Metro Future Vision Commission

Mission:

1. Assist Metro in evaluating options for future growth and recommending a Future Vision for adoption by the Metro Council.

2. Assist Metro in building a community consensus for the recommended Future Vision.

3. Evaluate issues which represent a potential risk to the livability of the region and recommend short-term actions to minimize these risks.

Approach:

1. Review past state, regional and local planning efforts.

2. Assist in defining and evaluating the Metro Growth Concepts; identify any additional concepts that may warrant consideration.

3. Review Metro's work program for adequacy in evaluating growth options; recommend changes as needed; identify areas of needed short-term or long-term research.

4. Seek input from business and community interest groups and the general public.

5. Assist Metro in developing public outreach and education programs.

6. Recommend a Future Vision and short-term implementation actions.

7. Evaluate external forces which could significantly alter expected growth trends; recommend actions to minimize risk of these uncertainties.

8. Provide input on interim products affecting the Future Vision and other Metro planning responsibilities, including:

   - 20-year growth forecasts needed for the RTP update
   - Input on growth effects of major transportation decisions, including the Western Bypass, Sunrise Corridor, Mt. Hood Parkway and future LRT construction
   - Establishment of urban reserves
   - Input to region water supply plan

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INSTITUTE OF PORTLAND METROPOLITAN STUDIES
SCHOOL OF URBAN AND PUBLIC AFFAIRS
PORTLAND STATE UNIVERSITY

FUTURE VISION CONCEPT STATEMENT
JULY 6, 1993

I. Future Vision Mission

By charter, the Future Vision is:

> "a conceptual statement that indicates population levels and settlement patterns that the region can accommodate within the carrying capacity of the land, water and air resources of the region, and its educational and economic resources, and that achieves a desired quality of life. The Future Vision is a long-term, visionary outlook for at least a 50-year period."

The charter goes on to state that the matters to be addressed by the Future Vision include but are not limited to:

> "1) use, restoration and preservation of regional land and natural resources for the benefit of present and future generations, 2) how and where to accommodate population growth for the region while maintaining a desired quality of life for its residents, and 3) how to develop new communities and additions to the existing urban areas in well-planned ways."

The charter specifically states that the Future Vision is not a "regulatory document," and that it is the intent of the charter that the Future Vision "have no effect that would allow court or agency review of it." The only specific effect of the Future Vision noted by the charter is that the Regional Framework Plan shall "describe its relationship to the Future Vision."

Taken together, these sections of the charter suggest that the Future Vision should be a compelling statement of principles regarding the stewardship of the region's landscape and communities. Although the Future Vision is not intended to be a plan, especially a "land use plan" as called for by the Oregon Statewide Land Use Goals, it should be specific enough so that its application to any specific geographic location is easy to understand. The Future Vision should be a useful tool for stewardship, a "users guide" to the metropolitan area.

The Future Vision must clearly identify those features and relationships in our landscape that are central to our sense of place and should never change. It should also identify the forces of change acting on the region and identify those that are positive, those that are potentially negative, and those that could be either positive or negative depending on the circumstances.

Finally, the Future Vision should suggest strategies for stewarding those important landscape features and relationships most vulnerable to those forces of change. The Future Vision must be developed and portrayed in a manner that is useful to groups or individuals charged with or otherwise making choices affecting urban form and structure.

II. Key Objectives

The Future Vision, as described by the charter, should explain or describe the region in several key categories:

a) Landscape - specific direction to address issues pertaining to settlement patterns, carrying capacity of the land, and the location of growth all suggest that the Future Vision should first, develop an understanding of the landscape, how we've come to inhabit it, and where our current patterns of use seem to be taking us. In this instance, the term "landscape" is taken to mean the intersection of the natural environment and the built environment as mediated by the culture of our communities. When speaking of landscape, the Future Vision should focus on the underlying relationships in the region uniting natural systems and local communities.

b) Carrying Capacity - specific mention is made of the concept of carrying capacity and the limits to growth inherent in the landscape, airsheds, and watersheds of the region. Carrying capacity, though often referred to as an absolute concept, is, like the term "efficiency," a relative concept. For example, the carrying capacity of our metropolitan land area to accommodate new households depends, at least in part, on the density we build at. The carrying capacity of our metropolitan area food supply was probably exceeded long ago, and now depends on imports from around the world.

If by carrying capacity we mean access to resources needed to sustain life, we can go far past the point where quality of life has been reduced to a cinder before we reach that biological point of no return. The Future Vision must identify the decision points for the region at different levels of population and density, and with respect to the use of technology for meeting community needs while stewarding critical landscape features.

c) Intergenerational Equity - The charter speaks to the needs of present and future inhabitants. This suggests that the Future Vision needs to specifically address the responsibilities of this generation to the ones to follow. One way to address this is to identify the characteristics of quality of life we currently enjoy, and to propose strategies for maintaining them in a mutually supportive and

sustainable manner. For example, we are fortunate to currently inhabit a landscape that embodies three important qualities:

- Possibility: residents of this region can expect rewarding and chance encounters with the natural environment and with each other in their communities. At any time, it's possible to see hawks and herons flying overhead, to hear geese and coyotes making their calls in the night, to smell the freshness of an ocean breeze or the changing of the seasons, even though we are living in the fastest growing, most densely populated part of the state. In many parts of the region, it's also possible to meet friends, family members, and neighbors in the course of shopping, work, or simply taking a stroll at lunch or in the evening.

- Abundance: in northwestern Oregon the challenge is not getting things to grow but cutting them back fast enough. Salmon and steelhead can be caught in the Willamette River in downtown Portland and in area streams. Each season brings a fresh harvest of fruit and vegetables from local producers. In short, we live in an abundant landscape that enriches the lives of its inhabitants. Historically, this abundance in our landscape has also meant economic opportunity for a large segment of our population. Today, with an economy of quite different characteristics evolving in the state, we are faced with the challenge of finding new and sustainable links between our economy, employment for our people, and the stewardship of our landscape.

- Access: it is relatively easy to move between city and country, mountains and coast. There are a variety of housing opportunities in virtually every community. Jobs are critically needed in our largest and smallest communities, though the same patterns of movement to employment are observed here as in other metropolitan areas. Citizen participation in planning and governance is both a tradition and, in some cases, the law. Relative to other large metropolitan areas, this is one where government remains relatively close to the people.

The Future Vision should identify how these, and undoubtedly other characteristics of our region operate today, how they are inter-related, and what needs to be done to sustain them as our legacy to those who will follow and be faced with their own needs and choices.

d) Growth and Change - The region will grow and change. Even without growth, the region will change, but by all accounts our long-term outlook should be one that anticipates more people and more activity in the future. The Future Vision must reflect an understanding of the sources of growth, the sources of

change, and the actions and interactions required to ensure that positive aspects of growth and change will be evident in our quality of life in the years ahead. More specifically, the Future Vision should anticipate the affects of different rates of change and population growth, and our ability to cope with the consequences of those different rates.

e) Geography - The Future Vision needs to be developed with respect to a territory descriptive of the forces at play and the resources affected. To some degree, this is an area extending the length of I-5 from Medford to Olympia, and from the coast to the high desert. To start, the Future Vision should employ a base map portraying the area from the crest of the Coast Range to the crest of the Cascades, and from Polk County to Castle Rock along I-5.

f) A "Conceptual Statement" - The Future Vision is not intended to be a comprehensive plan in the legalistic sense that we know in Oregon. It should operate at a scale appropriate to the geographic scope of the effort and its time horizon. Hence, questions of zoning or of specific densities may not be usefully addressed by this effort, and might better be delegated to subsequent Regional Framework Plan activities. It may be more helpful to think of the Future Vision as analogous to the Statewide Planning Goals rather than to a local comprehensive plan or the Urban Growth Boundary. Nonetheless, the Future Vision must be specific enough so that its application to the landscape can be mapped. In this respect, the Future Vision is akin to the older, traditional examples of "comprehensive planning," with the products taking the form of tools for decision making and conceptual or thematic maps.

With these categories in mind, the Future Vision should explain in a highly accessible manner how the region "works," what we like about it, and how our actions, as households, communities, and jurisdictions, should be guided to enhance the qualities underlying our quality of life. In essence, the Future Vision should be an engaging description of what every citizen should know about living in this region. Hence, the Future Vision should emerge as the pre-eminent statement of what this region means as a place, and how that knowledge can be used to sustain and inspire the people who come to live here.

III. The Future Vision Commission

The role for the Future Vision Commission can be regarded as embodying important elements of synthesis and translation. Neither this generation nor any other starts with a blank slate. Our challenge is to make choices and take actions which meet our needs while not sacrificing the options available to future generations to meet their own. However, just as we are creating the context within which choices will be made

in the future, we are making our choices in a context created by the choices made since prehistory and the last glacial advance.

Therefore, the Future Vision Commission will be called on to present a unified view of our context for action. This is a task of synthesis, drawing on the cultural, political, economic, and natural history of the region. In addition, this task needs to include the values and objectives of present-day communities, and the expectations and policies that describe the future currently being sought. Through this task of synthesis, the Future Vision Commission will be able to describe how we currently define that elusive term "quality of life," and how that definition is related to and shaped by the natural and cultural qualities of our region.

The second and perhaps most central task is one of translation. With the charge for the Future Vision in mind, and a thorough knowledge of the working of our region provided by the synthesis activities, the Commission needs to translate its new-found understanding into tools for stewardship. This begins with the identification of what ought to be stewarded, how it might be affected by growth and change, and what strategies should be employed to do the job. The work of the Commission should also result in the development of a system for monitoring the cumulative affects of future growth and change on our landscape and communities.

IV. The Future Vision and Region 2040

To some degree, both Region 2040 and the Future Vision are systematic efforts to refine and improve RUGGO. Whereas Region 2040 is directed at refining RUGGO with respect to the RTP, UGB, and other land use decisions, Future Vision is in the enviable position of not having to be cast in the same planning and regulatory framework as Region 2040 or the Regional Framework Plan.

The Future Vision, by charter, is encouraged to look beyond the limitations of jurisdiction, time, and legal structure to the underlying dynamics that create and sustain identity and quality of life. Hence, the Future Vision should be fundamentally be concerned with relationships and linkages. The Future Vision is not so much about the urban design principles underlying a mixed use urban center, but the relationships between employment and housing, wheels and walkers.

The Future Vision should be specific about relationships between city and country, urban core and suburb, metropolitan region and the state, economy and the environment, and built and natural, among others. Whereas Region 2040 will develop a concept of urban form to be used for guiding land use decisions, the Future Vision should articulate the relationships that underlie quality of life in a manner that can be used to evaluate and shape land use decisions.

The Future Vision Commission will have access to the extensive citizen participation activities of Region 2040 to develop information on current visions and values as part of its synthesis activities. The Commission will also have access to all technical and background materials prepared for the Region 2040 project.

In addition to providing comment during the Region 2040 process, the Future Vision Commission should use the Region 2040 process to test its own products. Region 2040 provides an excellent vehicle for determining whether the products likely to come from the Commission's work are specific enough to be effective. Applying the Future Vision to Region 2040 will give the Commission a true "field test" of its work.

V. Suggested Future Vision Tasks

The following tasks can be developed in anticipation of Commission needs and prior to completing the detailed work plan:

1) Commission Organization: the Future Vision Commission will be appointed by early June. At the first meeting of the Commission, members should be briefed on the origin of the Future Vision project, expectations of those involved in its creation, and the relationship of the Future Vision to other Metro and charter-mandated planning projects. The Commissioners should also take time to simply get to know each other. Most important, Commission members should have the opportunity to share their objectives for serving on the Commission, and the "breakthroughs" that they would like to see in the region as the result of having a Future Vision.

2) Scoping the Process: the Future Vision is expected to be a living document, with the first iteration of the vision leading to others over time. The work plan should be developed accordingly. Fortunately, their are people and organizations in the community with experience in community goal setting and "visioning." To develop a scope of work leading to a final product, the Oregon Visions Committee members, resource people drawn from the faculties of PSU and U of O, and other key "process" experts could be involved in a one-day scoping session, the product of which would be a process white paper for the Commission. Background materials for the day would include:

a) the Oregon Visioning Model prepared by the Visions Committee of the Oregon chapter of the American Planning Association, along with the work over the past few years of the Metropolitan Area Planning Directors on regional planning issues and processes;

b) a research paper summarizing work by John Friedmann and Clyde Weaver, Michael Hough, Ian McHarg, Kevin Lynch, Ann Spirn, Richard

Forman, and Dan Kemmis along with materials describing the work of the Watershed Regeneration Trust in Toronto, the Regional Plan Association in New York, and the Greenbelt Alliance in the San Francisco Bay area; and

c) materials drawn from local efforts including Region 2040, RAPP, Knowing Home, CRAG, Portland's Changing Landscape, and planning histories by Carl Abbott and others.

3) Basic Background Reports: Six reports, focused on this notion of linkages or relationships, should be produced to augment the materials already produced for Region 2040 and other visioning efforts. Collectively, these reports could be titled "The Interactive Landscape," or something like that:

i) Landscape Ecology Report: An analysis of the region's ecosystems and landscape ecology should be prepared in a visually stimulating and useful format. This report should include information about critical natural systems and their current status, as well as about elements of the region's landscape associated with sense of place and community identity. The report should include an assessment of carrying capacities for air, land, and water in the metropolitan area, and factors likely to affect gross carrying capacities in the future.

ii) Trends: An assessment of emerging trends, from local to international levels, that will provide an essential part of the context for the growth and change of the metropolitan area well into the next century. Cultural, economic, technological, and institutional trends will be evaluated for their ability to critically affect the ecology, quality of life, settlement patterns, and patterns of activity throughout the region.

iii) Values, and Visions: A synthesis of locally adopted visions, value surveys, and portrayals of the future in the form of plans, scenarios, and other materials. The product will be a report outlining the values and beliefs held in common by the people of the region, and the ways in which those values have emerged in the form of plans and policies guiding growth and development.

iv) History of Settlement: A report outlining the historic settlement dynamics of the region, and the actions taken through investment, policy/planning, and/or the application of new technologies to create or affect change. This report could be presented in the form of an atlas, showing maps of settlement at different periods accompanied by photos, charts, and other background information describing the dynamics of the time. The purpose of this report is to show the unique and common

regional characteristics operating to affect settlement at different points in time, and how relationships with our history do and should shape our future.

v) Education and the Economy: A report outlining the economy of the region and the trends for its important sectors in time and location. Specific attention will be paid to the role of education in the growth of the economy, particularly with respect to attracting and retaining family wage employment. Other topics will include the identification of regional characteristics that have influenced the nature and extent of economic growth, and the likely operation of those characteristics in the future. The product should speak specifically to the relationships between the economy and the region as a unique place, the economy and the natural environment, and the economy and the people of the region and state.

vi) Carrying Capacity: A report outlining the carrying capacity concept, and providing several scenarios for its application to the metropolitan area through the Future Vision. The Commission will need to decide how it wants to define carrying capacity for a range of resources, and how it will apply those definitions to the development of the Future Vision. This is a task identified in the charter, and this report should provide the conceptual underpinnings for the discussions of the Commission.

These three activities will help to frame the work of the Commission as Commissioners get to know each other and their task. the development of the final work plan for this project should include, among other things, specific attention to the following:

a) Citizen Involvement: Due to budget constraints the Commission will need to consider ways to meet its citizen involvement needs through other planning projects, particularly Region 2040, and the work of other jurisdictions and agencies. The Commission may want to consider inviting community based organizations, cultural groups, local jurisdictions, and environmental and business groups to provide testimony on specific topics or questions during the course of Commission meetings. All meetings of the Commission will be open to the public, and could include the opportunity for public comment as a standing part of the agenda.

b) Future Vision Drafting and Testing: Using the basic background reports, products from other planning projects, and citizen involvement activities, the Commission should draft a vision statement and set of principles to be used to evaluate planning efforts. The vision statement and principles should be

presented in the form of pictures, charts, and annotated maps explaining the likely use of the landscape over time should the vision statement be acted on. To test the draft vision statement and principles, the Commission should use them to comment on the urban form choices presented by Region 2040 and their inclusion in the public involvement process leading to the conclusion of Region 2040 will provide additional public review. The use of the Future Vision for this purpose should be evaluated and the results of the evaluation should be used along with public comment in the Region 2040 process to modify and revise the draft.

c) Public Hearings: The Commission should hold public hearings on the draft vision statement and principles prior to revision and submission to the Metro Council for adoption in January, 1995.

ATTACHMENT A

Terms and Conditions

1) The Institute of Portland Metropolitan Studies ("the Institute") shall:

a) Provide coordination and technical assistance for the Future Vision Commission. The Institute shall provide the time of Ethan Seltzer for this purpose up to a maximum of 8 hours per week. At a minimum, this shall include assistance with the development and implementation of the Future Vision work plan, definition of and contracting for technical reports identified as needed by the commission and according to the work plan, drafting and editing of reports and commission findings, attendance at all meetings of the commission, direct consultation with the Chair and Vice-Chair of the commission, coordination of Metro staff and Portland State University subcontractors, and periodic reports to the Metro Council. The Institute will bill Metro monthly at a rate of $50 per hour plus 15% for overhead.

b) Develop technical reports and memoranda. The Institute shall seek subcontractors among the faculty of Portland State University or other institutions of higher education to provide background reports on the carrying capacity concept, work plan, landscape ecology of the region, history of settlement, values and visions, and the economy and educational resources of the region. Additional topics may be identified as the project proceeds. Individual report budgets and scope of work shall be developed in consultation with Metro staff. Metro shall have the right to reject a proposed subcontractor and/or scope of work, and ask either for a revised scope or to contract directly with another vendor. If the reports desired by the commission require more than a total of $52,000 to produce, Metro shall be responsible for identifying the additional required resources.

2) Metro shall:

a) Commit a minimum of $75,000 to this contract according to the terms and conditions of this attachment.

b) Provide an Associate Regional Planner at 1.0 FTE to support the activities of the commission. The Associate Regional Planner will be supervised directly by the Land Use Supervisor, in consultation with the Institute.

c) Provide all logistical support for the commission including but not limited to arranging for the time and place of all meetings, recording or otherwise documenting the proceedings of all commission meetings,

taking and disseminating minutes of all commission meetings, producing and disseminating meeting agendas and related materials, maintaining a mailing list for the Future Vision project, arranging for graphics and data support for the commission, and other tasks related to the day-to-day operation of the commission as identified by the Chair and Vice-chair or by Metro staff in consultation with the Institute.

d) Make appropriate staff members available to ensure the smooth and efficient coordination of all other Metro planning and policymaking projects with the Future Vision project.

e) Keep the Metro Council informed of the routine progress of the Future Vision project.

f) Provide resources to ensure adequate citizen participation in the Future Vision project through the activities of the 2040 planning project and/or other Metro planning projects.

3) This agreement shall be in effect for one year. To ensure continuity, Metro shall grant the Institute a right of first refusal for the renewal of the contract for a second year, or through the adoption of the Future Vision by the Metro Council, whichever comes first.

4) This agreement can be terminated at any time with the agreement of both parties.

M E M O R A N D U M

METRO

FUTURE VISION COMMISSION

Settlement Patterns in the Portland Region: A Historical Overview

by

Carl Abbott

January 1994

SETTLEMENT PATTERNS IN THE PORTLAND REGION:

A HISTORICAL OVERVIEW

Prepared for

Metro Future Vision Commission

January 1994

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SETTLEMENT PATTERNS IN THE PORTLAND REGION: A HISTORICAL OVERVIEW

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SETTLEMENT PATTERNS IN THE PORTLAND REGION: A HISTORICAL OVERVIEW

INTRODUCTION

Cities exist because they serve two basic functions--to generate economic value and to sustain social and cultural values. In the most fundamental sense, the interaction of these two urban roles determines the growth of metropolitan areas and patterns of land use and settlement within those urban areas.

Cities are economic machines. The most successful cities are those that efficiently facilitate the processing of goods and the exchange of goods and services. In economic terminology, cities are locations where value is added by transforming products into new forms, by transferring goods to new customers, and by transmitting information among experts and users.

Major cities are also centers of wide-reaching social and cultural networks. They provide the locations for the institutions that hold societies together--churches, governments, secular organizations, communication media. They are the places where ideas are developed, shared, challenged, and refined.

At the center of great cities we find the institutions that represent the two functions--market and mosque, guild hall and cathedral, department store and city hall. In the contemporary city we plan for adequate industrial and commercial land, and we simultaneously strive for strong central districts that help to define and support our common identity as members of communities.

Within this framework of metropolitan functions, five factors have strongly affected American urban settlement patterns. The first section of this report briefly introduces these broad forces. The central section traces in detail the ways in which the factors have shaped settlement and land use in the Portland area over the last 150 years. The concluding section suggests new ways in which these five basic factors may operate in the coming decades and briefly analyzes possible new effects on the region's settlement patterns.

Figure 1 shows the organization of the report in graphic form, indicating the continuity among the subsections:

Figure 1

FACTORS INFLUENCING PORTLAND METROPOLITAN SETTLEMENT PATTERNS

Section 1:	Section 2:	Section 3:
CONDITIONING FORCES	**PORTLAND METRO GROWTH**	**EMERGING TRENDS**
Mastery over nature ---------->	Natural environment ---------->	Ecological awareness
Agglomeration economies ---------->	Industrial/ commercial land needs --------->	Global and information economies
Transportation technologies -------->	Passenger transportation/ residential land needs --------->	Digital highways
Social valuation of distance ------->	Community values/ cultural forces ------>	Social patterns/ family structure
Growth as policy goal ----->	Public policies ---------->	? ? ? ?

1. CONDITIONING FORCES

A) Mastery Over Nature

American society has historically assumed the right to reshape the natural environment to current economic needs. The impacts of this assumption have been especially apparent in the American West, where marginally habitable natural environments have required massive reallocations of water and other resources. Hydro-electric dams, irrigation systems, and huge diversions of water under the continental divide or around the Sierra Nevada mountains are examples of the active restructuring of the natural environment for human uses.

American city builders have also remade their local landscapes, taking seriously the injunction in Isaiah 40 that "every valley shall be lifted up, and every mountain and hill be made low; the uneven ground shall become level, and the rough places a plain." Much of downtown San Francisco, New York, and Boston (the "Back Bay" neighborhood) are built on filled land. Urban streams have been channelized and buried and fresh water imported over hundreds of miles. Hills have been leveled and reshaped to supply buildable land, most impressively in Seattle. City makers also compete with farmers for the same high quality land, for the characteristics that make land attractive for farming--easily tilled soils, good drainage, level or gently rolling topography--are equally attractive to homebuilders.

Compared to their neighbors in Seattle or San Francisco, Portlanders have been relatively careful in their impacts on the landscape. Nevertheless, any comparison of nineteenth-century and twentieth-century maps will show the extent to which Portland area residents have encroached on rivers and wetlands in their search for high value land, a process that reached its peak in the early decades of this century.

B) Agglomeration Economies

In the contest for metropolitan growth, a variety of factors allow ambitious cities to outdistance their rivals. One of the most important and basic factors is a site and location favorable to long-distance transportation. Less predicable but equally important have been the historical accidents by which individual entrepreneurs have made their home base in specific cities--Henry Ford in Detroit, George Eastman in Rochester, David Packard in Palo Alto. Bridging the gap between natural endowment and individual enterprise have been community efforts to provide the seedbed for economic development by investing in physical and social infrastructure. An example is the willingness of Seattle in the late 1950s and 1960s to invest in container cargo terminals, the University of Washington, the Century 21 exposition, and the massive Forward Thrust bond measure.

Once a city has gained an edge on local rivals, it is common for the rich to get richer. That is, cities with broadly developed economies attract additional activities. A large city has a labor force with diverse skills, a wide range of suppliers and professional experts, and local sources of capital, all of which make it fertile ground for new or growing businesses. Economist Wilbur Thompson has talked about a ratchet effect, arguing that once a city reaches a certain size it has a built-in momentum for further growth. A broad economic base attracts new industries, whose payrolls in turn support further broadening of the metropolitan economy in a repeating cycle.

Thompson's argument applies in particular to economically diversified cities such as metropolitan Portland. In the absence of a single dominant employer or industrial sector, it has been relatively insulated from downturns in the economic cycle. It has been well positioned for steady growth during upswings.

The principle of agglomeration also applies to patterns of land use within metropolitan areas. Activities tend to cluster with like activities. Proximity allows them to share suppliers, to interchange goods and information, to hire and fire from the same pool of trained workers, and to deal with lenders familiar with their business,and to attract a larger pool of customers.

The classic downtown of American cities is one such cluster. It evolved between 1870 and 1920 to meet the commercial needs of the growing metropolis with new institutions that served the new mass market--department stores, vaudeville theaters, steel-frame skyscrapers. Downtown activities in turn clustered into distinct subdistricts for finance, government, retailing, and entertainment, a pattern still visible in downtown Portland.

Manufacturers have also found benefits from proximity. An example is the New York City garment district in lower Manhattan, where thousands of small firms depended on the daily interchange of inputs and information. More recent examples are the petrochemical complex along the Houston ship canal and the electronics firms of Silicon Valley or Washington County. Although there is strength in numbers, there is also danger in concentration if an industrial sector enters an era of decline (as with the vast steel mill complex at the southern tip of Lake Michigan or Portland's nineteenth-century lumber mills).

In turn, industrial clustering has been the strongest determinant for the location of working class housing. Industrial workers, historically burdened by long hours and low wages, have usually tried to live close to their factories. The result in most cities has been the development of working class neighborhoods adjacent to industrial corridors and concentrations (for example, the neighborhoods around the

Chicago stockyards). This is a pattern that strongly affected Portland's riverfront districts from the 1850s through World War II.

C) Transportation Technologies

A third basic determinant of residential patterns has been changing technology of passenger transportation. Since the 1840s, American cities have evolved from "walking cities" to "streetcar cities" and then to "automobile metropolises." The successive new technologies have vastly expanded the size of urban areas and allowed the subdivision of neighborhoods by economic status and ethnicity.

The first American cities were pedestrian cities. From the 1600s to the 1840s, city-dwellers got from one place to another on foot. When Benjamin Franklin arrived in colonial Philadelphia to make his fortune in 1723, he didn't hop on a streetcar, hail a cab, or stop at the Hertz counter--he walked from the waterfront into town. So did everyone else, rich and poor alike.

Walking cities were small and compact out of necessity, limited to an approximate radius of 2 miles (making cities roughly an hour's brisk walk from one end to the other). With space at a premium, residents and activities jumbled together in what was sometimes a chaos of competing land uses. Streets were narrow, buildings crowded, environmental sanitation poor, and social classes in constant contact. On a much smaller scale than early New York or Philadelphia, Portland and Oregon City in the 1850s and 1860s fit the model of compact, pedestrian cities.

The first transportation improvement was the horsecar or horse-drawn street railway, which appeared in east coast cities in the 1850s and came to Portland in 1871. Horsecars doubled the effective radius of cities from 2 to 4 miles. Portland, for example, grew from 10th Street westward to 23rd Street during the horsecar era of the 1870s and 1880s. Unfortunately, horsecars were also unsanitary, slow, and inefficient. Nor were the first mechanically-powered alternatives, such as cable cars and miniature steam railroads, much better.

The answer was the electrically powered streetcar, an improvement universally adopted by American cities in the 1890s. Streetcars were faster, more comfortable, and carried more passengers. They again expanded the effective radius of urban development from to 6 or 8 miles, vastly increasing the land available for urban uses. The early twentieth century brought an explosion of "streetcar suburbs" as builders rushed to take advantage of the new transportation system by developing areas like east side Portland. The newly useable land allowed Americans to build single-family detached houses rather than row houses and to sort themselves out by social class and ethnic affiliation. The streetcar city of the early twentieth century was thus a socially divided city. Because streetcar lines converged on the offices and businesses

located in the city center, it was also a city that depended on and revolved around its downtown.

The newest stage in urban transportation technology arrived with the democratization of the automobile in the 1920s. Automobiles have again extended the effective radius of urban development to span, for example, the 40 plus miles from Forest Grove to Sandy or from Newberg to Battleground. They have allowed Americans to confirm their preference for free-standing houses on large lots and extended the pattern of social sorting. Passenger cars and trucks have also eroded the power of the single metropolitan core, enabling outlying centers to develop increasing economic autonomy as "outer cities" or "edge cities," a process apparent in the Portland region but much less advanced than in many metropolitan areas.

D) The Social Valuation of Space

In an important sense, changing transportation technologies have had their greatest effect by allowing the expression of community values or cultural choices that stand outside the realm of economics.

Since the days of Daniel Boone, Americans have liked elbow room for its own sake. Far more than continental Europeans, for example, they prefer single-family houses to attached housing or apartments. They prefer large yards to small yards and persuade jurisdictions with undeveloped land to require large minimum lot sizes. On the exurban fringe, the desire translates into five-acre farmettes and country roads densely lined with new houses on narrow, deep lots.

Americans use residential location to establish and substitute for social distance. In mobile and egalitarian America, few people have a social identity that is defined and limited by family origins. Nor are there many exclusive signs of social status. Modern merchandising (installment buying, credit cards, auto leasing) allows persons with modest incomes to drive fast cars, wear fashionable clothes, and vacation in the tropics. We often have no idea whether our middle class neighbor has fallen from riches or risen from rags in the style of a Horatio Alger story.

In this socially fluid environment, neighborhood can be a proxy for status. Most obviously, house and neighborhood are a symbolic package that helps to place people by socioeconomic position. Many Americans will pay substantially more for an identical house if it is in a "better" rather than a "poorer" neighborhood. They are buying a more prestigious address, not a superior form of shelter from wind and cold.

It is an elaboration of the same point to say that place is also a component of individual and group identity. Zip code marketers, with their identification of "Volvo-brie" neighborhoods and "minivan-pizza" neighborhoods are on to something.

Commitment to a particular place is often strong in low-income communities whose residents are heavily dependent on local services and institutions. It can be just as strong in upscale neighborhoods like Boston's Beacon Hill or the Portland area's Dunthorpe.

In addition, of course, Americans sort themselves by ethnic group and race. The Little Italies, Poletowns, and other European immigrant neighborhoods have historically been sources of group cohesion and strength. They gave a home base to political leaders, supported ethnic businesses, and housed churches, schools, newspapers, and other institutions that served that group.

Racial ghettos--whether nineteenth-century Chinatowns or black ghettos of the twentieth century--have differed in origins and impact. By definition, they are the result of restrictions imposed by the majority society, not a product of voluntary sorting. The result has been to impose special costs on their residents including the deterioration and crowding of housing, inferior public services, and sometimes the deliberate concentration of crime.

E) Growth as a Policy Goal

Americans have made the choice to design "open" cities. An "open city" welcomes all newcomers as long as they bring capital, skills, or a willingness to work. Unlike religious utopias or company towns, open communities reflect the imperatives of economic growth and democracy. Newcomers are welcome for the labor, capital, and ideas that they contribute to the common cause of city-building. Periodic anti-immigrant campaigns, usually triggered by economic downturns, stand out as exceptions rather than the rule. The other glaring exception to the premise of the open city, of course, has been the creation of racial ghettos with their limitations on individual opportunity.

Land use planning and other public policies have reflected this orientation to economic growth. Since the early nineteenth century, city governments have competed vigorously to attract new businesses with incentives such as cheap land and favorable tax treatment. They have battled for improved transportation connections, whether a new railroad or a through flight to Tokyo. By implication, growth-oriented cities expect population growth and the expansion of their settled area into the countryside.

The easiest design for open communities has been the gridiron street plan, infinitely extendable as the city grows. The grid orients us in metropolitan space and provides the framework for extending the subdivision frontier. In the phrase of planning historian John Hancock, the American grid is a "neutral support for pure speculative processes." Like other major U.S. cities, greater Portland has grown by

incremental extension of its initial grid, so that the metropolitan area now stretches within a grid that runs from at least 268th east to 242nd west (with major exceptions for terrain and subdivision design).

Within the land development grid, land speculation has been a powerful force in favor of outward growth. In a large city, land is generally less expensive toward or beyond the edge of development and more expensive in or toward the center. Investors with large amounts of capital can afford to speculate in centrally located land. Smaller real estate investors, in contrast, have tended to find that their opportunities on the fringe. American cities have historically gone through cycles of speculative over-platting of peripheral land in advance of the market, often leading to fragmented and inefficient development patterns. The very existence of the recorded lots and dedicated streets, however, has tended to attract development outward.

In addition, federal policy directly supported the policy goal of peripheral growth after World War II. The federal government underwrote many of the costs of new land development. The 1950s brought federal funding for highway construction and federal assistance for regional planning. General Revenue Sharing arrived in 1972. Revenue sharing was preeminently a suburban aid program, tilting federal assistance away from central cities to all full-service governments, whether a city of 2 million or a suburban town of two thousand. The 1970s also brought $40 billion in federal grants for sewer construction, mostly in the newly developing areas on the metropolitan fringe.

Federal support of for homeownership through the mortgage insurance programs of the Veterans Administration and the Federal Housing Administration reinforced these effects. Responding to the tremendous pent-up demand for housing, the government from 1946 through 1950 along backed $20 billion of VA and FHA loans, approximately 40 percent of all home mortgage debt. There were nearly 2 million housing starts in peak year of 1950. Mass produced communities and subdivisions were starters for couples in their late twenties or early thirties hurrying to make up for lost time on a tight budget. Indeed, the 1940s are the decade in which a majority of American households became homeowners (55 percent) rather than renters (45 percent), a trend that continued in the 1950s and 1960s. The process was also reinforced by the general adoption of self-amortizing mortgages and the deductibility of mortgage interest on federal income tax returns.

Taken in isolation, the encouragement of homeownership might have been neutral in locational effects. However, federal agencies "red-lined" thousands of older neighborhoods by refusing mortgage guarantees. By so doing, they artificially reduced the market for existing housing and expanded the market for new housing. The result, again, was strong federal encouragement of metropolitan population decentralization.

The commitment to continual economic growth has also included a broad willingness to accept what theorist Josef Schumpeter called the "creative destruction" of free market capitalism. New markets and products mean changing needs for urban land. The result has been continual rebuilding of American cities that proceeds simultaneously with their building. Although no land use is fixed or permanent, the pressures for reuse have been strongest in the most central or accessible parts of the metropolis, particularly the downtown core. The same block in downtown Portland, for example, has held in succession the first school building, the Portland Hotel, the Meier and Frank parking structure, and Pioneer Courthouse Square. Urban renewal has been a public policy intended to speed and rationalize this process of reuse. The current debate about the fate of I-5 on the east bank of the Willamette River is one more episode in this process of continual shaping and reshaping with the help of the public sector.

The rebuilding process also impacts neighborhoods. The rebuilding is sometimes cataclysmic, as with the intrusion of industrial uses, rapid institutional expansion, or clearance of run-down housing. It can be more gradual, as with the replacement of single family housing with low-cost, low-value apartments. Neighborhood changes can sometimes reverse as the metropolitan housing market changes and changes again. An example is the conversion of large houses in Northwest Portland to multiple occupancy between 1930 and 1960 and their reconversion to single-household occupancy by the more recent generation. There is every reason to expect similar patterns of rebuilding and reuse in Clackamas and Washington counties as postwar commercial strips and subdivisions fail to meet the demands of twenty-first century markets. In recent decades, public policies have tried to encourage conservation of older neighborhoods and rehabilitation of older housing. To the degree that such efforts prevent neighborhood abandonment, they slow the expansion of the metropolitan fringe; to the degree that they result in reduced population densities, they may accelerate that expansion.

2. PORTLAND METROPOLITAN SETTLEMENT PATTERNS

The evolution of Portland area settlement patterns falls into four periods. The first period, which serves as a prologue to this section, is that of Native American settlement. The second period covers the first generations of British and American settlement from the establishment of Fort Vancouver in 1825 through the 1880s. The third period covers Portland's "urban explosion" between 1890 and 1930. The final period covers the decades of metropolitan-regional growth from 1930 to the present.

Within each of the major periods, the discussion is organized around the five factors identified in the previous section. As applied to metropolitan Portland, these factors are (1) the natural environment, (2) commercial and industrial land needs, (3) passenger transportation technologies, (4) community values, and (5) public policies. Figure 2 indicates the relative importance of these factors during each period. The natural environment, for example, was a major determinant in the early decades but faded in importance in the early twentieth century. Public policy, in contrast, has steadily increased in importance over the last century and a half, leading to current discussion of policies to shape twenty-first century development patterns.

Figure 2

Two Centuries of Portland Metropolitan Growth: Key Factors

	1825-1890	1891-1930	1930-present
Natural Environment	xx	-	x
Commercial/ Industrial Land Needs	xx	x	x
Passenger Transportation Technology	x	xx	xx
Cultural Forces and Community Values	x	x	xx
Public Policies	-	x	xx

- = minimal constraint

x = significant factor

xx = dominating factor

2.A: Native American Settlement Patterns

When British and American explorers and traders first reached the Pacific Northwest in the decades around 1800, substantial numbers of Native Americans lived along the shores of the lower Columbia River. The two most important locations were the Columbia estuary and the falls at Celilo. The rich bays and shorelines of the estuary supported a large population with access to ocean resources and coastal trade. Celilo Falls, 200 miles upriver, was another natural trading center. Chinook Indians from the coast could trade dried fish, cedar bark and other coastal products for the furs and hides that Paiute and Shoshonean tribes brought from the interior plateaus.

Between Celilo and the mouth of the Columbia, speakers of Chinook dialects dotted the river islands and entry points of small rivers and streams. Their "metropolis" was Sauvie Island and the adjacent Oregon shore. Lewis and Clark counted 2400 people on the island and 1800 along the south side of the Multnomah Channel. Six years later, British fur trader Robert Stuart reported a population of about 2000 on the island itself--a denser population than the island supports today. By piecing together the reports of different European travelers, we can locate about fifteen separate villages on Sauvie Island and immediately adjacent areas. Residents fished for salmon, sturgeon and smelt; hunted migratory birds and deer; gathered nuts and berries; and dug wappatoo roots along the rivers. "Wappato Island" was Lewis and Clark's name for Sauvie Island. Cedar logs provided materials for canoes, cooking utensils, and longhouses. Villages were built to last for years rather than decades, for the abundance of natural resources made it easy for a group to move from one spot to another within its general territory.

In contrast to their bustling settlements along the Columbia, Native Americans made only limited use of the lower Willamette River. Not until they reached the Clackamas River and the Willamette River falls did European explorers find more than scattered and often temporary settlements. Here, where the salmon stopped, the natural environment again made life relatively easy for the Cushook, Chahcowah, and Clackamas peoples. The falls were a point of contact between maritime tribes and hunting peoples of the Tualatin Valley. Twenty or so small villages of Tualatin Indians used the valley, traded with river people, and occasionally gathered near Gaston. They were a subgroup of the Kalapooias of the central Willamette Valley, all of whom had learned to improve their environment with periodic fires. Their purpose, they told naturalist David Douglas, was to clear the land for ease of gathering wild foods and to force deer into tree islands where they were easy to hunt.

In a very different way, a change in the natural environment destroyed the native Americans whom it had nurtured. Among the world's most isolated peoples, the Indians of the Northwest coast were easily susceptible to new diseases that arrived with Europeans. As has been true for millennia, a disease that has become common and relatively "tame" among one population can devastate a new population with no previous contact. In 1829, measles attacked the Sauvie Island villages. The next year the "Cold Sick" or "Intermitting Fever" appeared in Chinook and Kalapooia villages. It raged for the next three years along the Willamette and lower Columbia. It is likely that the disease was malaria brought from the tropical Pacific by traders, although influenza is another possibility. Whatever its true identity, the Cold Sick spread outward from an infection epicenter at Sauvie Island and Fort Vancouver. It killed half in some villages, 90 percent in others, leaving a few hundred Native Americans and a virtually unoccupied landscape for the English-speaking settlers who began to arrive over the Oregon Trail in the 1840s.

2.B: Settlement Patterns, 1825-1890

1) Natural environment

To understand initial American settlement patterns, it is important to remember that explorers and settlers approached the Portland area by water. The closest contemporary equivalent to the landscape that greeted them would be the less developed banks of the lower Columbia River. What visitors saw were low, sandy islands, separated by shallow channels from marshy bottomlands and backed by rising hills or bluffs. Along the shores were thick tangles of willows, maples, and alders. Most prominent for Portland were Swan Island, Ross Island, and Sauvie Island. Other wetlands had formed where streams emptied into the Willamette, as with the mouth of Sullivan's Gulch on the east side and Marquam Gulch on the west side.

Many of the wider bottomlands were covered with shallow sheets of water that were refreshed by winter rains and spring floods. Settlers who needed well-drained land for fields and orchards and remembered the devastation of floods in the Mississippi Valley shunned areas like Couch's Lake and Guild's Lake in northwest Portland. Smith and Bybee lakes in North Portland are remnants of a landscape that also covered much of the south shore of the Columbia with its maze of sloughs and lakes.

As they approached this marshy, sandy front door, the first Anglo-American settlers found little to praise. Philadelphia physician and naturalist John Townsend summed up a common reaction when he wrote about the future vicinity of Portland that "there is not sufficient extent unencumbered [by vegetation], or which could be fitted for the purposes of tillage, in a space of time short enough to be serviceable; others are at some seasons inundated, which is an insurmountable objection."

Early settlers placed a premium on three landscape features. One was relatively well-drained terraces that sloped gradually up from the rivers--a feature shared by early settlement points such as Oregon City, Portland, Linnton, St. Johns, and Vancouver. A second feature was streams with enough flow and fall to generate water power for sawmills and other basic factories. Tanners Creek, dropping out of the West Hills behind the Portland townsite, is one example; Johnson Creek is another. The third feature was the fertile and easily tilled prairies of the Tualatin Plains, which attracted many of the area's first farmers.

Given this early dependence on the natural landscape, it is not surprising that early Anglo-American settlers within the Portland metropolitan region made decisions that resembled those of Native Americans.

The Hudson's Bay Company moved its base of operations from Fort George (near Astoria) to Fort Vancouver in 1825. The new post soon bustled with activity under the management of John McLoughlin. The site offered convenient access to the four points of the compass--up the Columbia River to the network of interior trading posts and beaver streams, down the Columbia to the wider world, north along the Cowlitz River corridor to Puget Sound, south up the Willamette River. McLoughlin used Sauvie Island to pasture cattle to feed his trading post. By 1850, the southern end of the island would have a cluster of farmers raising livestock and potatoes.

Oregon City was a secondary center and gathering point. Beginning in 1840-41, John McLoughlin and Methodist missionaries contended for control of what seemed a natural location for a town. Located below the Willamette River falls, it was a necessary stopping point for small sailing ships and canoes. Above the falls were the rich Willamette Valley prairies, already settled at Champoeg by French-speaking employees of the Hudson's Bay Company. Oregon City was also midway between the Tualatin River from the west and the Clackamas River route to the east, along which a number of early pioneers settled. By the winter of 1842-43, the new town had thirty buildings and a gristmill. It was the first destination for the swelling American migration that brought 800 settlers to Oregon in 1843 and 1200 in 1844. Opening of the Barlow Road cutoff from The Dalles to Oregon City in 1845-46 seemed to confirm Oregon City's role as the major junction point south of the Columbia. Maps of early roads and farms clearly show its centrality as a communication center around 1850 (Map 1). With 933 residents, Oregon City was big enough to have a "suburb" in the form of Linn City (population 124).

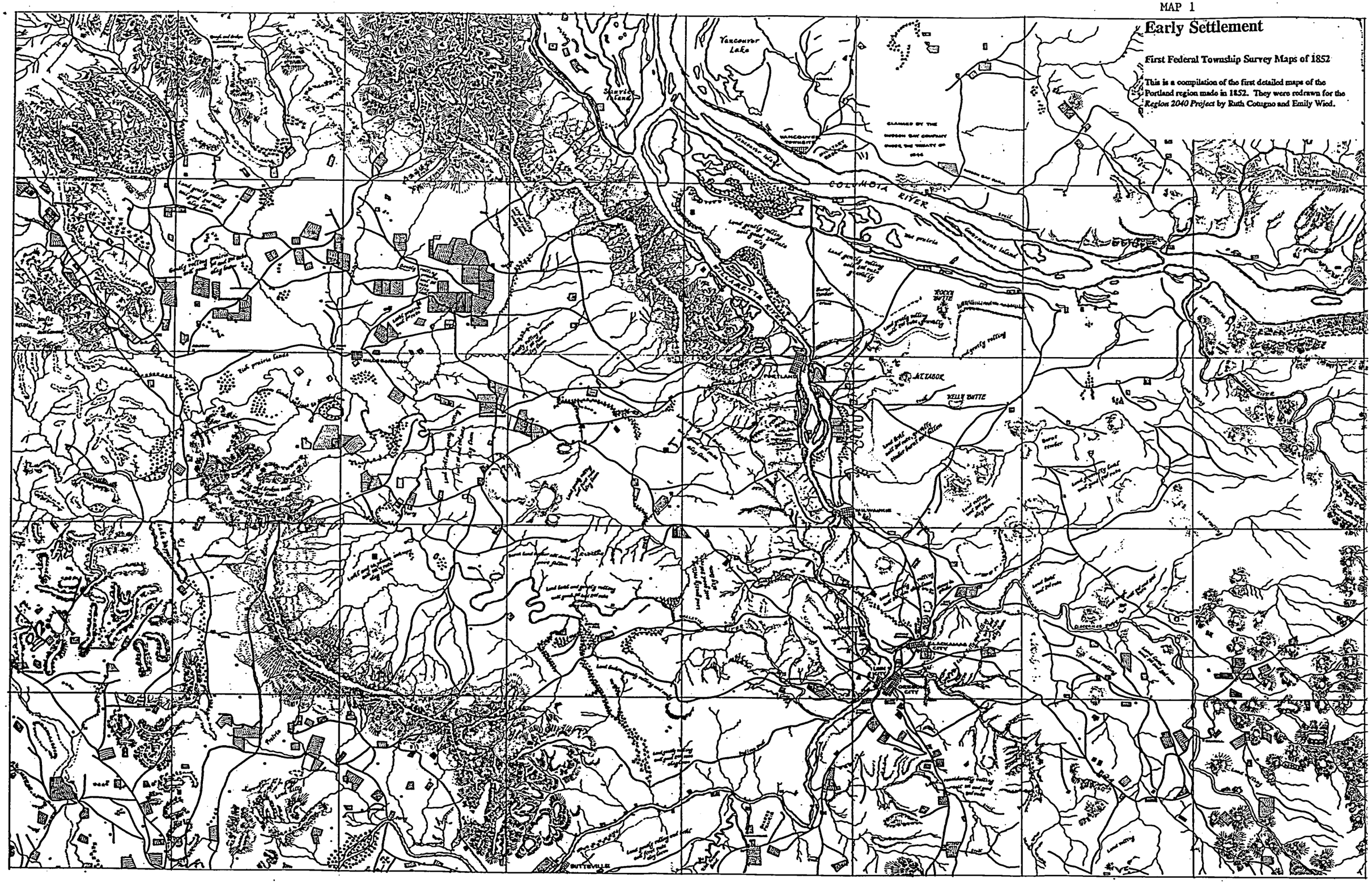
The most important agricultural district in the circle around Oregon City was the Tualatin Plains, the northernmost of the Willamette Valley prairies. The plains lay west of Rock Creek in what is now the Hillsboro-Forest Grove-North Plains-Banks area. In the 1830s, Hudson's Bay Company employees from Fort Vancouver sometimes drove cattle over the muddy passes of the Tualatin Mountains (West Hills) to fatten on the rich summer grasses of the Tualatin Valley. In the 1840s, American wheat farmers pushed aside the British cattle. The newcomers saw no reason to hew farms out of dense forest. Instead, their ideal location was on the margin of the open grasslands, with easy access to timber and fresh springwater from low foothills. Early Washington County towns included Columbia (Hillsboro) and West Tualatin (Forest Grove) as the bulk of development was separated from the Willamette River by the Tualatin Mountains and their forested western slopes.

Within this early settlement system, the site of the future Portland was Oregon's first highway rest area. Native Americans and fur trappers had cleared part of a dry, sloping bank on the west side of the Willamette roughly halfway between Fort Vancouver and Oregon City. It was a good spot to cook a meal, spend a night,

Early Settlement

First Federal Township Survey Maps of 1852

This is a compilation of the first detailed maps of the Portland region made in 1852. They were redrawn for the *Region 2040 Project* by Ruth Cotugno and Emily Wiod.



or repair equipment. Jesse Applegate later remembered his visit to "the clearing:" "We landed on the west shore, and we went into camp on the high bank where there was little underbrush . . . No one lived there and the place had no name; there was nothing to show that the place had ever been visited except for a small log hut near the river, and a broken mast of a ship leaning against the high bank. There were chips hewn from timber, showing that probably a new mast had been made there . . . but there was no prophet to tell of the beautiful city that was to take the place of the gloomy forest."

Early the next year, when William Overton and Asa Lovejoy claimed the square mile that would become downtown Portland, they knew that they had a promising site. As two British spies described the new town in 1846, "the situation of Portland is superior to that of Linnton, and the back country of easier access. There are several settlements on the banks of the [Willamette] river below the falls, but the water, covering the low lands during the freshets render them valueless for cultivation, and but few situations can be found adapted for building on."

Lovejoy's shrewd choice contrasts with the unrealized proposal of Bostonian Hall J. Kelley. An armchair geographer and Oregon enthusiast, Kelley developed a grandiose scheme for a city at the immediate confluence of the Columbia and Willamette. With no direct experience of the topography, he proposed a settlement that would have been mired miserably in the sloughs and marshes of what we now call Kelley Point and Rivergate.

Although Portlanders would gradually assert mastery over their natural environment, the differences between wet and dry land continued to influence the detail of settlement through the nineteenth century. In east side neighborhoods like Buckman, for example, east-west ridge lines were developed for housing before the valleys in between; surviving clusters of Victorian houses reflect that early adaptation to topography. Along the marshy east side waterfront, Grand Avenue became the major commercial connection because it was the first north-south street that ran on firm land (portions of what is now S.E. Martin Luther King Boulevard had to be raised on pilings).

Although it now seems obvious, finally, the most imposing natural impediment to urban growth--the Willamette River itself--was not effectively mastered until the very end of this initial settlement period. The Willamette Iron Bridge Company completed the Morrison Bridge in 1887. A railroad bridge (Steel Bridge) followed in 1888 and opened for wagons and streetcars a year later. Private investors built a rickety, wooden Madison Street Bridge in 1891 and sold it to the city the next year. The city followed with a much more substantial Burnside Bridge in 1894, Taken together, the four spans and their successors set the stage for the west side city to become an east side metropolis in the early twentieth century.

2) Industrial/Commercial Land Needs

The tiny town that Asa Lovejoy and Francis Pettygrove began to develop in 1844 and 1845 grew as a creature of the regional transportation system.

As the California gold rush created a booming San Francisco market for Oregon wheat and lumber, Portland struggled to establish itself as the head of ocean-going navigation on the Willamette River. "Head of navigation," of course, was a moving target. It varied with the season, the length of the wharf, the type of ship, and the foolishness of its captain.

The first rivalry was with Milwaukie, founded in 1848. Milwaukie had the Western Star newspaper, which began publication two weeks before The Oregonian. It also had the Lot Whitcomb of Oregon, the first steamboat built in the territory. The steamer could make 14 miles per hour on its run to Astoria during its inaugural season of 1851, but trouble was in the wings. One boat after another began to scrape bottom or bend a propeller on the Ross Island sand bar. Captain John Couch, who had relocated his business interests from Oregon City to Portland, announced that the river at Ross Island normally had only four feet of water and claimed to have ridden clear across on horseback. Milwaukie was soon a stranded town, too risky as a destination for increasingly expensive steamers.

The battle between Portland and St. Helens was tougher. St. Helens built a road over the Cornelius Pass. Portland countered with the "Great Plank Road," the first "paved" route along the Sunset corridor. Then came the news--in February 1851--that the Pacific Mail Steamship Company of San Francisco was going to terminate its California-Oregon service at St. Helens. The company's worry was another sandbar, this time at Swan Island. The contest hung in the balance for two years until Pacific Mail found it was unable to make full cargoes at St. Helens and began to advertise direct service between San Francisco and Portland.

After gaining control of trade between the Willamette Valley and California, Portland entrepreneurs looked eastward. From the 1860s to the present, metropolitan growth has been tied to the resources of the Columbia River Valley. Central to the city's prosperity was the Oregon Steam Navigation Company, the Portland-owned company which controlled travel to eastern Oregon, Washington, and Idaho. Settlers east of the Cascades hated its monopoly and high freight charges, but Portlanders liked the jobs and money that it funneled to the city. Contemporaries called it Oregon's "millionaire-making machine."

On September 10, 1883, finally, Portland celebrated its connection to the nation's transcontinental railroad system via the Northern Pacific Railroad. The line had opened for business in the summer but the official golden spike was driven at

Deer Lodge, Montana on September 8. Two days later Portland welcomed a trainload of dignitaries including former president Ulysses S. Grant. The following year the city gained a second connection to the Union Pacific system.

Railroads and river steamers made the bustling port the entrepot for the vast Columbia Basin, bringing raw materials for transshipment or manufacture. The combination of rail and water transportation also created an industrial/working class corridor that formed the south-north axis of the city in the 1870s and 1880s.

Fulton (now the Terwilliger neighborhood) anchored the corridor on the west bank of the Willamette. North of Fulton's factories and worker housing were South Portland and then waterfront docks and warehouses that were interspersed with the cheap lodgings of Skid Road. The wharves and mills of the industrial waterfront resumed north of the growing rail yards (Figure 3). George Weidler operated the city's largest steam sawmill at the foot of Savier Street and industrial workers filled the small houses of Slabtown. Further downriver, the waterfront settlement of Linnton developed a cluster of wood products factories.

The east side of the river developed as part of the same industrial corridor. East Portland and Albina were the Hoboken and Jersey City of the Willamette--industrial suburbs built around docks, mills, factories, and railroad yards. East Portland, set behind a marshy waterfront directly across the river from Portland, was platted in 1861 and incorporated in 1870. Its legal boundaries stretched from Southeast Holgate to Northeast Halsey. Its factory district started with the Inman-Poulson lumber mill just north of Ross Island and continued northward.

East Portland was the focus of Ben Holladay's short-lived business empire. Starting in 1868 with $1.5 million from a California freighting business, he won control of the Portland-to-California railroad project, running his tracks down the east side of the Willamette to the distress of land owners on the west side of the river. He owned docks, warehouses, and ships and tried to use his railroad to make Holladay's Addition (the present Lloyd Center area) into the business center of Portland. The Depression of 1873 and hostile Portland business leaders ended Holladay's empire, but his colorful career is a sharp contrast to the sober majority of Portland's elite. It also provides historical context for the longstanding rivalry between Portland's east and west sides.

To the north was Albina, laid out in 1873 and incorporated in 1887. Because the transcontinental and California railroads first linked up in Albina, the eastside city assumed a central economic role as a railroad switching and repair center managed by the Northern Pacific Terminal Company and then the Union Pacific (after 1890). Up to a thousand rail cars rolled in and out of Portland on a busy day. William S. Ladd's Portland Flouring Mills towered seven stories above the Albina

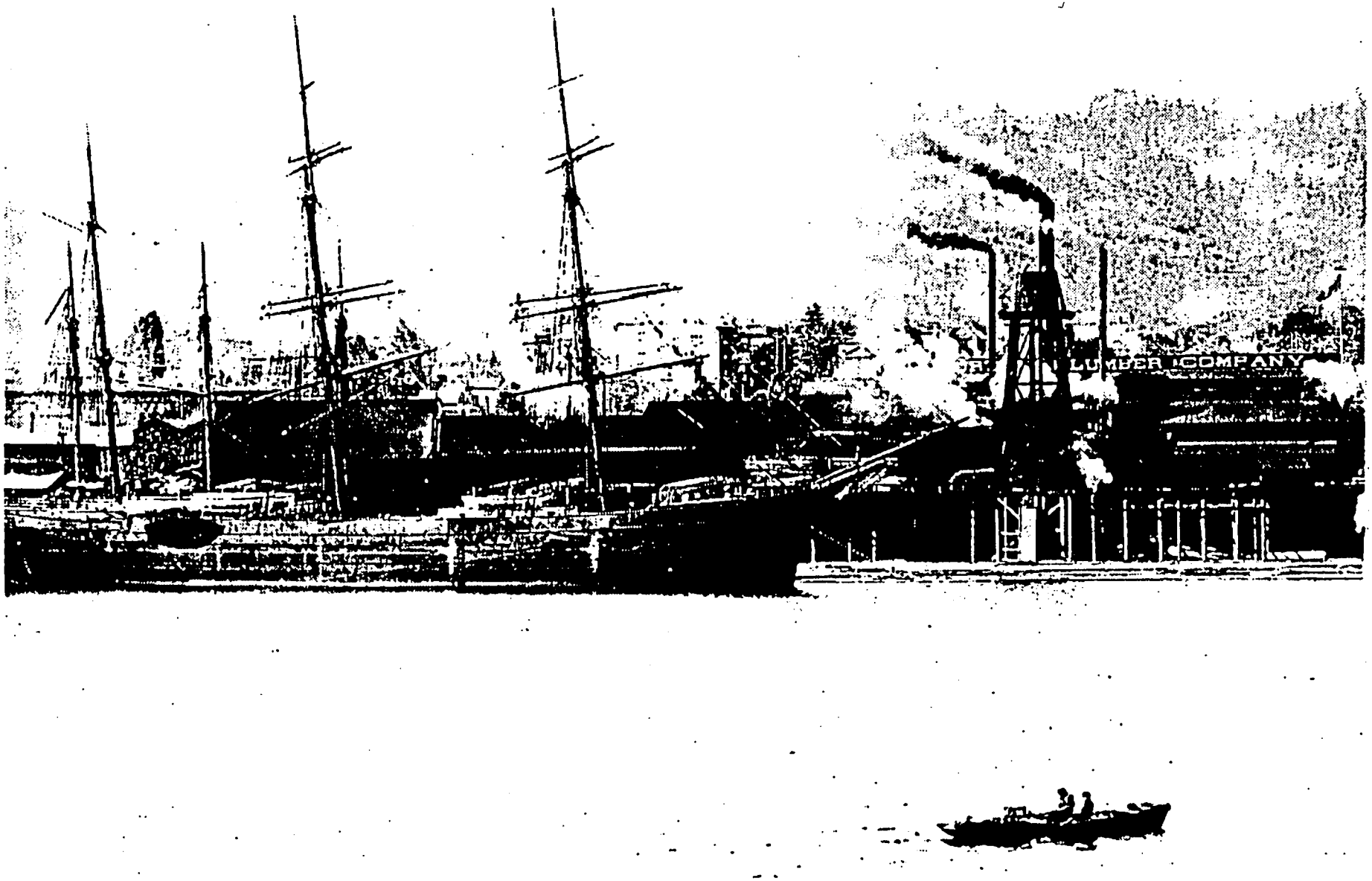


Figure 3. Willamette River Waterfront in 1905

shoreline--the largest in the Northwest. F. H. Peavey of Minneapolis controlled the Pacific Coast Elevator, whose 1,000,000 bushel capacity was unrivaled this side of the Twin Cities. It could unload grain from eight rail cars and load it into two ships at the same time. Planing mills, lumber yards, sash-and-door factories, and other manufacturing plants filled in Albina's industrial roster. Boarding houses and small cottages climbed the bluff behind the factories. The surviving symbol of this first industrial era is the Union Pacific Smokestack, built in 1887 on "a foundation that would last for all time."

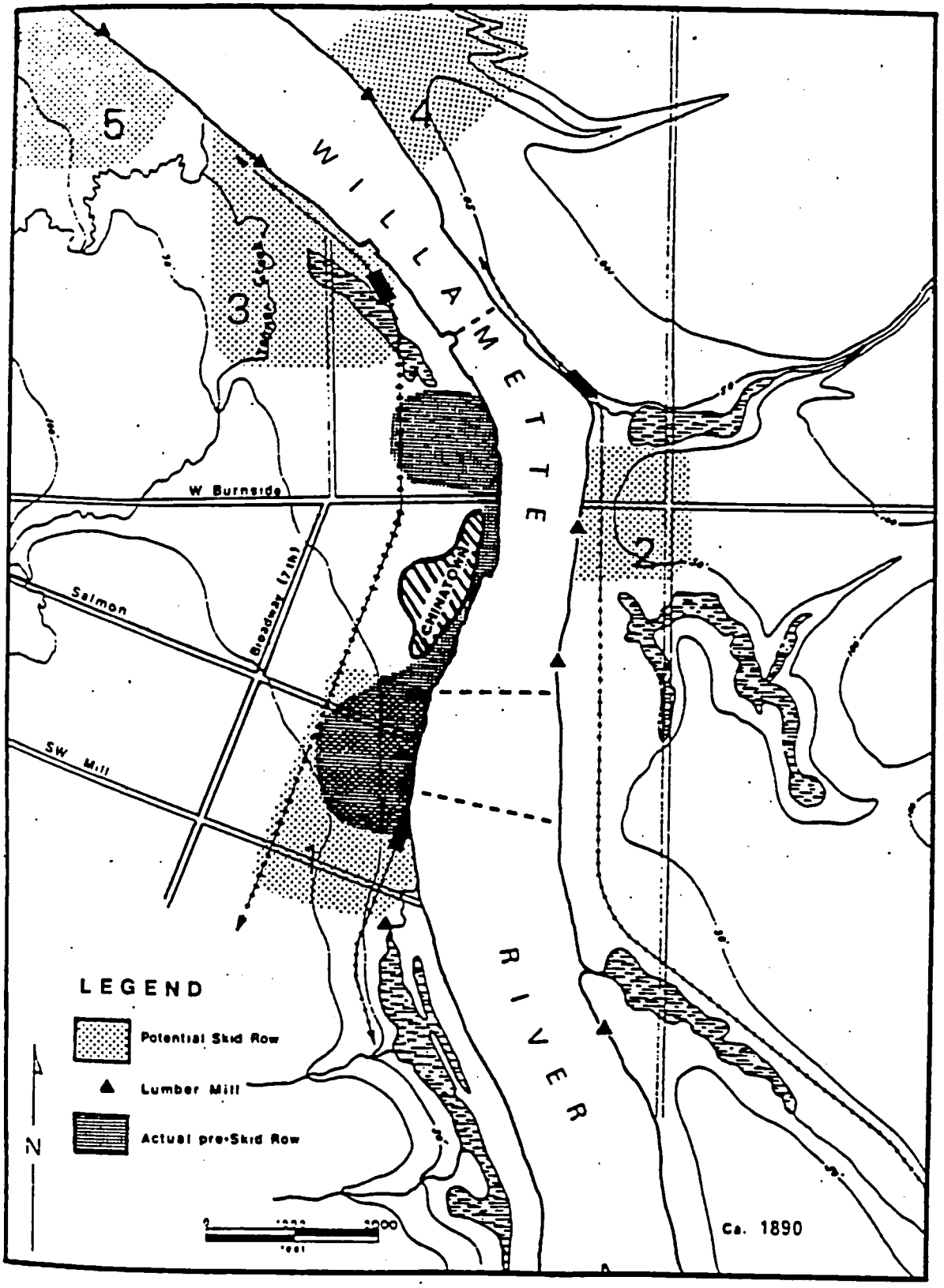
3) Passenger Transportation

Early Portland straggled along the river, shaped by the needs of river traffic and pedestrians. The first pictures show a town that stretched dozens of blocks north-south but only a few blocks westward into the woods. The walking city got its first public transportation in 1871 with a line of horse-drawn streetcars along First Street. Property owners along this main thoroughfare, especially between Davis and Salmon, built the city's first downtown by replacing frame buildings with 3-4 story masonry buildings fronted with elaborate cast iron facades.

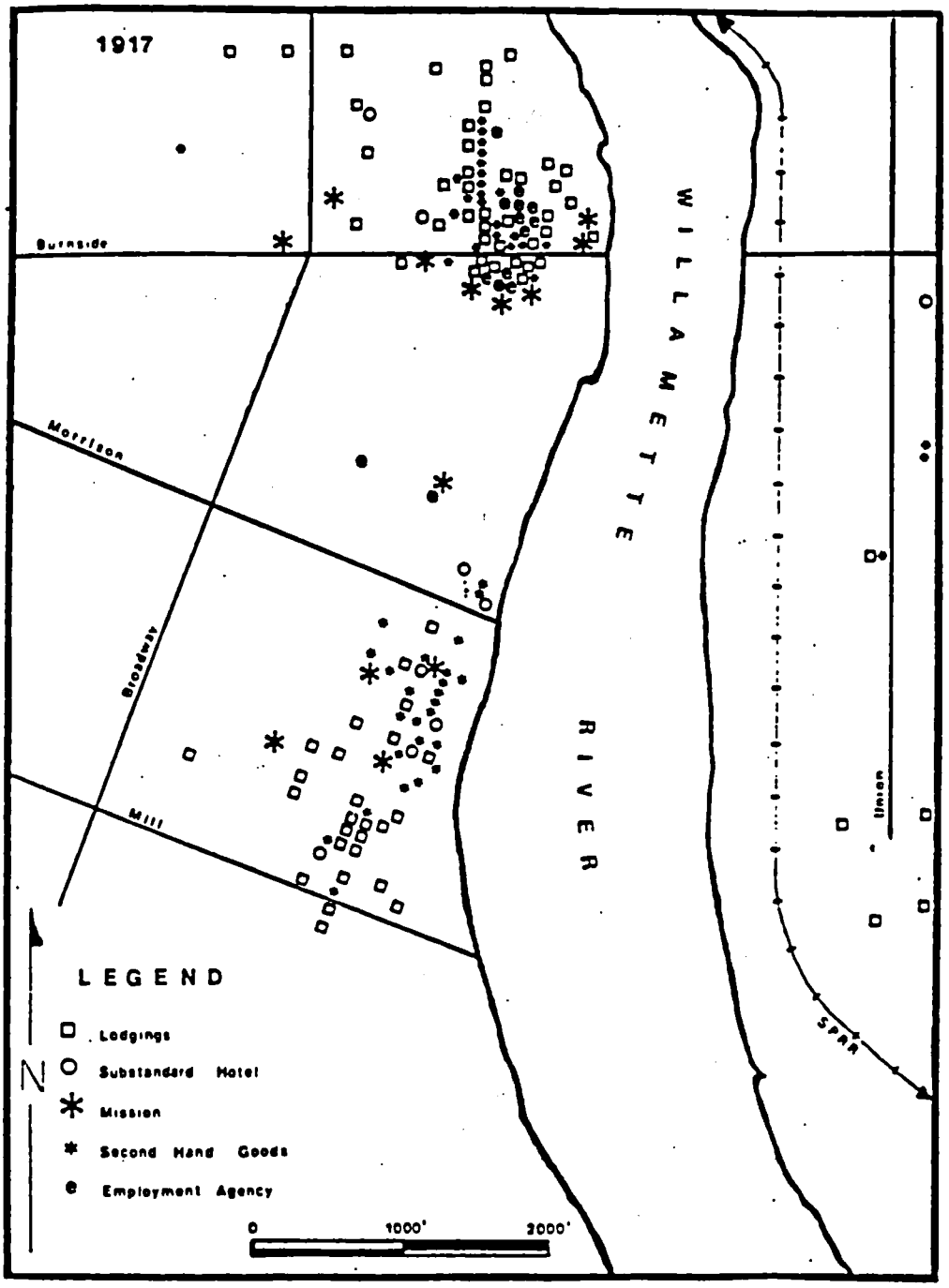
Waterfront workingmen's districts flanked downtown to the north and south. The Lownsdale and Burnside districts were connected by the First Street horsecars and within easy walks of waterfront industry and shipping (Maps 2, 3). With cheap accommodations, second hand stores, brothels, saloons, and employment agencies, the districts served a transient labor force of lumberjacks, farm workers, seamen, and railroad construction gangs who wintered over or passed through Portland. At their height in the early twentieth century, the districts may have housed as many as 10,000 men, giving the city proportionately one of the largest skid roads in the nation

4) Community Values

If workingmen hugged the waterfront, Portland's business and professional families looked toward higher lands. The first "good" neighborhoods were Northwest Third and Fourth and Southwest Broadway, whose distinguished residents such as Matthew Deady enjoyed the quiet view of Mount Hood from their front porches. In search of social distance, more affluent families continued to seek sites with the best combinations of good views, fresh breezes, and easy accessibility. One such area was the South Park Blocks. Across the river, comfortable and even affluent families could choose sites along the ridge that extended from Mock's Crest through the future location of the Alameda neighborhood and across Sandy Road--all in all "one of the most beautiful and sightly locations to be found in Oregon," according to the unfailingly upbeat West Shore magazine. Albina's successful businessmen built houses with price tags that stretched as high as $35,000.



Map 2. Industrial and Skid Row Districts in the Nineteenth Century



Map 3. Skid Row Institutions

The most important of these uphill moves created the mansion rows of 18th, 19th, 20th, and 21st streets, followed a few decades later by airy subdivisions like Willamette Heights and Westover. In the early 1880s, tycoons began to create Portland's own "Nob Hill" in imitation of San Francisco (Figure 4). Horescar lines followed the new houses as far as 23rd and Burnside and made for an easy commute to riverside offices. Here's what Oregonian editor Harvey Scott had to say about the emerging elite neighborhood a century ago: "One is led rapidly on by the sight of grand and imposing residences in the distance, of costly structure and splendid ornamentation. Many of these are set upon whole blocks, beautifully supplied with trees, turf, and flowers, and supplied with tasteful drive-ways. . . . Some of the more palatial of these edifices occupy double blocks, the cross streets not being run through. Among those of the spacious and magnificent West End are houses costing about $20,000 to $50,000--some of them $90,000 each---of three and four stories, and mainly in the Queen Anne style. It is upon the swell of the plateau that these fine houses begin to appear, and the views from their upper windows and turrets are extensive. For ten blocks back--16th to 26th streets--or even further, and from about N Street southward to Jefferson, the region is, by popular consent--and still more by prevailing prices--forever dedicated to dwellings of wealth and beauty.

The social opposite of Nob Hill was Chinatown, along the central waterfront, where physical segregation also established social distance. Swollen by refugees from anti-Chinese violence in Puget Sound in 1885-86, the city's Chinese population grew from 1700 in 1880 to 7800 at the turn of the century. Like the adjacent Lownsdale and Burnside districts, Chinatown was a nearly all-male society with a handful of merchants and thousands of workingmen. The district centered at Second and Alder and stretched from Ash to Salmon between the river and Third Street (Figure 5). Many Chinese-born workers commuted to seasonal jobs on farms, lumber camps, and Columbia River salmon packing plants. Their lives while in Portland involved activities that white society defined as vices, particularly gambling and the use of opium. The existence of Chinatown gave other Portlanders the thrill of confronting the "other" as visitors or police officers while remaining firmly in charge.

5) Community Policy

Local government was far less active in the nineteenth century than in the twentieth, leaving real estate decisions to the private market. However, the public sector was central to one part of the growth agenda. Disappointed in the results of the 1890 census, the Portland Chamber of Commerce began to push for consolidation of three adjacent cities. Eastsiders would enjoy the removal of bridge tolls and everyone could boast of higher population. Consolidation passed resoundingly in 1891, jumping Portland from 7 to 26 square miles. Two years later it grew another 50 percent with the annexation of Sellwood, much of the southwest hills, and areas east of 24th Avenue.

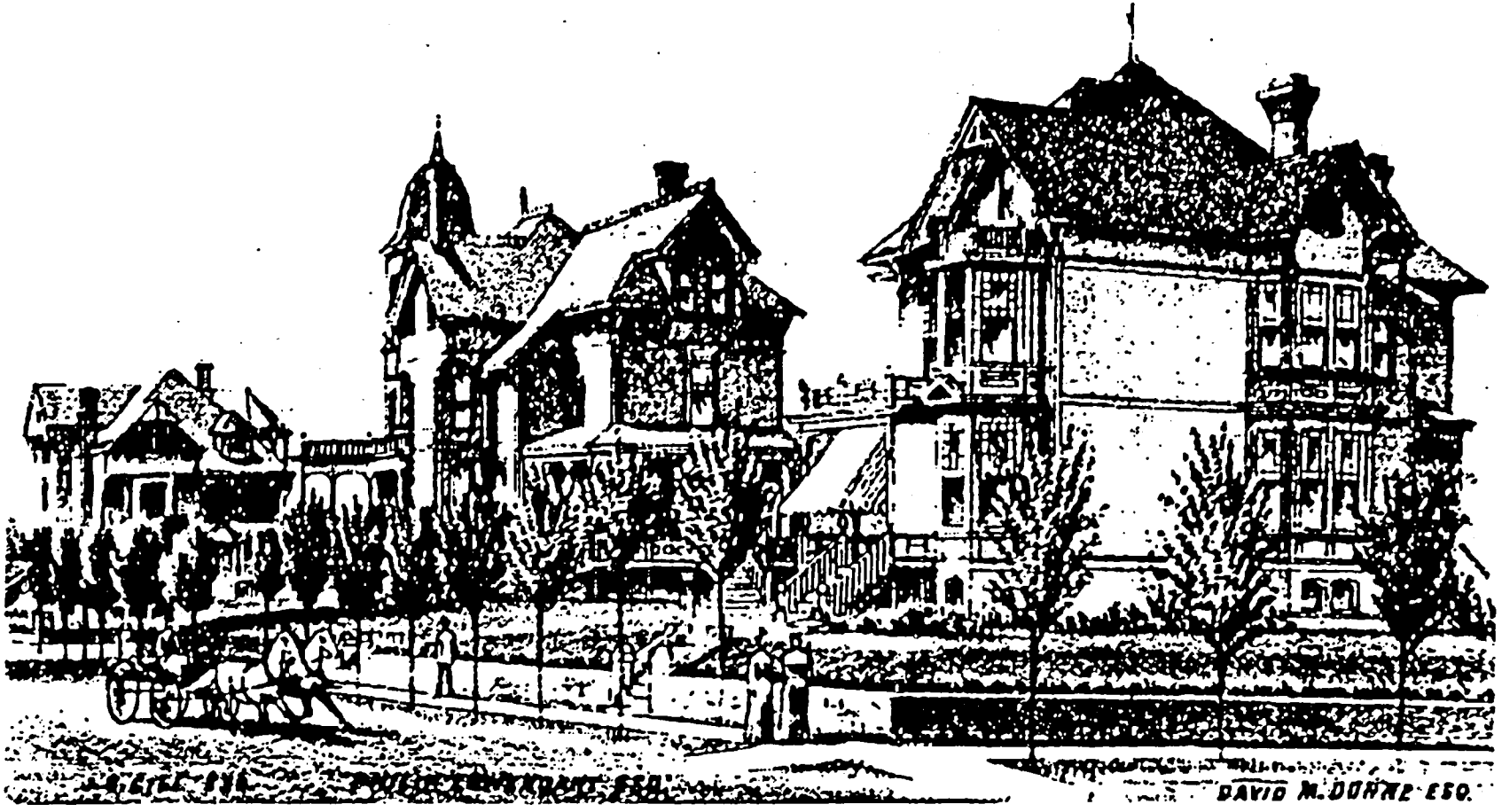


Figure 4. Nob Hill (Northwest Portland)

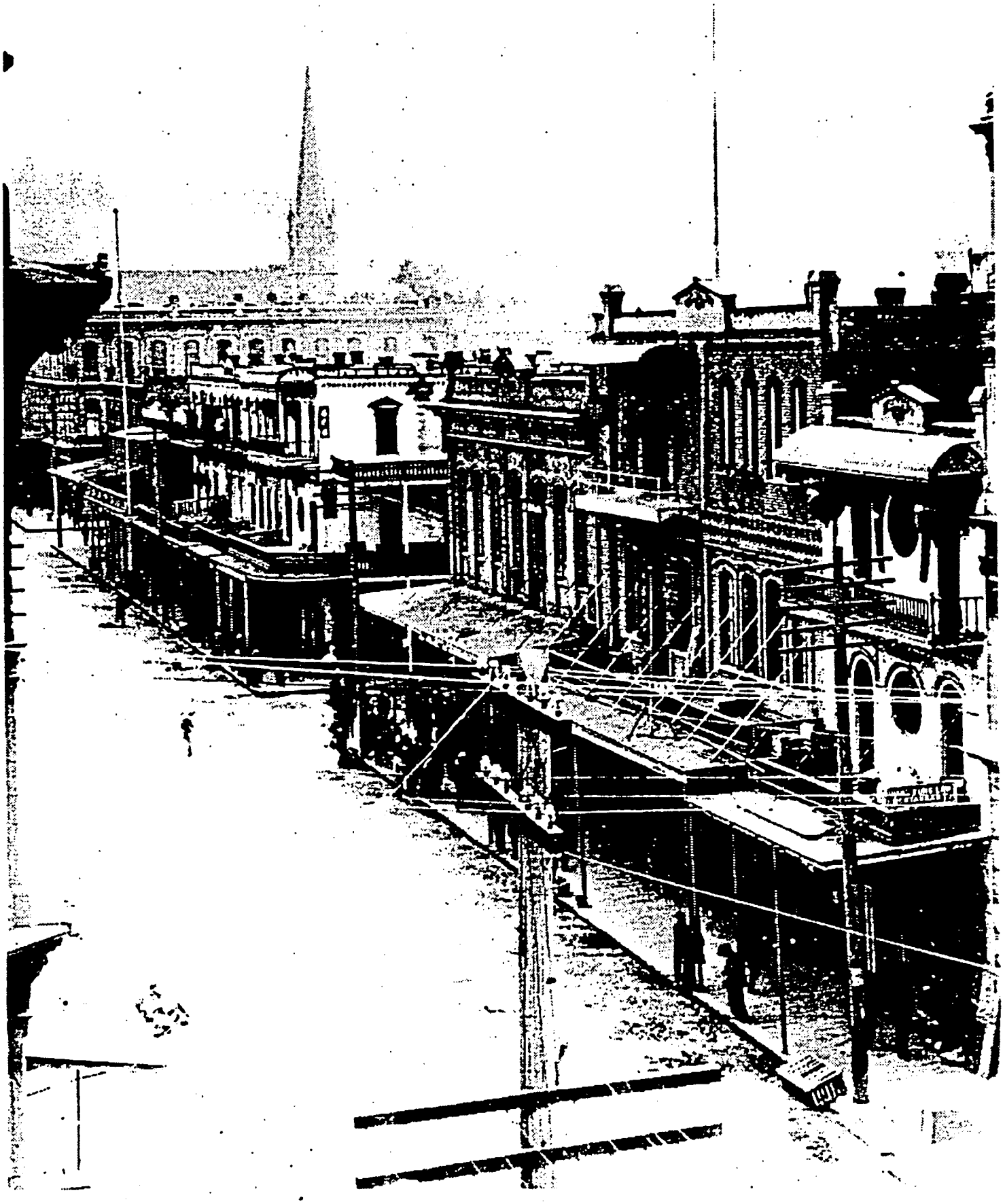


Figure 5. Chinatown in 1890

2.C: Settlement Patterns, 1890-1930

1) Natural Environment

The first generation of American settlers had paid careful attention to the limits set by the natural environment. Their successors in the late nineteenth and early twentieth centuries treated the same environment as something to be manipulated and adapted to urban uses.

In the city's early years, for example, growth had been helped by the proximity of fresh water from the West Hills. Its first water system had utilized Balch Creek in Northwest Portland, bringing what The Oregonian in 1868 called "an inexhaustible supply of as fine mountain water as any city in the world." Despite the newspaper, a second system was soon needed to tap the Willamette River opposite Milwaukie. In the 1880s, however, with the Portland Water Company strapped for cash and the Willamette increasingly suspect as drinking water, the legislature authorized the city to buy out the private company and bring pure water from the mountains. A committee that included Henry Failing, William Ladd, and Henry Corbett chose the Bull Run River on the slopes of Mount Hood and appropriated it for urban purposes. Bull Run water reached the Mount Tabor and Washington Park reservoirs in 1894 and flowed through Portland pipes on the first day of 1895. Although not as long-reaching as Los Angeles's Owens Valley aqueduct, the Bull Run system claimed a regional resource for the city.

Portlanders also manipulated the natural landscape by making new land. Dredge spoils and fill extended the Willamette River shoreline in areas like the mouth of Sullivan's gulch, turning wetlands into buildable real estate. Fill and drainage also evened the topography of Southeast Portland, pushing streams underground and opening new land for development. A careful observer can still find clues to the early drainage patterns from the distribution of older and newer buildings.

The process was even more extensive in Northwest Portland. The Northern Pacific filled Couch's Lake for rail yards. Organizers of the Lewis and Clark Exposition of 1905 kept the larger Guilds Lake clean by pumping in fresh river water while the fair was in progress. Soon thereafter began the long process of filling the lake for industrial land. Much of the soil on which the Guilds Lake industrial district is built was washed down from the West Hills. The Lewis-Wiley Company of Seattle, where hydraulic engineering was well practiced, constructed a system of high pressure hoses and flumes to carve the streets and lots of Westover Terrace out of the hills and sluice the suspended dirt into the shallow lake. By the mid-1910s the first houses speckled the bare hillside. Guilds Lake itself was a drying and settling mud flat by the 1930s, awaiting development during World War II.

Port of Portland dredges had already straightened the Willamette River at Swan Island. The Port shifted the channel from the east side of the island to the west and attached the island itself to the east bank, making another tract available for massive industrialization after 1940.

Railroad development triggered another alteration of the natural landscape by allowing logging to go big time in the higher sections of the metropolitan counties after 1900. The industry's expansion within the metropolitan region was part of the massive relocation of the American lumber business from the Great Lakes to the Pacific Northwest. Industrial logging dwarfed previous land clearance in Portland region. In Washington and Columbia counties, large-scale cutting followed railroads into the Coast Range and on to Tillamook Bay. Loggers and logging railroads also penetrated the lower slopes of the Cascades from the Clackamas and Columbia rivers. Towns like Estacada and Vernonia are essentially products of this early twentieth century timber boom. So were vanished towns like Bridal Veil and Palmer on the flank of Larch Mountain.

2) Industrial/Commercial Land Needs

The central industrial corridor grew northward during this second period of settlement and growth. In 1925, Multnomah County assessor Henry Reed estimated that 70 percent of the city's industry was located north of the Broadway Bridge.

Public agencies played an important role. The waterfront at the start of the new century was firmly in the hands of private wharf owners. Major docks were operated by the railroads, which were unenthusiastic about promoting maritime trade. Reformers set up the Commission of Public Docks in 1910 to break the private monopoly. The Commission's new public terminals began to draw the shipping business downstream (the first was Municipal Dock No. 1 in 1914). Manufacturing moved the same direction in search of large tracts of affordable land in Linnton and St. Johns, which were annexed to Portland in 1915 to enable the Docks Commission to improve the St. Johns municipal dock.

A new industrial district also appeared along the south shore of the Columbia River. The "North Bank" railroad (now part of the Burlington Northern system) completed its Columbia River line and bridge in 1907. Swift and Company took advantage of the new railroad by opening a huge packing plant where 1500 workers processed livestock from eastern Oregon and Washington. Another dozen large factories quickly followed. Swift also built the community of Kenton to house its employees. The neighborhood business district ran along Denver Avenue, with housing for managers on one side of the avenue and housing for workers on the other.

The same period brought a bigger, brighter, and presumably better downtown. Portland's first downtown of masonry buildings with cast-iron facades paralleled the river on First and Second and focused on the New Market Theater (1872), a combination of drive-through market and meeting hall. The twenty cast iron buildings that still survive (out of perhaps two hundred) now form the core of the Yamhill and Skidmore-Old Town historic districts. A new downtown began to form between Third and Broadway after the disastrous flood of 1894 reminded property owners of the merits of high land. New electrified trolley lines poured thousands of workers and shoppers into the city center, creating such congestion that the city's first traffic officer was stationed at Third and Washington in 1901. Between 1900 and 1930, the downtown core grew from 15 acres to 120 acres. The typical buildings were steel-frame skyscrapers of eight to twelve stories, surfaced with bright glazed tile. The contemporary downtown still uses these terra cotta buildings of the early twentieth century. Of particular note are the early department stores--especially Meier and Frank (built in three phases) and Olds and King (now The Galleria).

3) Passenger Transportation

It was the addition of rail transit to the new bridges that transformed farms and orchards east of the Willamette River into a set of new neighborhoods between 1889 and 1912. Electrically powered trolleys replaced horsecar lines in a burst of new investment in the 1890s. A series of mergers created the Portland Railway, Light and Power Company in 1906. Four years later, PRL&P was operating 161 miles of streetcar line, carrying 16 million passengers, and sending a thousand streetcars a day across the Willamette River bridges.

The streetcar era created what we now call "traditional neighborhoods"--large expanses of single family houses on individual lots with local services along major streets. One real estate boom stretched from 1887 to 1893. After severe economic depression in the mid-1890s, the Lewis and Clark Exposition ushered in a second and even more exciting boom from 1905 to 1912. With the impetus of the World's Fair and the development of agriculture and stock raising in the inland empire of the Columbia Basin, the population with the Portland city limits TRIPLED from 90,000 in 1900 to 264,000 in 1916. Population in the "new" east side neighborhoods passed west side population in 1906; it was more than twice the west side by 1916. Over the decade, east side population exploded from 55,000 to 178,000. To put that level of growth in perspective, Washington County would have to leap from 312,000 people in 1990 to 1,000,000 in 2000.

The streetcar neighborhoods of 1890-1915 developed in two broad growth corridors. One extended directly eastward from the established business core, following trolley lines that crossed the Morrison, Madison (Hawthorne), and Burnside bridges into what are now the Buckman, Sunnyside, Kerns, Mount Tabor, and

Richmond neighborhoods. The second corridor extended north from the points where the Steel Bridge and later the Broadway Bridge touched a long westward curve of the Willamette River. Growth was oriented to a railroad route to Woodlawn and the Columbia River crossing and to streetcar lines along Mississippi and Albina streets, Williams avenue, and what was then Union Avenue. Figure 6 shows the west side and waterfront orientation of Portland in 1889. Maps 4, 5, and 6 show the areas of developed east side land by 1910, the streetcar routes of 1912, and streetcar ridership in 1920.

The streetcar system was also responsible for "micro-level" patterns in land development. In Southeast Portland, the northern half of Ladd's Addition developed before the southern half because of proximity to the Hawthorne Street trolley line. In the 1990s, the contrast is still visible between the larger "old Portland" style houses north of Ladd's Circle and the 1920s bungalows to the south (Map 7). We can similarly compare the density of commercial structures that developed along streetcar arteries (Hawthorne, Belmont, Sandy, Union, Killingsworth) with the much more scattered development along non-trolley streets like Division. Major trolley streets experienced dramatic transformations in the first quarter of the century--from residential streets with retail clusters at major intersections to continuous strips of two-story and three-story commercial buildings (Figure 7).

Even more impressive were two secondary "downtowns" along Grand Avenue and Russell Street. They had developed to serve independent East Portland and Albina and flourished even after consolidation in 1891. Indeed, retailers W. P. Olds and Aaron Frank both noted that it took fifteen years after the merger for eastsiders to get into the habit of west side shopping.

The surviving core of the Russell Street Historic Design District represents early commercial development that served the workers and businesses of the early Albina waterfront as well as residents of what is now the Eliot neighborhood. According to data compiled by the Pacific Telephone and Telegraph Co., it was the third largest commercial district in the city in 1916. The Hill Building at the intersection of Russell and Williams defined the heart of the district from the 1890s into the 1960s. When the bulldozers arrived a couple decades ago, the Portland Development Commission's gesture was to relocate the building's cupola to Dawson Park as an architectural joke.

Southeast Grand Avenue was the second largest commercial district. Trolleys along Grand linked the southeast bridges and streetcar lines. Major commercial buildings and community institutions, including the influential East Side Commercial Club, spread outward from the intersection of Grand and Morrison. Residents of Southeast Portland could transact much of their business along Grand without

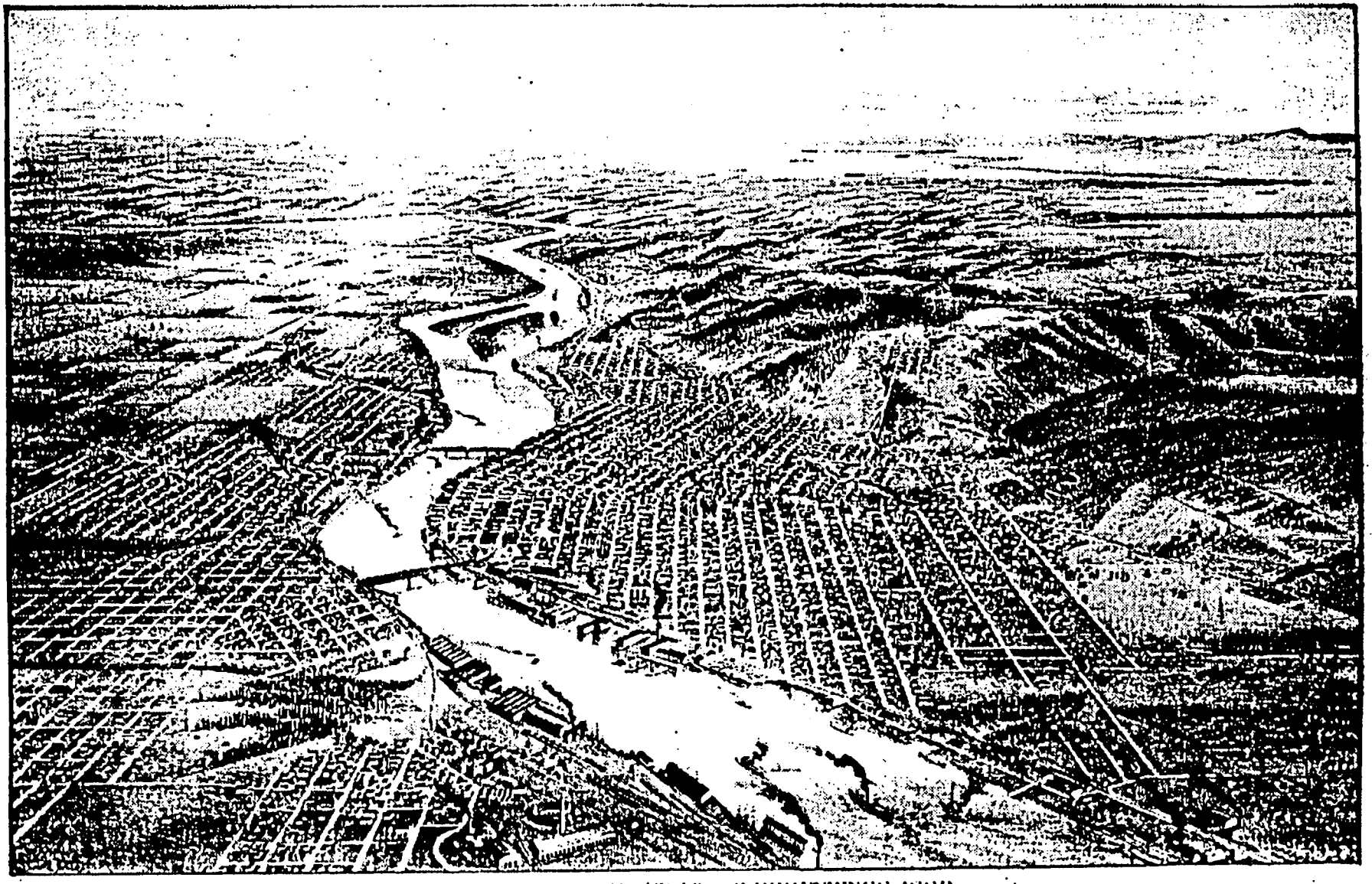
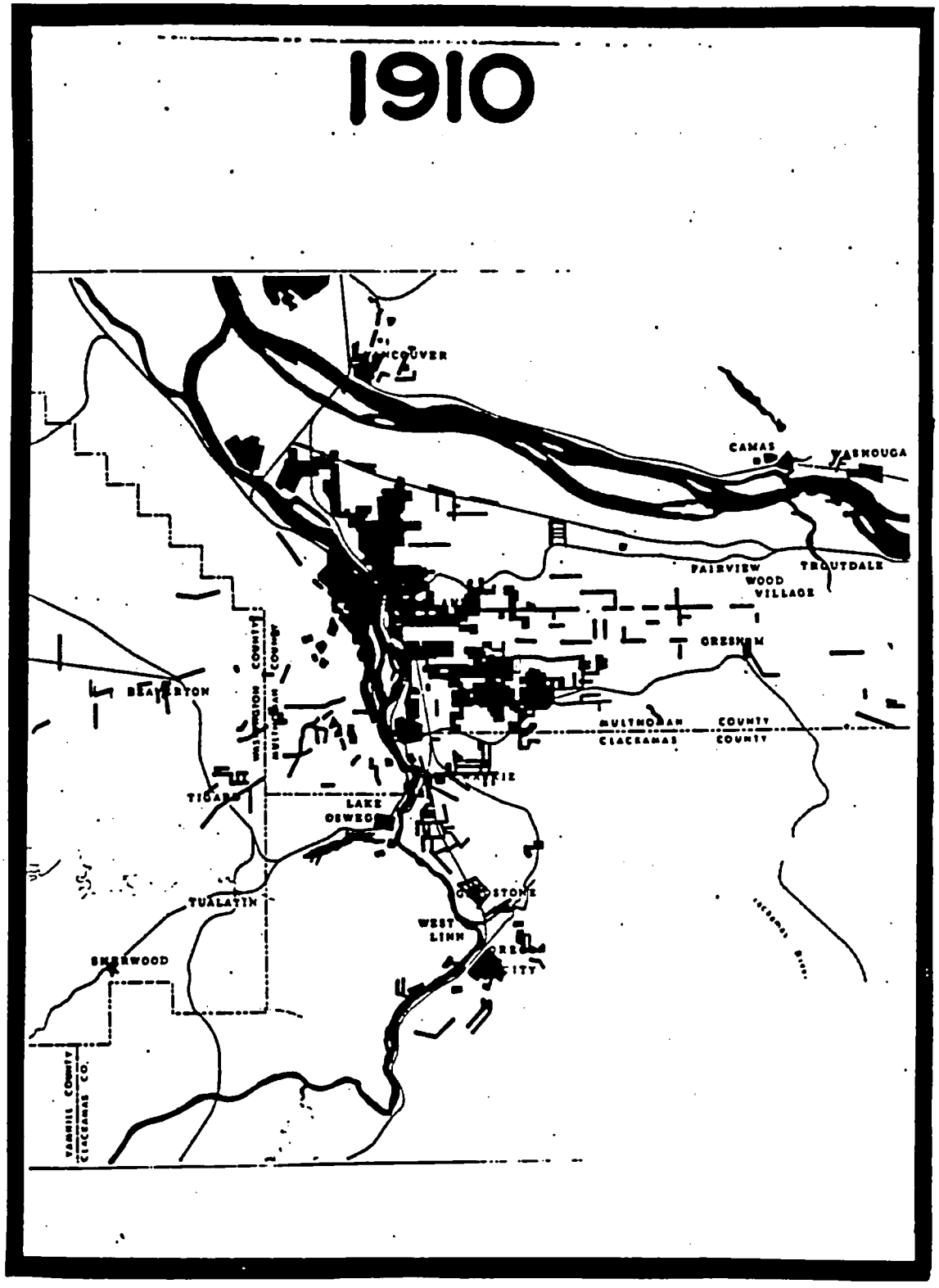
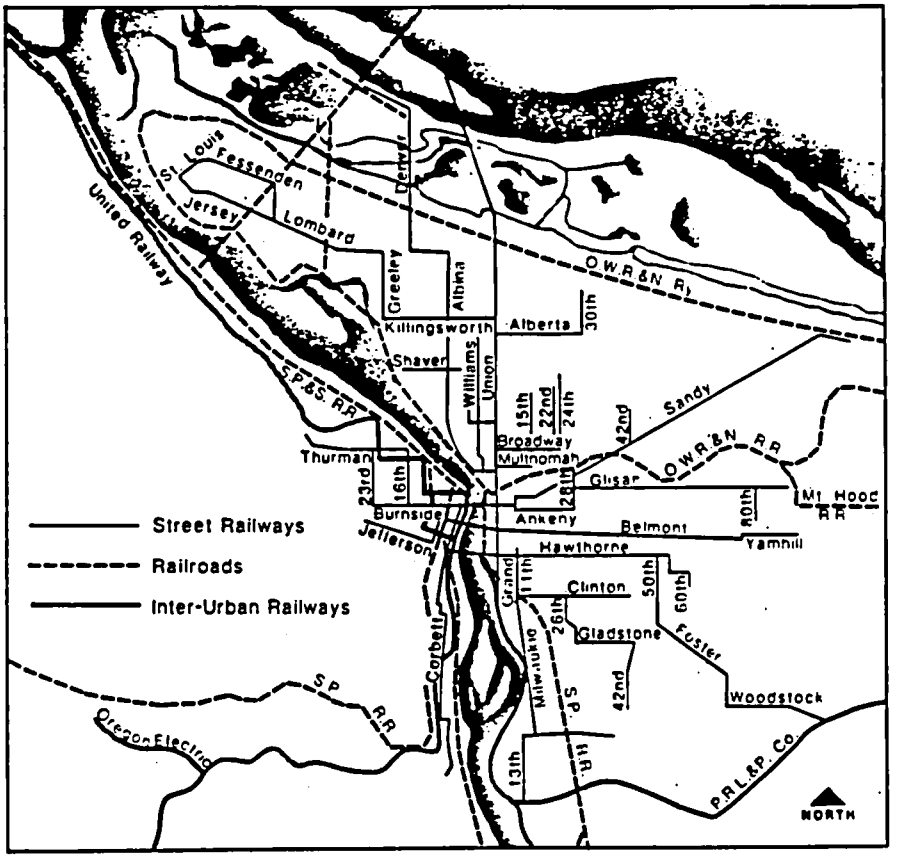


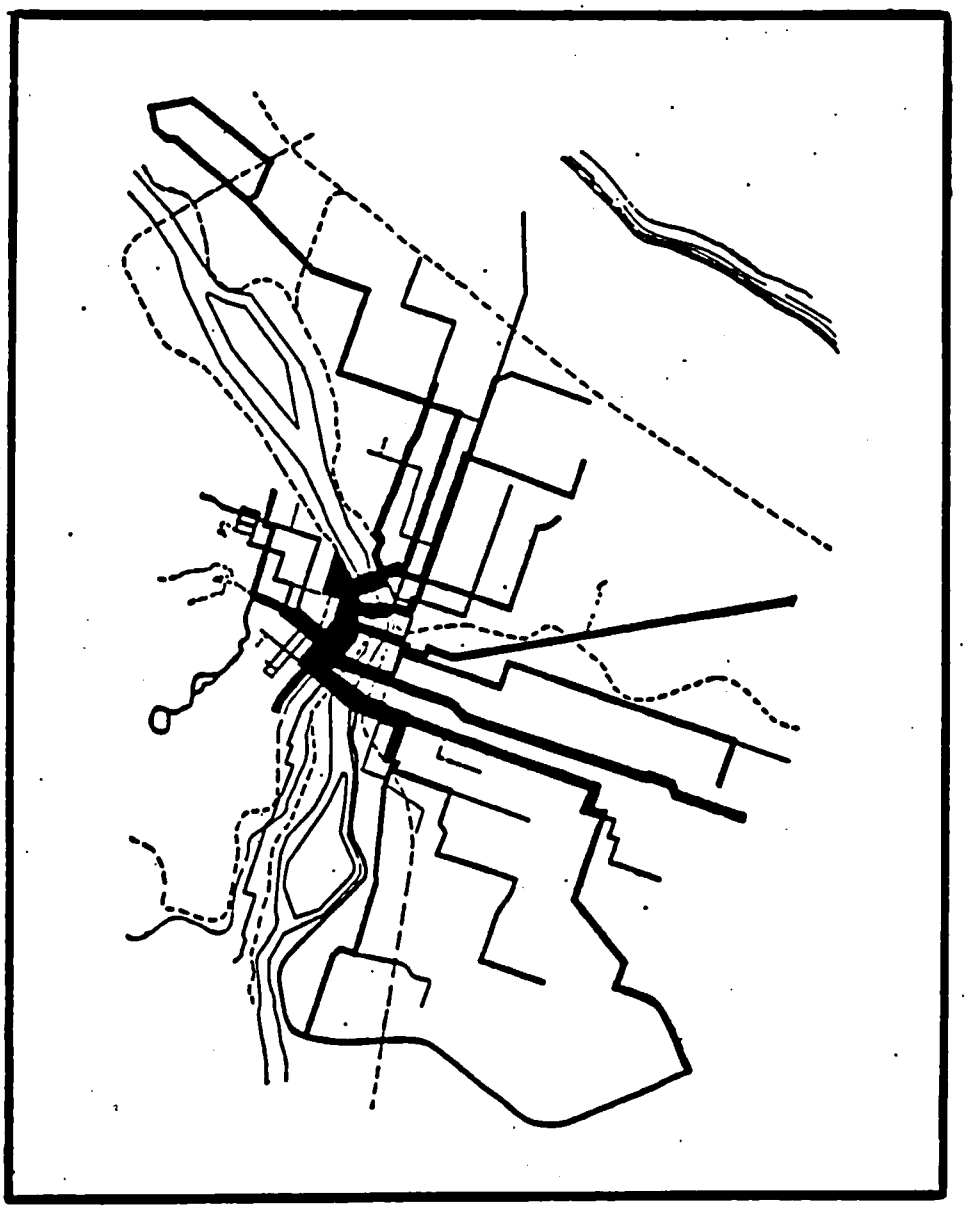
Figure 6. Portland in 1889



Map 4. Developed Land in 1910



Map 5. Streetcar Lines in 1912



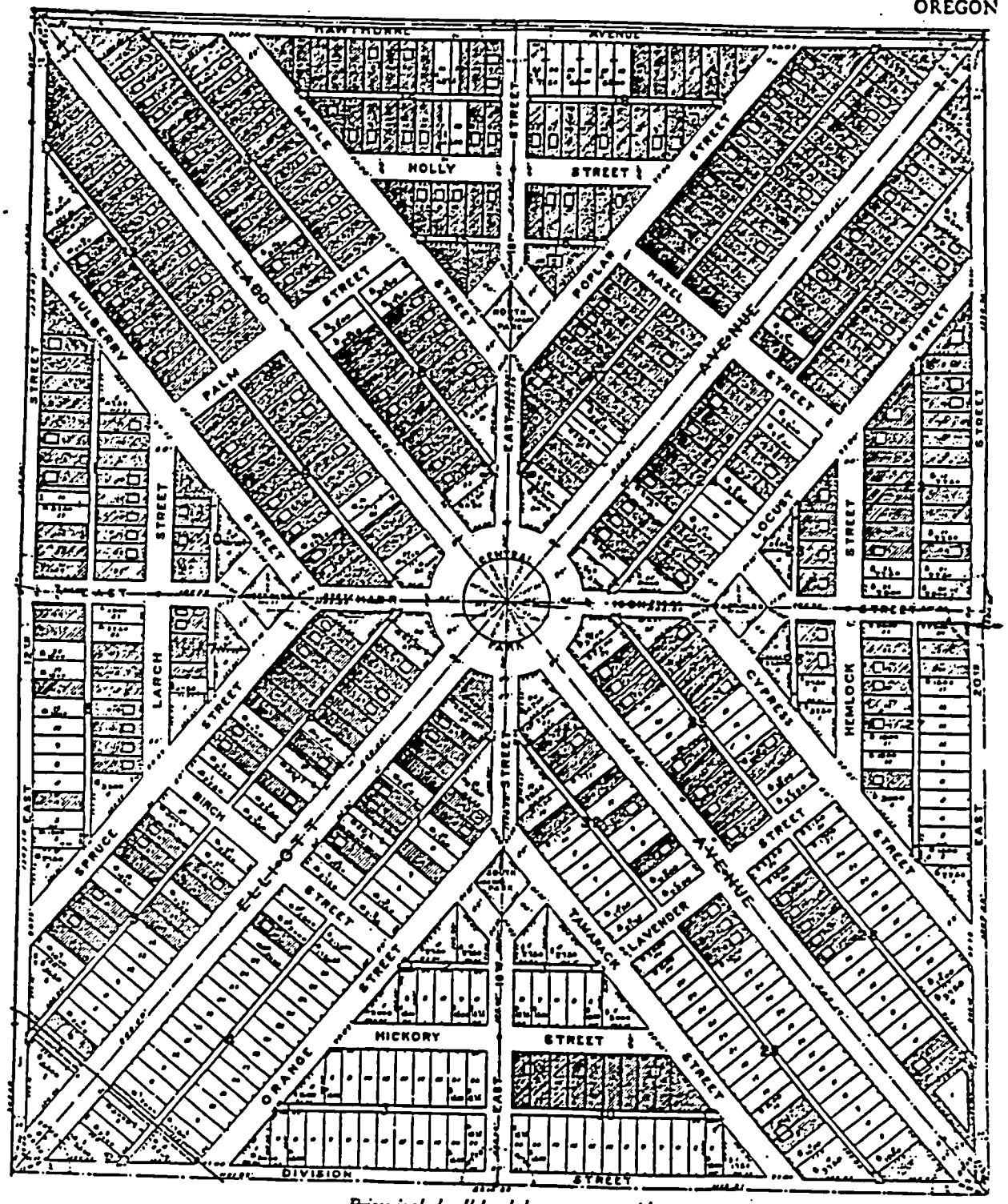
Map 6. Streetcar Ridership in 1920

LADD'S ADDITION

WIDE PARKINGS
ASPHALT STREETS

a residential section for cultured people

PORTLAND
OREGON



Prices include all bonded assessments paid

MAY 23, 1922

LADD ESTATE COMPANY
OWNERS

OFFICE
246 STARK ST.
BROADWAY 5754

Map 7. Development of Ladd's Addition

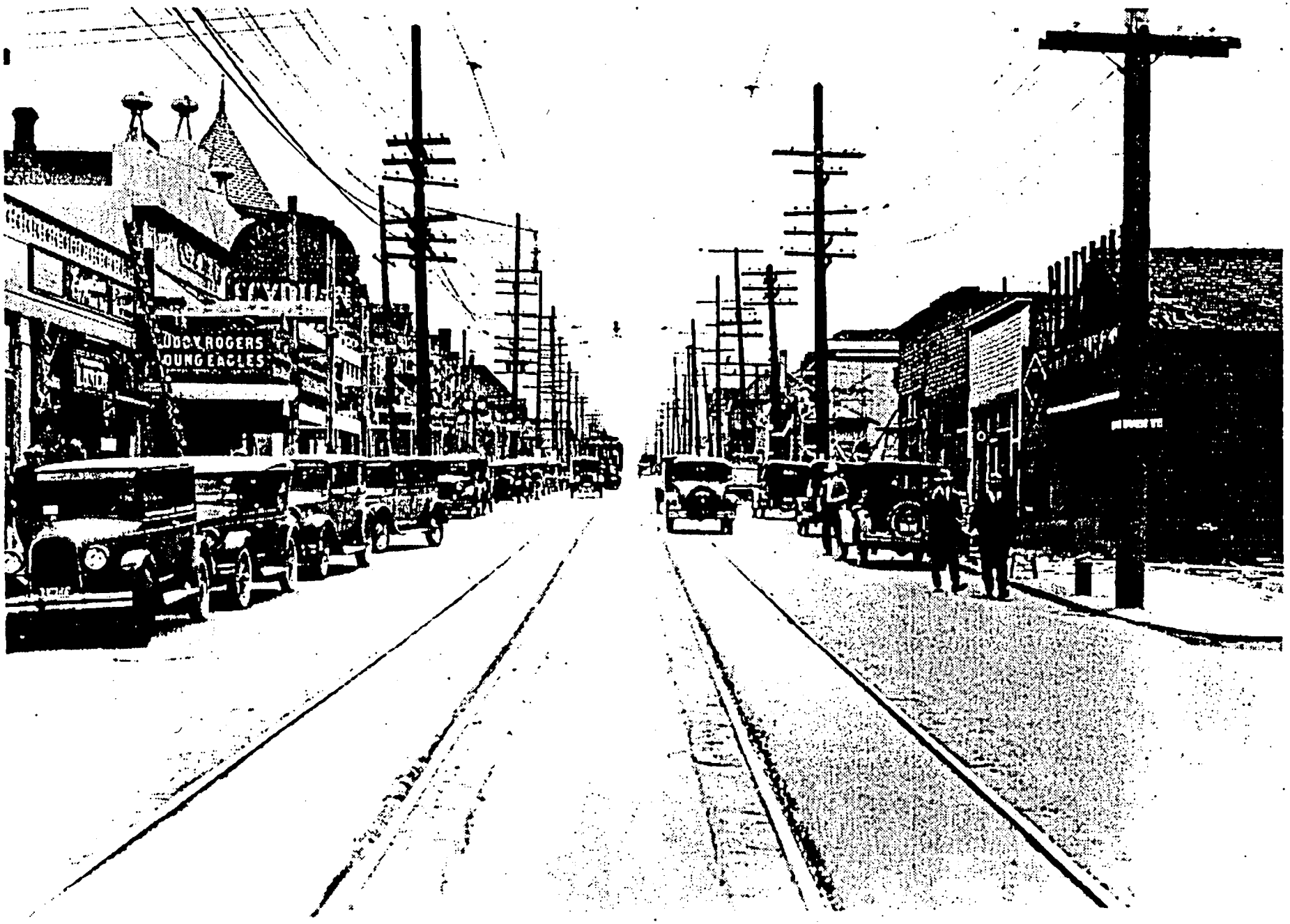


Figure 7. Union Avenue in the 1920s

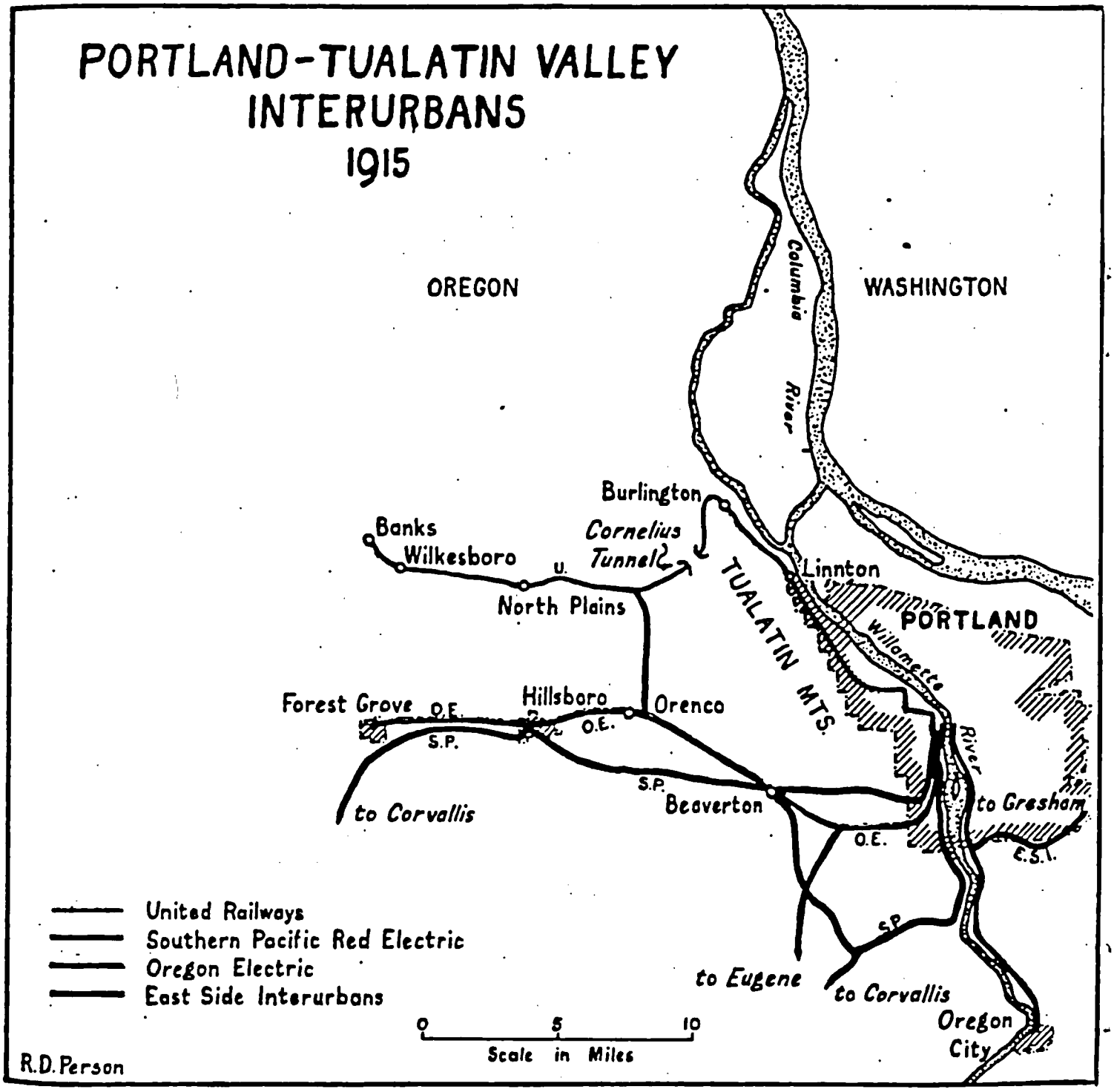
needing to venture downtown. The Weatherly Building--the only east side skyscraper until the 1960s--symbolized the viability of the business district through the 1920s.

The areas between the two corridors developed most intensively in the 1920s. The city of Portland added 25,000 new houses during the decade, particularly in the West Hills, North Portland, Rose City Park, and the Powell-Woodstock area. After acrimonious local debates, much of this territory (Council Crest, Rose City, Eastmoreland, Woodstock) had agreed to annexation in 1906-11 to secure city water and better streetcar service. New high schools of 1920s--Franklin, Roosevelt, Grant--are visible monuments to the outward movement of population just as high schools built in the 1950s (Centennial, David Douglas, Sunset), 1960s (Putnam, Aloha), and 1970s (Lakeridge, Glencoe) are monuments to postwar suburbanization.

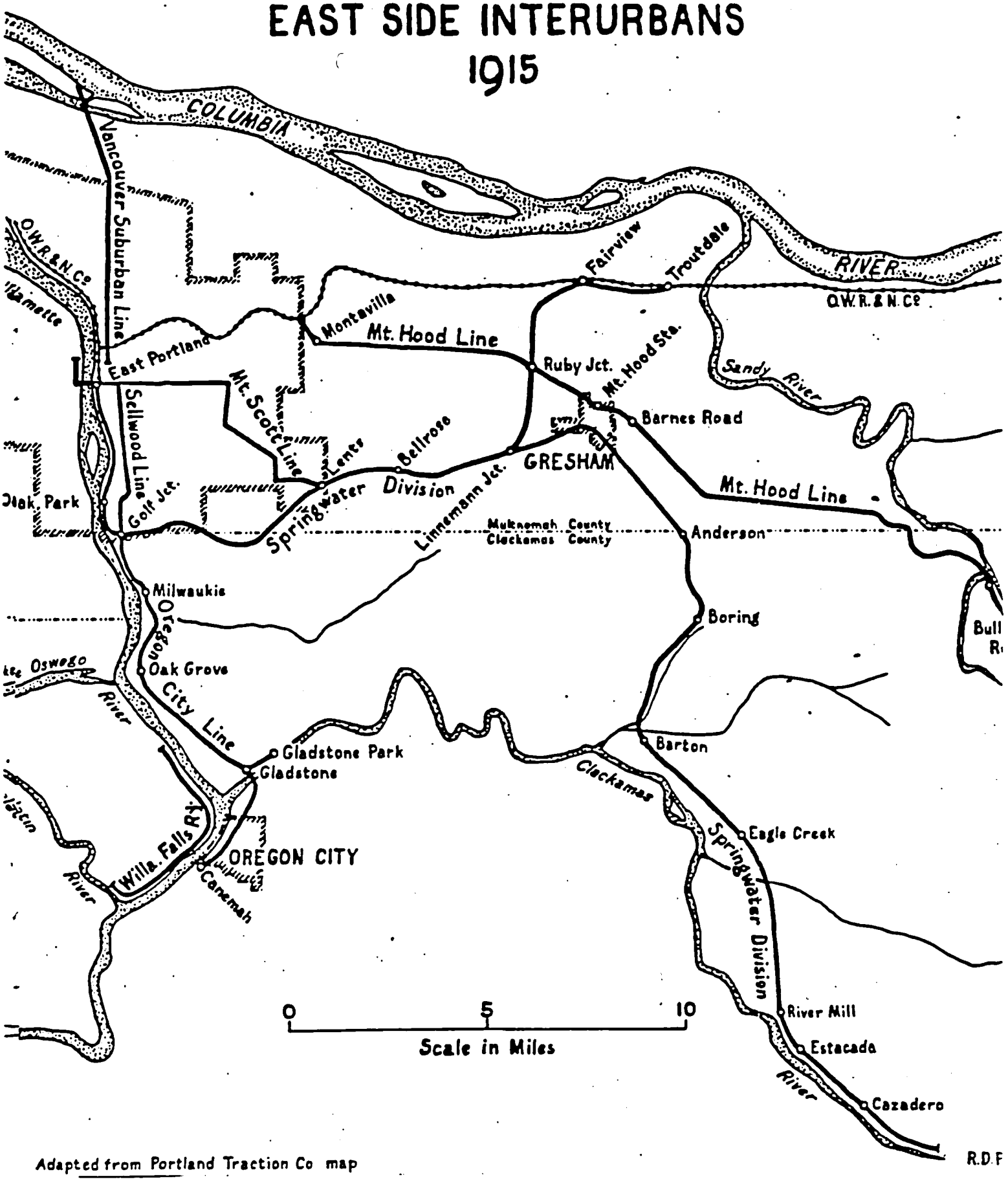
Beyond the range of the streetcar system--approximately five miles from Fifth and Morrison--early twentieth-century residents could ride electric interurban trains (Maps 8, 9). At the peak of the interurban system in 1915, the suburban division of Portland Railway, Light and Power served Troutdale, Gresham, Boring, Estacacda, and Oregon City. Oregon Electric, a tiny cog in James J. Hill's great railroad empire, ran one line to Beaverton, Hillsboro, and Forest Grove and a second through Tualatin and Wilsonville to Salem. The Southern Pacific served Garden Home, Beaverton, and Hillsboro before swinging south to McMinnville and Corvallis.

The 5 million interurban riders in 1915 represent the first integration of Washington, Multnomah, and Clackamas counties into a single system of everyday interaction. The three counties had been tied through economic exchange since the 1850s. In the new century, the interurban trains added the possibility of easy personal trips for special occasions--shopping trips and theater excursions into the city balanced by weekend visits to rural parks and amusement centers like Canemah in Clackamas County. The region still awaited the age of the automobile for the third stage of expanded daily commuting.

The most important towns along the interurban lines were the long-established county seats (Table 1). Oregon City remained the most prominent center between Portland and Salem. Hillsboro and McMinnville reflected the prosperity of Willamette Valley agriculture (as did comparably-sized Newberg). The booming development of St. Helens was a response to the expansion of the Coast Range timber industry. Across the Columbia, the rapid growth of Vancouver, Camas, and Washougal also responded to the wood products industry. Scattered around the five Oregon counties in the 1920s were a set of secondary towns with populations between 1000 and 2000, including Gresham, Milwaukie, Gladstone, West Linn, Oswego, Sheridan, Forest Grove, Beaverton, Vernonia, and Rainier.



Map 8. Interurban Lines: West Side



Adapted from Portland Traction Co map

Map 9. Interurban Lines: East Side

Table 1

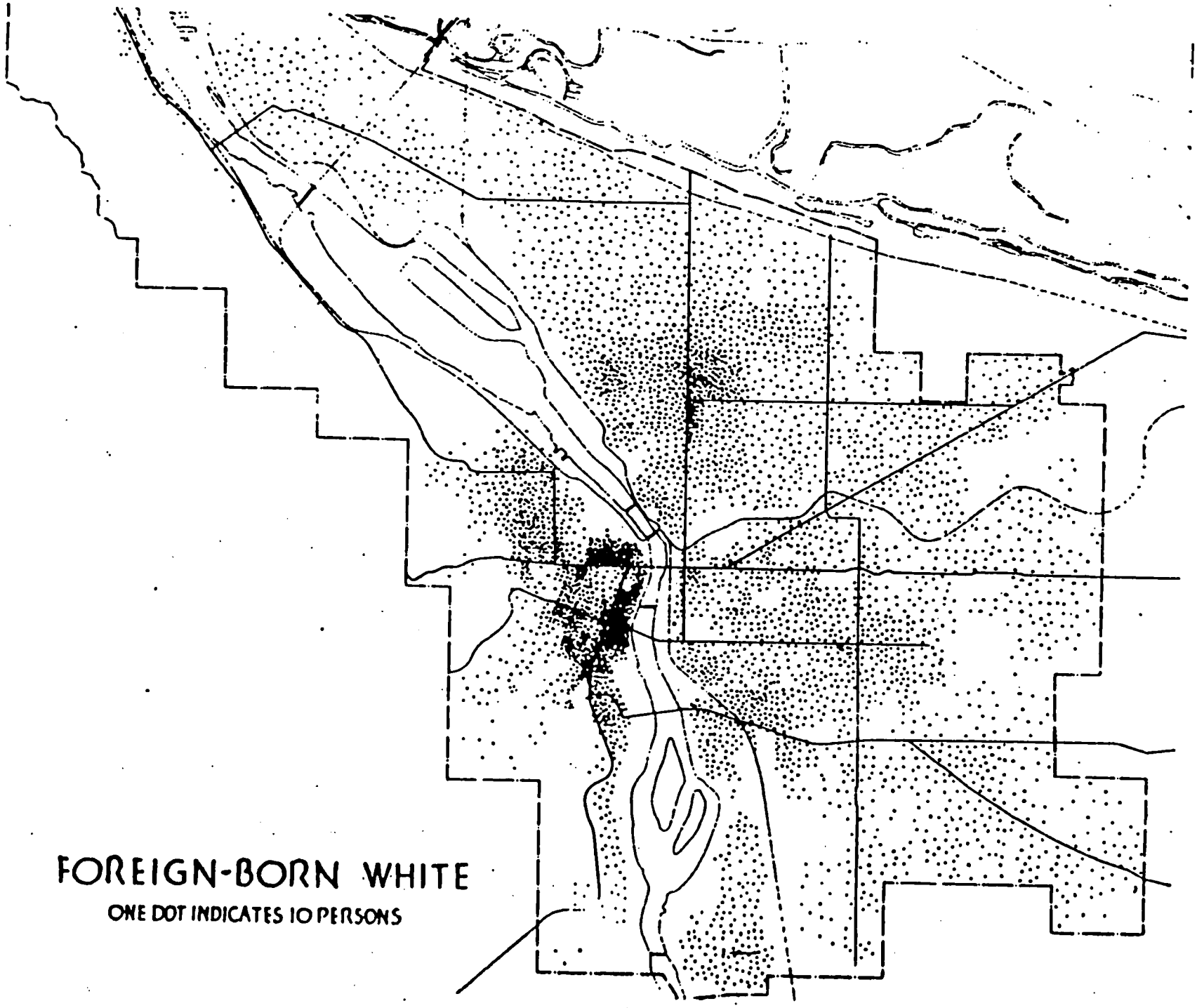
Population of County Seats: Portland Metropolitan Area

	1890	1910	1930
Vancouver	3,545	9,300	15,766
Oregon City	3,062	4,287	5,761
Hillsboro	[not reported]	2,016	3,039
McMinnville	1,386	1,651	2,917
St. Helens	220	742	3,994
Portland	46,385	207,214	301,815

Over the same span from 1890 to 1930, county population growth shows the relative stability of farming as an economic base compared with rapidly growing logging and with urban functions. Multnomah was the fastest growing county, with a phenomenal population growth of 352 percent. Next were Columbia County, with growth of 286 percent, Clark County with 244 percent, and Clackamas County, with growth of 203 percent. All three had substantial new logging and wood products industries. Slower growing were the farming counties of Washington (153 percent increase) and Yamhill (106 percent increase).

4) Community Values

The middle and upper middle class Portlanders of the new east side and West Hills neighborhoods carefully set themselves apart from immigrant neighborhoods closer to the industrial core. The crescent of lower land around the central business district and the inner tier of east side neighborhoods housed the overwhelming majority of Portland's racial minorities and its foreign-born, particularly in three clusters in Northwest, Southwest, and North-Northeast (Map 10). In the early years of the century, these were Portland's closest equivalent of the large ethnic communities of lower Manhattan or Chicago's west side. No single European ethnic group provided the majority of residents in any one neighborhood at the start of the century. However, Germans set the tone for Goose Hollow, Irish and then Slavic immigrants for Slabtown in Northwest Portland, Scandinavians, Finns, and Poles for North Portland, German-Russians in the Sabin district, and Italians for Brooklyn near the Southern Pacific rail yards.



Map 10. Foreign Born Population in 1930

We can sense the vibrancy of these ethnic neighborhoods from the public buildings and churches that have survived the weight of time. St. Patrick's Church in Northwest Portland dates from 1891, serving working class Irish at the turn of the century and Croatians in the 1920s and 1930s. The expansion of the Kaiser health complex on North Interstate Avenue forced the moved of the old Finnish community hall. Nearby was St. Stanislaus Church with its congregation of Polish Catholics. Many Northeast Portland churches passed from one ethnic group to its successor. For one example, the Free Evangelical Brethren German Church (1904) became St. Nicholas Russian-Greek Orthodox in 1930 and then passed to an African-American congregation.

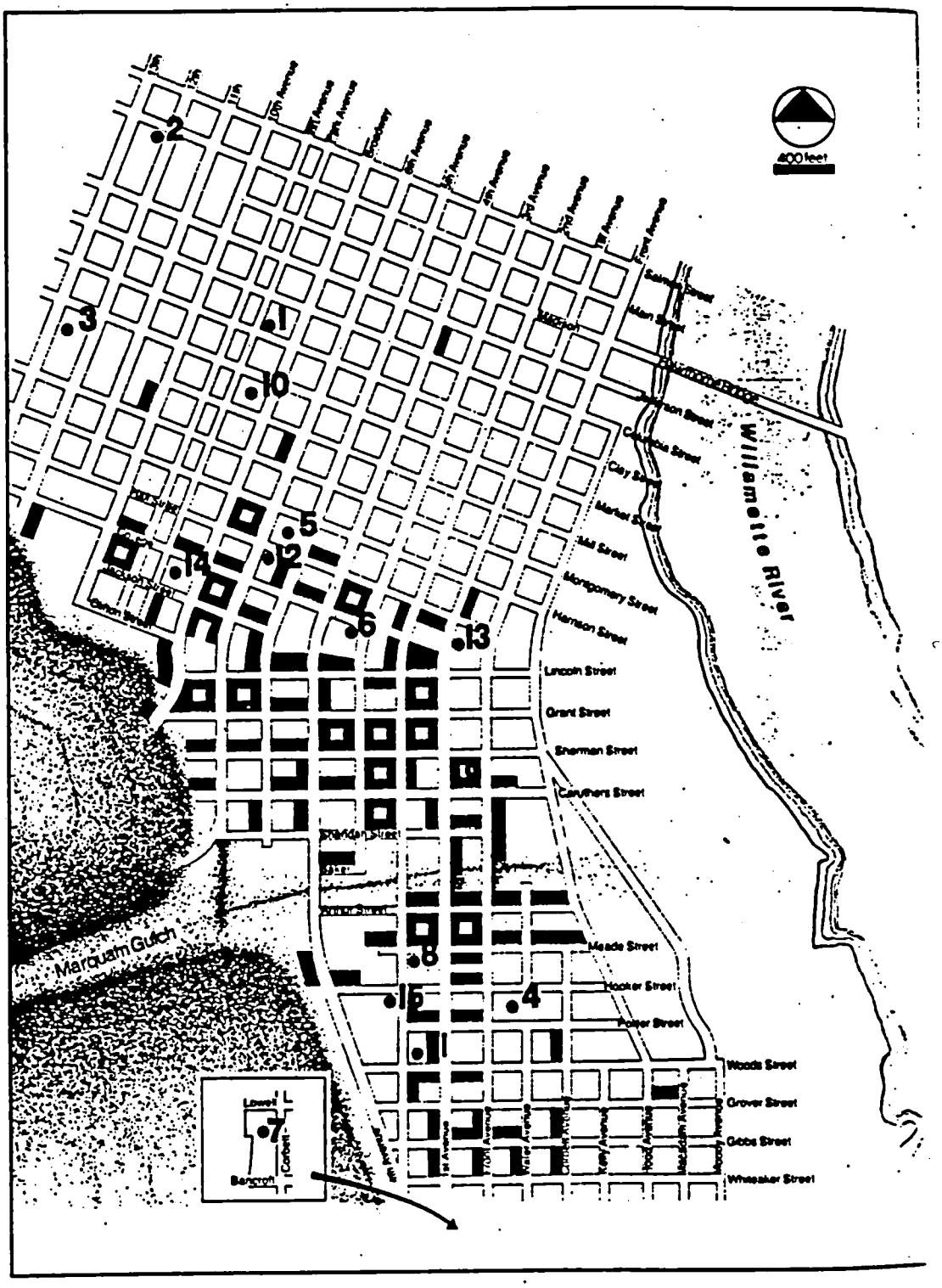
One of the best remembered immigrant neighborhoods is South Portland, a fraction of which survived urban renewal and freeway building as the small Lair Hill neighborhood just southeast of the Portland State University campus. From the 1890s to the 1940s, the area between the River and the South Park Blocks and southward from Clay Street was an immigrant community. Its two anchors were Failing School and Shattuck School, the gateways for success in the new world. The housing was a mixture of apartments and small "workingmen's cottages." Italian-Americans clustered particularly in the blocks near the river, where a visitor could find the Sons of Italy and the Christoforo Columbo Society, St. Michael's Church and Italian language movies. Jewish immigrants from Poland and Russia were especially concentrated a few blocks upslope between Fourth and Broadway and served by the social settlement workers at Neighborhood House (Map 11).

Early twentieth-century real estate developers did not fully trust the open market to maintain social distinctions among neighborhoods. They turned instead to restrictive covenants. Written into deeds, these covenants usually specified a minimum house value, limited non-residential uses, and excluded non-whites as renters or owners. Promoters for Alameda in 1910 claimed "magnificent views" of the city, river, and snow-covered mountains and described it as "a most perfect example of the ideal residence park." Every street would be supplied with hard pavements, cement walks, curbs, water pipes, gas mains, sewers, and street lights. Buyers of Alameda's choicest lots were required to invest at least $3500 in their house. "All homes must be built twenty feet back from the property lines. No business houses were allowed except on certain lots at the extreme corner of the tract. Apartment houses, flats, hotels, and stables are taboo--likewise people of undesirable colors and kinds." The last phrase meant Asian-Americans and African-Americans. Eighty years later the racially restrictive covenants are gone--declared unenforceable by the U.S. Supreme Court in 1948--but the hotels, stables, and businesses are still banished from the green-canopied streets.

SOUTH PORTLAND

Jewish Population and Major Institutions in 1920

1. Ahavai Sholom
2. Beth Israel
3. B'nai B'rith Building
4. Failing School
5. High School of Commerce
6. Jewish Old Peoples Home
7. Jewish Shelter Home
8. Kesser Israel
9. Linath Hazedek
10. Lincoln High School
11. Neighborhood House
12. Neveh Zedek Talmud Torah
13. Shaarie Torah
14. Shattuck School
15. South Portland Library



Map 11. South Portland as a Jewish Neighborhood

5) Public Policy

The first fifteen years of the twentieth century gave Portland the outlines of its city park system. A new Parks Commission under the leadership of Thomas Lamb Eliot secured a park plan from the famous landscape architecture firm of Olmsted and Sons. Several city parks were developed and landscaped in accordance with this plan under the direction of E. T. Mische. These are also the years in which Portland was going wild for roses, both in city parks and in private gardens; the Portland Rose Society and the Rose Festival are turn-of-the-century phenomena. A typical product of this era was Peninsula Park in North Portland, with its sunken rose garden and bandstand. In the 1910s it was also Portland businessmen and Multnomah County politicians who turned the dream of a scenic highway along the Columbia River into a reality and began to define an urban "claim" on the scenic resources of the surrounding mountains that would culminate in 1986 with the Columbia River Gorge National Scenic Area.

During the decade of booming growth that followed the Lewis and Clark Fair, Portland businessmen commissioned Chicago architect and planner Edward Bennett to prepare a comprehensive plan for the development of the city. Bennett proposed a grand and cosmopolitan city that imitated Paris, Vienna, and Budapest. He suggested great diagonal boulevards cutting across the city; three civic centers to concentrate governmental, cultural, and transportation activities; and uniform styles of downtown building.

Bennett projected a tenfold increase in Portland's population to a total of 2 million. Failing to allow for the decentralizing effects of automobiles, he expected that population to be accommodated within an area roughly equivalent to the present city of Portland. Although he did not directly address questions of housing, it is likely that he expected most of the new Portlanders to live in row houses and apartments at the same density as Chicago's near north side or Boston's Back Bay. The city's voters approved the plan in an extraordinary referendum in 1912 but soon forgot its grand schemes when a recession undercut the real estate market.

Bennett's grand ideas were followed by more practical land use controls. Portland's business leadership first proposed land use zoning in 1919-20 as response to uncontrolled wartime growth. Voters narrowly defeated the plan, with most middle class districts in favor but working class districts opposed (because of the fear that zoning would prevent realizing economic return from close-in property). A second try succeeded in 1924, dividing the city into four zones. One was limited to single-family houses; a second allowed apartments; a third allowed businesses; and a fourth industrial zone allowed virtually any activity.

The distribution of the single-family and apartment zones clearly reflected prevailing attitudes about neighborhood "quality." The apartment zones covered the inner west side, inner Northeast, and selected neighborhoods in inner Southeast. The effects are obvious today in the mix of housing types in neighborhoods such as Buckman, Sunnyside, Northwest, Kerns, and the southwestern quadrant of Irvington.

2.D: Settlement Patterns from 1930 to the Present

A) Natural Environment

Portland area residents had a chilling reminder of the power of natural environment with the Vanport flood of 1948. The wartime community of Vanport had been the country's single biggest emergency housing project during World War II. Funded by the federal government and built by Kaiser, Vanport rose in 1942-43 on the Columbia River floodplain where Delta Park is now located. It eventually had 10,000 apartments housing nearly 50,000 residents. After 1945, Vanport housed veterans and, increasingly, African-Americans. A flood on Memorial Day, 1948, destroyed Vanport and forced several thousand African-Americans to crowd into Albina. From the point of view of land use planning, Vanport is an ironic counterpoint to the Lewis and Clark Fair--another vast waterfront project that has vanished with scarcely a trace.

Another reminder of the residual power of the natural environment came in 1968-69. Vigorous real estate development in Washington County overburdened limited sewer systems and installed far too many septic tanks for public health. The state of Oregon imposed an eighteen-month moratorium on new housing in large portions of the county, bringing the boom to a sudden halt. It was an expensive reminder of the need to pay attention to the carrying capacity of the natural environment.

The natural environment has also reappeared as a cultural constraint as well as a physical limitation on Portland area settlement patterns. One of the essential goals of Oregon Senate Bill 100 (1973), which established the Land Conservation and Development Commission to oversee a system of statewide planning goals, was to preserve farm and forest land. The fundamental intent of the program is to protect productive farm and forest lands from metropolitan sprawl; the secondary goal is to promote compact, equitable, and efficient patterns of urban growth. The key tool is the definition of urban growth boundaries around cities and towns. UGBs presumably contain adequate land for approximately twenty years of urban development and are subject to periodic reevaluation and extension. They create separate markets for urbanizable and protected land. When adequately enforced, they tend to promote compact development.

2) Industrial/Commercial Land Needs

In the middle decades of the twentieth century, track-based manufacturing and warehousing facilities gave way to truck-based buildings and locations. The rail-oriented warehouses and loft buildings of 1900-1920 in the so-called Pearl district or the Central Eastside contrast with an auto-oriented facility like the new factory that

Jantzen built on Northeast Sandy Boulevard at the end of the 1920s. The descendants of Jantzen are the dozens of industrial parks in Washington County and along I-205 and the new facilities of auto-dependent employers such as Intel and Tektronix.

The renewal of Portland as an international port in the 1970s and 1980s, after relative decline in the 1960s, continued land use trends first identified in the 1910s. Modern ports are great consumers of land, especially for container yards and automobile processing. To find that land, port functions have moved steadily downstream and onto the Columbia River--to Terminal 4, Terminal 6 and Rivergate, the Port of Vancouver, and perhaps in the future to Hayden Island. The relocation of the airport from its prewar location on Swan Island to the Columbia South Shore is a parallel example of modern transportation's land-hunger.

The flip side of these changes has been the abandonment of older industrial facilities located inland from the Steel Bridge. Some of the structures have been recycled for uses that range from retailing to offices to artists' studios and apartments. Many others have disappeared entirely in favor of supermarkets or upmarket housing. It is this context of deindustrialization that makes the survival of a viable Central Eastside Industrial District particularly remarkable.

Industrial development in Washington County has created a modern equivalent of nineteenth-century neighborhoods like Albina or Kenton, where workers clustered close to new jobs. Nearly 61 percent of Washington County residents worked within the county in 1990 rather than commuting to the central city or to other outlying job centers (for Clackamas County the comparable figure is only 46 percent). There is also an ethnic/immigrant dimension to the industrialized Sunset Corridor. Washington County--particularly in the Beaverton area--houses a modern version of nineteenth-century immigrant communities. The county's Asian-origin population shot upward from 5000 to 14,000 during the 1980s, many of them attracted by Silicon Forest jobs. Inner Washington County now has important concentrations of Korean, Vietnamese, and other Asian-American business and institutions.

3) Passenger Transportation

Between 1915 and 1930, the automobile changed from an expensive piece of recreational equipment to a middle class necessity. Auto registration in Multnomah County grew from 10,000 in 1916 to 36,000 in 1920 and 90,000 in 1930, when there was one car for every 3.8 residents. In affluent neighborhoods, two-thirds of the households owned cars. Motorists had to learn a new set of social rules (not to triple park downtown, not to turn onto a busy thoroughfare without slowing down). The city government had to adopt traffic regulations, widen streets such as West Burnside,

and install new devices like the first parking meters and early two-bulb traffic signals with warning bells.

The impacts of the automobile spread inward from the periphery. Interurban passenger ridership began to fall at the time of World War I as farmers and farm towns switched to Model-Ts. Streetcar use began to fall sharply ten years later, in 1927-28, despite efforts to upgrade service. The Ross Island Bridge in 1927 was first to be built without streetcar tracks. The Sellwood and St. Johns bridges from the start were auto-oriented facilities that served substantial cross-town traffic with no interest in downtown (Figure 8). Only gasoline and tire rationing during World War II would interrupt the decline of streetcar ridership.

The shifts in preferred transportation modes began to change shopping habits. Fred Meyer and Sears were the first major retailers to establish "suburban" stores outside the downtown core before World War II. "First generation" shopping centers opened in the new suburbs in the 1950s, followed by the unusually sited Lloyd Center. When Mayor Terry Schrunk and Governor Mark Hatfield watched 700 homing pigeons explode into the morning drizzle at the center's dedication on August 1, 1960, the city of Portland could boast (briefly) of the nation's largest urban shopping mall, aimed at 600,000 customers within a 20 minute drive. Jantzen Beach followed in 1972, Washington Square in 1974, Vancouver Mall in 1977, and Clackamas Town Center in 1981, completing the circle of superregional malls with their powerful attraction to related commercial and office development.

Retail geography was responding to changes in the character of residential neighborhoods. As late as the 1910s, upscale developments were designed with the idea that residents would use both streetcars and personal automobiles. An advertising flyer for Alameda, for example, featured pictures of a private automobile and the 24th Avenue trolley line climbing up Regents Drive. A Laurelhurst brochure made sure that prospective buyers noted the Glisan Street trolley as well as the tiny automobiles pictured on the streets.

By the start of the 1930s, in contrast, the triumph of the automobile was assured. At the top of the social scale, elite families began to abandon Nob Hill for new houses in the West Hills or Dunthorpe that were accessible only by automobile. Middle class households began to transform the interurban railroad corridors of 1900-1920 into the suburban auto corridors of the last fifty years. As Portlanders have sought more elbow room, they have again demonstrated the effects of transportation options on urban growth. Although the metropolitan area does not have a full circumferential highway like the Washington DC "beltway" or the London "orbital,"

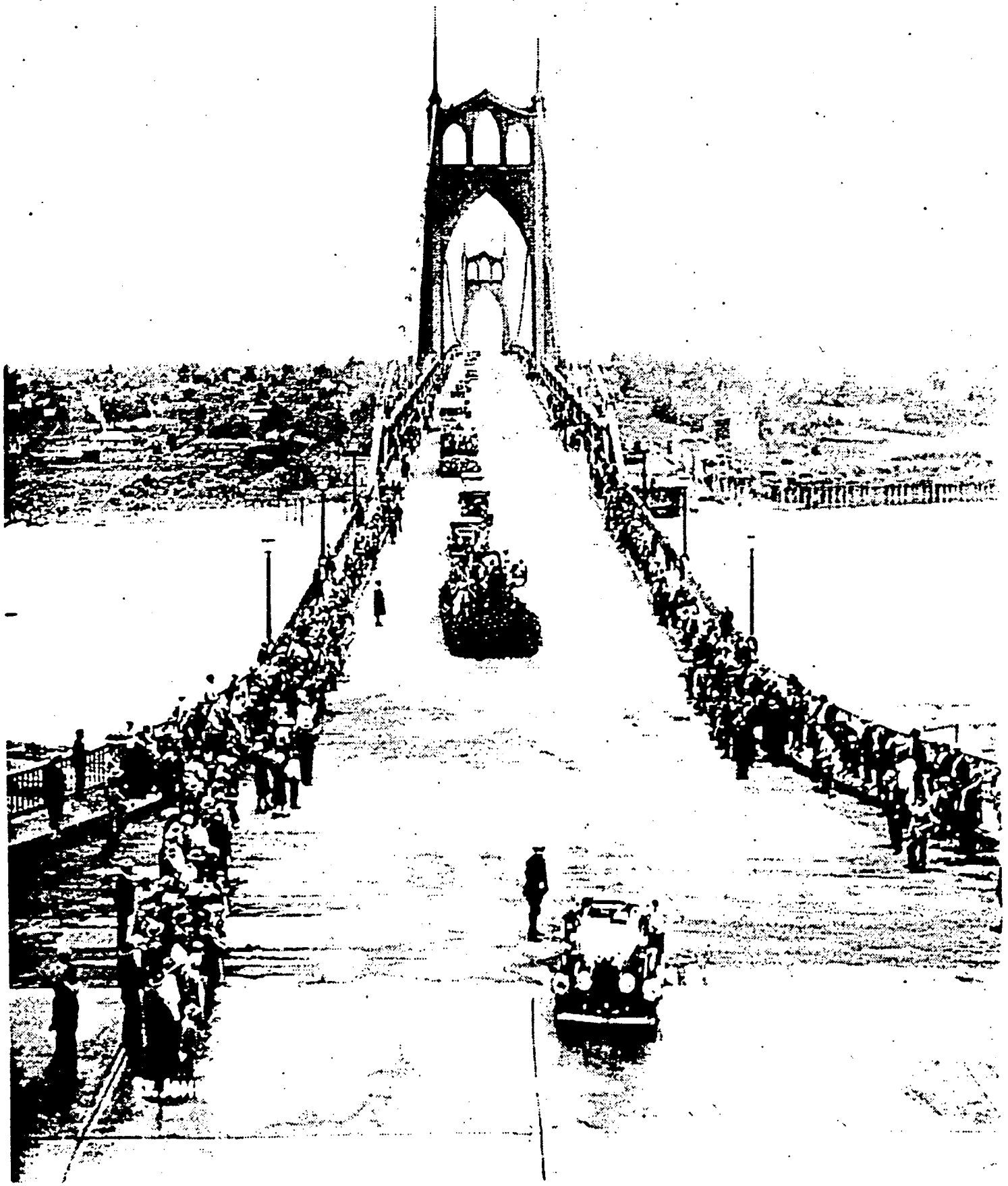


Figure 8. Opening of St. Johns Bridge

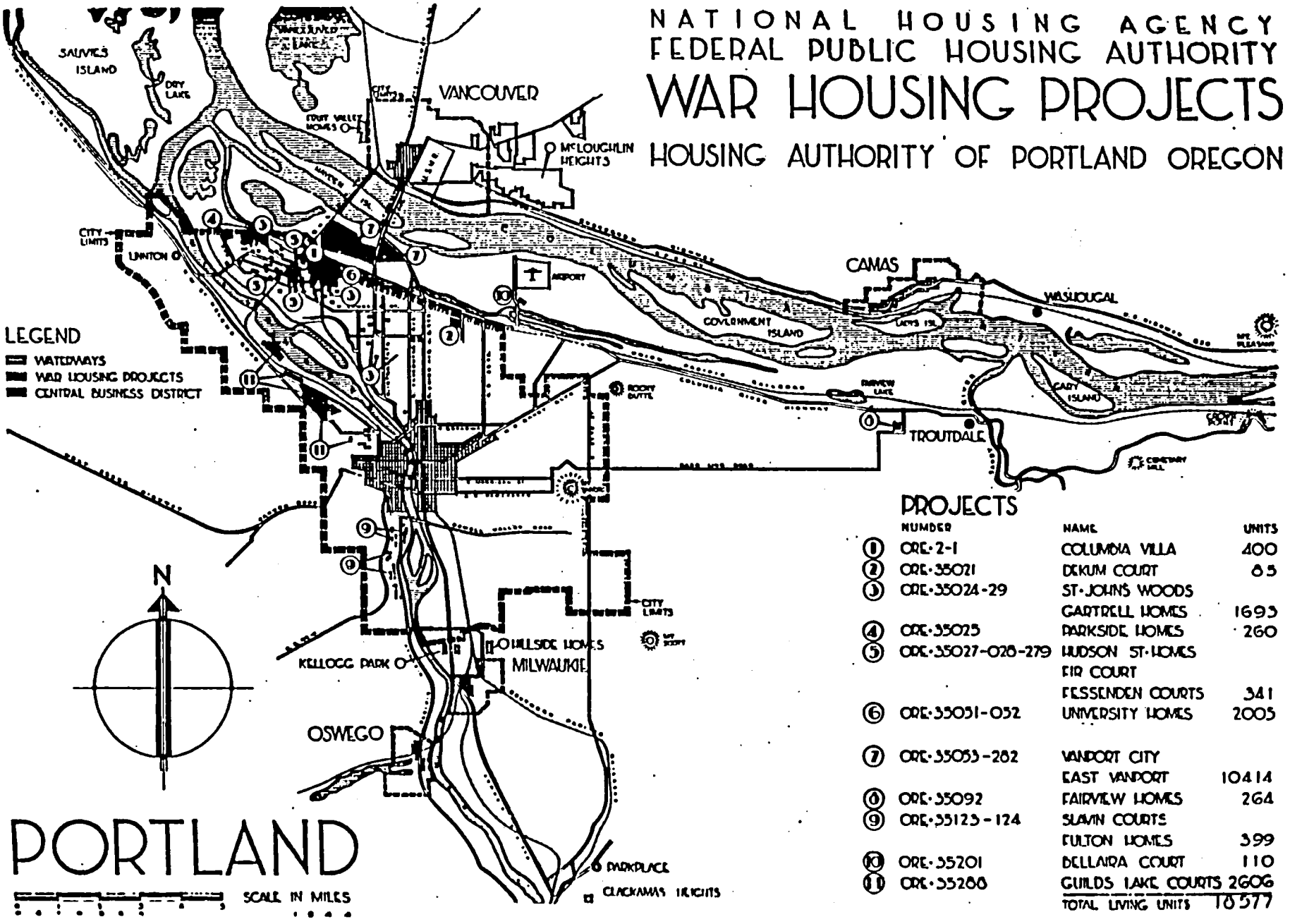
the developmental effects of outlying freeways are apparent along 217 in Washington County and I-205 in Clackamas County.

During the boom years of World War II, emergency housing concentrated in North Portland and Vancouver near the shipyards with their 130,000 workers (Map 12). Immediately after the war, the prime target for suburban growth was eastern Portland and Multnomah County, served by the area's first freeway which crept slowly westward from Troutdale. Between 1940 and 1950, the North Portland, Northeast Portland, and Multnomah County neighborhoods that overlook the Columbia River counted 50,000 new residents. The city and county neighborhoods from Mount Tabor east to 148th Street gained another 30,000. Builders in the 1950s continued to follow the wedge of high, buildable land that pointed toward Gresham between the Columbia floodplain and Johnson Creek. Eastern Multnomah County added another 50,000 residents during the fifties. Its share of metro area population climbed from 10 percent in 1940 to 18 percent in 1960 (Maps 13, 14)

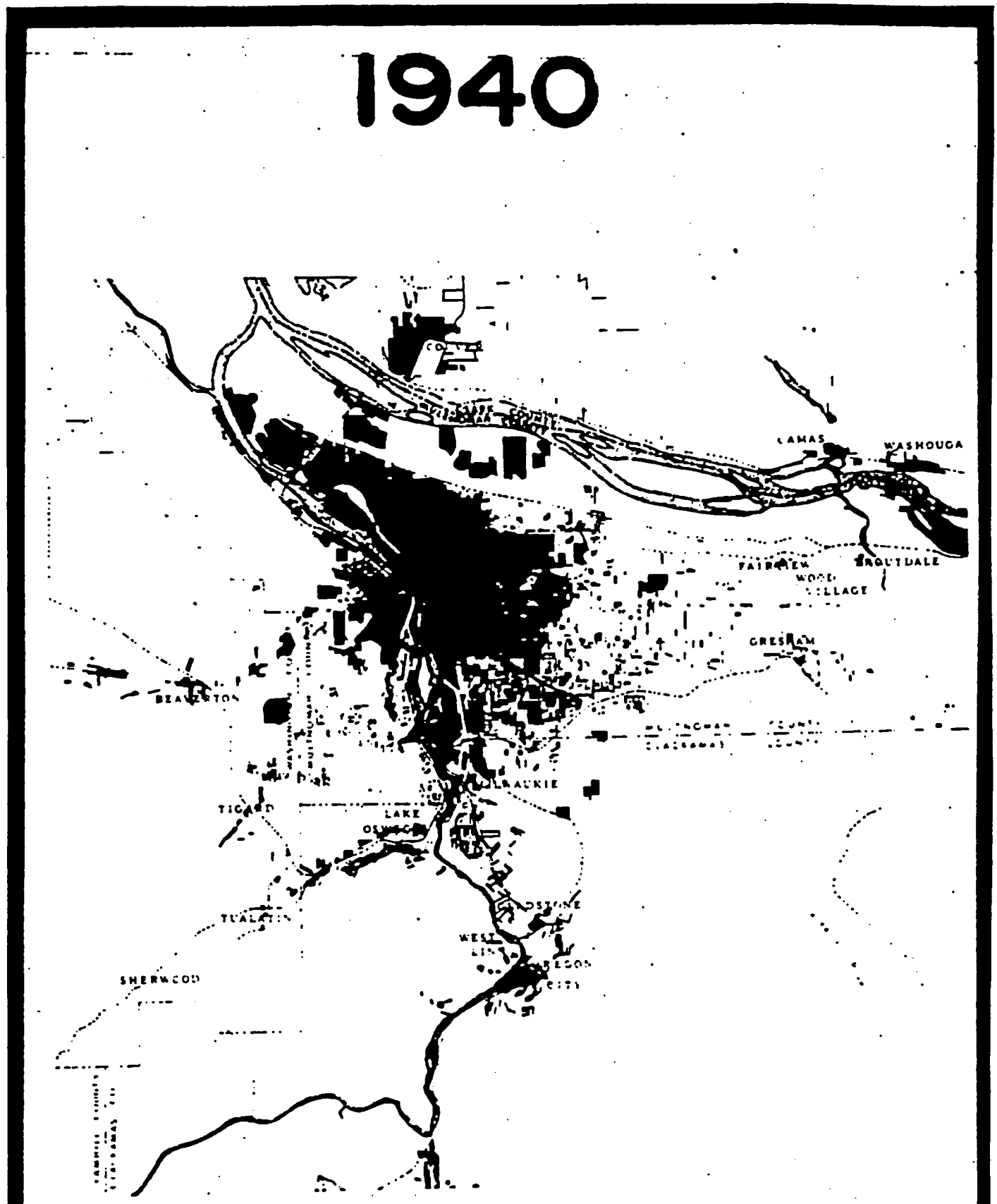
These new communities matched the popular image of the bedroom suburb. They sent 64 percent of their workers on the daily commute to the city of Portland in 1960 and 55 percent in 1970. The proportion of residents who had moved into East County directly from the central city was twice that for the other metropolitan area counties. The signs that marked the city limits of Portland in the early 1960s defined a political but not a social boundary. Since 1980, of course, many of these same neighborhoods have been annexed to Portland.

The Sunset Highway (1960) and I-5 (1963) shifted the subdivision frontier from east side to west side by giving high-speed, high-capacity auto routes over the West Hills; route 217 connected the two highways in 1965. Building permit totals show a rising development tide in Washington County during the 1960s. Both Washington and Clackamas counties began to outpace Multnomah County. The Multnomah County share of metropolitan population actually dropped between 1960 and 1980 while Washington County's share leapt from 11 percent to 19 percent and the Clackamas County share rose from 14 percent to 20 percent. The new neighborhoods between Portland and Gresham had been built in the 1940s and 1950s for Americans just rediscovering affluence. The suburban streets and houses of Washington County were built during the high tide of prosperity in the 1960s and early 1970. The average Washington County house was bigger, newer, and better equipped than its counterpart in Multnomah County in 1970 and worth 30 percent more.

The 1970s and 1980s reinforced the predominance of the west side for new housing and office development, despite the fact that completion of I-205 and the Glenn Jackson Bridge (1984) improved the relatively accessibility of central Clackamas County and eastern Clark County. Population data (Table 2) show that

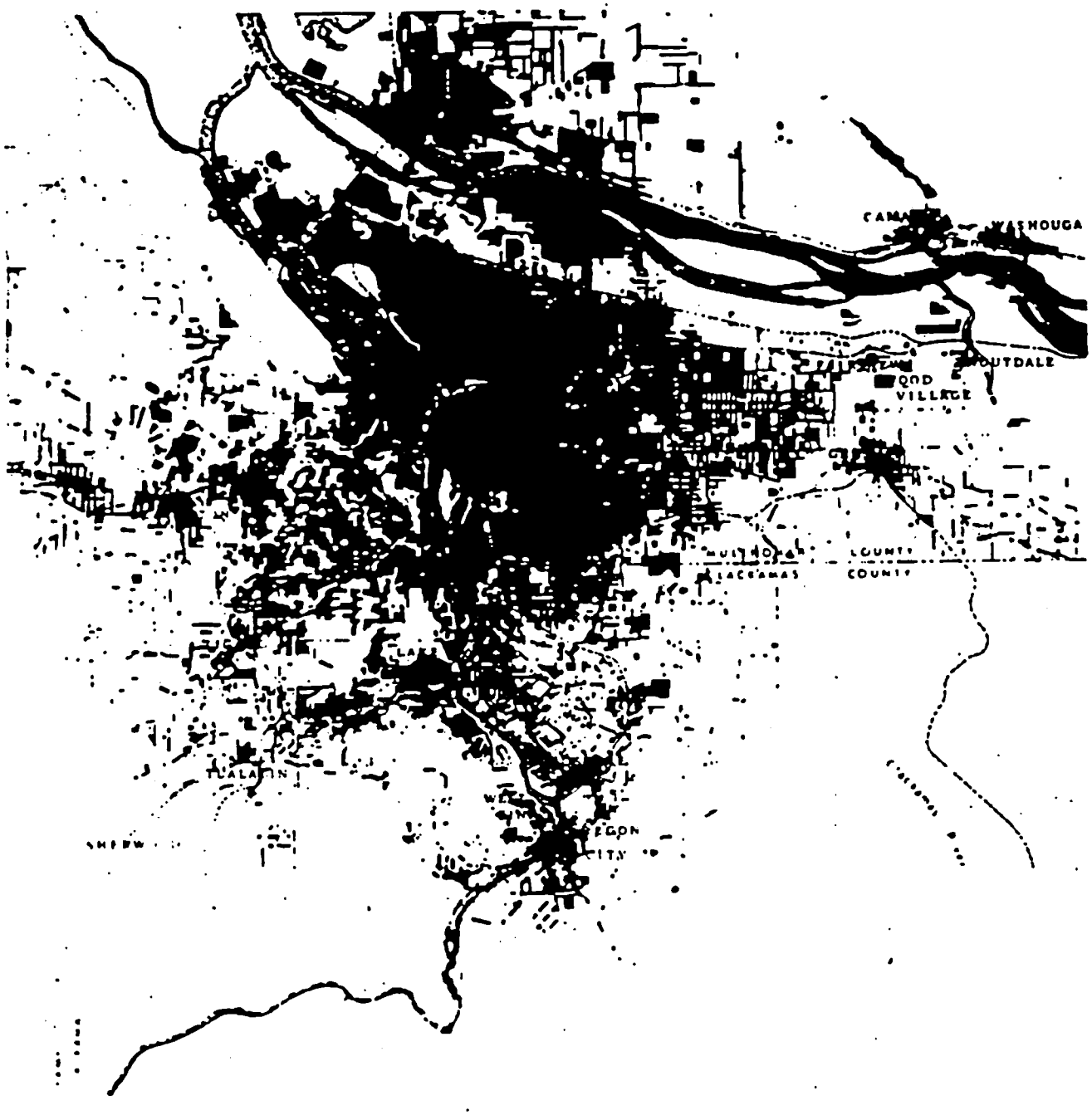


Map 12 World War II Housing Projects



Map 13. Developed Land in 1940

1960



Map 14. Developed Land in 1960

Washington County outpaced all of its metropolitan neighborhoods in both decades, although Clark County was a close second. Although it trailed the other counties, Multmomah County's continued population growth is also remarkable for a "central city" county in a U.S. metro area.

Table 2

County Growth Rates, 1970-90

	1970-80	1980-90
Clackamas	44 %	16 %
Clark	50 %	24 %
Columbia	24 %	5 %
Multnomah	1 %	4 %
Washington	62 %	27 %
Yamhill	37 %	19 %

In spite of its impressive growth, Washington County has not yet emerged as an "edge city" that is declared its independence of the city of Portland. The central city remains the location for vital business, professional, and medical services and offers accessible land for expansion of manufacturing and wholesale distribution within the city limits. The metropolitan transportation system is and will continue to be centrally focused on Portland. At the same time, Washington County does not yet contain any key metropolitan public facilities--sports complex, convention center, airport, port, comprehensive university, flagship museum, major recreational attraction. It is not likely to have such facilities in the foreseeable future.

We can roughly gauge the effect of outward growth on typical neighborhood character by looking at census figures on the "urbanized area" within the Portland metropolitan area. The data in Table 3 summarize three phases in postwar residential growth. Between 1950 and 1970--the first two decades of unimpeded automobile suburbanization--the area of urbanized land exploded while the average population density fell by a third. From 1970 to 1980, the subdivision frontier continued its rapid expansion but the decline in average density slowed markedly. For the following decade, perhaps reflecting the impacts of the new Urban Growth

Boundary adopted in 1980, the area of developed land increased much more slowly and the downward trend in average residential density actually reversed.

Table 3

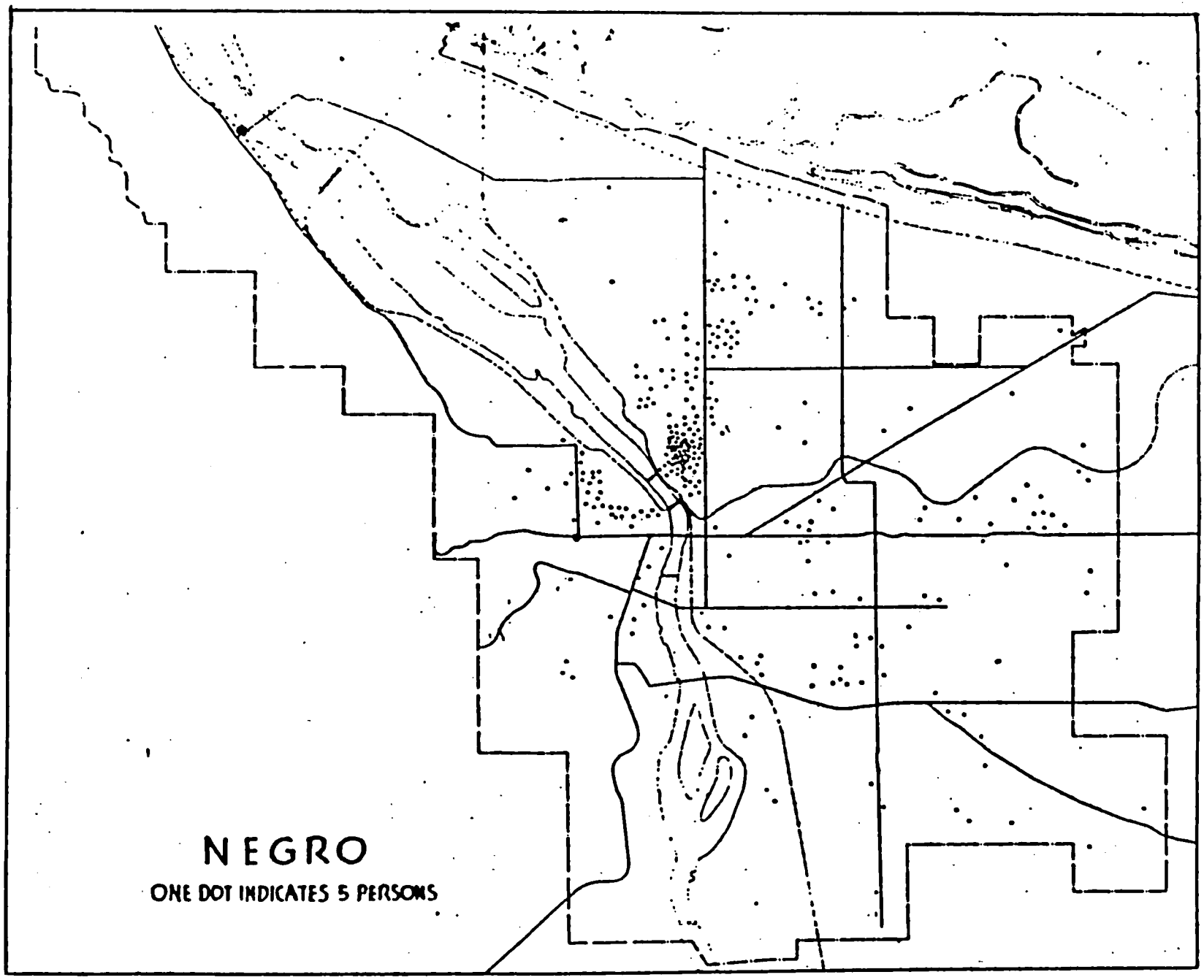
Portland-Vancouver Urbanized Area

	Area in Square Miles	Population per Square Mile
1950	114	4517
1960	191	3405
1970	267	3092
1980	349	2940
1990	388	3021

4) Community Values

World War II brought two sudden changes to Portland's ethnic groups in the Portland area. In 1942 the U. S. government exiled the city's 2000 Japanese-Americans to relocation camps in the interior West. Between 1942 and 1945, shipyard jobs increased the city's African-American population from 2,000 to 15,000. In the first case, the relocation emptied out the Japanese district north of Burnside. In the second case, the Portland area struggled to fit African-Americans into neighborhoods and social institutions that most residents wanted to reserve for whites.

The real estate industry had already set the community framework for racial relations. Before World War I, most of Portland's 1000 blacks lived between Burnside, Glisan, Fifth, and Twelfth, in easy access to hotel and railroad jobs. In the 1930s, Realty Board training materials for new salespeople explicitly defined Albina as the appropriate neighborhood for African-Americans. Brokers could lose their license if they violated the canon of racial segregation by selling houses in all-white neighborhoods to minorities. By 1940, more than half of Portland's 2000 African-Americans lived in Albina, with others scattered through other old neighborhoods (Map 15). Over the next generation, the center of the black community moved more than a mile north from Williams and Broadway in 1940 to King and Skidmore by the



Map 15. African American Population in 1930

1980s. The process started with land clearance for the Coliseum in the 1950s and continued with the construction of Interstate 5 in the 1960s and the Emanuel Hospital redevelopment in the 1970s in the historic heart of Albina.

Portland in the 1990s has no ghetto that approaches the nearly total racial isolation of South Side Chicago or Bedford-Stuyvesant. The degree of racial concentration in the core community has changed little since 1970. In 1990, the two most segregated census tracts (located south of Killingsworth Avenue and west of Martin Luther King Jr. Boulevard) were 69 percent and 70 percent African-American; only four other tracts were more than 50 percent African-American. These six tracts with an African-American majority all lie along NE King. Taken together, their 10,500 African-Americans are only 27 percent of all African-Americans in the metropolitan area. In short, nearly three-fourths of African-Americans in the Portland area are a minority within their own neighborhoods as well as within the metro areas as a whole.

Only in the last twenty years has the suburban housing market opened to African-American families. A gradual suburbanization that was evident in the 1970s continued at the same slow pace in the 1980s. The number of new black residents in Clackamas County in the 1980s--approximately 400--was the same as the number for the previous decade. The same was true for Washington County, where the increments were 900 for the 1970s and 1000 for the 1980s. Data on housing values and homeownership indicate that these suburban African-Americans are part of a successful middle class who share the same social status as their white neighbors.

Inclusive data on all four major minority groups of African-Americans, Asian-Americans, Native Americans, and Hispanics show that metropolitan Portland is one of the "whitest" communities in the nation. Among the 38 metro areas with populations greater than 1 million in 1990, only Minneapolis-St. Paul had a smaller proportion of minority residents.

Nevertheless, minority population in the Portland area grew rapidly during the 1980s--by 45 percent in Multnomah County (to 15 percent of the total); by 88 percent in Clackamas County (to 5 percent of the total); and by 131 percent in Washington County (to 10 percent of the total). The latter two counties are clearly catching up with Multnomah County as centers of racial diversity. Washington County in 1990 had the same level of diversity as Multnomah County in 1980, while Clackamas County in 1990 had the same level of diversity as Washington County a decade before. If 1980-90 growth rates for minority and majority populations continue into the future, Washington County will pass Multnomah County in ethnic and racial diversity in the year 2007.

African-Americans in North-Northeast Portland are the area's largest and most visible minority concentration. However, three other concentrations also merit notice. Asian-Americans make up more than 5 percent of the population of Southeast Portland and of inner Washington County. Hispanics make up more than 5 percent of the population of outer Washington County.

Patterns of minority residence are embedded within the persisting social and economic contrast between the east and west sides of the Willamette River. Popular wisdom, of course, knows the difference. Some Portlanders who have grown up on the west side find it difficult to imagine crossing the river for anything short of a Blazers game or a flight out of town. The east side to such eyes is flat, dull, and dangerous, enlivened only by bowling alleys and RV dealers. Eastsiders are more than willing to return the prejudice, knowing the west side as the natural habitat of stockbrokers, snobs, and status seekers. The attitudes are not unlike the mutual disregard of North Side Chicago yuppies and South Side Chicago steel workers.

In fact, the Willamette River has been a persistent social divide for the entire postwar era. We can compare east side and west side census tracts on accepted indicators of social and economic status such as years of education, income, and professional-managerial employment. West side census tracts have been consistently higher, with a gap that has grown since 1950. The differences among the three largest peripheral counties as of 1990 are shown in Table 4. There is a consistent gradation from higher status and west-side Washington County to middle status Clackamas County and to lower status Clark County.

Table 4
Social and Economic Indicators, 1990

	Washington County	Clackamas County	Clark County
Percent with B.A. or equivalent	30%	24%	17%
Percent of workers with executive, administrative, managerial, or professional jobs	32%	28%	24%
Household income (median)	$35,554	$35,419	$31,800

5) Public Policies

Explicit public policy has had far more influence on settlement patterns since 1950 than in previous generations.

One example is the extension of land use planning outside the city of Portland. The Oregon legislature authorized county planning commissions in 1947, empowering then to enact subdivision ordinances but requiring a vote of affected residents before the implementation of zoning. East Multnomah County accepted zoning in the mid-1950s, followed about five years later by Clackamas County and ten years later by Washington County.

Many outlying areas in the 1950s and 1960s tempered their cautious acceptance of county zoning by using special water, sewer, and fire districts to meet their public service needs. Special districts tended to respond to private market rather than shaping land uses actively.

The last twenty years have brought a "thickening" of the regulatory environment for land development. Portland, Gresham, Beaverton, and other municipalities have engaged in active annexation campaigns. As a result, incorporated municipalities accounted for 69 percent of residents in the three core counties of Multnomah, Washington, and Clackamas in 1990, up from 59 percent in 1970. Senate Bill 100, with its requirement that every city and county prepare and implement a comprehensive plan in accordance with statewide goals, assured that all land in the Oregon portion of the metropolitan region would be subject to a roughly comparable degree of regulation. Washington's recent and somewhat weaker growth management act has begun to move Clark County in the same direction.

In addition, Oregon in the 1980s elaborated the effects of the Urban Growth Boundary by adding further planning regulations that will tend to promote dense and compact settlement. Goal 10 and its implementing rules require that every jurisdiction zone for substantial multi-family or attached single-family housing (zoning, of course, does not assure actual construction of the planned housing mix). The regulations were enforced by a series of court cases dealing with smaller Portland-area municipalities in the early 1980s. As a result, the pattern of exclusionary large-lot zoning found in many American cities is expressly forbidden in Oregon. Portland-area cities and counties are also required to plan for minimum average densities rather than maximum densities. The LCDC Transportation Rule, adopted in 1991, mandates planning for a 20 percent reduction in vehicle miles traveled. The obvious avenues for compliance are the promotion of alternative transportation modes (rail, bus, bicycle, foot) and of compact development with a mixture of activities in relative proximity.

The public sector has also attempted to reshape the older sections of the central city. The urban renewal program of the 1950s and 1960s cleared "blighted" land and slums to allow rebuilding of new housing, offices, and public facilities. South Portland was a primary target. The new Portland Development Commission classified the district as a slum, removed 2300 people, closed businesses, and disrupted community institutions. It cleared the land for the apartments and office towers of Portland Center. Coupled with land clearance for construction of the Stadium Freeway and the expansion of Portland State University, urban renewal hastened the end of a community that was already in transition.

In contrast to the land clearance of the 1950s and 1960s, the central themes of downtown planning for the last twenty years have been public and private reinvestment and the creation of public spaces. The planning process itself involved a Downtown Plan in the early 1970s and a Central City Plan in the late 1980s. The result of plans and redevelopment decisions has been a widely admired urban core that has retained its economic functions while reintroducing housing and public activities. With completion of the MAX line, it is also a downtown that realizes the ambitions of Ben Holladay by spanning both sides of the Willamette

A "neighborhood revolution" that occurred between 1967 and 1975 has been a second influence in reshaping Portland's older cityscape. Nearly every older neighborhood began to argue vigorously for revitalization in the later 1960s. Neighborhood associations themselves were not new, but the positive character of their agendas was a significant departure. The Model Cities program made positive contributions to community liveability and self-determination in North-Northeast Portland. Southeast Uplift assisted inner Southeast neighborhoods, several of which also helped to fight off the potentially devastating Mount Hood Freeway (whose five-mile length would have destroyed 1700 homes). Inner Northwest and Southwest neighborhoods successfully resisted massive land conversions for institutional use and--at least temporarily--conserved affordable close-in housing. The recycling and reuse of these early twentieth-century immigrant and streetcar neighborhoods is one of the remarkable stories of Portland's recent settlement history.

3. EMERGING TRENDS IN METROPOLITAN SETTLEMENT PATTERNS

This section examines several trends that may affect Portland area settlement decisions in the next century. It briefly describes each trend and links it to the factors that dominated nineteenth and twentieth century development. The trends are then evaluated for possible effects on overall metropolitan growth and for centralizing or decentralizing effects within metropolitan areas, with specific attention to the recent experience of the Portland area.

A) Ecological Consciousness

In the late twentieth century, the natural environment affects settlement patterns in the United States more strongly through cultural values and choices than through direct physical limitations. We can and do continue to adapt the natural environment to human purposes. Compared with the nineteenth century, however, we do so with much greater forethought and care. We also make choices to avoid environmental impacts that would have seemed perfectly acceptable to Americans of 1850 or 1890.

The last two decades have brought a new popular awareness and concern in the United States about energy conservation, recycling of materials and facilities, open space, and conservation of natural systems. Topics such as "carrying capacity," "bioregionalism," and "sustainable development" are now commonplace in urban planning and development. According to environmental scholar Samuel Hays, environmental activism has been especially strong in western metropolitan areas such as Seattle, Denver-Boulder, San Francisco, and Portland.

This expanded environmental concern is embodied in public policies developed over the last two decades. Examples from the federal level are coastal zone management programs, wetlands protection, and endangered species protection.

At the state level, the concern is built into several goals within the LCDC system and into the Columbia River Gorge National Scenic Area. It is seen at a regional scale in the "Metropolitan Greenspaces" program, park and trail development, and renewed interest in drainage basin planning and water quality.

An environmental consciousness clearly argues against metropolitan sprawl and low density urbanization on the fringe of settlement. Instead, it might favor clustered peripheral development, following the classic planning model of greenbelts and garden cities. This has been a strongly articulated regional planning alternative in Vancouver, B.C., in Seattle, and in Metro's 2040 regional planning process.

A community might also seek the same goals through increased core use and density. This tendency is likely to be stronger in Portland than in many cities because of the existing strength of core areas. Downtown and close-in living are relatively attractive. The city already has a higher proportion of affluent and majority race residents within a three-mile circle of its central business district than most cities. Since affluent households are the highest per capita consumers of land, the ability to hold and attract these households for high-density districts can be an important factor in meeting environmental goals.

B) Changes in Economic Base

Economies of scale and agglomeration continue to provide a basic framework for understanding metropolitan economic development. Downtown districts in American cities prospered in the 1980s through the agglomeration of business and financial services. Specific industries--such as electronics--continue to thrive best in metropolitan clusters.

However, the closing decades of the twentieth century have introduced basic structural changes in the national economy. Some cities will find themselves better positioned than others to take advantage of these changes. Those that benefit most substantially will find, in turn, that the growth of their economic base has given them further competitive advantages vis-a-vis regional rivals.

Perhaps the most important on-going change in the American economy is the reconnection of the United States to the world. In the previous century, American growth was deeply dependent on foreign markets, foreign investment, and immigration from Europe. The 1920s and 1930s, in contrast, the nation turned in on itself with both political and economic isolationism. This tendency again began to reverse itself in the 1960s with changes in immigration law, reciprocal trade agreements, and the arrival of the 747 jet. The United States has redeveloped a global economy. Immigration now makes a larger contribution to American growth than at any time since the 1910s. Foreign trade now amounts to more than 15 percent of the gross domestic product. Foreign markets for American services such as tourism and education make major contributions to American prosperity. Much of this reinternationalization has involved the development of strong social and economic connections to Latin American and the Pacific Rim to supplement historic ties to Europe.

To date, the global trend has had limited effect on the Portland area economy. Although Portland and Vancouver constitute an important international port, the metropolitan area traditionally has been more strongly oriented toward its regional hinterland than overseas. Seattle, San Francisco, Los Angeles, San Diego, and Honolulu have all developed more vigorously as international centers since the 1960s.

Greater Portland's international involvement is closer to that of interior cities like Phoenix and Sacramento than to its coastal rivals.

Because of its need for highly centralized and specialized facilities and expertise, any globally-based growth that comes to Oregon will tend to promote growth of metropolitan Portland rather than isolated communities such as Astoria. Within the metropolitan area, participation in the global economy reinforces the importance of the airport and of maritime trade. The strongest developmental impacts are likely to be felt in northern Multnomah County and southern Clark County along the shores of the Columbia River and adjacent to I-205.

Globalization also means renewed diversity of population groups. In the 1980s, Asian population grew by 110 percent, Hispanic by 88 percent, and Native American by 42 percent in the three core counties. The effects of the increases will be most striking in Washington County, whose foreign-born population nearly doubled in the 1980s and now surpasses Multnomah County in proportional terms (Table 5).

Table 5

Percentage of Population Foreign Born

	1980	1990
Clark County	3.4 %	3.6 %
Clackamas County	3.7 %	4.1 %
Multnomah County	6.2 %	7.1 %
Washington County	5.5 %	7.3 %
Yamhill County		4.6 %

Overlapping the expansion of the global economy is the emergence of an information-based or "transactional" economy. The information economy stretches back to the organizational revolution of the later nineteenth and early twentieth centuries. Growth of big business and big government coincided with the development of the telegraph, telephone, railroad, and typewriter, which allowed the managers to work in office locations physically separated from their factories. The size of organizations and the specialization of information-consuming activities have continued to increase with electronic data storage and communication.

"Transactional cities" are the sorting points for trade in information and ideas. As junction points in economic networks, they concentrate economic and political decision makers and the occupations that center on the generation, processing, distribution, and recombination of information.

The relative commitment of specific U.S. cities to transactional functions can be judged by looking at several indicators: (a) white collar employment; (b) employment in finance, insurance, real estate, and corporate administration; (c) major corporate headquarters; and (d) federal administrative offices. Available data allow us to assign approximate point totals for each factor at the beginning of the 1960s and measure change to the late 1980s. Cities gained points by percentage employment increases greater than the average for all U.S. metropolitan areas, by increased shares of major corporate headquarters, or by substantial absolute increases in federal role (Table 6). The data indicate that metropolitan Portland compares relatively poorly to other far western metropolitan areas as a transactional center. In particular, Seattle, Los Angeles, and San Francisco have effectively captured information network functions in the same way that they have captured international economic roles, leaving other western cities in a second tier.

Table 6

Information Economy in Far Western Metropolitan Areas

	Relative Score: 1960s	Relative Score: 1980s
San Francisco	8	10
Los Angeles	5	8
Seattle	4	6
Salt Lake City	4	4
San Diego	3	4
Sacramento	3	4
Phoenix	2	5
Honolulu	2	4
Portland	2	3

Although the comparison indicates that the information economy has relatively limited importance as a factor behind the overall growth of metropolitan Portland, it may still have significant impacts on development patterns within the metropolitan area. In considering these impacts, it is important to distinguish between routine information (such as credit card processing) and tailored information (such as advertising or business consulting).

The growth of routine information activities has been decentralizing. The back office work of banks, insurance companies, and similar data processing is the mass production industry of the information age. It can be detached from headquarters locations and located essentially anywhere--whether suburban rings or Sioux Falls, South Dakota. Routine data activities are attracted to peripheral locations for low rents, for available parking, and mostly importantly for an underemployed labor pool of literate and numerate women. Much of the boom in suburban office employment over the past two decades has involved exactly these sorts of workers and activities.

Tailored information, in contrast, has a strongly centralizing effect. Face-to-face contact and agglomeration economies that allow immediate access to a full range of business and professional services take on enormous importance in the transfer and analysis of unique business information. The effects reach their extreme in the financial districts of London, New York, Tokyo, Singapore, and other "global cities" or "world cities," but nearly every important city had a downtown office boom in the 1980s.

In the Portland area, both central core and suburban office markets are strong. Downtown jobs rose by 68 percent from 1970 to 1992, to more than 105,000 within the inner freeway loop. Core area growth is even higher if the Lloyd district is included. At the same time, overall metro area employment is up by 90 percent. The dual nature of information employment should continue to support both central and peripheral job growth and the housing demand associated with such jobs.

C) Communication Technology

Thousands of experts think that <u>something</u> is happening to the way in which we interact with each other. Personal contact, say many writers, is likely to give way to electronic contact. Dozens of new terms are available to capture the essence of this new electronic world. We talk about traveling information highways or digital highways. We want to pioneer the electronic frontier, learn in the global classroom, dip our toes into the cyberstream, and nourish our brain from the electronic cafeteria. We anticipate living in on-line communities or virtual communities or on "the Net." We anticipate a future as citizens of the telecosm, cyberbia, or the fibersphere.

The new technologies raise two questions for metropolitan settlement patterns. One is the extent to which digital highways will <u>directly substitute</u> for physical movement. The other is the ways in which telecommunications may <u>rearrange</u> patterns of movement and settlement.

When we reach beyond the jargon to respond seriously to these questions, it is important to differentiate between social and economic uses.

The social use of telecommunication is to create virtual communities--sets of people with common interests who communicate by computer network rather than mail or face-to-face meetings. Such on-line communities are an amplification of the communities of interest that have always emerged in urban areas as like-minded or like-interested people have found each other. This sort of networking might slightly retard the overall rate of metropolitan growth, by allowing a person whose life revolves around a particular obscure interest to pursue that interest without moving to the big city. It has no implications for settlement within metropolitan areas, for its effect is to remove location as an important variable for interaction with one's community of interest. However, it is likely to have an incremental effect on reducing the total number of trips generated by a given population. In the long run, such digital interaction may allow households to do without that extra automobile (the second, third, or fourth car, depending on household composition).

In the economic realm, the use of digital highways has obvious decentralizing possibilities in the form of "telecommuting." For the professional elite, telecommuting holds the possibility of interacting with clients around the globe while living in the beautiful outback. A number of writers propose a seductive image of a noncity in which millions of telecommuters plug their electronic gear into the grid and live in blissful isolation among the pines, hopping occasionally into their 4x4 to enjoy the local services provided by laid-back entrepreneurs in hundreds of updated villages. In fact, the type of worker who can meet this model is limited to successful free-lance specialists (such as journalists, artists, or consultants) who have the security to pick and choose their clients and control their own schedules.

For the far larger number of routine information workers, in contrast, telecommuting holds the possibility of a new "putting out system." In England at the start of the industrial revolution, much textile production was "put out" to individual households rather than centralized in factories. Materials were delivered weekly or monthly, the previous week's or month's work picked up, and the weavers paid by the piece. In a similar way, large information industries can deliver bundles of work to suburban homes for processing in front of the home computer. Since much of this work has already moved from core city to suburbs, it is likely that further decentralizing effect will be real but limited.

It is also important to note that as yet there is little evidence of a major trend toward home-based work and telecommuting. In the Portland metropolitan area in 1970, 3.0 percent of employed persons said they worked at home. In 1980, the figure had fallen to 2.2 percent. In 1990, it had risen again to 3.8 percent, a very moderate change over twenty years.

It is equally important to remember that economic use of the digital highway can also promote centralization by facilitating control of multiple enterprises from a

single headquarters. It this way it interacts with and reinforces the centralizing effects of the information economy, for the most sophisticated users of electronic communication are corporate executives and their supporting professionals in law, accounting, design, and business services. They also remain the most highly centralized component of the national labor force. Studies have shown that executives in finance and banking make the greatest use of face-to-face meetings in preference to telephone contacts, followed by executives in professional services and then by executives in manufacturing. In short, telecommunications may rearrange activities within metropolitan areas by decentralizing some and centralizing others.

D) Community Values

The social valuation of distance continues to operate as a powerful factor in modern American society. Large numbers of Americans still want to live on the metropolitan fringe or beyond. Where they are not constrained by public policies such as those in Oregon, the result is continued sprawl.

Avoidance of minorities and the poor also continues to influence residential choices. At worst, the result is a social version of the tragedy of the commons. Each household that "escapes" a high-minority neighborhood or a problem-ridden neighborhood increases the isolation of the remaining residents. The continuing strength of social avoidance can be seen at the macro-scale in the Portland area by the rapid growth and high social status of the area's southwest quadrant. It can be seen at the micro-scale by such episodes as the recent negative reaction to proposed higher housing densities in the otherwise socially liberal neighborhood of Irvington.

In addition to these ongoing patterns, community and cultural values are likely to influence settlement patterns through changes in household structure, including female work force participation, shrinking household size, and the aging of the population.

Between 1970 and 1990, the proportion of women aged 16 or older participating in the American labor force increased from 42 percent to 57 percent. This rapid increase in working women has been a strong decentralizing factor, for much of the change has involved employers tapping a large pool of underemployed women by bringing jobs to the suburbs (and in turn reinforcing the attractiveness and efficiency of suburban residence). In the later 1980s, however, the increase in working women slowed, perhaps in part because of powerful social reactions that are stated in the language of traditional family values. We do not yet know whether women's labor market participation will plateau at 60-70 percent or will continue to grow to the European level of 85-95 percent.

Metropolitan Portland has slightly led the rest of the country in the proportion of working women, moving from 44 percent in 1970 to 60 percent in 1990. It is also a comparatively hospitable environment for women's professional advancement, as evidenced by the high proportions of women in professional and managerial jobs and in leadership positions. The generally high level of participation is likely to be decentralizing, while the openness of professional and executive career ladders may reinforce the value of access to the central office core.

Another way in which changing family patterns have affected the geography of settlement has been through declining household sizes in the 1970s and 1980s. Falling household size has meant that even a stable population has shown an increased demand for separate housing units. There has also been a shift in the composition of that demand, with growing markets for apartments and smaller houses. In turn, these changes in demand have translated into strong markets both for suburban apartments and for recycling of older urban housing.

The Portland area has particularly small households compared to the national average, although the decline in average size was less than that for the entire nation (Table 7). Within the metropolitan area, the numbers for 1990 confirm the expectation of smaller average households in the city of Portland (2.27) than in the rest of the metro area (2.95).

A third demographic factor is the aging of the American population. Both the United States and the Portland area have grown older in the last decade, but Portland has aged more rapidly. In the aggregate, an aging population implies a slowing rate of household formation and a consequent slowing of demand for new housing. At the same time, it suggests a shift in demand from larger units and large lots to smaller units. It is also likely to increase the demand for specialized complexes that provide services and medical care as well as shelter. However, the preferred location for such downsized and specialized housing is ambiguous. Central locations are commonly thought to be attractive to older households and empty-nesters, but so are suburban or semi-rural retirement communities of a type as yet more common in the eastern states than in Oregon.

Before projecting recent trends, it is important to note that migrants from out of state, who account for a substantial portion of recent population growth, tend to be disproportionately teenagers and young adults. If migration continues to dominate Portland area growth into the next century, it will tend to counteract the natural "greying" of the population.

Table 7

Social Characteristics:
Metropolitan Portland and the United States, 1980-1990

	1980	1990
Persons per Household		
Portland Metro Area	2.56	2.52
United States	2.74	2.63
Median Age		
Portland Metro Area	30.2	33.8
United States	30.0	32.9

CONCLUSION

This report supports two broad conclusions.

The first is the consistency of major forces affecting Portland area settlement patterns over the last century and a half. Decisions about the location of economic activities and housing have been affected by the "hard" factors of the physical setting, the special land needs of manufacturing and commerce, and the available technologies of transportation and communication. They have also been affected by the "soft" factors of community values (including the desire for social segregation) and deliberate public policies. The specific impacts have varied from decade to decade, but the same determining factors have continued to influence land development choices and settlement patterns. What might initially be viewed as new factors in the late twentieth century--the transactional economy, telecommunications--can be understood as the latest expressions of forces that have operated since the beginning of the industrial revolution.

The second conclusion is the ambiguous effects of these current trends. Each of the factors reviewed in Section 3 has the potential to accelerate decentralization of metropolitan activity. Each also has the potential to foster renewed concentration and centralization. There is no single factor currently operating with the same unidirectional force as the explosive spread of the automobile between 1930 and 1970.

Given the uncertain and sometimes contradictory effects of current trends, a large role remains for deliberate public policy. Metropolitan jurisdictions and state agencies have the opportunity to <u>choose</u> which tendencies to reinforce and which to counteract. Citizens and their elected officials can and will make a difference as they shape Portland area settlement patterns over the next generation.

This historical analysis suggests several conclusions that can be related directly to the four topical categories that frame the deliberations of the Future Vision Commission.

First, a <u>strong center</u> is important for enhancing economic vitality and community well-being. Cutting edge economic activities, which depend on the pyramiding and diffusion of new ideas and innovations, flourish in urban centers. The metropolitan downtown supports economic growth in unique and essential ways through its concentration of business services.

At the same time, downtown is essential to community well being, for it is the one place in the metropolitan area that "belongs" equally to every metropolitan

citizen, whatever their race, place of residence, or economic status. With its cultural institutions, public spaces, and vital street life, it is everybody's neighborhood in a way that office parks and regional malls are not. Clackamas Town Center will never serve more than a fraction of the metropolis; downtown Portland can potentially serve everyone. A strong downtown is common territory where everyone in the metropolitan area can mingle on relatively equal terms. By holding its center, metropolitan Portland can respond to the isolation of races and classes and help to promote a sense of membership in a single metropolitan community.

Second, it is important to think in terms of supporting and enhancing strong and centered communities throughout the metropolitan area. Both Portland neighborhoods and smaller cities offer their residents a distinct sense of place. A well-crafted metropolis balances its strong center with a mosaic of lively and viable communities with their own focal points for economic and civic life such as parks, business districts, and community institutions. A sense of community comes from a sense of place combined with participation in civic life, whether in Irvington or Gresham, Northwest Portland or Newberg.

One way to capitalize on the current revolution in communications is to think in terms of grassroots community access to information. Portland can seek to become a democratically networked metropolis in which neighborhood and community centers such as schools and libraries become the focal points for information access oriented to community or civic action.

Third, strong centers and communities imply compactness. Compactness reduces the costs of public services and frees public resources to enhance community well being through better education, health care, and similar services. Compactness supports economic growth by increasing employer access to the entire metropolitan labor force and reducing service costs. And perhaps most obviously, compact development preserves many of the elements of the physical environment that contribute so strongly to the sense that greater Portland is a distinct and valued place.

Sources for Illustrations:

Map 1:	Metro
Maps 2, 3:	Christopher Sawyer, "From Whitechapel to Old Town: The Life and Death of the Skid Road District, Portland, Oregon" (Ph.D. dissertation, Portland State University, 1984)
Maps 4, 13, 14:	Columbia Region Association of Governments
Map 5:	Carl Abbott, Portland: Planning, Politics and Growth in a Twentieth Century City (University of Nebraska Press, 1983)
Map 6:	Portland City Club Bulletin (July 1921)
Map 7:	Oregon Historical Society
Maps 8, 9:	Harold L. Throckmorton, "The Interurbans of Portland, Oregon: A Historical Geography" (M.A. thesis, University of Oregon, 1962)
Maps 10, 15:	Portland City Planning Commission, Report on Public Recreational Areas (Portland, 1936)
Map 11:	Steve Lowenstein, The Jews of Oregon (Portland: Jewish Historical Society of Oregon, 1987)
Map 12:	Housing Authority of Portland, From Roses to Rivets (Portland, 1946)
Fig. 3, 5-8:	Oregon Historical Society
Figure 4:	Richard Marlitt, Nineteenth Street (Portland: Oregon Historical Society, 1972)

FUTURE VISION COMMISSION

Workstyles Study

by

Steve Schriver
March 1994

Workstyles Study

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S/2 Intelligence

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March 1994

Table of Contents

Section I - Introduction

PURPOSE

The purpose of this report is to assist Metro's Future Vision Commission in its deliberations by providing information regarding emerging workstyles - where people will work, what they will do, and how they will get it done.

INTRODUCTION

This report examines emerging workstyles as a vehicle to better understand the Portland region of tomorrow. For most people, work is *the* defining activity in their lives - it influences how and where they live.

This report is not intended as a formal, rigorous, or fully referenced undertaking. Rather, it is intended as an accessible reconnaissance that identifies many key trends that are shaping the context of work and some of their effects.

The nature of work and where it gets done is in a fast-forward mode. The setting is volatile, complex, turbulent, ambiguous, and fluid. There are no definitive guidebooks, manuals, or primers available on the subject. *Workplace 2000*, considered a "visionary classic" when published in 1991 (Joseph Boyett and Henry Conn), doesn't mention the word telecommuting in its 350 page length. And it wasn't until July of last year that the Federal government created the Office of the American Workplace (Labor Department under Robert Reich's instructions).

The horizon for this report is calibrated to the mid-term future - 2000 to 2005. Projecting, with predictive accuracy, beyond this point in time is not a very productive use of time. In 10 to 12 years so much, that cannot be anticipated, can happen - new technology, a third political party, major environmental disaster, rapid growth of a leisure ethic, emergence of a charismatic leader or a mutant populist movement, and so forth.

METHODOLOGY

The development of this Workstyles Study relied upon four sources of research information:

- The proprietary trends data of S/2 Intelligence.
- Information made available by Metro and the Institute of Portland Metropolitan Studies.
- Interviews with knowledgeable key informants (see Appendix A).
- Relevant books, articles, reports, and studies (see Appendix B for suggested readings).

ORGANIZATION

The Workstyles Study is composed of four sections:

- CAUSES (Section II) - this section identifies several converging trends that will be shaping the context of work in the years ahead. Five causes are discussed: 1) The "New" Economy, 2) Global and Domestic Competition, 3) Technology, 4) Worker Dissatisfaction, and 4) Time Scarcity.

- EFFECTS (Section III) - this section identifies several of the effects these trends will be producing in people's lifestyles, the workplace, and so on. Five effects are discussed: 1) Small(er) is Beautiful, 2) Ubiquitous Workplace, 3) Entrepreneurship, 4) Homework, and 5) Bright Collar Workers.

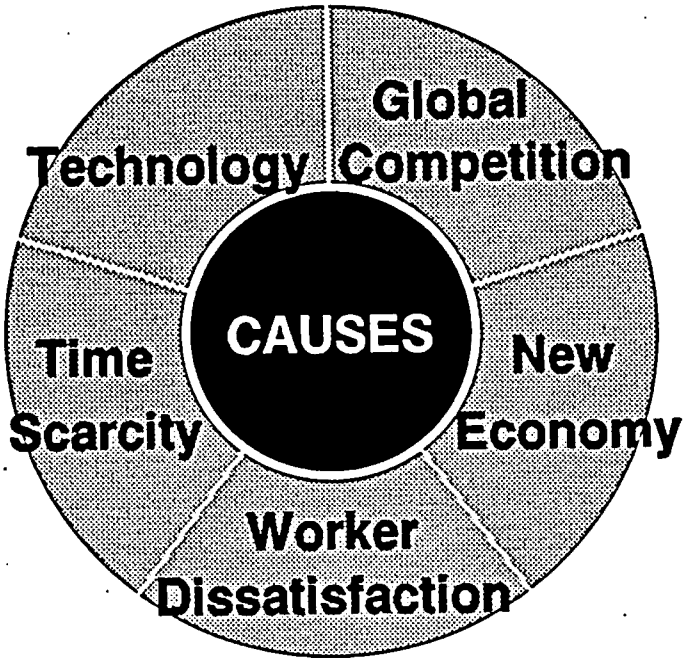
- KEY HIGHLIGHTS (Section IV) - this summary section pulls together the findings of this study.

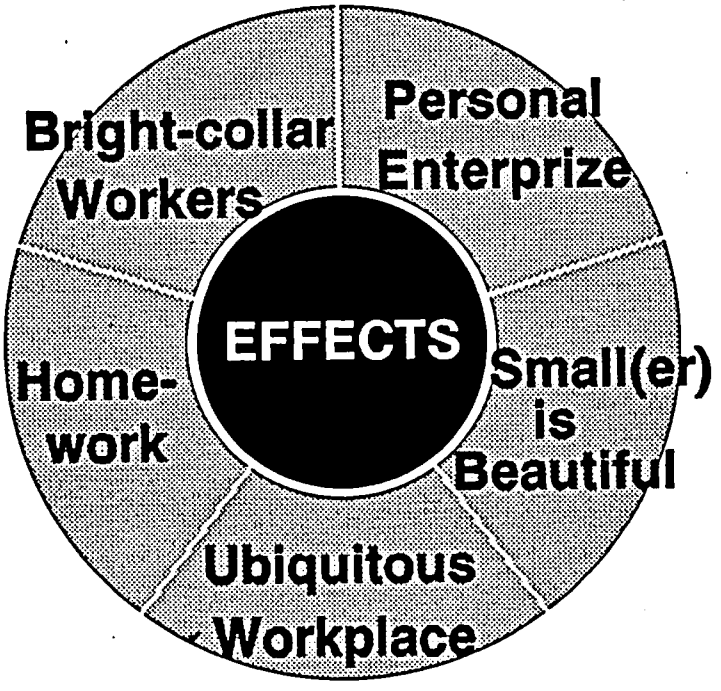
- RECOMMENDATIONS (Section V) - this section forwards five recommendations to the Future Vision Commission for meeting its focus of "Supporting a high quality of community life" in the Portland region.

This study does not attempt to describe all the effects that are emerging, only some of those which are clearly influencing where people will work, what they will do, and how they will get it done. Certainly, the study could be missing some implications. For example, a recent (February 16, 1994) article in *The Wall Street Journal* examines how an aging America is making elder care an emerging issue in the workplace. The writer of the story, Sue Shellenbarger, quotes a specialist on aging who says that "'As the baby boom moves deeper into middle age, the need for elder-care services will simply explode.'" The article goes on to say that "about half the time, working care-givers live 100 miles or more from the relative." One possible implication, is that millions of care-givers could be driving far more in tomorrow's world.

> *"By 2005, 37 percent of U.S. workers will be aged 40 to 54, the prime time for caring for elderly parents. By 2020, more than one in three employees will be providing elder care."* - Andrew Scharlach, University of California Professor on Aging (quoted in the above cited article).

This Study looks at five precipitating causes that are, in combination, producing at least five effects. For the reader, it is important to note that causes and effects can often serve two roles - a cause can become an effect and vice versa: for example, *stagnating productivity* in the 1970s and 1980s contributed significantly to rise of the *dual-income family*, which in turn contributed to a real and perceived *shrinking of time*, which lead to the growth of *convenience* as a competitive standard in business. All of these - stagnating productivity, dual-income families, time scarcity, and convenience - can be justifiably viewed as both causes and effects. The following two illustrations - Causes and Effects - summarize the cause and effect relationships contained in this Study.


Global Competition
New Economy
Worker Dissatisfaction
Time Scarcity
Technology
CAUSES


Personal Enterprize
Small(er) is Beautiful
Ubiquitous Workplace
Home-work
Bright-collar Workers
EFFECTS

The following Cause Relevance Table identifies the degree of relevance each cause has in producing each effect (strong, moderate, or weak). The Table is intended to provide a better understanding of the cause and effect action and help demonstrate interrelationships.

Cause Relevance Table

1 = strong relevance
2 = moderate relevance
3 = weak relevance

CAUSES / EFFECTS		Worker Dissatisfaction	New Economy	Time Scarcity	Technology	Global Competition
Personal Enterprise		1	1	3	2	2
Ubiquitous Workplace		3	2	2	1	2
Bright collar Workers		2	1	3	2	1
Small(er) is Beautiful		2	1	3	3	2
Homework		2	1	1	1	2

CAUSE 1: THE "NEW" ECONOMY

Business gurus, magazine editors, authors, talk show hosts, academicians, and many others are increasingly referring to what is now being called the "New" Economy. Depending on who's talking, this economy can be seen in the globalization of markets; expansion of information, knowledge, and technology; growth of the service sector; and the shrinkage of manufacturing and extractive industries.

Discussion

- In 1979, one worker in every four worked in manufacturing. Since then factory production has increased by 39 percent, yet only one in six workers is now involved in manufacturing. This increased efficiency is, in part, the result of a $1 trillion dollar investment in the application of information, knowledge, and technology by business during the 1980s.

  In the last 30 years, manufacturing (including extractive) jobs have declined by 10 percent while service jobs have increased by 200 percent. According to the editors at *Fortune* magazine the paradigm of doing business will continue to shift further from making products to providing services (May 17, 1993).

Manufacturing and Service Jobs
(in millions)

	1970	2000
Manufacturing Jobs	19.4	18.2
Service Jobs	11.4	32.5

Source: Bureau of Labor Statistics

"Blue-collar jobs were once virtually a birthright for high-school graduates. Now they're in the midst of a historic decline at the dawn of the post-industrial age." - Alan Ota, *The Oregonian*, October 25, 1992.

As manufacturing has diminished over the years, so too has the role and influence of labor unions. The only membership gains unions have seen is in state and local government employees.

Declining Labor Union Influence
(Non-agricultural union members as percentage of labor force)

1955	1987	2000
33%	17%	10%

Source: Department of Labor

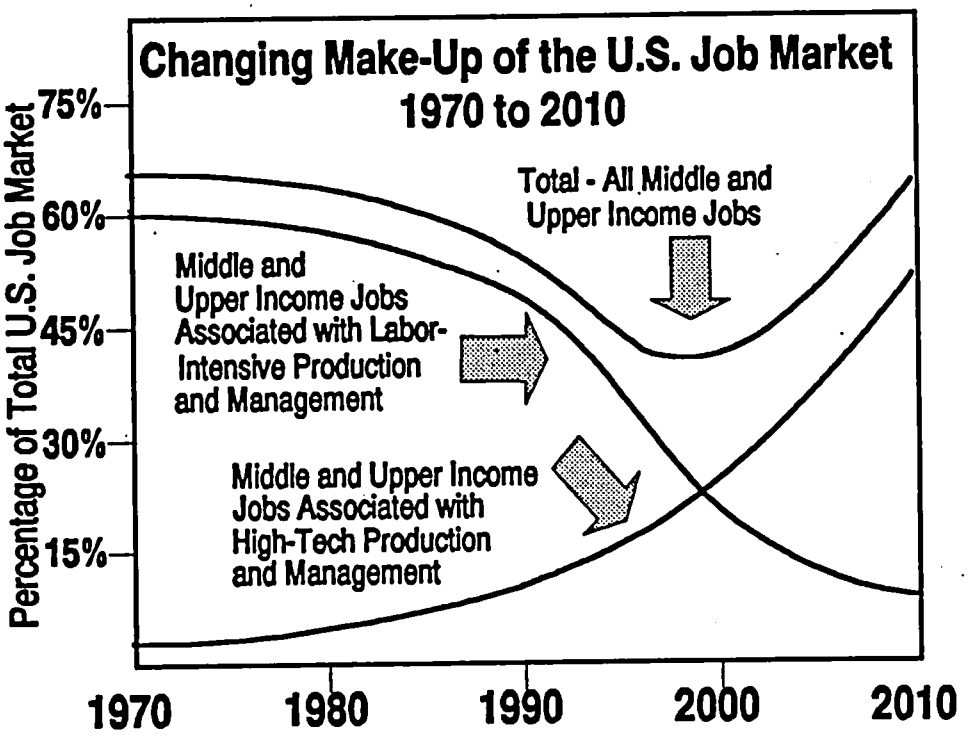
- The factory jobs that allowed American workers to live middle-class lifestyles for so many years are disappearing. The better paying jobs will go to those with college educations and advanced technical skills. For example, IBM PC Direct (computer sales) requires all its salespeople to hold a four-year college degree.

Although wage growth has been flat since the early 1970s, there have been remarkable shifts in earnings among different groups of workers. For example, in 1987 managers with high school diplomas earned $23,306 while managers with college degrees earned $37,252, or 39 percent more. The salutary effect of education held true for other classifications like technicians and service workers too.

Many Oregonians are also aware of the salutary effects of education. Seven out of ten Oregonians, responding in the recent statewide Values and Beliefs Study by the Oregon Business Council, said wages will fall for those people with only a high school education.

Related to growing importance of education, is the new *"fervor for professional credentials that is beginning to emerge. The new accreditation trend is rooted in the drive to produce better workers and improve efficiency, performance, and service* (Kim Long, *American Forecaster Almanac*, 1994). "

The following chart, Changing Make-Up of the U.S. Job Market, is based on the work of Paul A. David, Chairman of the Department of Economics, Stanford University. The chart was developed by David Snyder, using Mr. David's paper, "Computer Dynamo" The Modern Productivity Paradox In A Not Too Distant Mirror (July, 1989), as the research source.



CAUSE 2: GLOBAL-DOMESTIC COMPETITION

Perhaps more than any other driving force, increased global and domestic competition is precipitating fundamental and long-term structural change regarding the nature of work - how it gets done, where, when, and by whom. Contracting out, downsizing, lateral advancement, and partnershipping are not just recession-responsive fads. They represent the start of a new ball game for private and public organizations.

Discussion

- The merger mania of the late 1980s, and resulting corporate downsizings, is largely due to an increasingly savvy and competitive worldwide marketplace. This reality has forced American companies to become more productive and efficient. For example, the steel industry now produces 45 percent more steel while using 30 percent fewer workers than just 8 years ago. Just-in-time inventory, re-engineering, delayering, outsourcing, and the rapid growth of the contingent workforce, are some of the better known responses.

- The largest private employer in the U.S. today is Manpower, Inc.. Not IBM, General Motors, or Walmart. And these are not temporary jobs for clerical positions. They include, among others, scientists, executives, doctors, and lawyers. Since 1982 temporary employment has increased 250 percent while all employment has grown less than 20 percent. In 1992, half of all new jobs were contingent jobs. *Time* magazine calls the growth of the temporary work force "The most important trend in business today (*Time*, March 29, 1993)."

> *"Most people will find their place outside the organization, selling their time or their services into it, as self-employed, part-time, or temporary workers."* - Charles Handy, *The Age of Unreason*, 1989.

Growth of Contingent Workers
(as a percentage of the labor force)

1988	25%
1993	33%
2000 (Reported in: *Fortune*, January 24, 1994)	50%

"As corporations and governments struggle to reinvent themselves, they have found they can expand and contract their work forces without expensive layoffs. Through the use of part-timers, temporaries and independent consultants, the concept of just-in-time inventory and production has been carried over to the workplace." - Newsday (as reported in *The Oregonian*, December 12, 1993.

Contingent workers cost an estimated 2 to 40 percent less than a core employee (source: Clare Ansberry , *The Wall Street Journal*, March 11, 1993).

As re-engineering, the current grail in business, picks up steam, layoffs and reliance on temporary workers might well increase. Indeed, "re-engineering could eliminate a million to 2.5 million jobs a year for the foreseeable future (Center for the New West, *Points West Chronicle*, Summer-Autumn, 1993)."

Charles Handy, in *The Age of Paradox* (to be released Spring 1994), says that tomorrow's organizations will be like apartment blocks: a collection of temporary residents co-located for mutual convenience. For today's worker, the message is clear: You are now on your own.

CAUSE 3: TECHNOLOGY

The third driving force that is washing upon the world of work is technology. Voice recognition, wireless computing, E-mail, personal communicators, pagers, fiber optics, video conferencing, faxes, portable cellular phones, virtual reality, and a host of other emerging tools are emancipating workers in ways yet to be fully understood. Just as machines leveraged worker output in the Industrial Age, telecommunications is leveraging output in the Information Age.

Discussion

- The incredible explosion in technology, and its applications, is fueling the growth of a technical workforce and a computational workplace infrastructure. Between 1950 and 1988, the number of professional and technical workers in the U.S. increased by 282 percent - three times the growth rate of the labor force.

> "Scientific knowledge has been growing exponentially, by some estimates, doubling every six to ten years since the 1960s" - Cornell's Stephen Barley, as quoted in *Fortune*, May 17, 1993
>
> "Computing speeds and densities (memory) double every 18 months" - Moore's Law

- Modern telecommunications and computers are allowing businesses to locate their "back office" operations, like data processing, almost anywhere. This makes it possible to de-couple office activities that were previously located together. The steady movement of companies from downtown headquarters to suburban campuses is one result. .

> *"Today, more FORTUNE 500 companies - and their jobs - are located outside major cities than in them."* - Andrew Reinach, *Buildings*, July 1992.

- Communication and computer technologies are merging to rapidly reshape the nature of work in America. Five key offspring include:

  - ☞ Connectivity - access to multiple data venues and services.
  - ☞ Interactivity - active participation not just passive reception.
  - ☞ Portability - nomadic products mean freedom.
  - ☞ Ubiquity - anytime and anywhere communication.
  - ☞ Transparency - making technology invisible to the user.
  - ☞ Instantization - information when you want it.

"Computers chock-full of capabilities - fax, phone, and data - will be small enough so that we may one day wear them. We may all be wearing our offices in our coat pockets." - David Coursey, *Info World*, July 8, 1991.

- The new "worker elite" will be technicians, information, and knowledge workers. The fastest growing occupations, according to the Bureau of labor Statistics ("Projected Job Growth"), in the 1990 - 2005 period include:

  - ☞ Home Health - 91.7 percent job growth.
  - ☞ Paralegals - 85.2 percent job growth.
  - ☞ Systems Analysts/Computers - 78.9 percent job growth.
  - ☞ Personal Care - 76.7 percent job growth.
  - ☞ Physical Therapy - 76.0 percent job growth.
  - ☞ Medical Assistants - 73.9 percent job growth.
  - ☞ Research Analysts - 73.2 percent job growth.
  - ☞ Human Services - 71.2 percent job growth.

"Evidence suggests that much of Oregon's recent growth can be attributed to the in-migration of a highly educated class of workers who are either self-employed or work for an employer in another state." - James Reinmuth, Dean of the University of Oregon's College of Business Administration (quoted in *Oregon Business*, February, 1994).

- The arrival of desktop computer-based videoconferencing will effectively and efficiently cut the bonds that bind workers to traditional locations - time, distance, and other limitations will diminish in importance.

  Though expensive a couple of years back, this potent technology is now within the reach of most businesses: On January 1, 1994, Intel Corp. launched a new line of products called ProShare that allows workers to hold face-to-face, long-distance conferences on their PC screens. According to an article in the *Oregonian* (January 26, 1994) by Ken Hamburg, the ProShare deluxe version comes with a video camera, microphone (both attaching to a computer), and software, and *"allows simultaneous, real-time interaction of data, fax, video and more."* In less than a three-year span of time, the cost for a system has gone from $40,000 to $2,499. Amazing.

  "I see a financial-services salesman in New Jersey having a face-to-face meeting via computer with a client in California. While on the line, the customer tries out the product. He likes it, downloads it into his computer and the salesman bills him right then. Nobody has left the office or home and it all gets done in a nanosecond." - Rick Oliver, Vanderbuilt University, Owen Graduate School of Management (quoted in *USA TODAY*, October 15, 1993).

- The Clinton Administration's commitment to developing an "information superhighway" will allow faster, easier, and cheaper information to flow (in larger amounts) between governments, schools, nations, markets, libraries, hospitals, businesses and others.

CAUSE 4: WORKER DISSATISFACTION

Americans increasingly find themselves trying to juggle the demanding roles of worker, spouse, parent, housekeeper, and caregiver. Longer work weeks, shrinking time, job skill gap, performance pressures, stagnating wages, and job insecurity, are producing stress and less than a rosy mood. People are feeling overworked and are beginning to question how much of their life they must sacrifice for a career.

Discussion

- Like hamsters, Americans are running harder just to stay in place. They are working longer hours, taking second jobs, and joining their spouses in the workforce. Additionally, more workers feel that they are in real jeopardy of losing their jobs. For many, this is producing a generalized resentment towards work. According to *USA TODAY* (October 21, 1993), three million middle-management jobs disappeared in the last five years, and another seven million could be lost by 2000. An increasing number of white collar workers are *"perched on the slippery slope of downward mobility* (*U.S. News & World Report*, June 28, 1993)."

Multiple Job-Holding Rate

Year	Total
1974	4.5%
1978	4.8%
1985	5.4%
1989	6.2%

Source: Bureau of Labor Statistics

In the years ahead American workers will be less willing to make sacrifices for their employers. The era of the paternal organization is gone. So too is the idea of the "organization man," - the loyal employee who bled blue for IBM. Tomorrow's workers will be loyal to the work they do, not necessarily to who they do it for.

"The chances that you will be fired from your job have grown from one-in-four to one-in-three in the last five years." - The Futurist, September/October, 1993.

"Technology advances have made possible a high degree of geographic decentralization of work, characterized by an almost continual flow of telephone conversations, faxes, and overnight express packages on a national and international scale." - U.S. Department of Transportation, "The Transportation Implications of Telecommuting," 1993.

"For all but the elite, work holds less promise, less purpose, less security, and less dignity than it did a generation ago." - Peter Kilborn (*New York Times*) appearing in *The Denver Post*, October 17, 1993.

- The individual's right to privacy, especially at work, is moving up on the national agenda. The 1992 Harris-Equifax Consumer Privacy Survey revealed that:

  - ☞ 79 percent of the public is concerned about threats to personal privacy.
  - ☞ 76 percent of the public is concerned that their control has been lost over how personal information is circulated and used.

  The public's growing concern about privacy has generated a flood of legislation - over 500 bills have introduced recently addressing the privacy abuses and protection. Commentary has focused on how a person's right to privacy is basic to their autonomy, self-determination, and sense of self worth.

  The push towards employee screening and monitoring by business has been prompted by the need to improve productivity and avoid liability exposures (for example, unknowingly hiring a convicted child abuser). In 1992, The Congressional Office of Technology Assessment estimated that 6 to 10 million workers nationwide were being monitored electronically.

"Today the companies that employ us seem to know everything from our charities to our cholesterol counts, including how much we save, what our credit rating may be, who our heirs are, and what model car we prefer to rent." - Fortune, "What the Boss Knows About You," August 9, 1993.

- With a pension crisis brewing (corporate and federal under funding) and the cost of living outpacing wages, Americans may need to work well into their expected retirement years. Indeed, older worker's participation in the labor force is growing again after 30 years of steady decline (1950 - 1980).

CAUSE 5: TIME SCARCITY

For most Americans, real and perceived time is shrinking. There is simply too much to do and too little time available. Contributing to this reality is the growth of dual-income families, the popularity of work-and-spend lifestyles, a longer working year, increasing births, more family activities, and longer commutes. Consequently, more and more Americans treat time as an increasingly precious resource.

Discussion

- For many Americans, time scarcity, and the corrosive effect it exerts on quality of life, is a major concern. Indeed, marketers now understand that time is as important a factor in people's buying decisions as money.

> *"The drive to become efficient time managers at work, at home, and on the road lies behind the growing popularity of cellular phones, answering machines, carphones, and timesaving telecommunications features from repeat dialing to call waiting. It continues to fuel the boom in home shopping."* - The Roper Organization, 1993.

> *"More people are traveling farther than ever to their jobs, with the average worker spending 13% more time on the road in 1985 than in 1975." - The Wall Street Journal*, August 1, 1993.

In 1989, 65 percent of respondents in a Robert Half International poll said they would be willing to reduce their salary to gain more personal time. The same results were seen again in a 1991 Hilton Corporation survey, and quite recently in a huge (3,381 sample) 1993 study by the Families and Work Institute. These studies all reveal an American burned out from trying to balance work and family life.

Economist Juliet Schor, in her recent book *The Overworked American*, claims that Americans are now working 163 hours more each year than they did 25 years ago. In Oregon, for example, manufacturing workers worked an average of 39.6 hours a week per year in 1992 which was about 1.7 hours more a week than 1982. That translates to 88 more working hours each year.

EFFECT 1: SMALL(ER) IS BEAUTIFUL

In response to savvy competition, the growing importance of speed, niche markets, access to empowering technology, and the overriding need to be close to an ever-changing customer, business has set sail on a historic period organizational restructuring. This phenomenon is also occurring in the public sector, where smaller, highly specialized governments have been steadily blossoming.

Discussion

- Downsizing, contracting out, reengineering (team work, alliances, etc.), focusing on core competencies, and targeting niche markets, are all parts of a sea change in organizational thinking. Dominant players like IBM, AT&T, Kodak, Digital Equipment, and others are shedding vast numbers of mostly middle-level workers in search of competitive nirvana. They are dividing themselves into fast, flexible, and focused, "Independent Business Units."

  According to Britian's *New Scientist* magazine, groups of 100 to 230 have turned up everywhere as the ideal operational size - from religious communes to neolithic villages to research organizations.

- As large companies shrink, smaller companies grow in size and number - playing in the shadows that the giants cast.

  The rapid expansion of the service economy will continue to stimulate small business growth (according to the Bureau of Labor Statistics, manufacturing jobs in 1993 fell to their lowest level since 1956). Oregon is a small business state, with 89 percent of all businesses employing fewer than 20 employees. Personal services do not require hefty amounts of capital like manufacturing does. In 1989, for a sense of perspective, there were "nearly 700,000 incorporations, 400,000 partnerships, and 300,000 sole proprietorships" created, according to a story in *Utne Reader*, January/February, 1989).

- The specialization that is occurring in business is also occurring in government. In 1982, the U.S. Census Bureau counted 86,743 governments in America. In Oregon, the number was 1,487 which computes to 240 cities, 36 counties, 340 school districts, 870 special districts, and one state government. Nationally, governments grew by 12 percent in just the last five years - involving mostly single-purpose (specialized) units. In Portland, a good example of this phenomenon is the Economic Improvement District (EID) that the Association for Portland Progress created.

EFFECT 2: UBIQUITOUS WORKPLACE

The convergence of technology, self-reliance, global competition, business restructuring, time scarcity, diverse lifestyles, and worker dissatisfaction, is creating an everywhere-all-the-time workplace. The traditional boundaries between work and play, home and office, public and private, are dissolving. In another 10 years, the idea of an "office" may be a 20th century novelty.

Discussion

- Satellite centers, homes, resorts, Flight 112 to Denver, a briefcase, and people's automobiles, are rapidly becoming the work venues of choice for an increasing number of Americans. These alternative worksites satisfy key emerging needs:

  - They save people time, energy, and effort.
  - They are easy to access and use.
  - They help streamline and simplify complex lifestyles.
  - They allow people to structure work around busy lives.
  - They promote higher worker productivity.

- Tomorrow's offices are already here today. Ernst & Young, Chait/Day, Los Angles County, Andersen Consulting, AT&T, and a host of other organizations are now instituting a variety of nontraditional office forms:

  - Virtual Office - technology creates the office wherever an employee happens to be sitting, walking, driving, or flying.
  - Universal Plan - everybody gets the same space no matter their job title.
  - Hoteling or Just-In-Time - a few fully equipped offices are shared by scores of employees on an as-need basis.
  - Telecommuting - working within the home environment via telecommunications.

- ☞ Satellite Offices - corporate branch offices located near employees homes.
- ☞ Live Boards or Shared Minds - merging of geographically scattered workers to do real-time, face-to-face projects entirely on-line. Workers interact as if they are in the same room.

- In addition to space, workers relationship to time is metamorphosing. The work week is no longer a 9 to 5, Monday through Friday schedule. In a global market, people are working within a 24-hour day, seven day week, time frame. The workplace resembles the Duracell Bunny: it never stops. A recent Hyatt Hotels and Resort study found that 50 percent of executives routinely take work with them on vacation.

"Nine-to-five is an artifact of Taylorist thinking." - Paul Saffo, Institute for the Future.

- In addition to working everywhere and any time, Americans may well be working harder and longer in tomorrow's world. Yesterday's predictions of more leisure time never materialized. Indeed, perceived time has shrunk. Only those individuals with high-level skills will be able to leverage their time by using technology, and only those individuals with money will be able to leverage their time by obtaining personal services.

EFFECT 3: PERSONAL ENTERPRIZE

People from all walks of life are engaging in entrepreneurship, and an explosion of microenterprizes is resulting. In an era of uncertainty and rapid change, entrepreneurship represents one of the few routes available to self-reliance. In the 1980s, entrepreneurship was chic. Today its more survival oriented. As Tom Peters has recently observed, "Americans may be returning to the Emmersonian spirit of self-reliance."

Discussion

- With hoards of contingent workers entering the labor market, career ladders clogged, glass ceilings in place, no end in sight for corporate delayering, an emporium of gee-whiz work-related technologies available, and the opportunity for self-direction beckoning, many Americans are taking the plunge and starting a business. Indeed, the number of self-employed people is growing at four times the rate of salaried workers.

Projected Employment Growth for the Self-employed
(in occupations with 50,000 or more workers)

Occupation	Jobs gained 1990-2005	Percent change
Service	442,000	36%
Executive/Administrative	508,000	32%
Technicians	25,000	23%
Professionals	281,000	19%
Precision Production	246,000	15%

Source: *Outlook 1990-2005: Occupational Employment*, Bureau of Labor Statistics, May 1992.

"One-in-six discharged managers starts a business." - Source: Challenger, Grey & Christmas (reported in *The Oregonian*, September 1, 1993).

"Economic man must carry his security with him now in the form of flexible skills and constantly current knowledge. One must:

- *Manage their own career*
- *Shepherd their own progress in acquiring flexible skills*
- *Oversee their own retirement program"*

Marshall Inginerson, "Workers Brave New Job Frontiers," *The Christian Science Monitor*, March 24, 1993.

- One of the most interesting aspects of entrepreneurship has been the rapid growth of Lone Eagles. *Inc.* magazine estimates that there are now nine million workers who fit the profile: professionals who live by their wits, and are connected to their clients by telecommunications and air transportation. These unfettered workers reside primarily in the West. They include management consultants, software designers, writers, financial advisors, and others.

"Lone Eagles are the most significant cultural phenomenon in the U.S. workforce since the rise of the two-wage-earner family." - Jay Gillette, Center for the New West.

Lone Eagles are such a tantalizing market, that many smaller communities have made luring them the centerpiece of their economic development strategies (the Edison Electric Institute figures a Lone Eagle generates $60,000 to 100,000 yearly).

- Fueling this self-employment boom, is a reservoir of 77 million individualistic baby boomers who grew up "doing their own thing." For them, "free agency" will be a highly prized livelihood attribute in the years ahead. One manifestation of this individualism is the formation of new businesses by women.

"By 2000, women will own at least half of the estimated 30 million businesses in the U.S." - Research Alert, *The Lifestyle Odyssey*, 1991.

Franchises are also blossoming, especially as laid off middle managers cast about for other work possibilities. In the U.S., there are now more than 500,000 individual franchise locations involving 65 industries. Sales growth has been steady at a vigorous 15 percent a year.

"Americans seem to think little about embarking on a new career in midlife, even when the chance entails years of retraining. Rabbis become lawyers. Musicians become physicians. Steel workers become computer operators. Teachers go into marketing." - *The Wall Street Journal*, March 25, 1990.

EFFECT 4: HOMEWORK

The home has always been a powerful symbol, but more so today than in the past 50 years. In times of rapid and profound change, the home offers stability and security. Accordingly, people are spending more time in the home and the home is evolving - office, cinema, spa, gym, retreat, learning center, arboretum, and so forth. Life- and workstyle conditions are producing the flexible home.

Discussion

- The number of people working at home has grown 8.9 percent annually from 1989 through 1993 (LINK Resources). Since 1974, the number of homeworkers has increased more than sixfold. According to the *1994 Information Please Almanac*, homeworkers can be divided into the following categories:

  - Primary self-employed homeworkers - 12.2 million.
  - Part-time self-employed homeworkers - 12.1 million.
  - Telecommuters - 7.6 million.
  - High-tech corporate after-hours homeworkers - 9.2 million.

  The Center for the New West estimates that the self-employed sector will represent over one-third of the workforce by 2005. As: 1) people try to improve the quality of their lives, 2) big cities scramble to satisfy the Clean Air Act, 3) ISDN* line infrastructure expands, and 4) businesses seek greater worker productivity and reduced operating costs, homework participation (in all its forms) could easily skyrocket.

  *Integrated Services Digital Network allows phone lines to carry simultaneous data and image transmission. Most of today's phone lines are analog, and cannot accomplish this quinella. U.S. West, for example, estimates they will have ISDN line technology in place by 2000 in their service area. Currently, Microsoft is pushing for ISDN technology for individual (single line) and corporate (double line) use.

Reasons cited in a 1989 Electronic Home Office Products Services study for expanded use of the home include:

- ☞ Start a business - 43 percent.
- ☞ Convenience and Comfort - 39 percent.
- ☞ Supplement Income - 38 percent.
- ☞ Flexible Hours - 38 percent.
- ☞ More Time for Family - 33 percent.

In anticipation of growing workplace dispersal, the Federal Communications Commission recently (July 24, 1993) set "aside a portion of the public airwaves for two-way wireless communications (*The Washington Post,* June 25, 1993)."

"There are now more than 12 million people using cellular telephones nationwide - a figure that grows by nearly 10,000 people a day." - Paul Neville writing in the Eugene *Register-Guard*, January 8, 1994.

- The comfort, convenience, and control that the home offers, could certainly contribute to continued suburban and exurban growth. Already the suburbs have more than 57 percent of the nation's office space, up from 46 percent just ten years ago (Source: U.S. Census Bureau). People, jobs, shopping, and entertainment are increasingly moving outwards. In West Linn Oregon, for example, the local chamber of commerce recently examined where business licenses were being issued. They discovered, surprisingly, that 75 - 80 percent of the business licenses that were issued, were to in-home businesses. On the other side of the coin, Carl Abbott, in his article "Settlement Patterns in the Portland Region: A Historical Overview," observed that telecommuting grew very little from 1970 to 1990 in the Portland metropolitan area. However, what might have occurred from 1990 on was not included.

EFFECT 5: BRIGHT-COLLAR WORKERS

As 2000 approaches, a new type of worker is emerging. These ability-enriched Americans are being forged by a confluence of driving trends: global competition, baby boomer values, enlightened self-interest (survival), corporate restructuring, emerging technology, and personal enterprize. Robert Reich, Labor Secretary, calls them "symbolic analysts," and says they represent about 20 percent of the population. They include investment bankers, lawyers, engineers, software designers, and all types of lone eagles and consultants.

Discussion

- The emerging renaissance worker is armed with a number of key survival attributes which allow them to prosper. They include:

  - ☞ Specialized knowledge and problem-solving skills.
  - ☞ Versatility, flexibility, and adaptiveness.
  - ☞ Self-starting and self-reliant.
  - ☞ Information and technology-avid.
  - ☞ One-to-one and small group communication skills.
  - ☞ Fast and responsive.
  - ☞ Globally oriented.

> *"The future belongs to the self-employed, project-focused, knowledge-based specialists."* - Charles Skorina

- Perhaps more than any other factor, education is the key for these bright and vigorous workers. Economists Cecilia Rouse and Tom Kane have reported that every year of post-secondary education increases earning power by 5 to 10 percent. And according to the U.S. Census Bureau, households headed by people with four years of college or more were worth $72,373 while those households headed by people with a high-school diploma were worth only $33,254. In one way or another, the marketplace is getting the

message. In 1970, there were 11.8 million college graduates in the U.S.; by 1990 that number had increased to 32.5 million.

To attain the earnings cited above, most households must now send both partners into the workforce. In large part, this is due to productivity increases of less than one percent from 1970 to 1990. The effect, is that Americans must work harder and longer and smarter just to maintain a middle-class lifestyle. Education is the most cost-effective investment an individual can make.

- One very troubling downside to all this, is the increasingly rapid bifurcation of American society into the haves and have-nots. Indeed, not since 1946, when the U.S. Census Bureau began keeping statistics, has the gap between rich and poor been so wide. For example, in 1979 the U.S. Census Bureau calculated that 18.9 percent of full time workers had low-wage jobs; by 1992 that figure had jumped to 25.7 percent. Oregon has not been immune to the similar effects - from 1979 to 1989, poverty increased from 10.7 to 12.4 percent, while median household income fell three percent. Polarization however, is not limited to just income factors:

Haves	Have-nots
High-wage knowledge jobs	Low-wage service jobs
Self-reliant	Other-reliant
Optimism	Pessimism
Homeowners	Renters
Technology-avid	Technology-averse
Gain-motivated	Loss-motivated

"For most workers wages have been stable or sinking for 20 years. The center of the labor force has been hollowing out as the top and bottom have grown." - Peter Kilborn, writing in *The Denver Post*, October 17, 1993.

"Many labor specialists fear that the four horsemen of the workplace - global competition, technology, downsizing and the growth of the contingent workforce - will cause wages to continue to fall, creating a nation divided into haves and have-nots." - *The Wall Street Journal*, March 10, 1993.

Section IV - Key Highlights

KEY HIGHLIGHTS

The following Key Highlights, regarding the emerging nature of work, have been drawn from Sections II (Causes) and III (Effects) of this study.

- **Plasticized Work** - tomorrow's workstyles, and what they mean to the form and function of metropolitan areas, will be steadily evolving. As people adapt to the sweeping forces of competition, shrinking time, aging bodies, entrepreneurial self-sufficiency, technological innovation, instant communications, polarizing incomes, metropolitan congestion, violent crime, and so on, work as it is now understood will certainly mutate - again and again. Indeed, where people will work, what they will do, and how they will get it done, is truly a "work in progress."

- **Individualized Work** - tomorrow's workstyles will reflect a new common denominator: One. Market fragmentation, abundant choice, the growing popularity (and necessity) of self-reliance, continued business restructuring (layoffs), and the growth of a service economy are all contributing to the emergence of an empowered "free agent" worker. More Americans understand that traditional societal supports have weakened, and that they are now more on their own. These workers are becoming, with the help of leveraging technologies and accessibility to knowledge, independent economic engines. Increasingly, they will be able to work where they want, when they want, how they want, and with who they want. Many will ply their niche specialties in suburban and exurban locales, for this is where the service sector and entrepreneurship are thriving. Many, perhaps more than half, will be women.

  Related to the power of one, are small businesses which have grown dramatically. Since 1980, the number of small businesses has more than doubled and now employs about half of the nation's private workforce. Small businesses are sprouting throughout the landscape.

- **Omnipresent Work** - tomorrow's workstyles will be occurring wherever people find themselves: taking a walk, relaxing at home, driving the car, flying to Denver, or playing the back nine at Progress Downs. For the employed, telecommunications (especially video conferencing and screen sharing) will make it less necessary to attend briefings, meetings, and worksessions. This is creating a world in which people will be able to work anytime-anyplace. The traditional bonds of space and time will slowly lose importance. American's desires for control, mobility, freedom, individual expression will assert themselves. As a result, people will increasingly work everywhere - disaggragated throughout the urban, suburban, exurban, and rural landscapes.

- **Virtual Work** - tomorrow's workstyles will be profoundly altered by the advent of emancipating technologies, especially wireless communications, video conferencing, and screen sharing. These "killer applications" will help fuel the growth of an anywhere-all-the-time workplace (omnipresent). Information will move, not people. Other-employed (and self-employed) workers will eagerly embrace the liberating qualities that these technologies can deliver, and businesses will wisely embrace the productivity increases and cost savings that will accrue.

- **Continuous Work** - tomorrow's workstyles will more closely relate the realities of the global community and a customized economy (what you want, when you want it, and where). The 168-hour workweek will be commonplace (note: manufacturing is most cost-effective when run without interruption). Compaq Computer recently shifted to an around-the-clock manufacturing and distribution schedule to ramp up a "built to order" computer customization initiative. Combined with the Omnipresent (everywhere) workplace, the continuous (all the time) workplace may well serve to disperse, dilute, and diminish traffic concentrations in both space and time.

- **Efficient/Productive Work** - tomorrow's workstyles will reflect the growing influence of efficiency. Indeed, efficiency will be to the 1990s what quality was to the 1980s - the dominant paradigm for business and government. Savvy competition, fewer resources, new technology, and the organizational practice called reengineering, are now combining to hasten the emergence of

efficiency - getting more and better from less. The productivity revolution that hit manufacturing and farming some time ago, is now spilling into the huge service sector. Prices will drop, work done per employee will go up, and jobs will probably be lost. Already huge layoffs have been announced at service companies like AT&T (15,000), GTE Corp. (17,000), Nynex Corp. (16,800), and Pacific Telesis (10,000). This trend will accelerate, especially in utility, insurance, communication, banking, and finance areas. The growth of a contingent (temporary) workforce seems assured. However, competitiveness is also assured, which should create more jobs.

- **Flexible Work** - tomorrow's workstyles will take into consideration the many pressures workers must increasingly deal with. Less available time, child and elder care responsibilities, conflicting family schedules, and other work-family issues are now starting to bring about major changes in the American workplace. Part-time, flexplace, flextime, compressed work weeks, and other fresh arrangements are being tried and instituted in many organizations. Early adopters like U.S. Bank, Xerox, and Stride Rite realize that helping employees handle their responsibilities improves productivity and job satisfaction. These emerging employee work options may prove to influence urban forms, settlement patterns, traffic flow, and other important aspects of metropolitan living.

- **Bifurcated Work (Locations)** - tomorrow's workstyles will be played increasingly further out (exurban) and closer in (urban).

  Exurban & Suburban residential living will grow more popular in the years ahead, especially for "free-agent" baby boomers. The need for control in an ever more precarious world, availability of emancipating telecommunications, consumer desire for rural amenities and space (larger lots), availability of less expensive housing, personal security concerns, and a longing for more freedom, will fuel this growth pattern. Areas like the stretch between Tualatin and Beaverton on highway 217, or to the north on the Hillsboro-Beaverton corridor, are early examples of expanding suburban, or perhaps, "edge city" growth.

  Urban residential living will also grow increasingly popular in the years ahead. The Pearl District, RiverPlace, John's Landing, and

other emerging, close-in, neighborhoods should experience significant growth. Empty-nesters, retirees, childless couples, single working professionals, and others will gravitate to these special, lifestyle-oriented venues. Emerging "neotraditional" living arrangements that combine distinctive housing, sense of place, transportation, proximity to work, educational opportunities, shopping, professional services, entertainment and cultural activities, will prove highly attractive to time-short, culturally-oriented, and community-seeking market segments.

Section V - Recommendations

RECOMMENDATIONS

This Section has been developed to assist the Future Vision Commission apply this study. The focus of the FVC, to "Support a high quality of community life" has been used as the reference point in developing the following five recommendations.

- **The FVC should support the development and implementation of a communications infrastructure in the Portland metropolitan region.**

Emerging technologies and applications like video conferencing, wireless cellular, personal digital assistants, voice mail, interactive multimedia, computer networks, and so forth, represent "a volcano about to erupt (*Wall Street Journal*, special telecommunications report, February 11, 1994)." Telecommunications, entertainment, learning, cable, computers, publishing, and retailing are coalescing into a mega industry with mega implications. Urban form and function will be altered as citizens are liberated from the traditional constraints of time and space. Freedom, flexibility, and self-sufficiency could see rapid and accelerating growth. People will be able to work anywhere-anytime. Microsoft, for example, predicts that by 2000 the home will represent 50 percent of the company's sales, compared to just five percent today. Microsoft is betting that more and more Americans will be working, learning, shopping, and entertaining at home in tomorrow's world. Less congestion and traffic are possible outcomes.

- **The FVC should support the development and implementation of educational and skill-building opportunities in the Portland metropolitan region.**

The ability to become productive citizens in tomorrow's world will increasingly depend upon accessing, acquiring and applying ideas, knowledge, and specialized skills. Knowledge has become the fulcrum of a revolution and the central resource of an advanced economy - it reduces the need for raw materials, labor, time, and capital. No better avenue exists for acquiring knowledge than through technical training and higher education. The beneficial effects that education and training exert on lifetime earnings are

profound. For example, in the last ten years the inflation adjusted income of high-school dropouts has declined four percent, while the incomes of college graduates has increased 48 percent (Congressional Institute for the Future, *What's Next*, Fall 1993). A skill- and knowledge-abled individual will prove to be a net contributor in tomorrow's Portland.

- **The FVC should support the development and implementation of flexible work options in the Portland metropolitan region.**

  Complex and crowded lifestyles, dual-income working couples (with kids) and single parents with less time, longer commutes and longer working hours, costly child and elder care, and time compression, are all eroding the quality of people's lives. For the 1990s, and well beyond, time and control will be two critical worker-driven aspects of work. Accordingly, more organizations are now experimenting with, and implementing, various flexibility options - part time, flexplace, flextime, job sharing, work-at-home, compressed work week, corporate satellite offices, and so forth. Businesses have learned that allowing worker's control over their work results in productivity gains. Lack of control produces absenteeism, tardiness, and stress-related health problems. Flexible workstyle and workplace options could easily translate into much less traffic (by spreading commuting out over non-peak times) and in reducing the number of commuters.

- **The FVC should support the development and implementation of residential developments that offer a sense of community in the Portland metropolitan region.**

  The powerful tug of individualism that fueled market fragmentation, population dispersal, cafeteria lifestyles, and individual rights, probably reached its zenith in the late 1980s. For the next 20-years, community and family-type values will resurface. This change is traceable to the aging of America, especially its influential baby boomer generation. Accordingly, neighborhoods, urban villages, and downtown communities that offer the attributes that people will want - sense of place, proximity to work, convenience, transit, safety, recreation, shopping, and so forth - will be able to satisfy a growing market while contributing significantly to the region's quality of life.

- **The FVC should support the development and implementation of Livability (quality of life) as the central defining attribute in the Portland Metropolitan region.**

  Concern about the carrying capacity of land, water, and air resources is certainly near the top of the urban planning agenda. However, as a source of public leverage, livability will be much easier to support and sell. Crime, congestion, crowding, and control, for example, are easier for citizens to relate to than land use planning terms. In the years ahead, as American cities continue to deteriorate, livability will become paramount. Indeed, it already has in a number of locations throughout the nation. Quality of life will prove to be an enduring issue that captures the attention of Americans and moves them to action.

Section VI - Appendices

Appendix A

Listed below are the Key Informants who were interviewed for this report:

Steve Donahue
Executive Staff
Office of the American Workplace
Washington, D.C.

Kathy King
Transportation Services Coordinator
Oregon Department of Energy
Salem, Oregon

Collen Murphy
Senior Research Fellow
Center for the New West
Denver, Colorado

Chris Rau
Telecommuting Market Planning
U.S. West
Portland, Oregon

David Snyder
Consulting Futurist
Lifestyle Editor *The Futurist* magazine
Bethesda, Maryland

Chris Whelan
Home Office Group Market Planning
U.S. West
Phoenix, Arizona

Appendix B

Suggested readings:

Joseph H. Boyett and Henry P. Conn, *Workplace 2000 (The Revolution Reshaping American Business)*, Dutton publishers, 1991.

Juliet B. Schor, *The Overworked American*, Basic Books (a Division of HarperCollins) publishers, 1991.

Charles Handy, *The Age of Unreason*, Harvard Business School Press publishers, 1990.

Richard Carlson and Bruce Goldman, *2020 Visions Long View of a Changing World*, Stanford Alumni Association publishers, 1991.

Joe Cappo, *Future Scope*, Longman Financial Services publishers, 1990.

Katherine S. Newman, *Declining Fortunes (The Withering of the American Dream)*, Basic Books (a Division of HarperCollins) publishers, 1993.

A Report of the President, *The State of Small Business*, United States Government Printing Office publishers, 1992.

Peter Drucker, *Managing for the Future*, Truman Talley/Dutton publishers, 1992.

David Pearce Snyder and Gregg Edwards, *Future Forces: An Association Executive's Guide to a Decade of Change and Choice*, Foundation of the American Society of Association Executives publishers, 1984.