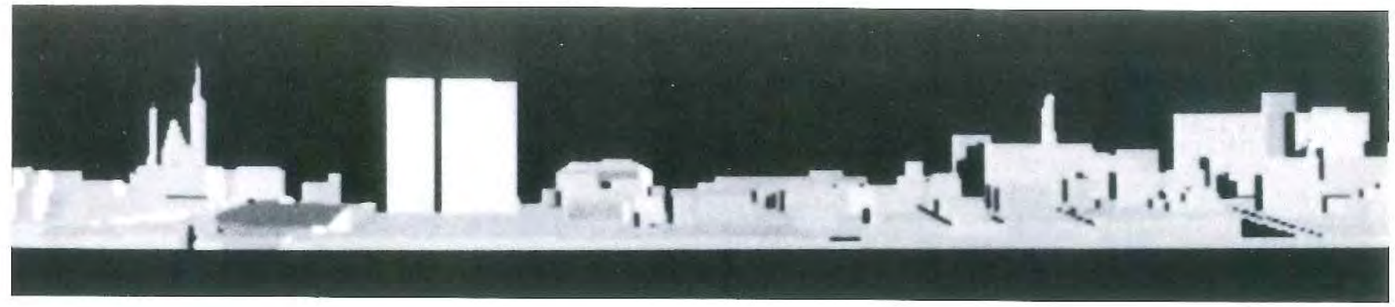

PORTLAND MAINE
DOWNTOWN HEIGHT STUDY

Policy Report
February 1989

Carr, Lynch, Hack and Sandell 1385 Cambridge Street Cambridge, Massachusetts 02139

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Portland City Council
Cheryl A. Leeman, Mayor
Linda E. Abromson
Edward I. Bernstein
Esther B. Clenott
Ronald J. Dorler
J. Donald MacWilliams
Peter E. O'Donnell
Pamela P. Plumb
Barbara A. Wood

Portland Planning Board
Barbara Vestal, Chair
Joseph R. DeCourcey, Vice-Chair
Jack H. Humeniuk
John L. Barker
Kenneth M. Cole
Michael J. Fenton
Jadine R. O'Brien

Robert B. Ganley, City Manager

City of PortlandDepartment of Planning and Urban Development
Joseph E. Gray, Jr., Director
Alexander Jaegerman, Chief Planner
Philip L. Meyer, Urban Designer

Carr, Lynch, Hack & Sandell
Gary Hack, Principal in Charge
Paul G. May, Project Manager
Jonathan Sinagub
Kathryn Ludwig
Lieve Kuypers
Julie Johnson
Donna Wharton

Harvey Bryan, AIA, Zoning Consultant

Mark Van Norman, Computer Consultant

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DOWNTOWN VISION

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INTRODUCTION

HEIGHT AND CONTEXT

How tall is too tall? What building heights and forms create a good skyline? What does it mean for a building to be in scale with its surroundings? What views are important? These are some of the basic questions which have prompted this study of building heights on the Portland peninsula. (Figure 1).

Building heights have been a focus of much debate in deciding the appropriateness of new buildings in downtown Portland. As well as affecting how the city looks and feels, height has become a powerful symbol of change. Buildings that are tall and new suggest to some that Portland is losing its uniqueness as a low scaled uncongested red brick city. Heights of buildings also may have immediate practical effects. The height of a structure determines how large an area will be shaded; it can effect pedestrian level wind patterns; it may mean that views of important structures and vistas are blocked; and it can make a difference in whether a structure seems compatible with its surroundings.

1 Current Skyline in the City Hall Area

But building height must be viewed in combination with other factors that also influence whether a new structure seems to fit with its surroundings; and how height is interpreted is largely dependent on the context. A one hundred foot building can appear to be the right height among other buildings of similar dimensions, but it would overwhelm surroundings if they were twenty-five foot buildings. A new building which blocks the view down a street to Portland Harbor will probably seem inappropriate, even if it is the same height as its surroundings. Thus policies for building heights must be considered in terms of broader objectives for the visual environment of Portland, not simply as an isolated issue.

The overriding purpose of this study is to recommend policies that will ensure that new buildings are compatible with the existing fabric of Portland. At the same time, that objective must be tempered by the desire to allow the continued economic expansion of the city. Portland is a city with a pronounced character, with strong inner city neighborhoods, highly visible landmarks, and districts with special significance. There is also a considerable amount of change occurring within many of the areas of the peninsula. Too often continuity and change have been seen as irreconcilable objectives. In commissioning this study, the Portland Planning Board and City Council have expressed the desire to decide upon policies which allow for contemporary buildings and facilities to be developed downtown, while safeguarding the character of the city's built environment.

OBJECTIVES FOR PORTLAND'S ENVIRONMENT

Portland continues to experience a considerable amount of development pressure. In times of slower growth, development was easily accommodated within the envelope of existing zoning controls, or through readily obtainable height variances. However, as the standards for variances have been tightened, the viability of many recent project proposals has hinged on modifying these height limits, which is one reason to reevaluate their appropriateness for the future. Moreover, large scale development is beginning to spread to the perimeters of downtown, into lower scaled areas, which raises the question whether there is sufficient capacity for future growth within the currently permitted development envelope. That envelope itself has come under increasing criticism as well, on the grounds that it is resulting in harsh streets, often devoid of sunlight, and that it is insensitive to such factors as important views to the harbor and surroundings. In coping with the proposals which have been made, the City has been forced to consider each proposal for a height variance in isolation, an approach which this study seeks to obviate by outlining a set of consistent standards.

Ideally, decisions about building form, heights and intensity ought to be made in the context of an up to date plan for downtown, a plan which projects an image of what the area should be like and provides for future access, parking, open space and facility needs. The City has embarked on a process of modifying the comprehensive plan for downtown through the Downtown Vision planning process. This study of height policies is one component of the ongoing review.

In the course of this study, a computer model of the peninsula was developed to help visualize the effects of development under current and modified development controls. The model reproduces accurately the topography of the peninsula and shows the outline form of each building. It allows views to be taken down any street, or towards the peninsula from any distant location. New buildings may be "constructed" in the model as they are proposed, and judgements may be made of their possible impacts. Beyond this study, the model will continue to provide a valuable tool for the evaluation of potential development.

But making sound judgements about building heights ultimately depends upon clarity and consensus about what is valuable about a city's visual environment. "Tall" is a subjective dimension dependent on a series of other physical and perceptual criteria. Through discussions with Portland citizens, the Planning Board and City Council, and city planning professionals, a series of criteria were developed to express those aspects of building heights which are considered critical to producing harmonious development:

- **Contextual Relationship** -- Each element of the city, whether building or landscape, is seen beside its immediate neighbors and against the backdrop of the city as a whole. Likeness is judged through comparisons which include scale, color, height, massing, use, and materials. *Any new development should reflect and reinforce in its design the recurring characteristics of its immediate context.* When the immediate area has no particular character worthy of reference, the new design should look to the larger context of the city for qualities to reflect. Portland is known for its buildings of red brick and light colored masonry, with individual windows punctuating their facades. Structures maintain consistent street faces and commonly have expressive roof lines.

- **Skyline** -- The skyline of Portland has a great deal of importance to local residents, since it is seen by most residents each day commuting from the surrounding districts along the main approaches. Especially important are the views of the skyline from Portland Harbor, South Portland, Munjoy Hill, the Back Cove area, along Interstate 295 and from the International Jetport. *The desire is to maintain a varied skyline, which reinforces the profile of the peninsula, with buildings stepping down in height as they move closer to the Harbor and Cove.*

- **View Corridors** -- The pattern of streets and buildings in the downtown allows significant views to the Harbor and Back Cove and to a number of landmark buildings. These views are important for orientation, and as a reminder of the city's relationship to the water. *These significant views should be maintained and enhanced whenever possible.*

- **Architectural Massing** -- The height and proportions of buildings, together with their setbacks and step-backs, determine how massive they seem in relation to their surroundings. But simply comparing the dimensions of facades or calculations of floor area ratio are likely to be deceptive. *The critical dimension is the relationship to pedestrians on the street -- whether they can relate to a structure or feel overwhelmed, and whether the street seems comfortable or canyon-like.* While overall height is one element of the massing, the dimensions of street walls are what give Portland its distinctive character (Figure 2).

- **Pedestrian Environment** -- Portland is a human-scaled city easily experienced by strolling along its irregular pattern of streets, wharves, and plazas. The characteristics of this environment include the intimate scale of the neighboring buildings, activities at the street level of most buildings, streetscape amenities, sunlight reaching the street, and shelter from the winds. The typical streetscape has a consistent building line with blocks composed of

several structures, contributing to the scale and interest for the pedestrian. *New development should contribute to the experience of the pedestrian, extending patterns already established in the City (Figure 3).*

- **Open Space** -- The distribution of open spaces throughout the peninsula adds focal points to the city's pedestrian environment. Open spaces provide relief from the largely built up city and provide places for contact. Where they are effective, such spaces offer sunlight, landscaping, furniture to rest on, and distant and local views. They are important to downtown employees looking for a place to spend their lunch hour, to tourists wishing a place to rest, and to the increasing number of downtown residents, stopping to enjoy the passing scene. *Portland has a series of key open spaces which need to be maintained and protected, while new small scale spaces are added through new development (Figure 4).*

2 Architectural Massing, Congress Street

3 Pedestrian Environment, Lobsterman Square

4 Open Space in Downtown, Tommy's Park

THE STUDY PROCESS

The recommendations which follow are grounded in a careful analysis of existing building forms in Portland, the growth pressures the city is likely to face in the future, and the objectives which city residents hold for the evolution of their physical environment. The sections which follow explain the six components of the study:

- Analysis of the existing urban form of the Portland peninsula;

- Projections of the growth in office, retail and residential development through 1995;

- Constructing a computer model of the entire peninsula area to study the effects of new buildings on the form and appearance of the peninsula;

- Estimating the most likely scale and locations of the projected development;

- Evaluating alternative growth scenarios by modelling the projected quantities of development in the locations and form implied in each scenario;

- Developing policy recommendations.

The report which follows is organized to mirror these six components of the study.

In addition, during the course of the height study, development proposals for sites in the downtown were analyzed and served as test cases for the evolving sense of appropriate development controls. One of these -- for the Congress Street site owned by the DMR Group is shown in the Appendix.

DEFINING URBAN CHARACTER

Through field observations, discussions with the City's planning staff and several public workshops, we identified and made specific the most important characteristics of the current form of the peninsula. The important structural elements are the area's districts, landmarks, and views. These are shown graphically on Figure 5. Together they are key elements of the image of the city.

The list of important characteristics which inform our policy guidelines includes the following:

Street Walls

- Street faces which are relatively uniform in height, such as Exchange Street, provide a sense of a coherent district. While variety in overall building height is acceptable, abrupt changes -- such as more than 50 percent differences in height -- tend to make a district seem less cohesive. This is approximately the variation of heights along upper Congress Street.

- Buildings which maintain a street wall of consistent height with their neighbors can have higher portions, yet seem in scale, if the higher elements are stepped back from the building face.

- The most comfortable pedestrian street wall to street width ratio, as a rule of thumb, is between 1:1 and 1.5:1. Streets with such proportions tend to feel enclosed, but not canyon-like. Cities in as diverse locations as Europe and Japan have set limits of 1.5:1 on the heights of street walls.

- While buildings in Downtown Portland vary considerably in height, the most cohesive areas tend to have one of three typical maximum heights: 45-foot heights in the residential ends of the peninsula and the wharf area; 65-foot heights in the Old Port area; and 85-foot to 90-foot heights along Congress Street. Each area, of course has exceptions, but they are small in number.

- A continuous street wall gives emphasis and meaning to open plazas and squares, such as are found in Portland. The street wall assists in reinforcing the unique and irregular street pattern, maintaining the density of the urban fabric, and through contrast, enhancing the significance of open spaces. The most obvious examples are Congress and Exchange Streets.

Pedestrian Environment

- Portland is an eminently walkable city and every effort should be made to keep it that way. That suggests ensuring that development is continuous along important streets such as Congress, and compact so that varied activities are within easy range of each other.

- Architectural massing and fenestration should be scaled to relate to a pedestrian passing in front of a structure.

- Street amenities should be present. These include public furniture, lighting for the pedestrian, waste receptacles, newspaper stands, etc.

- Landscaping should be present wherever buildings depart from the street wall. This should take a variety of forms including trees, flowers, grass, topographic changes, rock walls, water features, etc. These often provide a contrast to the hard textures of buildings.

- Sidewalks should be textured, not simple concrete. In most areas, continuation of brick paving will help unify the downtown. In special areas such as adjacent to City Hall and other public buildings, granite or stone paving may be more appropriate.

View Corridors

- Portland is blessed with a number of distant views to and from the downtown. These make visible major landmarks, adjacent districts, the Harbor and the Back Cove. They help with orientation and provide a sense of connection between areas on the peninsula. It is important to identify viewpoints as well as view corridors.

- Views to the Harbor and the Back Cove from the ridge line of the peninsula along Congress Street should be preserved as often as possible. Portland has always been a city with a special relationship to the water, and while the type of relationship has changed over the years, the need to see, sense and have access to the water continues. Views to the harbor have become even more appreciated in recent years, with the opening of the waterfront to public use.

- There are many views to individual buildings, such as the First Parish Church, Custom House, and Observatory, which should be preserved. These buildings are generally of a historic and public nature (rather than commercial structures) and thereby have meaning to a broad cross section of Portland residents.

- Wherever possible, view corridors should be "framed" by consistent street walls. This dramatizes the view, while also creating a coherent streetscape.

- There are many landmark steeples and spires in Portland -- the Cathedral, First Parish Church, St. Lawrence Church, and City Hall among others. These have a dramatic character when read against the sky. This character is

5 Structure of Views and Landmarks in Downtown Portland

diminished when they become surrounded by taller buildings.

- The locations of key open spaces, such as Fort Sumner Park, provide panoramic views of the city skyline and water. These spaces should remain public and accessible, and skyline views from these viewpoints should receive special attention.

Architectural Massing

- Historically, buildings in downtown have had a *tri-partite* composition, with a base, middle, and top (although cornices have sometimes been removed). The pattern should be continued in areas where new structures are adjacent to older ones.

- Buildings taller than the current 125-foot height limit are more easily accommodated in the form of slender towers, stepped back from the street face, so as to cast fewer shadows on the street and be less visible to pedestrians passing by on major routes. Such a massing scheme also minimizes pedestrian winds by creating a shelf to deflect down-draft.

- The interest of the skyline is enhanced when the massing of structures is not completely uniform and when buildings have distinct profiles. Prominent and distinctive structures serve as landmarks in themselves and do not require logos or identification signs that can be read from a distance.

- Continued concentration of the tallest buildings along the Congress Street "spine" reinforces the historic form of the city and provides an orientation seam for downtown.

- Just as it is important to have landmark structures, it is also critical that smaller buildings be carefully designed as "background" structures, and that all structures be compatible with their neighbors at their lower levels.

Open Spaces

- Open spaces will be used and appreciated more if they receive natural sunlight throughout the day, especially between 10 am and 2 pm, the lunchtime hours, and 4 pm to 6 pm, when people are leaving their work place. These hours expand as the downtown continues to attract new residents and visitors.

- Building step-backs, awnings, and arcades can all assist in reducing the wind effects on open spaces.

- Consistent architectural forms bordering open spaces, coupled with active uses that spill out into the spaces, can help give definition and life. Careful location of building entrances to draw people through spaces can also help in their animation.

- A number of the major public open spaces in Portland provide water views, adding special significance to the location. These views need to be maintained and new open spaces should be considered at key viewpoints to the water.

- The programming of open spaces can enhance their use and the range of participation in the space.

- Buildings with large interior open spaces risk detracting from outdoor space usage. However, if the interior spaces are clearly connected to outdoor spaces and are visible from the street, they can provide synergy to the downtown environment.

Skyline

- The views of the Portland skyline are one of the unique characteristics of the City. The variation of building forms and heights that currently exists should continue to be encouraged. This includes slender elements which pierce the skyline as well as blockier elements, providing a rhythm of light and building.

- Panoramic views to the skyline should remain from the major approach routes such as I-295 and the Million Dollar Bridge, and from Portland Harbor.

- The dominance of the Congress Street spine should be reflected on the skyline.

Materials

- Building materials and colors should relate to the immediate context. Wherever possible, buildings should continue the use of masonry and brick prevailing throughout much of the downtown.

- The ratio of solids to openings in brick or masonry buildings should be at least 1:1, to continue the traditional pattern of solid wall buildings with openings.

- The use of reflective materials should be kept to a minimum, and carefully placed so as not to cause glare for pedestrians and motorists.

The section which follows puts these principles into a context. The amount of change that must be accommodated is largely a function of the economic dynamic of Downtown Portland. The following section outlines several possible rates of growth and change, based on the recent history of downtown development.

DEVELOPMENT PROJECTIONS

The recent pressure for development in Downtown Portland is likely to continue for some time into the future, but the rate at which new development occurs will be critical in determining whether growth can easily be accommodated within currently permitted building envelopes. In order assess the future growth which may need to be accommodated in the downtown, we researched past growth patterns of Portland, and projected a range of growth rates into the future.

The growth categories examined included primary office space (class A space); residential units; and retail space, which includes general retail, restaurants, trade shops, convenience stores, etc. Together these uses are likely to represent the bulk of new space added to Portland's downtown in the near future.

The growth projections should not be read as economic forecasts. Rather, *they represent alternative assumptions of possible growth rates tied to rates which Portland has experienced in the past. Estimates of possible growth are calculated in terms of actual net absorption of space, not the amount of space constructed in any year since it may take several years to fill.*

At the low end of the spectrum, a reasonable minimum growth rate for primary office space might be the level experienced during the recession of 1980 to 1982. Absorption is not likely to fall below those levels in the foreseeable future. The opposite extreme might be the average annual growth rate experienced over the past five years which have seen record absorption of office space. We have assumed this rate to be the maximum for the purpose of testing height scenarios. Our middle growth rate falls between the extremes and corresponds to the average annual absorption rates of the 1976 to 1986 period. We used a similar methodology in setting minima and maxima for retail and residential growth, although the time periods from which the extremes are drawn vary for each use.

Using as a base the information on 1987 primary office space, retail space, and residential dwelling units, we projected the actual amount of space which would be absorbed through the 1995 under the low, middle and high growth assumptions. Specific growth rates are located below, with the 1995 development projections provided in the appendix.

Primary Office Growth

1987 base = 2,823,000 square feet.

Low growth rate = 5 percent per year -- assumed minimum rate for Portland.

Mid growth rate = 10 percent per year -- rate of 1976 to 1986 growth adjusted to reflect a slight decline in job creation rate in the area.

High growth rate = 15 percent per year -- rate of growth in Portland from 1981 to 1986.

Retail Growth

1987 base = 1,638,000 square feet.

Low growth rate = 1.2 percent per year -- rate of growth in retail establishments from 1977 to 1982.

Mid growth rate = 2 percent per year -- rate of growth of retail establishments from 1972 to 1977.

High growth rate = 3.1 percent per year -- rate based upon adjusted projections of Greater Portland Council of Governments estimates of retail growth.

Residential Growth

Projected 1987 base = 2,550 downtown dwelling units

Low growth rate = 0.88 percent per year -- rate of growth from 1970 to 1980.

Mid growth rate = 1.25 percent per year -- inferred medium rate from Greater Portland Council of Governments data.

High = 2.2 percent -- rate projected for 1985 to 1995 by Greater Portland Council of Governments.

These projections yield a range of between 1.3 and 5.8 million square feet of new office space being absorbed through 1995. While the upper bound is not likely to be reached, it is not inconceivable that 2 to 3 million square feet of new space might be absorbed, barring a major slow down in the demand for offices. Retail space estimates range from a low of 165,000 square feet to a high of 455,000 square feet, and in this case, the likely outcome probably also will fall between. The residential growth rates would yield between 190 and 490 new units in the downtown area (exclusive of the West End and Munjoy Hill); it is not impossible to imagine the upper end of this range being reached.

A critical policy issue is whether existing sites in the downtown have the capacity to absorb this growth. In the following section we describe the computer model developed to allow us to envision the impacts of the possible growth on sites in the downtown.

- Ready availability and ease of assemblage into developable parcels.

- Sufficient area to accommodate contemporary forms of development.

- Accessibility for both vehicles and pedestrians.

- Proximity to public amenities.

Since the growth built into each of the scenarios in this study reflects space absorbed, not projects built, the early absorption is assumed to take place in buildings currently complete. For near term development, we have favored sites where projects have already been announced. Hence, the impact of changes in height regulations would not be felt for several years, and the shift to new locations where taller buildings may be built would quite likely be gradual.

A further word of caution is necessary to avoid misunderstanding the assumptions of this study. While there are many possible development sites in downtown Portland, developing all of them is an obvious impossibility. Some sites are held off the market for reasons unrelated to their desirability. Moreover, at any time there are always more sites in the process of being considered for development than will materialize as real projects. And so it should be: without more sites than projects, there is a danger of too little competition in land markets, and rapid escalation of land prices. Thus, the process of decisions about sites which will actually be built upon is more random than our modelling would suggest. The scenarios below should be read as indicative rather than definitive.

Within the pattern of sites that seem suited for development under these criteria, there remain many options as to how development should occur. The sections which follow indicate several alternative scenarios for development.

SCENARIO DEVELOPMENT

There are many possible strategies for distributing the projected growth of office, retail, and residential development onto physical sites within the downtown area. After discussions with the Department of Planning and Urban Development, three scenarios for future growth were generated. Each assumed a different pattern of height restrictions, and projected how modifying this factor might influence the location of development in the downtown. The three scenarios were:

I - Development under *existing height limits*

II - Concentrating development along the *Congress Street spine* by allowing higher development in this area

III - Creation of two *growth districts*, in South Bayside and in the India Street area, and encouraging new development to concentrate in these areas

For each growth scenario, development implications were examined under the low, middle and high growth rate assumptions. Images reproduced in this document, however, reflect the high growth rate build-out of each scenario, for purpose of contrasting the impacts as sharply as possible. Obviously, at lower growth rates, the impacts of changing regulations will be less perceptible.

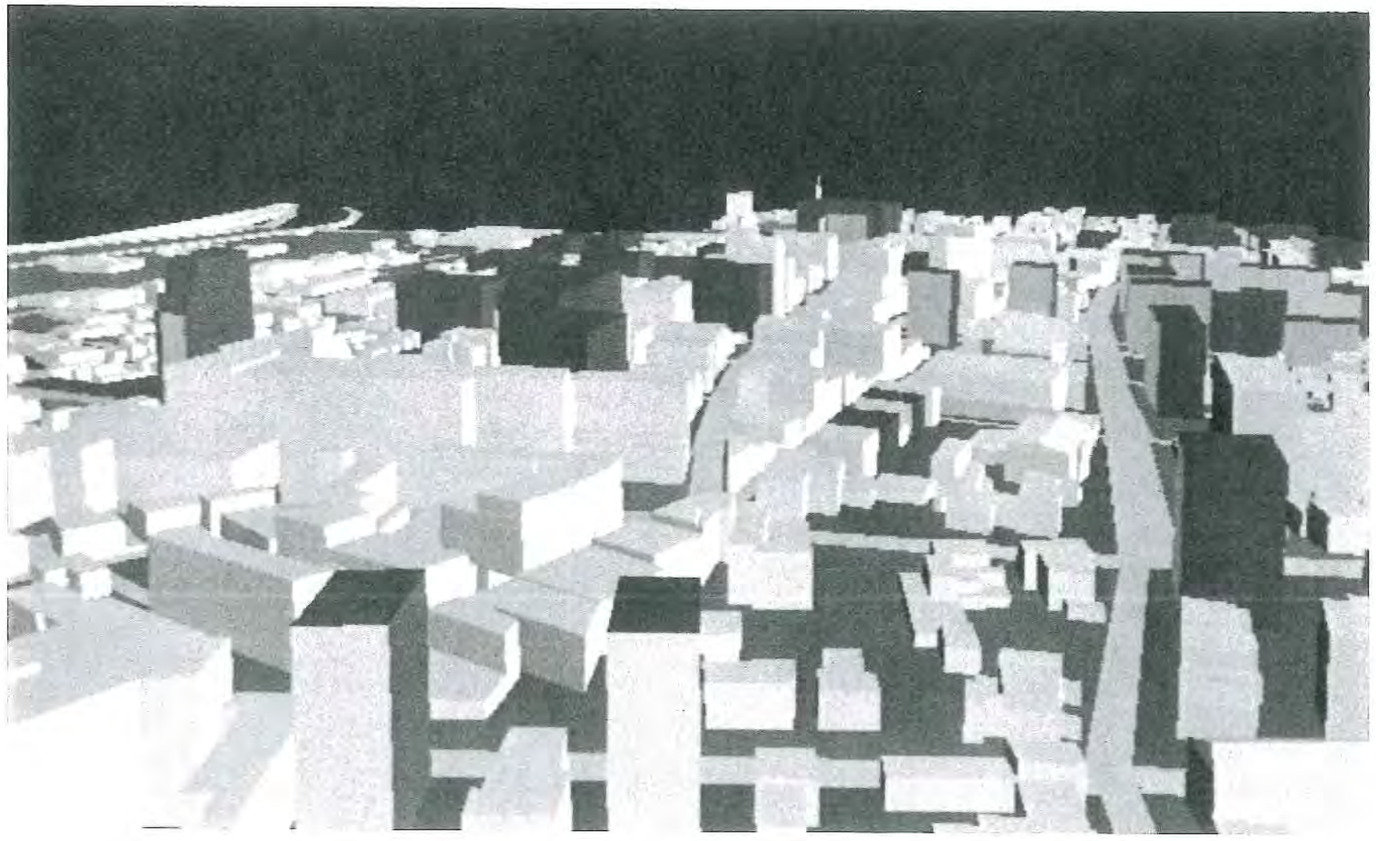
I - EXISTING HEIGHT SCENARIO

This scenario examines the impact of future growth in downtown assuming that current regulations remain in effect and are observed in future development (Figure 14). Current height regulations limit development to 125 feet in the entire B-3 downtown area, except portions within 100 feet of the waterfront zones. For residential development within the B-3 zone, the maximum height permitted is 100 feet. There are no provisions for bulk, massing or step-backs on new buildings, so new development is allowed to rise vertically to full height at the street line. However, in modelling this scenario, we assumed that designers of new structures would opt to preserve view corridors to the extent possible.

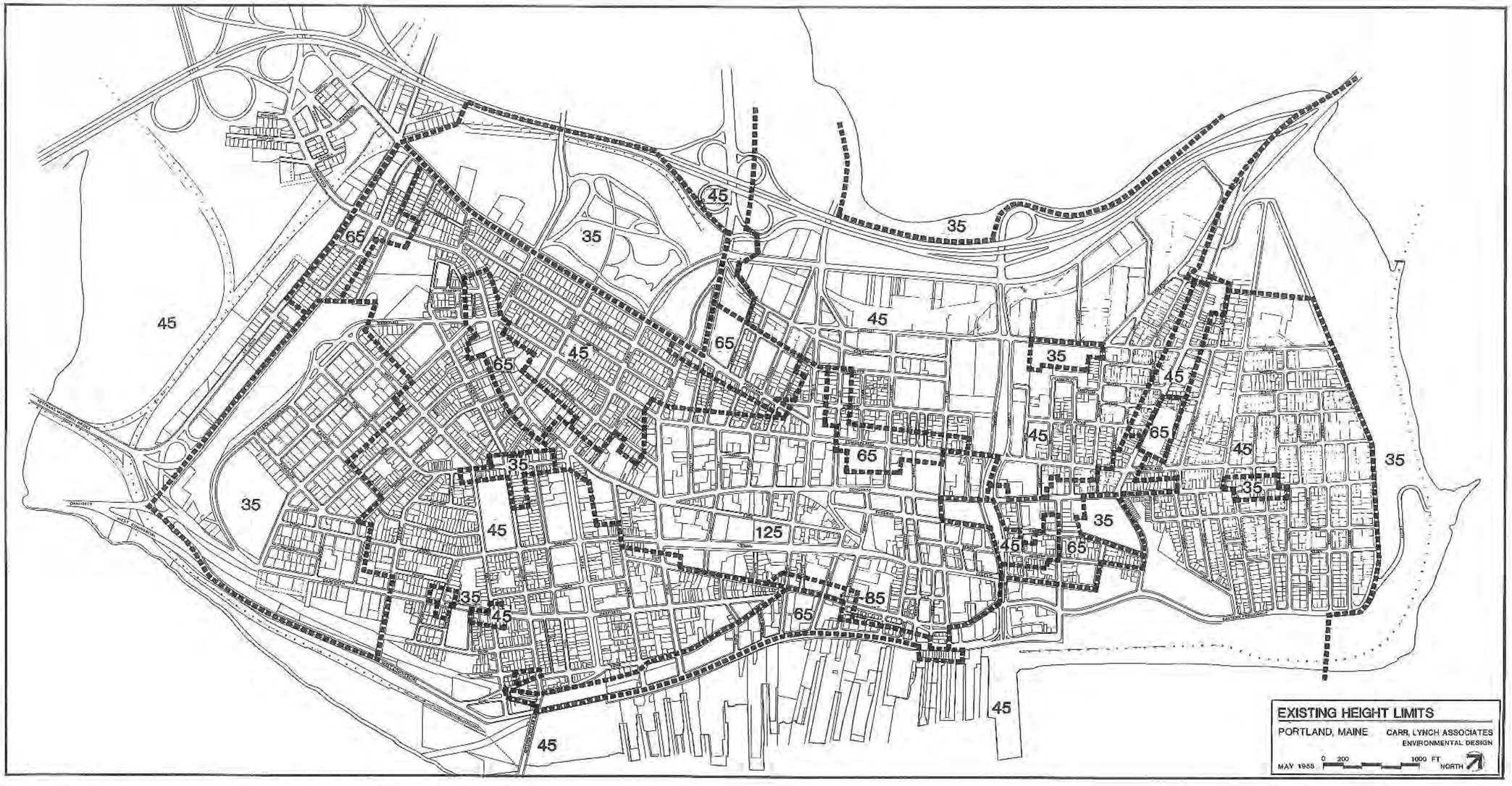
The result of this pattern of growth is immediately apparent: current development envelopes appear to be inadequate to accommodate growth beyond the lowest growth rate. Under higher growth rates development is forced outward into the nearby neighborhoods or requires substantial demolition to create sites for new development. Over time the city would become less compact or would lose much of its current character. The newest and largest development projects would likely occur on the perimeter of the downtown (Figures 12, 13, 15).

Development implied by the low growth rate can be accommodated in projects which have already been proposed. Thus, if growth rates decline radically, and remain low through 1995, no changes in development regulations -- including shifts in height limits -- will have much of an effect. H wever, at a moderate rate of growth, some redevelopment or spread of development to the perimeter of downtown will be the likely result. At the high growth rate, downtown is extended dramatically into adjacent neighborhoods. Without any controls, the resulting physical form represents a loss of

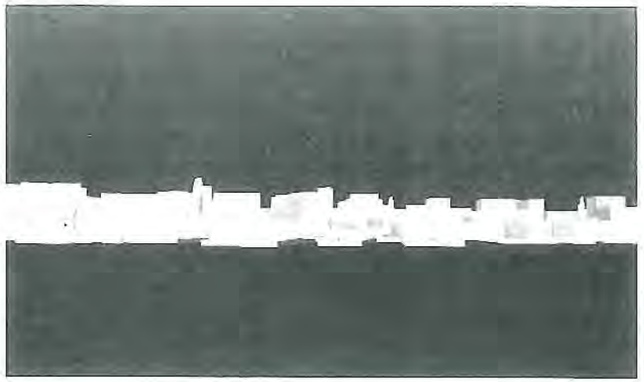
12 Projected Skyline under the Existing Height Scenario



13 Aerial View of Projected Development under the Existing Height Scenario



14 Existing Height Limits on the Peninsula



15 View from the Harbor, Existing Height Scenario

some residential areas and a massive bulky skyline. Several streets would be transformed by tall structures which rise directly from sidewalk to full height.

Our assessment of this growth pattern is that there is insufficient capacity for high growth in the downtown without considerable demolition, including many structures which give the area its current character. The overflow into the neighboring areas is not an adequate solution, particularly in light of the strong and important residential neighborhoods surrounding the downtown. We also feel that the resulting city fabric is very bulky and flat, causing inhospitable streets and little opportunity for new building forms. Streets become cavernous, lack sunlight, and are a departure from the human scale that presently exists in most parts of Portland. *This scenario reveals that a moderate to high rate of development under the current regulations could endanger the city's special character.*

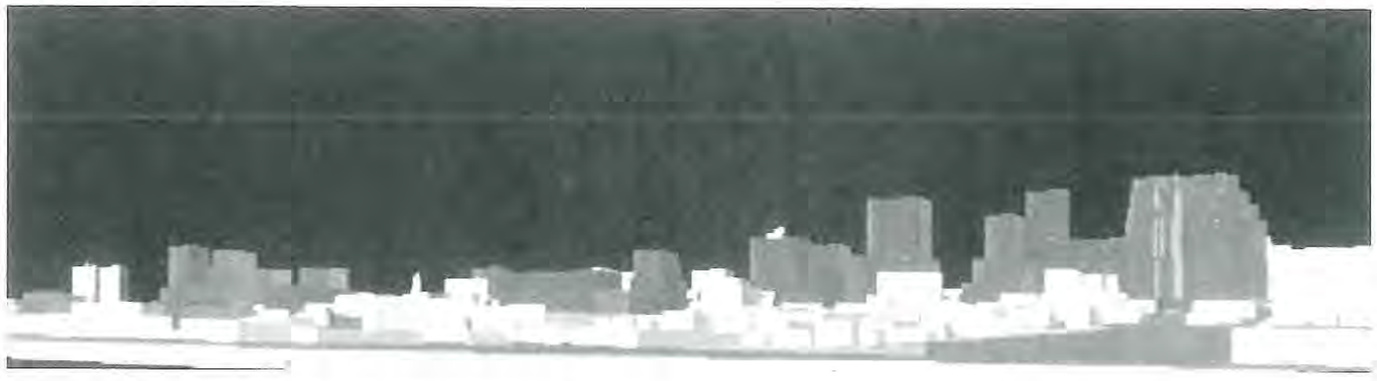
II - HIGH SPINE SCENARIO

This scenario encourages the concentration of much of the future growth along the spine of Congress Street from High Street to Franklin Arterial Street (Figure 17). Such a pattern would reinforce the sense that Congress Street is the "Main Street" of the city, while also relieving some of the pressure from other areas of the downtown core and adjacent neighborhoods.

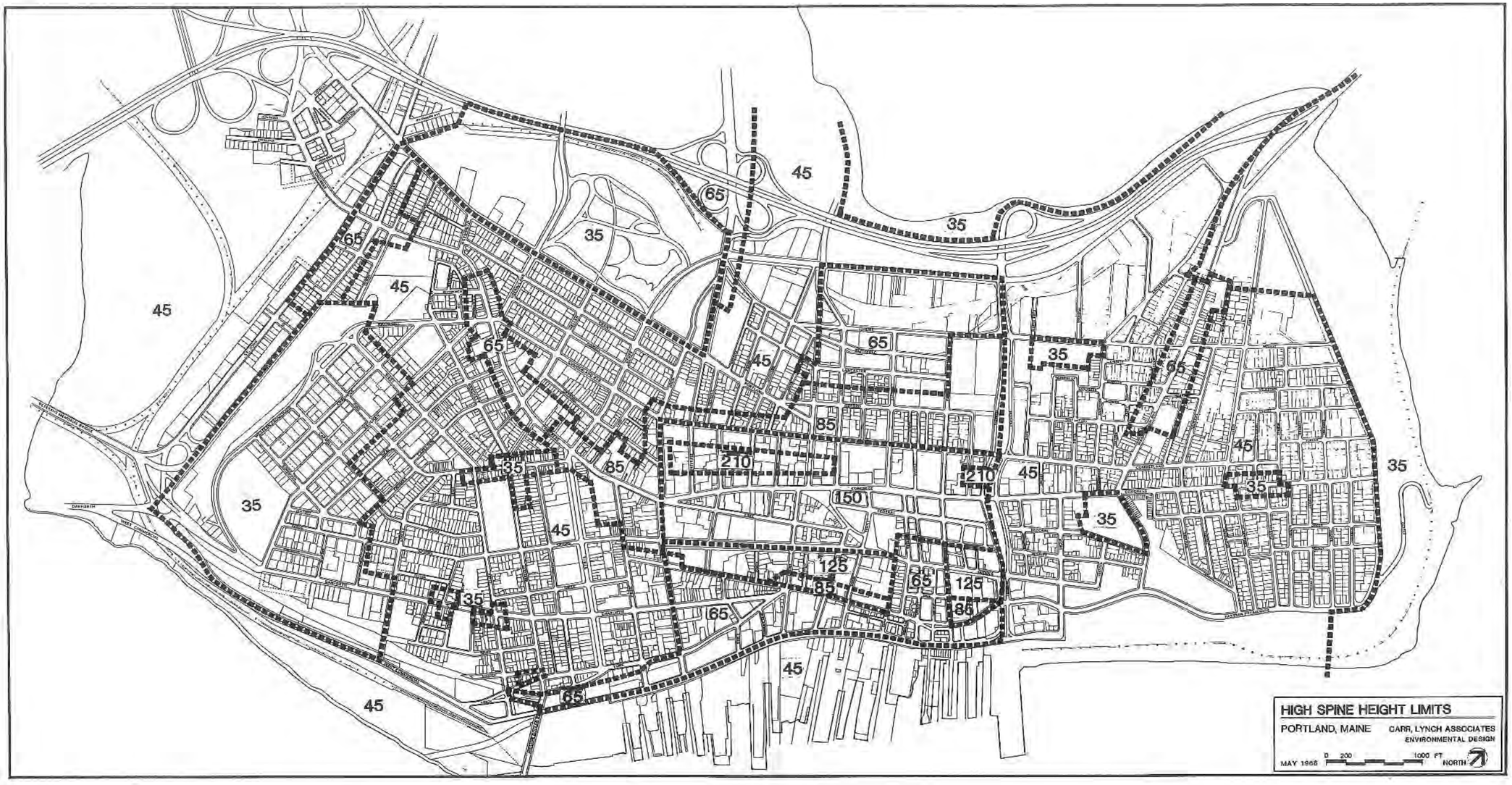
Creating a "high spine" with increased heights would provide a greater capacity for development in the heart of the business district of Portland, reinforcing current activity in this area. Raising height limits on blocks adjacent to Congress Street could be coupled with a reduction of height limits in several special areas of downtown, notably the Old Port and the waterfront.

This "high spine" scenario permits midblock heights between Congress and Cumberland to reach 210 feet. The remaining downtown core area between Cumberland, Spring, High, and Franklin Arterial would also allow increased heights, but only to 150 feet. But simply allowing increased heights runs the risk of creating street walls that are dramatically out of scale with existing development and pedestrians using the streets. Thus, under this scenario, strict limits on street walls are established, from which any additional height must step back. To create a more slender skyline, only 25 percent of a building site is allowed to rise above 125 feet. Thus, the increased density along the spine is not as apparent as it might be, and the skyline is less congested than under the previous scenario (Figures 16, 18, 19, 20).

The increased capacity for development in the central core permits a reduction of heights elsewhere to reflect the special character of areas. While it may appear that the potential development area added through increased heights does not offset the development potential lost by limiting street wall heights and requiring set-backs, in reality the opposite is true. Developers are unlikely to fill the entire building envelope permitted today since it would result in space that is too distant from exterior light and floor plates that are too large. Hence, the additional height allowed would represent a real opportunity to construct additional space -- space that is more valuable as well because of its views.



16 Projected Skyline under the High Spine Scenario

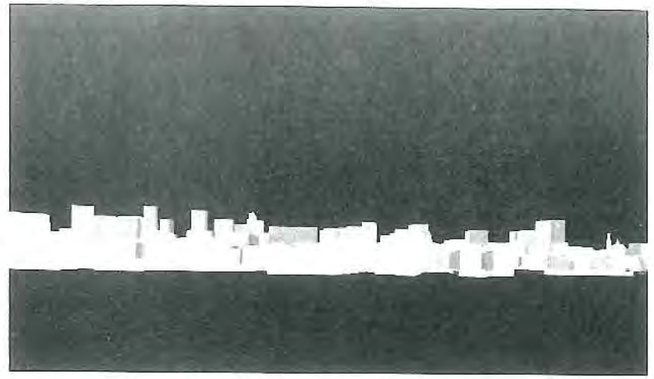


17 Height Limits with the High Spine Scenario

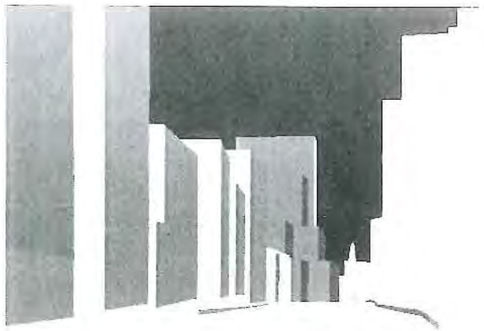
Allowing the "high spine" would permit reductions in height in areas where it is critical to maintain the current building scale. In the Old Port area height limits would be reduced from 125 feet to 65 feet; in the India Street area new limits would be 45 feet; and along upper Congress Street heights would be reduced to 85 feet. View corridors are maintained and enhanced through the setback and step-back of new buildings from the property line.

As with the previous growth scenario, little impact of these changes is visible under the low growth rate. The middle growth rate begins to establish a new pattern on the skyline while creating streetscapes which are human scaled and more respectful of existing buildings.

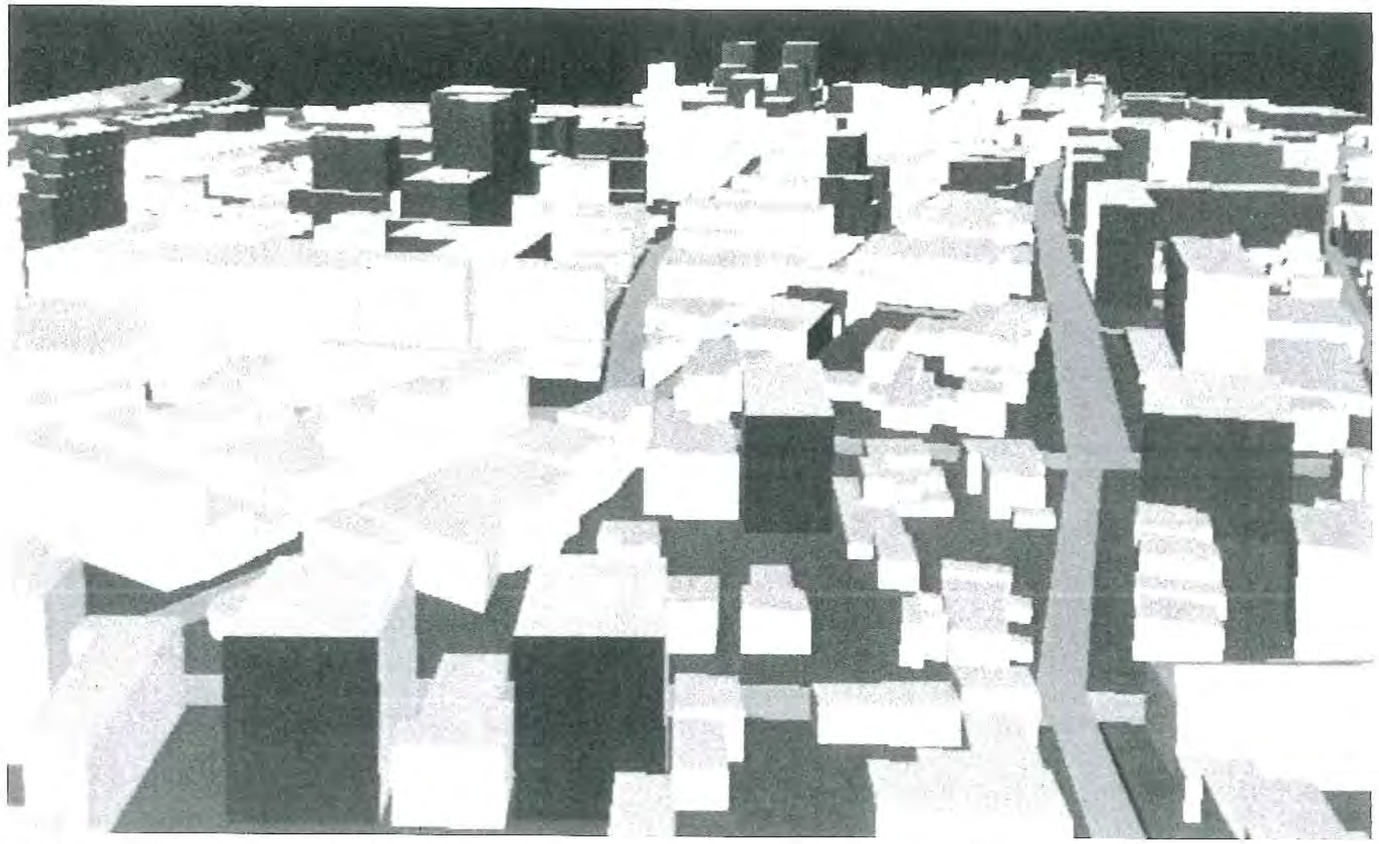
Even under the high growth rate assumption there remains capacity for additional growth. The incentive of additional heights will, over time, permit additions to, or redevelopment of, many older buildings and sites within the core of the City. This is a mixed blessing: while retaining a compact and walkable core area, it will create the need to have clear policies on the protection of significant structures in the area. Without such policies, the conflicts between development and preservation objectives would likely intensify.



18 View from Harbor, High Spine Scenario



19 View along Congress Street, High Spine Scenario



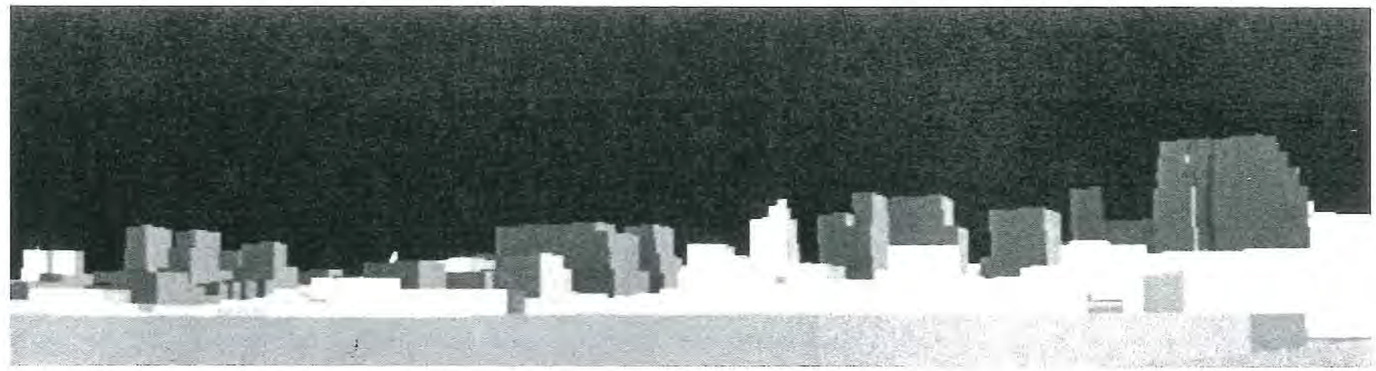
20 Aerial View of Projected Development under the High Spine Scenario

III - GROWTH DISTRICT SCENARIO

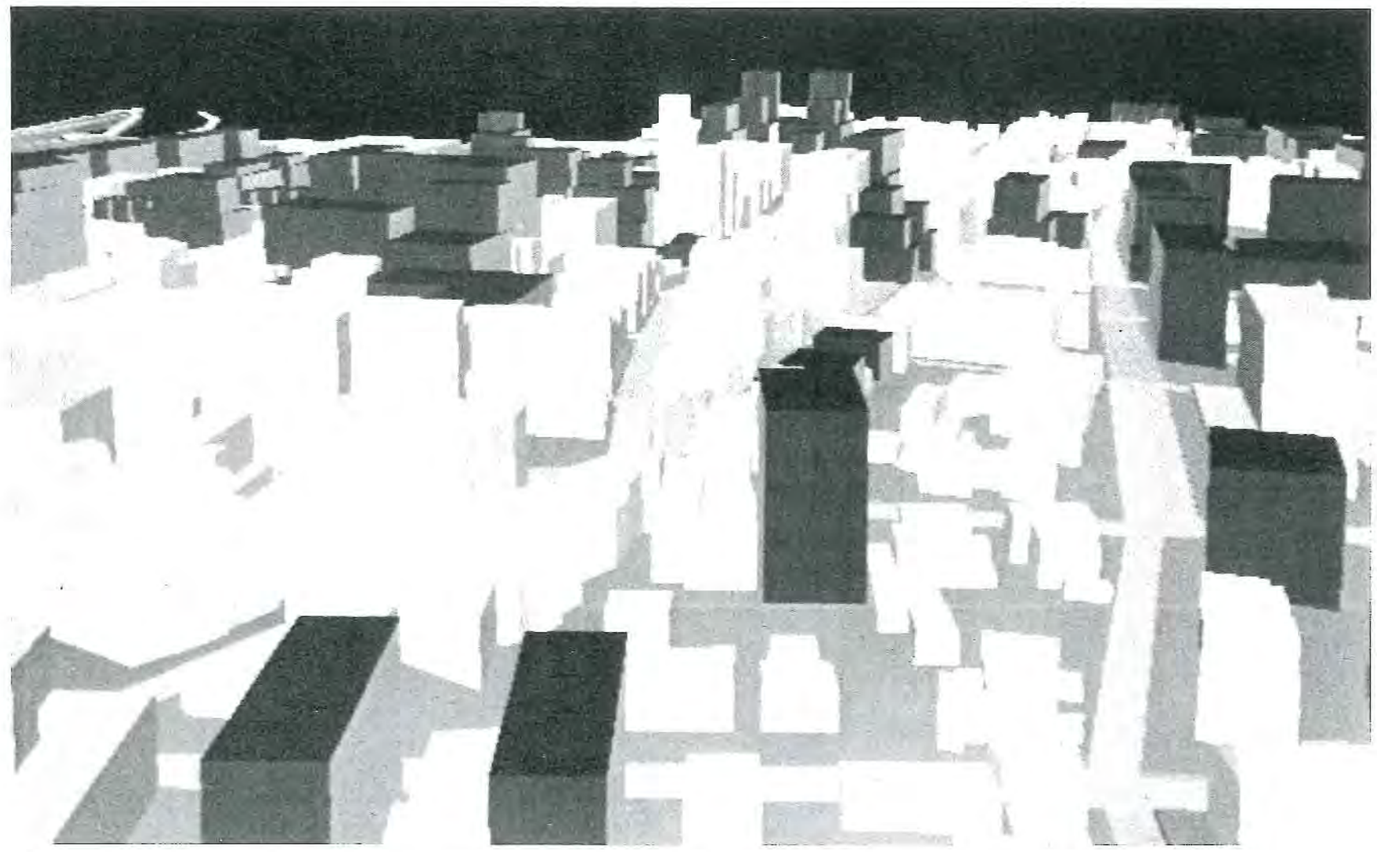
In contrast to the previous growth pattern, this scenario would channel a larger portion of new growth into two planned growth districts (Figure 23). These districts would be created to absorb the additional development which would under current regulations be wedged, perhaps unsuccessfully, into the downtown core, or would spill over randomly into adjacent areas. Under this scenario there is an incentive to plan for new growth and concentrate its impacts.

The two growth districts are different in character and would likely attract different types of uses. The smaller of the two areas is centered on India Street between Newbury Street and the waterfront. The second is considerably larger and encompasses most of the West Bayside area between Cumberland Avenue and I-295. Both areas are today underdeveloped, with large open sites and a mixture of uses including some housing. Development of these areas would necessitate advance planning and greater control, to assure that a balance of uses locate there, and that open spaces and affordable housing are constructed along with commercial uses. But they hold out the promise of creative additions to the core, and should divert some of the development pressure away from existing commercial areas (Figure 21).

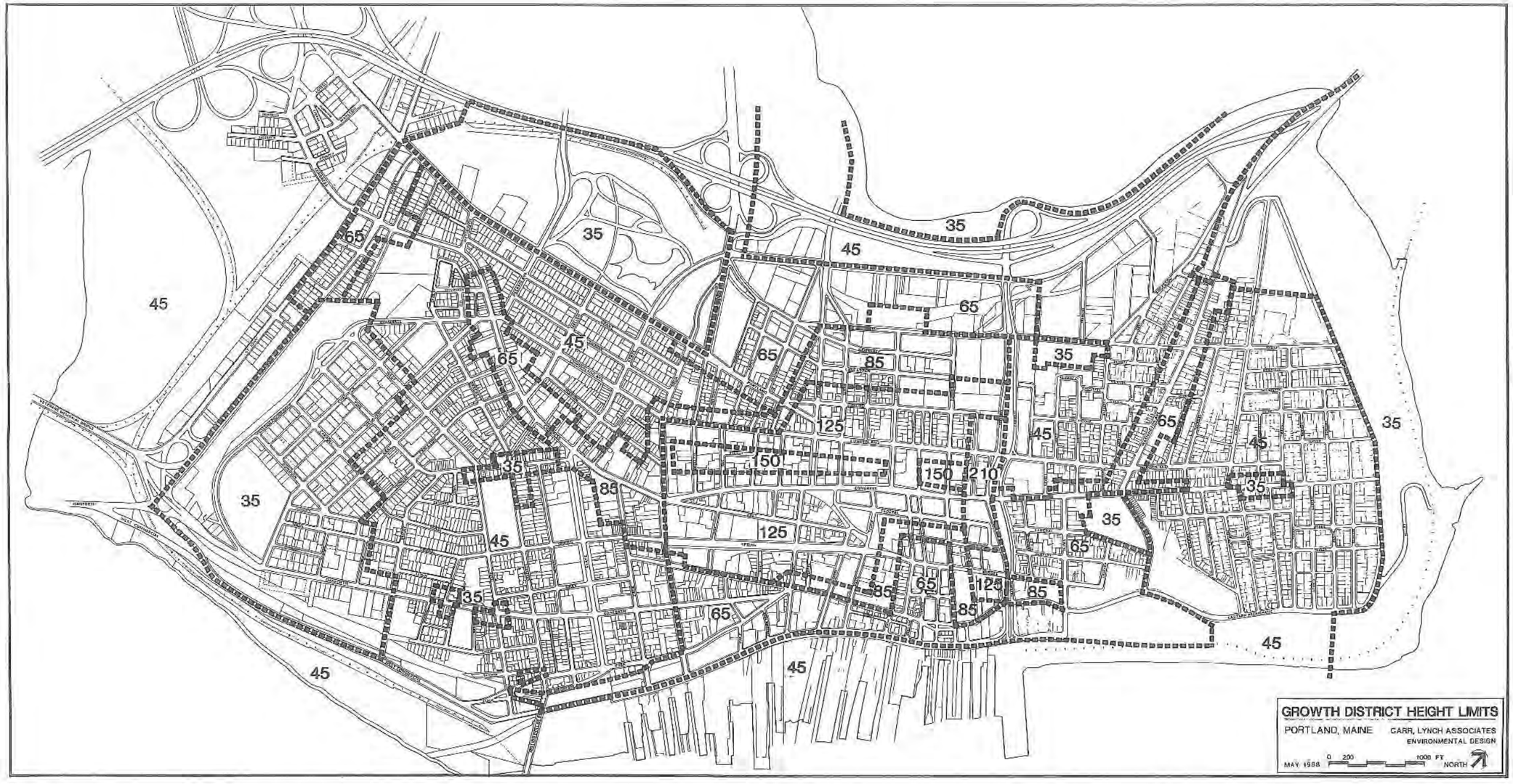
Under this scenario, heights are allowed to increase in the downtown area to 150 feet along the spine of Congress Street. The remainder of the downtown core remains at the current limit of 125 feet. Heights are decreased in the Old Port, upper Congress Street, and in the waterfront transition area. Development still will occur in the core, but at a rate less than under the previous scenario. Instead, heights are raised slightly in the India Street growth area (to 65 feet and 85 feet) and in the West Bayside growth district on the Cove side of the



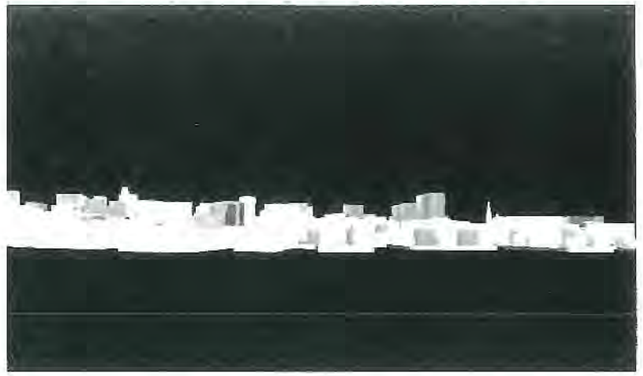
21 Projected Skyline under the Growth District Scenario



22 Aerial View of Development under the Growth District Scenario



23 Height Limits with the Growth District Scenario



24 View from Harbor, Growth District Scenario

spine (heights stepping down from 85 feet to the existing height of 45 feet) (Figures 22 and 24).

As with the prior scenarios, development only begins to be diverted under middle growth rates. Under high growth rates, the skyline views from I-295 are quite different, with much more development visible on the cove side of the peninsula. One potentially negative impact of this scenario is the fact that increased heights in the India Street area will block some views to the waterfront from lower elevation housing in the Munjoy Hill area. However, topographic differences mean that most housing in the area would have views over the new development.

SUMMING UP -- THE BASIS FOR REVISED HEIGHT POLICIES

The computer modelling assisted in the evaluation of the possible benefits and difficulties of each of the growth scenarios. Discussions with the Council and Planning Board provided insights as to the feasibility of carrying out the policies. This evaluation strongly suggested that changes are needed to current development regulations in order to accommodate growth without eroding the essential qualities which make Portland unique.

In sum, the case for modifying regulations which relate to the height of buildings is, as follows:

1. **Existing regulations encourage development which is out of keeping with Portland's character.** While overall heights are restricted, current regulations allow structures to rise to full heights at the street face, creating buildings which are out of scale with the older environment. Height limits today fail to discriminate between ordinary and sensitive sites, where view corridors ought to be preserved or where potential overshadowing of open spaces or scale relationships with landmark buildings are issues.

2. **Case by case review of projects without standards is both unfair and inefficient.** While large projects are currently reviewed under site plan review provisions, the absence of clear standards related to the visual environment makes the process frustrating to developers, public officials and the general public. Frequently projects are too far advanced to be changed in substantial ways when they reach the review stage.

3. **A continued high rate of development will create significant pressures for development to spread to areas adjacent to downtown, conflicting with objectives for preserving those areas.** At very low development rates, the current development envelope is fully adequate through 1995. However, at a moderate or high rate of development, new sites will need to be created in adjacent areas, or significant redevelopment of the older stock of structures will be required. As an alternative, loosening some of the restraints imposed by height limits could help create a compact core with targeted development zones.

4. **A combination of a "high spine" and "growth district" strategy offers real advantages over maintaining the status quo.** Loosening the restraints on development heights along Congress Street would offer immediate encouragement to developers to plan projects that anchor the core in its traditional location. Over the longer term, designation of the India Street and West Bayside areas as planned growth districts would provide the outlets for development well beyond 1995, and could relieve pressures on the West End, Munjoy Hill and the waterfront.

5. **Simply raising height limits is an inadequate response: other changes to regulations are needed to encourage development which is in keeping with the current character of Downtown Portland.** Equally important are regulations that limit street wall heights; encourage towers which are slender; force respect for visual landmarks; maintain view corridors; prevent shadowing of open spaces; and reflect districts of important public character.

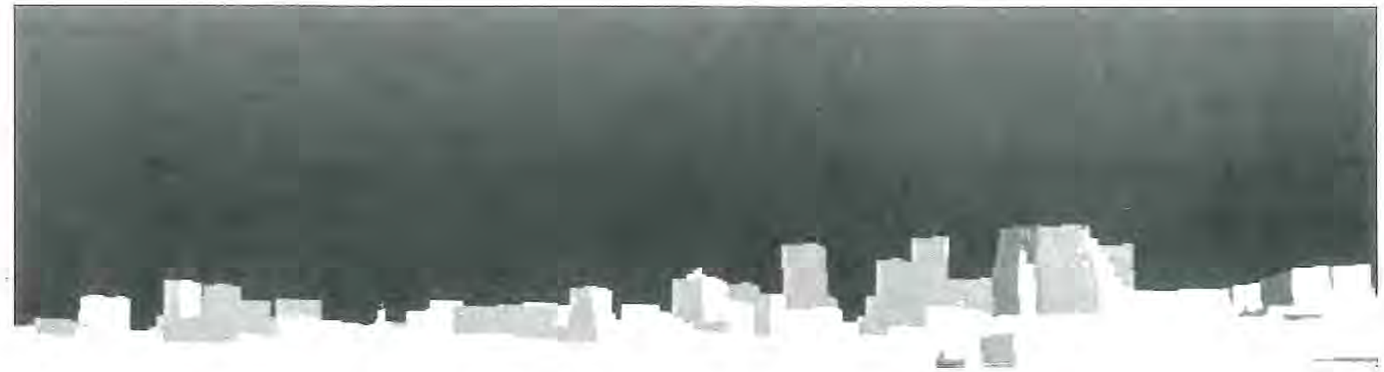
The sections that follow detail our recommendations for each of the needed policies.

PROPOSED HEIGHT POLICIES

We believe that seven policies related to the heights of buildings in Downtown Portland ought to be adopted to ensure that there is room for future development, and that the form and character of new structures are respectful of what now exists. The policies have a dual purpose: to provide the basis for revisions to existing ordinances that affect the height of buildings, and to serve as standards and guides for the review of individual projects where discretionary action is required. By clearly announcing the policies, developers will be encouraged to design their projects so that they meet public expectations. The seven policy areas are, as follows:

- Overall height limits
- Street walls
- Special Civic Area
- Tower massing
- Visual landmarks
- View corridors
- Key open spaces.

Each of these is expanded upon in the following pages.



25 Projected Skyline with Recommended Height Limits

OVERALL HEIGHT LIMITS

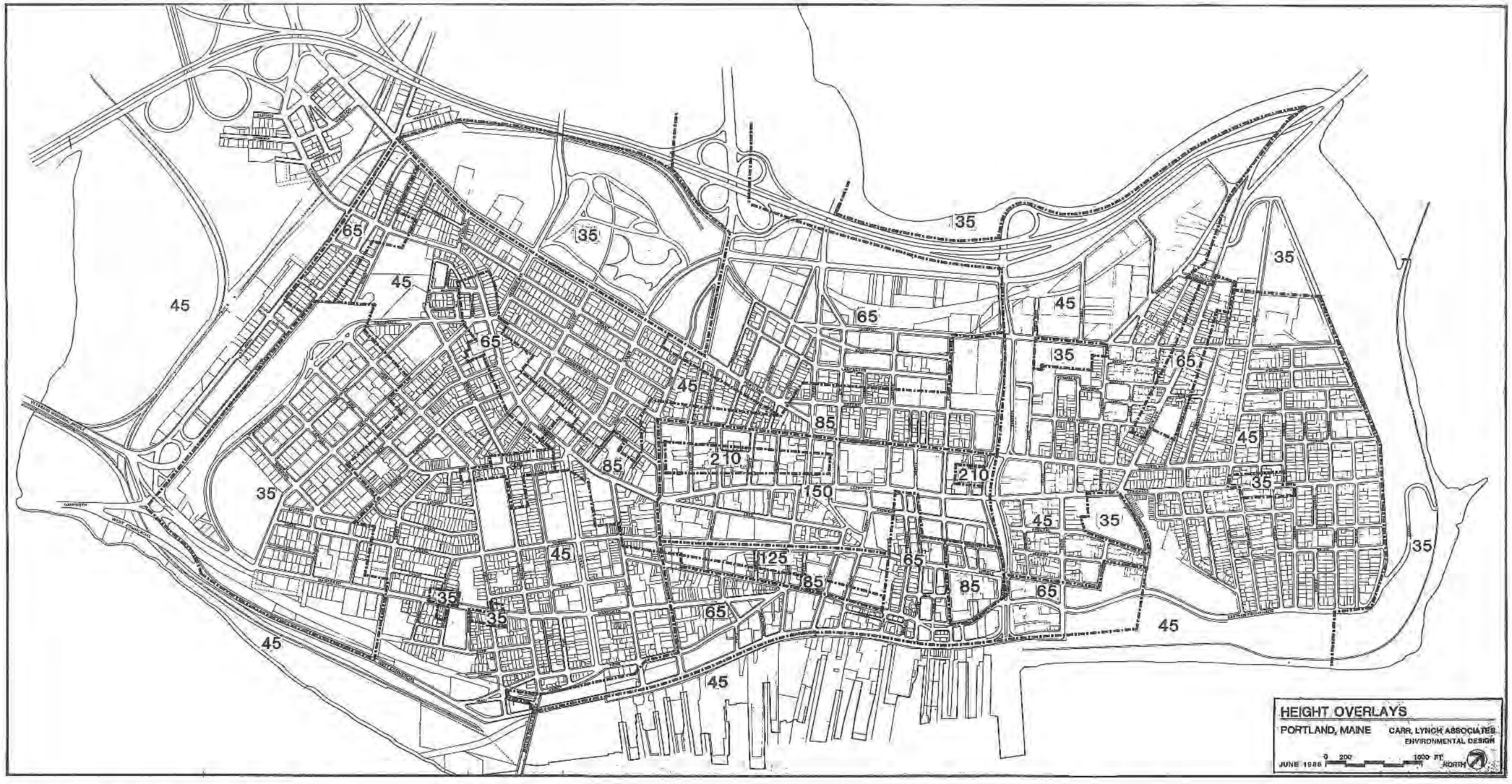
Our proposed height policy has several objectives: to reinforce the spine of development along Congress Street by making it advantageous for new large projects to be created nearby; to direct specialized new development into two new growth districts, along India Street and in West Bayside; and to limit the height of development in historic areas of the downtown. Accordingly, we are recommending new height limits for a number of areas of downtown, as indicated on Figure 26.

These heights respond to the existing urban character and provide capacity for the development growth expected over the next decade and beyond.

The proposed height concept lowers the maximum heights of several areas (Old Port, upper Congress Street, waterfront transition zones), and increases the permitted height in the spine, the downtown core, and in the two growth areas. These new height limits are intimately tied to the policies of limiting street walls and encouraging slender tower massing as discussed in the following sections. While the overall capacity to accommodate growth increases under the proposed limits, that growth should be more sympathetic to Portland's current environment than if current zoning policies are continued.

The accompanying computer generated illustrations indicate how the downtown might develop if the height limits proposed here are implemented (Figures 25 and 27). The height limits shown reflect the following recommendations:

1. Height limits in the "high spine" along Congress Street from High Street to Franklin Street Arterial should be increased to 210 feet. However, this height zone is carefully located in mid-block areas from Congress to Cumberland to avoid a change in scale along the two streets. Our recommendation is also coupled with the proposal to create street wall limits as described in the following section. Additionally, to achieve the maximum height, new development should be required to correspond to the principles for tower massing outlined in a policy section that follows. We also suggest that an architectural top of up to 40 feet be allowed above this limit to enclose and hide mechanical equipment on the top of structures. This



26 Proposed Overall Height Limits

element should also correspond to the tower massing policies.

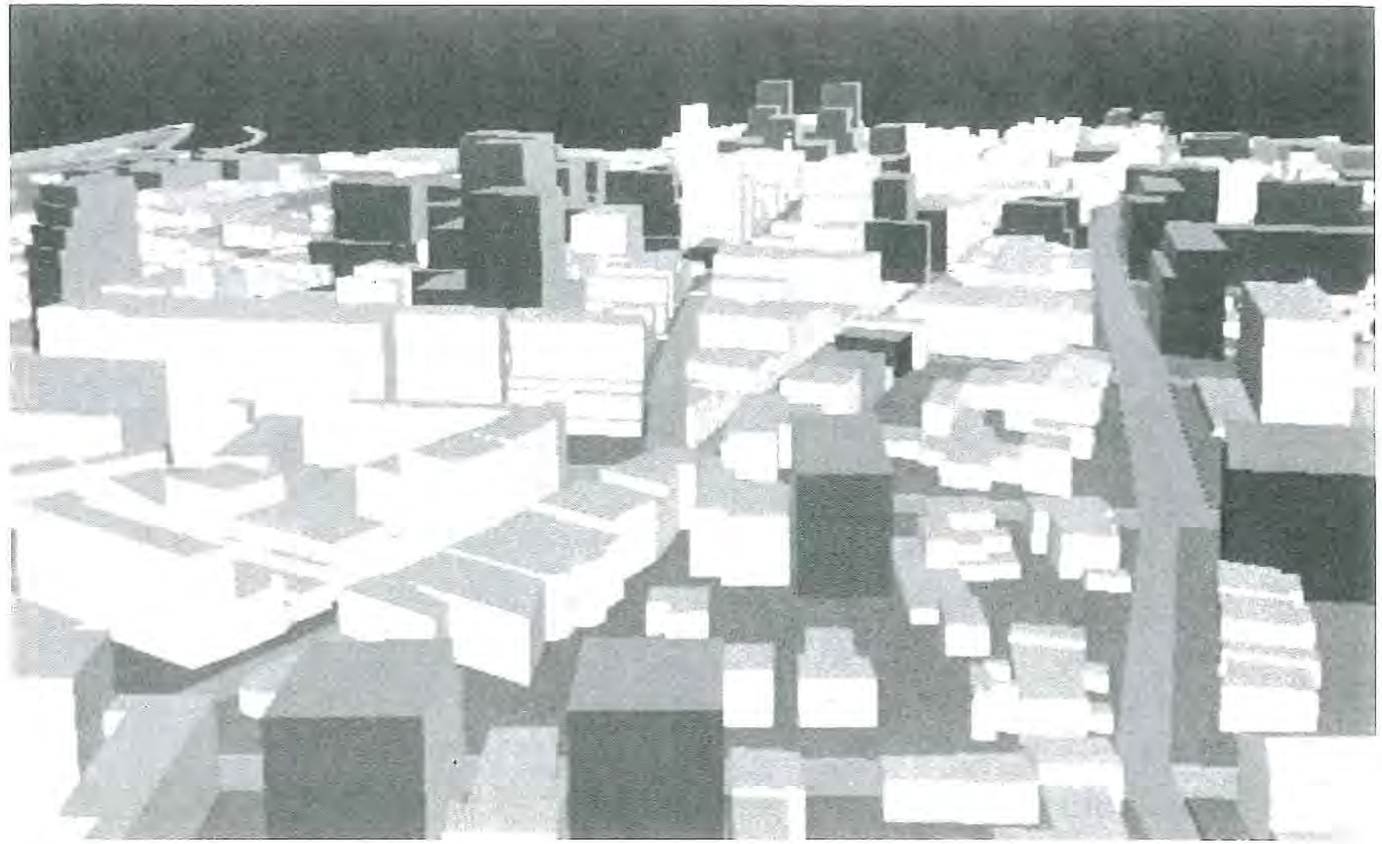
2. In the downtown core, bounded by Cumberland Avenue, Spring Street, Franklin Street Arterial, and High Street, we propose that height limits be raised from 125 feet to 150 feet, in order to provide further incentive for compact growth. However, the footprint of development above a certain height, perhaps 90 feet, should be limited to 25 percent of the lot coverage. As in the previous area, an architectural cap of up to 40 feet should be permitted to enclose mechanical equipment systems. This element should also meet the tower massing policies.

3. In the Old Port area, height limits are proposed to be lowered to 65 feet to maintain the current character of the district.

4. A larger "transition" zone with a height limit of 85 feet should be created between the 125-foot height districts and the 65-foot waterfront height areas. This reflects the need for gradual reduction of heights from the downtown core to the water's edge.

5. The waterfront should remain at a height limit of 45 feet. This includes the area to the harbor side of Commercial Street. The current provision for height exemptions should be eliminated.

6. The mixed use area bounded by York Street, High Street and Pleasant Street should allow increased heights up to 65 feet. To accommodate this and ensure that fine older structures are retained, a development plan for the area should be undertaken by the City. The increased height limit is consistent with adjacent areas and could provide some incentives to redevelop the area into a mixture of uses.



27 Aerial View of Projected Development with Recommended Height Limits

7. The West Bayside area should be planned in a comprehensive manner as a new inner city living and employment area. Accordingly, it seems appropriate to allow increased heights as a way of stimulating growth. Since the area currently includes a number of modest priced housing units, it will be important to mandate the inclusion of affordable housing in any development of the area. West Bayside is seen as a place where some of the development interest in downtown could be diverted. It has excellent access and with strict guidelines could represent a logical extension of the downtown core. Height limits should be increased to 65 feet in the area bounded by I-295, Franklin Street Arterial, Forest Street and Lancaster Street. The area bounded by Lancaster Street, Preble Street, Franklin Street Arterial and Cumberland Avenue should increase to an 85-foot limit. These new limits should provide the needed incentive for a mix of uses.

8. Height limits in the "uptown" Congress Street area (the B-3 district extending from Congress Square to beyond State Street), currently 125 feet, should be reduced to 85 feet. This will offer greater protection to the adjacent residential areas. This transitional height of 85

feet should continue on the cove side of Cumberland Avenue from High Street to Franklin Street Arterial.

9. The India Street area should have an urban plan designed to integrate the redevelopment of the vacant and underutilized parcels in this important area of the City. Increased heights to 65 feet in the area bounded by Middle Street, Commercial Street, Franklin Street Arterial and Mountfort Street should be allowed. This area can physically accommodate the increased height because of the topographic differences between the area and the higher Munjoy Hill residential area. Protection of existing affordable housing in the area and along its borders should be one objective of the redevelopment plan.

10. The current B-3 area on Munjoy Hill should be reduced in height to 65 feet. This should also occur along Forest Avenue in the B-3 area from I-295 to Portland Street.

11. The residential neighborhoods of Munjoy Hill and the West End should retain the current limits of 45 feet. While the study did not address these areas in great detail, there is no compelling reason to raise the limits in these areas. However, the computer model is available if the need arises to study these areas at some time in the future.

Two further points should be made about these proposals for adjusting height limits in Downtown Portland. The first is to re-emphasize that the precise height limits proposed are, quite obviously, the result of judgments, not scientific deduction. They seek to reconcile a desire to preserve the existing fabric of the city with the equally important objective of providing room for the continued expansion of Downtown Portland. Could the maximum height as reasonably be 190 feet or 180 feet? The answer is a qualified "yes", but a recognition that as the height is lowered, it diminishes in importance in influencing the pattern of development, since there is less incentive for developers to locate in the preferred area rather than other locations. While we have studied the issue carefully, with the aid of the computer model of the peninsula, it is worth the reminder that setting height limits remains an art more than a science.

The second point is to recognize that currently height limits are the result of underlying zoning districts that, in some instances are mapped elsewhere in the city as well. Thus, creating the new height limits will necessitate either some form of overlay zoning, or modifications of current use districts, or the creation of new downtown zoning districts. Such moves obviously need to be integrated into the revisions to the comprehensive plan for downtown that are part of the Downtown Vision planning process.

STREET WALLS

The height of the street wall is in many ways the most critical dimension affecting the scale of the city, and the experience of pedestrians and motorists using the area. This is because one's awareness of the environment diminishes above a height of 30 to 50 feet, and the sense of street cross section provides one with the impression of scale. Consistency of street walls is also important: it is what gives the Old Port area its distinctive character, to cite just one example.

Three typical average street wall heights are prevalent in central Portland, the result of different eras of development. These heights are 90 feet, 65 feet, and 45 feet (Figure 31). Examples are shown in Figures 28 to 30. Recently, isolated buildings have risen from the street to the maximum permitted height of 125 feet, but fortunately these remain freestanding structures.

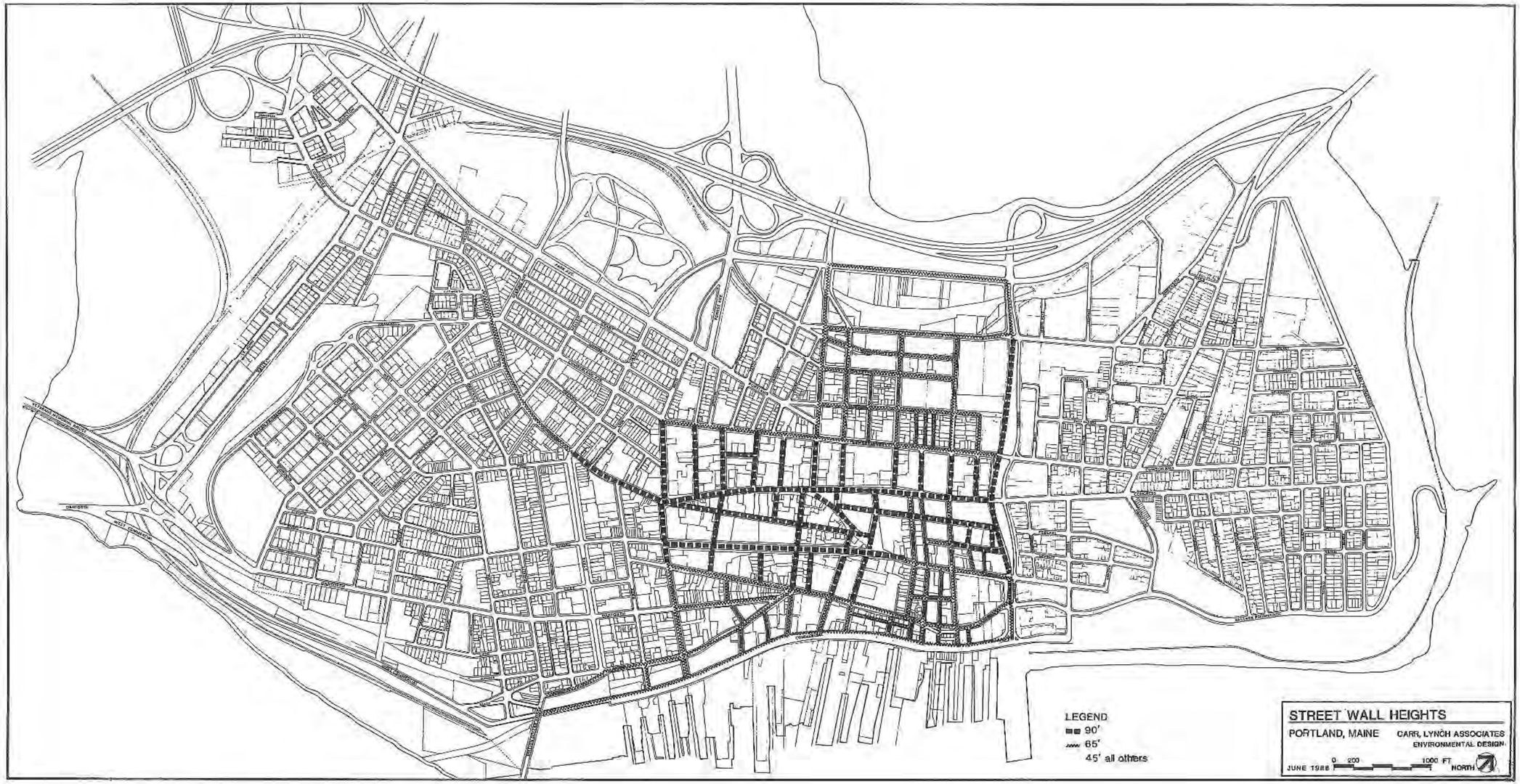
The 90-foot street wall is seen throughout the core of the downtown. Congress Street is a good example of this, and the Masonic Temple building next to City Hall is representative of this height. There are, of course, buildings both above and below this height. However, those buildings which rise above this height without any step-back begin to have adverse effects on the scale and pedestrian environment of the street. New structures surrounding Monument Square are examples of the abrupt shift in scale.

Establishing a maximum street wall of 90 feet in the core of the downtown area will maintain the historic scale of Portland's urban streets. The 90-foot height also corresponds to the rule of thumb, adopted by many cities, that street wall heights should not typically exceed 1.5 times the width of the street. To maintain the sense of scale, we recommend that buildings

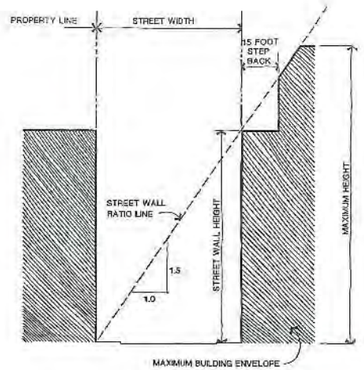
28 Congress Street -- 90-Foot Maximum Street Wall

29 Exchange Street -- 65-Foot Maximum Street Wall

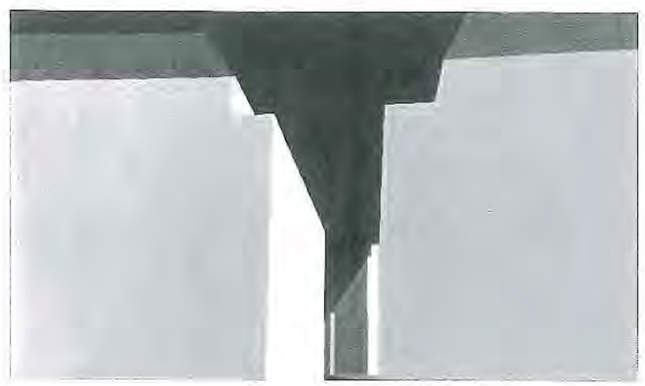
30 Residential Areas -- 45-Foot Maximum Street Wall



31 Proposed Maximum Street Wall Heights



32 Ideal Street Wall Proportions

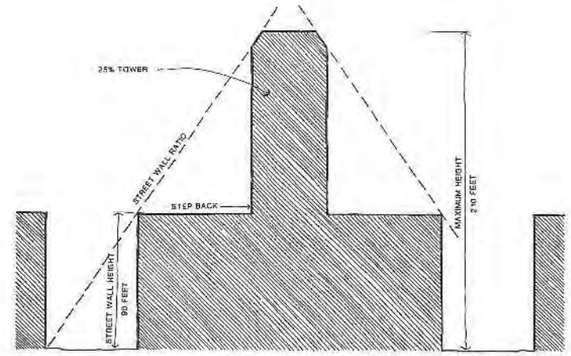


33 Example of Step-Backs

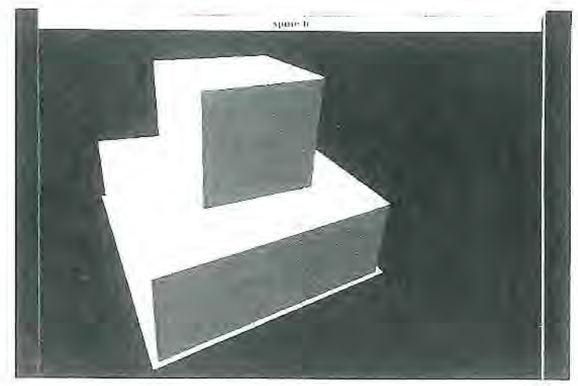
which rise above 90 feet be stepped back at least 15 feet at that elevation.

The areas between the downtown core and the waterfronts on the cove and harbor should have a street wall height limit of 65 feet. The Old Port is a prime example of this height; it provides a more humanly scaled pedestrian street. Similar to above, step-backs of at least 15 feet should occur on any structures which rise above 65 feet.

The remainder of the downtown area near the water, as well as the rest of the peninsula



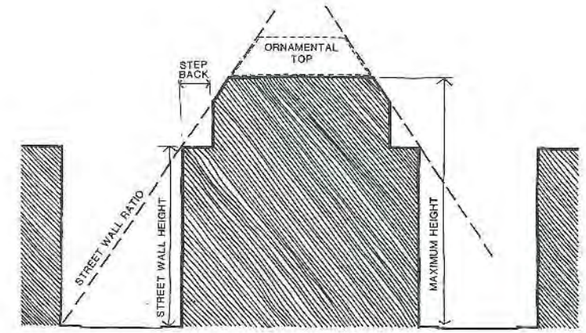
34 Tower Envelope



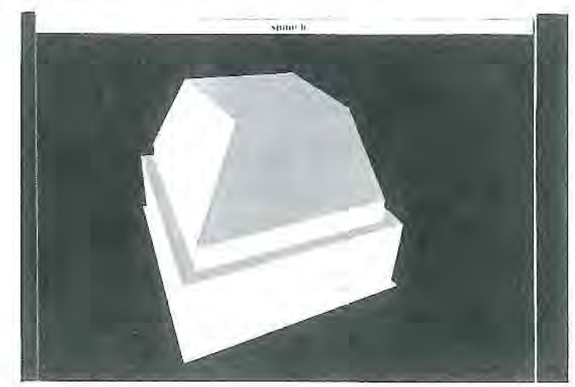
35 Model of Tower Envelope

should have a 45-foot street wall height. This height is representative of the wharf buildings and warehouses, the residential triple deckers, single family Victorians, and more luxurious mansions. It is a typical scale for most streets in the peninsula.

One exception to these general rules seems appropriate in the Civic Area, where we propose a special 50-foot street wall height. Policy recommendations for this area are explained in the following section of this report.



36 Alternative Tower Envelope



37 Model of Alternative Tower Envelope

When buildings rise above the street wall height, they ought to be stepped back a distance that is proportionate with their height (Figures 32 and 33). Figures 34 and 36 indicate two patterns of such step-backs, which are modelled in Figures 35 and 37. In blocks along the "high spine" where the maximum heights are recommended to reach 210 feet, the footprint of higher towers should be limited to no more than 25 percent of site area, to encourage higher portions to be slender. The proposals are explained in greater detail in a following section.

TOWER MASSING

The Portland skyline tends to be filled with a variety of rather "boxy" shaped buildings with mechanical equipment placed in an unconsidered way on their roofs. Most of these taller buildings rise directly up from the street, without any effort made to create a more slender profile. In addition to their bulk, these buildings often cast long shadows and create severe down drafts of wind at the street level. Modification of the standards for the massing of taller buildings could contribute substantially to the character of the area's skyline, not to mention the contributions to daylight and winds at street level. Achieving more slender tall buildings was a recurring theme voiced in public workshops we held in Portland.

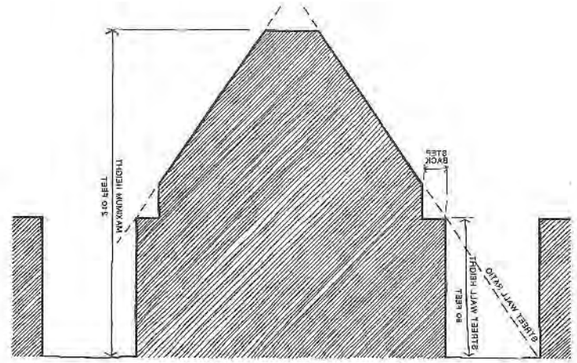
Our proposal to encourage towers that are more slender and set back from streets has three aspects:

- Limit the floor plate of structures above the maximum street wall height to no more than 25 percent of the site area. However, on small sites this may prove impractical, so we further suggest that floor plates not be restricted to less than 10,000 square feet.

- Require towers to generally be located within the cone created by a 1.5:1 vertical to horizontal plane. Some flexibility will also be needed in administering this standard, to cope with small and irregularly shaped sites. However, a step back of at least 15 feet should always be required at the maximum street wall elevation (Figure 42).

- Permit--indeed, encourage--architectural tops on tall structures that will be read on the skyline as a way of emphasizing their height.

In the course of this study, other possible regulations have been considered to achieve the



42 Maximum Building Envelope for Towers

same end, including maximum diagonal dimensions. There are merits to each way of regulating the shape of towers, but whatever system is chosen, it must be simple, imageable and flexible enough to cope with the many conditions it will need to address. We believe that the system suggested here meets such tests. Nonetheless, they are not intended to be a substitute for site plan and other review procedures.

This stepping back of the mass of buildings reduces the bulk of the structure. It also reduces the wind levels on the street, and increases sunlight penetration to street level. This is not a new idea in Portland. Several examples exist which use this principle. One City Center steps back along the Monument Square Mall, as does One Hundred Middle Street along Middle Street.

VISUAL LANDMARKS

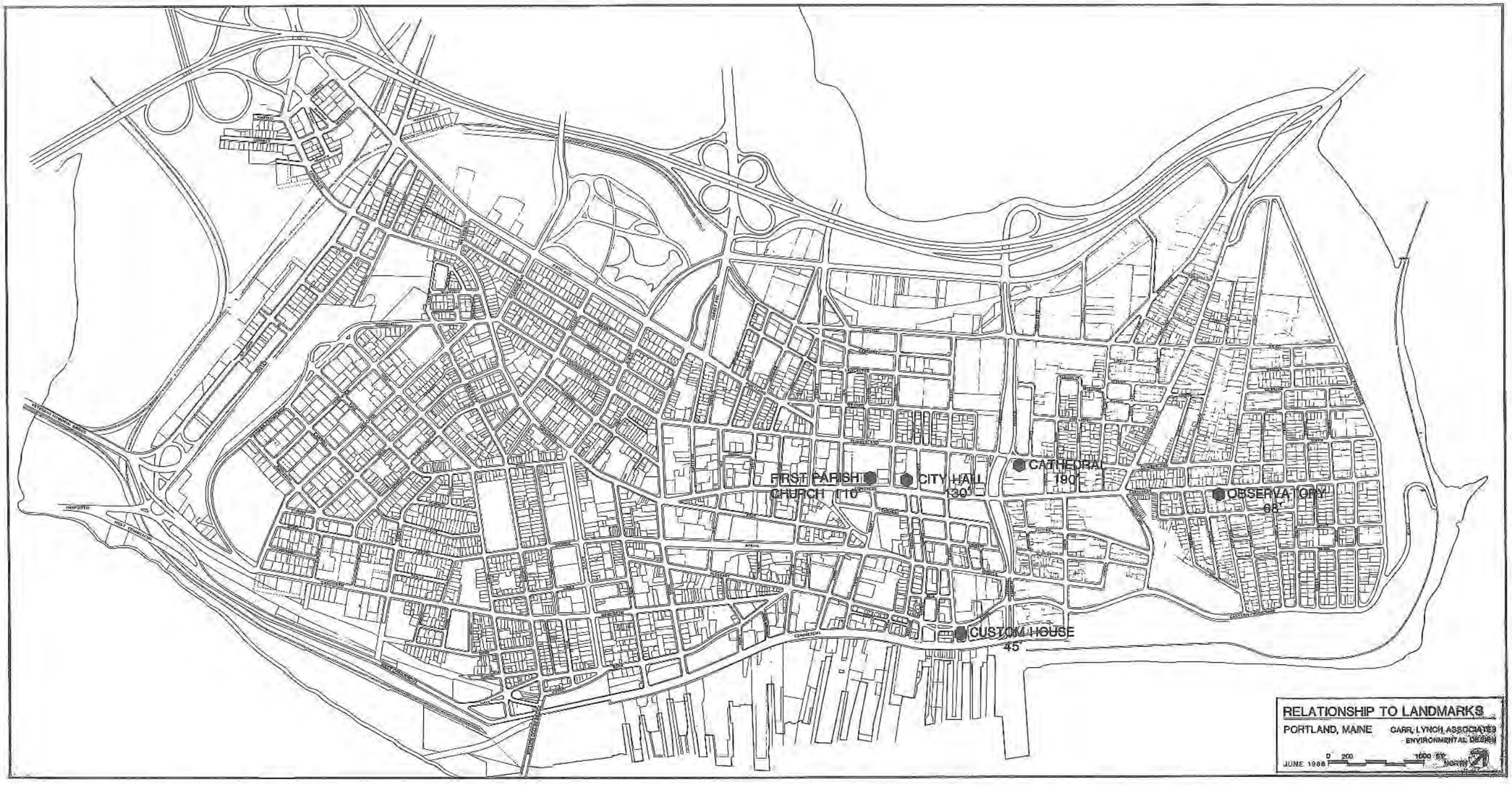
Landmark buildings in Downtown Portland help give areas their identity and are important for orientation. They are also important symbols of the city and its institutions. While many are old, not all historic structures are instantly recognizable. From our conversations with Portland residents, the most recognizable landmarks are:

- Portland City Hall
- Observatory
- Custom House
- Cathedral of the Immaculate Conception
- First Parish Church

Presently the distinctive profile of each of these landmarks can be seen against the sky from important streets and squares. This quality contributes to their visual prominence. Typically, they are surrounded by structures of similar or lower height, so they seem an integral part of the areas in which they are located. When landmark buildings are dwarfed by structures of considerably larger scale, they appear as remnants of some bygone era. A notable example of this effect is the Old State House in Boston, which appears as a tiny jewel box surrounded by gigantic new structures. Thus, two policies are important for landmarks: that they be read against the sky from important streets, and that they be surrounded by structures of similar scale.

Translating these policies into standards, we believe that *heights within a one block radius of a landmark should be limited to no more than 50 percent higher than the landmark structure.* Figures 43 indicates the height of the five important landmarks in downtown, which are shown in Figures 44 to 48.

The heights of neighboring buildings also should be limited so as not to block the view of



43 Key Visual Landmarks in Downtown

44 Observatory

45 First Parish Church

46 City Hall

47 Custom House

48 Cathedral

landmarks against the sky. While this is a highly restrictive policy, it should be carefully applied to selective views. As an example, the views of City Hall tower when approaching along Park Avenue, Congress Street and Exchange Street ought to be preserved since they are important to orientation, while it is less critical that all other views be similarly protected.

The spirit of this policy could be extended to a variety of other important buildings in the peninsula area. Elements such as church spires, towers on schools and fire stations, and unique architectural roof features should be respected and viewed against the sky. In most situations, the area height limits we recommend will provide for this. However, views towards landmarks need to be evaluated on a case by case basis.

VIEW CORRIDORS

View corridors play a large role in determining the visual character of the city by revealing destinations and assisting pedestrians and motorists to orient themselves to the layout of streets and to the world beyond. Distant views provide visual and psychological connections to the world surrounding the city. Views may also make connections to the past by juxtaposing the old and the new.

Establishing view corridors preserves the important vistas within the downtown area. But since it is impossible to preserve every vista without seriously diminishing the use of private properties, it is important to identify view corridors which have special significance.

Figure 53 summarizes the critical long distance view corridors in the downtown area of Portland. Many shorter views, especially from Commercial Street to the Harbor, have been documented in the Waterfront Access Report and should, where possible, also be maintained.

Portland has important links to the water. It was founded as a port city, and maintains an active harbor. View corridors to the harbor help to recall the city's history, and re-assert the contemporary presence of the harbor. Views can be to the opposite shoreline, middle of the water basin, or to the near shore, but in each case they offer a glimpse of the water and occasionally of passing boats. View corridors frequently extend across private property and in these areas, the heights of structures must be limited so as to avoid blocking the object of attention.

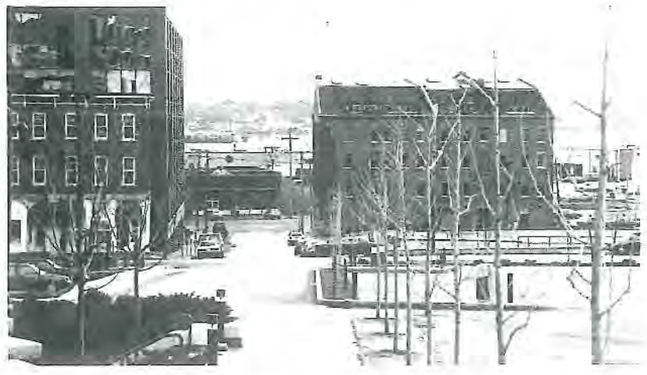
The following view corridors along streets leading to Portland Harbor are ones that we believe are worthy of special protection:

- **State Street** -- from just south of Longfellow Square towards the harbor (Figure 49).
- **High Street** -- from Congress Square towards the harbor (Figure 50).
- **Center Street** -- from Congress Street towards the harbor (Figure 51).
- **Cross Street** -- from Free Street towards the harbor (there is currently a view easement through the Northland property) (Figure 52).
- **Union Street** -- from the Temple Street/Lobsterman Plaza area towards the harbor (Figure 54).
- **Market Street** -- from Newbury Street towards the harbor (Figure 55).
- **Pearl Street** -- from Congress Street towards the harbor (Figure 56)
- **Franklin Street Arterial** -- from Congress Street towards the harbor (Figure 57).
- **India Street** -- from Congress Street towards the harbor (Figure 58).
- **Mountfort Street** -- from Federal Street towards the harbor (Figure 59).

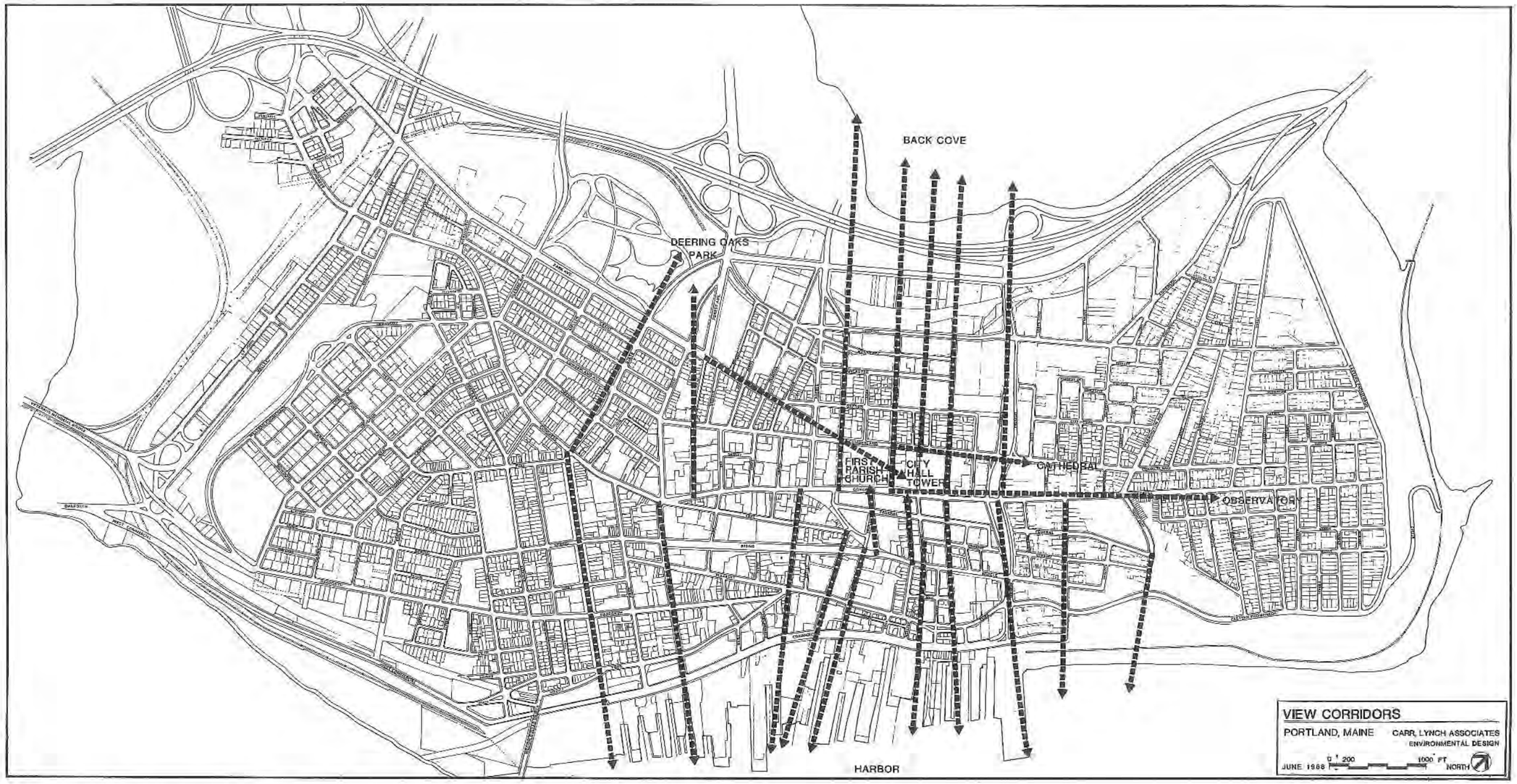
49 State Street -- Harbor View

50 High Street -- Harbor View

51 Center Street -- Harbor View



52 Cross Street -- Harbor View



53 View Corridors

54 Union Street -- Harbor View

55 Market Street -- Harbor View

56 Pearl Street -- Harbor View

57 Franklin Street Arterial -- Harbor View

58 India Street -- Harbor View

59 Mountfort Street -- Harbor View

Views to the water in the Back Cove area are equally important to the visual structure of downtown. When looking at the cove one realizes the geography of the peninsula. Rise and fall of the tides creates an ever changing body of water, and endlessly varied views. The following view corridors to the Back Cove should be established:

- **State Street** -- from Longfellow Square at Congress Street towards the Back Cove; the short range view to Deering Oaks Park is also important (Figure 60).
- **Forest Avenue** -- from just north of Congress Street towards the Back Cove area and Deering Oaks Park (Figure 61).
- **Elm Street** -- from Congress Street towards the Back Cove (Figure 62).
- **Chestnut Street** -- from Congress Street towards the Back Cove (Figure 63).
- **Myrtle Street** -- from Congress Street towards the Back Cove, with the Portland Stove building as a centerpiece (Figure 64).
- **Pearl Street** -- from Congress Street towards the Back Cove (Figure 65).
- **Franklin Street Arterial** -- from Congress Street towards the Back Cove (Figure 66).

60 State Street -- View of Deering Oaks and Cove

61 Forest Avenue -- View of Deering Oaks

62 Elm Street -- Cove View

63 Chestnut Street -- Cove View

64 Myrtle Street -- Cove View

65 Pearl Street -- Cove View

66 Franklin Street Arterial -- Cove View

As indicated in the previous policy, certain views towards landmark buildings are deserving of special protection. These views have special meaning in the city, and development should not interrupt these corridors so that the structures may continue to be read against the sky. To accommodate these views, it may be necessary on individual sites to set development back or to step back street walls an adequate distance to ensure that landmark structures can be seen. The following view corridors towards landmark buildings should be preserved:

- **City Hall Tower** -- The tower and the cupola atop City Hall can be seen on axis along Park and Portland Streets. This is a major entrance for many into the City. The view from the Forest Avenue and Portland Street intersection should remain open (Figure 67).

- **City Hall** -- A second view corridor to City Hall is from Middle Street along Exchange Street. This provides the view to those enjoying Tommy's Park and the future Post Office Park (Figure 68).

- **Cathedral** -- The tower and the spire of the Cathedral of the Immaculate Conception can be viewed from Elm Street along Cumberland Avenue (Figure 69).

- **Observatory** -- From Casco Street along Congress Street to the Observatory. This provides a critical link of the downtown area to the Munjoy Hill neighborhood (Figure 70).

- **First Parish Church** -- The view to the church from Lobsterman Plaza along Temple Street (Figure 71).

67 City Hall Tower

68 City Hall

69 Cathedral of the Immaculate Conception

70 Observatory

71 First Parish Church

KEY OPEN SPACES

Portland is fortunate to have a number of high quality public open spaces, located throughout the peninsula. These spaces provide relief from the congestion of buildings, and create places to gather, stroll, rest, eat, and be entertained. The most important public open spaces on the peninsula are indicated on Figure 78. Additional important, privately owned but publicly-accessible open spaces exist, but have not been mapped as part of this study.

One of the major determinants of the success of these spaces is the amount of direct sunlight that reaches them. This is important in a city like Portland, where the outdoors can be uncomfortably cold in the shade.

The heights of adjacent development should be restricted so that key open spaces receive sunlight during the critical hours when each space is actively used. By assuring sunlight, the period of use of the spaces can be extended several weeks in spring and fall, and even during warm days in the winter.

For most spaces in the downtown, the critical period of use is usually the lunch hour and several hours on either side (approximately 10 am to 2 pm). They are often active in other times as well, but during early mornings and late afternoons in winter, virtually the entire downtown is in shadow. Hence, there is little merit in attempting to regulate shadows for these hours.

Our proposed standard: *From March 21 to September 22, new developments should not add more than 10 percent shade to any key open space during its critical hours.* The base amount of shadow is the condition prevailing at the end of 1988. This would not apply to the shadows cast by new trees or landscape.

72 Longfellow Square

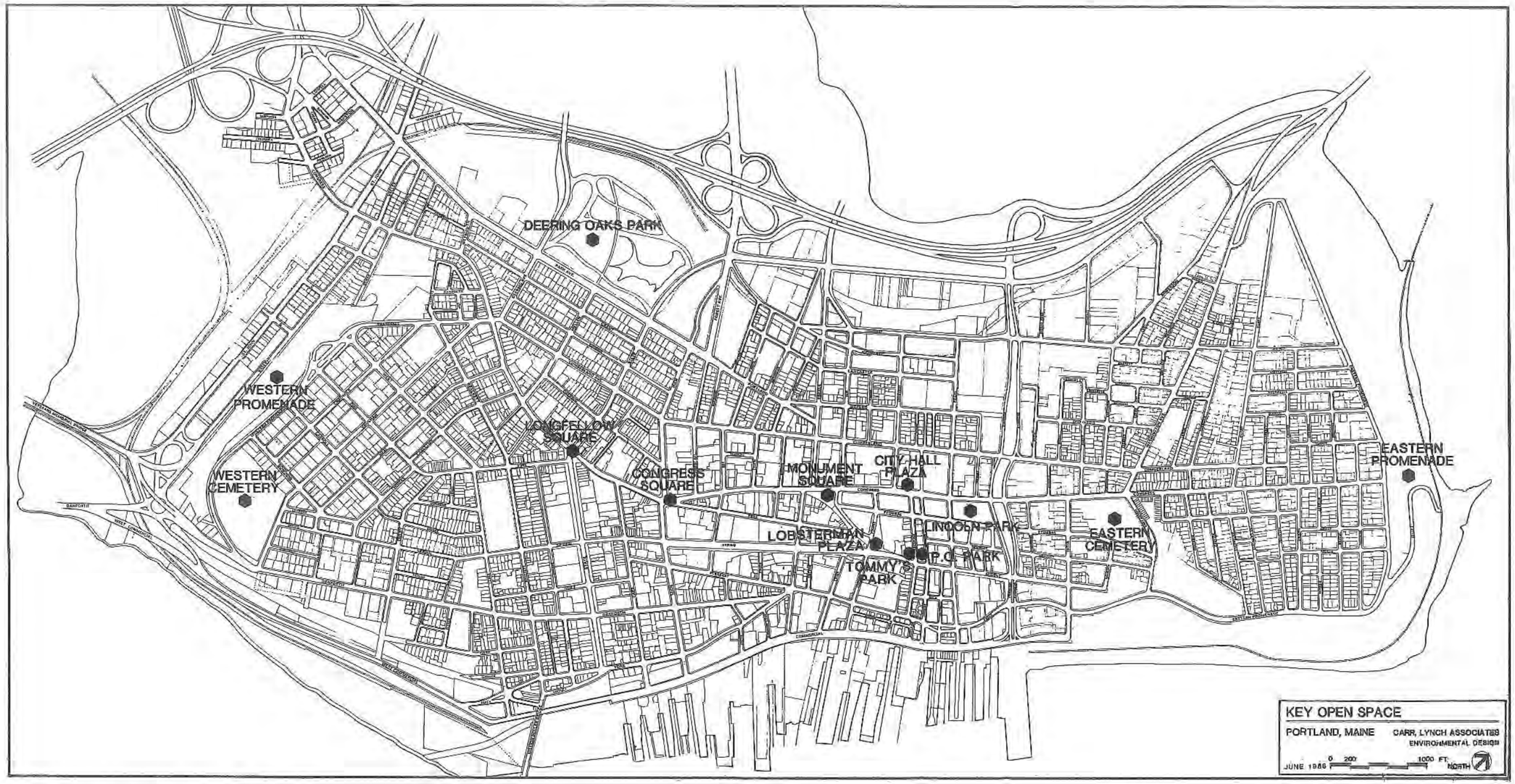
73 Congress Square

74 Monument Square

75 Lincoln Park

76 Lobsterman Plaza

77 City Hall Plaza


DEERING OAKS PARK
WESTERN PROMENADE
WESTERN CEMETERY
LONGFELLOW SQUARE
CONGRESS SQUARE
MONUMENT SQUARE
CITY HALL PLAZA
LINCOLN PARK
LOBSTERMAN PLAZA
TOMMY'S PARK
P.C. PARK
EASTERN CEMETERY
EASTERN PROMENADE
KEY OPEN SPACE
PORTLAND, MAINE
CARR, LYNCH ASSOCIATES
ENVIRONMENTAL DESIGN
JUNE 1986
0 200 1000 FT.
NORTH

79 Tommy's Park

The following are the key open spaces, with their critical activity hours:

- **Longfellow Square** -- active from 9 am to 3 pm (Figure 72).
- **Congress Square** -- active from 10 am to 3 pm (Figure 73).
- **Monument Square** -- active from 10 am to 2 pm (Figure 74).
- **Lincoln Park** -- active from 10 am to 2 pm (Figure 75).
- **Lobsterman Plaza** -- active from 9 am to 2 pm (Figure 76).
- **City Hall Plaza** -- active from 10 am to 2 pm (Figure 77).
- **Tommy's Park** -- active from 10 am to 2 pm (Figure 79).
- **Post Office Park** -- presently in design phase, use patterns undetermined.

There are several larger open spaces in the peninsula which also deserve to be noted as significant. The Eastern and Western Promenades, and the Eastern and Western Cemeteries are permanent spaces which have special character. Development adjacent to these spaces should not detract from the space. Smaller open spaces on the East and West Ends were not a part of the downtown study. The spirit of this policy should be applied to these spaces as well.

IMPLEMENTATION

Height policies are but one aspect of the overall planning effort of the Downtown Vision process, and they must be seen in the context of other initiatives which need to be taken to assure the health and character of the area. In the meantime, this document can serve as a statement of policy and can inform any individual decisions on cases that need to be made before the synthesis of the overall revised comprehensive plan for downtown. Applying them to individual cases will also serve as a useful test of the proposed policies before institutionalizing them more broadly, just as the analysis of the proposed Lincoln Square project assisted in sharpening the policies during this study.

IMPLEMENTATION TECHNIQUES

Ultimately there are several options for embedding the proposed policies in the structure of the City's ordinances and development review procedures. These include:

- **Overlay Zoning** -- An ordinance could be passed to create a zoning overlay for the downtown which overrides the individual height, setback and building envelope controls of each current use district that has been mapped in the downtown area. While this is potentially the simplest avenue, it would still require site plan review procedures to cover issues of shading of open spaces, maintenance of view corridors and relationships to landmark structures. Nonetheless, the virtue of the approach is that it would not require extensive revision of the underlying zoning districts.

- **Revised Downtown Zoning** -- In the course of adopting the new comprehensive plan for downtown, it may be considered desirable to revise the underlying zoning for other reasons, in which case new height limits could be embedded in the new use districts. A number of cities have adopted custom-tailored "downtown commercial districts" for their central areas to allow the flexibility needed to encourage mixed use projects, encourage off-site parking structures that are shared, and promote other arrangements that are unique to the downtown.

- **Elective Zoning** -- An alternative approach would be to offer the height policies as discretionary requirements, applying only in cases where developments exceed a particular threshold (for example 100,000 square feet), or where developers wish to exceed current height limits. The policies would then apply to the detailed development review process. At best, however, this is a partial solution, since we propose locations where we believe current height limits ought to be lowered, as well as areas where we believe that they could be raised.

Beyond the changes to zoning, we feel that it is essential to begin the preparation of development plans for the India Street District and for the West Bayside Area. While we believe that the two areas have great potential for absorbing some of the growth now focused on the downtown, they will need plans to show how that growth could be directed to produce livable areas, and to minimize any dislocations of affordable housing.

And finally, we suggest the use of the computer model to analyze new developments in terms of their sensitivity to their surroundings. As new developments are constructed, the model should be revised to remain up-to-date.

ISSUES NOT ADDRESSED

As we emphasized at the outset, height is but one aspect of the visual environment and by focusing upon it we sincerely hope that other issues will not be neglected. These include:

- **Ground Floor Uses** -- These affect the livability of the city, its economic livelihood and the functioning of open spaces and sidewalks bordered by buildings. In a comprehensive review of downtown zoning, policies on the promotion of ground floor commercial uses should receive prominent attention.

- **Parking** -- How parking is integrated into structures will have a large bearing on the look and the feel of the downtown, and must also be an important policy issue.

- **Open Space** -- In several areas of the downtown, especially near the harbor and in West Bayside, the creation of new open spaces would be an essential move in continuing to assure that the area is pleasant and attractive to pedestrians and residents. Creation of these open spaces will also affect the height restrictions on bordering properties, so plans need to be made for these at an early date.

- **Landmark Structures** -- While we urge special protection in terms of building height restrictions for a handful of the important structures downtown, this policy should not be seen as a substitute for the larger agenda of deciding which additional structures ought to be designated as landmark buildings in the area.

- **Materials** -- Building materials are critically important in terms of promoting the consistency of new and older structures. While we fail to address the issue here, since we are narrowly focused on issues of height, it must be a part of the larger agenda of the Downtown Vision process.

APPENDIX

1995 DEVELOPMENT PROJECTIONS

The section that follows presents the development growth rates, projected out to 1995. Downtown numbers reflect the area between State Street and Franklin Street Arterial. Munjoy Hill represents the areas east of downtown, and Western Promenade the area west of downtown within I-295.

PORTLAND HEIGHT STUDY

DEVELOPMENT PROJECTIONS FOR 1995

EXISTING		1995
Primary Office (1987 base) 2,822,900 sq. ft.	Low(5%)	4,149,900 (+1,327,000)
	Mid(10%)	6,051,100 (+3,228,200)
	High(15%)	8,635,300 (+5,812,400)
General Office Includes all office types. (1987 base) 4,240,500 sq. ft.	Low(5%)	6,265,100 (+2,024,600)
	Mid(10%)	9,089,800 (+4,849,300)
	High(15%)	12,971,700 (+8,731,200)
Residential (projected 1987 base) 13,170 dwelling units	Low(.88%)	14,120 (+950)
2,550 (downtown)		2,740 (+190)
7,320 (west prom)		7,850 (+530)
3,290 (munjoy hill)		3,520 (+230)
	Mid(1.25%)	14,540 (+1370)
		2,820 (+270)
		8,090 (+770)
		3,630 (+340)
	High(2.2%)	15,670 (+2500)
		3,040 (+490)
		8,710 (+1390)
		3,910 (+620)
Retail Includes gen. retail, restaurants, trade shops, convenience stores, and auto related services. (1987 base) 1,646,200 sq. ft.	Low(1.2%)	1,811,000 (+164,800)
	Mid(2%)	1,928,800 (+282,600)
	High(3.1%)	2,101,600 (+455,400)

SCENARIO SITE DEVELOPMENT NUMBERS

The accompanying map locates the sites selected in the creation of the *Existing Height Scenario.* The development numbers for these sites are shown on the tables which follow. These numbers do not necessarily represent the most effective use of each individual site. They are, however, accurate in distributing a realistic amount of development on the sites. They also represent a realistic variety of sizes of developments for the city.

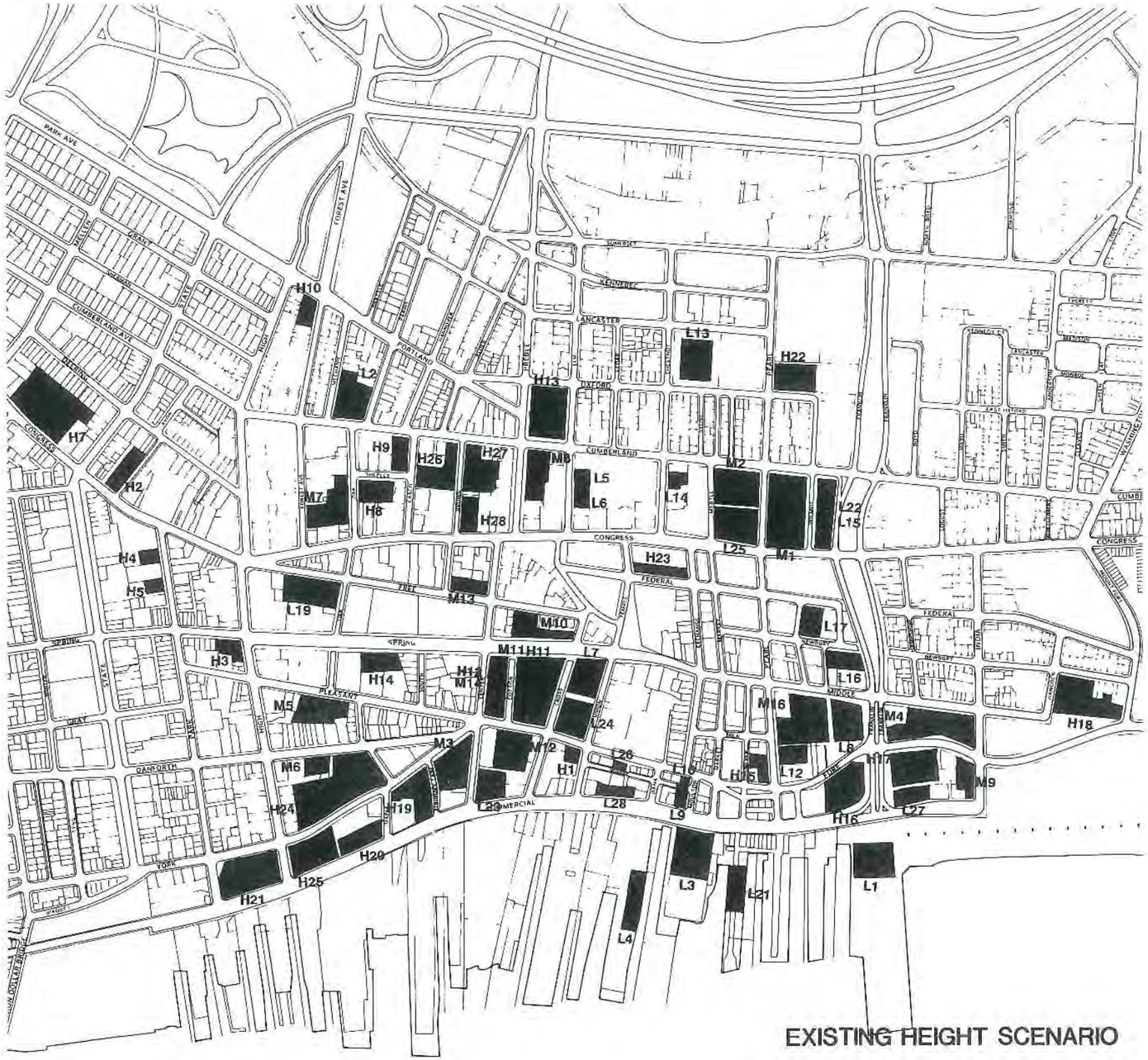
SCENARIO ONE
SCENARIO DEVELOPMENT UNDER EXISTING HEIGHTS

LOW GROWTH PROJECTIONS THROUGH 1995

Blk#	Map#	Project Name	Units/SF	Displacement
	L			
122	1	Casco Bay Term.	11,100 inst. 400 spaces	Vacant
077	2	Back Bay Tower	115 units 4,000 ret. 124 spaces	Vacant
119	3a	Long Wharf	180,000 off 27 units 20,320 ret	Parking(168sp) Bank(4580 sf)
027	3b	Long Wharf Garage	537 spaces	
118	4	Fisherman's Wharf	40,000 off 33,400 ret 206 spaces	Comm(24,740 sf) Ind(27,224)
091	5	PHS Addition	21,600 inst.	Parking(44sp)
091	6	PHS Garage	400-450 spaces	Parking(180sp)
041	7	Northland Ph1	148,400 off 8,230 ret 4,600 stor 330 spaces	Parking(380sp)
013	8	100 Middle St.	193,625 off 7,705 ret 238 spaces	Parking(40sp) Ret(22800 sf)
030	9	Gendron's 10 Moulton St.	12,621 off 1,776 ret 19 spaces	Parking(15sp)
030	10	Gendron's Wharf St. Passage	13,878 off 2,880 ret	Parking(19sp)
023	11	Market St.Garage	1,500 ret 68 spaces	112 net space increase
013	12	GSA Garage	10,300 ret 655 spaces	Parking(100sp)
094	13	Chestnut St. Garage Addition	399 spaces	(net increase)
098	14	Chestnut St. Office Bldg.	25,009 off 9 spaces	Parking(16sp) Ret(800 sf)
102/ 104	15	Lincoln Square Phase I	300,000 off 2,313 ret 1000 spaces	Parking(205sp)
012	16	Cumberland Co. Parking Garage	378 spaces	Parking(127sp)
010	17	Cumberland Co. Courthouse Expan.	40,000 off	Parking(127sp)
083	18	Goodwill Renov.	20 spaces	Parking(10sp)
054	19	Museum Row	40,000 off 10,000 ret	Parking(133sp)
023	20	Post Office Park	open space	Parking(30sp)
120	21	Portland Pier	13,591 off 20 units 37 spaces	Ind(13200 sf)
102/ 104	22	Lincoln Square (additional)	10,000 ret	(see L15 above)
042	23	Northland infill	10,000 ret 20 units	Parking(50sp)
041	24	Northland Ph.2	150,000 off 15,000 ret 20 spaces	Parking(105sp)
099	25	congress/myrtle st. redevelopment	150,000 off 15,000 ret	Inst(18826 sf) Stor(58688 sf)
033	26	fore st.	2,000 ret 1,000 off 1 unit	Vacant
001	27	franklin/ commercial st. redevelopment	20,000 ret 20,000 off 160 spaces	Vacant
032	28	commercial st. redevelopment	30,000 off 10,000 ret	Whse(40000 sf)

TOTALS (Low)

183	Units
32,700	Institutional
1,358,000	Office
184,000	Retail



EXISTING HEIGHT SCENARIO

SCENARIO ONE
MID GROWTH DEVELOPMENT- THROUGH 1995
(add to low growth figures)

Blk#	Map#	Project Name	Units/SF	Displacement
	M			
102/ 104	1	Lincoln Square	250,000 off 10,000 ret	Parking(200sp)
099	2	congress/myrtle st. redevelop Ph.2	100,000 off 5,000 ret	Vacant
044	3	finch block	115,000 off 5,000 ret	Parking(102sp)
002	4	middle/fore st. redevelopment	80,000 off 15,000 ret 40 units	Whse(76000 sf)
056	5	pleasant st.	25 units	Parking(__sp)
057	6	danforth st.	25 units	Parking(__sp)
076	7	forest ave.	200,000 off 15,000 ret	Parking(__sp) Off(10000 sf) Bank(2436 sf) Lounge(2436 sf) Vacant(2436 sf)
086	8	cumberland/ preble st.	150,000 off 10,000 ret	Parking(__sp)
001	9	india st.	60,000 off 5,000 ret	Off(8732 sf) Vacant(14420sf) Parking(__sp) Whse(2832 sf) Tavern(2515 sf)
040	10	free st.	75,000 off 10,000 ret	Parking(__sp)
041	11	Northland Ph4	180,000 off 10,000 ret 600 spaces	Parking(225sp)
042	12	Northland Ph5	100,000 off 5,000 ret 400 spaces	Parking(__sp)
051	13	free st.	75,000 off 5,000 ret	Parking(__sp)
041	14	cotton st.	125,000 off 5,000 ret	Ret(6476 sf) Whse(5076 sf) Res(3 units) Parking(__sp)
013	16	old port	75,000 off 10,000 ret	Parking(__sp)

TOTAL (Low + Middle)
273 Units
2,943,000 Office
294,000 Retail
32,700 Institutional

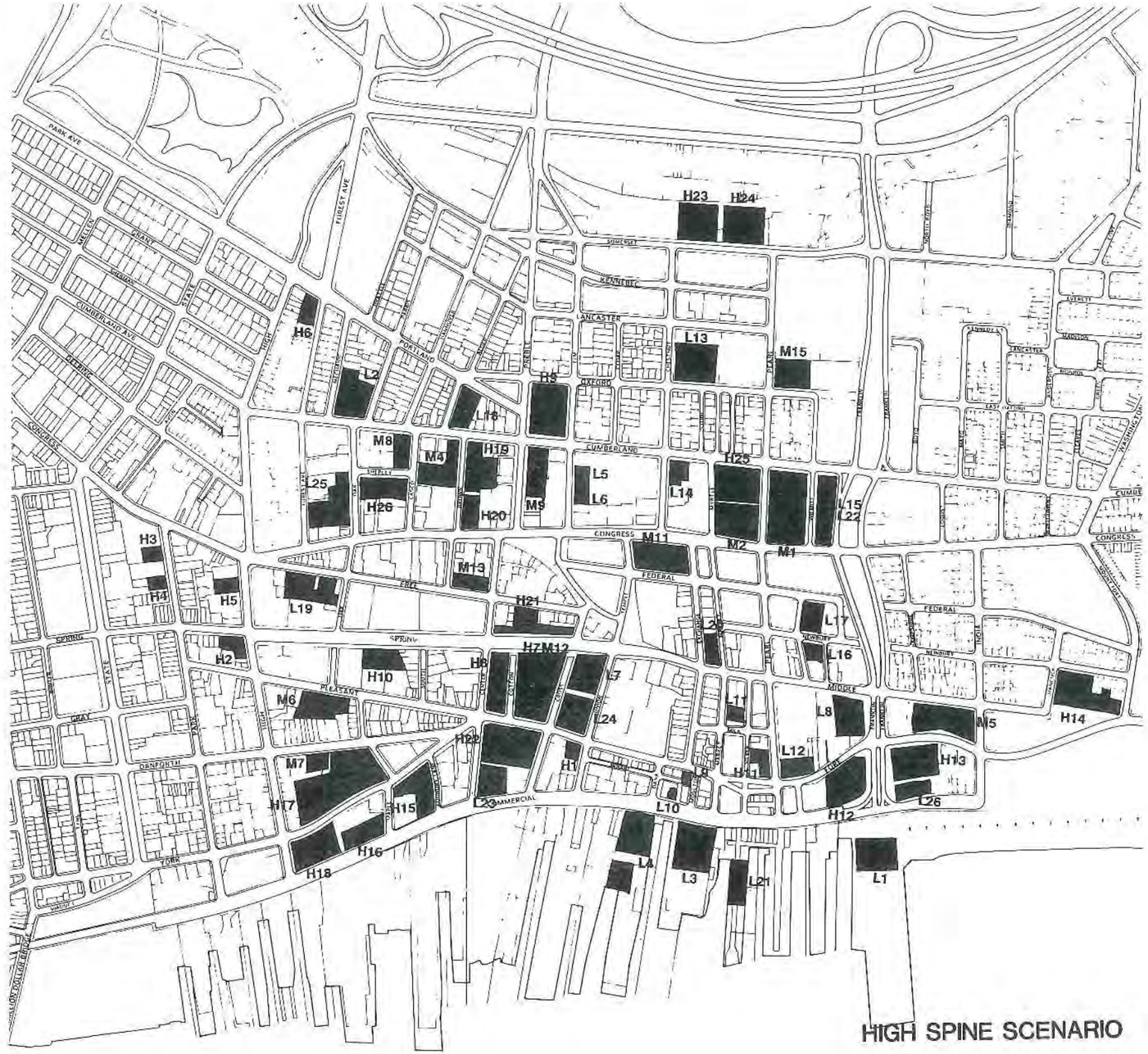
SCENARIO ONE
HIGH GROWTH DEVELOPMENT- THROUGH 1995
(add to mid growth figures)

Blk#	Map#	Project Name	Units/SF	Displacement
	H			
043	1	fore st.garage	30,000 off	--
069	2	congress st.	100,000 off	Ret(4444 sf) Whse(2702 sf) Vacant(1260 sf) Parking(__sp)
062	3	spring/high st.	90,000 off 10,000 ret	Parking(__sp)
064	4	park st.	50,000 off	Parking(__sp)
064	5	park st.	50,000 off	Parking(__sp)
219	7	congress/dow st. redevelopment	135,000 off 10,000 ret	Ret(7020 sf) Rest(1334 sf) Apts.(8) Stor(7020 sf)
080	8	oak/shepley st.	135,000 off 10,000 ret	Parking(__sp)
079	9	cumberland/ casco st.	10,000 ret 150,000 off	Parking(__sp)
074	10	forest/portland	45 units	Ret(__sf) Res(__units)
041	11	Northland hotel	300 rooms 10,000 ret	Parking(225sp)
041	12	cotton st. conv. ctr.	90,000 exhibit 50,000 off	Whse(5076 sf) Ret(6476 sf) Res(3 units) Parking(__sp)
087	13	preble/ portland st.	225,000 off 15,000 ret	Parking(__sp) Res(3 units) Off(7281 sf) Inst(9708 sf) Whse(11908 sf)
049	14	spring st.	125,000 off 10,000 ret	Parking(__sp)
017	15	pearl/milk st.	50,000 off 5,000 ret	Parking(__sp)
014	16	fore/ franklin arterial redevelopment	150,000 off 10,000 ret	Ret(2170 sf) Parking(__sp) Whse(5544 sf) Stor(4454 sf)
001	17	franklin arterial/ fore redevelopment	150,000 off 5,000 ret	Whse(23170 sf) Gar(4945 sf) Stor(8610 sf) Vacant(318 sf)
201	18	hancock/ newbury	80 units	Vacant Indust (120,000 sf)
045	19	york/maple st.	125,000 off 5,000 ret	Parking(__sp)
058	20	commercial/ maple st.	125,000 off 10,000 ret	Parking(__sp)
059	21	commmercial/ high st.	200,000 off 25 units	Vacant(15100sf) Parking(__sp)
103	22	pearl/oxford st.	175,000 off 25 units	Parking(__sp)
036	23	congress/ federal st. redevelopment	30,000 ret	Park/Plaza Parking(__sp)
057	24	maple/york st.	75 units 5,000 ret	Parking(__sp)
058	25	commercial/ high st.	175,000 off	Off(2477 sf) Ret(321 sf) Whse(1656 sf) Rest(20580 sf)
081	26	casco/brown st. redevelopment	225,000 off 7,500 ret	Parking(__sp)
085	27	brown/cumberland redevelopment	150,000 off 7,500 ret	Parking Garage (___sp)
085	28	congress st. redevelopment	150,000 off 10,000 ret	Off(10012 sf) Bank(7288 sf) Unfin(7288 sf)

TOTALS (Low, mid, high)
523 Units
32,700 Institutional
464,000 Retail
5,578,000 Office

Development sites in the *High Spine Scenario* have a greater concentration in the core of downtown. The incentive of increased heights would make the possibility of redevelopment of existing parcels more likely, as well as height additions to existing structures.

The site locations and possible development amounts are summarized below.



SCENARIO TWO
SCENARIO DEVELOPMENT UNDER MODIFIED HEIGHTS

LOW GROWTH PROJECTIONS THROUGH 1995

Blk#	Map#	Project Name	Units/SF	Displacement
	L			
122	1	Casco Bay Term.	11,100 inst. 400 spaces	Vacant
077	2	Back Bay Tower	115 units 4,000 ret. 124 spaces	Vacant
119	3a	Long Wharf	180,000 off 27 units 20,320 ret	Parking(168sp) Bank(4580 sf)
027	3b	Long Wharf Garage	537 spaces	
118	4	Fisherman's Wharf	40,000 off 33,400 ret 206 spaces	Comm(24,740 sf) Ind(27,224)
091	5	PHS Addition	21,600 inst.	Parking(44sp)
091	6	PHS Garage	400-450 spaces	Parking(180sp)
041	7	Northland Ph1	148,400 off 8,230 ret 4,600 stor 330 spaces	Parking(380sp)
013	8	100 Middle St.	193,625 off 7,705 ret 238 spaces	Parking(40sp) Ret(22800 sf)
030	9	Gendron's 10 Moulton St.	12,621 off 1,776 ret 19 spaces	Parking(15sp)
030	10	Gendron's Wharf St. Passage	13,878 off 2,880 ret	Parking(19sp)
023	11	Market St.Garage	1,500 ret 68 spaces	112 net space increase
013	12	GSA Garage	10,300 ret 655 spaces	Parking(100sp)
094	13	Chestnut St. Garage Addition	399 spaces	(net increase)
098	14	Chestnut St. Office Bldg.	25,009 off 9 spaces	Parking(16sp) Ret(800 sf)
102/ 104	15	Lincoln Square Phase I	300,000 off 2,313 ret 1000 spaces	Parking(205sp)
012	16	Cumberland Co. Parking Garage	378 spaces	Parking(127sp)
010	17	Cumberland Co. Courthouse Expan.	40,000 off	Parking(127sp)
083	18	Goodwill Renov.	20 spaces	Parking(10sp)
054	19	Museum Row	40,000 off 10,000 ret	Parking(133sp)
023	20	Post Office Park	open space	Parking(30sp)
120	21	Portland Pier	13,591 off 20 units 37 spaces	Ind(13200 sf)
102/ 104	22	Lincoln Square (additional)	10,000 ret	(see L15 above)
042	23	Northland infill	10,000 ret 20 units	Parking(50sp)
041	24	Northland Ph.2	150,000 off 15,000 ret 20 spaces	Parking(105sp)
076	25	Forest Ave. redevelopment	180,000 off 30,000 ret	Off(10000 sf) Bank(2436 sf) Lounge(2436 sf) Vacant(2436 sf)
001	26	franklin/ commercial st. redevelopment	20,000 off 20,000 ret 160 spaces	Vacant

TOTALS (Low)
182 Units
32,700 Institutional
1,357,000 Office
187,000 Retail

SCENARIO TWO
MID GROWTH DEVELOPMENT- THROUGH 1995
(add to low growth figures)

Blk#	Map#	Project Name	Units/SF	Displacement
	M			
102/ 104	1	Lincoln Square Phase 2	200,000 off 10,000 ret	Parking(200sp)
099	2	congress/myrtle st. redevelopment	100,000 off 15,000 ret	Inst(18826 sf) Stor(58688 sf)
081	4	casco/brown redevelopment	290,000 off 10,000 ret	Parking(__sp)
002	5	middle/fore st. redevelopment	40 units 10,000 ret	Whse(76000 sf)
056	6	pleasant st.	25 units	Parking(__sp)
057	7	danforth st.	25 units	Parking(__sp)
079	8	cumberland/ casco st.	175,000 off 10,000 ret	Parking(__sp)
086	9	cumberland/ preble st.	150,000 off 10,000 ret	Parking(__sp)
036	11	congress/ federal st. redevelopment	300,000 off 15,000 ret	Off(113,807 sf) Bank(10827 sf) Unfin(24911 sf) Parking(__sp)
041	12	Northland Ph4	180,000 off 10,000 ret 600 spaces	Parking(225sp)
051	13	free st.	100,000 off 5,000 ret	Parking(__sp)
103	15	oxford/pearl st.	75,000 off 5,000 ret	Parking(__sp)

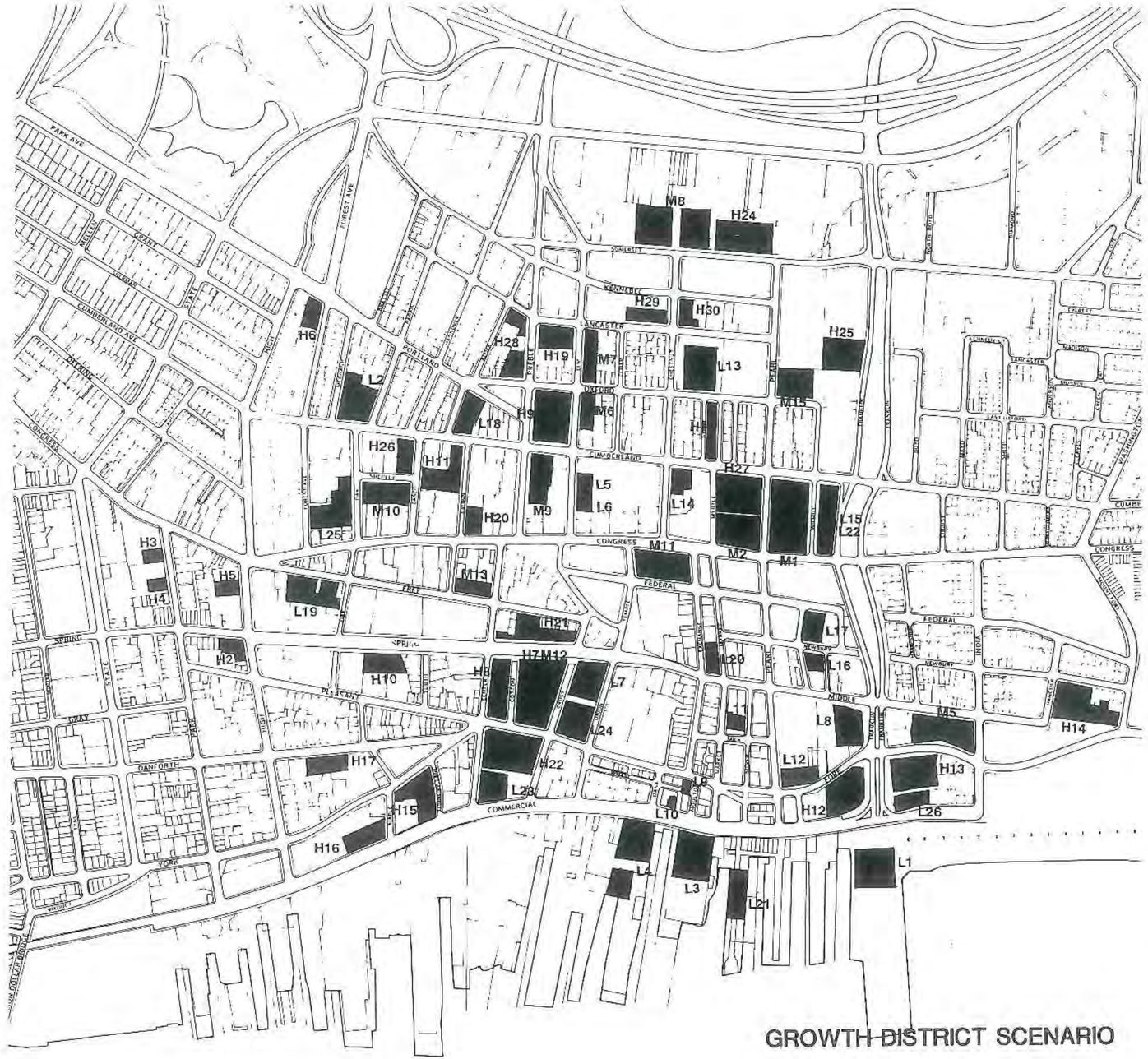
TOTAL (Low + Middle)
272 Units
2,927,000 Office
287,000 Retail
32,700 Institutional

SCENARIO TWO
HIGH GROWTH DEVELOPMENT- THROUGH 1995
(add to mid growth figures)

Blk#	Map#	Project Name	Units/SF	Displacement
	H			
043	1	fore st.garage	30,000 off	--
062	2	spring/high st.	90,000 off 10,000 ret	Parking(__sp)
064	3	park st.	50,000 off	Parking(__sp)
064	4	park st.	50,000 off	Parking(__sp)
063	5	high st.	75,000 off 10,000 ret	Parking(__sp)
074	6	forest/portland	45 units	Ret(__sf) Res(__units)
041	7	Northland hotel	300 rooms 10,000 ret	Parking(225sp)
041	8	cotton st. conv. ctr.	90,000 exhibit 50,000 off	Whse(5076 sf) Ret(6476 sf) Res(3 units) Parking(__sp)
087	9	preble/ portland st.	225,000 off 15,000 ret	Parking(__sp) Res(3 units) Off(7281 sf) Inst(9708 sf) Whse(11908 sf)
049	10	spring st.	125,000 off 5,000 ret	Parking(__sp)
017	11	pearl/milk st.	50,000 off 15,000 ret	Parking(__sp)
014	12	fore/ franklin arterial redevelopment	250,000 off 10,000 ret	Ret(6642 sf) Parking(__sp) Whse(5544 sf)
001	13	franklin arterial/ fore redevelopment	150,000 off 5,000 ret	Whse(31770 sf) Gar(5763 sf)
201	14	hancock/ newbury	80 units	Vacant Indust (120,000 sf)
045	15	york/maple st.	125,000 off 5,000 ret	Parking(__sp)
058	16	commercial/ maple st.	125,000 off 10,000 ret	Parking(__sp)
057	17	maple/york st.	75 units 10,000 ret	Parking(__sp)
058	18	commercial/ high st.	175,000 off	Off(2477 sf) Ret(21671 sf) Whse(1656 sf)
085	19	brown/cumberland redevelopment	250,000 off 10,000 ret	Parking Garage (___sp)
085	20	congress st. redevelopment	175,000 off 10,000 ret	Off(10012 sf) Bank(7288 sf) Unfin(7288 sf)
040	21	free st.	105,000 off 10,000 ret	Parking(__sp)
042	22	Northland Ph5	100,000 off 5,000 ret 400 spaces	Parking(__sp)
__	23	West Bayside	100,000 off 10,000 ret 40 units	Parking(__sp)
__	24	West Bayside	100,000 off 5,000 ret 40 units	Parking(__sp)
099	25	congress/myrtle st. redevelop Ph.2	150,000 off 5,000 ret	Vacant
080	26	oak/shepley st.	275,000 off 10,000 ret	Parking(__sp)

TOTALS (Low, mid, high)
552 Units
32,700 Institutional
457,000 Retail
5,572,000 Office

Development sites for the *Growth District Scenario* have special emphasis on the West Bayside and India Street areas. Their locations and amounts of development are summarized below.



SCENARIO THREE
SCENARIO DEVELOPMENT THROUGH GROWTH ZONES

LOW GROWTH PROJECTIONS THROUGH 1995

Blk#	Map#	Project Name	Units/SF	Displacement
	L			
122	1	Casco Bay Term.	11,100 inst. 400 spaces	Vacant
077	2	Back Bay Tower	115 units 4,000 ret. 124 spaces	Vacant
119	3a	Long Wharf	180,000 off 27 units 20,320 ret	Parking(168sp) Bank(4580 sf)
027	3b	Long Wharf Garage	537 spaces	
118	4	Fisherman's Wharf	40,000 off 33,400 ret 206 spaces	Comm(24,740 sf) Ind(27,224)
091	5	PHS Addition	21,600 inst.	Parking(44sp)
091	6	PHS Garage	400-450 spaces	Parking(180sp)
041	7	Northland Ph1	148,400 off 8,230 ret 4,600 stor 330 spaces	Parking(380sp)
013	8	100 Middle St.	193,625 off 7,705 ret 238 spaces	Parking(40sp) Ret(22800 sf)
030	9	Gendron's 10 Moulton St.	12,621 off 1,776 ret 19 spaces	Parking(15sp)
030	10	Gendron's Wharf St. Passage	13,878 off 2,880 ret	Parking(19sp)
023	11	Market St.Garage	1,500 ret 68 spaces	112 (68+44new) net ncrease
013	12	GSA Garage	10,300 ret 655 spaces	Parking(100sp)
094	13	Chestnut St. Garage Addition	399 spaces	(net increase)
098	14	Chestnut St. Office Bldg.	25,009 off 9 spaces	Parking(16sp) Ret(800 sf)
102/ 104	15	Lincoln Square Phase I	300,000 off 2,313 ret 1000 spaces	Parking(205sp)
012	16	Cumberland Co. Parking Garage	378 spaces	Parking(127sp)
010	17	Cumberland Co. Courthouse Expan.	40,000 off	Parking(127sp)
083	18	Goodwill Renov.	20 spaces	Parking(10sp)
054	19	Museum Row	40,000 off 10,000 ret	Parking(133sp)
023	20	Post Office Park	open space	Parking(30sp)
120	21	Portland Pier	13,591 off 20 units 37 spaces	Ind(13200 sf)
102/ 104	22	Lincoln Square (additional)	10,000 ret	(see L15 above)
042	23	Northland infill	10,000 ret 20 units	Parking(50sp)
041	24	Northland Ph.2	150,000 off 15,000 ret 20 spaces	Parking(105sp)
076	25	Forest Ave. redevelopment	180,000 off 30,000 ret	Off(10000 sf) Bank(2436 sf) Lounge(2436 sf) Vacant(2436 sf)
001	26	franklin arterial/ commercial redevelopment	20,000 off 20,000 ret 160 spaces	Vacant

TOTALS (Low)

182 Units
32,700 Institutional
1,357,000 Office
187,000 Retail

SCENARIO THREE
MID GROWTH DEVELOPMENT- THROUGH 1995
(add to low growth figures)

Blk#	Map#	Project Name	Units/SF	Displacement
	M			
102/ 104	1	Lincoln Square Phase 2	250,000 off 10,000 ret	Parking(200sp)
099	2	congress/myrtle redevelopment	100,000 off 5,000 ret	Inst(18826 sf) Stor(58688 sf)
002	5	middle/fore st. redevelopment	125,000 off 10,000 ret	Whse(76000 sf)
090	6	elm/oxford st.	20 units	??Parking(__sp)
089	7	elm/ lancaster st.	20 units	??Parking(__sp)
---	8	somerset/ chestnut st.	275,000 off 20,000 ret 30 units	??Parking(__sp)
086	9	cumberland/ preble st.	150,000 off 10,000 ret	Parking(__sp)
080	10	oak/shepley st.	150,000 off 10,000 ret	Parking(__sp)
036	11	congress/ federal st. redevelopment	200,000 off 15,000 ret	Off(113,807 sf) Bank(10827 sf) Unfin(24911 sf) Parking(__sp)
041	12	Northland Ph4	180,000 off 10,000 ret 600 spaces	Parking(225sp)
051	13	free st.	75,000 off 5,000 ret	Parking(__sp)
103	15	oxford/pearl st.	75,000 off 5,000 ret	Parking(__sp)

TOTAL (Low + Middle)

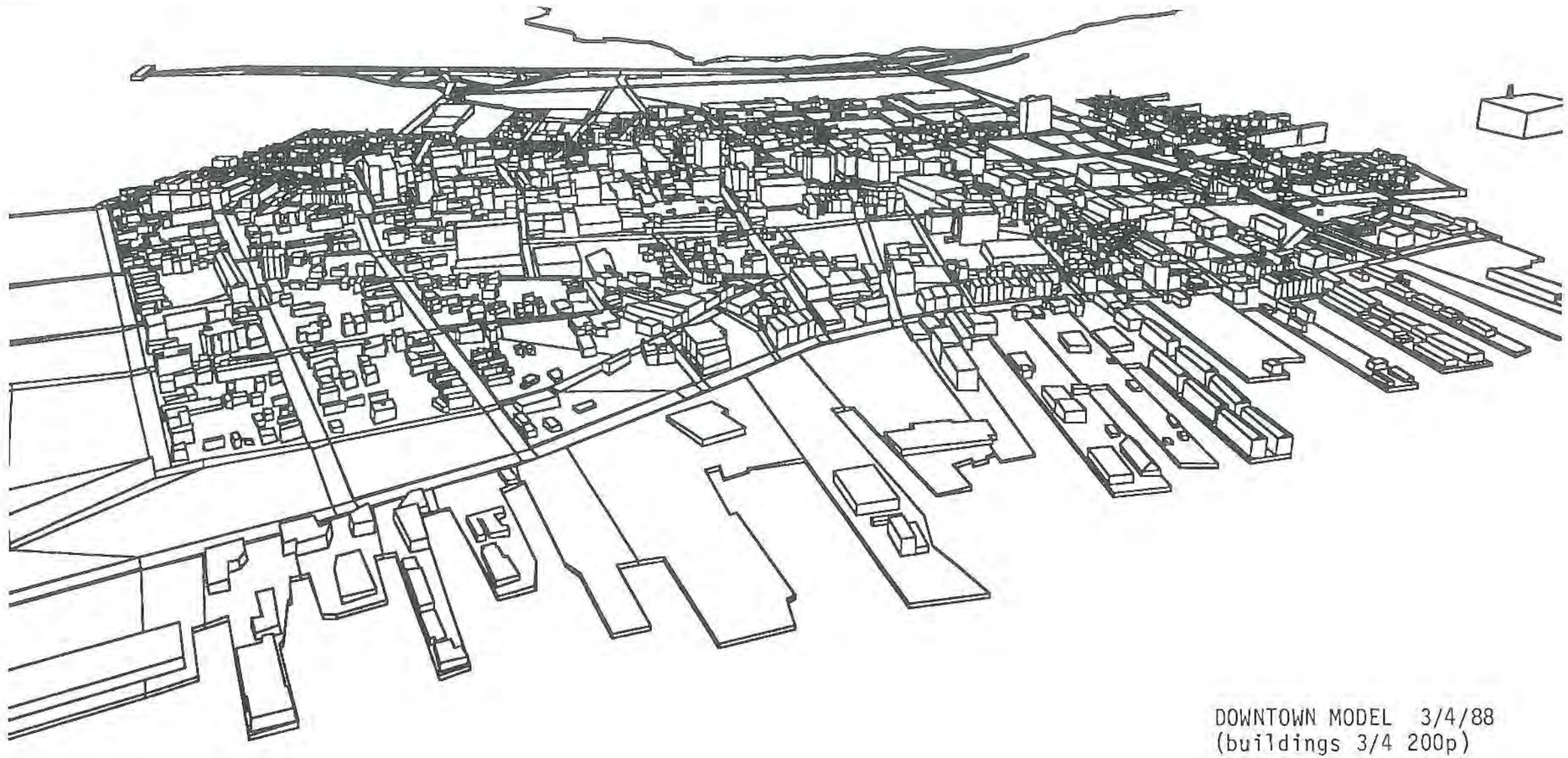
293 Units
2,937,000 Office
287,000 Retail
32,700 Institutional

SCENARIO THREE
HIGH GROWTH DEVELOPMENT- THROUGH 1995
(add to mid growth figures)

Blk#	Map#	Project Name	Units/SF	Displacement
	H			
096	1	stone st. hsng.	35 units 5,000 ret	--
062	2	spring/high st.	50,000 off 5,000 ret	Parking(__sp)
064	3	park st.	50,000 off	Parking(__sp)
064	4	park st.	50,000 off	Parking(__sp)
063	5	high st.	75,000 off 5,000 ret	Parking(__sp)
074	6	forest/portland	45 units	Ret(__sf) Res(__units)
041	7	Northland hotel	300 rooms 10,000 ret	Parking(225sp)
041	8	cotton st. conv. ctr.	90,000 exhibit 50,000 off	Whse(5076 sf) Ret(6476 sf) Res(3 units) Parking(__sp)
087	9	preble/ portland st.	225,000 off 15,000 ret	Parking(__sp) Res(3 units) Off(7281 sf) Inst(9708 sf) Whse(11908 sf)
049	10	spring st.	125,000 off 10,000 ret	Parking(__sp)
081	11	casco/brown redevelopment	200,000 off 10,000 ret	Parking(__sp)
014	12	fore/ franklin arterial redevelopment	250,000 off 10,000 ret	Ret(6642 sf) Parking(__sp) Whse(5544 sf)
001	13	franklin arterial/ fore redevelopment	250,000 off 5,000 ret	Whse(31770 sf) Gar(5763 sf)
201	14	hancock/ newbury	80 units	Vacant Indust (120,000 sf)
045	15	york/maple st.	125,000 off 5,000 ret	Parking(__sp)
058	16	commercial/ maple st.	125,000 off 10,000 ret	Parking(__sp)
057	17	danforth st.	25 units	Parking(__sp)
088	19	preble/ lancaster st.	75,000 off 5,000 ret 20 units	??
085	20	congress st. redevelopment	150,000 off 10,000 ret	Off(10012 sf) Bank(7288 sf) Unfin(7288 sf)
040	21	free st.	105,000 off 10,000 ret	Parking(__sp)
042	22	Northland Ph5	100,000 off 5,000 ret 400 spaces	Parking(__sp)
__	24	West Bayside	150,000 off 5,000 ret 25 units	Parking(__sp)
103	25	West Bayside	100,000 off 5,000 ret	Parking(__sp)
079	26	cumberland/ casco st.	125,000 off 10,000 ret	Parking(__sp)
009	27	congress/myrtle redevelop ph.2	150,000 off 10,000 ret	Vacant
209	28	preble/lancaster	100,000 off 10,000 ret 20 units	??
207	29	chestnut/ lancaster st.	100,000 off 10,000 ret	??
206	30	chestnut/ lancaster st.	75,000 off 5,000 ret 10 units	??

TOTALS (Low, mid, high)

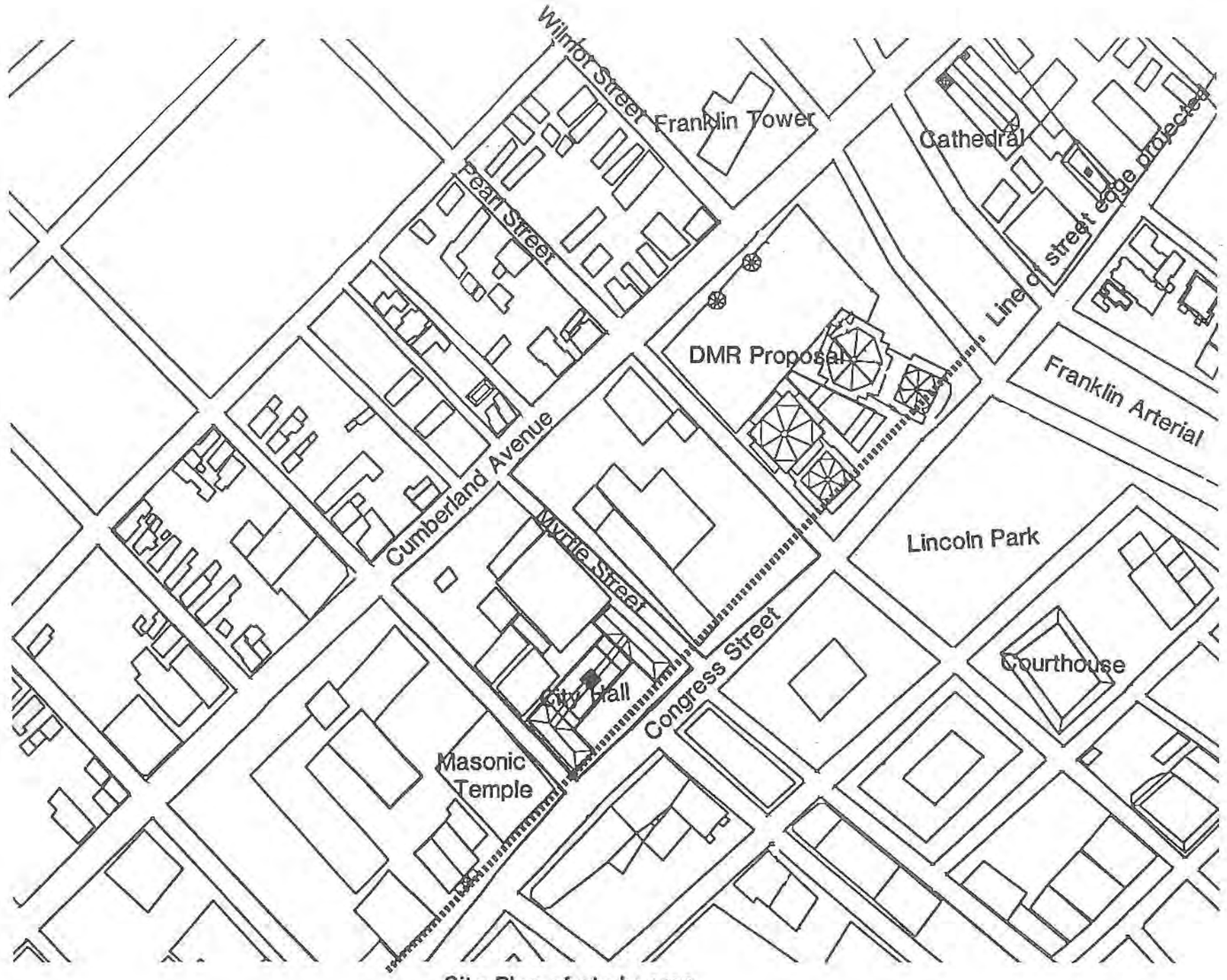
522 Units
32,700 Institutional
462,000 Retail
5,562,000 Office



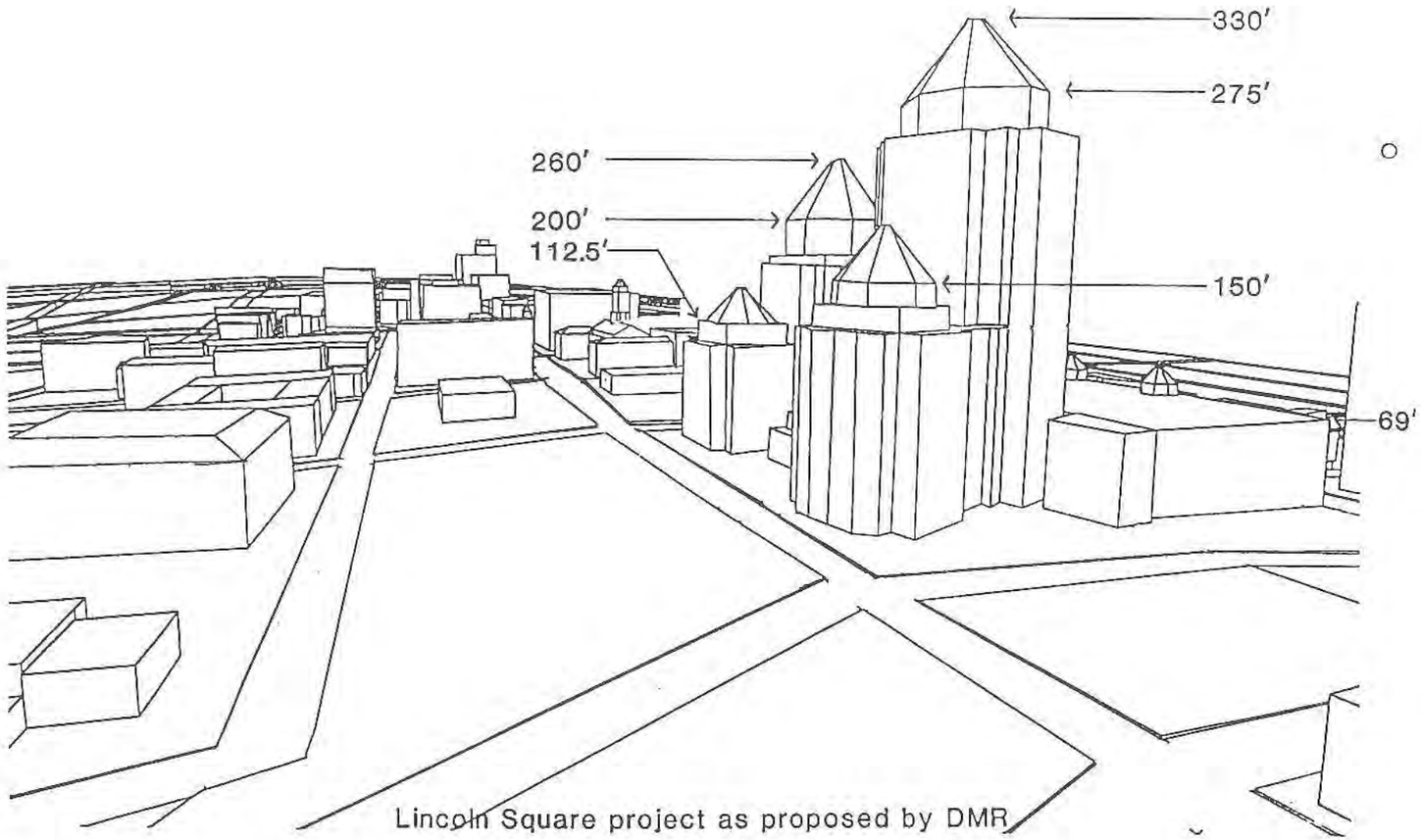
DOWNTOWN MODEL 3/4/88
(buildings 3/4 200p)

DMR CASE STUDY

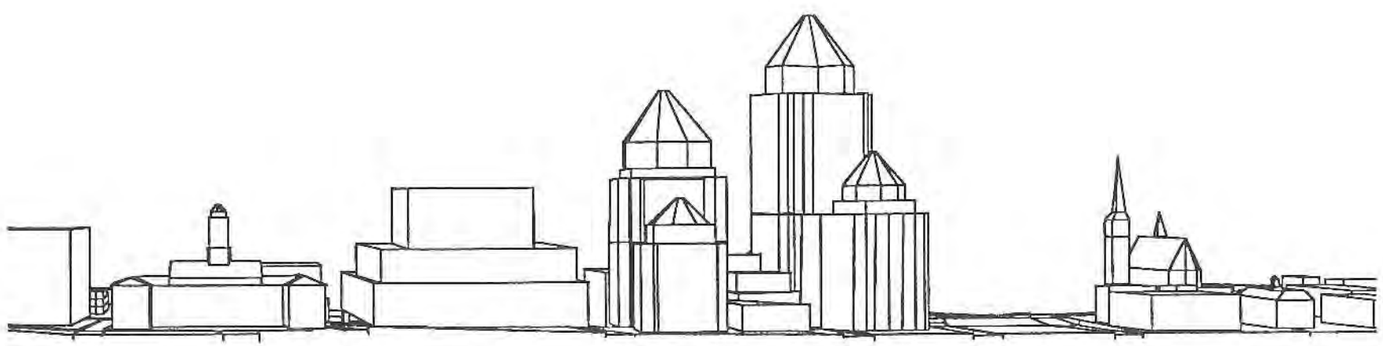
The images and text which follow represent part of the process in the test case of a three block area along Congress Street east of City Hall. These are reduced from an earlier presentation to the City Council.



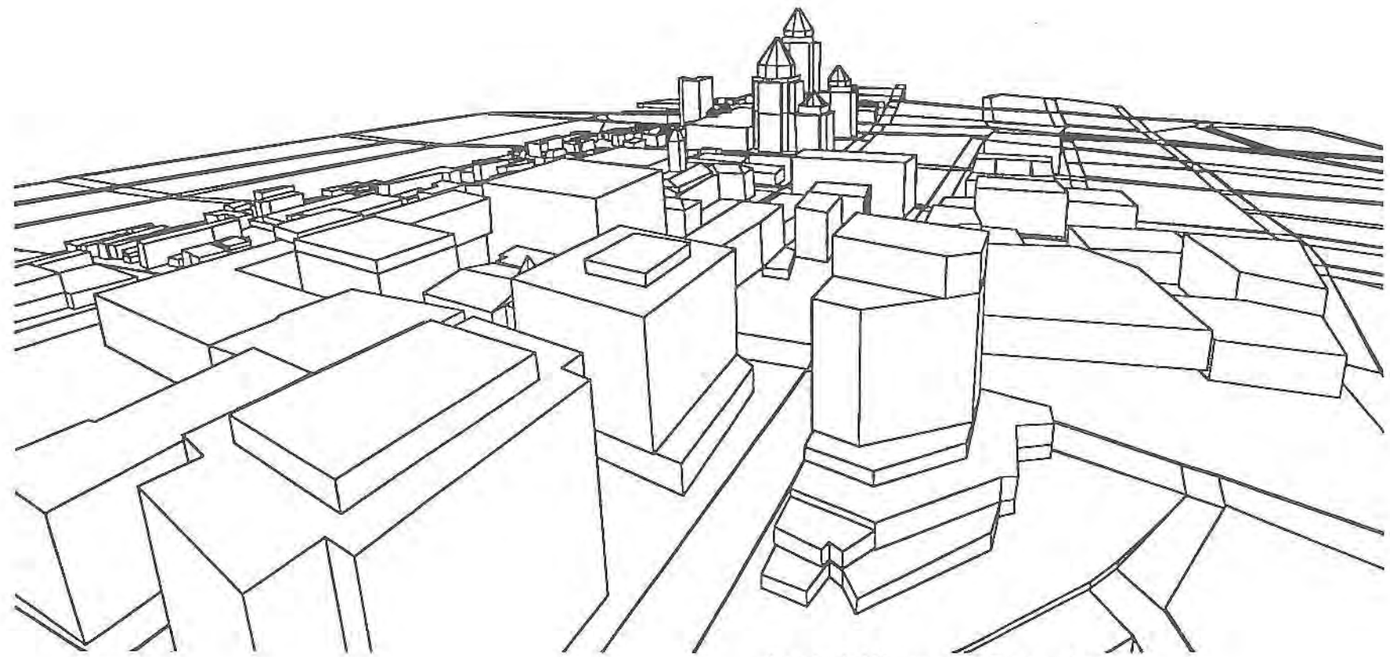
Site Plan of study area



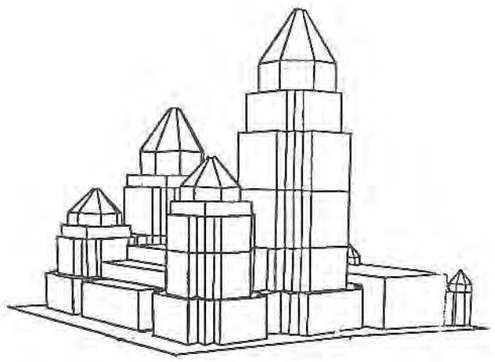
Lincoln Square project as proposed by DMR



Section through Congress Street Showing DMR proposal with infill on newspaper site



Aerial View of Downtown



VERSION A

1. Congress Street facade set back from street edge

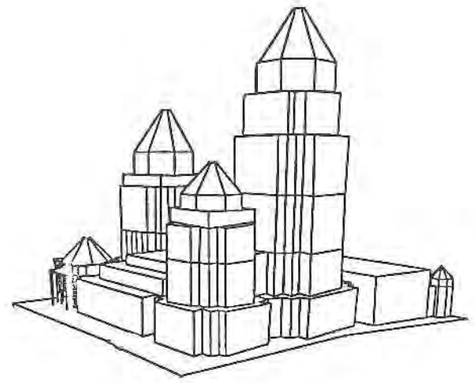
2. Wintergarden extended out to Congress Street edge

3. Facades on Congress, Pearl, & Franklin are stepped back 15' at a height of 45'

4. Facade on Congress Street is stepped back an additional 15' at a height of 80'

5. Complex is extended to the Franklin Arterial street edge

6. Facade along Cumberland Avenue stepped back 25' at a height of 45'

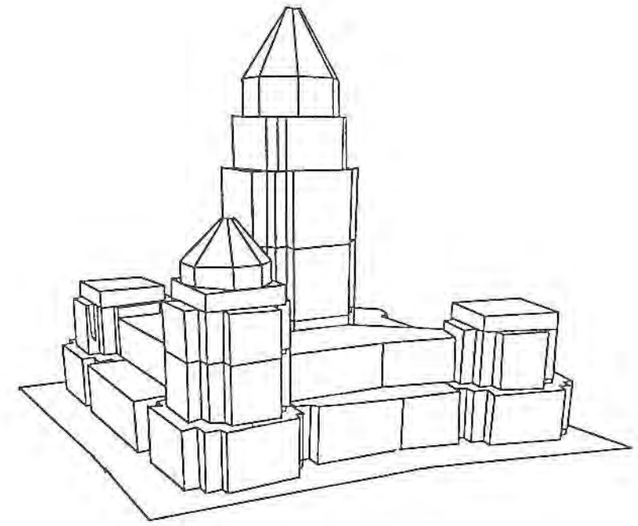


VERSION B

1. See notes 1 - 6 from version A

7. Office tower at the Pearl/Congress Street corner is removed & replaced with an outdoor pavilion like element

8. Wintergarden orientation is toward the Pearl/Congress Street corner



VERSION C

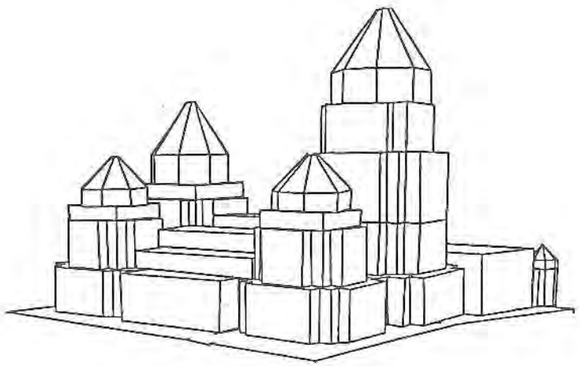
1. See notes 1 - 4 from version A

5. The largest tower is moved to a central location on the site

6. Smaller towers (without caps) are located at the Congress/Pearl St. & Cumberland/Franklin Arterial corners

7. Franklin Arterial facade is extended to the street edge, including a bend in the facade

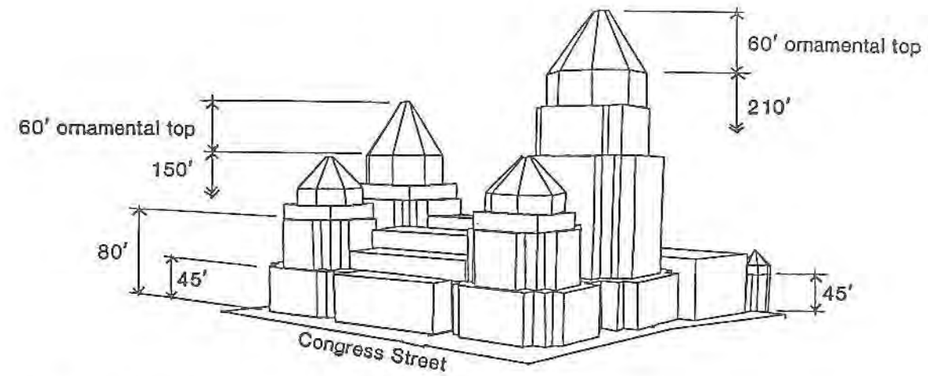
8. Parking garage becomes an "L" configuration at the Pearl/ Cumberland corner



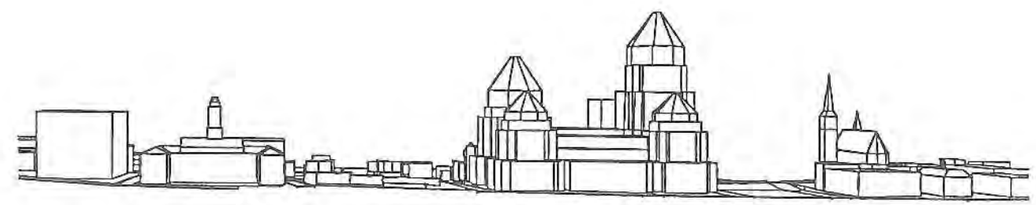
VERSION D

1. See notes 1 - 6 from version A

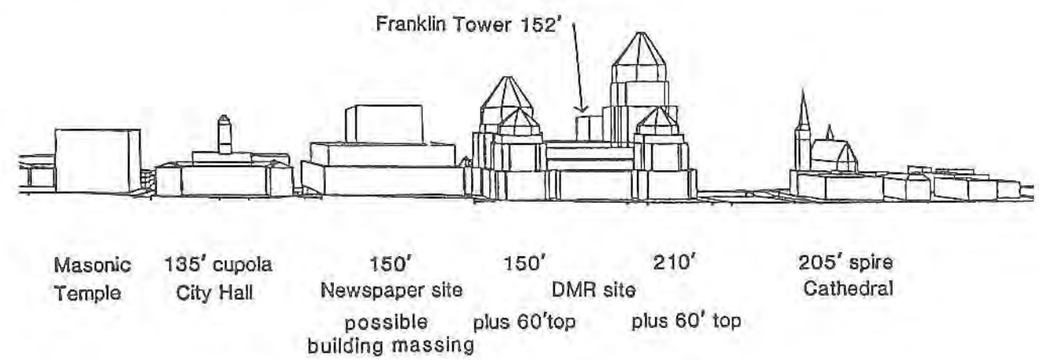
7. Three of the four towers are reduced in height as follows: Tallest tower reduced approximately 65'; other two towers reduced 45' each



Modified DMR Project with reduced heights



Section through Congress Street with existing newspaper site Showing reduced heights



Section through Congress Street with newspaper site infill Showing reduced heights