully considered by the subcommittees.

Finally, before approving and presenting this Plan, the Committee scheduled a second major opportunity for public input. In May, the Committee held a public transportation symposium, entitled "Take Part Portland," at the former Porteous building on Congress and Free Streets. Over a period of two days, hundreds of City and area residents had an opportunity to learn about the Committee's planning process, and to add their voices and ideas to this Plan.

Implementation

Throughout this lengthy planning process, the Committee was cognizant of its role as a citizen's advisory committee. As such, and although it was at times difficult to do so, the Committee refrained from prioritizing the public policy initiatives set forth in the Plan, and from attempting to reconcile the vision of this Plan with sometimes competing policies now in effect. This task we recognize is properly vested in the City Council, the Planning Board, and the City administration.

The Committee strongly believes, however, that the policies presented in this Plan are important ones. We urge the City's policymakers to consider carefully the recommendations embodied in the Plan in all phases of public decisionmaking. While many of the Plan's recommendations will require further

deliberation by the Planning Board and the City Council, we stress that many other recommendations might be implemented by the City's administration itself, without resort to public debate before those bodies. We also urge the initiation of a number of "pilot projects" identified in the Plan, as a means of demonstrating the salutary effects that can be achieved if the Committee's recommendations are implemented on a broader scale.

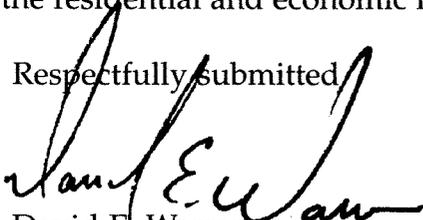
Finally, we welcome a continued public discourse on the more far-reaching proposals set forth in the Plan. If our City is able clearly to envision the benefits to be realized by thoughtful implementation of this transportation Plan, Portland can have a progressive and effective transportation system that will serve the needs of its residents and businesses alike.

Acknowledgements

This Plan is the result of eighteen months and untold hours of discussion and deliberation by the Committee members, aided throughout by the Committee's staff, consultants and, in some instances, volunteers who were not Committee members but who took a genuine interest in this important subject. At various times, a number of Committee members rendered extraordinary service in a variety of roles, such as serving as subcommittee chairs, acting as facilitators at public meetings, and planning for the important public participation phases of our Committee's work. The Committee's staff and consultants also served ably, and in many cases went well beyond mere professional obligations in assisting in the development of this comprehensive Plan.

To each and every one who served so well, I am grateful. Your contributions of your time and talents have resulted in a comprehensive transportation Plan that will serve Portland well, and will have a meaningful impact on the quality of the residential and economic life of your community.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "David E. Warren". The signature is written in a cursive, flowing style with a large initial "D".

David E. Warren
Chair

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FOREWORD: TWO FUTURES

Travel with us, fellow citizens, into two futures. The vehicle is your imagination. A morning fifteen years from now is your destination.

The first future...

"Mark!" says Barbara.
"I've overslept. Are you up?"

"Not only am I up, I've walked down to Penny Wise and back, picked up some milk, and given Davey and Paula their breakfast."

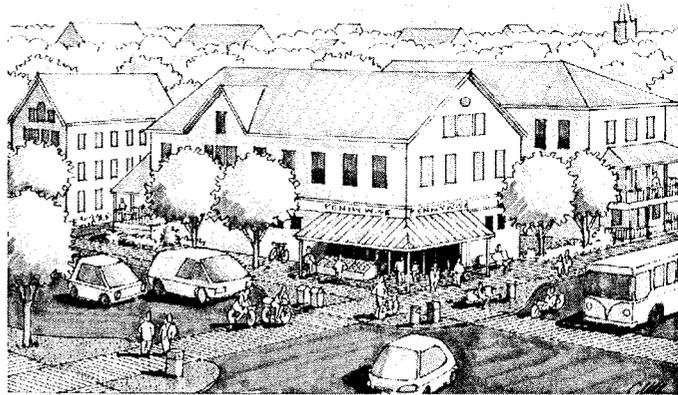
"Have they left for school?"

"Davey rode his bike. He's pretty good about staying in the lane. What a blessing the path over to the school is.

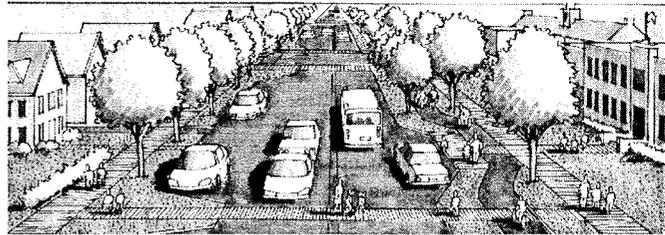
Paula's walking with friends."

"Thanks, Mark--tomorrow it'll be my turn. Do you need the car today? Davey has a dentist appointment after school. He can walk, but I want to be available in case."

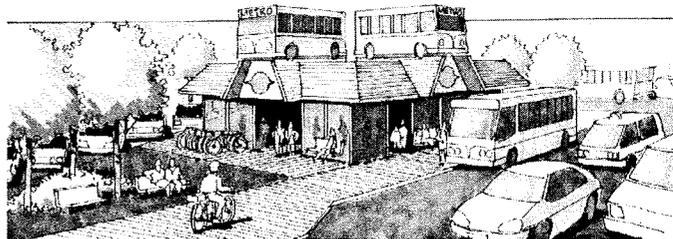
"I'll ride the bike to work. It'll save my commuter allowance. If it looks like rain, I'll



Corner store nearby



Neighborhood transportation connections



Local transport center

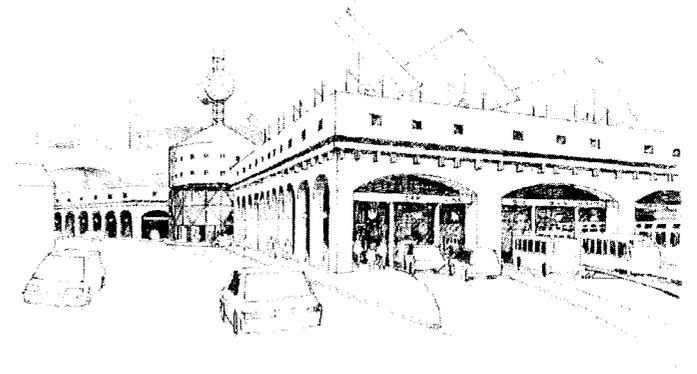
switch to the bus at Forest Plaza. I can take a shower at the office."

"I thought this was a travel day for you --to meet a client or someone in Portsmouth? Wasn't it someone vaguely well known?"

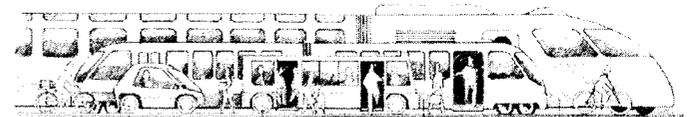
"A Mr. Allen. The nephew of the former mayor. You know, the one known as the 'transportation mayor'. Anyway, he decided to take the express up to Portland. We're meeting in the conference center above the station. So you can have the car."

"Good. I could use it. I plugged it in yesterday. It should have plenty of charge. If I hurry, I'll still make it to work on time. I'll take a short cut through Morrill's Corner."

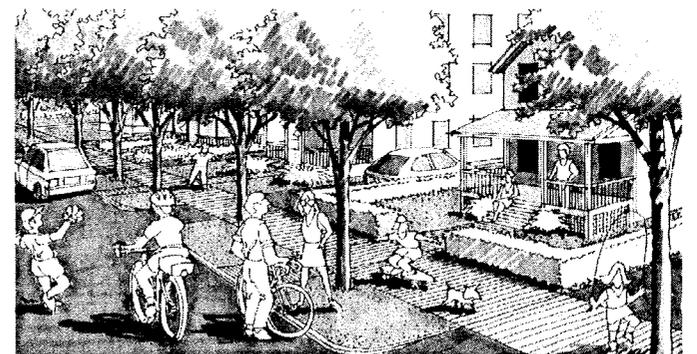
"OK, I'm off. After supper tonight let's take the kids to Vivian's for ice cream. We can sit outside and catch up on the neighborhood news."



Regional transport center



Multimodal connections



Back home in the neighborhood

The second future...

"I'm exhausted," says Barbara. "Ever since they widened the road out front it sounds like the traffic is in our bedroom! I've been awake since 5."

"Well, it's time to get up anyway," says Mark. "Davey and Paula had breakfast. But no milk. We're out. They didn't like the oatmeal much without it."

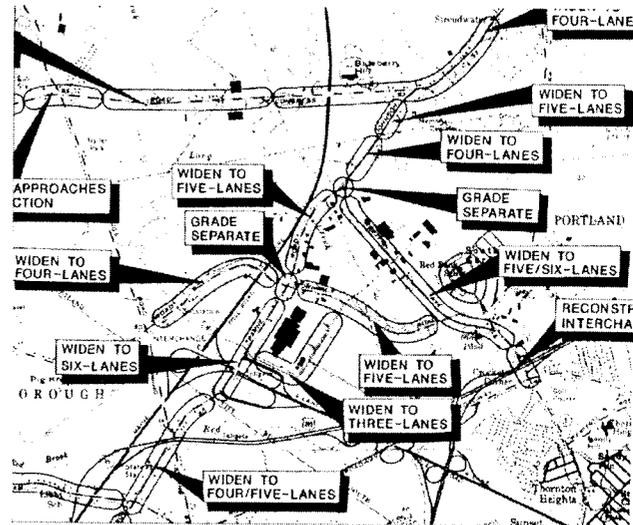
"I'll drive them to school," he continues, "but can you pick them up this afternoon? Davey's got to go to the dentist and Paula has a softball game."

"I guess. But that means getting off work early. It'll take 45 minutes just to get through Morrill's Corner. And why do the dentist and softball field have to be in different corners of the world? All this scheduling drives me crazy!"

"Uh-huh," says Mark, only half-listening. He's plotting his own trip to work. Walton to Stevens. If I cut over Glenwood and Bradley I'll hit hospital traffic but that's better than the Brighton-Stevens intersection. The light turns four or five times



Morrill's Corner Intersection



Proposed traffic improvements at Maine Mall (PACTS, 1989)

before you can get through. Of course that means a left hand turn onto Congress to get to I-95. . that's not good. . .

"You know," he says, "When they added a lane to Stevens I thought it'd be clear sailing. But it's worse than before. It still takes an hour to get to the mall. I waste two hours every day just getting to and from work. Well, at least the parking is free once I get there."

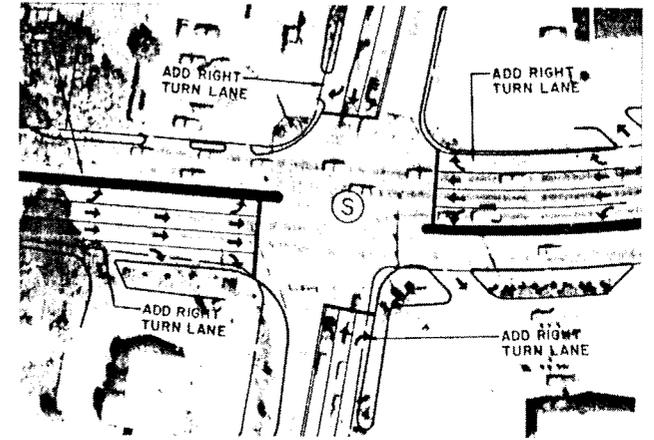
"Close the window, will you? The fumes are strangling me. Will we ever get out of this place?"

"After supper let's drive out to Parsonsfield. Rural Realty has some 3-acre lots for sale. We ought to start looking. Can you imagine the luxury of a 3-acre lot!"

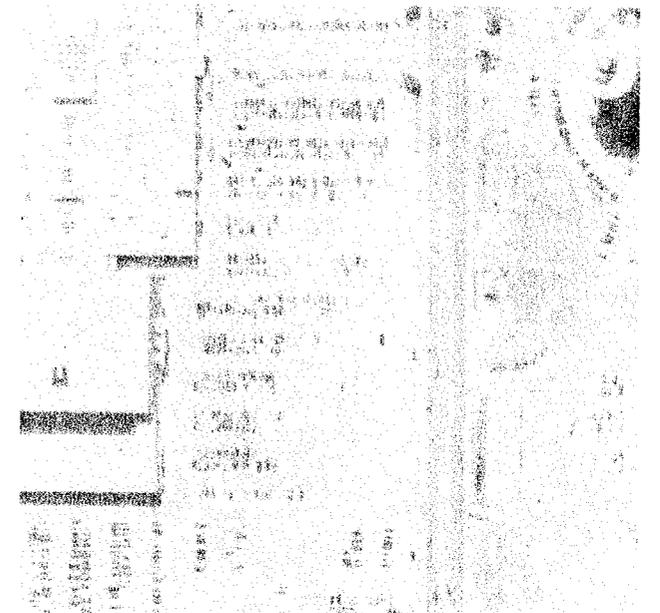
Isn't Parsonsfield a long way from the mall?"

"Farther, but about the same time-wise. Besides, the state has plans for a new Route 25.

Both futures are possible. The first will come about only with some shifts in public policy and lifestyles. The second is a simple extrapolation of present policies and lifestyles. The choice is ours.



Proposed traffic improvements on Route One (PACTS, 1985)



Parking at Maine Mall

I. INTRODUCTION: A TIME OF CHANGE

In 1970, before the Middle East oil crises, before we were aware of global warming, and before ozone pollution was recognized as afflicting even Maine, about two-thirds (65%) of us in Greater Portland got to work by driving in a car alone. In the City itself, a little over half (54%) of us got to work by driving alone.

After two Middle East oil crises, widespread publicity about global warming, and repeated ozone alerts, we might have expected these percentages to drop. They didn't. They went up. By 1990, the percentage of Greater Portland's residents driving to work alone jumped to more than three-quarters (77%). In the City itself, the percentage rose to more than two-thirds (68%).

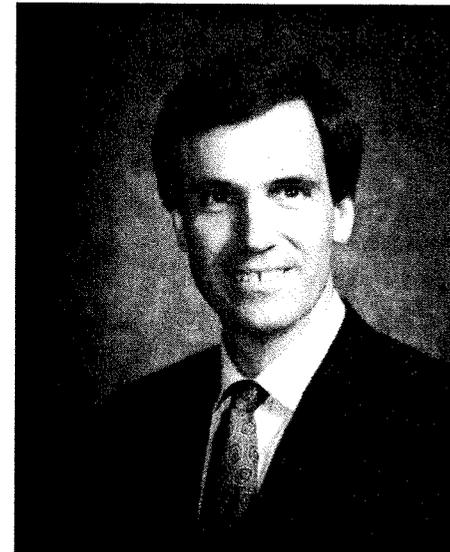
So over that 20-year period the share of carpoolers, bus riders, bicyclists, and walkers fell to less than a quarter of the region's residents and less than a third of the City's residents.

And since the mid-1970's traffic on the main arteries in Portland increased by as much as 115% (on Auburn Street), and by an overall average of nearly 50%. Some portions of the City's street system--Morrill's Corner, for example--have reached a point of congestion that defies any affordable, conventional solution.

That the single-occupant auto, already "king" in 1970, would become so much more dominant yet in so short a period of time, even in the face of earth-shaking events it helped to cause, is testimony to the power of the auto as personal transportation; to rising incomes to pay for it; and to changing demographics and lifestyles that have come to rely on it.

It is also testimony to something fundamentally wrong in how we, as a government and as citizens, make decisions about building and using transportation systems. At every level of policy, the transportation playing field has been drastically tilted toward the single-occupant auto:

- in policies governing the planning of transportation, requiring transportation planners to accommodate urban sprawl rather than to help reshape it;
- in policies governing the funding of transportation systems, which have greatly favored highways;
- in policies aimed at keeping gasoline cheap;
- in zoning ordinances that require a spread out, sorted out pattern of development that can be served only by the single-occupant auto;
- in policies that take public buildings, like schools and post offices, outside of built-up areas;
- in policies that give higher priority to the swift movement and convenient parking of autos than to the preservation of traditional elements of the walkable city; and
- in policies that view public transportation terminals--whether airport, bus station, ferry terminal, or rail terminal--as single-purpose centers fed by the auto rather than as integrated centers fed by multiple forms of transportation.



Against this background, City Councilor and then-Mayor Tom Allen in 1991 launched this Transportation Plan. His charge to the Comprehensive Transportation Plan Advisory Committee was to prepare a plan "that covers all modes of transportation--bikes, trains, transit, highways, carpools, vanpools, and others. The plan should take a comprehensive view and address how these various modes will be integrated."

Subsequent state and federal legislation affirmed that mission:

- In June 1991 the State Legislature passed an act to restore passenger rail in Portland. It was the first citizen-initiated bill ever adopted by the Maine Legislature.
- In November 1991, Maine adopted by referendum the Maine Sensible Transportation Policy Act. It requires capacity-creating projects, such as major road widenings, to be considered a last resort. Other options to manage traffic must be considered first.
- In December 1991, Congress passed and the President signed the Intermodal Surface Transportation Efficiency Act (ISTEA). Its purpose is “to develop a National Intermodal Transportation System that is economically efficient, environmentally sound, provides the foundation for the Nation to compete in the global economy, and moves people and goods in an energy-efficient manner.” After years of favoring funding for highways, ISTEA gives state and local governments flexibility in determining transportation solutions.
- Congress also adopted the Clean Air Act Amendments of 1990. The amendments say that, where air quality standards aren’t being met, transportation plans and projects must reduce emissions and help attain the standards. Greater Portland is classified as a “nonattainment area” for ozone, a colorless gas created by the reaction of auto emissions with sunlight. That means transportation planning here can no longer be business as usual.

Consistent with Mayor Allen’s charge and with the subsequent state and federal laws, the purpose of this Transportation Plan is to change the way the City (and perhaps the region) think about transportation. The change will not happen on the hope of self-sacrifice by thousands of auto users. Therefore, this Transportation Plan recognizes the need for a combination of approaches:

- financial incentives for things that are consistent with public goals and financial disincentives for things not consistent with public goals;

- regulations that think more comprehensively about transportation than simply easing congestion;
- in fact, accepting congestion as one way of allocating the use of public roads;
- aggressive investment in alternative modes of travel;
- education about and marketing of alternative modes--starting with school children, many of whom have never been on a city bus; and
- investment in roads, as well, where it is consistent with other goals of the City.

This Transportation Plan is premised on other things, too:

- Issues of transportation cannot be resolved unless the use of land is organized in a way that allows them to be resolved. It’s been said that the best way to solve problems of congestion and pollution caused by autos is to build cities that don’t need them. That is no longer realistic. But the Plan recognizes that there must be fundamental change in land use regulations: from a code of land use patterns that leave no choice but the single-occupant auto to a code of patterns that give other modes a fighting chance. The new patterns must phase away from separating the elements that make up a community (like homes, schools, churches, and small businesses) and allow a mixing and proximity of such uses where it seems natural to do so.
- Portland’s role as a transportation center is vital to its economy. Transportation centers are also job, retail, and business centers.
- The Transportation Plan must be just that: a transportation plan. It is not a collection of isolated roadway plans, mass transit plans, bikeway plans, or sidewalk plans. It is a *transportation* plan that provides for each of these and integrates them so that people and goods can move efficiently (and even pleasantly).

- All modes of transportation must receive fair consideration for funding. Alternative modes won't be considered mere niceties to be embroidered onto roadway projects, but rather as serious competitors for funding and for allocation of space in public ways. Transportation planning must institutionalize this point of view.
- The City of Portland does not act in a vacuum. This Plan promotes a coordinated, regional approach to the issues. Portland competes on many levels with surrounding communities for its economic and civic livelihood. In choosing measures to change transportation, it must consider whether the choices will put it at serious disadvantage. Portland can neither unilaterally change the transportation behavior of consumers who have choices outside the City's limits, nor unilaterally impose its solutions onto its neighbors. Many of the issues presented in this plan transcend local boundaries. Soon there must be a wider, regional dialogue so that Greater Portland can envision and apprehend a progressive future in transportation with the wisdom and will to ensure our collective quality of life.

The Transportation Plan is not a detailed action plan. It acknowledges, in some instances, need for more study. But it is a blueprint for transportation policy in Portland. And the blueprint is one of change.

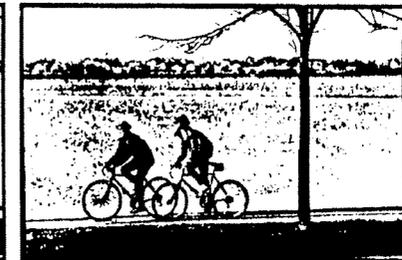
Casco Bay Weekly

THREE BEARS LOOKING FOR A JAM

Perfumed Scorpion finds a place that's just right to play their inventive jazz — at café no. See page 29.



LEARNING TO WALK



The Back Cove Pathway attracts people from all walks of life.

A new walking and biking path between the Back Cove and the Old Port may lead Portland into a new era of transportation planning

■ By Wayne Curtis
■ Photos by Tomer Harbert

Wander over to Back Cove Pathway late some afternoon. You'll see a steady stream of people passing by — joggers, power walkers, bikers and strollers. Some glide and some wobble, but they all share one trait. They move under their own power, without consuming fossil fuel or contributing to congestion and frayed nerves.

An archaic way to get around? Hardly. Many forward-thinking urban planners envision people moving around cities this way in the future. Of course, there's a problem at the Back Cove. Travelers aren't getting anywhere. They leave from Shop 'n Save, and they end up at Shop 'n Save. The pathway loop is convenient for recreation, but not too useful for transportation.

That may soon change.

Portland Trails, a non-profit land trust organization, has been promoting a vision of a local pathway network for which the Back Cove would serve as the hub. And after two years of quiet negotiations, they're ready to add the first spoke, connecting the cove with downtown.

In mid-April the Trust for Public Lands (TPL), acting on behalf of Portland Trails, purchased an option on a 30-acre, 1.7-mile abandoned railway that runs between the Casco Bay Lines ferry terminal on Commercial Street and the Burnham and Morrill Co. baked bean factory near the inlet to Back Cove.

If all goes according to plan, by fall the state and city will own the rail corridor and begin construction on a new waterfront pathway for recreation and non-motorized transportation. When completed, the pathway will allow bicyclists and pedestrians to move between Portland's western neighborhoods and the Old Port without facing roadway hazards.

City and state officials still have a number of details to work out before committing to the project. But they need to hurry. On May 31, TPL must choose whether to exercise its option... or let it expire.

Continued on page 8

TREAT MOM RIGHT. SEE CBW'S MOTHER'S DAY DINING GUIDE, PAGES 34-35. BULK RATE

Local newspaper headline heralding a new way to thinking about transportation

II. EXECUTIVE SUMMARY

GUIDING PRINCIPLE

- To provide maximum mobility in a transportation system which encompasses all modes, balances competing objectives, and promotes the economic vitality and quality of life of Portland. (See chapter III)

Overall Goal

- By 2000 to reduce the share of work trips by the City's residents in single-occupant autos from 68% to 50% (just under the share briefly achieved following the oil crisis of the late 1970's). At the same time, increase the share of trips by other modes:
 - Car pooling, from 12% to 15%
 - Public transit, from 4% to 10%
 - Bicycling, from 1% to 5%
 - Walking/working at home, from 15% to 20%

KEY ELEMENTS

- Consortium of transit agencies to coordinate mass transportation
- "Traffic demand management" to diversify modes of travel to the workplace
- Eventual commuter rail to the Peninsula
- Basic bicycle network in place within five years
- Intermodal regional transport centers to move goods and people efficiently
- Local transportation districts with goods and services within easy reach of residents and equipped with local transport centers
- Traffic "calming" and diversion of through-traffic
- Neighborhood streets as multipurpose, public spaces
- Diverse, compact patterns of land use
- Seven pilot projects to test transportation concepts in the City

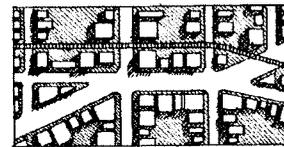
ISSUES AND POLICIES

The policies in this Plan are set forth by geography: how people and goods move through neighborhoods; how they move from place to place within the City; and how they move into and out of Portland to and from the larger region.

The policies are organized in this way because no single system (bus, bicycle, road, etc.) can be considered out of the context of the entire system. Public transportation will not succeed unless land uses are organized to make it viable. A system for moving goods nationally and internationally will not work without interconnections among air, rail, road, and sea. A system of bicycle lanes must be part of a road system that respects them, with points of transfer that allow for shifts from bikes to buses or ferries. A system for pedestrians won't be used unless neighborhoods are designed as walkable places, with destinations close by and with adequate protection from auto traffic cutting through.

However, for simplicity, this executive summary presents the issues and policies by system or by topic. It is hoped that this will allow the reader to ascertain at a glance what is proposed for a specific element of the transportation network. But you are encouraged to review the full plan and to appreciate how intertwined and interdependent all the elements are. Successful implementation of one element almost always will depend on the concurrent implementation of other elements.

The Link between Transportation and Land Use

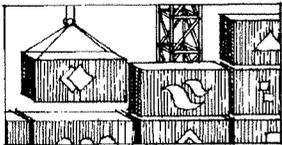


The patterns of land use that have evolved at all levels--regionally, in the City, and even in neighborhoods--increasingly favor just one mode of transportation: the automobile. Public policy has assured that this one mode will be the most convenient. By hiding the true expense, it also has assured that it will be the least costly to the individual. This policy has maximized the freedom that comes with personal transportation. But it also has spread out the City and region and contributed to traffic congestion, air pollution, less livable urban neighborhoods, and a weakened city center.

This Plan seeks to “level the playing field” between the auto and other modes of transportation. Specifically:

- Portland should be an advocate at the state and regional levels for more compact patterns of land use. This includes supporting federal and state policies that recognize the total social costs of the auto and a spread-out pattern of land use, amending the State’s Site Location Act to favor development in “growth centers,” and working with regional employers to “monetize” off-street parking. (See chapter VI, Regional Issue 1)
- Within Portland, the City should support patterns of land use that create opportunities for people to meet more of their everyday needs close by and that make public transportation a viable option. (See chapter V, City Issue 1, and chapter IV, Neighborhood Issue 1)
- Within neighborhoods, the City should seek the advice of residents as to the types of services they would like close by, and should legitimize so-called “non conforming uses” that are in fact important parts of the neighborhoods. (See chapter IV, Neighborhood Issue 1)

Movement of Goods

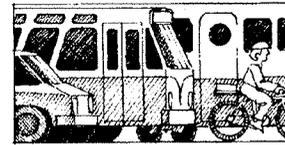


Portland is a regional transportation center. This role is crucial to the City’s economic vitality. To preserve and enhance this role, the City should:

- Plan comprehensively for regional, intermodal transportation centers at the Jetport, the new AMTRAK station/Bus Terminal area, one or more Turnpike interchanges, and along the waterfront from the International Ferry Terminal to Merrill’s Marine Terminal. In each case the center should be fed by multiple modes with direct access to the regional transportation system.
- Continue to develop the infrastructure needed to support air, rail, and sea travel.

- Assure that industries with regional and interstate markets have adequate access to the interstate highway system to minimize commercial traffic in residential districts.
- Proceed with study, consistent with ISTEA guidelines, of a West-End Bypass to connect the commercial waterfront to I-295. (See chapter VI, Regional Issue 2)

Transport Centers



Transport centers are places where travelers or goods arrive by one of several possible modes and can choose to switch to another of several possible modes that best meets their needs. Such centers should be developed at both the regional and local levels.

Regional

By their nature, regional transport centers (airport, rail stations, etc.) can be expansive, noisy, and in conflict with nearby neighborhoods. In the further evolution of these centers, the City should:

- Give formal, early voice to neighborhoods as regional transportation facilities develop.
- Use land use regulations to anticipate and minimize conflict.
- Proceed on the assumption that a balance can be struck between the needs of the centers and the needs of neighborhoods, and that public participation can help find creative solutions to transportation issues. (see chapter VI, Regional Issue 3)

Local

Local transport centers, unlike the regional centers, are small-scale and city-oriented. The City should:

- Develop prototypical designs for the centers in cooperation with METRO and the nearby neighborhoods where they will be located. At a minimum, the local transport centers should accommodate bus, taxi, bicycle, pedestrians, and ridesharing.
- Locate one or more centers in each of eight designated transportation districts. They should be part of already established activity centers, such as shopping areas, schools, and community centers. They should be developed, wherever possible, in cooperation with existing businesses who can benefit from the increased traffic while agreeing to assist with maintenance. (See chapter V, City Issue 3)

Public Transportation

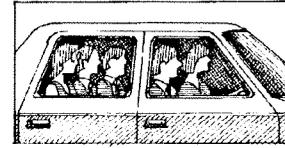


Public transportation has been losing ground in Portland for 20 years. Regionally, public transportation is largely unavailable and, where it is available, often is not coordinated.

- The City should encourage mass transit agencies in the area to create a “seamless” network of passenger services. The mass transit agencies (including METRO, Casco Bay Island Transit District, South Portland Bus Service, and the Regional Transportation Program) should be urged to form a consortium for joint marketing, purchasing, and coordination of routes and schedules. Their services, in turn, should be coordinated with air and rail travel.
- METRO should be urged to fully integrate its routes with the City’s park-and-ride lot and to equip its buses and bus stops with a variety of conveniences for users. (See chapter V, City Issue 2)
- METRO should be considered for bus service to the City’s middle and high schools. (See chapter IV, Neighborhood Issue 5)
- Commuter express buses should be developed between Portland and its principal suburbs. Financial assistance for intercity bus services should be sought under the appropriate Federal programs.

- Commuter rail service should be explored on existing rail lines. (See chapter VI, Regional Issue 4)

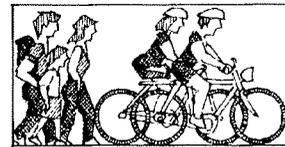
Ridesharing



After rising in the 1970’s, carpooling declined in the 1980’s. “Ridesharing” includes carpools and vanpools. Park-and-ride lots support ridesharing by providing a point of concentration for drivers from widespread areas. Especially in the low-density, second- and third-tier suburbs, ridesharing may be the only feasible alternative to the single-occupant auto.

- The network of park-and-ride lots should be expanded along freeways and principal arterials in Greater Portland, where practical in existing, underused lots. This should be accompanied by an aggressive marketing program aimed at both employers and commuters. (See chapter VI, Regional Issue 5)

Bicycles and Pedestrians



Bicycling and walking have been afterthoughts in transportation planning. Experience shows that where proper facilities are provided, including safe and comfortable routes and accommodations, such as secure storage and showers at the point of destination, a sizable number of people will use them, even in northern climates.

- The City should elevate and institutionalize bicycling and walking as legitimate parts of the transportation system by, among other things, assigning to a specific staff person in City government the duties of a bicycle/pedestrian coordinator. (See chapter VI, Regional Issue 6)
- A continuous, regional network of bikeways should be promoted and developed. In the City, a 5-year funding and construction program should be established to implement a basic bicycle route recommended by this Plan. (See chapter V, City Issue 4)

- Bicycle carrying racks should be incorporated on METRO's buses and on ferries, with use at no charge. Major employers should be encouraged, and large development projects should be required, to incorporate showers, lockers, and secure storage for bicycles into their facilities. (See chapter VI, Regional Issue 6)
- The ban on bicycling to elementary schools should be lifted, where appropriate, concurrent with the implementation of safe routes and facilities and a program to make drivers aware of young bicyclists. (See chapter IV, Neighborhood Issue 5)
- Missing links in the pedestrian network, especially to public facilities, should be constructed, and streets should be designed to make walking easy and comfortable. Portland Trails should be used wherever possible as part of a continuous system of walkways and bikeways. (See chapter V, City Issue 4)

Streets

Congestion



Automobile congestion has to be re-thought. First, feasible alternatives to the auto have to be offered. Second, access between arterials and private property can be better managed. Third, congestion can itself function as a management tool in certain situations. Fourth, alternative routes can be considered to siphon through-traffic from local roads. Creation of new street capacity should not be considered unless it meets other important public goals besides relief of the congestion.

- The City should adopt a "travel demand management" (TDM) program that includes (a) assigning a specific staff person in City government to review, monitor, and coordinate all TDM efforts, (b) adoption of a model TDM ordinance that provides incentives to and/or requires new development to incorporate measures to discourage use of single-occupant autos and to encourage other forms of transportation, and (c) working with major employers to promote alternatives. (See chapter V, City Issue 5)

- Access from the City to the interstate highways should be improved if it can be shown to significantly relieve through-traffic on local streets. (See chapter VI, Regional Issue 7)
- For each arterial that cuts through a neighborhood, a specific strategy should be designed to deal with the traffic. Three approaches are recommended, depending on the arterial: (a) aggressively try to reroute traffic by reducing roadway capacity, (b) "calm" the traffic by using new design elements to inform drivers about the nature of the street, without reducing capacity, or (c) take steps to move peak hour traffic through the area as efficiently as possible. (See chapter V, City Issue 6)
- Motor vehicle laws designed to protect neighborhoods and pedestrians should be strictly and aggressively enforced. (See chapter V, City Issue 6)

Neighborhood Streets

Neighborhood streets are important public spaces--not only to move traffic, but also for recreation, socializing, walking, bicycling, parking cars, street trees and landscaping, and even vending. They have increasingly been turned over to the auto. In defense, new neighborhoods are often designed with dead-end streets. This stops through-traffic but also destroys the rich interconnections that allow multiple paths around neighborhoods. People are forced onto busy streets even for simple neighborhood trips. The City should:

- Promote and renew interconnections within neighborhoods, even if the paths are exclusively for bicyclists and walkers.
- Design, promote, and use neighborhood streets as multipurpose, public spaces that are recognized as essential to vibrant neighborhoods. Through both the physical design of the streets and enforcement of motor vehicle laws, multiple use should be protected and promoted. (See chapter IV, Neighborhood Issues 2, 3, and 4)

Off-Street Parking



Making parking easily available encourages the use of autos, often at the expense of walkable commercial districts. But to do otherwise may jeopardize the attraction of Portland's commercial districts, including Downtown, to retailers, major office users, and others essential to

Downtown's economy.

- With minor revisions in emphasis, the City should continue to implement the Downtown parking policies adopted by the City Council in 1992. (See chapter V, City Issue 7)
- The City should consider a continuum of approaches to deal flexibly with off-street parking standards. (See chapter V, City Issue 1, and chapter VI, Regional Issue 1)

Institutional

Carrying out the policies of this Transportation Plan will require a greater degree of awareness of how many actions of the City ultimately affect transportation.

- The City should integrate transportation-related functions (traffic engineering, parking, enforcement, bicycle/pedestrian coordination, etc.) that cross over several City departments such that the policies of this Plan can be consistently pursued. (See chapter V, City Issue 5)
- Fully include transportation within the purview of the City Council's Public Safety Committee, and draw upon the public to help solve transportation problems in the spirit of ISTEA and the Sensible Transportation Act. (See chapter V, City Issue 9, and chapter VI, Regional Issue 3)

PILOT PROJECTS

To build momentum toward a new transportation future, the City should undertake within the next one to three years the following seven pilot projects (See Figure I-1):

- 1 Stevens Ave.: use of design to inform users about the high volume of foot traffic, especially school-aged children, and diversion of through-traffic
- 2 Shop 'n Save Plaza (Forest Ave.)/USM campus/Deering Oaks area and Northgate area: demonstration of low-cost local transport centers serving multiple modes (bicycle, walking, transit, ridesharing)
- 3 Peninsula: shuttle bus loop to serve Downtown workers and tourists
- 4 Riverton and Sunnyside areas: interconnection of neighborhood street networks
- 5 Forest Ave. between Woodfords Corner and Morrills Corner: high density residential/mixed use development in a transit corridor
- 6 Outer Congress Street: package of measures for "travel demand management"
- 7 North Deering to Downtown: comprehensive demonstration project to increase bus ridership

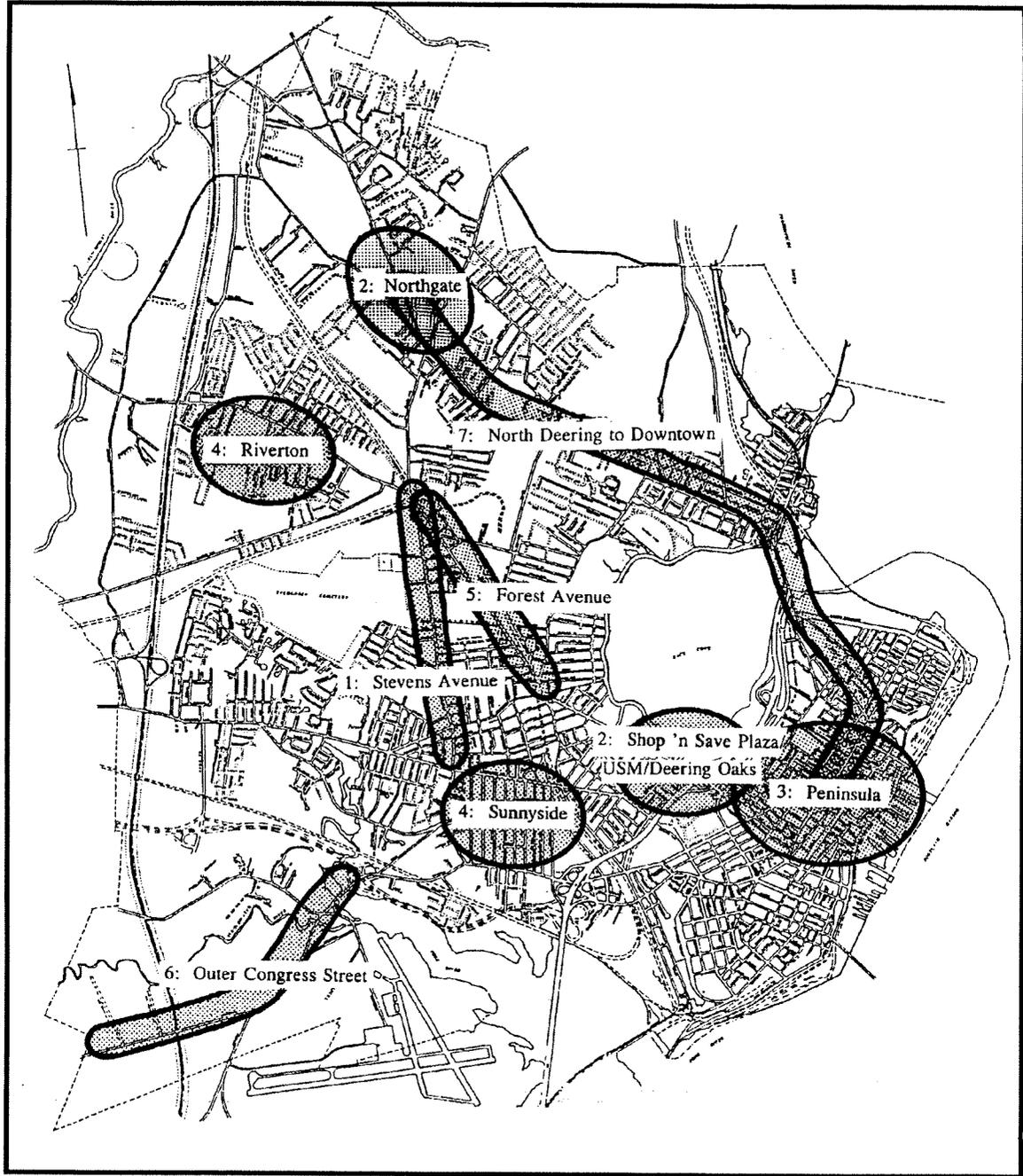


Figure I-1 Pilot projects

III. GOALS

Guiding Principle

To provide maximum mobility in a transportation system which encompasses all modes, balances competing objectives, and promotes the economic vitality and quality of life of the Portland community.

Goal #1: ENVIRONMENT AND ENERGY

To establish a transportation system responsible to current and future generations in consumption of resources and protection of the environment.

- Minimize negative environmental impacts.
- Minimize energy consumption, especially nonrenewable energy resources.
- Factor direct and indirect costs and benefits in decision-making. Impacts which are not easily expressed in dollar values should be considered.
- Promote public awareness about the global and community impacts of behavior.
- Reduce the percentage of trips by single occupant motor vehicles.

Goal #2: INTEGRATED INTERMODAL

To provide a convenient, integrated, intermodal transportation system.

- Provide physical connections between various modes of transportation.
- Provide operational connections between various modes of transportation.
- Make improvements that are contextually appropriate.

- Provide the maximum modal choice for transportation consumers at the greatest convenience level possible, with special attention to the needs of the handicapped and elderly.
- Foster a sense of mutual respect among the various modes of transportation, so that, for example, pedestrians and bicyclists will not feel threatened by motorists.
- Foster a sense of safety and security so that riders of mass transit will not feel threatened.
- Educate the public on modal choices available.

Goal #3: STRUCTURED SYSTEM

To achieve a transportation system appropriately structured and designed to safely and effectively move goods and people.

- Create a neighborhood street system characterized by a network of interconnected streets which minimizes through traffic in residential neighborhoods.
- Appropriately scale and design streets and highways and other transportation infrastructure to serve local traffic, destination traffic, and through-traffic.
- Foster domestic and international transportation and commerce links that are vital to the economic health of the City and region.

Goal #4: LAND USE AND TRANSPORTATION LINK

To create a comprehensive transportation plan linked with land use planning policies in the City and region, that will guide decision-making for development and infrastructure investment.

- Future growth should not foster auto dependencies.

- Provide appropriate land and infrastructure for development opportunity in the shipping/distribution/transport industries.
- Weigh investment decisions for automotive infrastructure against investments in alternative transportation modes.

Goal #5: PERFORMANCE TARGETS & PHYSICAL PLAN

To set performance targets and create a physical plan that delineates specific improvements to the transportation system.

- Establish aggressive but realistic targets for the modal split within the transportation system for the short, medium, and long term. (See Table III-1. The suggested 2000 goal returns modal splits to approximately the splits of 10 to 20 years ago. Progress should be monitored and longer term goals set accordingly.)
- Create a funding strategy that realizes maximum resources from all available sources and allocates those resources so as best to achieve the modal split targets contained in this plan.

Goal #6: DESIGN AESTHETIC

The design of system components shall represent a high standard of aesthetic and functional quality.

- Build visually attractive and durable infrastructure such as roadways, pathways, and bridges.
- Set high architectural standards for terminal buildings, stations, shelters, garages, and other facilities.
- Respect and enhance the built and natural environment through architecture, landscaped, and engineered features.
- Preserve significant historic and natural resources.

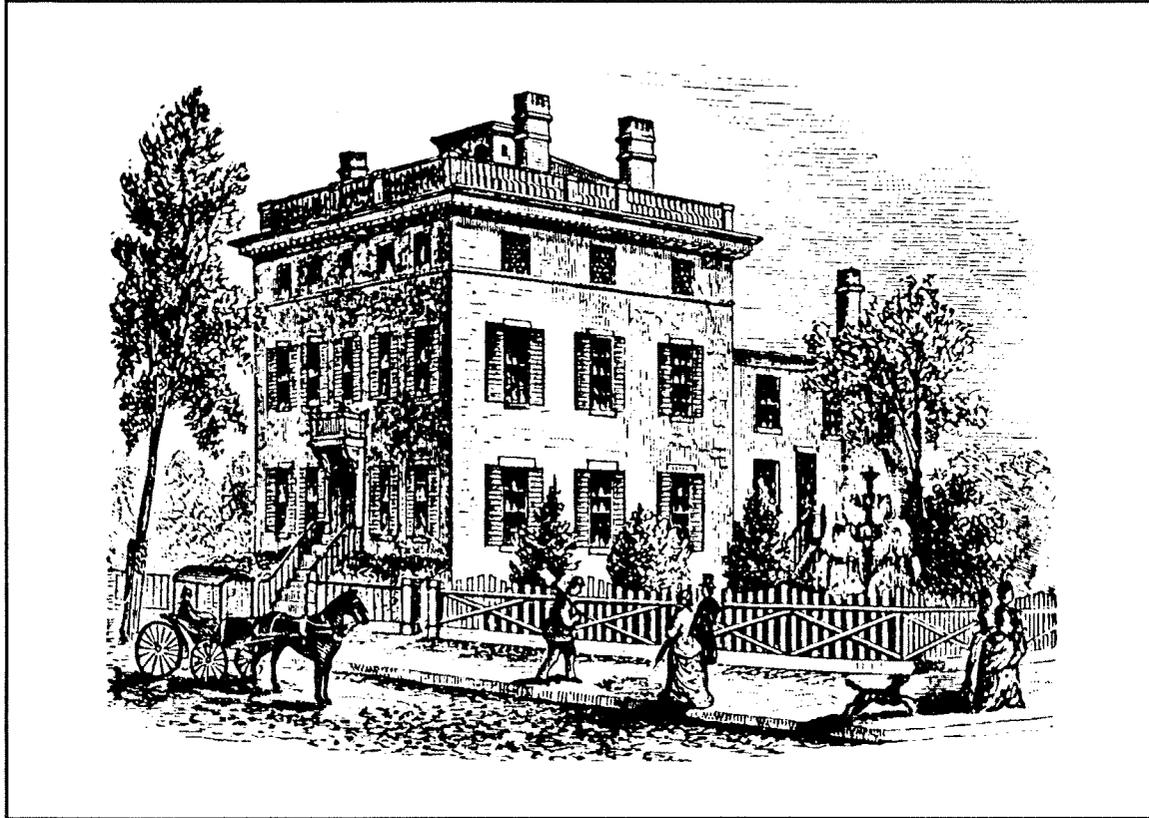
**Table III-1
Goals for Work Trips by Mode**

How Portlanders get to work:

Mode	1970	1980	1990	Goal 2000	10-Yr. Change
Drive alone	54%	52%	68%	50%	-18
Car Pool	13%	20%	12%	15%	+3
Public transit	10%	8%	4%	10%	+6
Bicycle/other	2%	2%	1%	5%	+4
Walk/work at home	21%	18%	15%	20%	+5

Source:U.S. Census (1970, 1980, 1990)

IV. MOVING LOCALLY: THE NEIGHBORHOODS



Courtesy of Greater Portland Landmarks

Chapter Summary

1. *Some neighborhoods lack routine daily services within walking distance, and where such services do exist, they often are considered “nonconforming” uses. The City should work with neighborhoods that lack the daily necessities to identify the best locations for them and to assure that existing services will be continued.*
2. *Outside of the City’s older neighborhoods, the system of neighborhood streets often lacks safe and convenient interconnections. The City should promote the interconnection of neighborhood streets and pathways, so that there are short, easy paths of travel to key destinations by foot and bicycle, as well as auto.*
3. *Neighborhood streets are increasingly used solely to move traffic. Neighborhood and downtown streets and streets through the City’s parks should be considered to be--and designed as--multipurpose public spaces.*
4. *Design standards for neighborhood streets should be revised where practical to conform to notions of traditional neighborhoods and multiple use.*
5. *The use of public transportation and other alternative modes has been nearly eliminated from the everyday lives of the City’s youth. The City should repeal the ban on bicycles at elementary schools, where appropriate, and should reinstate METRO as the provider of bus service to the middle and high schools.*

Neighborhood Issues and Policies

Issues of transportation are most personal in neighborhoods. Either the neighborhood is safe for walking or it is not. Either it is protected from noisy through-traffic or it is not. Either things needed day-to-day are within easy reach or they are not. Either parents feel easy about letting a child cross streets or ride a bicycle to school or they do not. Either backing out of a driveway onto the street is a daily risk or it is not.

Before the motor age, the city's neighborhoods were of necessity designed as walkable places. Blocks were short and usually designed in a grid pattern, so that there were multiple ways to get to the same place. Lots were narrow, so that distances between places were short. Within or next to neighborhoods were small-scale stores and services accessible to the neighborhood's residents. With the advent of the trolley, neighborhoods developed farther from the central business district of the City, but even then the neighborhoods were compact and within a quarter- or half-mile of the trolley stop.

As the auto became prominent and affordable to the average family, the design of neighborhoods changed. A suburban ideal took hold. It pushed new neighborhoods farther from the hubbub of the city center. Within neighborhoods, land uses were strictly separated. Lots became wider and larger. Streets were purposely designed to discourage connections and through-traffic. Blocks were lengthened, cross streets were reduced, and dead ends with cul-de-sacs became the norm. And the suburban neighborhood became the model for zoning ordinances.

Figure IV-1 illustrates the difference between the traditional neighborhood street network and the contemporary, suburban approach.

The purpose of the street itself also changed. Prior to the 1950's and the dominance of the auto, the street, including the width of its right-of-way, was by its nature an important public space. Transportation was only one of its purposes. It was also a place of socializing, recreation, and even commerce. Buildings, both homes and businesses, had a specific and often intimate relationship with the street. They enclosed the street and their inhabitants were visually and socially connected to it. The dominance of the auto in the design of contempo-

rary streets and neighborhoods has converted many city streets into single-purpose spaces, and that purpose is to move automobile traffic as efficiently as possible. Where that purpose is tantamount, it is difficult for the other purposes to coexist. In fact, other purposes--even other transportation-related purposes such as bicycling or on-street parking--are diminished or eliminated.

The spread-out location and design of neighborhoods and of the transportation system that serves them was made possible by the auto. In turn, neighborhoods created during the last three decades have become largely dependent on the auto for even the most basic transportation tasks. The auto is at once liberating and confining.

Balancing the realities of the motor age with the imperative of highly livable neighborhoods is at the heart of the transportation issues and policies at the neighborhood level. And it bears directly on the health of the City. If residents who live in the City by choice come to believe their neighborhoods are not safe for walking, are not protected from noisy through-traffic, don't provide easy access to the daily necessities, don't give their children the freedom to move about independently--then the City has lost much of its competitive advantage over the suburbs. Portland still is in the position to preserve its advantage and to help families choose to remain.

Neighborhood Issue 1 Neighborhood Land Use

Some neighborhoods, especially those more recently developed, lack even routine daily services within walking distance. Where such services do exist, the zoning ordinance often considers them to be nonconforming uses.

Policies

Vibrant neighborhoods include nearby, small-scale commercial areas that provide both convenient service and natural meeting places. Routine, daily services should be within walking distance of residents of all neighborhoods, as long as the businesses providing the services are small-scale, are designed compatibly with residences, and fit into the fabric of the neighborhood.

The City should work with individual neighborhoods to identify suitable locations and approaches to accommodate neighborhood businesses.

The City functions as a series of neighborhoods. Oakdale, Deering Center, and Munjoy Hill, for example, are defined areas of the City and evoke certain images of how people live. A basic concept of neighborhood is that it functions as a “unit” in which residents (and especially children) can move about easily and safely and meet at least some of their basic, daily needs within their neighborhood.

Historically, the elementary school and religious institutions were the cornerstones of many neighborhoods. So were small neighborhood stores. All of these serve basic, daily needs and also are natural meeting places. They are part of the “glue” of lively neighborhoods. To the extent that new neighborhoods are designed without proximity or easy access to at least basic goods and services (the corner store, the bakery, the hair salon, etc.), and to the extent that small neighborhood commerce is replaced by single-purpose, auto-oriented commercial strips, the “glue” is lost.

The City has a well-established pattern of small-scale services that meets the needs of many of the neighborhoods. They are found in neighborhood centers such as Rosemont, Central Square, Pine Street, or “down front” on Peaks Island, or in freestanding locations along nearby arterials. While many of these areas are zoned as Neighborhood Business (B-1), many of the services are, in fact, “grandfathered” nonconforming uses, and thus in jeopardy of being lost if they are even temporarily discontinued. In addition, there is little available commercially zoned land that is appropriate for the establishment of new neighborhood services.

There also are neighborhoods, such as the outer North Deering area, Stroudwater, Ludlow Street area, and the Payson Park/Chevrus area of Ocean Avenue, that have limited access to neighborhood services.

See Action Box No. N-1.

Action Box No. N-1

To assure the opportunity for day-to-day services, of appropriate scale and design, within walking distance of all neighborhoods:

- Review the existing nonconforming neighborhood businesses and “legalize” those that are positive factors in meeting neighborhood needs.
- Explore mechanisms to allow the establishment of new neighborhood businesses without creating a proliferation of small B-1 districts. One method might be to establish a strict performance standard approach, including design standards, that would allow neighborhood businesses to locate outside of B-1 zones if the objective criteria are met.
- In neighborhoods without nearby services, work with residents to identify appropriate locations and/or approaches to accommodating these uses.
- Review the zoning ordinance’s land use standards to assure that the uses allowed in the B-1 districts are neighborhood-type businesses.
- Review the zoning ordinance’s land use standards to assure that neighborhood businesses are “good neighbors,” maintain the architectural character and fabric of the neighborhood, and are of an appropriate scale.

Neighborhood Issue 2 Street Network

Outside of the City's older neighborhoods, the system of neighborhood streets often lacks safe and convenient interconnections. This system of street design protects residents from through traffic but also makes them highly dependent on the auto even for simple tasks.

Policy

The City should promote the interconnection of neighborhood streets and pathways, so that there are multiple paths of travel to get to destinations within and between neighborhoods by foot and bicycle, as well as auto.

The traditional network of interconnected neighborhood streets offers several advantages. By giving multiple ways to reach the same point, it spreads out local traffic, and it is less likely that any one street will be burdened with the problem of cross-cutting. It allows the neighborhood's residents to get to neighborhood destinations--a school, a store, a friend's house--without having to venture onto an arterial. It makes trips more direct, often cutting down distance and making it easier to think about walking or bicycling.

If neighborhoods are thoughtfully located within larger transportation districts, with arterials and collectors treated in a way that respects the integrity of neighborhoods--as discussed in Chapter V--the need for the dead-end street as a defense against heavy flows of through traffic is lessened. In turn, the opportunities for the neighborhood to function as a social unit, which depend on the physical interconnections of its streets and pathways, are heightened.

The City, of course, cannot dramatically change what already has been built. Many of the city's neighborhoods already have a pattern of interconnected streets. In these cases, the task is to preserve the interconnections. Streets, for example, should not be dead-ended, except perhaps where a neighborhood street is being inappropriately and dangerously used by regional traffic as a through-street; even then, alternatives to eliminating interconnections should first be explored. As a rule streets in the Woodfords area should not be cut-off by

rail lines. In established neighborhoods that don't have an interconnected network, there may be opportunities to make connections: via walkways and bikepaths, for example.

See Action Box No. N-2.

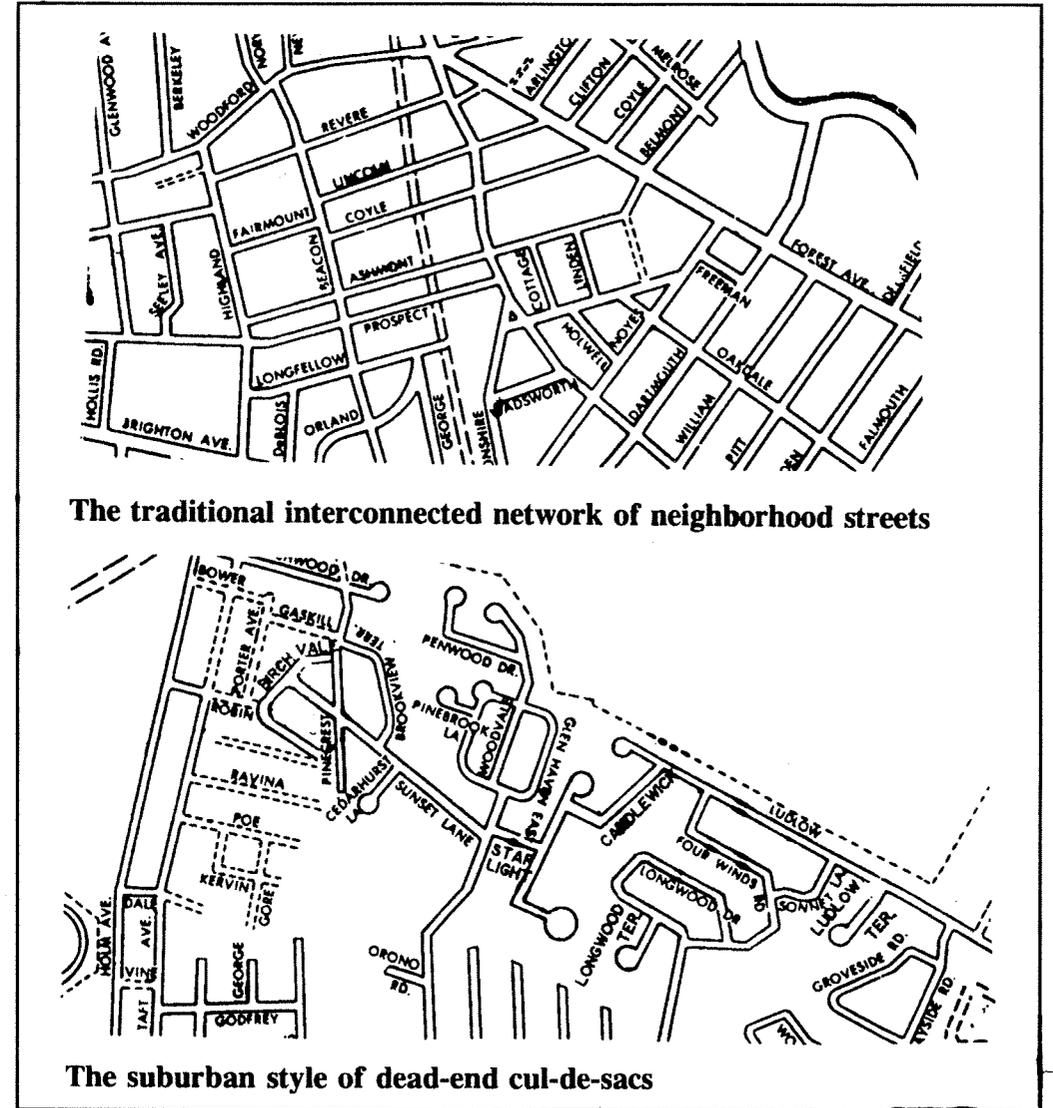


Figure IV-1

Action Box No. N-2

To promote the interconnection of neighborhood streets and pathways:

- Require through the City's subdivision ordinance that new development be integrated into the overall neighborhood to provide a continuous travel network without dead-ends (keeping in mind that traditional "grid" patterns must be modified to fit the natural conditions of the site).
- Encourage subdividers to pay attention to the City's old street plats, allowing for internal re-configuration of streets but preserving connections to existing roadways.
 - Explore the extension of paper streets:
 - off Allen Ave. for connections to Canco Road or Washington Ave.
 - off Forest Ave. for connections to Warren Ave. or to streets that in turn connect to Allen Ave., Washington Ave., and/or Bishop Street
 - off Ray street for connections to Ocean Ave.
- Require new developments to provide pedestrian and bicycle linkages to the surrounding neighborhood and to neighborhood services.
- Use natural resources corridors and "greenways" as part of the pedestrian system.
- Program improvements to neighborhood sidewalks and bicycling facilities.
- In established neighborhoods that lack an interconnected system of streets or pathways, identify key potential linkages--for example, to elementary schools or to main streets with sidewalks--and explore the possibility of gaining easements for walkways and bike paths.

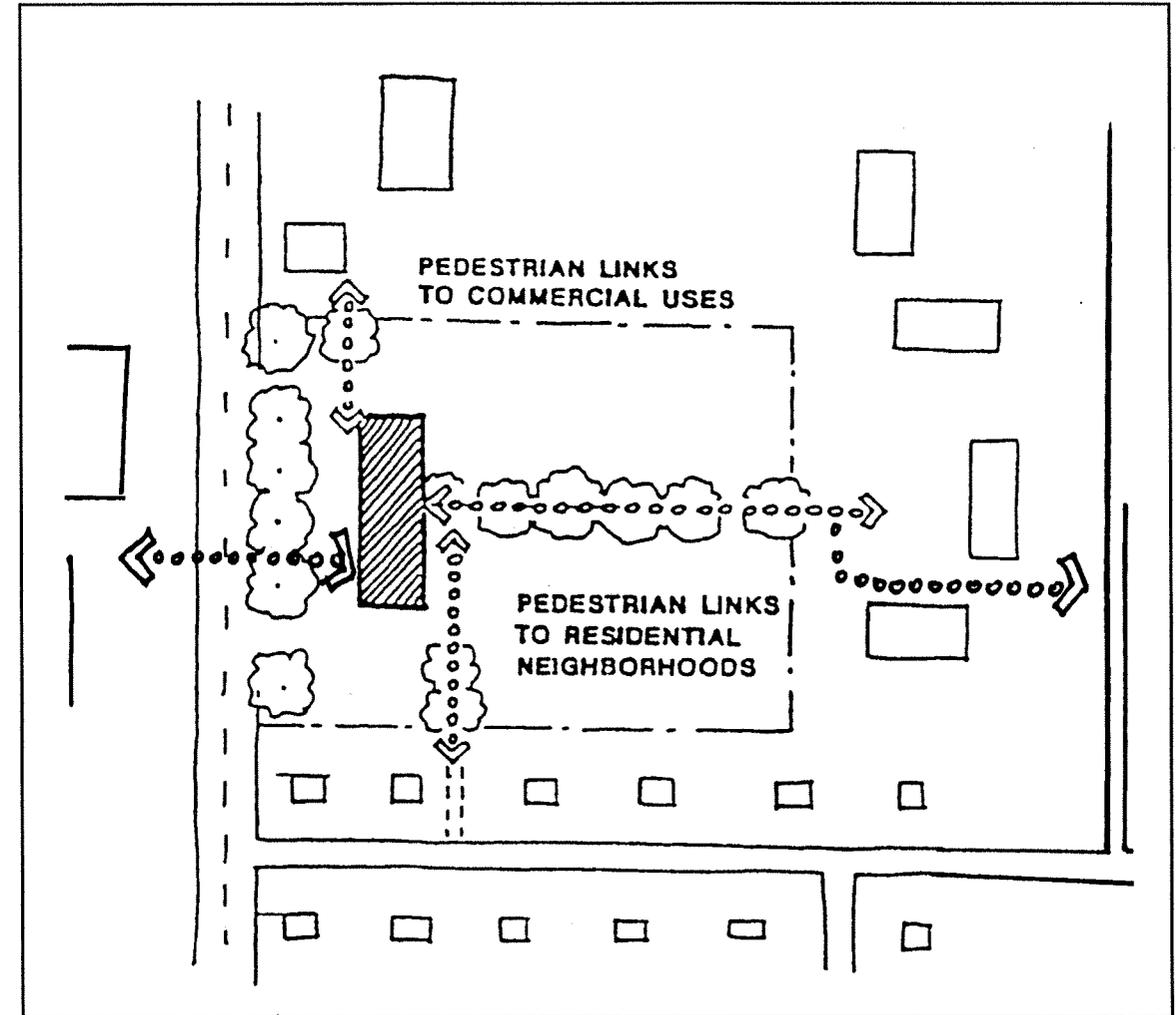


Figure IV-2: Pedestrian interconnections between commercial and residential uses

Neighborhood Issue 3 Streets as Public Space

Neighborhood streets are increasingly used as single-purpose spaces: to move automobile traffic as swiftly as possible. In some cases, arterials and collectors cutting through neighborhoods have been given over almost entirely to this one purpose.

Policy

Neighborhood streets, Downtown streets, and streets through the City's parks should be considered to be--and designed as-- multipurpose, public spaces.

The "street" includes the whole width of the right-of-way. In addition to the paved street, the right-of-way often has within it esplanades with trees and sidewalks on one or both sides of the street. These are part of the multiple purposes of this public space: walking and neighborhood greenery. The paved street itself should be designed for multiple purpose: in addition to the movement of automobile traffic, there can be provision for bicycling, the parking of vehicles, and informal, spontaneous recreation and socializing. These purposes usually are limited or eliminated on arterials and collectors that have been entirely given over to automobile traffic. They should be selectively reintroduced where the goal is to slow down ("calm") or divert through traffic to other roads. (See City Issue 6 in Chapter V.) And on neighborhood streets that are not meant to serve commuter traffic, but rather serve primarily the neighborhood's traffic, these purposes should be specifically designed into the street.

In addition to neighborhood streets, Downtown streets and streets through the City's parks offer good opportunities for multiple use. Downtown's retail streets, for example, can be (and are) converted to festival streets from time to time and can be used as an extension of the marketplace and for recreation.

See Action Box No. N-3.

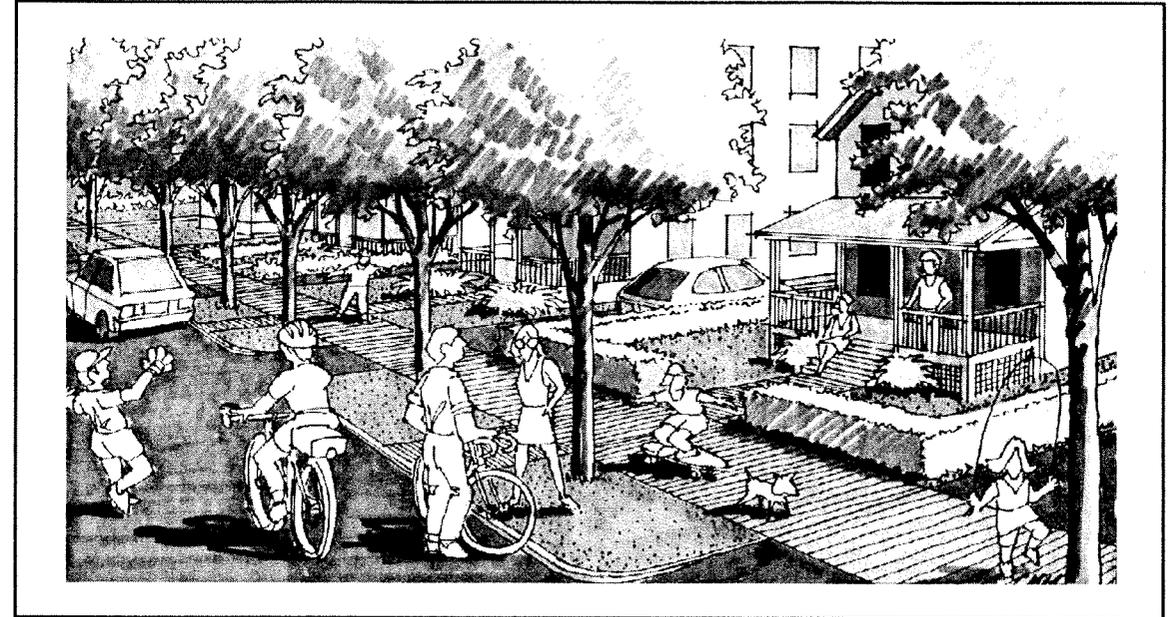


Figure IV-3: Neighborhood street as multipurpose, public space

Action Box No. N-3

To promote the neighborhood street as a multipurpose, public space:

- Upgrade facilities along neighborhood streets for bicycles and pedestrians, as illustrated in Figure IV-3.
- Assure that the subdivision ordinance and the City's street design standards include provisions for on-street parking, esplanades sufficient for shade tree plantings, and sidewalks.
- Where pavement is narrowed as a "calming" technique, combine this with the widening of sidewalks and/or consider bicycle lanes, landscaping, open space that can double as snow storage in the winter, or other uses of the right of way.
- In the reconstruction of neighborhood streets, consider the competing uses of the right-of-way.
- Assure that motor vehicle laws are enforced for the safety of other users of the public streets.

Neighborhood Issue 4 Street Design Standards

Design standards for streets do not conform to the notions of traditional neighborhoods and of the street as a multipurpose, public space.

Policy

The City's street design standards as they apply to local or neighborhood streets should be reviewed and where practical revised for consistency with principles of traditional neighborhood design.

The physical design of the street and its right-of-way will determine whether the street actually will "feel" like an inviting public space and whether the concept of an interconnected network of neighborhood streets actually will work. Portland has ample examples of streets that can serve as models: Craigie, Deering, Noyes, Longfellow Park, and many others. Practical considerations, including topography and other natural conditions, may not always allow replication of their lay-outs and dimensions. However, the City's design standards for local streets should emulate these successful urban streets rather than suburban models.

See Action Box No. N-4.

Action Box No. N-4

Elements of street design in traditional neighborhoods include:

- length of blocks (typically not longer than 300 to 400 feet, with the average perimeter of lots not exceeding an average of 1,300 feet)
- very limited use of dead ends
- where uses are primarily residential, a 50-foot right-of-way to accommodate sidewalks, esplanades, and on-street parking as well as travel lanes
 - in higher density neighborhoods, two 10-foot travel lanes, parallel parking on at least on side, esplanades, and sidewalks both sides
- in lower density neighborhoods with ample room for off-street parking, two 8-foot travel lanes, 8-foot parallel parking each side, and 10-to-12 foot sidewalk, with stores pulled up close to the sidewalk
- street trees and street lamps at regular intervals
- curb radii of not more than 15 feet, less in major foot traffic corridors
- use of bump-outs and safety islands on wider streets

Sources: Performance Streets, Bucks County Planning Commission: Traditional Neighborhood Development Ordinance, Foundation for Traditional Neighborhoods, Ossipee, N.H., 1990

Neighborhood Issue 5 Education of Youth

The idea and use of alternative modes of transportation have been nearly eliminated from the everyday lives of the City's youth. Lacking any habit of using these modes, the youth are not likely to think of them as natural or credible alternatives as they become adults.

Policies

Urge the School Committee to repeal the ban on riding bicycles to elementary schools.

Urge the School Committee to consider reinstating METRO as the provider of bus service to the City's middle and high schools and in other ways introduce students to mass transit.

With proper education, the proper provision of bicycling and pedestrian facilities as recommended elsewhere in this Plan, and proper supervision, the use of bicycles and of the public bus system can be safe and convenient alternatives for transporting students to their schools. In addition to issues of safety, it is important that the schools--like other major destinations discussed in this Plan--provide for the proper storage of bicycles once at the schools as protection against theft.

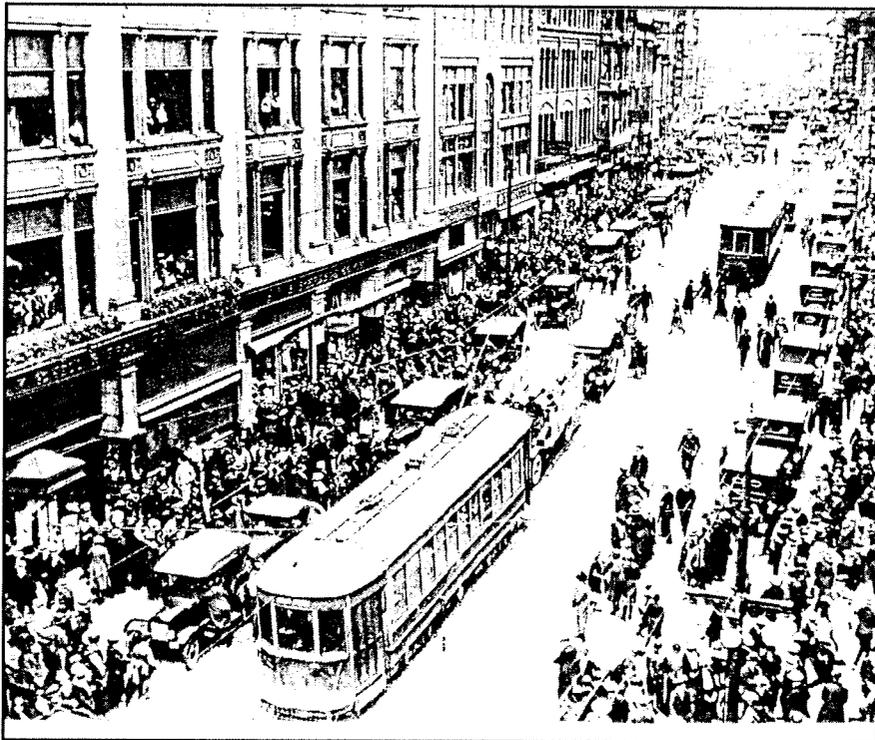
See Action Box No. N-5.

Action Box No. N-5

To promote the use of alternative modes of transportation among the City's youth:

- As recommended elsewhere in this Plan, give priority to upgrading walking and bicycling facilities, as necessary, that serve the City's schools.
- Include bicycle training courses, including safe bicycling techniques and rules of the road, in the regular curricula of the schools.
- Coordinate bicycle safety and informational programs being conducted by various groups, such as police departments, schools, bicycle interest groups, bike shop owners, and others.
- Repeal the ban on riding bicycles to elementary schools wherever and whenever safe bicycling routes exist.
- Prepare a feasibility study, including cost estimates and fleet requirements, for the provision by METRO of bus services to Portland's middle and high schools.
- Urge cooperation between the schools and METRO to expand educational programs that will prepare the City's youth for the new, multimodal transportation environment being planned for our City.
- Install bike racks on buses and ferries.

V. MOVING FROM PLACE TO PLACE IN PORTLAND: THE CITY



From: E. B. Robertson, Remember the Portland, Maine Trolleys, 1982

Chapter Summary

1. *Land use in Portland has been decentralizing, making transportation by foot, bicycle, and bus more and more unlikely. The City should support patterns that create opportunities for people to meet more of their everyday needs close by, make public transportation a viable option, and sustain the traditional advantages of urban living.*
2. *Facilities for mass transit in the City are not fully in place. The City should work with METRO to assure swift, safe, and convenient service.*
3. *The City lacks local transport centers for easy shifts from one form of transportation to another. It should design and locate these centers in the midst of existing activity centers, such as shopping areas and schools, with close coordination with METRO.*
4. *Bicycling and walking in the City frequently have been squeezed out of the City's streets. The City should recognize them as important modes of everyday transportation and make provisions for funding and building the needed facilities.*
5. *New laws require states and cities to "manage" traffic before building new roads to accommodate it. The City should establish a program for "travel demand management."*
6. *Existing arteries cut through areas with established neighborhoods, chipping away at the neighborhoods. The City should (a) take steps to shift through traffic to more appropriate modes and routes, (b) implement strategies that balance the need to protect neighborhoods against the need to move traffic, (c) strictly enforce motor vehicle laws in the neighborhoods, and (d) use the City's fleet to set an example of how to drive with respect for and attention to foot traffic.*
7. *Making parking easily available Downtown encourages the use of autos and congestion; but to do otherwise may jeopardize the attraction of Downtown to retailers and major office users. The City should continue to implement the Downtown parking policies adopted by the City Council in 1992.*
8. *The islands' transportation needs, both between the mainland and the islands and on the islands themselves, are unique. The Casco Bay Ferry Terminal should continue to evolve as a multimodal local transport center. The Casco Bay Island Transit District should be a key component of the City's seamless web of mass transportation.*
9. *Federal and state law open the door to a stronger local and public voice in transportation decisions. The City should encourage the public to contribute creative ideas to meet transportation needs.*

City Issues and Policies

This chapter looks at how people move from place to place within Portland: from home in a neighborhood to work along an arterial or in Downtown, for example, or from home to a community shopping area. In considering this movement, it is helpful to divide the City into “transportation districts.”

Transportation districts should be employed to ease the mobility needed in the daily lives of the City’s residents. Within transportation districts, streets, land uses, and transportation facilities can be designed for short, easy, safe trips--to shop for groceries, to go to school, and to meet many day-to-day needs. At the same time, the interior of the districts can be protected from heavy flows of through traffic. Between transportation districts, connections can be designed to move people so they can take easy advantage of stores, jobs, cultural events, and the other resources of the City.

A properly conceived transportation district is perhaps one to two miles along its longest dimension: a “walkable” or “bikable” distance. It usually comprises two or more neighborhoods. It should be bounded by--but not crossed by--arterial roads. Within the area most activities should be able to be reached by foot, bicycle, taxi, or bus, rather than depend solely on the auto (though local car trips also are common). If properly constituted, a transportation district has within it many of the land uses and activities to satisfy day-to-day needs: an elementary school, churches, convenience goods shopping (grocery store, drug store, hardware store, video rental, laundromat, and the like), day care centers, parks and playgrounds, and small-scale businesses. Thus, at least to go to school, do the daily shopping, or meet friends for recreation or socializing, there is little need to venture onto or to cross the auto-dominated arterials that define the boundaries of a district.

A transportation district is not isolated from the rest of the City. There are many reasons to move from one’s neighborhood in a district to other parts of the City: for work, culture, major shopping, and the many kinds of interchange that can be had only in a city. But many day-to-day needs should be able to be met locally. In the process neighborhoods are strengthened and burdens on the transportation system are eased.

An ideal transportation district is designed to discourage internal movement across it by high speed traffic. It should either be hard or unnecessary, or both, to travel from an arterial on one side of the transportation district to an arterial on the other side through the district. There should be few intersections of major roads within a district. Major cross roads (“collectors”) should be widely spaced to protect the individual neighborhoods that comprise the district.

This is the theory. In practice, many arterials run through the middle of neighborhoods that might otherwise comprise a transportation district: Route 302 through Riverton, for example, or Route 22 through Stroudwater. Some streets started out as local roads but evolved into cross-town collectors that go through the heart of some districts. Stevens Avenue, Capisic-Frost, and the State Street-High Street couplet are examples. Some parts of the City lack the mix of activity to be even moderately self-sufficient in terms of meeting the day-to-day needs of residents. As a result, residents are forced to leave the area, usually by car, for basic needs.

Thus, for example, the travel demands of residents of the Ludlow Street area undoubtedly are higher than those of residents in the East End area, where a range of small stores and services are available. And within many districts, facilities aren’t designed to accommodate the pedestrian or bicyclist. In fact, they have at times given way to expanded accommodations for motor vehicles.

In a city where the auto has been superimposed on a system of streets and neighborhoods built in earlier times, roadways often are called upon to do double duty: to serve both as a local street and as a regional arterial or cross-town collector. Many of the policies presented in this chapter are intended to ease the tension between these roles:

- by promoting a degree of self-sufficiency within neighborhoods that might constitute transportation districts;
- by encouraging alternative modes of travel between districts; and
- by sorting out the functions of major streets so that neighborhoods bounded by them can be better protected.

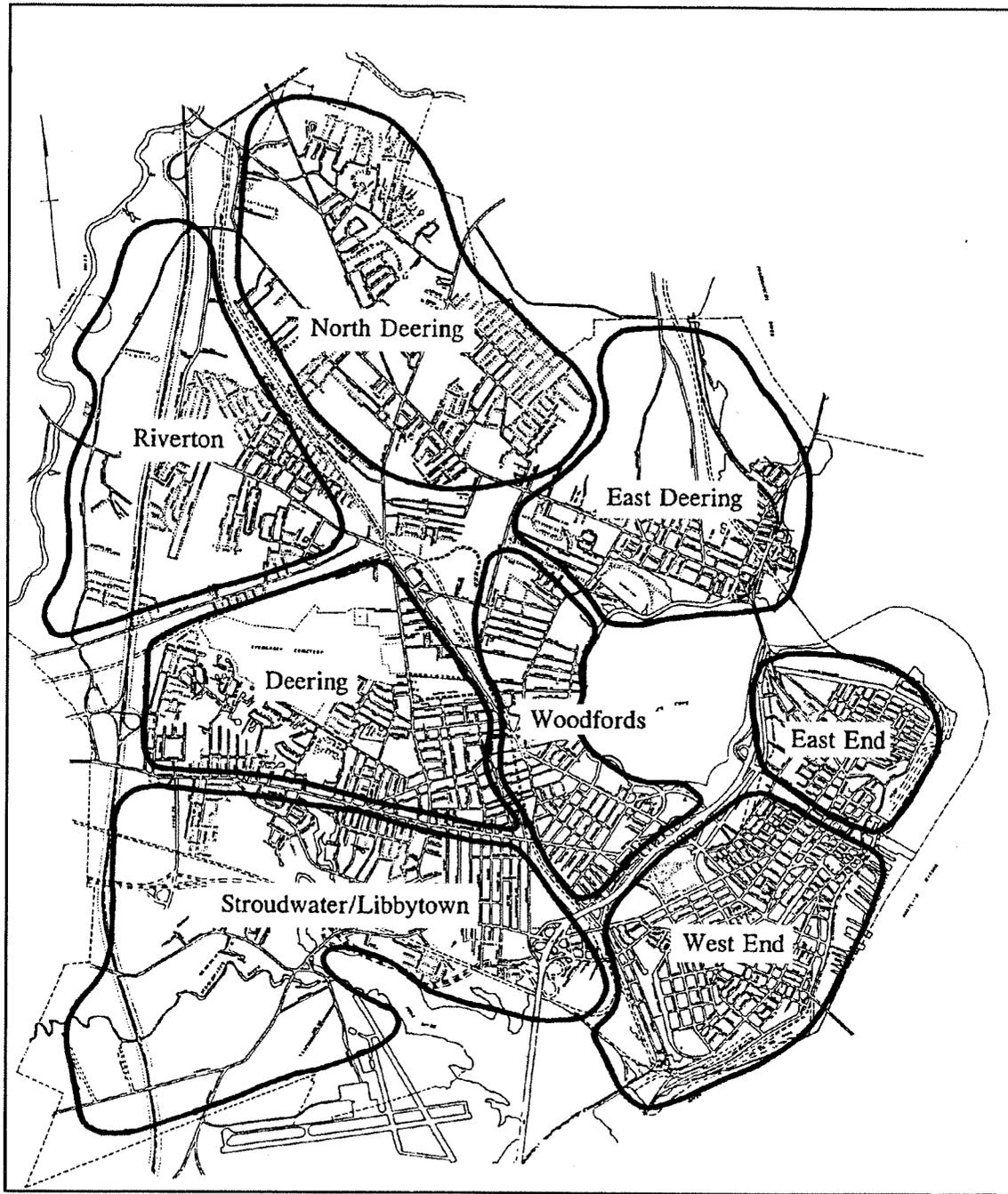


Figure V-1: Transportation districts

For the purpose of this transportation plan, the City has been divided into eight transportation districts. See Figure V-1. They are:

- East End
- West End
- Stroudwater/Libbytown
- Woodfords
- Deering
- East Deering
- North Deering
- Riverton

The boundaries of each district were located so that no individual neighborhood is split into more than one district. The boundaries are not "official." Different neighborhoods might define themselves differently, and that might affect the boundaries of the districts. Nevertheless, conceptually, the eight identified districts serve this Plan's purposes.

Nine major issues arise with respect to the City and its transportation districts.

Within Portland itself, land use has been decentralizing for at least the last 30 years, making transportation by foot, bicycle, and bus more and more unlikely.

Policies

The City should promote a land use pattern that allows for opportunities for people to work and meet a larger share of their everyday needs within or adjacent to their transportation district.

The City should continue to encourage businesses to locate in established employment centers, including Downtown, that are served by public transportation or that have the critical mass necessary to support alternative modes of transportation.

The City should allow development along transit corridors and near community commercial centers to evolve at a density sufficient to make public transit, walking, and biking viable options. Such density should be coupled with policies that encourage or maintain a healthy share of owner-occupancy in these areas as well as compatible site design.

Where sufficient densities and concentration of activities already exist to support public transit, or are allowed by zoning, they should be continued and/or obstacles to reaching their potentials (such as unrealistic off-street parking requirements) should be removed.

The distance a person must travel between destinations is the most important determinant of how he or she will accomplish the trip. Other factors come into play, too: the purpose of the trip (is it to buy five bags of groceries or a quart of milk?); the availability and design of facilities to accommodate the preferred mode (is it safe, comfortable, and uncongested?) and the weather. But distance and time are the sine qua non. If the distance is beyond a quarter- or half-mile, experience shows that the average person will not walk even if the purpose is merely to buy a quart of milk, the sidewalk is well maintained, and the weather

is sunny. If the distance is more than perhaps two miles and certainly more than five, it discourages bicycling among those who may have an inclination toward it but aren't enthusiasts.

If the destination is distant, motorized travel is a necessity. In that case, the choice of motorized travel is related to density, both at the point of origin and at the point of destination. Studies (Pushkarov, Boris S., and Zupan, Jeffrey M., Public Transportation & Land Use Policy, 1977; Cervaro, Robert, "Congestion Relief: The Land Use Alternative," JPER, Vol. 10, No. 2, pp. 119 - 129, c. 1990) suggest that:

- Local bus systems are most likely to attract a significant number of riders in areas with residential densities of at least 4 dwelling units per acre and, more typically, 7 dwelling units per acre; and they need destinations that contain at least 5 million square feet of business space;
- Light rail transit requires an average residential density of at least 9 dwelling units per acre in a corridor of at least 25 square miles;
- Ridesharing programs can operate in low-density neighborhoods, with park-and-ride lots serving as points of concentration if necessary, but the destination of the vehicles has to be relatively concentrated with a floor area ratio (the ratio of total floor area to land area) of 2.0.

These observations, of course, are built on policies and an allocation of transportation costs that favor the auto. A different allocation of resources might overcome some of the need for compactness. In any case, Portland's historic pattern of land use continues to make alternative modes of transportation viable options. An estimated 40% to 50% of the City's households live in areas with densities of 7 units per acre or more, for example. Downtown Portland contains on the order of 5 million to 6 million square feet, with most of it built at floor area ratios well over 2.0.

However, over the last 30 years, the City has experienced three important, decentralizing land use trends that have influenced transportation patterns and modes.

(1) The percentage of households living at densities that can support mass transit has been dropping. Between 1960 and 1980 the City's population fell by 11,000 (from 72,566 to 61,572), a loss of 15%. This by itself reduced the City's density. At the same time, the City's residential land use pattern was decentralizing as in-town neighborhoods were changed or even relocated and residential development occurred on the fringes of the City. So the City had fewer people in 1980 than in 1960, and they were spread more thinly across the City.

During the 1980's this pattern changed somewhat. Unlike the previous decades, the City's population grew by 4.5%. However, the pattern of decentralization continued. The North Deering area, for example, saw its population grow by over 40% between 1980 and 1990, reflecting the construction of a large number of low-density single-family developments. In contrast, the peninsula saw its population remain relatively constant (23,243 in 1980, 23,403 in 1990), while older residential areas such as the Ocean Avenue area, the Deering Center neighborhood, and East Deering saw only small increases in their population. Other older off-peninsula neighborhoods such as the Brighton Avenue/Deering Highlands area, Oakdale, and the Libbytown area actually saw their populations decrease. By 1990 an estimated 30% to 35% of the City's households were living in neighborhoods of fewer than 3 units per acre (up from about a quarter of all households as of 1980).

(2) The organization of commercial uses has changed dramatically. On one hand, there has been some concentration of uses as community stores and services were supplanted by large chain stores in shopping centers. At the same time, these new retail and service centers located in a decentralized pattern across the City. And the shopping center style of development is single-story with vast parking lots, creating very low floor area ratios.

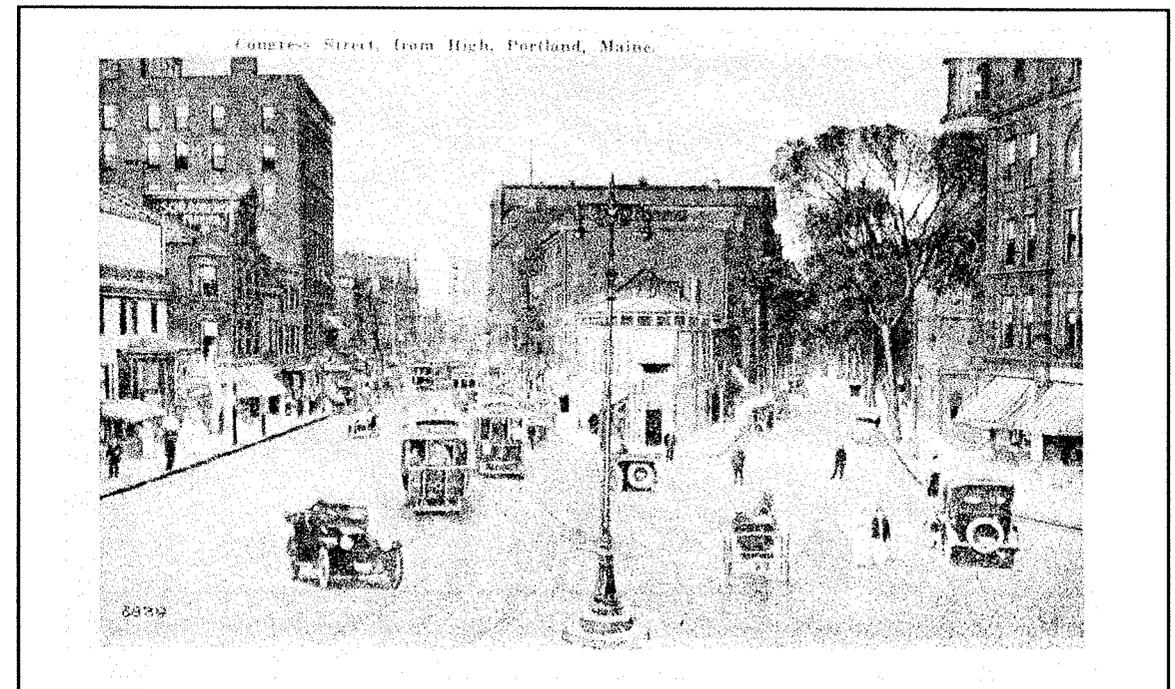
(3) Land use regulations have favored less density and concentration. In the quest to enhance quality of life, the City has revised its land use regulations significantly over the past decades. The allowable density of residential development was decreased substantially in the R-6 and R-5 districts, the City's principal multifamily districts. The City doubled the off-street parking requirement for all residential uses, making even moderate density residential development difficult and expensive. The potential for mixed use development in commercial

districts was reduced since the density of residential development in these areas was tied to the stricter standards. The impact of these well-meaning changes was to restrict the potential for infill development or redevelopment in the built-up part of the City, further promoting a lower density/dispersed pattern of land use.

Similarly, the City became more restrictive in its treatment of home occupations and office and professional buildings in the residential areas of the City and along the City's arterials. Again, the purpose of these regulations was to protect the quality of life in the City's residential neighborhoods. But they tend to require people to travel farther to work and for needed services.

If the City were to choose not to revise the land use policies of recent years to benefit alternative modes of transportation, but rather only to improve facilities such as bike lanes, bus stops, and sidewalks, there may be more use of bicycles, buses, and walking. But the goals of this Transportation Plan are unlikely to be met without reaffirmation of historic patterns of development in the City. These patterns were concentrated and diverse and ready-made for choice in transportation.

See Action Box No. C-1.



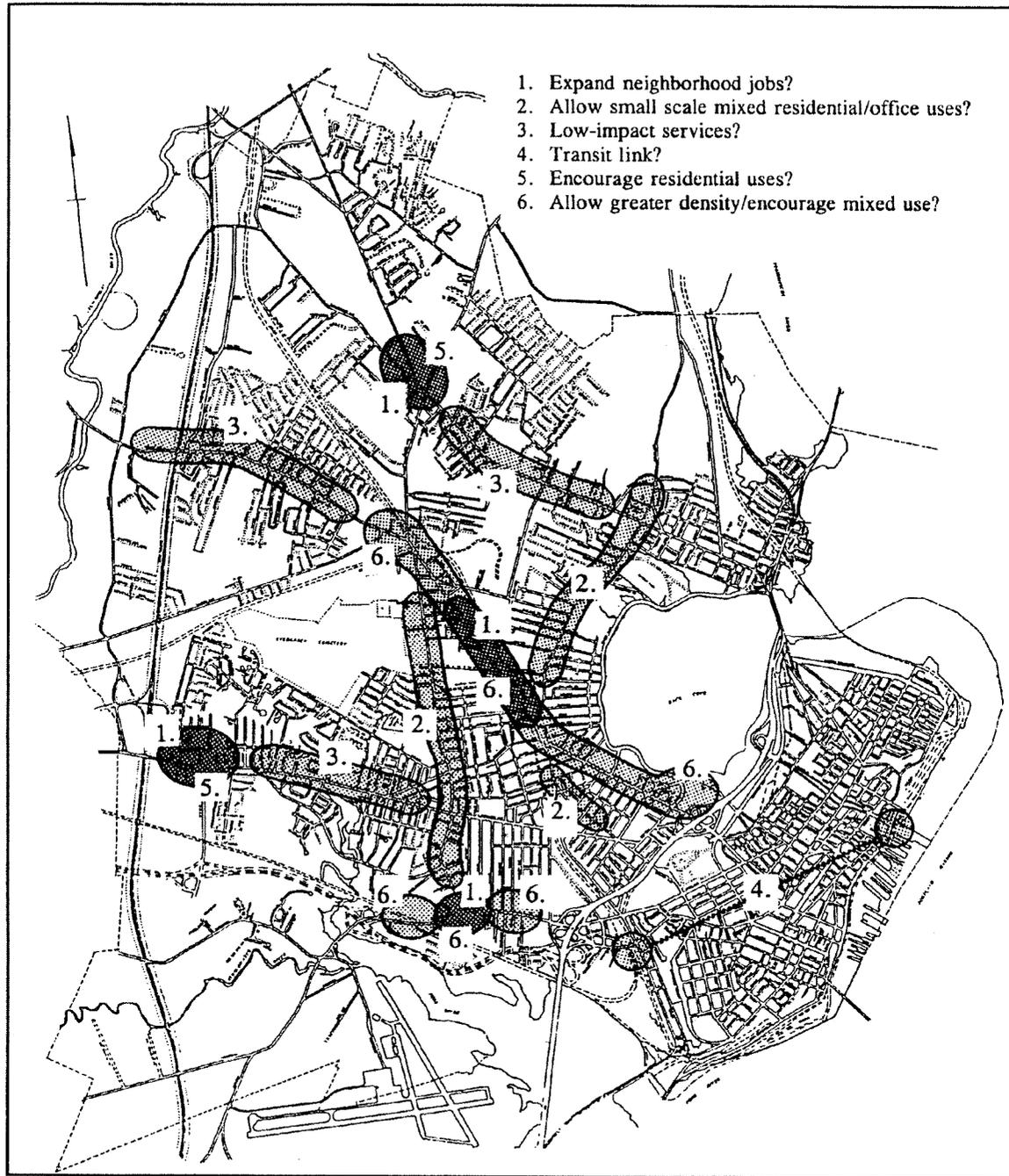


Figure V-2: Examples of opportunities to link land use and transportation

Action Box No. C-1

To promote a land use pattern that allows people to meet more of their everyday needs within or adjacent to transportation districts:

- Review and liberalize home occupation regulation, with standards to assure that home occupations are unobtrusive and small-scale.
- Ask neighborhoods in each transportation district what goods and services they would like to have within walking distance and where low-impact offices and services could be integrated into their areas. Involve the neighborhoods in the design of safe routes to reach these facilities by foot and bicycle. Establish performance-based controls to assure compatibility of these uses with the residential scale of the neighborhoods. These standards should address traffic generation, noise, parking demand, and preservation of existing residential structures, for example.
- Encourage small-scale, mixed-use building that retain a residential use at strategic points along collector streets where traffic has devalued purely residential use.
- Allow a wider range of small and midsize businesses near established community commercial centers such as Northgate, Westgate, Pine Tree, and Woodfords. An example of this type of use is the former Northport Shopping Center in North Deering, which now houses a radio/TV station, telemarketing center, and other uses. Consider performance-based land use standards in these areas.
- Enable the Planning Board to assess, case-by-case, parking, setback, lighting, and landscaping standards in commercial projects and to modify them where doing so would clearly be compatible with walking and neighborhood design.

cont'd on next page

Action Box No. C-1 (cont'd)

To promote a land use pattern that supports public transportation in Portland:

- In all zoning policies, especially as they affect density, consider the impact on public transportation.
- Consider strategies that would allow residential densities of 10 - 15 units/ac. in commercial districts along portions of Forest Ave. and outer Congress St., with incentives for mixed-use occupancies that combine residential and nonresidential uses.
- Allow residential uses at reasonable densities in and adjacent to existing community commercial center.
- Require less off-street parking for residential uses located close to public transit, such as on the peninsula, in and adjacent to community center, and in the proposed mixed use districts along Forest Avenue and outer Congress Street.

City Issue 2

City Mass Transit

The infrastructure necessary for effective mass transportation between transportation districts in Portland is not fully in place.

Policies

Mass transit in Portland should be operated swiftly, safely, and conveniently to and from transportation districts. The standard of service must be such that it will attract not only the "transportation-dependent" but also people with choice to its ridership.

METRO routes and stops should be fully integrated with the City's park-and-ride lots.

METRO buses and bus stops should be equipped with a variety of conveniences for users.

Access to METRO service from the interior of local transport areas should be safe and convenient.

The Greater Portland Transit District (METRO) operates seven major bus routes, originating from its timed-transfer Pulse at the Elm Street municipal parking garage Downtown. As will be discussed in the next chapter (see Regional Issue 4), METRO's boardings have shrunk considerably in the last 20 years. In 1992 there were about 1.3 million boardings. The routes follow most of the City's arterials and major collector streets. The most heavily used routes are those that run from Congress Street to S.D. Warren and Downtown Westbrook via Brighton Avenue (296,000 boardings in 1992), along Congress Street to the Jetport and Maine Mall (271,000 boardings), and from Downtown to the St. John Street area (205,000 boardings). Two routes that serve almost exclusively the Peninsula (the Downtown-to-St. John St. run and the route that loops the East and West ends) together accounted for 352,000 boardings.

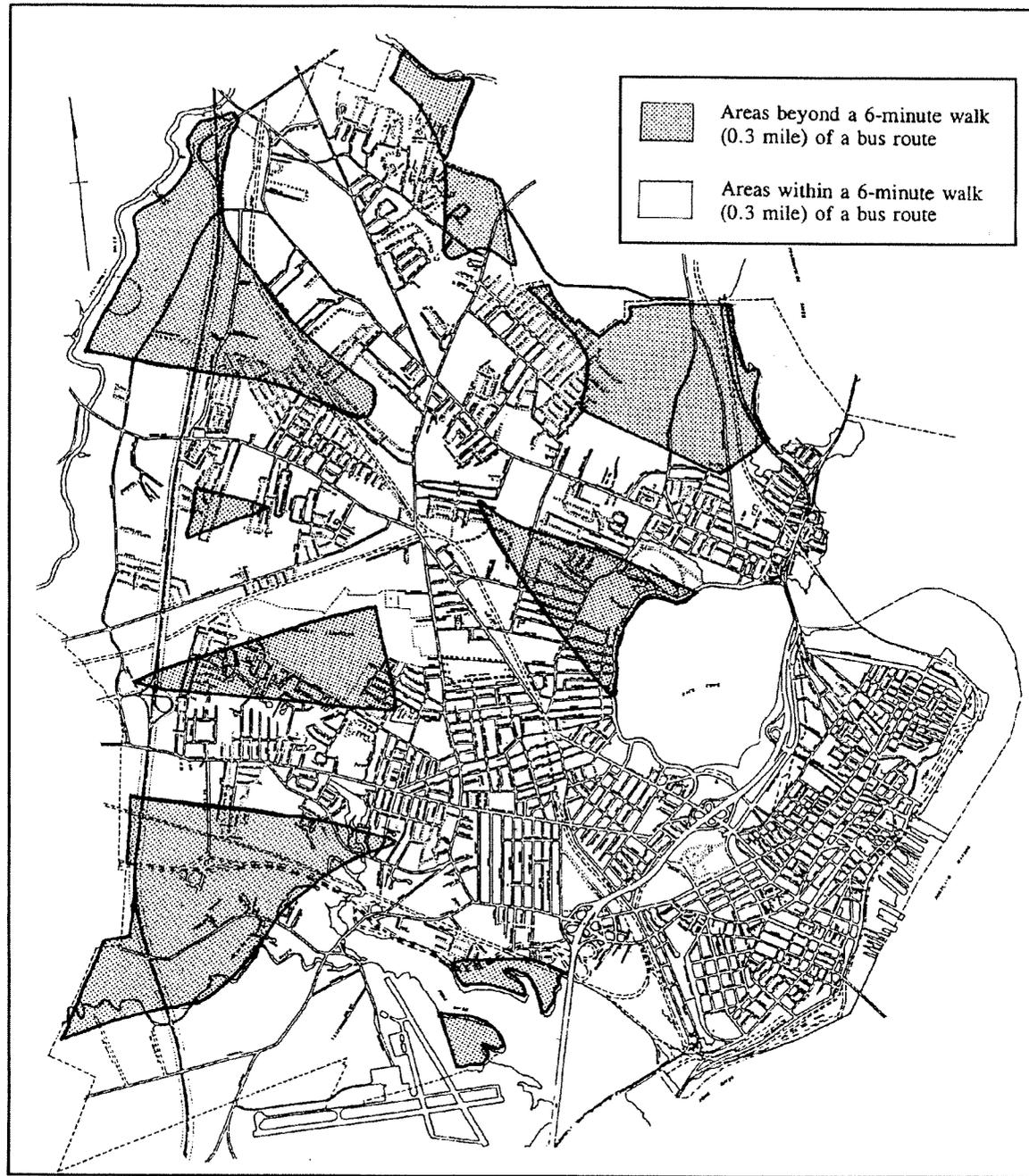


Figure V-3: Most of Portland is within a 6-minute walk of a bus route.

Besides land use patterns that discourage heavy use of mass transit, the Greater Portland Travel Demand Management Study (*Working Paper No. 1*, Greater Portland Council of Governments and PACTS, 1993) notes that barriers to its use include unfavorable cost perceptions, lack of information about transit routes and schedules, and inconvenience (in terms of time and frequency of service). Extensions of routes can increase ridership but often have little impact on reducing auto travel (probably due to insufficient densities). According to the TDM study, a study of the results of extended routes in four relatively small metropolitan areas in different parts of the country found that an average increase of 63% in bus miles traveled yielded only a 0.1% net decrease in regional vehicle miles traveled. Therefore, bus routing has to be carefully targeted. In general, according to the TDM study, a 1% increase in transit service results in a 0.5% increase in patronage. But a 1% increase in service to a central business district yields on average a 0.9% gain in ridership.

See Action Box No. C-2.

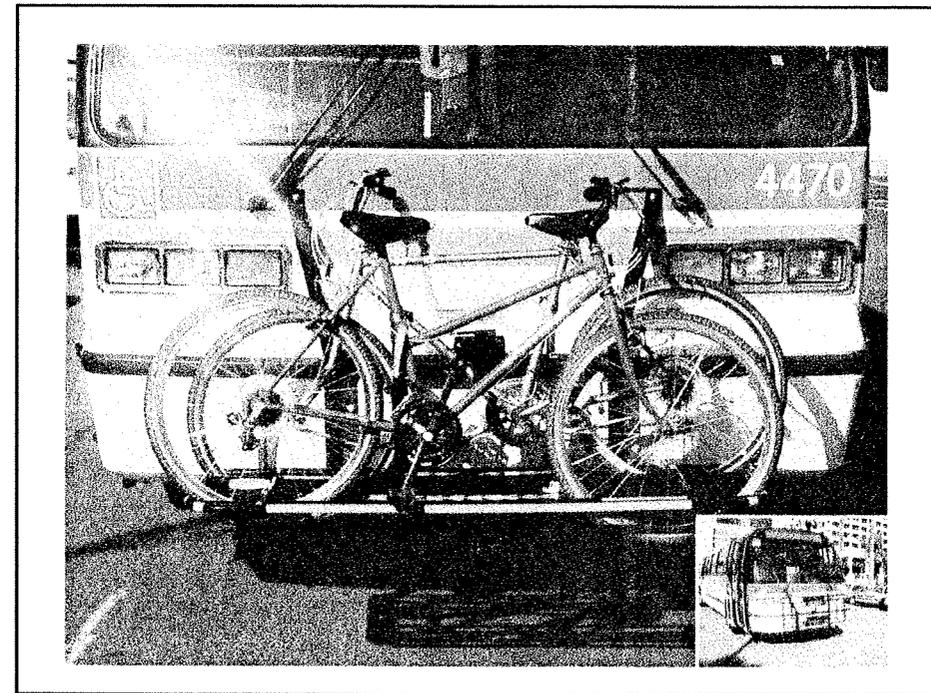


Figure V-4: Example of bike rack on bus

Action Box No. C-2

To enhance public bus service within the City:

- Urge METRO to increase the frequency of peak-hour service on routes identified by the Greater Portland TDM study as having high concentrations of intracity commuters
- Urge METRO to seek ISTEA or other funding for and implement a pilot, all-day free or very low fare shuttle bus within the two local transport areas (East End and West End) of the peninsula
- Urge GPCOG and PACTS to prepare a study for METRO on the feasibility of reconfiguring METRO routes to strike an optimal balance between pedestrian access to bus service and in-vehicle bus commuting time
- Urge METRO to install bus stop information sign, each with a route schedule and map, at each bus stop on its system, beginning with the commuter corridors identified in the Greater Portland Travel Demand Management Study
- Urge METRO to offer a variety of conveniences for passenger, depending on the location of the stop, including adequate lighting, trash receptacle, newspaper stand, pay telephone, bicycle rack or locker, bus pass sales outlet (if at a store), bench, and bus shelter (at higher volume stops)
- Integrate bus stops as part of local multimodal centers (see City Issue 3). At park-and-ride lots, assure that METRO provides its logo and informational display.
- Consider development of a consumer debit card for bus use
- Engage in innovative marketing, such as:
 - developing themes for different buses
 - enlisting businesses to encourage employees to "adopt a bus" for specific periods of time
 - putting top level management on buses for a week (with the help of the Chamber of Commerce)
 - encouraging businesses to give free or subsidized bus passes to employees

Action Box No. c-2 (cont'd)

Ultimately, the level of service must be so high that it attracts and keeps a ridership that includes members of the professional workforce.

To improve access to METRO service from the interiors of local transport areas:

- Assure that well maintained and cleared sidewalks are available for METRO passenger walking to bus stops. Reestablish the clearing of sidewalks as a shared responsibility with private property owners.
- Urge METRO to provide bicycle carriers on its buses to permit passengers to bicycle to and from METRO stops.
- Urge the integration or consolidation of METRO and paratransit service to pick up mobility-impaired passengers at their residences and drop them off at their destinations.

The City's internal transportation system lacks planned, local multimodal centers that offer choice of transportation or that enables easy shifts from one mode to another.

Policies

The City should create local multimodal centers for the City's commuters and mass transit passengers, building on the presence of existing centers of activity wherever possible.

The City should connect these local centers with each other and with regional transport centers.

The City must coordinate the design, location, and implementation of local transport centers with METRO, without which they cannot succeed.

To think comprehensively about transportation, it is necessary to think in terms of "transport centers." A transport center is a point at which different modes of transportation meet, and where one can switch from one mode to another. In the next chapter, the concept of regional transport centers (Jetport, train station, intercity bus terminals, etc.) is discussed. See Regional Issue 2. This section addresses local transport centers.

Local multimodal centers would serve a variety of trips, including shopping, medical, school, commuting, and other trips. (It should be noted that commuting from one area of the City to another for work is as common as commuting from the suburbs into the City. According to the 1990 Census, 69% of the 32,731 workers living in Portland also worked in Portland. The majority drove to work in single-occupant autos.) The local centers would be small "nerve" centers where commuters and other residents can switch from one form of transportation to another.

Local transport centers are different, in design if not function, than regional transport centers in several ways:

- Whereas regional transport centers will involve shifts to and from a variety of modes (taxi to air, bus to rail, auto to ferry, truck to ship, etc.), local transport centers almost always will involve a shift to and from a street-related mode (walking, biking, or car).
- Whereas regional transport centers must be located near regional travel networks and be sized for them, local transport centers will be smaller scale and city-oriented.
- Whereas regional transport centers are centralized, owned and maintained by a single responsible, on-site party, local transport centers will tend to be decentralized and, while owned and maintained by a single entity (METRO, the City, etc.), they can't be individually staffed. Their maintenance will depend on an interested and involved public living in the local transport areas that use them.

Local transport centers will have the best chance of success if they are part of larger activity centers. That is, transportation should be one activity among others, such as shopping, workplaces, banking, personal services, recreation, and so forth. Therefore, they should be located where these other activities are happening naturally: at a shopping center, near schools, at a community center, etc. They might simply be enhancements of existing sites, such as bus stops or park-and-ride lots. At a minimum, they should provide for bus service, park-and-ride, bicycles, convenience services, taxis, and pedestrians. They should be bright, friendly places, with shelters, lighting, landscaping, and public art.

Possible locations for local transport centers--appropriate in part because they already are activity centers--include, by transportation district (see **Figure V-6**):

East End

- Casco Bay Island Transit Terminal
- Cummings Center
- MDOT Park-and-Ride Lot at Marginal Way and Franklin Arterial

West End/Downtown

- Monument Square/METRO "Pulse"
- Reiche School
- Union Station area (perhaps integrated into the regional transport center associated with the AMTRAK station and Greyhound Bus terminal)
- Maine Medical Center
- Hadlock Field-Portland Exposition Building
- Shop 'n Save Shopping Center/USM Park-and-Ride at Preble Street Ext.

Stroudwater/Libbytown

- Westgate Shopping Center

Woodfords

- University of Southern Maine campus
- Woodford's Corner

Deering

- Deering Center (Stevens Avenue)
- Pine Tree Shopping Center/Barron Center/Sagamore Village Area

East Deering

- Vicinity of Washington Avenue and Veranda Street
- Old Marine Hospital
- Andover College

Riverton

- Riverton Community Center
- Morrill's Corner

North Deering

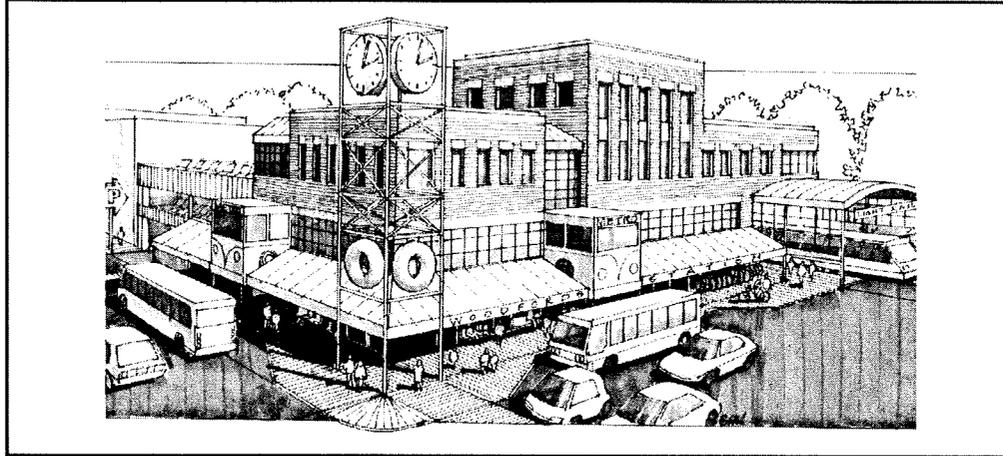
- Northgate Shopping Center/Northport Business Park

See Action Box No. C-3.

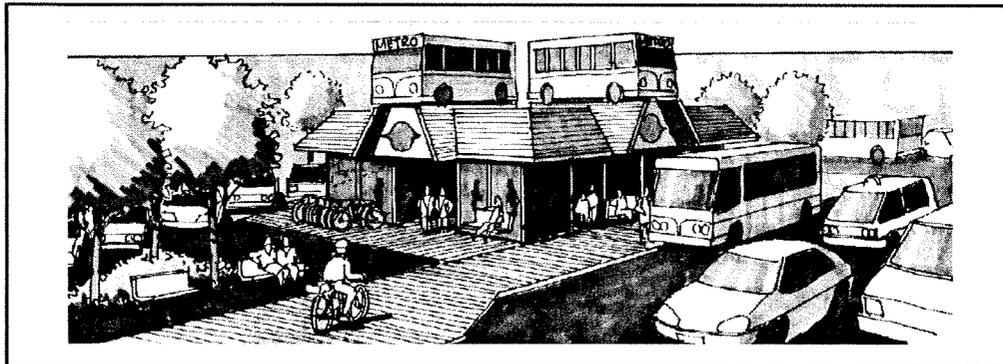


Figure V-5a: Concept of local transport center at Downtown METRO Pulse

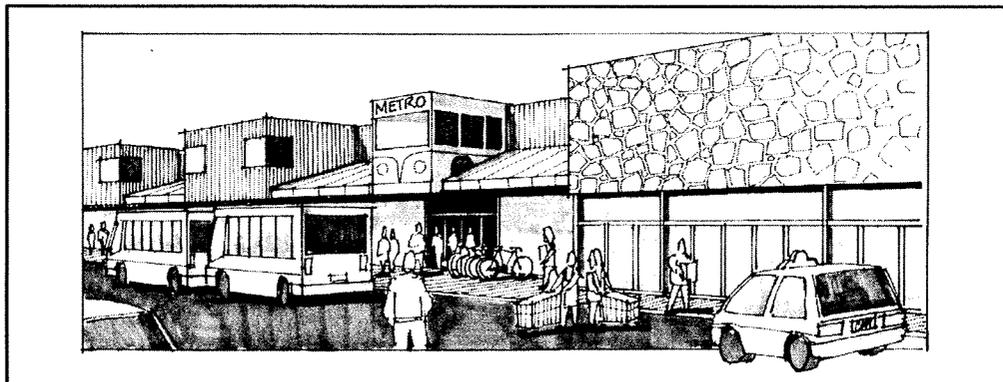
Figure V-5b: Examples of local transport centers



At Woodfords Transport Center



At North Deering Transport Center



At Back Cove Transport Center

Action Box No. C-3

To create local transport centers:

- With the assistance of METRO, PACTS, and neighborhoods design prototypical local transport centers (they may not necessarily be new structures, but rather a collection of services, such as newspaper stand, vending machines, secure bicycle storage, ATM, etc. within existing structures).
 - Consider a design competition that involves local residents and schools:
 - Establish a high standard for the centers in terms of how they are to function and be maintained.
- Work closely with the neighborhoods of each local transport area and with METRO to (a) locate the centers, preferably as part of already active location, (b) secure the commitment of area residents to keep watch over the center, and (c) prepare a marketing/education plan in cooperation with providers or advocates of different modes, including the bus, taxi, bicycle, and ridesharing.
 - Coordinate the centers with the location of METRO bus routes and with bike routes;
 - Make sure they are at easy bus transfer points, perhaps serving as "mini pulses";
 - Consider how workplaces/job centers can be tied in.
- Work closely with property owners or agencies responsible for sites on which local transport centers might be proposed to be located.
 - Consider cooperative relationships with existing businesses to achieve mutual goals of maintenance and increased business activity (e.g., a store location is designated as a center in return for help with maintenance).
- Prepare a budget for the implementation and maintenance of the centers as clean, safe, attractive places and a priority plan for phasing them in, and seek appropriate sources of federal and state funding to match local dollars. The priorities should be based in part on the presence or potential of high bus ridership and by level of interest of residents of the local transport areas.

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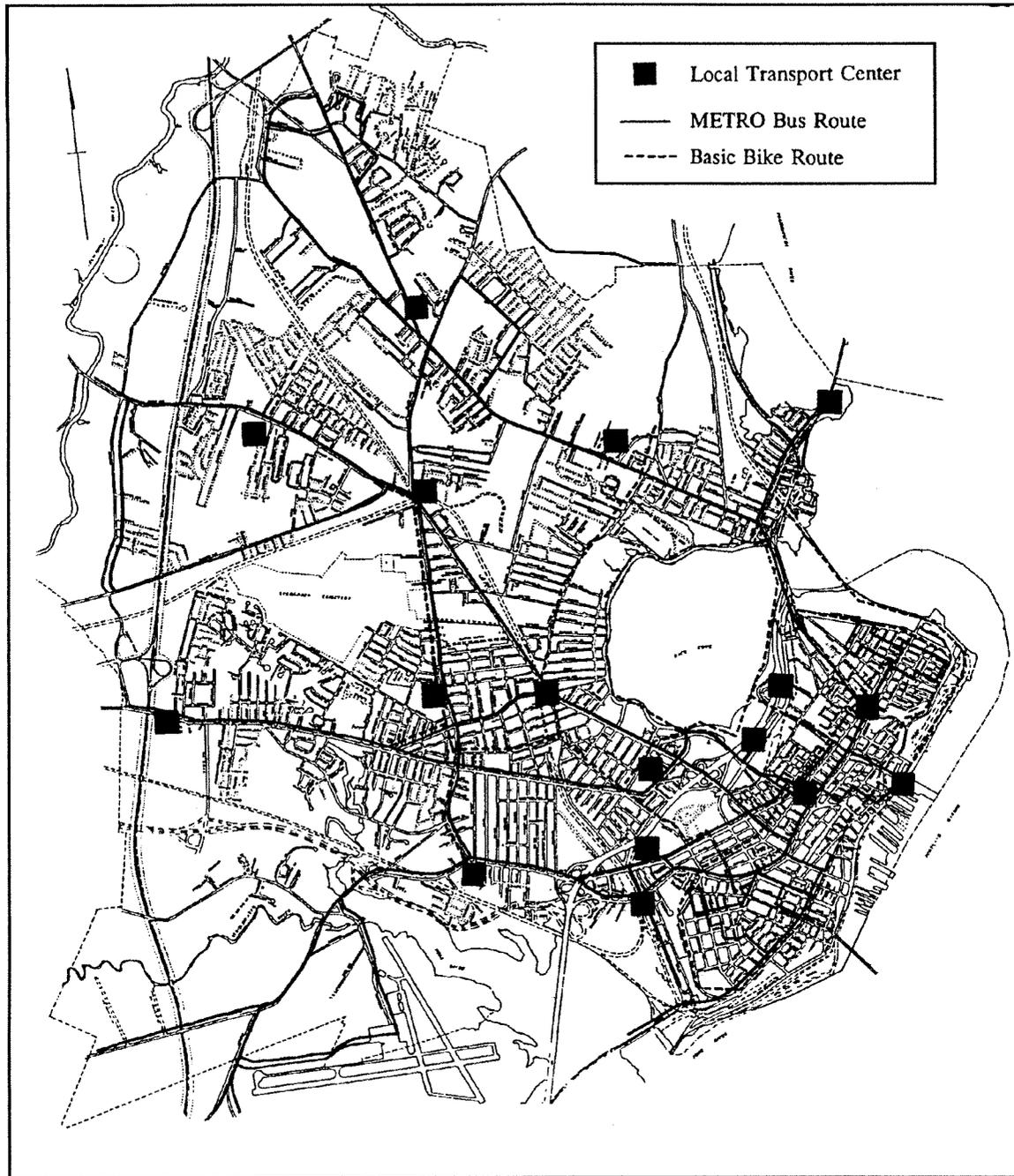


Figure V-6: Possible local transport center locations, placed at activity center, integrated with bus and bicycle routes

Action Box No. C-3 (cont'd)

To assure connections among local transport center and with regional transport centers:

- Begin by connecting , via shuttles, concentrated bus service, or other appropriate means, local and regional transport center in the St. John Street, Downtown, Franklin Arterial, and waterfront areas. Promote these areas as development district, linked by dependable mass transit. Allow more intense development districts, if commitment to alternative transportation is provided by the developer. Consider use of tax increment financing to fund a high level of transit service among these nodes.

Bicycling and walking are viable and important modes of everyday transportation, but ever-increasing auto traffic and planning to accommodate the auto have greatly reduced the opportunity for safe and pleasant biking and walking.

Policies

The City should recognize and encourage the bicycle and walking as important modes of everyday transportation and a reasonable choice to the automobile for commuting, utilitarian, and recreational purposes.

Bicycling should be integrated and included on equal terms with other modes in the ongoing transportation planning and funding process.

The City should provide greater safety for bicyclists of all levels of ability and safer interaction with other modes of transportation.

A comprehensive and continuous system of bicycling facilities should be systematically implemented over a 5- to 10-year period.

The City's fleet (police, public works, and other vehicles) and those driving the fleet should be a constant example of how to interact with and respect bicycle and foot traffic.

"Bicycling and walking have consistently remained top recreational activities in the United States. Their widespread use, though, for commuting remains low in most areas due to a number of factors: increasing commuting distances, separation of land uses by traditional zoning, their low priority given by transportation policy makers and professionals, and society's embrace of the automobile."

--Greater Portland Travel Demand Management Study (1993)

Only 0.8% of Portland area residents commute by bicycle. But the City, although its land use has spread out in recent decades and a number of major employers have jumped to the suburbs, still has many of the raw materials needed to make bicycling viable. Many of its older neighborhoods are compact and most neighborhoods, old and new, are within bicycling distance of commercial centers, including Downtown. Its mainland is roughly 5 miles by 5 miles, making most in-town travel by bicycle possible within 20 minutes.

What must be overcome are a lack of safe facilities, isolation from or inadequate consideration by other modes of connecting travel (such as park-and-ride lots and buses), and supporting facilities such as secure storage areas and showers and lockers for those cycling longer distances.

Commuting by bicycle will only appeal to a minority of residents. Issues of physical condition, values and attitudes, family responsibilities, and work requirements will prevent most from bicycling to work. But there is good evidence that if the barriers of poor facilities, dangerous traffic conditions, and inadequate routes are overcome, and if employers support this mode with storage and lockers/showers, the share of bicyclists can increase five to ten times. In places that have made a commitment to bicycling, this mode now accounts for 2% (Seattle, Portland, OR) to 11% (Chico, CA, Madison, WI) of commuting trips. Places like Madison demonstrate that biking as a mode of commuting is viable in northern climates. A recent Harris Poll found 20% of Americans would bike more often if the facilities were available.

As will be discussed in chapter VI, PACTS in 1982 published a regional Bikeway Plan in which Portland participated. It focused on commuting and, as a result, directed most of the routes into Portland. Within Portland, bikeways were scheduled along outer Forest Avenue, Warren Avenue, Westbrook Street, outer Congress Street, Stevens Avenue and several connecting roads with Baxter Boulevard. These routes connected with the peninsula, which was looped by the bikeway. Approximately 22 miles of bike routes were designated in Portland.

There were gaps along several of the arterials (Brighton Ave., the inner segments of Forest Ave., for example). More importantly, as noted by the Greater Portland Travel Demand Study, the Bikeway Plan was lacking in two other regards. First, there was no assurance that the designated routes would be

converted into "bicycle-friendly" routes--a consideration more important than mere designation. Second, the Bikeway Plan did not have a program for implementation or promotion. The Bikeway Plan, however, serves as a good jumping off point for revisions and a new commitment to bicycling.

Many of the problems afflicting bicycling affect walking, as well. However, within the City a notable percentage of workers do walk to work: 12.4% according to the 1990 Census. The barriers to walking are in some respects similar to biking (safe, maintained routes, comfortable conditions) and in some respects different. Land use patterns--compactness, mixture of uses--are especially important to walking, since the maximum practical commuting distance on foot is fairly short: one to one-and-a-half miles, and less for many. On the other hand, bicyclists need more intense attention to facilities, such as secure storage for bikes.

See Action Box No. C-4.

Action Box No. C-4

To put planning for bicycles within the City on even terms with planning for other modes:

- In addition to assigning to an appropriate member of the City staff the duties of Bicycle/Pedestrian Coordinator (see chapter VI), appoint a Citizens Bicycle/Advisory Board to begin developing educational materials, enforcement programs, and special promotional events.
- Set annual construction priorities for both bicycle and pedestrian facilities and program them into the Capital Improvement Program.
- Require review by the Planning Board of the impact on bicycles and pedestrians of all transportation decisions and require mitigation if a negative impact is found.

To enhance the safety of bicycling and pedestrians along arterials and collectors between local transport areas:

- Educate drivers on bicycle awareness and how to share roads with bicyclists.
- Require safe design and construction practices on all roadways, and use consistent standards.
 - Where perceived speeds are too high for safe bicycling, install speed reducing elements such as trees, built-out curbs, and roundabout gates.
 - Install rubberized railroad crossings when they intersect with roads
 - Publish bicycle facility/roadway suitability maps, safety information, and other promotional materials, and encourage their dissemination through local bike shops with the purchase of bikes
- Consider the needs of pedestrians and bicyclists in all public lighting projects.

To systematically implement a bicycle facilities plan:

- Put into place the following 5-year plan:

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- Year 1: sign, stripe, and complete a basic bicycle route (see Figure V-6 on page 33); and design as a model bicycle/pedestrian project the part of the route that includes Back Cove, USM, Deering Oaks, and Shop'N Save Plaza.
- Year 2: improve/perfect the basic route and add 10%; construct the model project; plan an improved connection between Back Cove and the Eastern Promenade.
- Year 3: improve/perfect the basic route and add 10%; construct the improved connection between Back Cove and the Eastern Prom; plan Stevens Ave. slowdown design.
- Year 4: improve/perfect the basic route and add 10%; construct Stevens Ave. slowdown; plan Capisic St. extension to Falmouth St./USM.
- Year 5: improve/perfect the basic route and add 10%; construct Capisic St. connector to USM; plan connection between Virginia St. (Allens Corner) to Ocean Ave.

Improve pedestrian facilities for travel along arterials and between local transport areas by:

- Develop priorities for crosswalks, such as for schools, that are in need of special identification with appropriate contrasting materials or zebra striping and good maintenance.
- Make all intersections and walkways accessible to the handicapped.
- Use pedestrian-actuated crossing signals at intersections and lengthen the crossing time where necessary, especially on school walking routes.
- Minimize pedestrian crossing distance at intersections through appropriate design of curb radii and use of mid-street islands as "safe havens" for walkers crossing wider roadways.
- Construct missing links in the pedestrian network, giving priority to sidewalks that connect to public facilities.
- Implement the Portland Trails/Shoreway Access Plan through annual funding of capital improvements and maintenance, including snow removal.
- Reallocate snow plowing resources to plow all crosswalk entrances and to plow more sidewalks as determined through public participation.

City Issue 5 TDM Regulation

Past practice has been to respond to increased traffic by trying to accommodate it. Recent federal and state law shifts the emphasis to "travel demand management," and this will require the City to reconsider its approach to transportation planning.

Policies

The City should establish a program for managing travel demand within and between transportation districts.

The City should integrate transportation-related functions that now cross over several City departments such that the philosophy of TDM can be consistently pursued.

The City should work with other interested agencies to foster among employers an aggressive program of managing travel demand.

At the heart of recent federal and state legislation--the Intermodal Surface Transportation Efficiency Act (ISTEA) and the Maine Sensible Transportation Policy Act--is the concept of "travel demand management," or TDM. The essence of TDM is that before streets are widened or new ones built to accommodate growing traffic, attempts should be made to reduce the volume of traffic during peak driving times.

This is very much a regional issue and much of Chapter VI of this Plan was directed to it: in proposals for ridesharing, park-and-ride lots, and a coordinated system of mass transit, for example. Earlier parts of this chapter also are key to TDM: in proposals for a compact and integrated pattern of land use, local transport centers, and bicycling facilities. This section adds to TDM the dimension of regulation. It calls for incorporating TDM into ordinances that govern the review of public and private projects within Portland. It is hoped that, as discussed in Chapter VI, other communities in the region will likewise consider TDM and that the state through its Site Location Act will assure that large projects in the region implement TDM measures.

See Action Box No. C-5.

Action Box No. C-5

To manage demand on the City's roadways:

- Appoint a person within City government to comprehensively keep track of and coordinate **TDM** efforts: to coordinate efforts in surrounding communities and at the state level, to assure consistency with policies that relate to Downtown, to work closely with a Bicycle/Pedestrian coordinator (refer to Regional Issue 6 in the next chapter), and generally to assure consistency of actions by individual departments that may affect transportation and **TDM**. Note: this might be an enlargement of the type of coordinating responsibilities of the Downtown parking division.
- Adopt as part of the City's land use ordinances and other programs measures for **TDM**, including:
 - the review of all municipal activities and projects for their impact on and inclusion of provisions for alternative transportation. This consideration should be built into routine project development for those activities funded through the Capital Improvements Program, Transportation Improvement Program, Jetport Fund, and similar municipal program. The City should consider provisions for including a transportation alternatives analysis as part of the planning for major projects (e.g., Hadlock Field, Jetport expansion.)
 - requirement that private projects that involve public support (such as street and sidewalk improvements) or public financing incorporate suitable provisions for alternative transportation. Depending on the nature of the project, this might include bus stops, facilities for bicyclists, use of paratransit service, a program to promote ridesharing among employees, and so forth.
 - requirement for all large projects to incorporate provisions (storage, locker rooms, showers) for bicyclists.

Action Box No. C-5 (cont'd)

- for other, entirely privately financed developments:

consideration of a requirement--provided that the state through its Site Location Act implements the same requirement region-wide--that imposes a maximum number of parking spaces that can be built by projects over a certain size, and at the same time requires implementation of programs that reduce employee demand for parking;

or, if the City prefers incentives to requirements or if the state does not act regionally, incentives for TDM, such as reduced off-street parking, greater densities or more floor space in return for efforts by the employer to implement carpools, vanpools, shuttle bus, bus pass subsidies to employees, bicycling facilities, etc.

- a fee in lieu of the construction of parking spaces, the proceeds of which would go to support programs for alternative forms of transportation.

To get existing employers involved in TDM:

- Convene a cooperative effort with COG's Regional Rideshare Program, METRO, and the Greater Portland Chamber of Commerce to market travel demand management and commuting alternatives to Portland's employers.

Existing arterials carrying through-traffic cut through transportation districts with established neighborhoods, disrupting life in the neighborhoods and putting pressure on the street system that, if expanded in response to the traffic, will further chip away at the integrity of the neighborhoods.

Policies

As set forth in policies on regional traffic (see issue R-7), the City should take steps and urge steps by others that would shift through-traffic to other more appropriate modes and routes.

Beyond these steps, the City should develop and implement a strategy that balances the integrity of the neighborhood against the need to move traffic on the arterials.

The City should take all reasonable steps to assure that motor vehicle laws are strictly enforced, especially in neighborhoods where the balance between traffic and the needs of the neighborhood is delicate.

The treatment of arterials, whose role is to carry through-traffic, requires different approaches on different roadways. Balancing the need to move goods and people and the need to protect the internal functioning of transportation districts and their neighborhoods is critical. In some cases it is appropriate to encourage more efficient use of the roadway and to mitigate the impacts. In others, it is appropriate to give up some efficiency in the movement of traffic in response to the needs of the neighborhood. And in others, it is necessary to actively discourage use of the roadway in favor of alternative routes of travel.

This issue can't be separated from other issues confronting transportation districts. Transportation districts with a degree of self-sufficiency in meeting everyday needs (as discussed in the first issue of this chapter) will not add to or feel as acutely the impacts of through traffic. An effective program of travel demand management, with effective local transport centers and good facilities for bicycling and walking will help mitigate the problem of through traffic.

Realistically, however, the problem of through-traffic dividing and disrupting neighborhoods is likely to persist and must be addressed directly. The proposed strategy has three parts, dealing with arterials in three different situations:

(1) Where commuting traffic has an alternative to the arterial that is cutting through the transportation district and its neighborhoods, take steps that will discourage use of the arterial (including "calming" traffic through reduced roadway capacity, substituting on-street parking, bikelanes, etc.) and, concurrently, encourage the use of other arterials that are better located (upgrading the latter arterials if necessary).

(2) Where commuting traffic has no alternative but to take the arterial that is cutting through the transportation district and its neighborhoods, and the land uses are sensitive to the traffic (e.g., schools, pedestrian-oriented activities), take steps to "calm" the traffic without substantially taking away capacity (e.g., through effective landscaping, definitive sidewalks with esplanades, pedestrian crosswalks, and similar visual cues).

(3) Where commuting traffic has no alternative but to take the arterial that is cutting through the transportation district and its neighborhoods, and where land uses are not highly sensitive to the traffic, take the steps necessary to move the traffic through the area in the shortest time possible during peak periods. The emphasis here is on efficient use of existing pavement, not necessarily widening roadways. Nor does it mean speeding up traffic, but rather trying to achieve smooth, steady flows.

Of the three strategies, priority should be given to the first two.

Inherent in these strategies is thoughtful design of the physical environment: in some cases using physical design to slow and "calm" traffic, in other cases to make the most efficient use possible of the street in order to move traffic. To achieve such design will require a new working relationship between transportation planners, who set forth concepts like "calming," and traffic engineers, who must implement them.

Good physical design can act as a self-enforcement mechanism to achieve the desired results. However, the balance between the needs of neighborhoods and the needs of traffic is fragile in many places. Without aggressive enforcement of motor vehicle laws--regulating speed, turning movements, cross-walks, traffic signals, and so forth--the strategies may fail.

The test of whether balance has been achieved may be summed up in the answer to any parent's question: "Do I feel safe letting my child cross the street...to get to school, a store, or a friend's house?" If the answer is "no," the situation is out of balance; and there is one less reason for a family to continue to live in the City, where walkability, being close to things, and not being entirely dependent on the car presumably are among the advantages. Both good physical design and enforcement are necessary for the answer to be "yes."

See Action Box No. C-6.

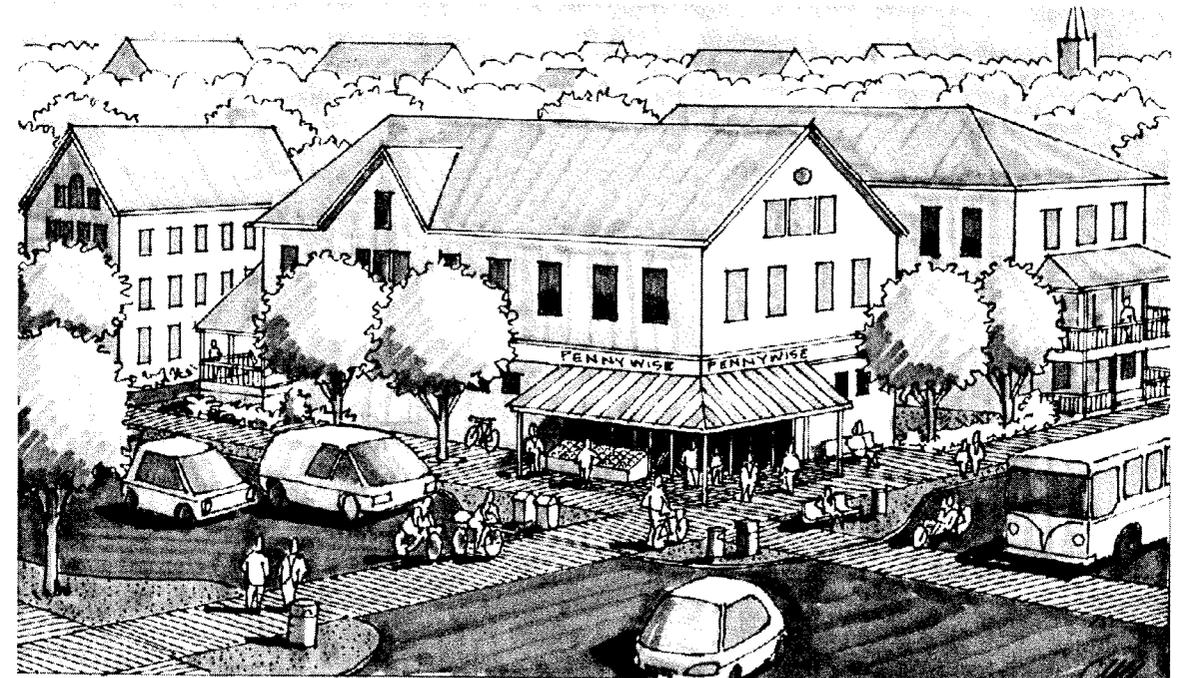
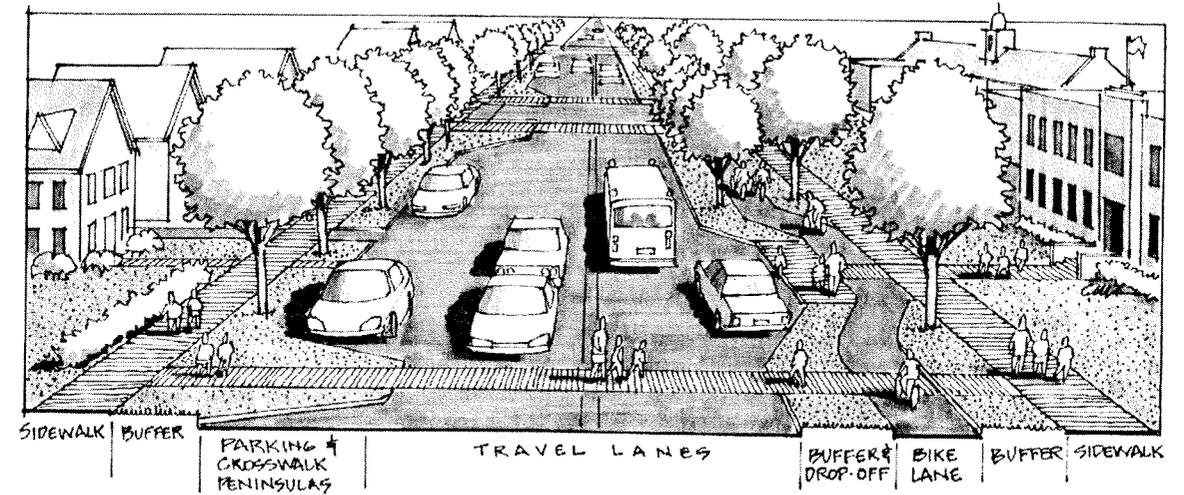


Figure V-7: Examples of traffic "calming" on streets through neighborhoods, combining a variety of public uses of the streets

Action Box No. C-6

To balance the integrity of neighborhoods against the need to move traffic on arterials:

- Where the situation calls for aggressively discouraging use of the road for through-traffic:
 - adding more school zones
 - providing for more on-street parking
 - posting the street for "No Through Trucks"
 - adding stop signs
 - narrowing the road in strategic places for easier pedestrian crossings, wider sidewalks, landscaping, etc.
 - adding a bike lane
 - adding sidewalks, narrowing the cartway (the area between curbs) if necessary
 - upgrading other arterials, and providing better access to other arterials that are more appropriate for through traffic
 - trying to assure that major destinations of this through traffic are being fully served by alternative modes of travel

Examples: Stevens Ave., Frost St., Capisic St., with diversions of through traffic to Riverside street and Maine Turnpike; Danforth St., with diversion to other arterials

Action Box No. C-6 (cont'd)

- Where the situation calls for accommodating through traffic by slowing it down (or "calming" it), consider:
 - making improvement that cause drivers to note that they are in a neighborhood/pedestrian setting, such as:
 - regular and closely spaced tree plantings;
 - well-marked crosswalks;
 - other improvements to create a closed-in effect on the roadway;
 - posted speed limits
 - pedestrian-controlled walk lights

Examples: State St., High St., Woodfords St., Forest Ave. through Riverton, residential areas of Brighton Ave.

- Where the situation calls for expediting the movement of traffic through the area in the shortest time possible, consider:
 - eliminating on-street parking during peak hours
 - where possible, relocating bus stops to bus turnouts
 - so-called "transportation system management" improvements, such as adjustments to the geometrics of an intersection, as necessary and desirable
 - regulating traffic lights and providing signs to indicate the desirable travel speed during peak hours
 - with appropriate signs and education, allowing the use of a lane in one direction during the morning peak hours and in the opposite direction during the evening peak hours
 - safety measures for pedestrians, including school children

Examples: St. John St., Warren Ave., Washington Ave., Forest Ave., (in the latter two cases with heavy landscaping to mitigate impacts)

Continued efforts to make parking easily available Downtown encourages the travel of autos into Downtown via the arterials that cross local transport areas; but to do otherwise in the face of free and expansive parking in the suburbs may further jeopardize the attraction of Downtown to retailers and major office users.

Policy

With some revision in emphasis, the City should continue to implement the Downtown Parking Goals and Policies adopted in May 1992.

In May 1992, the City Council adopted a set of goals and policies on Downtown Parking. The full document is presented in Appendix A of this Plan. The goals can be summarized as follows:

1. To make the experience of parking Downtown a positive one, which means it must be attractive, secure, user friendly, convenient, and affordable.
2. To minimize the amount of prime location Downtown property which is consumed by parking.
3. For the City to play a leadership role to ensure that the long-term parking capacity exists to meet the needs of all, diverse user groups, and to mitigate the extent to which parking cost and availability compromise the competitiveness of Downtown vis a vis the suburbs.
4. To manage the supply of on and off street parking spaces to achieve maximum and optimum use.
5. To cultivate a positive reputation for the Downtown that ample parking is available, safe, convenient, affordable, and easy to find and use.

6. To encourage the Downtown workforce and visitors to reduce reliance on on-site parking for single occupant vehicles.

The revised emphases recommended in this Plan are:

- (1) To make the sixth goal--reduced reliance on on-site parking for single-occupant vehicles--the first priority over the long term. This should include the education of students at the high schools about the costs and benefits of the single-occupant auto versus other modes. If other elements of this Plan are pursued aggressively and are successful, some of the pressure on Downtown parking will be relieved.
- (2) To build incentives for owners of surface parking lots located near stores and services to conform to an overall parking plan that calls for day-long parkers to use garages, freeing up the surface lots for turnover, metered parking.
- (3) To explore the possibility of using assessments on parking to fund bicycle and pedestrian facilities.

The islands' transportation needs, both between the mainland and the islands and on the islands themselves, are unique. Of necessity, islanders each day must shift among different modes of travel, and these shifts must operate smoothly and at reasonable expense. Since the establishment of the Casco Bay Island Transit District in 1981, the system has worked well. Issues for the future center around keeping services and equipment up-to-date with the changing demographics of the island.

Policies

The City and CBITD should continue to evolve the Casco Bay Ferry Terminal as a fully serviced, multimodal local transport center.

The CBITD should be a key component of the consortium of mass transit agencies designed to deliver a "seamless" web of mass transportation.

The populated islands are Cushings, Peaks, Little Diamond, Great Diamond, Long (now a town of its own), and Cliff. Cushings is an exclusively summer community in the old style, and is tied to Portland by its own ferry service. The other islands are served year-round by the Casco Bay Island Transit District. The ferry service, particularly since its takeover by the islands' residents in 1981, is a real focus of the sense of Casco Bay community. The ferry link also historically includes Great Chebeague, making that island, which is in Cumberland, a part of the Casco Bay community. (Most of Great Chebeague's island/mainland commerce is via Chebeague Transportation Company's Cousins Island connection, and most Chebeaguers gravitate to Falmouth or Yarmouth for mainland activities.)

Cushings, Peaks, and the Diamonds are connected to Portland Water District's Sebago Lake pipeline. This water supply has permitted more intense development of those islands than the others, which rely on wells for water.

Although year-round populations have grown, all the islands are highly seasonal. As of the 1990 Census, Portland's islands, including Long, had 1,098 year-round residents, mostly on Peaks. There are a total of 1,366 housing units. Of these, 849 or 62% are used seasonally.

These island populations (with the exception of Cushings), generate transportation needs filled by the Casco Bay Island Transit District (CBITD) and other barge, landing craft, and water taxi services. CBITD's ferry fleet is a prominent feature on the bay, and the Casco Bay Ferry Terminal, owned by the city, is a prominent waterfront intermodal facility. In 1992 CBITD carried 635,000 passengers. See Table V-1.

**TABLE V-1
1992 CBITD Ridership**

Peaks	482,038
Little Diamond	14,072
Great Diamond	20,182
Diamond Cover (Great Diamond)	3,286
Long	82,154
Great Chebeague	9,756
Cliff	23,774
Total	635,262
Autos transported to Peaks (Commercial not included)	5,093

Riders run the gamut from casual day trippers to daily commuters. Peaks is a significant bedroom suburb. To a lesser extent, so are Long and Cliff. Peaks, Long, and Cliff have schools that go through the fifth grade. After that the children commute to Portland for school. A significant number of mainlanders do a "reverse commute" to the islands for work daily.

Freight, fuel, goods, and vehicles are transported to the islands in a variety of ways. Peaks and Great Diamond have transfer bridges that permit the CBITD vehicle ferry to transfer autos or trucks of about any description at any phase of the tide. Vehicle access to the other islands is provided primarily by barge or landing craft and is possible only at the upper end of the tide range. (In a 1990 poll taken on Long Island by MDOT, islanders rejected the option of a transfer bridge, fearing that increased vehicular access would adversely impact the character of the island.) Excluding large shipments of building materials or fuel, the bulk of down-bay (beyond Peaks Island) freight is carried on the passenger ferries.

Of course in addition to commercial transportation there is significant use of private craft by individuals for transportation purposes.

CBITD's operating costs are covered virtually completely by revenue collections. The state does provide and maintain island landings rent-free, and the city has provided a one-time \$20,000 subsidy. (In contrast, 50% of the operating cost of the State Ferries on Penobscot Bay comes out of the State's general fund. The rationale given by various state agencies is that the ferry subsidy is crucial to maintaining the viability of the year-round communities on the Penobscot Bay Islands.)

One of CBITD's challenges, as it replaces and updates its vessels, is to anticipate demographic change on the islands: a shift toward more commuters, for example, and an aging population. These changes are influencing the types of future vessels. For example, a new vessel soon to come on line will be equipped with an elevator. In planning for vessels scheduled for purchase in the mid-1990's, consideration is being given to whether speed and commuting times should be the priority (which would dictate smaller, passenger-only vessels). In any case, CBITD will look to the City's capital improvement plan for assistance in financing.

City Issue 9

Public Participation

The federal Intermodal Surface Transportation Efficiency Act (ISTEA) and the Maine Sensible Transportation Policy Act open the door to a stronger local voice in how transportation dollars should be spent.

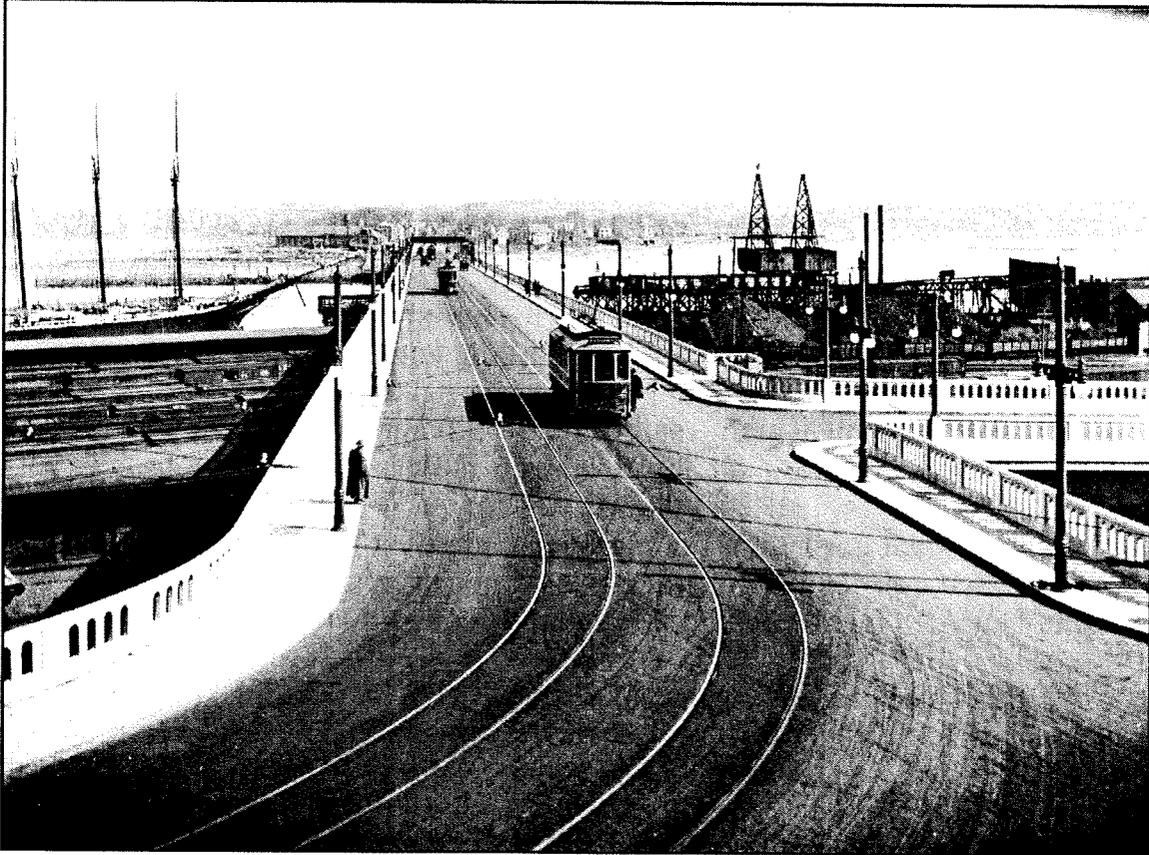
Policies

The City, through the Council's Public Safety Committee, its representation in PACTS, and similar institutional vehicles, should encourage public initiatives and opinions in considering creative ways to meet transportation needs.

Portlanders have a history of initiatives in transportation. They include, for example, Portland Trails; a proposal to re-route rail lines in the City to resolve rail crossing problems and link together several modes of transportation ("The Humez Proposal for Portland's Rail System," June 24, 1993, which has been submitted to PACTS); the Edaville 2-foot railway; and a basic system of bicycle pathways (which is included in this Plan).

These are examples of creative ideas that can be spawned by open participation in transportation planning.

VI. MOVING IN AND OUT OF PORTLAND: THE REGION



Courtesy of Greater Portland Landmarks

Chapter Summary

1. *The spread-out pattern of land use in the region is locking us into dependence on the single-occupant auto. Portland should be an advocate for more compact regional land use patterns.*
2. *Portland depends on a regional transportation network to tie it to a global economy. It should plan comprehensively for regional, intermodal transportation centers for the movement of goods and people.*
3. *Conflict between regional transportation facilities and neighborhoods is inevitable, and the need to manage this conflict is ongoing. The City must give voice to neighborhood concerns and find a balance between the needed transportation facilities and the protection of neighborhoods.*
4. *Regional mass transportation is largely unavailable and, to the extent it is available, it is uncoordinated. The City should encourage mass transit operations in the region to work toward a "seamless" network of services.*
5. *Commuting within Greater Portland and into Portland is primarily via single-occupant auto. Where mass transportation is not an option in low-density suburbs, park-and-ride lots should be expanded, coupled with an aggressive ridesharing program.*
6. *Bikeways and walkways are not viewed as legitimate elements of regional transportation. They must be institutionalized as credible parts of the system.*
7. *The City's arterials are increasingly congested, while controlled access highways may not be used to highest efficiency. The City should work with the Maine Turnpike Authority and others to improve access to the interstate system and relieve traffic on local streets.*

Regional Issues and Policies

Portland does not control the policies or decisions of its municipal neighbors or of the region or state. But it has a major presence in the region and state, serves them with regional transportation facilities, and is affected by the many decisions about transportation made by surrounding governments and by the thousands of individuals living in neighboring communities. It is essential, therefore, that by dint of cooperation and leadership, Portland offer policies to influence the movement of people and goods into and out of the city, from and to the larger region.

This chapter identifies the regional transportation issues that affect Portland and recommends policies to address them. Seven issues arise.

Regional Issue 1 Regional Land Use

Land uses in the region are spreading out, commercial activity is decentralizing, and housing is being built at lower and lower densities. These trends translate into congestion on the city's (and region's) arterials.

Policies

Portland should advocate consolidated regional land use patterns so that alternatives to single-occupant vehicles have a chance to succeed.

Transportation systems exist to move people from one land use to another. Demand for transport and the resulting traffic stem almost entirely from how land is used and organized.

The developing pattern of land use in the region is systematically locking it into dependence on the single-occupant auto. A spread-out pattern of development leaves few alternatives. Unfortunately, sprawl is aided and abetted by public policy:

- Energy and tax policies keep gasoline, and thus the cost of commuting long distances, inexpensive.

- Burying the costs related to the means of auto travel--in road and parking lot construction and maintenance, for example--put other modes at competitive disadvantage.
- Local land use policies and zoning ordinances in the region not only encourage sprawl but, through requirements for large lots, wide frontages, and prohibitions against mixed use, require it.
- Practices governing the funding of new or expanded roads are designed merely to react to traffic problems created by sprawl. They do not try to rein in the sprawl. Traffic planners have never seen it as part of their role to influence land use, but only to solve problems caused by it. The result is usually more sprawl, more traffic, and a repeat of the cycle.

Portland's own transportation problems won't be solved, and new transportation opportunities won't be seized, unless policies influencing the pattern of land use in the region are changed. This means advocating for change in federal and state gasoline tax policy. It means working with government and employers to "monetize" costs of commuting and parking. It means arguing for new directions in land use policy in the region and for different practices in the selection and funding of transportation improvements in the area.

To assure that Portland is not placed at a disadvantage in the region, it is essential that policies affecting auto-related practices, such as off-street parking, be implemented regionally and through the State's Site Location Act.

Portland also can lead by example. It can do so by working with other municipalities, GPCOG, PACTS, and MDOT to write model zoning and subdivision ordinances that are "friendly" to alternative modes of travel.

See Action Box No. R-1.

Action Box No. R-1

As an advocate for more compact patterns of land use, the City should:

- Support federal and state policies that discourage sprawl.
- Work with regional employers to “monetize” off-street parking. Example: give employees a “commuter allowance,” then charge for use of on-site parking. The less employees use the parking, the more of the allowance they keep.
- Support the requirement in Maine’s Growth Management Program that municipal comprehensive plans designate compact growth centers to which communities guide new residential development and where not only more daily needs can be met, but also where population can be concentrated enough to warrant alternative modes of travel.
- Urge PACTS to build land use considerations into its review of projects to be funded by the Department of Transportation so that transportation improvements are used to help shape desired land use patterns rather than merely react to land use. Example: classify arterials according to long-term intention to accommodate or discourage growth.
- Urge the Department of Environmental Protection to modify criteria under the Site Location Act to favor development in growth centers. Examples:
 - greater flexibility as to the required “Level of Service” on streets in designated growth areas so that new uses aren’t discouraged from locating in built-up centers
 - requirement that uses that generate high levels of traffic include measures for alternative modes in their development plans
 - consideration of maximum off-street parking requirements for large commercial and office projects in Greater Portland (only on a regional basis), combined with use of alternative modes
- Urge PACTS, MDOT, and other related agencies to give credit to communities that have adopted “travel demand management” ordinances as the agencies distribute transportation funds.

Action Box No. R-1 (cont’d)

Ordinances “friendly” to alternative modes of travel should include requirements on incentives for:

- mixed land uses
- clustering and more compact development
- bicycle paths, racks, and lockers
- sidewalks, lighting, and landscaping for pedestrians
- setbacks or drop-offs to improve access by pedestrians and transit to buildings
- preferential parking for carpools and vanpools
- provision of benches and shelters for patrons of transit
- reduced off-street parking, perhaps limiting the number of off-street spaces as an incentive to explore alternative transportation and remote parking.

Such ordinances also would require major developments to conduct “transportation impact” review. This would extend beyond “traffic” impacts to impacts on circulation and access for pedestrians, bicyclists, and transit vehicles. These impacts should be assessed for public projects as well as private developments.

Regional Issue 2 Economy and Regional Transport Centers

Portland depends on a network of air, rail, sea, and highway travel to tie it to a global economy.

Policies

The City should plan comprehensively for regional, intermodal transportation centers for the movement of goods and people.

The City should develop the infrastructure that supports the development of air, rail, and sea facilities and helps build prosperity.

The City should seek to assure that industries with regional and interstate markets locate near or have adequate access to the interstate highway, sea, and rail freight systems.

Portland is a regional center for sea and air travel. It is one of the region's trucking centers. And it will once again become a regional transportation center for passenger rail. Its economic health and, indeed, the health of the region and state are bound to this role as a regional transportation center.

COMPONENTS OF REGIONAL TRANSPORTATION

Air Transportation

In 1991 more than 555,000 passengers boarded airplanes at the Portland Jetport. Peak use to date was in 1988, prior to the recession of 1990-91, when there were 620,000 boardings. These figures compare with 238,000 boardings in 1982. See Table VI-1. At that time, Delta was the only major carrier at the airport. Beginning in 1983, other major lines established service here. The airport now is served by Delta, United, Continental, U.S. Air, and TWA, plus commuter lines. In addition to passenger lines, Portland Jetport is served by 11 air cargo shippers.

The airport's terminal was expanded and renovated in 1982. A \$6.45 million investment tripled its size to more than 100,000 square feet, added five boarding gates, and built a parking garage. In November 1988, voters approved a \$3.2 million bond for another expansion of the terminal. Adjacent land has been acquired for this purpose. The city has authorized an architectural and engineering study for adding ramps at the terminal and expanding the parking garage. In addition, the city is studying the possibility of constructing a new access road to the Jetport to separate airport traffic from local traffic.

Table VI-1
Passenger Boardings at Jetport

Year	Boardings
1982	238,000
1984	493,000
1986	603,000
1988	620,000
1990	563,000
1991	555,000

Rail Transportation

Greater Portland is tied into the state and national rail networks by the freight service of the Springfield Terminal Railroad, which is owned by Guilford Transportation Company (formerly the Maine Central and Boston & Maine Railroads). Direct connection from Portland into the Canadian rail network was lost when the trestle on the Grand Trunk line of the Canadian National Railroad burned and was not repaired. The St. Lawrence and Atlantic Railroad now operates freight service on the former Grand Trunk line which connects with the Springfield Terminal network at Danville Junction, just south of Lewiston. Occasional service is still provided into East Deering.

See Figure VI-1.

Within the next year, passenger rail service will be restored to Portland. Service will connect Portland and Boston, with several stops in between. **Table VI-2** shows the projected daily passenger volume at each of the stops. Expansion of the connection through Boston to the AMTRAK lines to New York and beyond also is being actively studied. The passenger station will be located behind the former Maine Central Railroad offices (now a renovated office building) off St. John Street. The City has obtained a grant for the design of a multimodal terminal building and is currently seeking funding for the construction of the facility. A preliminary design for the terminal is being developed.

The reintroduction of passenger rail opens opportunities not only for interregional travel, but also for commuter rail into Portland. It is worth noting that in an earlier day of rail travel, including the electrified rail car, rail lines were the direct connection between suburb and city. They provided easy daily travel for thousands into the central city. As long as the rail lines prospered, so did the central business district. Rail might again be part of the City's daily economy.

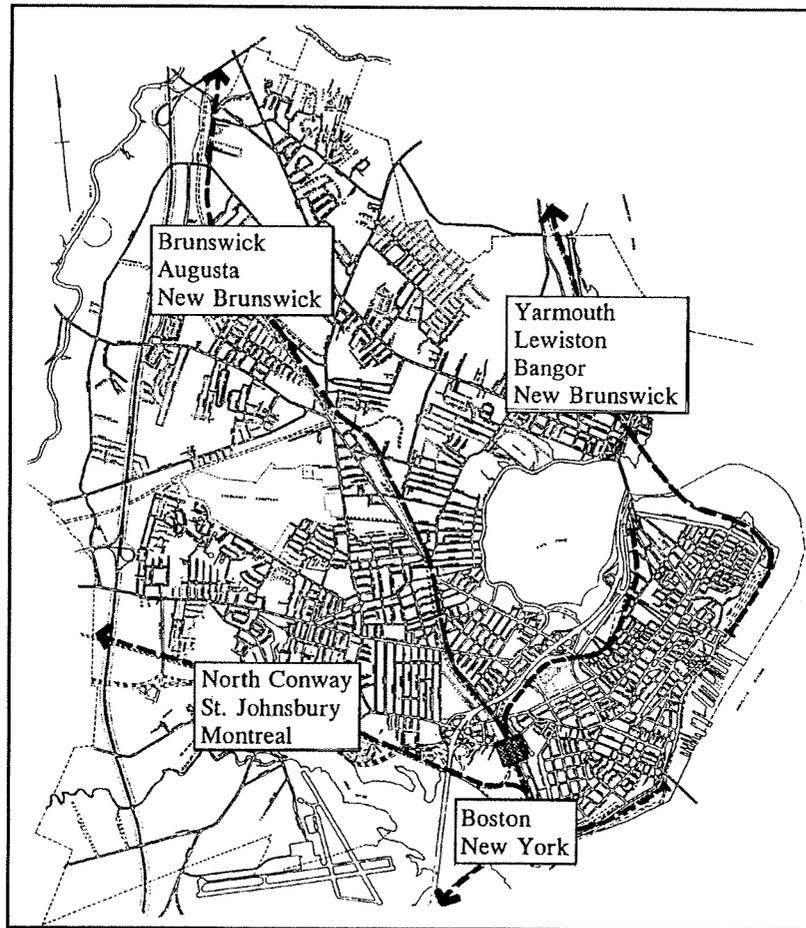


Figure VI-1: Rail connections

**Table VI-2
Projected Daily Station Volumes, Amtrak
(incl. bus trips)**

Station	1994	2010
Portland*	380	718
Saco	142	335
Wells	151	319
Dover*	212	445
Exeter	108	251
Haverhill	274	636
Boston	116	667
Total	1,383	3,371

*Includes feeder bus volumes

Source: Vanasse-Hangen

Water Transportation

Commercial: The Port of Portland is a regional distribution point for consumer and industrial goods. The port is 3.5 miles from the open ocean. Its main ship channel is 1,100 feet wide, with depth of 45 feet at mean low water (MLW) to the Diamond Island Roads Anchorage. The channel is maintained at a depth of 35 feet MLW from the anchorage upstream to the Rolling Mill docks. The harbor has 30 wharves and piers with 51,620 linear feet. **See Figure VI-2.** Included on the Portland side are two major cargo facilities:

- The city-owned International Marine Terminal has 750 linear feet of berthing. Part of the facility was renovated in 1990, and renovation of the remainder of the dock will be completed by the summer of 1993. In 1991, weekly containerized cargo service was inaugurated by Germany-based Hapag-Lloyd America, Inc., between Portland and Halifax, N.S., and on to Europe and the Far East. Plans include service from Portland to Boston and New York.
- The privately owned Merrill's Marine Terminal, built in 1983, has 900 feet of berthing, 450 feet of roll-on/roll-off berthing, a 175-ton crane, and a 50 railcar siding. Major cargoes shipped in and out of Merrill's include coal, lumber, salt, baled wood pulp, paper, frozen fish, scrap metal, tapioca, and machinery.

Passenger: The harbor has both local and national/international passenger service. Prince of Fundy Cruises provides, via the M/S Scotia Prince, daily service between Portland (International Ferry Terminal) and Yarmouth, Nova Scotia from May through October. In 1990 it carried 165,000 passengers, 30,000 cars, and 2,000 trucks and buses. In addition, over the last few years, Portland has become a recognized port of call for cruise ships. The port averages 15 cruise ship calls per summer.

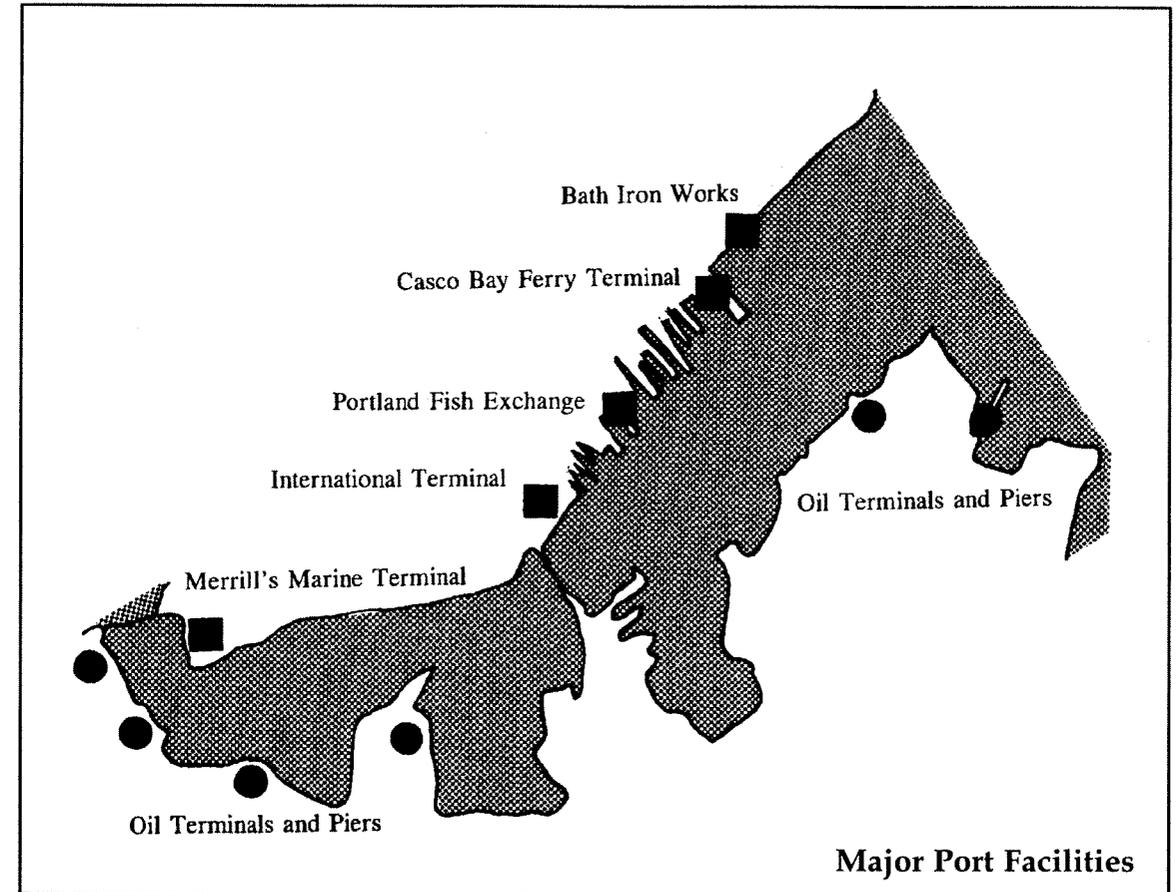


Figure VI-2: Port of Portland

The Casco Bay Island Transit District provides local ferry service to the islands of Casco Bay on a daily, year-round basis. The district is based at the Casco Bay Ferry Terminal, which was built in 1986 at the junction of Commercial Street and Franklin Arterial along with a 400-car parking garage. It is an intermodal facility in its accommodation of land and water taxis, bicycles, buses, and foot traffic to and from the ferry. In addition, numerous recreational cruise companies offer daily excursions and are an important tourist attraction.

Maine Turnpike

Over its 100 miles, 70.6 million vehicles entered and departed the Maine Turnpike in 1992. (The peak year was 1990, when 73.8 million vehicles entered and departed.) About 9% of these--6.0 million vehicles--entered and departed at Portland's Exit 8. Another 7.0 million entered and departed at Exit 7 in South Portland. See **Table VI-3**. The Turnpike has capacity to handle additional vehicles as it passes through Greater Portland. The Maine Turnpike Authority is studying whether the construction of one or more additional interchanges in the region would help to divert traffic from other arterials to the Turnpike. The two locations under consideration (in the vicinity of the Jetport on outer Congress Street and in the vicinity of the Westbrook Arterial and Rand Road) are wholly or partly inside Portland's city line. The Turnpike plans to convert to a "closed barrier" system in Greater Portland by 1995.

Table VI-3
Traffic Counts Turnpike Exits 7 and 8
(Entering and Exiting)

Year	Exit7	Exit 8
1980	3,125,000	2,868,000
1982	3,506,000	3,242,000
1984	4,581,000	3,907,000
1986	5,872,000	4,967,000
1988	7,025,000	6,137,000
1990	6,885,000	6,016,000
1992	7,000,000	6,000,000

Trucking

Trucks are the major carrier of freight in the region. They were estimated in 1985 to account for more than 135,000 trips daily (PACTS Arterial Study, Vanasse Hangen Brustlin, Inc., January 1988, p. 26) in Greater Portland. This was about 17% of all trips on the area's roadways.

Regionally, there are 30 interstate carriers with main or branch terminals in Greater Portland. Eight of the terminals are in Portland. The largest number of terminals (13) are to the south in South Portland and Scarborough, in the Route 1 - Pleasant Hill Road area, from which there is good access to the Turnpike. Nevertheless, many of the trucks' destinations for both pick-ups and deliveries are the manufacturers, distributors, retailers, shippers, and others in Portland.

Bus Transportation

Several public and private operators provide bus service to and from the region. See Regional Issue 4 in this chapter.

REGIONAL TRANSPORT CENTERS

While the City's role as a hub of regional transportation has long been appreciated, it has not always been viewed comprehensively. As a result, the components of regional transportation are disjointed. Many of the City's regional transportation facilities have developed as single-purpose centers. Coordination of facilities has been secondary (and sometimes nonexistent). The results range from inconvenience to nuisance to economic disadvantage: as, for example, when connections between highway and waterfront terminals are indirect, or connections between airport and the central business district are primarily by auto through a residential neighborhood.

To think comprehensively about regional transportation, it is necessary to think in terms of "transport centers." A transport center is a point at which different modes of transportation meet, with the facilities to allow switching from one mode to another. "One mode to another" includes switching from a single-occupant auto to a carpool, as well as to an entirely different mode.

Passenger Transport Centers

Every regional, passenger transportation terminal (airport, railroad station, etc.) of necessity becomes a kind of transport center because the auto and, to a limited extent, other modes are used to get to and from the terminals. Thus, for example, the Jetport is served by private auto (with parking garage and surface lots), bus, taxi, and charter services.

However, most are really “single-purpose” transport centers, developed to allow for the transfer to the specific mode at hand (air travel, rail travel, carpool, etc.). In the region there are few “multi-purpose” transport centers: “nerve centers” at which travelers arrive by one of several possible modes and decide to switch to another of several possible modes. Most of the terminals (Jetport, park-and-ride lots, bus stations, etc.) have been developed with the sole purpose of accommodating a switch to the single mode of immediate concern. Nor has there been a serious attempt to link the physically separated terminals by any means other than the city streets or regional roadways that carry normal automobile traffic: for example, there is no shuttle between park-and-ride lots and the Jetport. Rather, each terminal has sought to maximize accommodations for arrival by private auto. Given the region’s auto-dependency, no other strategy has made sense or, for that matter, may have arisen even as a possibility.

The “single-purpose” regional passenger transport centers--which are more accurately referred to as terminals where they don’t play the “nerve center” role implicit in transport centers--in or serving Portland can be listed as follows (see also **Figure VI-4**):

- Portland Jetport
- Casco Bay Ferry Terminal
- International Marine Terminal
- Intercity bus terminals
- (Proposed) AMTRAK Railroad Station off St. John Street

Park-and-ride lots also play a role as a transport center, though at present primarily by allowing a switch from single-occupant auto to ridesharing. Park-and-ride lots and ridesharing are discussed later in this chapter.

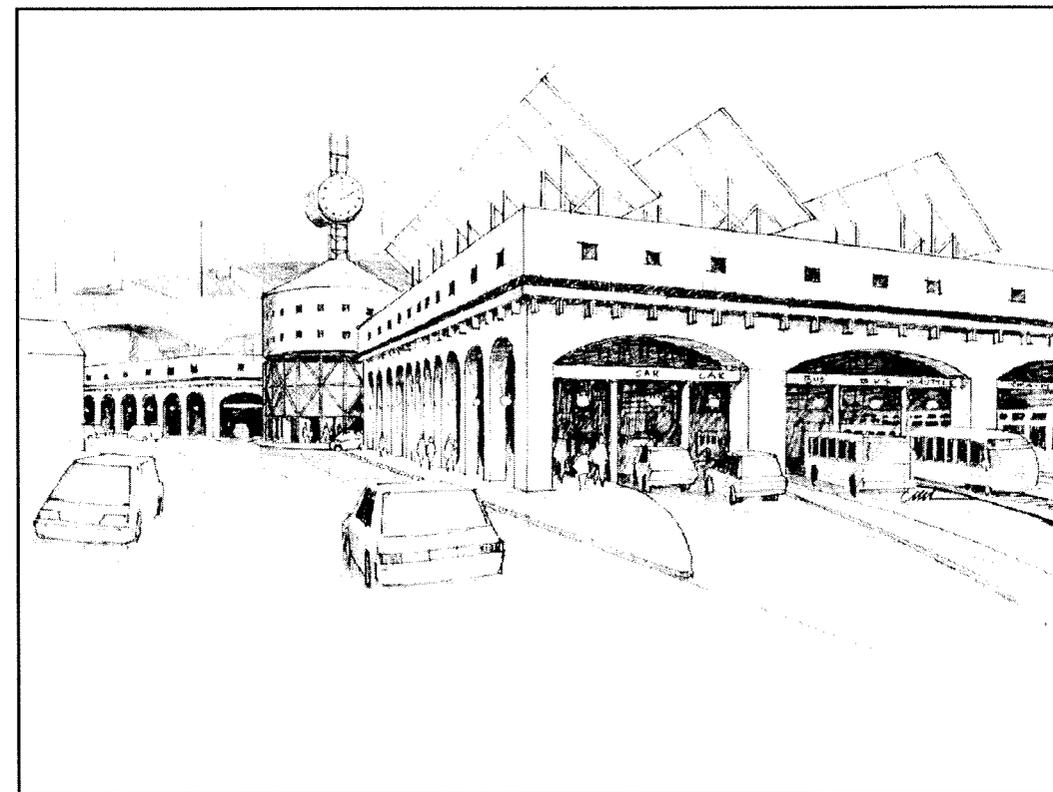


Figure VI-3 Conceptual regional transport center: a “nerve center”

Commercial Transport Centers

The same types of observations made for passenger centers hold for commercial transport. Instead of autos, the connecting mode is trucks, either to or from ships in Portland Harbor, or to or from rail at warehouses or rail sidings. An exception is Merrill's Marine Terminal, where roadway, rail, and sea-borne modes of transportation converge. However, even here there are deficiencies, primarily the lack of direct access to the interstate highways.

The existing commercial transport centers are:

- International Marine Terminal
- Merrill's Marine Terminal
- Portland Jetport

Designated Regional Transport Centers

In planning comprehensively for regional transportation facilities, the City should formally designate at least the following as regional intermodal transportation centers:

- Portland Jetport
- New AMTRAK station/Greyhound Bus Terminal
- One or more Turnpike Interchanges
- Waterfront from International Ferry Terminal to Merrill's Terminal

As regional transport centers, the City should in particular assure that each:

- is adequately sized and equipped to meet the demands of a regional center;
- has land around it zoned for supporting uses (warehousing and distribution, for example, in the case of centers whose purpose is primarily to move goods); and
- has an adequate, intermodal feeder system to and distribution system away from the center.

Ideally, at least one center will evolve as truly multimodal: a place where a traveler can arrive by any of several modes and leave by any of several modes. The AMTRAK/Greyhound area may have the best chance of achieving this if easy connections between the terminals are planned at the outset.

See Action Box No. R-2.

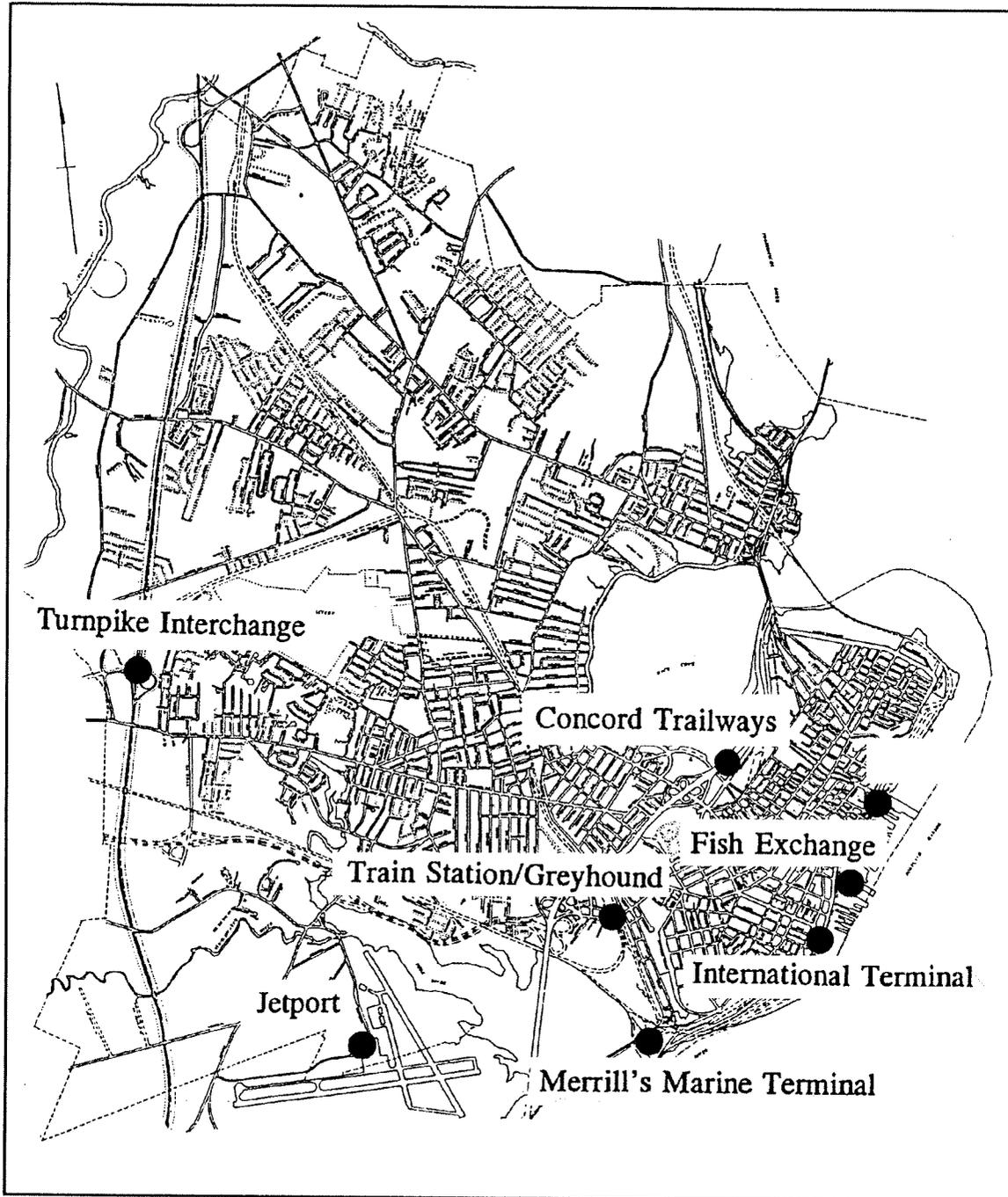


Figure VI-4: Regional transport centers

Action Box No. R-2

To enhance the designated regional transportation centers:

- Focus airport-related development around the airport so that it can operate efficiently as a transport center
- Make the Jetport a stronger multimodal center, with preferences for mass transportation, shuttle buses, park-and-ride lots, and favorable taxi rates, and with consideration given to those alternatives before expansion of parking facilities for single-occupant autos
- As the Jetport looks at future expansion, consider whether there are functions better handled by larger regional airports (Pease, Logan, etc.) not as constrained by surrounding neighborhoods
- Assure that waterfront zoning accommodates land uses that support the regional waterfront transport center, such as affordable warehousing
- Give serious consideration, under the guidelines of ISTEA and the Maine Sensible Transportation Policy Act, to a West End bypass connecting I-295 south of Exit 5 to the waterfront in the vicinity of Merrill's Marine Terminal, provided that the plan also reduces through traffic on Danforth Street
- Operate highly visible, fixed-route buses that run a loop among the International Ferry Terminal, the Casco Bay Ferry Terminal, the new AMTRAK station, Jetport, and Park-and-ride lots

To further support the development of air, rail, and sea facilities:

- Develop an entity or work with an existing entity, such as a public warehouse, that can coordinate routes and consolidate small loads from individual businesses into a large enough volume to justify rail transport
- Working with MDOT and existing owners, assure that existing railroad rights-of-way, such as the Mountain Division of the Maine Central or the Grand Trunk line into Falmouth, are preserved for future transportation use
- Explore the need for renewed year-round commercial ferry service to the Maritimes

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Actin Box No. R-2 (cont'd)

To enhance access to regional and interstate markets (and minimize regional/interstate traffic on local arterials):

- Earmark land adjacent to Turnpike and I-295 interchanges for uses that require access to regional highways and/or rely on interregional transport of people or goods
- Consider whether access to adjacent, underused land (e.g., Rand Road area, Fore River - I-295 area) can be upgraded without adverse impacts
- Identify preferred truck routes into and out of the City, and then (a) move to solve conflicts along these routes, and (b) discourage or prevent trucks from using other routes
- Explore the need for connections between I-295 and the Maine Turnpike south and north of the City. If appropriate, build the connections that will complete a beltway around the City

Regional Issue 3 Conflict with Neighborhoods

Conflict between regional transportation facilities and neighborhoods is inevitable, but it creates opportunity to address transportation issues imaginatively.

Policies:

The City and its residents should recognize and appreciate Portland as a city that draws its strength from a diversity of uses, including transportation facilities and the activities they support.

The City should formalize the means of giving an early voice to neighborhoods in the development of regional transportation facilities in conjunction with ISTEPA and the Maine Sensible Transportation Policy Act.

Land use regulations should anticipate and try to minimize the conflict between regional transportation facilities and neighborhoods.

In the development and expansion of regional transportation centers, the City should proceed on the assumption that a balance can be struck and that public participation can help find creative solutions to transportation issues.

Regional transportation facilities are, by their nature, sizable and often intrusive. This is especially so where neighborhoods historically grew up around transportation centers. The challenge to the City is to find, through siting, design, and negotiation, acceptable balance between these facilities and the neighborhoods. Portland has examples where this has worked: Merrill's Marine Terminal and the West End neighborhood, for example. It also has examples where vigilant neighborhoods and the City have been doing the hard work of looking for the balance, such as in the case of the Jetport and Stroudwater neighborhood.

Reminding ourselves that Portland is a city of diverse activity, institutionalizing the neighborhood voice, and careful, anticipatory land use regulation all help to minimize and mediate the conflict that arises.

See Action Box No. R-3.

Action Box No. R-3

To minimize and manage conflict between regional transportation facilities and neighborhoods:

- Use this Transportation Plan as a vehicle for debate and consensus, and once adopted, use it consistently so that both neighborhoods and transportation centers can know what to expect.
- Fully include transportation within the purview of the City Council's Public Safety Committee, drawing upon the views of the public as it deems appropriate. This may include the appointment of a standing Citizens' Transportation Advisory Committee to advise the Council and to help implement this Plan.
- Review and enforce standards for the control of noise, dust, and similar environmental conditions to assure that they are adequate to protect existing nearby neighborhoods.
- To the extent possible, assure that land surrounding regional transportation centers is zoned for compatible, supporting uses rather than uses that would consider the centers to be nuisances.
- Encourage the clustering of complementary commercial functions (such as warehousing, distribution, lodgings, trucking, etc.) around regional transportation centers.

Regional Issue 4 Regional Mass Transit

Regional mass transportation is largely unavailable, and to the extent it is available, is not well coordinated.

Policies:

The City should encourage mass transit operations in the area to be closely coordinated to create a "seamless" network of convenient, easy-to-use-and-understand passenger services.

A network of commuter express bus services should be developed on principal arterials and freeways to connect Portland's suburbs to the City's peninsula and other regional activity centers. These commuter routes should serve park-and-ride lots in or near the suburbs.

Commuter rail service should be developed, to the extent feasible, on existing rail lines into Portland.

Intercity bus services connecting Portland with other areas in Maine and the nation should be enhanced as an alternative to autos.

Public transit, municipal vehicle, and other large fleets should begin conversion to alternative fuels.

Mass transit in the Portland region is limited mostly to buses. The regional bus system, operated by the Greater Portland Transit District (METRO), has both shrunk and been fractured during the last 15 to 20 years. In 1975 the system had 3.7 million passenger trips. At that time, the system included Portland, South Portland, Westbrook, and Cape Elizabeth, with service to the northern suburbs. In 1978 the service to the northern suburbs ended for lack of ridership. Also in 1978 Cape Elizabeth withdrew from the system. In 1983 South Portland withdrew and initiated its own local bus service. In 1984 METRO lost the benefit of special-fare tickets for low-income and other groups eligible for service from the county-wide Regional Transportation Program. In 1985 the system lost its service to school children, who began to ride school buses.

As a result of these blows--as well as the general spreading out of the region's population in patterns that preclude bus service--ridership on the regional METRO fell to less than 1.3 million as of 1992. According to the Greater Portland Travel Demand Management Study, there are 20 mass transit boardings per capita in Portland, accounting for 1% of all trips (work, shopping etc.).

In addition to METRO, the Regional Transportation Program provides paratransit (door-to-door) service by advance reservation for several human service client groups. Intrastate and interstate bus service is provided by Greyhound Bus Line, whose terminal is at St. John and Congress streets; by Concord Trailways, which is based on Marginal Way and provides nonstop service to Boston and Bangor and service to the midcoast; and by Mermaid Transportation, which gives direct service between Portland and Logan Airport in Boston. A shuttle bus between Biddeford/Saco/Old Orchard Beach and downtown Portland is operated by the Biddeford-Saco-Old Orchard Beach Shuttle Bus.

Three Portland-based taxi companies also provide transit in and around Portland. They are an important part of the regional transportation mix, in that they allow easy shifts to and from air, rail, and sea travel. A number of limousine services are also available in the area.

With reintroduction of passenger rail, there may also be opportunity to provide and promote commuter rail service into Portland.

See Action Box No. R-4.

Action Box No. R-4

To work toward a "seamless" network of mass transportation:

- Over the short term (within one to two years) METRO, Casco Bay Island Transit District, South Portland Bus Service, and the Regional Transportation Program, Inc., should form a consortium of independent agencies staffed by the Council of Governments and PACTS, for joint marketing, joint purchasing, service development, route/schedule coordination, and other purposes.
- This transit consortium should coordinate its activities with intercity bus firms, taxi companies, international cruise operators, Jetport management, and MDOT officials responsible for the planning and development of rail passenger service.
- Local transit schedules should be coordinated with the AMTRAK service, intercity bus services, Casco Bay ferry services, and with peak arrival and departure times at the Jetport.
- Over the long term, as the agencies of the consortium gain experience in working together, the participants should determine whether they wish to evolve into a more formal institution for regional cooperation. This may include the involvement of other transportation providers as well, such as the Jetport, the AMTRAK station, park-and-ride lots, and PACTS.

Pending feasibility analysis by PACTS and GPCOG, commuter express bus routes should be considered for:

- Gorham-Westbrook-Portland peninsula via Route 25;
- North Windham-Westbrook-Portland peninsula via Route 302;
- Gray-Portland peninsula via Maine Turnpike and Route 26;
- Saco-Biddeford-UNUM-Portland peninsula via Maine Turnpike and I-295;
- Brunswick-Freeport-Yarmouth-Falmouth-Portland peninsula via Rout 1, I-95, and I-295; and
- Buxton-Scarborough-Westbrook-Portland peninsula via Route 22.

Commuter rail service on existing rail lines into Portland should be explored for:

- Within 2 to 5 years, Saco-Biddeford-OOB to Portland on the rail line being upgraded for AMTRAK's passenger operations; and
- Over the longer term, in the following corridors:
 - Bath-Brunswick-Freeport-Yarmouth-Portland;
 - Lewiston-Auburn-New Gloucester-Portland; and
 - Windham-Westbrook-Portland.

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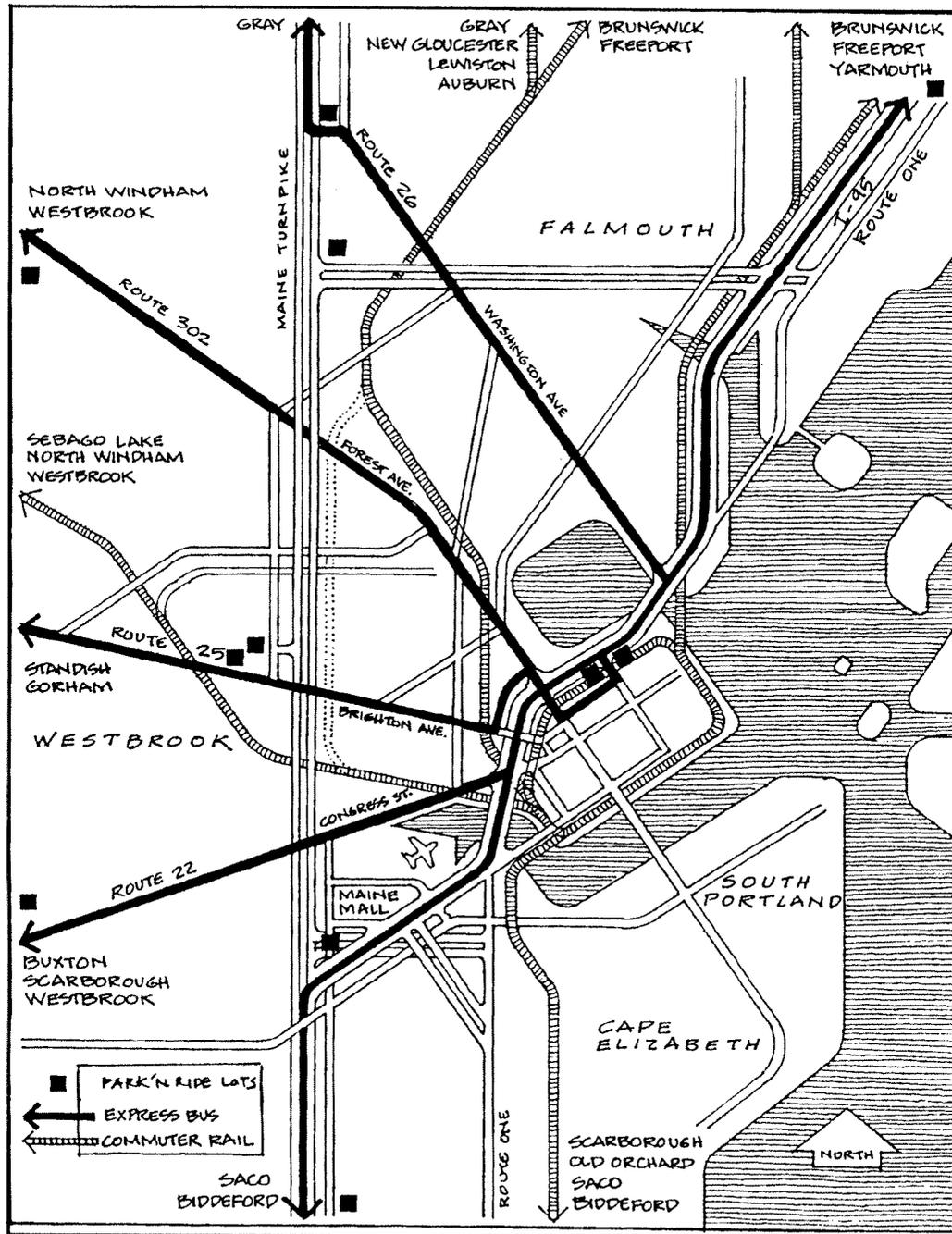


Figure VI-5: Potential express bus and commuter rail connections

Action Box No. R-4 (cont'd)

To enhance intercity bus service connecting Portland to other regions:

- Provide intercity bus service information as part of the regional mass transit consortium's marketing program.
- Ask MDOT to consider a start-up operations subsidy under the Federal Transit Administration's Section 18 program or the Intermodal Surface Transportation efficiency Act (ISTEA) for intercity bus service on the following corridors:
 - Midcoast, from Rockland to Portland, serving the new AMTRAK station, the International Ferry Terminal, the CBITD Terminal, and the Jetport (note: Concord Trailways and Greyhound recently resumed midcoastal service);
 - Boston to Portland, local service serving the new AMTRAK station and communities along U.S. Route 1 not served by AMTRAK service.
 - Bangor-Waterville-Augusta-Lewiston/Auburn to Portland, serving the new AMTRAK station, the International Ferry Terminal, the CBITD Terminal, and the Jetport;
 - North Conway-Fryeburg-Bridgton-North Yarmouth to Portland, serving the new AMTRAK station, the International Ferry Terminal, the CBITD Terminal, and the Jetport; and
 - Seasonally, Bethel-South Paris-Mechanic Falls-Gray to Portland as an example; other opportunities may arise.
- Portland should join with the proposed consortium of transit operators and other interested communities in developing an alternative fuels demonstration project. The project should be a demonstration not only of alternative fuels but of alternative modes. To the extent possible, this project should be based on shared use of capital facilities (e.g., fuel storage and pumping for liquid propane gas or recharge station for electric vehicles). The design of the project should be based in part on findings of the preliminary transit alternative fuels feasibility study to be undertaken by COG in spring 1993.
- The transit consortium and interested municipalities should seek Federal and/or state funds to support the demonstration project.

Regional Issue 5 Ridesharing

Commuting within Greater Portland and into Portland is primarily via single-occupant auto. Given the low-density development of the suburbs, most mass transit options, especially in the second- and third-tier suburbs, may not be workable.

Policies:

A network of convenient park-and-ride lots should be expanded adjacent to and visible from freeways and principal arterials in Greater Portland. These lots should be placed close to suburbs and rural centers, be served by mass transit as feasible, be integrated into existing activity centers (rather than be located in isolation from other activities), and be adequately sized, signed, equipped with shelters, lighted, and maintained. Existing, underutilized parking sites should be employed where possible.

An aggressive program should be established to promote regional ridesharing, to match riders, and to market carpooling and vanpooling to employers and commuters in the region.

Ridesharing can work in low-density situations where mass transit may not. It refers to moving commuters from single-occupant vehicles to multi-occupant vehicles. Public agencies can help ridesharing by providing facilities, such as park-and-ride lots, and services, such as matching commuters within similar schedules and destinations. Private employers can promote it through vanpools and helping with rideshare matching.

Park-and-ride lots are a part of the system that makes ridesharing work. They are a method of “concentrating” commuters from dispersed, low-density suburbs. They make possible a switch from single-occupant vehicles to multi-occupant vehicles: a carpool, a vanpool, or, if the critical mass warrants it, a bus.

At present in Greater Portland there are 21 park-and-ride lots with 1,503 spaces. These include three in the City with 131 spaces (source: PACTS/GPCOG, Greater Portland Travel Demand Management Study, Working Paper No. 1, 1993, p. 80). According to PACTS/GPCOG’s TDM study, a median of 58% of the spaces in the park-and-ride lots are used on work days. Use of the lots probably is by long-distance commuters on the interstate rather than by commuters into Portland. The challenge is to get commuters who are bound for in-town to rideshare. Of the 21 lots in Greater Portland, seven are located at Maine Turnpike interchanges between Biddeford and Gray. The three Portland lots are at:

- Marginal Way and Franklin Arterial (an MDOT lot with 36 paved spaces used to overcapacity, and there are plans to expand it to 160 spaces);
- Marginal Way and Preble St. (a two-lot facility jointly sponsored by the city and University of Southern Maine, containing a total of 309 spaces, with less than 10% typically used to date);
- Turnpike Exit 8 (25 spaces, used to capacity).

At present, only six of the region’s park-and-ride lots are served by buses.

See Action Box No. R-5.

Action Box No. R-5

Park-and-ride lots should be expanded or created, pending feasibility analysis underway by PACTS/GPCOG, in the following areas:

- Northwestern suburbs: Raymond, Windham, Gray, New Gloucester;
- Northern suburbs: Brunswick, Freeport, Pownal, Yarmouth;
- Western Suburbs: Westbrook, Gorham, Standish;
- Southern suburbs: Scarborough, Old Orchard Beach, Saco-Biddeford, the Kennebunks, Wells;
- Southwestern suburbs: Buxton, Hollis, Dayton, Sanford.

Better use of lots at Marginal Way and Preble Street should be enhanced by:

- Developing them as activity centers with basic services, and/or linking them to the activity center (and recommended local transport center) at Shop 'N Save Plaza.
- Exploring incentives and mandates for their use by USM students and employees.

An aggressive program to promote regional ridesharing should include:

- Encouraging cooperation by employers and the Maine Turnpike Authority in support of the COG Regional Rideshare Program (to be expanded through funding by MDOT).
- Encouraging this Rideshare Program to establish an 800-number for carpool inquiries, as well as extensive road signs and media advertising to promote rideshare.
- Encouraging the Rideshare Program to give technical assistance to employers in formulating programs for alternatives to the single-occupant auto and to inform employees about rideshare and other options.

Regional Issue 6 Bicycles and Pedestrians

Bikeways and walkways are not viewed as legitimate elements of the regional transportation system but are essential to meeting the goals of this Plan.

Policies

The City should elevate and institutionalize bicycling and walking as legitimate parts of the regional transportation system.

Major transportation facilities and major public and commercial facilities should build in provisions for commuting by bicycle and walking.

A continuous, regional network of bikeways should be promoted and developed.

In 1982 PACTS published a Regional Bikeway Plan. The plan called for a continuous network of bikeways from Scarborough on the south to Yarmouth on the north and to Gorham and Windham on the west. The plan put a priority on commuting routes. As a result, they follow or parallel the regional arterials and, like the arterials, converge on Portland in the vicinity of Baxter Boulevard and on the peninsula. The regional plan does not call for bikeways to the other major job center in the region, the suburban Maine Mall area of South Portland.

See Figure VI-6.

Segments of the regional bikeways have been built or are scheduled to be built--for example, along Route 88 in Falmouth, Route 77 in Cape Elizabeth and Scarborough, and as part of the scheduled new Portland-South Portland Fore River Bridge. However, most have not yet been built or formally designated.

Although bikeways and sidewalks have been embroidered onto highway projects or made token parts of the site plans for major developments, they have not been made a priority. Experience elsewhere shows that where facilities are

made available, a significant percentage of commuters will use them. These facilities can not be afterthoughts. In addition to bikeways and walkways themselves, accommodations have to be considered for intermodal transportation (such as bike racks on buses) and at the point of destination (such as showers and lockers).

See Action Box No. R-6.

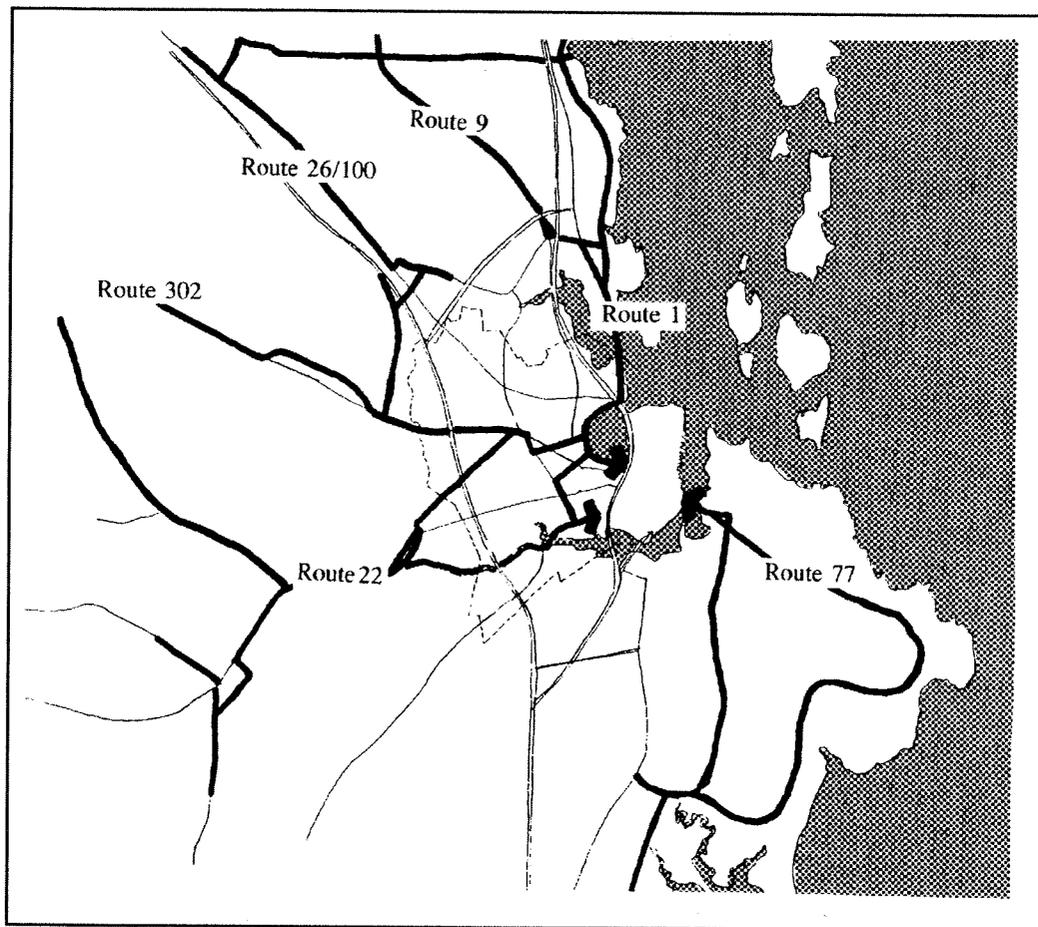


Figure VI-6: Proposed regional bikeway network (PACTS, 1982)

Action Box No. R-6

To help institutionalize bicycling and walking as legitimate parts of the regional transportation system:

- Create the position in the City of Bicycle/Pedestrian Coordinator. This position's responsibilities should include:
 - Promoting the development of needed facilities;
 - Reviewing development plans for compatibility with goals for biking and walking;
 - Preparing educational and informational programs;
 - Increasing the priority of bicycling and foot traffic among City departments.

Consider assigning this position to an existing staff member; and consider the benefits of housing the position in either the Police Department, where enforcement also is a responsibility, or the Public Works Department, which maintains streets and sidewalks.

- Train City-employed drivers to educate others by example. That is, they should be a visible model for other drivers in their respect for bicyclists and walkers (stopping at City crosswalks, for example).

To make biking and walking a legitimate part of commuting:

- Make accommodations for them leading to and within regional transportation centers, including park-and-ride lots, train station, Jetport, and ferry terminal.
- Create or improve provisions for transporting bicycles on buses, ferries, and trains, without charge.
- Work with major employers to build in--and amend land use ordinances to require major developments to provide--needed facilities at the point of destination, such as weather-protected parking of bikes, locker rooms, and showers.

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Action Box No. R-6 (cont'd)

To promote a continuous regional network of bikeways:

- Work with PACTS to update and prepare a systematic, long-term plan to finance and implement the 1982 Regional Bikeway Plan.
- Assure that all bridges, including between South Portland and Portland and between Falmouth and Portland, have properly designed facilities that separate motorists from bicyclists and pedestrians.
- Work with state and federal officials to modify official policy and allow bike lanes on "limited access" roadways/bridges such as I-295 at Tukey's Bridge.

Regional Issue 7 Congestion

The City's arterials are increasingly congested, while controlled access highways may not be used to highest efficiency.

Policies

The City should manage land use along arterials so as not to unreasonably rob them of their capacities.

The interstate highways should be the preferred route for auto and truck through traffic, rather than such principal arterials as Route 1 and Route 26/100.

Higher occupancy vehicles should be given preference on the Maine Turnpike.

Maximize the use of the interstate system to help relieve congestion on the City's arterials.

The issue is two-fold. First, the City's arterials are used simultaneously as through-roads and as local service roads. Second, interchanges governing access to highways and policies governing their use may not allow diversion of regional traffic to them to the fullest extent possible.

Congestion on the City's arterials is increasing. Six regional arterials converge on Portland, like spokes converging on their hub, from south, west, and north:

- Route 77 from the south;
- Routes 22 and 25 from the west;
- Routes 302 and 26/100 from the northwest; and
- Route 9 from the north (Route 9 joins Route 22 in Portland and later with Route 1 before regaining its identity in Scarborough to the south).

(In addition, there are three interstate highways--the Maine Turnpike, I-295, and Route 1--that travel through Portland south and north.)

See Figure VI-7.

Each of these arterials is an economic lifeline for Portland, connecting the city with regional and national markets and with workers and shoppers who live in the suburbs. Most of the arterials, according to the PACTS Arterial Study (Vanasse Hangen Brustlin, Inc., Jan. 1988, pgs. 18-19), have deficiencies in safety and mobility along parts of their lengths, both inside and outside of Portland. Deficient segments within Portland are listed in the following **Table VI-4** (excluding the Turnpike and I-295). In this table, the definitions of "safety" and "mobility" are specific, engineering definitions. For example, a "safety" deficiency exists where there have been more than eight accidents within three years and the number of accidents is higher than would be expected for this type of location. In less technical terms, safety has to do with how "safe" you feel walking along a street, or how "safe" parents feel letting their children cross a street. By these very human definitions, problems of safety may be much more widespread.

Table VI-4
Existing Roadway and Intersection Deficiencies

Route	Deficiency
77 (State and High)	Safety
22 (Congress)	Mobility from Downtown to Libbytown Mobility from Stevens to Stroudwater Mobility and safety at intersections between Steven and Westbrook St,
25 (Brighton)	Safety from Stevens to Capisic
302 (Forest)	Mobility and safety from Bedford through Morrill's Corner
26/100 (Allen)	Safety from Forest to Washington
(Washington)	Safety from Vernada to Allen
(Auburn)	Safety from Allen to Lambert
9 (Ocean)	Mobility and safety at intersection with Washington

According to PACTS, with projected growth in traffic volumes, most of the length of all of these arterials in Portland will be deficient in mobility by 2000. That is, they will operate at Level of Service E or F during peak hours. By 2010, based on projected growth, at least 25 intersections within Portland along these routes alone are projected to operate at LOS F.

This congestion, existing and pending, is not merely or even primarily a mobility problem. It is an air quality problem, the first solution to which is not more roadways but creative use of existing roadways and public transit. And it is important to note that if the assumptions upon which the PACTS Arterial Study was based do not materialize--if different assumptions take hold as recommended in this Transportation Plan--future congestion can be reduced.

See Action Box No. R-7.

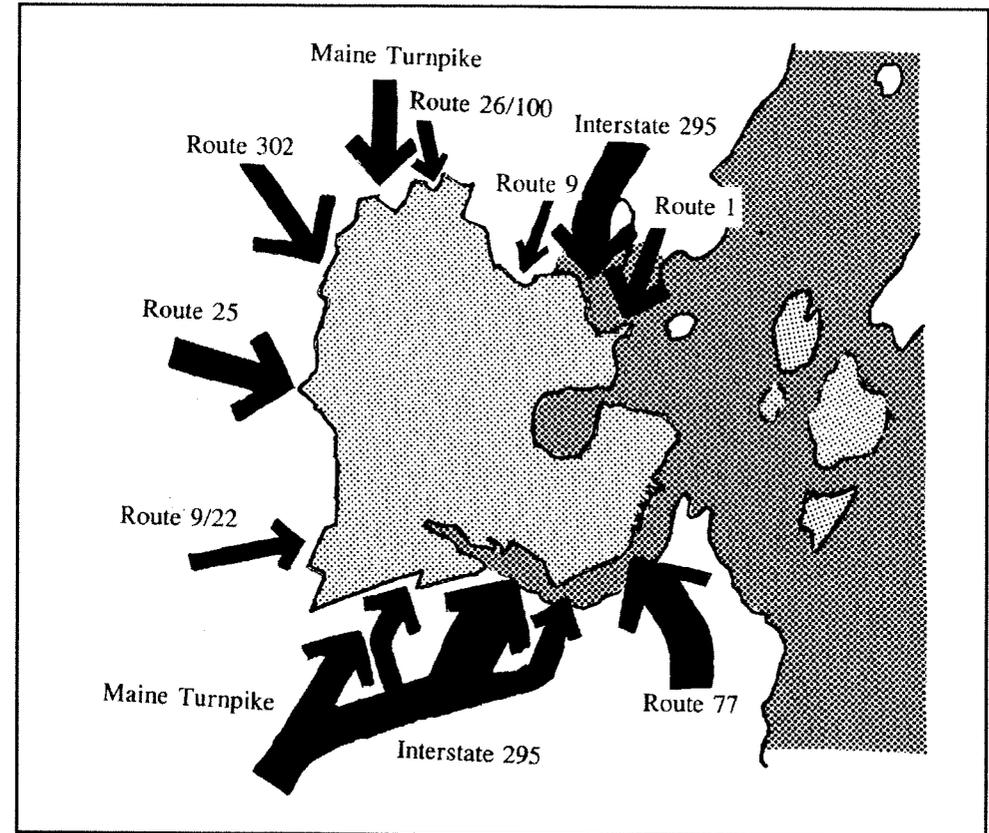


Figure VI-7: Regional traffic flows

Action Box No. R-7

To help manage existing capacities of the City's arterials:

- In the reconstruction of arterials, negotiate with abutting property owners for the consolidation of curb cuts where practical and possible.
- Review standards governing the access to arterials from adjacent properties, and upgrade the standards, as necessary, to limit new curb cuts and to require or encourage new development to share points of access.
- Require that new development along or near the regional arterials be integrated into the local street network to minimize the number of local trips on the arterials. (This approach should be analyzed case-by-case to assure that high volumes of traffic are not directed through established neighborhoods.)

To maximize use of the interstate highways and other high capacity arterials to the benefit of local roads.

- Ask MDOT and the Maine Turnpike Authority to install adequate signs directing through traffic onto the Turnpike, I-295, and I-95.
- Ask PACTS to develop a regional truck route plan.
- Ask PACTS, MDOT, and the Maine Turnpike Authority to analyze the regional traffic impacts of a variety of approaches and to weigh each against the goals of this Plan. Among the approaches should be:
 - pricing policy (e.g., making I-295 a toll road or, conversely, removing tolls on the Turnpike from Scarborough to Falmouth)
 - improved access to and from the interstate system and an assessment of new interchange locations
 - accepting congestion on local roads throughout the region as an alternative to major new construction and an incentive for public transit and ridesharing.

Action Box No. R-7 (cont'd)

- If found to be feasible by a PACTS study, the concept of a circumferential highway should be advanced by building new ramps that permit southbound movement from the Falmouth spur (on I-95) to I-295, and from I-295 northbound to the Falmouth spur.

To encourage higher occupancy vehicles on the Maine Turnpike:

- In the short term (one to three years), the Maine Turnpike should be encouraged to offer reduced tolls for carpool, vanpools, and commuter express buses and to continue expanding, as is practicable, park-and-ride lots.
- Encourage the Maine Turnpike to participate in COG's expanded regional rideshare promotional program.
- Over a longer term, encourage the Maine Turnpike to develop, as practicable, high occupancy vehicle exiting and entering lanes to give these modes preference over other vehicles.

VII. FIRST STEPS

The purpose of this Transportation Plan has been to set forth policies to direct transportation in Portland. Actions have been offered as illustrations of how the policies can be implemented.

While a full action plan--which would include cost estimates and a schedule--is beyond the scope of this document, this chapter presents:

- (a) several actions that should be taken immediately to build momentum toward the goals of the Plan, and
- (b) a proposal for a series of demonstration projects to test concepts, to better understand the costs involved, and to help market key ideas to the public.

Immediate Actions

The actions in the following chart should be in place within the next 36 months. They should not be construed as the only actions that might be initiated. Many transportation-related issues will arise in coming months, and it is expected that the policies of this Plan will guide the City Council and others as they tailor specific actions to address them. But the actions listed in the chart are considered the minimum necessary to set the stage for a new transportation future. They:

- preserve a diverse and compact pattern of land use, which is a precondition of any alternative to the auto, where it exists, and seek the advice of neighborhoods as to the types of goods and services they would like within walking distance;
- lay the foundation for “travel demand management” (TDM);
- build regional transportation centers into multimodal facilities;
- design multimodal, local transportation centers;
- put into place a basic bicycle plan;
- build toward a “seamless” web of mass transportation;

- prepare strategies for dealing with through-traffic on arterials that cut through neighborhoods;
- preserve or enhance walkable neighborhoods; and
- educate and enable children to more readily use mass transit.

More discussion of each action and its rationale can be found in chapters IV (Neighborhoods), V (City), and VI (Region) of this Plan, as indicated under the Reference column in the chart.

TOPIC	ACTION	REFERENCE
Land Use	<p>Work to preserve (or, where they do not exist, to create opportunity for) mixed use, residential densities compatible with mass transit, and design of commercial projects compatible with mass transit, walking, and bicycling. Specifically:</p> <ul style="list-style-type: none"> • allow wider range of businesses (such as small-scale production uses) near established community commercial centers (Westgate, Pine Tree, Northgate, etc.), with performance standards • require in all commercial districts dimensional standards (setbacks, floor area ratios, etc.) and design standards (relating to locations of building and off-street parking, etc.) friendly to bus riders, pedestrians, and bicyclists • ask neighborhoods what goods and services they would like close-by and where low-impact offices and services could be integrated into their areas. • review nonconforming neighborhood businesses and "legalize" those that are positive factors in meeting neighborhood needs • allow a wider range of home occupations, provided performance standards are met • increase residential densities in commercial districts along Forest Ave. and outer Congress St. and in areas adjacent to existing community commercial centers, with incentives for mixed residential-commercial use 	<p>Ch. IV, N-1; Ch. V, C-1; Ch. VI, R-1</p> <p>See also pilot projects below</p>

TOPIC	ACTION	REFERENCE
Land Use	<p>Using models developed by the GPCOG/PACTS travel demand management study, incorporate into the City's land use ordinances provisions for TDM. Require, at a minimum:</p> <ul style="list-style-type: none"> • consideration by major developments of alternative modes of transportation, including credible measures to implement such alternatives • analysis of impacts on alternative modes of transportation • on-site provisions for bicyclists • incentives/requirements to limit the number of off-street parking spaces in concert with alternative modes of transportation <p>Assign staff responsibility to monitor all TDM opportunities and efforts and to review all projects for impacts</p> <p>Solicit voluntary proposals from such major employers as USM and UNUM on ways in which intermodal transportation can be introduced or enhanced and the cooperative efforts needed to implement new programs</p>	<p>Ch. IV, N-1; Ch. V, C-1; Ch. VI, R-1</p> <p>See also pilot projects below</p>
Bicycling and foot traffic	<p>Assign staff responsibility to coordinate bicycle/pedestrian plans and opportunities</p> <p>Initiate a 5-year bicycle facilities plan, as described in this Plan</p> <p>Equip METRO buses, Park-and-ride lots, and transportation centers with provisions for bicycles</p> <p>Repeal ban on riding bicycles to elementary school</p> <p>Ask and train city-employed drivers to model practice of stopping as pedestrians enter City crosswalks</p>	<p>Ch. IV, N-5; Ch. V, C-4; Ch. VI, R-6;</p> <p>See also pilot projects below</p>

TOPIC	ACTION	REFERENCE
Regional Transport Centers and Facilities	<p>In the ongoing planning of the Jetport, AMTRAK station, and International Marine Terminal, and in the financing of improvements related to these and other major public facilities (such as Hadlock Field), require them to adhere to the same TDM measures to be required of large private developments</p> <p>Make sure these facilities are truly intermodal, with specific connections to different forms of transit</p> <p>Proceed with a full study under ISTEA guidelines of a West End Bypass connecting I-295 south of Exit 5 to the waterfront in the vicinity of Merrill's Marine Terminal (with diversion of Danforth Street traffic)</p> <p>Identify preferred truck routes and (a) move to solve conflicts along them and (b) discourage or prevent trucks from using other routes</p> <p>Ask the City Council's Public Safety Committee to fully include transportation within its purview. In fulfilling this responsibility, it should (a) draw upon the views of the public as appropriate, (b) consider appointing a standing citizens transportation advisory committee, and (c) determine the best way to advance the policies of this Plan through the City's representatives of PACTS.</p> <p>Review and revise as necessary standards for the control of noise, dust, and similar environmental conditions to assure protection of nearby neighborhoods</p>	Ch. VI, R-2 and R-3

TOPIC	ACTION	REFERENCE
Mass Transportation	<p>Endorse the formation of a consortium of the region's mass transit agencies for joint routing and scheduling, joint marketing, coordination with air and rail service, and similar purposes</p> <p>Work with METRO to upgrade facilities and services, including:</p> <ul style="list-style-type: none"> • frequency of peak-hour service on routes with high concentrations of intercity commuters • upgrade lighting, conveniences, and informational services at each key stop • thorough integration with park-and-ride lots and local transportation centers • innovative marketing • provisions for bicycles <p>Initiate a feasibility study to use METRO as the means of transportation to middle and high schools</p> <p>Immediately work with METRO to develop a program to supplement busing of school children for special events and activities</p> <p>Incorporate education about transportation alternatives into schools' curricula --an integrated program geared to students at different levels (e.g., bike safety at the elementary level, introduction to mass transit at the elementary and middle schools, transportation planning/impacts of auto use at the middle and high schools); and in which students are exposed to the alternatives (biking and METRO to school) and the impacts of their choices (driving cars to school)</p>	<p>Ch. IV, N-5; Ch. V, C-2 and C-3; Ch. VI, R-4</p> <p>See also pilot projects below</p>

TOPIC	ACTION	REFERENCE
Local Transport Centers	Design at least two prototypical local transport centers: <ul style="list-style-type: none"> • a freestanding facility that could be located adjacent to an existing activity center (a shopping center, community building, etc.) and • an integration of local transport center function into an existing activity center, without the need to construct a new building 	CH. V, C-3 See also pilot projects below
Streets through Neighborhoods	Categorize arterials/collectors as they travel through neighborhood as to whether they should be subject to strategies of (a) diversion, (b) "calming," or (c) peak hour efficiency for through traffic	CH. V, C-6 See also pilot projects below

Pilot Projects

The purpose of the pilot projects is to demonstrate the viability of new ideas in parts of the City where they stand the best chance of success. Seven pilots are proposed, as follows (see also **Figure VII-1**):

To make drivers aware of foot traffic and demonstrate means of diverting through-traffic from streets that cut through neighborhoods

Pilot area 1:

Stevens Ave., from approx. the Evergreen Cemetery to Frost Street.

Elements:

Aggressive traffic "calming" techniques

Pedestrian circulation/safety measures (as are being proposed in a Stevens Ave. pedestrian study now ongoing)

Devoting part of existing pavement to bike lane, in accordance with master bike plan

Strict enforcement of traffic safety laws

Promotion of alternative arterial routes for through traffic

Exploration and, as feasible, implementation of the connections and operating changes needed on the highways to establish a ring road around the City for through-traffic

To demonstrate the integration of multiple modes into low-cost local transport centers, as part of existing activity centers

Pilot area 2:

Shop 'n Save Plaza (Forest Ave.)/USM campus/Deering Oaks area; Northgate area

Elements:

Shop 'n Save Plaza/USM/Deering Oaks:

Transport centers at the two termini (the plaza and the USM campus/student center), including

- securing cooperation of property owners in the design, location, and maintenance of the centers
- incorporation of conveniences (newsstand, coffee/food, ATM, etc.)
- specific provisions for bicyclists, pedestrians, buses, taxis, as well as cars

Model bicycle route between plaza and USM via Falmouth and Bedford streets and through Deering Oaks

Heightened bus service, upgraded METRO facilities (including bike racks of buses running the routes that serve Forest Ave.)

Upgraded sidewalks, as needed, including landscaping, etc., to assure high level of comfort and a clear strategy for winter maintenance

Upgraded crosswalks at Forest Ave. for pedestrians (e.g., safe islands, rumble strips)

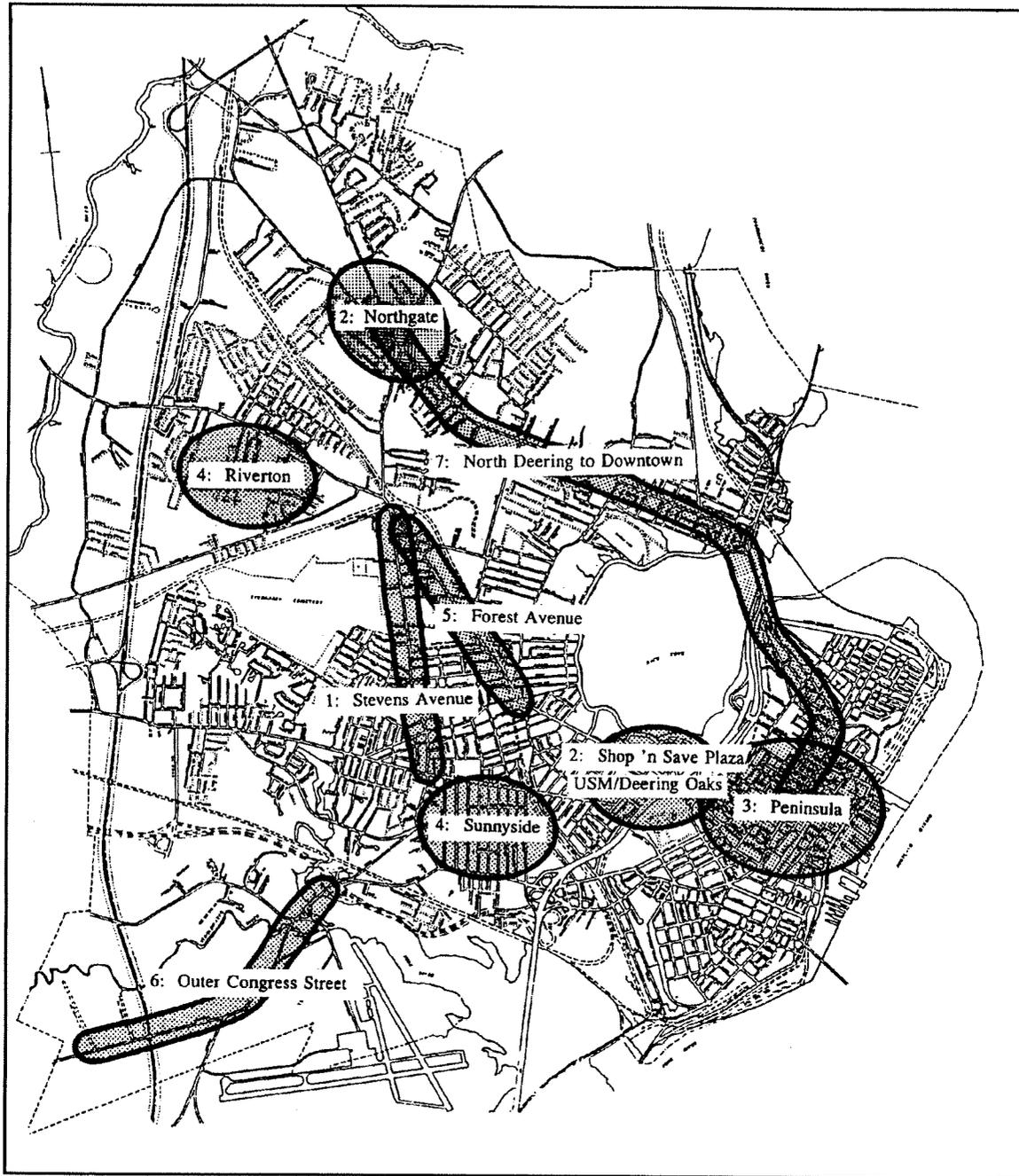


Figure VII-1: Pilot projects

Highly visible links to open spaces and related paths (along Baxter Boulevard, through Deering Oaks)

Northgate area:

Same elements, but adapted to a more suburban, lower density environment

Locate transport center at Allen Ave. intersection, Northgate shopping center, or Northport Plaza

To demonstrate the viability of increased mass transit to serve Downtown workers and tourists on the Peninsula

Pilot area 3:
Peninsula

Elements:

Loop routes designed specifically to serve two populations: Downtown workers who use shuttle/park-and-ride lots on edge of peninsula (Marginal Way, CBITD, etc.) and tourists

Loops encircle Franklin Arterial, Marginal Way, High St. - State St., and Commercial St.; intersect other routes emanating from the "Pulse" at Elm and Congress

Connect other intermodal centers: park-and-ride lots, CBITD terminal, International Marine Terminal

Frequent intervals to assure very short waits

Alternate fuel shuttle buses

To explore the interconnection of streets and enhancement of neighborhood street networks

Pilot areas 4:

- (a) outer Forest Ave. (Riverton neighborhood)
- (b) Sunnyside neighborhood

Elements:

Outer Forest Ave.:

Explore the legal and physical potential of extending paper streets and forging other intra-neighborhood connections (walking and bike paths) among streets and housing developments on the south side of Forest Ave., from Avalon Rd. to Aldworth St.

Connections should include a formalized local transport center in or adjacent to Riverton Community Center, with specific provisions for buses, bikes, taxis, pedestrians.

Purpose is to demonstrate how interconnections can (a) offer choice of travel within the neighborhood other than be car on arterial (Forest Ave.), (b) support/enhance neighborhood identity, and (c) be part of a model local transportation center serving a sizable neighborhood.

Sunnyside:

This neighborhood's streets run in a regular pattern between Congress St. and Brighton Ave., but cross-streets are limited. Explore potential for cross-connections strictly by means of walking and bicycle paths.

Purpose is to demonstrate how low-impact connections can be made in a fully developed, primarily single-family neighborhood and allow travel within a neighborhood without forcing residents out into arterials.

To encourage the establishment of higher density residential development along principal transit corridors

Pilot area 5:

Forest Ave. between Woodfords Corner and Morrills Corner

Elements:

Enhanced mass transit in association with more concentrated land use

Restore residential densities of 12 to 15 units per acre to allow development compatible with Deering Pavilion and Park-Danforth housing developments

Encourage the redevelopment and mixed use of marginal properties along this segment of Forest Ave.

Consider contract zoning as a tool to negotiate desired redevelopment, including design features, mixed use, and off-street parking (relaxing off-street parking requirements in return for cooperative mass transit efforts)

Possibility to package TDM, Housing and Community Development, and land use funds and concepts

To demonstrate use of a package of travel demand management measures in cooperation with major regional facilities in Portland

Pilot area 6:

Outer Congress Street, including UNUM, Jetport, Stroudwater Business Park, Maine Turnpike, potentially the Maine Mall and other major employers in South Portland

Elements:

Convene interests (employers, Jetport, Maine Turnpike Authority, Stroudwater Neighborhood Association) into a TDM demonstration group; emphasize importance of the project to the ability of Jetport and major employers to carry out long-term expansion plans in the face of federal and state transportation legislation

Request that PACTS help staff and fund the effort; use results of TDM study conducted by GPCOG/PACTS as appropriate

Consider, among other things:

- employer initiatives, such as shuttle buses, bicycling facilities, staggered work hours, commuter allowances tied to cost of parking spaces;
- public initiatives, such as expanded park-and-ride facilities and marketing, enhanced bus service;
- improved access to Turnpike and related pricing strategies;
- strong intermodal design at the Jetport, with shuttles or other earmarked links to job centers and to other regional transportation centers (AMTRAK, International Marine Terminal)

To make a concerted effort to increase bus ridership in a corridor that includes both urban and suburban development

Pilot area 7:

METRO's North Deering runs (via both Washington Ave. and Stevens Ave.)

Elements:

More frequent runs/reduced waiting time

Coordination with development of a local transport center at Northgate
(see Pilot Project 2)

Good amenities and services at transport center, at other bus stops, and on the buses

Strong, concentrated marketing program

Employer sponsorships (e.g., "adopt-a-bus") and incentives
(e.g., commuter allowances)

ISTEA funding

APPENDICES

APPENDIX A

DOWNTOWN PARKING GOALS AND POLICIES AS ADOPTED BY CITY COUNCIL, MAY 18, 1992

Goal I. Downtown Parking for People

Adequate parking is vital to a prosperous and active downtown. **The experience of parking should be a positive one, which means it must be attractive, secure, user friendly, convenient, and affordable.** Careful attention to physical details is needed, within lots and garages as well as along the pedestrian routes between parking spaces and parker destinations. At a minimum, concerns about parking should not be a deterrent to people coming downtown. The experience of downtown parking should become a pleasurable one.

I.A. Policy Statement: Parking management practices and programs should emphasize to the extent possible positive incentives rather than disincentives to achieve desired results (i.e., use carrots, not sticks).

Implementation Examples:

- Free Christmas parking;
- One hour free parking coupons with parking tickets;
- Warning tickets for first offenders;
- Parking garage brochures with tickets;
- Free or cheap overnight parking;
- Music in garages.

I.B. Policy Statement: Capital and operating fund investments are desirable which improve the pedestrian experience between parking locations and parker destinations.

Implementation Examples:

- Good quality sidewalks;
- Ample and attractive lighting;
- Clean streets and sidewalks.

Goal II. Location and Physical Aspects of Parking

Minimize the amount of prime location downtown property which is consumed by parking and thereby precludes uses which contribute directly to the employment, commercial or residential base of the City. Specifically, the first floor street frontage of buildings should not be utilized for parking, and on the second and third floors it should be discouraged. If economically feasible, below-ground parking is preferred in central downtown locations. (Large scale redevelopment projects in which the pedestrian level is located above the predevelopment street grade might achieve the desired characteristics, if the project otherwise meets the design standards of Downtown Vision.)

II.A. Policy Statement: All new garages in central downtown locations should have retail or commercial uses occupying the majority of the first floor street frontage. (This policy should not be rigidly applied where location or market conditions will not support such uses.)

Implementation Examples:

- Fore Street, Temple Street, and Gateway garages.

II.B. Policy Statement: Additional facilities at convenient perimeter locations with good vehicular access, as well as shuttle lots near peninsula entry points, are preferred for any substantial new additions to the public parking supply.

Implementation Examples:

- Chestnut Street, Elm Street, Gateway, and Casco Bay Ferry Terminal garages;
- Marginal Way and Fish Pier parking lots.

Goal III. Role of Public and Private Sectors

The City should play a leadership role to ensure that the long term parking capacity exists to meet the needs of all diverse user groups, and to mitigate the extent to which parking cost and availability compromises the development market competitiveness of downtown vis-a-vis the suburbs.

III.A. Policy Statement: City parking strategy should be targeted to meet the needs of vulnerable or poorly served segments of the market.

Implementation Examples:

- Garages open nights and weekends;
- Garages available at low cost to overnight parkers, especially downtown residents;
- Affordable monthly parking to meet the parking needs of lower echelon downtown workforce.

III.B. Policy Statement: The City must be aware of the impact of its pricing policies on the economic viability of privately operated parking facilities.

III.C. Policy Statement: The City should work with the private sector to achieve a Park 'n Shop program that has universal participation by all downtown commercial uses and parking facilities, and that will run on a break-even financial basis.

III.D. Policy Statement: Strike a balance in regulating parking with new development to achieve the following objectives: 1) the market requirements of developers and building occupants are met; 2) parking requirements do not unduly inhibit appropriate downtown development; 3) parking and traffic volumes do not overwhelm the street capacity; and 4) new development does not outpace parking supply to the extent that parking shortages and parking price inflation get out of control.

Implementation Examples:

- Building reuse projects shall not require parking;
- "Transportation Demand Management" practices should be undertaken to increase vehicle ridership levels;
- Minimize exclusive single user parking facilities in favor of shared or joint use facilities to maximize capacity utilization;
- Carefully assess and manage the cumulative traffic impacts of development;
- Discontinue the practice of requiring long term leases to document parking. Either waive the parking required upon a showing that ample supply exists in the market, or develop public parking in lieu of private parking, based on a fair and reasonable cost sharing basis.

III.E. Policy Statement: The City should maintain competent and professional parking facility operation and management capability.

Implementation Examples:

- Maintain consolidated control of municipal parking within a department with specialized expertise and responsibilities;

- The City administration should keep abreast of parking and transportation industry trends and innovations.

III.F. Policy Statement: The City should aggressively pursue cost effective opportunities for acquisition or development of additional parking facilities that will achieve city policy objectives.

Implementation Examples:

- Possible acquisition of privately owned garages;
- Possible expansion of existing garages, such as the Spring Street Garage;
- Development of the Marginal Way and other possible shuttle lots.

Goal IV. Management and Regulation

Manage the supply of on and off street parking spaces to achieve maximum and optimal utilization. Management includes proper maintenance and upkeep, pricing policy, and establishing and enforcing regulations.

IV.A. Policy Statement: On street parking is the turnover parking resource most valued by customers and visitors, and it should be managed in a consistent, convenient and user friendly manner.

Implementation Examples:

- Meters with consistent one or two hour time limits throughout the downtown;
- Meters should accept various coins and give proportionate time for nickels, dimes or quarters.

IV.B. Policy Statement: On street spaces are a premium product and reasonable opportunities should be pursued to increase their number.

Implementation Examples:

- Expand metered spaces on or near Congress Street;
- Long term parking on Spring Street;
- Selective reclaiming of no parking, loading zones, or bus stops where appropriate for metered parking.

IV.C. Policy Statement: Enforcement is an important function, but it must be done in the most positive, friendly, humane, and encouraging way possible.

Implementation Examples:

- Give parkers the benefit of the doubt or a grace period when ticketers and drivers converge on an expired meter at nearly the same time;
- A violation "warning ticket" for first time violators;
- Temper tickets with coupons for one hour free garage parking upon payment of the ticket fine;
- Design tickets to be less punitive in appearance by color choice and format;
- Provide parking information along with tickets;
- Be sure enforcement officers are polite, courteous, and friendly at all times.

IV.D. Policy Statement: Parking facilities should be attractive, clean, safe, well lighted, and in good repair at all times.

Implementation Examples:

- Elm Street is considered a good model for garage design that shows careful and creative architectural design to make the building attractive and pleasant to use;
- Lighting is especially important, that it be even, ample, and create a pleasant and secure environment - not harsh and no dark, scary, shadowy corners;
- Cleanliness is important to make garage use attractive;
- Regular preventive maintenance and prompt repair of vandalism, graffiti, and wear and tear damage;
- Enforce and amend if necessary building code requirements for private parking garages;
- Public restrooms should be encouraged in all parking garages.

Goal V. Education and Marketing

Perception is reality, so it is essential to cultivate a positive reputation for the downtown that ample parking is available, safe, convenient, affordable, and easy to find and use.

V.A. Policy Statement: Consistent and conspicuous posting of public parking facilities and rates is important in attracting a broader market of users.

Implementation Examples:

- A standard "P" sign should be used to denote all facilities open to the public;
- All public facilities should post the rates so parkers can see them clearly and not be worried about exorbitant costs;

- Parking garage operators should encourage all-day parking on the upper floors of the garage and short term, turnover parking on the lower, more convenient floors.

V.B. Policy Statement: Outreach and education is important to gain wider acceptance by the public that garages are a good place to park.

Implementation Examples:

- Add spots on TV or print media showing families using garages and enjoying it;
- Free parking coupons to lure people into garages for the first time. (See also items under Goal III.)

Goal VI. Reduce Single Occupant Vehicles

Encourage the Downtown workforce and visitors to reduce reliance on on-site parking for single occupant vehicles. Promote a pedestrian oriented downtown center, with a diversity of transportation modes including transit, shuttle lots, a peninsula jitney service, vanpools, ride share, walking, bicycling, etc.

VI.A. Policy Statement: Maximize Metro ridership by the commuter workforce by working with Metro and the business community on ridership innovations.

Implementation Examples:

- Attractive bus pass subscription rates for major employers;
- Maintain or improve bus service;
- Marketing and promotion of transit advantages.

VI.B. Policy Statement: Coordinate transit service with major visitor attractions and perimeter parking facilities so that visitors have full mobility around downtown without using their cars.

APPENDIX B

THE TAKE PART PORTLAND TRANSPORTATION WORKSHOPS by Jim Burns/TAKE PART Community Design Consultant

On Friday, May 14, for several hours and again on Saturday, May 15, from mid-morning to mid-afternoon, people worked together in small groups to establish needs and issues for transportation in and around Portland, and to evolve answers and solutions for these needs and issues. The Friday workshop was devoted to issues, and the Saturday session to answers.

On a long scroll in the workshop center, a participant wrote about personal visions: "Transportation relying less on cars. Getting back into the environment. We must move toward the next century for our children." That could be taken as the theme of the workshops.

Issues

Issues generated by workshop participants mainly fell into these categories:

- Safety
- Access for all people of all needs
- Efficient relationships between transportation modes
- Need to plan comprehensively, not project-by-project
- Need for awareness of future options and societal patterns
- Need for simple and understandable transportation plans
- De-emphasis on the single-occupant vehicle and emphasis on multiple modes, especially biking and walking
- Focus on downtown Portland as the central core, and the need to improve access and safety there at all hours

Bike safety (and that of similar modes of locomotion such as snowmobiles) should be a two-way street, with bikers learning respect for pedestrians and others, as well as being protected from dangers of larger vehicles.

Access to transportation options should include concern for special needs such as children, the elderly, and people requiring access to special services. (It was suggested that some services might be centralized more to aid this access.) At the other end of the economic scale, participants desired to "get the briefcases onto public transit"; in other words to encourage transit use by professionals, upper-income residents, and commut-

ers. Shuttle options from peripheral parking areas can help in this respect.

It was felt that, although the private car is the favorite mode, Portland is still not "car friendly." There is not enough free parking downtown, and much of the parking available is taken by downtown employees. The latter situation should be addressed by more specific parking provisions and/or shuttle lots for downtown employees, to free up downtown parking. However, participants propose that transportation planning "emphasize better pedestrian flow, not concentrate on vehicular flow as in the past."

A participant on Saturday wrote: "Encourage people to use bikes instead of cars within the city: Create a few small 'park your bike' spaces in parking lots."

More and safer sidewalks are needed, as are more connective walkways off the street system. These should be safe at all hours, particularly in downtown.

An understandable local modal transportation diagram should become available so that everyone can realize what the future options might be. It should show relationships to AmTrak, loop systems, a shuttle to the airport, systems for in-town and suburban bike trails, and subsystems serving downtown and the neighborhoods.

Various forms of public transit should be encouraged by finding ways for people to use them easily. Provisions are needed for people carrying packages; people with physical or sensory impairments; people of all age levels; people needing financial assistance to use public transit; people dependent on public transit who may have emergency needs to get somewhere (e.g., medical assistance) rapidly; people who need access to various parts of Portland at various hours of the day and night.

The hoped-for decline in dependence on fossil fuels can produce an improvement in air quality as well as an improved physical environment visually and audibly, plus enhancing safety in walking and biking around the community. These changes should be planned for so that they happen appropriately and not simply ad hoc as they might come along. Planning in context both regionally (in terms of various systems serving Portland and its surrounding areas) and locally (so that walking, biking, public transit, and private vehicles can be coordinated) can bring all systems and the needs of people into an appropriate synthesis. Transportation planning should be of a piece, rather than fragmented. "Don't do new projects until completion of the comprehensive transportation plan," in the words of one workshop group.

In addition to the physical changes ahead, there are demographic and societal permutations likely, and they should be considered so that movement systems can respond to them creatively. Age-group relationships, family and resident patterns, the

changing nature of Portland's formerly rural setting, will all have both impacts and requirements, and should be addressed in planning for the future. Ryan, one of the youngest participants on Saturday, captured this necessity when he wrote on the big scroll: "Needs: Food, shelter, and respect." Respect for each other and everyone's shared aspirations can produce plans that work, that will insure better lives for people.

Answers

On Saturday, workshop participants turned their attention to trying to provide some solutions to the issues posed by Friday's workshoppers. Several themes emerged swiftly, reflected here in quotes from comments written on a large scroll after people had taken bus and walking tours in downtown:

"Need 24-hour bus service, 7 days a week (including holidays)." "Bus service that allows you to get home if you get out of work at 9 PM." "Buses going toward Morrill's Corner after 10:40 PM (and East Deering and North Deering)." "Later Congress Street bus runs."

"Give everyone enough time to cross a street safely." "Pedestrian bridges (or tunnels, or walk lights in all directions) over Franklin arterial at Congress and Middle Streets." "A way to get to USM from downtown without the hazards of Forest Avenue." "Trails for walking, jogging, rollerblades, high speed bikes, wheel chairs. Hazard-free, safe, lighted."

"Mini-buses like the old jitney in Atlantic City." "A peninsular shuttle bus in Portland with connections to in/out routes and to Mall business centers in South Portland."

"More serene places to walk with trees and waterfalls and other natural habitats without gas fumes and cigarette smoke to bother us."

"Lack of biking affects the quality of life," claimed a Saturday group primarily interested in developing effective bikeways throughout the community. The main categories of bike users were suggested as: Children (transport and recreation); workers in downtown and other commercial areas; college students and faculty; and leisure riders. These groups have both similar and different needs, but a commonly shared requirement is safety of circulation and access. There should be bike lanes separated from swift and dangerous traffic. Access across major streets and arterials should be improved for security. Designated places for parking bikes are needed. Routes should connect schools, shopping, neighborhoods, recreation areas, and other community resources. Where there are "problem nodes" (where congestion causes problems), these

should be clarified and made safer. A network of bike trails should interconnect inner Portland to the other communities. Back Cove can become a big roundabout hub for a bike system connecting other trails.

Many aspects of buses and other public transit received recommendations. There should be dedicated lanes on Franklin and other arterials for cars, buses, bikes, and pedestrians. There should be morning and evening rush hour express commuter bus service along Congress Street. A loop bus service around the inner core is needed to connect to Maine Mall, South Portland, and other locales. Mode-to-mode transfer points need to be increased where needed, environmentally and visually improved, and made more efficient. As noted before, there is a prime need for more night-time bus service, especially in downtown. Signage and route information about public transit needs to be much more understandable and descriptive in order to be comprehended by commuters, shoppers, tourists, kids, the elderly, and other users.

In addition to improved and safe sidewalks, downtown and neighborhood walkway systems should evolve that connect places (neighborhood centers, schools, parks, etc.) as well as conducting people safely across fast streets and arterials. Lighting and security aspects should be improved so that people feel comfortable enjoying their community after dark.

Improvement of existing site-specific problems should occur within the context of the comprehensive plan. This includes such locations as the street crossings at USM; Morrill's Corner; swiftly moving corridors such as Franklin and Stevens; and unique situations such as the connection to the airport.

There should be a focus on Old Port as the birthplace of Portland. It has changed its nature from a working-fishing-commercial port to also include many aspects of recreation, culture, entertainment and tourism. These qualities need to be taken into account as transportation plans are developed. For instance, suggestions that the interface between Franklin Street and the Casco Bay ferry terminal be enlarged with other movement systems (e.g., a small-scale loop rail system), will have many implications.

The proposed small-scale rail system is based on the possibility of purchasing existing rolling stock and installing a system that would restore historic patterns into downtown. It is proposed to happen in several phases: Begin at the foot of Franklin in Old Port to the bridge; extend to the new AmTrak station past the new baseball stadium; proceed to the International Ferry Terminal; and complete the loop back to Franklin at the Casco Ferry Terminal. Exponents believe that this project will provide a viable attraction for residents and visitors, as well as being a functional carrier (compa-

rable to San Francisco's cable cars). It would interface with water transportation at the two terminals, as well as other land transportation systems (e.g., AmTrak), and hiking-biking trails and walkways along its route. Parking nodes would allow people to leave cars behind and proceed on the rail system. It is expected to provide an attractive economic boon to Portland and Old Port.

The group of Saturday participants which focussed mainly on the overview aspects of comprehensive transportation planning produced a priority list:

- Upgrade walking and biking facilities and potentials. Provide satellite parking lots coordinated with public transit and hiking-biking trails
- Develop alternative modes, including rail transport. (AmTrak should begin as commuter service system)
- Include awareness and planning of future of electronic community/ communications systems (shop-at-home, work-at-home, learn-at-home)
- Continually evolve more efficient and understandable bus lines
- Respond to changes in regional and national habits and demographics (less dependent on fossil fuels, new electronics networks, new resident and family patterns, new local and regional planning patterns)

APPENDIX C GLOSSARY OF TERMS

Clean Air Act Amendments of 1990 (CAAA) - Federal law establishing criteria for attaining and maintaining National Ambient Air Quality Standards. A nonattainment area is a region that fails to meet one or more of the standards. Greater Portland is a nonattainment area in terms of ozone.

Closed Barrier System - A type of toll collection system in which vehicles pay at toll booth "barriers" across the highway, rather than at toll booths at each exit from the highway.

High Accident Location - A location that has experienced eight or more accidents within the previous three years and that has a "critical rate" of accidents greater than 1. "Critical rate" is a statistic that compares the accident experience among similar locations. A "critical rate" greater than 1 indicates a higher than average rate of accidents for the location, given its traffic volume and other characteristics.

Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) - A landmark Federal law governing the funding of mass transit, highways, and highway safety. It replaced the old Federal-Aid Highway Program with a new series of Federal-aid programs, including a block grant program in which the State and local governments are given flexibility to determine transportation solutions that best meet their needs.

Level of Service (LOS) - A qualitative measure of the degree of mobility on a roadway. There are six levels of service defined, ranging from LOS "A" to LOS "F":

- LOS A free-flow conditions; delays are minimal or nonexistent
- LOS B stable flow, but motorists begin to experience some delays
- LOS C flow is still stable, but delays lengthen and maneuvering within the traffic stream is noticeably more difficult
- LOS D flow is still stable, but speed and maneuverability are severely restricted; moderately long delays (25 to 40 seconds per vehicle) at intersection
- LOS E road is at or near capacity; speeds are reduced to low, uniform flow; delays at intersection of 40 to 60 seconds per vehicle
- LOS F roadway is operating under "breakdown" condition; intersection delays of more than 60 seconds per vehicle

Maine Sensible Transportation Policy Act - Citizen-initiated act passed in November 1991 that requires "significant highway projects" to evaluate "the full range of reasonable transportation alternatives" before expanding highway capacity. Also requires substantial public involvement in the planning process and consistency with Maine's growth management program.

PACTS (Portland Area Comprehensive Transportation Study) - The designated metropolitan planning organization whose responsibility is to develop regional transportation plans and to advise the Maine Department of Transportation on the funding of transportation projects in Greater Portland.

Ridesharing - Sharing a ride to work and related costs with other commuters, usually by carpooling or vanpooling.

Travel Demand Management (TDM) - The reduction of peak-hour traffic congestion by reducing the number of single-occupant autos on the road. Measures that can reduce demand for roadway include ridesharing, mass transit, "flex" time, telecommuting, employer incentives to use alternative modes, and restriction on the amount of free or cheap parking, among others.