M E M O R A N D U M

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METRO

Date: October 30, 2003

TO: David Bragdon, President of the Metro Council

FROM: Lydia Neill, Principal Regional Planner

RE: Technical Assessment of Reducing Lands within Alternatives Analysis Study Areas

Purpose
Provide a technical assessment of reducing lands contained in the 2002/2003 Alternative Analysis Study areas that will be considered for possible amendment to the Urban growth Boundary (UGB). The technical assessment is based on the location and siting factors (slope, proximity to industry and access), size of areas, proximity to the UGB, size and committed uses of parcels. A reduction in the lands under consideration will focus discussion on areas that are suitable for industry and allow a more thorough analysis to be completed for the impact analysis completed for the Measure 26-29 report.

Background
Three industrial land location and siting factors have been identified to indicate which lands are most suitable for industrial purposes. The 2002 and 2003 Alternatives Analysis Study areas are proposed to be evaluated using the location and siting factors: 1) slopes of less than 10% and/or location in a floodplain, 2) proximity to other industrial uses and Title 4 areas (within one mile), and 3) good access to transportation facilities (two miles from an interchange or access to theTualatin Valley Highway or Highway 99).

All of the 2003 Alternatives Analysis Study areas meet the location and siting factors because they were chosen for study based on these factors. The 2002 Alternatives Analysis Study areas were identified for general land need purposes and prior to the development of the location and siting factors so there may be areas that do not meet these factors. The 2002 Study areas were analyzed using these factors, resulting in a number of areas that are proposed to be dropped from further consideration because they are not suitable for industrial development. However, there are areas recommended to remain under consideration because they either meet some or all of the suitability factors or they contain exception lands that would not necessarily be suitable for industrial purposes but could facilitate the extension of services to industrial areas.

Methodology for Reducing Study Areas

The objectives of removing areas from consideration include:

- Apply the three location and siting factors to all lands (slope, proximity and access to transportation facilities), include all areas to identify lands suitable for industrial purposes
- Capture as much of the exception lands as possible that meet the 10% slope and floodplain threshold
- Evaluate exception lands that may not be ideal for industrial development but could be important for providing services to industrial areas

- Identify areas in terms of the minimum size necessary to establish a new industrial neighborhood (300 acres)

Steps to Remove Areas from Consideration

To produce a map containing a subset of lands from the 2002/2003 Alternatives Analysis Study areas a specific methodology was applied. The methodology includes the use of location and siting factors, determination of minimum necessary to form industrial neighborhoods and size and development patterns.

- Apply 10% slope and floodplain coverage to all study areas (2002/2003) and remove tax lots from study areas that do not have a majority of the area remaining outside of floodplains and/or meet the 10% slope threshold
- Examine areas to remove areas that contain a majority of parcels that are 5 acres or less and are already developed
- Remove areas that are isolated from industrial areas, not contiguous to the UGB and contain less than 300 acres.
- Remove areas that may be contiguous to the UGB but are not located within one mile of existing Title 4 areas and/or industrial areas and are more than two miles from an interchange (Highway 99 or Tualatin Valley Highway) unless these areas may be needed to provide services to areas suitable for industrial uses.

Remaining Areas to Be Considered for Industrial UGB Expansion

The areas proposed to remain under consideration have been reduced from the combined 2002/2003 Alternatives Analysis Study areas as follows:

- 2002/2003 Study areas- 68,334 acres
- Acreage recommended to be removed from study based on steps above- 46,993
- Final areas left for consideration- 21,341

Exception Areas Better Suited for Residential Development

There are a number of areas that were studied in the 2002 Alternatives Analysis that are not suitable for industrial development due to slopes, access constraints, committed uses and/or size of lots. Some of these areas are located between the existing UGB and potential areas suitable for industrial development. The location of these areas raises two policy issues: 1) should public facilities be extended through exception lands to industrial areas without bringing them into the boundary and, 2) if these exception areas were to be included in the UGB to create a logical boundary and to ease extension of services does this create an residential over-supply problem? Metro has not faced this issue before and the Land Conservation and Development Commission (LCDC) has not directly ruled on this issue. The 2002 UGB expansion decision provided 666 dwelling units over the 20-year identified land need. This decision was acknowledged by LCDC in July 2003 implying that this is an acceptable level of over-expansion for residential purposes. The addition of additional exception areas not suitable for industrial purposes has the potential to greatly increase the over-supply of residential capacity. These questions will need to be resolved prior to Council deliberation on industrial areas.

Attachment:

Map of areas

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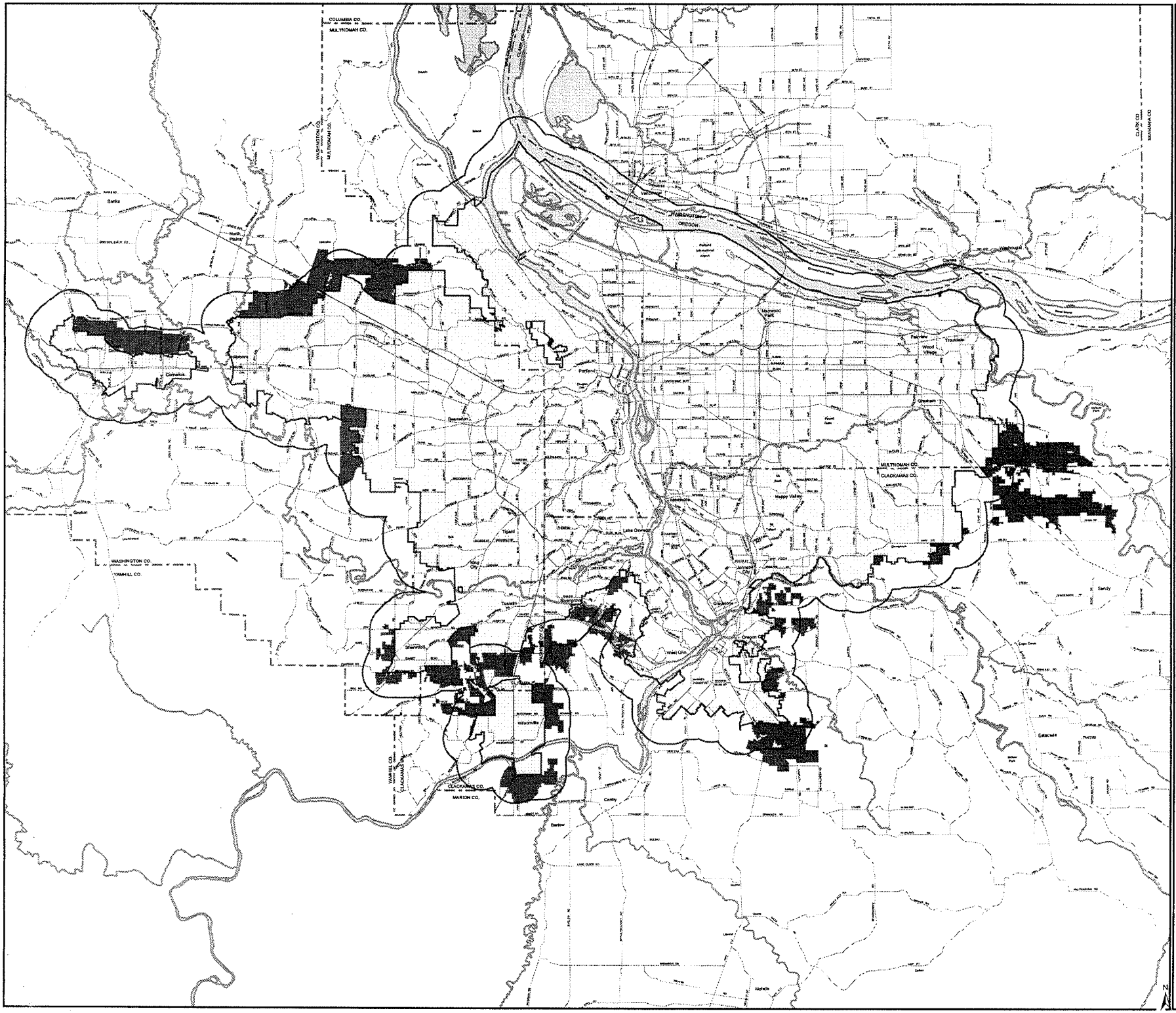


R L I S
REGIONAL LAND INFORMATION SYSTEM

Proposed Alternatives Analysis Study Areas

Revision10/21/03

Revised Study Areas

1 Mile UGB Buffer

Areas removed based upon:

* Slopes > 10% and floodplains

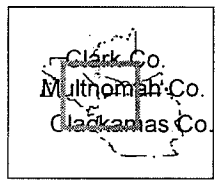
* Areas largely composed of developed 5 acre parcels.

* Areas not contiguous to the UGB and are less than 300 acres.

* Areas not located within one mile of existing Title 4 / or industrially zoned lands that are more than 2 miles of an interchange, Hwy. 99 or TV Hwy.

1 inch equals 5.1 miles

0 1 2 4 Miles



Location Map

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METRO DATA RESOURCE CENTER
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TEL: (503) 797-1742 | FAX: (503) 797-1909

METRO COUNCIL

Work Session Worksheet

Presentation Date: December 16, 2003 Time: Length: 20 min.

Presentation Title: Periodic Review- Slope Case Study

Department: Planning

Presenters: Lydia Neill, Principal Regional Planner

ISSUE & BACKGROUND

There have been a number of questions and comments regarding the impacts of slopes on industrial development. Staff has researched this issue and provided a memo that quantifies the site work that is associated with slopes ranging from 3 to 10%. The analysis was conducted with help from several developers and an engineering firm. Five sketches were produced that provide a plan and a section view of the impacts that slope has on developing a 10 acre parcel for industrial use.

A memorandum containing detailed results is provided as an attachment.

OPTIONS AVAILABLE

This is an informational item only.

IMPLICATIONS AND SUGGESTIONS

The information from this study provides background for the upcoming Council decision to expand the UGB for industrial purposes and supplements the record for that decision.

QUESTION(S) PRESENTED FOR CONSIDERATION

Is there any other information on this subject that is needed?

LEGISLATION WOULD BE REQUIRED FOR COUNCIL ACTION __Yes _X_No
DRAFT IS ATTACHED ___Yes _X__No

SCHEDULE FOR WORK SESSION

Department Director/Head Approval _____
Chief Operating Officer Approval _____

M E M O R A N D U M

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METRO

Date: November 25, 2003

TO: David Bragdon, President of the Metro Council

FROM: Lydia Neill, Principal Regional Planner

RE: Slopes Constraints on Industrial Development

Purpose
Provide a technical information on siting industrial development on land with slopes ranging from 3% to 10%. This analysis provides information on possible limitations on building sizes, earth removal and its associated costs as well as overall cost per square foot increases.

Background
Metro has used location and site characteristics to define which potential lands being considered for urban growth boundary (UGB) expansion are suitable for industrial development. A slope factor of less than 10% has been used as a cut-off for identifying which lands would be viable for industrial development.

This analysis was produced from a series of discussions with a National Association of Industrial and Office Properties (NAIOP) industrial real estate brokers and an engineering firm that specializes in industrial construction. Five sketches were produced both in plan and in section format to illustrate the sites constraints associated with developing industrial buildings with various slope conditions. The purpose of this analysis is not to demonstrate that sites cannot be developed on steeper sloped sites but to examine the additional costs and the corresponding decreases in site efficiencies. Industrial users have clearstory requirements, clear span needs and site circulation needs that dictate building sizes, shape of sites and construction types. These same inefficiencies are often not associated with commercial development because these structures have more flexible building types that can be stepped into slopes and less of a need for large turning radiuses for truck movement, outdoor storage or the movement of raw materials and products.

Methodology
The effects of developing a sloped site were examined by considering:

- Percent of slope: 3-10%
- Maximum building size that could be constructed on the site
- Land to building ratio
- Cubic yards of earth moved to create a flat site
- Construction cost impacts and overall per square foot building costs

The following chart that contains information on the relationship between slope, earth moved and costs is based on several assumption that include: 1) land costs for a 10 acre parcel of $5.00/square foot and 2) hard construction costs of $22.00/square foot. The hard construction costs do not include interior tenant improvements.

The chart below illustrates the relative cost impact of developing a single industrial building on a site of increased topographical slopes.

10- Acre Industrial Case Studies- slopes ranging from 3-10%

	Slope	Max. Building Size- sq.ft.	Land to Building ratio	Cubic yards of earth moved[1]	Construction dollar costs[2]	Build Cost/ sq. ft.
Sketch 1	3%	180,000	41%	60,000	$105,000	$49.38
Sketch 2	6%	171,000	39%	160,000	$520,000	$53.11
Sketch 3	8%	148,400	34%	220,000	$720,000	$58.80
Sketch 4 (includes/retaining walls)	10%	148,400	34%	250,000	$1,310,000	$62.78
Sketch 5	10%	122,200	28%	300,000	$975,000	$68.23

Other Factors Relating to Site Work

Any site that had more than 130,000 cubic yards of material that needed to be moved would require at least two months of additional construction time that would be factored into the overall construction costs. In addition to the extra construction time, there is a limited window of time when these quantities of earth can be moved due to wet weather constraints. Economically, earth can only be moved during the summer and fall months under most soil conditions. Rock outcroppings that are located below grade and cause actual variations in topography can add significantly to the costs of site preparation. Market factors determine whether the increased site costs can be absorbed in the overall square foot costs of a project and ultimately determine whether a project will be developed.

Attachments:
Five Sketches of Site Studies of Slope Conditions

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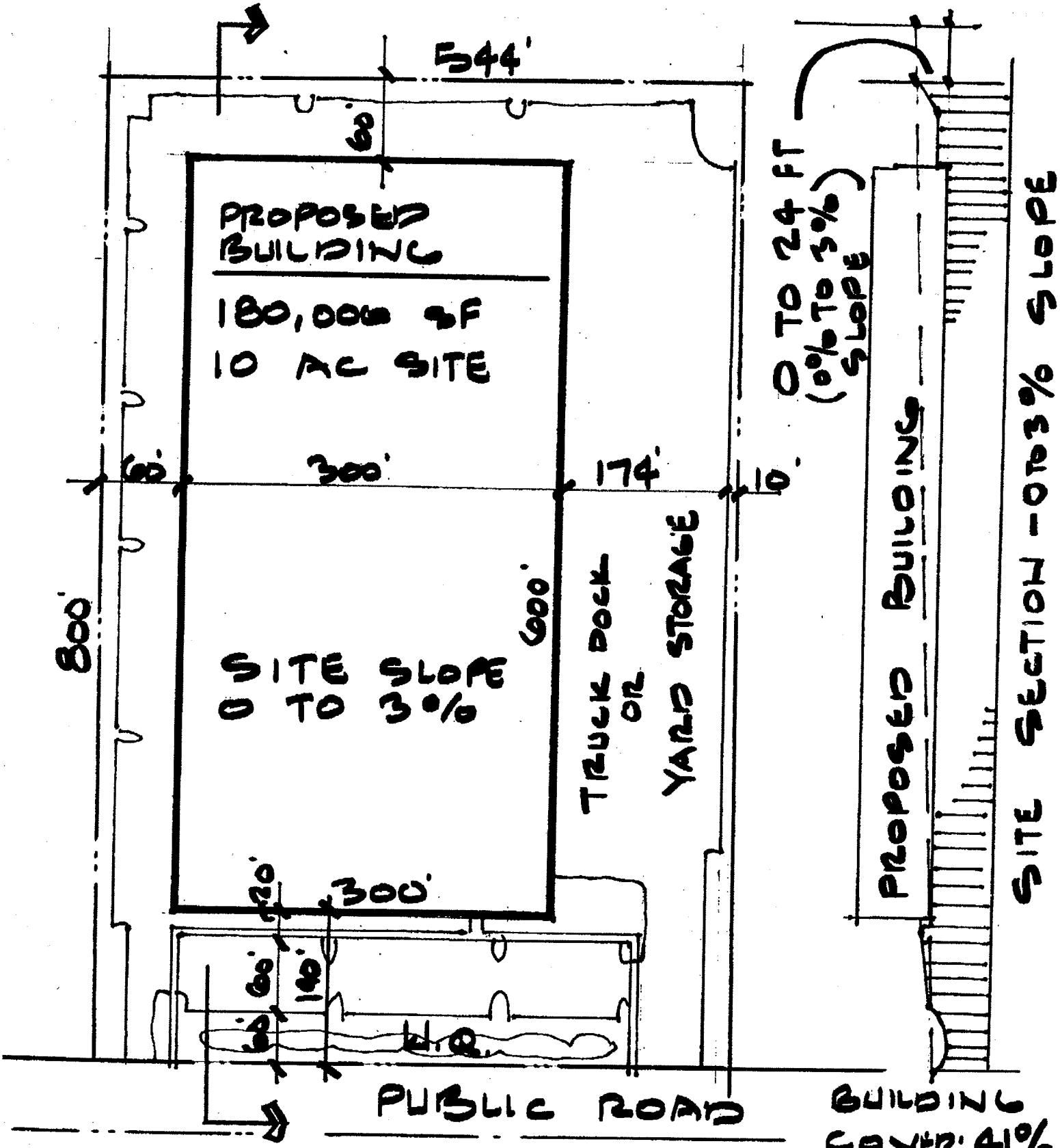
[1] Earth moved beyond that required for construction on a flat site.
[2] Includes the additional cost of construction due to schedule extension that is required due to the extra site work.



10 ACRE SITE STUDY

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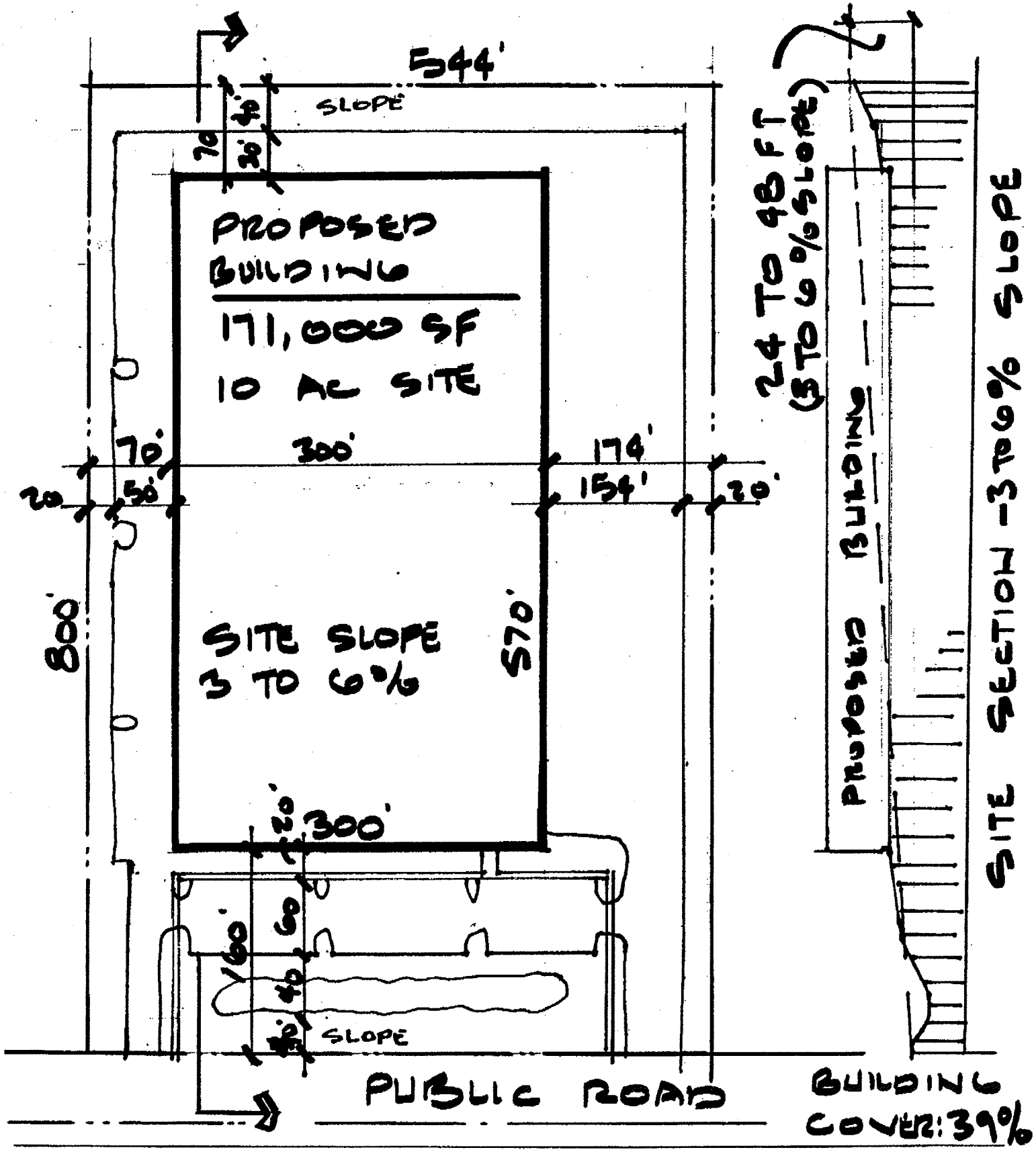
By BOB T.
Date 10.8.03
Job # 203062
Sht. 1 of 5



10 ACRE SITE STUDY

By BOB T.

Date 10.8.03

Job # 203002

Sht. 2 of 5

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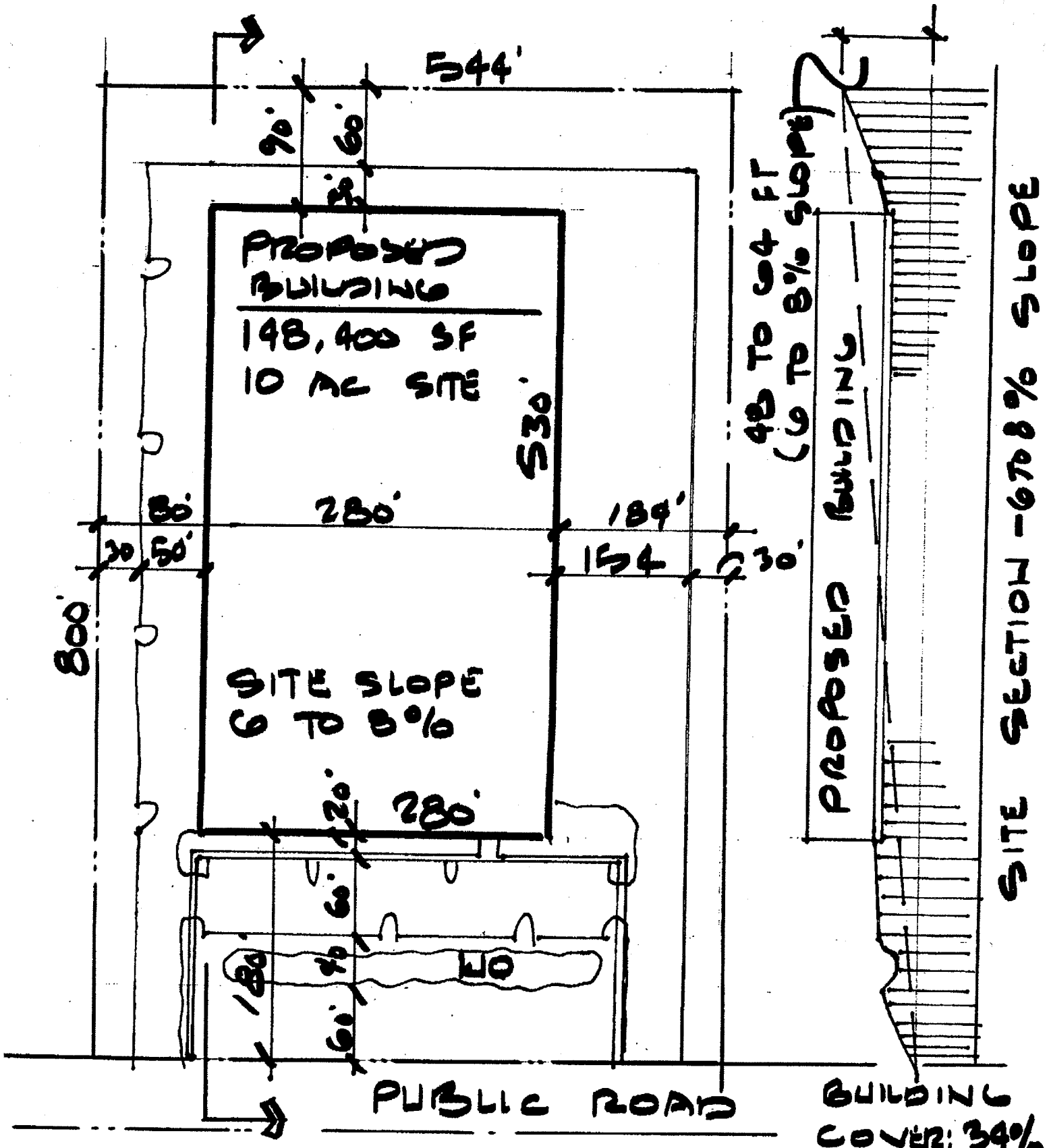

10 ACRE SITE STUDY

By BOB T.

Date 10.8.03

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Sht. 3 of 5

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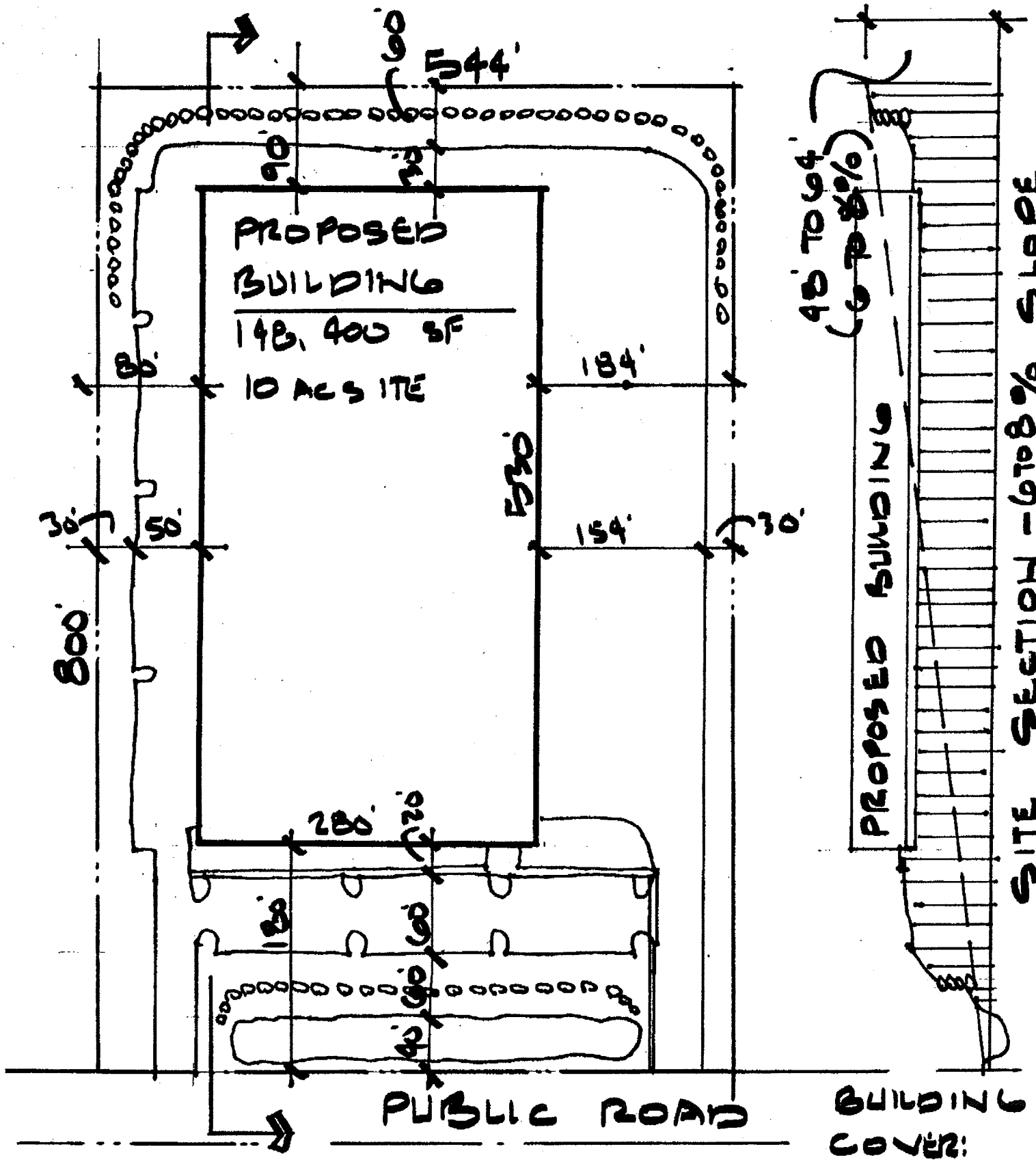

10 ACRE SITE STUDY

By BOB T.

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Sht. 4 of 5

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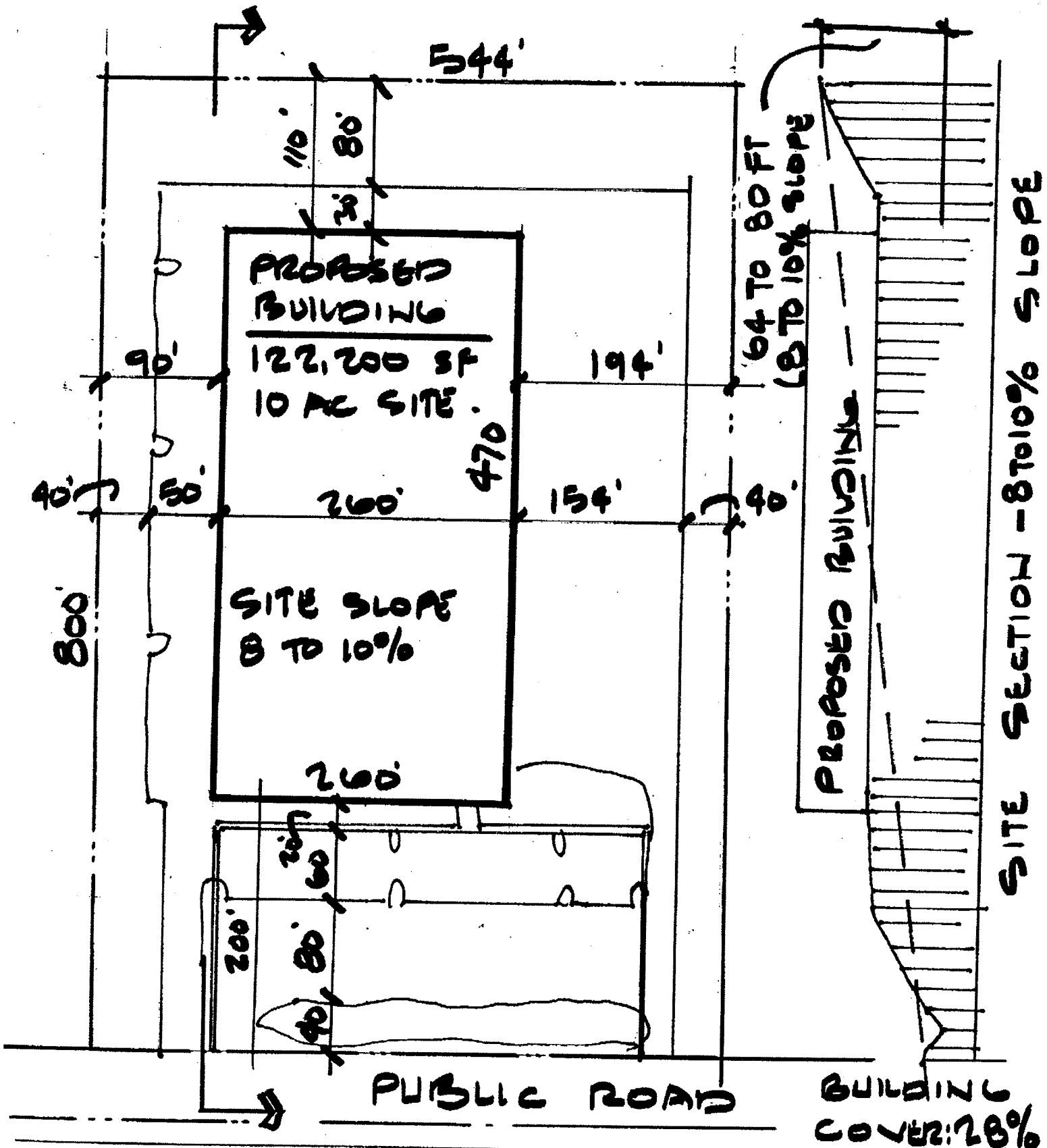

10 ACRE SITE STUDY

By BOB T.

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Sht. 5 of 5

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Metro Corridors Project: Summary Report

PREPARED FOR
Metro and the Transportation Growth Management Program of the Oregon Department of Transportation and the Department of Land Conservation and Development

June 2005

METRO
PEOPLE PLACES • OPEN SPACES

Metro
People places • open spaces

Clean air and clean water do not stop at city limits or county lines. Neither does the need for jobs, a thriving economy and good transportation choices for people and businesses in our region. Voters have asked Metro to help with the challenges that cross those lines and affect the 25 cities and three counties in the Portland metropolitan area.

A regional approach simply makes sense when it comes to protecting open space, caring for parks, planning for the best use of land, managing garbage disposal and increasing recycling. Metro oversees world-class facilities such as the Oregon Zoo, which contributes to conservation and education, and the Oregon Convention Center, which benefits the region's economy.

Your Metro representatives

Metro Council President – David Bragdon
Metro Councilors – Rod Park, District 1; Brian Newman, District 2; Carl Hosticka, District 3; Susan McLain, District 4; Rex Burkholder, deputy council president, District 5; Robert Liberty, District 6.
Auditor – Alexis Dow, CPA

Metro's web site
www.metro-region.org

Printed on recycled-content paper.
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Metro Corridors Project: Summary Report

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June 2005

This project is partially funded by a grant from the Transportation and Growth Management (TGM) Program, a joint program of the Oregon Department of Transportation and the Oregon Department of Land Conservation and Development. This TGM grant is financed in part by federal Transportation Equity Act for the 21st Century (TEA-21), local government and the State of Oregon funds. The contents of this document do not necessarily reflect views or policies of the State of Oregon.

Summary

The Metro Corridors Summary Report summarizes the research of the Metro Corridors Project. The full report contains the details of the purpose, evaluation methods, data, assumptions, findings, and recommendations. This summary covers just the most important findings, organized as follows:

- **Background** briefly describes Phase I and Phase II of the Metro Corridors Project.
- **Answers to key questions about Metro's Corridors** presents the key findings of the project by answering a series of policy questions.

BACKGROUND

The Metro Corridors Project is a study of "Corridors" as designated by the 2040 Growth Concept. Its purpose is to describe how development has occurred in Corridors in the past and is likely to occur in the future, how that development corresponds to what Metro policy desires and requires, and whether changes should be made to that policy.

Many of the Corridors in the Portland metropolitan region developed in the 1960s and 1970s; their development pattern has changed little since then. Corridor locations then offered many market advantages, including: (1) accessibility, (2) large parcels, and (3) low land costs. Corridors were logical, efficient locations for retailers of all sizes and types.

Market trends are changing. While corridors are still good locations for some types of retailers (in recent years, big-box retail and specialty retail, like auto sales and service), the locations with the highest demand are at major intersections along the corridors, not along the entire length of the corridors. Moreover, the typical development pattern of corridors has led problems with traffic, aesthetics, and community identity.

ANSWERS TO KEY QUESTIONS ABOUT METRO'S CORRIDORS

DOES METRO HAVE TO CHANGE POLICY TO IMPLEMENT ITS GOALS FOR CORRIDORS?

That depends on how aggressively the Metro Council wants to pursue the Corridor goals and how much of its staff resources and transportation funding it is willing to invest. In summary, the adopted Metro goal for Corridors is to make them more friendly for pedestrians and bicycles, and to increase density. This report provides reasons to believe that market forces will cause some changes in Corridors that will be consistent with Metro goals, but that the changes will be slow, piecemeal, and unable to achieve significant changes to the streetscape

without public financial or policy assistance. Slow change may be acceptable, especially if Metro concludes that limited resources should be focused in its Centers. If greater change is desired, then Metro should consider the kinds of policy changes suggested in this report.

DO CORRIDORS COMPETE WITH CENTERS?

Yes, at some level and in many cases. Corridors are an old development pattern and, in many cases, are in transition. In the Metro region, a key demand for land in Corridors comes from big-box retail. Though Centers are preferable locations because of central location and transportation access, Corridors have larger parcels at a lower unit price than what can be found in Centers. Metro policy wants retail in Centers; Corridors are clearly competing for that retail development.

That statement does not mean that by prohibiting big-box retail in Corridors it will go to Centers: the problems with land assembly and price may make it unfeasible, at least in today's market. It does suggest, however, that regional policy is in conflict, and that some clarifications of that policy (suggested later in this report) could be beneficial. The Beaverton-Hillsdale/Canyon Road Case Study suggests that restructuring Corridors could help get more of the development desired by Metro policy in nearby Centers.

ARE THERE TOO MANY DESIGNATED CORRIDORS?

In the context of public policy and public resources, probably so. There are over 400 miles of Corridors designated in the Portland Metropolitan region. The designated Corridors vary greatly in the type of adjacent land use, streetscape, vehicle capacity, and market conditions.

If one takes as given that Metro will continue to treat all designated Corridors with the same policies, and will continue with the same level of funding for improvements in the Corridors (almost none), then the number of Corridors should be reduced so that Metro can focus on the few it cares about.

If, however, Metro creates different types of Corridors with different requirements, then it might effectively address more miles of Corridor.

Which direction Metro goes with policy here relates to the answer to an earlier question about the extent to which Metro wants to get involved with Corridors: the former action—reducing the number and mileage of Corridors—reduces regulations, requires less staff time, and is probably easier politically.

IS THERE ENOUGH FUNDING TO RESTRUCTURE DESIGNATED CORRIDORS AS ENVISIONED BY METRO POLICY?

No. The number and length of Corridors that could be redeveloped overwhelms the potential funding. The technical advisory committee stated that

there is not enough money to fully implement Centers, much less implement Corridors.

One of the recommendations from the case study is to reevaluate Corridor designations to determine if the designation is still appropriate, and to prioritize Corridors for funding based on the existing conditions, the potential to implement the nearby Center(s), and the willingness of the local jurisdiction to redevelop the Corridor.

SHOULD PUBLIC POLICY FOR CORRIDORS FOCUS ON REGULATION OR INCENTIVES?

As a practical matter, it will probably address both. Government policy in general, and Metro 2040 in particular, has been more likely to use regulations (e.g., requirements for certain types of densities of development in certain areas). Developers and property owners clearly favor incentives. So does Measure 37. Attempts to reduce the amount or type of retail in some commercial Corridors (this report explains why such reductions might be a good idea if the objective is to increase development and density in Corridors) will have to be accompanied by reasonable evidence that such changes will maintain or increase property values. Targeted public investments in the streetscape and transportation system can act as a catalyst for change by creating a pedestrian, bicycle, and transit supportive environment and buffers residential uses along the Corridor.

The decision about regulation and incentives relates to the previous questions about the number of designated Corridors and funding. One the one hand, a lack of funding for incentives or concerns about the ability to enforce change via regulation would suggest less policy for Corridors rather than more. Doing more technical work to define more Corridor types might have little practical value. On the other hand, the relationship of Corridors to Centers, and of both to regional growth objectives, argue for more attention to the way transportation and land uses develop in Corridors.

RECOMMENDATIONS AND NEXT STEPS

POLICY RECOMENDATIONS

Many policy studies start with a clearly defined problem and a presumption that something must be done be government to reduce the problem. In this study, however, the problems and responsibility for their solutions are more diffuse. Given limited resources and a focus on Centers, it would not be unreasonable for Metro to conclude that it will look to ODOT, local governments, and market forces to make decisions about Corridors. Consistent with such a conclusion would be a decision to by Metro to define a single Corridor-type that Metro wants to see change and then focus policies and investments on a few Corridors of that type. Fewer arterials in the region would have a Corridor overlay, and Metro would target its efforts in those Corridors. An alternative is to decide that all 400 miles of Metro Corridors need some type of policy overlay, but to then

differentiate Corridors by type, and have different policies for different types. Possibilities are discussed in this report.

The policy recommendations in this section start from the assumption that Metro and the local jurisdictions affected by its requirements *want to achieve* Metro's stated objectives (in its 2040 planning documents) for land use and transportation development in designated Corridors—that they are willing to use regulations and incentives to get more pedestrian-friendly, denser, mixed-use develop in Corridors than would occur without such intervention. Not everyone on the case-study advisory group agreed with all those objectives; a similar group assembled for other Corridors would have probably voiced similar differences of opinion.

It is not the task of this report to make an *absolute* recommendation about what to do in Corridors. Rather, it is making a *contingent* recommendation: *if* Metro wants to move in the direction of meeting 2040 objectives for Corridors more thoroughly or more rapidly, *then* here are the kinds of things that should be done. Those things are described for three levels of governments: state (ODOT), region (Metro), and local (cities and counties).

STATE AGENCY RULES AND POLICIES

S1: Re-examine AASHTO interpretation within Corridors.

S2: Designate UBAs only in Neighborhood Corridors.

S3: Develop state-local agreements regarding transportation and streetscape improvements in Corridors

S4: Increase funding for Corridors in the State Transportation Improvement Program (STIP).

REGIONAL AGENCY RULES AND POLICIES

R1: Recognize Corridor segment typologies as a tool for Corridor planning.

R2: Provide Functional Plan support for retail clusters.

R3: Emphasize the importance of Corridor planning to improve the transportation system and enhance Centers.

R4: Increase the priority of Corridor funding in the Metropolitan Transportation Improvement Program (MTIP).

R5: Clarify the use of medians along Corridors.

R6: Develop gateways in Corridors.

R7: Coordinate with housing providers and advocacy groups to identify and implement a pilot project.

LOCAL GOVERNMENT POLICIES AND DEVELOPMENT CODES

L1: Change road design policies within Transportation System Plans (TSPs) and/or public works standards to encourage transportation improvements that support the land use and development alternatives and remove barriers.

L2: Rezone the neighborhood Corridor segments to limit the amount of retail and allow for the density of residential, office, lodging, institutional, and limited commercial uses envisioned in the land use and development alternatives.

L3: Implement transportation and street-design strategies to support the land use and development alternative.

L4: Review current codes for appropriate design guidelines and develop standards for retail in Corridors.

L5: Provide incentives to encourage the redevelopment of Corridors.

NEXT STEPS

The consultant team identified four immediate steps Metro should take to implement the findings of the project. They are:

- **Determine if Metro will change policy to implement the 2040 Corridor goals.** The recommendations listed above and the next steps in this section are contingent on a decision by Metro Council that it wants to dedicate the time and resources necessary to affect greater change in land use and transportation in Corridors. That probably requires that a Councilor recommend such action to the Council, and agree to provide direction to staff and champion the recommendations at Council.
- **Work with ODOT and local jurisdictions to implement policy changes.** There is a fundamental choice about the number of segments and miles that Metro wants to cover with Corridor policy. Since local support is critical to the implementation of the recommendations in this report, Metro may want to encourage additional input from local jurisdictions that are interested in implementing 2040 Corridor policies within their jurisdictions.
- **Reevaluate the Corridor designation and prioritize Corridors for funding purposes.** If the decision is made to apply policy to more than a small number of similar Corridors, then Metro should distinguish between types of Corridors and establish priorities for planning and funding.
- **Identify funding sources.** Most of the recommendations require funding and staff resources for implementation. Implementing streetscape recommendations and transportation system improvements will require significant funding in most locations.
- **Conduct a pilot project.** Given limited funding, Metro should look to a Corridor where market and land-use conditions are encouraging of redevelopment, local government supports such redevelopment, and ODOT is planning to make transportation improvements. A pilot project

should include an economic study that can address Measure 37 issues, and a public outreach plan, but it should ultimately be a construction project (e.g., change in traffic design and streetscape for a four-block length of a Corridor at a key intersection). The best way to get the many Metro Corridors to redevelop in the ways that Metro policy desires is to show that such redevelopment is possible and successful.

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Chapter 1

Introduction

This report, the *Metro Corridors Summary Report*, summarizes an evaluation of issues and policies in Metro-designated Corridors.[1] Corridors are a planning designation in the 2040 Growth Concept (adopted 1995 to define the form of regional growth and development for the Portland metropolitan region). This evaluation revisits the purposes and performance of the Corridor designation, and determines whether changes to the Corridors (e.g., changes in the number, type, location, requirements, and supporting implementation for Corridors) are desirable.

The three sections in this introductory chapter are:

- **Reasons for, and potential drawbacks of, a regional policy about corridors** provides an historical context of corridor policy within Metro growth documents, and the limitations of that policy.
- **Evaluation methods** describes the two-phased research plan for the project.
- **Organization of this report** describes the chapters and appendices in this report.

REASONS FOR, AND POTENTIAL DRAWBACKS OF, A REGIONAL POLICY ABOUT CORRIDORS

The Metro 2040 Growth Concept (1995) defines the form of regional growth and development for the Portland metropolitan region.

The 2040 Growth Concept and its policies regarding Centers and Corridors was adopted almost 10 years ago. A logical result of the region's choice of a growth concept that emphasized "growing up, not out" was an encouragement of, or requirement for, greater density of development. It was clear that the required increases in density would not be uniform throughout the Urban Growth Boundary: some places were more appropriate for higher-density development than others.

The main areas for concentration of development are called Centers. The mixed-use Centers in the metropolitan region are the central city (Portland), seven Regional Centers (the downtown areas of Hillsboro, Beaverton, Oregon City and Gresham, and the Clackamas Town Center, Washington Square and Gateway shopping areas), 30 Town Centers, and numerous Main Streets and Station Communities.

[1] This report uses upper-case *Corridors* to refer specifically to the Corridors that Metro has officially designated on the map of its 2040 Growth Concept. It uses lower-case *corridors* to refer generally to characteristics of corridors, which may or may not be in Metro-designated corridors, in Portland, or in Oregon.

Metro's Regional Framework Plan (1997) and its Urban Growth Management Functional Plan (Functional Plan) provide more direction and requirements for how Centers should develop. The Functional Plan uses the term "design types" to discuss different types of Centers (3.07.130), and recommends average densities[2] for their development (3.07.170).

While a few Corridor studies have been completed in the Metro area, the emphasis over the last 10 years has justifiably been on Centers. Section 1.15 of the Regional Framework Plan requires Metro to develop a strategy to encourage development in Centers, to place a high priority on investments in Centers, and to assist local governments (and facilitate state assistance) with the development of Centers[3].

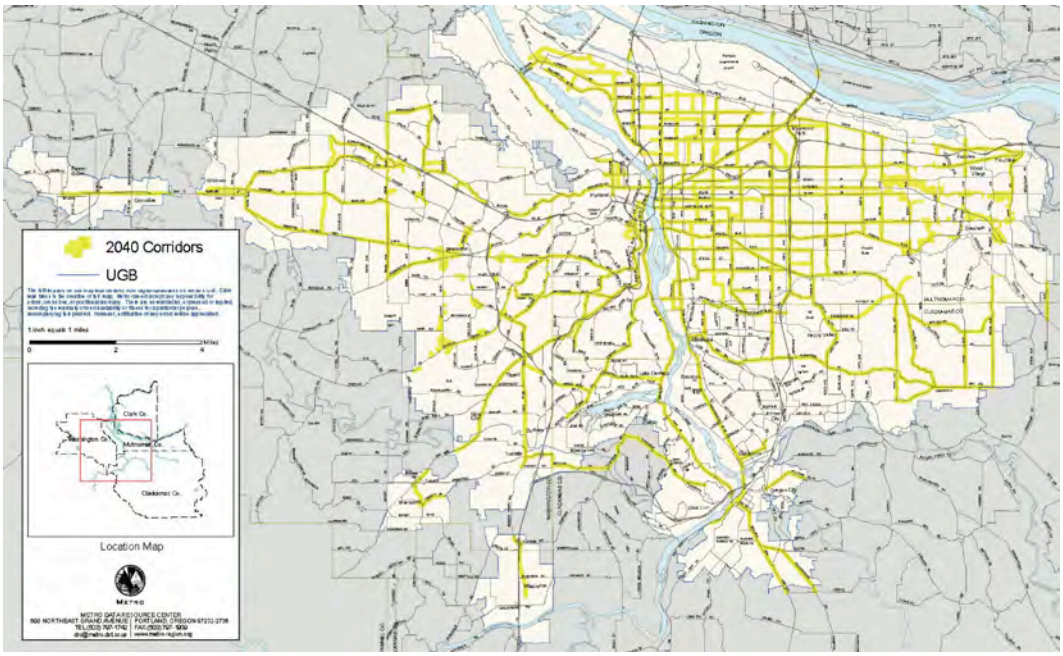
In contrast, there is no similar language, and relatively little guidance on Corridors. The Functional Plan defines Corridors as follows: "Along good quality transit lines, Corridors feature a high-quality pedestrian environment, convenient access to transit, and somewhat higher than current densities" (3.07.130); it recommends an average density of 25 persons per acre (3.07.170).

The research done in this project suggests that Metro Corridors were originally thought of as arterials that would (1) connect Centers, (2) have transit service, and (3) be appropriate for higher development density. The map of the 2040 Growth Concept shows a large number and many miles of Corridors, including ones in places that did not yet have the transportation and land use characteristics that would define them as existing Corridors (see Figure 1-1).

[2] In persons per acre, counting both residents and employees.

[3] This point is consistent with a conclusion of this analysis: that Metro Corridors are of many types and cannot be efficiently regulated by policies that imply all Corridors are the same.

Figure 1-1. Metro-designated Corridors in the Portland Metropolitan area, 2005



Source: Metro Data Resource Center, 2005.

There are over 400 miles of Corridors identified as part of the 2040 Growth Concept. These Corridors contain a wide range of street types, land uses, and locations. This study focused on Corridor types that are state highways, most of which are located in more suburban locations. Thus, the recommendations presented in Phase I and II and Summary Report (this report) will be most applicable to Corridors in suburban locations, and slightly less applicable to Corridors in inner-city locations (e.g., SE 39th Avenue).

In summary, Corridors were a logical idea, but one that was more theoretical than applied. Occasional studies were conducted (those relating to light rail were extensive), but otherwise Metro Council or staff has done little to monitor or enforce density or change land uses in some systematic way in Corridors. No evaluations were done of the relationship of Corridors to Centers (e.g., what uses and densities in Corridors would support the goals for uses and density in Centers?), or of the differences among designated Corridors.[4]

This report provides some of that evaluation to assist Metro staff and Council as they make decisions about whether changes to the regional policy for Corridors (e.g., changes in the number, type, location, requirements, and supporting

[4] The Regional Functional Plan did acknowledge, however that Corridors could be of different types:

> While some corridors may be continuous, narrow bands of higher intensity development along arterial roads, others may be more "nodal", that is, a series of smaller centers at major intersections or other locations along the arterial which have high quality pedestrian environments, good connections to adjacent neighborhoods and good transit service. So long as the average target densities and uses are allowed and encouraged along the corridor, many different development patterns—nodal or linear—may meet the corridor objective.

The Plan did not, however, take the next step of developing different policy for different types of Corridors.

implementation for Corridors) are desirable. Among the fundamental questions this report addresses are: Given the direct cost of streetscape and capacity improvements in Corridors, limited funding, and the ongoing and potentially increasing public debate about the scope of regulation, does it make sense to have any Corridor policy? If so, at what level?

EVALUATION METHODS

The Metro Corridors Project had two phases:

- Phase I of the Metro Corridors Project, completed in December 2004, investigated land use and transportation issues in corridors in general and in a subset of specific Corridors in the Portland region. It resulted in the selection of two Corridors for more detailed study in Phase II of the project.
- Phase II of the project was a case study of the Beaverton-Hillsdale Highway and Canyon Road Corridors. Its purpose was to identify opportunities for and constraints to achieving the development in Corridors that the Metro 2040 Growth Concept, Regional Framework Plan, and related documents encourage or require. Phase II described how the case-study Corridors and the Beaverton Regional Center complement and compete with each other. It recommended a plan for land use and development and transportation and streetscape improvements that conform to regional guidelines for development in Corridors. Finally, it recommended changes to local, regional, and state policies that would be helpful for achieving the plan.

This summary report draws heavily on the evaluation documented in those two reports, but contains additional evaluation and recommendations that go beyond what they contained.

ORGANIZATION OF THIS REPORT

- **Chapter 2: What the evaluation concluded about Corridors** describes what is desired in Corridors (per the 2040 Growth Concept), what is likely in Corridors (given national and regional market trends, and existing policy), answers to a few key questions about Corridors, and the implications for regional policy.
- **Chapter 3, Policy options** describes (1) broad choices that Metro has about its regional policy with respect to Corridors, and (2) if Metro chooses to continue to promote change in all or some of its designated Corridors, the types of policies at the state, regional, and local level that would facilitate those changes.
- **Appendix A: Corridors as defined in Metro policy documents**, provides the details of current Corridor policy.
- **Appendix B: Policy options** provides details of the potential policies that Chapter 3 summarizes.

This document is the *summary report* for this evaluation. The findings in this summary report are drawn from the extensive evaluation conducted in Phase I and Phase II, and documented in Technical Reports. Readers wanting more detail should refer to those Technical Reports.

Chapter 2 What the Evaluation Concluded about Corridors

This chapter describes Corridor objectives, based on the 2040 Growth Concept and how to achieve those objectives. It has two sections:

- **What the 2040 Growth Concept says about Corridors** describes Corridor planning objectives and requirements as defined in the 2040 Growth Concept and related documents.
- **Forces shaping land-use and transportation development in Corridors** draws from Phase I and II reports to address issues like the relationship between Corridors and Centers, appropriate development types for Corridors, transportation and streetscape strategies to implement the 2040 Corridor objectives, and general implementation issues.

WHAT THE 2040 GROWTH CONCEPT SAYS ABOUT CORRIDORS

PORTLAND METRO DEFINITION OF CORRIDORS

Policies at the state, regional, and local level play a role in shaping Corridors as they exist today, and how they will redevelop in the future. This section discusses Metro policies that define the vision of Corridors as defined by the Regional Framework Plan. Chapter 3 provides an evaluation of state, regional, and local policies.

In the Portland area, Metro has defined Corridors through the 2040 Growth Concept, as described in the Regional Framework Plan (see Appendix A for more detail). Metro has designated over 400 miles of arterial streets within the region as Corridors.

Metro defines Corridors as having the following characteristics:

- Relatively high density (25 persons [combined population and employment] per acre)
- Mixed-use development
- Continuous intensity or smaller Centers/nodes (often at major intersection) with auto-oriented activities sometimes between the nodes
- Arterial street with four travel lanes and significant traffic flows
- High-quality bicycle and pedestrian environment
- Convenient access to good quality transit

Many of these characteristics are planned or envisioned for Corridors but do not reflect the current state of Corridors in the Metro region. In reality, Corridor densities are often lower than 25 persons per acre, and not all Corridors provide a high-quality bicycle and pedestrian environment.

DIFFERENCE BETWEEN CORRIDORS AND CENTERS

Both Corridors and Centers are envisioned to be mixed-use, higher-density areas well served by transit.

The primary difference between Centers and Corridors in the 2040 Concept Plan is that Centers are focused at major intersections and include activity on a cluster of parallel and perpendicular streets, while Corridors usually connect Centers and are linear in nature. Corridors may also have nodes of activity at major intersections, but these nodes are generally smaller and more neighborhood-serving than Town Centers or Regional Centers. Between the nodes and official 2040 Centers, Corridors tend to be lower-density and more auto-dominated than Centers (see Figure 2-1).

Figure 2-1. Canyon Road (left) and McLoughlin Boulevard (right) Corridors, 2004

Source: ECONorthwest, 2004.

In essence, if a concentration of activity at a major intersection along a Corridor met some size threshold, that concentration became some type of 2040 Center. Concentrations not meeting the minimum threshold simply took on the same Corridor designation and, at the policy level, are undistinguishable from other, less-dense parts of Corridors.

In many cases, these distinctions do not reflect existing conditions: some Centers are as low-density as portions of Corridors, and some sections of Corridors contain large retail uses that serve a regional market. Many of the areas designated Centers and Corridors in the 2040 Growth Concept serve similar markets (particularly town Centers and Corridors)—ones with more of a neighborhood than a regional draw.

Thus, in many cases Centers and Corridors function in similar ways and compete for commercial tenants. In that competition, Centers and Corridors offer different advantages. Most Centers are composed of a series of self-supporting

developments, with exclusive parking and little provision for cross-shopping. A lack of variety of shopping opportunities within many Centers, gives Corridors an advantage (or at least, no competitive disadvantage) for attracting tenants. Additionally, Corridors often have an advantage over Centers because of better access. This competition results in Centers and Corridors that in theory are different, but in reality provide the same function.

FORCES SHAPING TRANSPORTATION AND LAND-USE DEVELOPMENT IN CORRIDORS

This section draws from the technical reports for Phase I and II to summarize general conclusions about Corridors.

- **Corridors in the Portland metropolitan region are drawing from markets larger than those of their adjacent neighborhoods to support their retail sales.** The case study showed that there is more retail square footage in the Beaverton Case Study Corridors than the surrounding neighborhoods can support. Retail businesses along the Corridors are drawing customers from a larger area. The same is almost certainly true for other regional Corridors with significant retail.
- **If Corridors draw from the same regional markets that Centers do, then their effect on Centers depends on whether they are offering competing or complementary goods.** Lower land values, high drive-by traffic, generous parking, and large parcels give Corridors a comparative advantage over Centers for many types of retail. If Corridors offer the same types of retail and office space that are found in Centers, then they will be competing, at some level, for tenants. Retail that is land intensive and auto-oriented (e.g., building supplies and fast food) may prefer Corridor locations to those in Centers (but see next point).
- **National trends in retail show more new development at major intersections and less along extended strips.** The old distinctions between businesses that are center-oriented and those that are strip-oriented are blurring. The essential trade-off of development cost and access remains. Businesses in the past chose corridor locations because good access came with cheap land in large parcels. As congestion increases along corridors and land prices increase, the relative advantage of corridors on this dimension is decreasing. The result is that retail locations with the highest demand in the Metro area and across the nation are at major intersections. Not surprisingly, those intersections are on corridors.
- **There is an opportunity for the region to take advantage of national trends in retail to restructure strip development corridors.** The case-study analysis and advisory group gave evidence that there are good reasons for retailers to develop along Corridors. But they also supported the idea that the demand for retail along Corridors was more of a derived demand for ample space (and therefore less expensive land) with good access. If land with those attributes were available in Centers, then the retail on Corridors could locate in Centers. Such movement would be in

line with Metro policy. The problem is that, historically, the land in Centers could not compete with land in Corridors in terms of access and cost. At a fundamental level, that is a synopsis of the 100-year history of suburbanization in America.

Over time, the gap between demand for land in Centers and demand for land in Corridors has narrowed, not because land in Centers has become less expensive, but because relative to Centers, the accessibility of Corridors has declined while land prices have increased. This presents opportunities to (1) shift some retail directly to Metro Centers, (2) shift some retail (e.g., big box) to the edge of Centers—at the boundary between Centers and their connecting Corridors—where the uses might be complementary, and (3) concentrate some of the retail in Corridors in nodes[1] that occur along different segments of the Corridors (which will increase the possibility that some of the use along the Corridors will shift to residential uses).

- **Residential, office, lodging, and institutional uses have the potential to supplant retail as the highest and best uses along some parts of Corridors.** Residential uses could become the primary use in Corridor segments (with office, lodging, and institutional playing a secondary role) between the concentrations of retail around retail nodes in the Corridors. We say these uses have the *potential* to supplant retail because redeveloping the Corridors for these uses requires that the streetscape and the surrounding non-residential uses be designed (or redesigned) to support and complement these new uses, especially the residential ones.
- **Redeveloped Corridors would support Centers.** Encouraging higher-density retail at major intersections and Centers; increasing the capacity for residential, office, lodging, and institutional uses in Corridors; and identifying space for large-format retailers at the edge of Centers can encourage the redevelopment of Corridors that support Centers.

  There is clearly a competition between Centers and Corridors for many types of development. But that does not mean that restricting all that development in Corridors would force it to Centers. Squeezed out would be many businesses with low capitalization (including small start-ups) and highly capitalized businesses that have a standard big-box, land-intensive development format. Total economic activity would be lower and prices slightly higher for retail goods in the absence of retail development in Corridors.[2] There is the possibility that properly constructed Corridors could facilitate the commercial development most appropriate for Corridors, redirect some types of commercial development toward Centers or their fringes, improve Corridor function, and in doing all of that, make both Corridors and Centers work better.

[1] We use the term neighborhood centers, noting that the term *centers* is used by Metro to refer to a hierarchy of Region 2040 Centers. The neighborhood center was introduced in the land use and development concept Chapter 4. The recommendations include adding neighborhood corridor to a typology to describe the uses (primarily residential, office, lodging, and institutional) between neighborhood, regional, and town centers.

[2] We do not comment here on whether that tradeoff is desirable: we are just describing the direction of the likely effects.

- **A major transformation of current Corridors will require a major transformation of the streetscape.** It did not take this study to discover that a lot of Corridors in the region and elsewhere are aesthetically unpleasing with little thought of pedestrian use (see Figure 2-2). These conditions, plus large traffic volumes and noise, make Corridors incompatible with residential uses today. Residential uses are less likely to be successful until the streetscape is changed to make Corridors more pedestrian friendly with buffers such as street trees for noise reduction and increased privacy.
- **Figure 2-2. Pedestrian facilities on McLoughlin Boulevard (left) and SE 82nd Avenue (right), 2004**

Source: ECONorthwest, 2004.

- **Transportation improvements can decrease congestion and increase mobility and access along Corridors.** The transportation improvements listed in the Case Study Report will increase mobility and access in Corridors for all modes of travel. There is no disagreement that the goal of getting vehicles through Corridors must be balanced with the goal of facilitating access to Corridor destinations and to neighborhoods abutting Corridors. Neighborhoods without a well-connected street network may have difficulty accessing Corridors in segments with medians. Bike and pedestrian paths connecting neighborhoods to Corridors can also help increase access where full street connections do not exist.
- **Without the benefit of clear public policy and public investment, most Corridors will change slowly.** There are multiple conditions that would provide opportunities for the restructuring of Corridors. They include market trends that encourage retail to locate at major intersections, disinvestment along strip Corridors, increases in residential land values that are closing the gap between residential and commercial land values in Corridors, and increasing congestion along Corridors. These forces will slowly cause change in the development in Corridors. If the region wants that change to occur faster and with more coherence and pedestrian amenities, then some policies—which could be adopted at the state, regional, or local level depending on their type—are probably necessary. A comprehensive policy would address all phases of implementation: determining the interest of local jurisdictions to engage in Corridor planning activities, identifying needed transportation/streetscape improvements, prioritizing Corridor investment, and determining funding strategies.

- **Public efforts to transform development in Corridors will need to complete all the steps that are now typical of sub-area and Corridor planning in Oregon, and then some.**
  - **Public involvement.** Resistance to restructured Corridors is often the biggest barrier to implementation. The consultants' experience elsewhere in restructuring Centers and Corridors suggests that approximately six local workshops are necessary for the successful adoption of a restructured Corridor plan. This level of public involvement is required to collect information from stakeholders, process the information, educate stakeholders on the existing conditions and market conditions, create alternatives, and to adopt a final plan.
  - **Economic analysis.** A fundamental conclusion about major transformations of current Corridor patterns that are extended, low-density commercial strips is that the retail needs to be concentrated, and that some of the commercial land should convert to high-density residential uses. In similar restructuring projects in other parts of the country examined for this project, local property owners resisted the removal of retail entitlements, believing that the retail market would rebound and demand for retail in a Corridor would increase. A comprehensive economic study that identifies prototypical developments that are viable in a restructured Corridor is necessary to show property owners that there is an alternative to retail.

    The economic study has the additional benefit of showing how a restructured Corridor and the accompanying policies would increase the value of properties over the long term. Such a study would help jurisdictions defend themselves against potential Measure 37 claims (assuming that the economic study can demonstrate a likely increase in property values).
  - **Local evaluation.** Many of the findings of the case-study Corridors are applicable in some form to Corridors throughout the region (primarily in suburban locations), but local conditions will dictate how restructuring occurs.
    - How close is the regional or town center?
    - Are there logical locations for neighborhood centers?
    - Are there specialty segments along the Corridor?
    - What is the local market for housing, office, and lodging?
    - Are parcels in the Corridor difficult to redevelop because of size (especially the depth of the parcels)?
    - What are the existing transportation conditions, including volumes, speeds, transit service, accident history, bicycle and pedestrian environment and streetscape design?
    - Are existing uses thriving, stagnant, or blighted?

- **State, regional, and local funding for transportation improvements along Corridors is necessary to support the land use and development alternatives.** A consistent message throughout this study was "there is not enough money to do Centers; where will the money for Corridors come from?" This question is in part one about priorities and has the obvious set of answers: increase total funding so there is more for Corridor restructuring; shift money from Centers to Corridors; or decide that public investment in restructuring of Corridors is not a high enough priority to merit a share of the limited funding available.[3]

[3] The next chapter addresses funding in more detail.

Chapter 3

Policy Options

This chapter recommends changes in policy at the state, regional, and local level. The recommendations are contingent: *If* Metro or other state agencies or local governments believe that there is value in public policy and investment aimed at transforming its designated Corridors, *then* the types of actions outlined in this chapter are relevant considerations. The chapter has three sections:

- **Context for decisions about regional policy for Corridors** illustrates how policies at the state, regional, and local levels have effects on land use and transportation in Corridors, and describes the general policy directions for Metro policy.
- **Policy options to implement 2040 Corridor objectives** summarizes the policy changes that would be necessary to implement the land use, development, and transportation recommendations.
- **Next steps** describes the short-term decisions and actions that Metro could take to implement the recommendations of this study.

CONTEXT FOR DECISIONS ABOUT REGIONAL POLICY FOR CORRIDORS

EXISTING STATE, REGIONAL, AND LOCAL POLICIES

Most technical evaluations of policy options include a description of current policies. In the context of this study, what state, regional, and local policies are now doing to affect transportation and land use in Metro Corridors is relevant to decisions about whether to change policy.

Chapter 2 described Corridors as defined by the 2040 Growth Concept, and what Metro is trying to achieve in its Corridors. The Metro objectives are not very specific. The Functional Plan defines Corridors as follows: "Along good quality transit lines, Corridors feature a high-quality pedestrian environment, convenient access to transit, and somewhat higher than current densities" (3.07.130); it recommends an average density of 25 persons per acre (3.07.170). The 2040 Growth Concept also engendered polices about "regional streets," which are envisioned to have high-quality transit, bicycle, and pedestrian facilities that include transit amenities at stops, sidewalks that are buffered from motor vehicles, crosswalks at major intersections, bike lanes, and so on. In short, the objectives are: better environment for pedestrians and transit riders, and higher density.

The implication of these policies is that what now happens in Corridors for pedestrian, transit, and density is inadequate. The solutions for fixing these inadequacies are acknowledged as variable: the 2040 Growth Concept notes that as long as the average target densities and uses are allowed and encouraged along a Corridor, many different development patterns—nodal or linear—may meet the Corridor objectives.

Both state and local governments have policy interests that go beyond Metro policy. The state (ODOT) has an interest in ensuring that Corridors that are also state highways maintain reasonable traffic flows and meet other state standards for access, alternative modes, and so on. Local governments have a broad range of objectives and requirements for land use and transportation in Corridors, including those relating to type and density of use; building, site, and streetscape design; and transportation impact fees.

In short, there are many policies at the state, regional, and local level that have an impact on how land and transportation develop in Metro Corridors. Table 3-1 shows some of them; the list is meant to be illustrative, not exhaustive.[1]

Table 3-1. Examples of land use and transportation policies in Corridors, Portland metropolitan region, 2005

Jurisdiction	Land Use	Transportation
State	Statewide Planning Goals Funding for planning (land use and transportation) (TGM grants)	Funding (STIP) Oregon Highway Plan Oregon Highway Design Manual AASHTO
Region	2040 Growth Concept Regional Framework Plan	Regional Transportation System Plan Regional Street Design Classification Regional Motor Vehicle System Transit Planning (TriMet) Creating Livable Streets Handbook— Street Design Guidelines Green Streets Handbook—Innovative Solutions for Stormwater and Stream Crossings Transportation Funding Process—Transportation Priorities 2006-09 (MTIP)
Local	Comprehensive Plan Development Code Development incentives	Transportation System Plans Transportation funding

Source: ECONorthwest, 2005.

The greatest degree of policy variability is at the local level. Portland metropolitan jurisdictions have incorporated Metro Corridor objectives (as described in Chapter 2) to varying degrees. The Phase I Report reviewed sample policies in Beaverton (Beaverton-Hillsdale Highway), Gresham (Powell Corridor), and Clackamas County (McLoughlin Boulevard). The City of Beaverton and Clackamas County had specific "Corridor" designations, while Gresham did not. Residential uses are allowed in all three Corridors, though not required. The three Corridors include specialty districts such as Corridor Mixed Use and Special High Density. These designations are permissive, not prescriptive. For example, they do not require a mixture of residential and commercial or office uses. They do not limit commercial to "nodes" or intersections, with the exception of Powell Boulevard in the City of Gresham, which clusters districts at specific intersections.

[1] Not all of the policies listed in Table 3-1 apply to all Corridors. For example, The Oregon Highway Plan policies only apply to Corridors that are designated as state highways.

The Phase I Report concluded that the policies that guide development in the three Corridors lack a clear policy direction, resulting in a lack of political and regulatory forces to change the conditions of these Corridors, regardless of the planning and overarching goals attributed to them.

Given these findings and the objectives for this study, the presumption is that Metro and ODOT are interested in knowing what else might be done at the state, regional, or local level to get more of the kind of development in Corridors that 2040 Growth Concept appears to support (i.e., higher-density, more supportive of alternative modes of transportation). The rest of this chapter explores both general policy direction and specific policy changes.

POLICY DIRECTION FOR CORRIDORS

There are several dimensions along which policies relating to Corridors could be categorized. Some examples:

- By type of issue addressed. At the broadest level, one could distinguish between land use issues and transportation issues. Subsets of issues could include, for land use for example, location, type, density, and design of development.
- By type of government action.[2] At the broadest level, one could distinguish between regulations and incentives. Regulations require certain actions—developing without complying with those actions is illegal. Incentives encourage certain types of development, typically by reducing its costs to private developers. Costs might be reduced by relaxing certain regulations in return for certain types of development, or by directly contributing resources (e.g., land, public facilities) to a development. In general, regulations are required; incentives are voluntary.
- By type of government. At the broadest level, one could distinguish among policies that are most appropriately implemented by state (e.g., ODOT), regional (e.g., Metro), or local (e.g., cities and counties) government. That organization is the best way to answer the question, Who should do what? The last section of this report organizes policies by this category.
- By direction of change from existing policy. At the broadest level, one could distinguish between changing policy or not; and if changing policy, is the change to reduce or increase regulations or incentives? That organization is useful for thinking broadly about what public policy is trying to achieve, and what direction it should head. The rest of this section is organized that way, to emphasize three broad directions for policy with respect to Corridors:
    - **Maintain the status quo**. No change to state, regional, or local policies regarding land use and transportation in Corridors. Change to

[2] This categorization was the one used in the report evaluating policy in Metro Centers entitled *Beaverton Downtown Regional Center Development Strategy*, by Johnson Gardner, Group Mackenzie, and ECONorthwest for Metro, (2004).

Corridor development patterns would occur slowly and in small pieces, probably depending on where ODOT decides improvements are needed to state highways and in response to market factors.

- **Reduce requirements and incentives.** Remove 2040 Corridor requirements and let the market determine what happens in Corridors.
- **Increase requirements and incentives**. Pursue policies that take a more aggressive approach to implementing the 2040 Corridor objectives, such as disallowing certain uses in Corridors, encouraging redevelopment and infill to densify Corridors, and requiring and funding transportation and streetscape improvements.

MAINTAIN THE STATUS QUO

This option assumes that Metro retains the 2040 Corridor objectives as they exist and does not require or encourage any other changes at the state, regional, or local level. Changes in Corridors would occur primarily in response to market forces operating in the context of current policy requirements. The market would determine the highest and best use of land within Corridors given current regulations and policies. This option implies that jurisdictions will not provide much in the way of incentives (whether financial or regulatory) to encourage different land or transportation uses in Corridors.

The short-term benefits of this policy direction to local jurisdictions are:

- Relief from potential investment requirements. State funds for highway improvements focus on traffic; money for the kinds of streetscape improvements that would help transform Corridors is limited to nonexistent, at least now. Regional funding is focused on Centers, not Corridors. Few jurisdictions have the resources (financial or staff) to dedicate to Corridor revitalization.
- Political expediency. Presumably, many property and business owners currently located along Corridors have profitable businesses and have few market or public policy incentives to change in the short run. They may resist efforts to redevelop a Corridor. At a minimum, Corridor redevelopment efforts will require public involvement and education to convince local property and business owners that they can benefit from redevelopment.

There are problems with this approach (as there are with the other two that follow). Most of them relate in some way to the reasons that Metro adopted a Corridor policy in the first place: if there are net benefits to the public of transforming some Corridors, then not assisting that transformation means foregoing those benefits and living longer with Corridors and their effects as they exist now. For example, Metro policy generally assumes that more efficient land use in Corridors will result in better transportation, more efficient services, better neighborhoods, and a reduction in need to expand the UGB. Not providing for Corridors so they may reach their full potential under the 2040 Growth Concept will reduce the overall success of the 2040 Growth Concept.

REDUCE 2040 CORRIDOR REQUIREMENTS AND INCENTIVES

The purpose of this study is to evaluate how 2040 Corridor goals can be achieved: relaxing requirements or reducing incentives does not move in that direction. Nonetheless, there are certainly cases where policy evaluations have found that regulations have gone too far, are inefficient in their attempts to achieve desired goals, or are aimed at the wrong goals. A full evaluation of Metro's options with respect to Corridor policy should include the option of doing less.

Some local jurisdictions may view the removal of requirements as an opportunity for greater control over land use and transportation policies or, at least, a relief from regulatory requirements that they have little interest in or ability to implement. They may or may not amend their local plans to reflect the changes in Metro policy. Other jurisdictions may consider the removal of 2040 Corridor regulations as negative because it reduces regional coordination and their ability to justify desirable local changes based on regional policy requirements. Removing 2040 Corridor requirements and the corresponding local policies may be inconsistent with statewide transportation policies that require multi-modal facilities. The Oregon Department of Transportation would also be concerned about policies that jeopardize the capacity of Corridors. Metro and local jurisdictions have invested significant time and resources into the development and implementation of the 2040 Growth Concept, including considerable citizen participation and local planning staff input. The removal of some of the requirements could be difficult both technically and politically.

This study did not further evaluate this policy direction. Rather, it started from the assumption that Metro wanted to evaluate the next policy direction: what *more* it could do to change land use and transportation development in Corridors sooner.

INCREASE 2040 CORRIDOR REQUIREMENTS OR INCENTIVES

This study evaluated policies to identify strategies that implement the 2040 Corridor objectives more aggressively than the status quo. The broad categories of options are:

- Change the types of land uses
- Change the intensity of land uses (redevelopment and infill)
- Implement transportation improvements and streetscape improvements.

These options are not mutually exclusive; it may be appropriate to implement all three, depending on the local conditions, the ability and willingness of the local jurisdiction, or other factors. Each section describes some of the benefits and challenges of each policy option.

Change the types of land uses

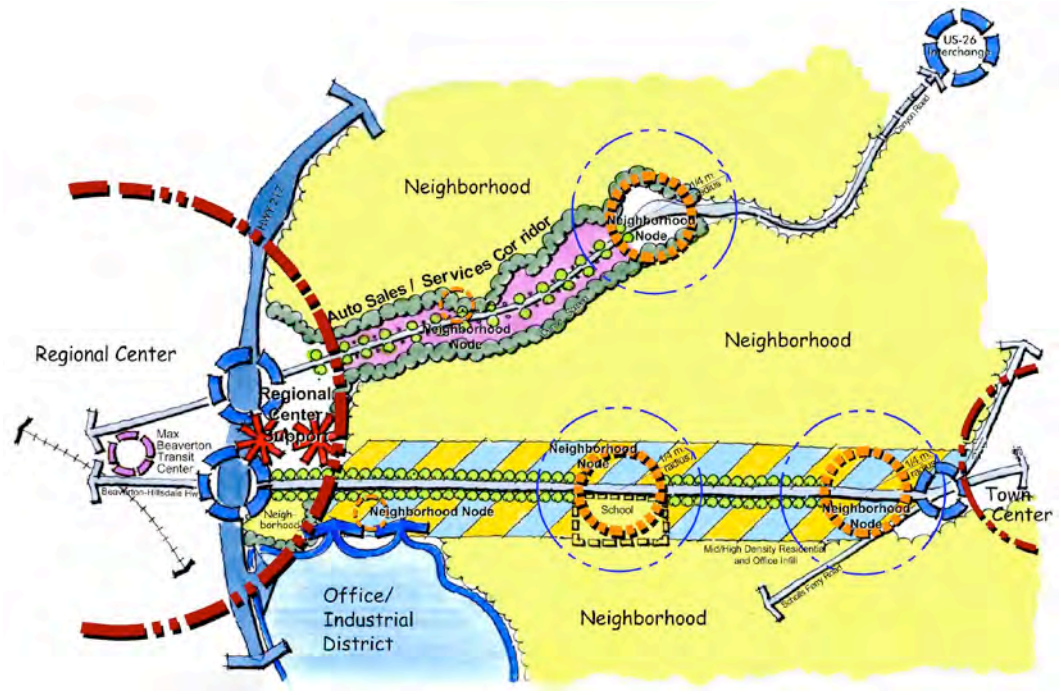
This policy category is fundamental: if the public disapproves of the development pattern in Corridors, then it should favor policies that change that

pattern by disallowing some current uses, and by requiring or encouraging other uses.

The analysis for this study, both of corridors in general and of specific Corridors in the Metro region, suggests that (1) Corridors compete with Centers for many types of retail uses, and (2) some Corridors have more retail than the surrounding neighborhood can support. These findings suggest a policy to reduce the amount of land zoned for retail in Corridors (and, potentially, increase zoning for retail in Centers). While such a policy could hasten the transition of the Corridor to a development pattern that better reflects market realities, transportation constraints, and community desires for more appealing main streets, it also has problems:

- Some uses may not relocate to Centers if excluded from Corridors. This policy option does not address the question of why certain retail and office uses are locating in the Corridors rather than Centers in the first place. The lower land prices and auto-oriented environment of a Corridor may be better suited than Centers for certain retail and office uses; those uses might not automatically migrate to Centers if they were excluded from Corridors.
- Centers may not be competing with Corridors for certain types of uses. The fact that Corridors contain a significant share of retail and office activity in the region is not necessarily an indication of competition with Centers for those uses. If the auto-oriented environment of a Corridor is in fact better suited than Centers for certain types of businesses, the land uses currently along Corridors may be complementary, catering to business types that rarely are compatible with Centers.
- A combination of incentives and education may be required to get local property owners support of redeveloped Corridors. The changes required to implement the 2040 Corridors are significant, as illustrated by the conceptual land use and development plan developed in the case study (see Figure 3-1). Change will require an extensive public involvement process, but even that will not be sufficient unless a local jurisdiction can show that a different type of land use will be more valuable than retail. While the details of implementation of Measure 37 are still being discussed in the legislature, the thrust of the measure is clear: government actions that reduce property value may require a local jurisdiction to either pay compensation, or waive the regulations.

Figure 3-1. Land use and development alternative concept, Canyon Road and Beaverton-Hillsdale Highway Corridors, 2005



Source: Freedman Tung & Bottomley, 2005.

Changes might occur in density and design as well as use. As noted above, such changes may take the form of regulations (e.g., rezoning segments of Corridors, or changing the density requirements of existing zones) or incentives (e.g., allowing a mix of uses, reducing parking requirements, funding streetscape improvements).[3]

Change the intensity of land uses (redevelopment and infill)

Redevelopment and infill along Corridors is desired by Metro policy, but the current low-density development may be the most profitable type allowed by zoning, given other market and policy conditions. Allowing redevelopment and infill to occur may be helpful where policy prohibits it. But in many cases, just allowing it is not enough to make it happen. Even if higher-density development is more profitable than low-density development for new construction on vacant sites, the cost of redevelopment (demolition and site preparation) may make it unprofitable in the short- to medium-term in redevelopment situations.

Thus, the effective policies in this category are more likely to be incentives than regulations. Whatever policies are selected, the evaluation leading to their selection should consider that:

[3] *The Beaverton Downtown Regional Center Development Strategy*, (2004), a study of Metro Centers, and *Metro Urban Centers: An Evaluation of the Density of Development*, (2001) Metro, described regulatory- and incentive-based tools to increase density. Many of these tools are appropriate to apply in Corridors, if the objective of the regulation or incentive is changed from density in all places (general objective in the Beaverton Centers study), to density in targeted locations, or other types of land uses that implement the Case Study Report land use and transportation concept for 2040 Corridors.

- Higher densities in Corridors might increase competition with Centers by making Corridors more Center-like. Where they had previously presented a complementary product of auto-dominated retail and office, Corridors would now present a product with similar urban design features. In the extreme case, Corridors would become extended Centers or continuous main streets. Both Centers and Corridors might be better off if "Center-like" mixed uses were limited to major intersections along Corridors, and allowed uses between the intersections included at least some lower-density uses like drive-through restaurants, car sales, and medium-box retail. On the other hand, some redevelopment and infill is probably possible and could be encouraged with the types of uses that are currently on the Corridor. Corridors should not have to mimic the economic composition of existing Centers to successfully redevelop.
- There are more Corridors with potential for redevelopment than there are government resources to make the necessary changes to encourage that redevelopment. The number and length of Corridors designated in the Portland metropolitan region and the lack of funding to satisfy existing needs, much less new Corridor redevelopment needs, make it unlikely that the majority of Corridors will get public funding to stimulate redevelopment.

Implement transportation and streetscape improvements

The previous two categories of policy options focused on land use; this one focuses on transportation.

Access management can improve through-flow for all modes. It may support the higher densities that are desired for Corridors. But as densities increase, the amount of congestion may increase as more trips are made to and from locations along a Corridor, and as more trips go through a Corridor to and from Centers. As congestion increases, a higher degree of access management may be required to support these higher densities.

Streetscape improvements would include those urban design elements that are not part of the private land uses. Rather than requiring higher densities or smaller setbacks, for example, streetscape improvements would focus on wider sidewalks, street trees, boulevard treatment with planted median strips, street lights, banners, benches, etc. The goal, ultimately, should be to improve Corridors to encourage redevelopment without making them linear Centers.

Figure 3- 2. Examples of streetscape improvements for residential uses along Corridors, 2004

Source: Freedman Tung & Bottomley, 2004.

Publicly provided streetscape improvements are incentives to private redevelopment; they can substitute for regulations. For example, jurisdictions could install landscaped medians along segments of Corridors between major intersections. The landscaped medians prohibit left-hand turns, a condition that most retailers do not like. This may force vulnerable retailers to relocate or go out of business, while at the same time creating an environment that is conducive to medium- to high-density residential uses. The landscaped medians buffer traffic noise and slow vehicles.

POLICY OPTIONS TO IMPLEMENT METRO CORRIDOR OBJECTIVES

The recommendations in this section are primarily from the Phase-II Case-Study Report (see Appendix A of this report or Chapter 5 of the Case-Study Report for a full description). They start from the assumption that Metro and the local jurisdictions affected by its requirements *want to achieve* Metro's stated objectives (in its 2040 planning documents) for land use and transportation development designated Corridors. Not everyone on the case-study advisory group agreed with all those objectives; a similar group assembled for other Corridors would have probably voiced similar differences of opinion.

It is not the task of this report to make an *absolute* recommendation about what to do in Corridors. Rather, it is making a *contingent* recommendation: *if* you want to move in the direction of meeting 2040 objectives for Corridors more thoroughly or more rapidly, *then* here are the kinds of things that should be done. Those things are described for three levels of governments: state (ODOT), region (Metro), and local (cities and counties). An obvious alternative, and one not explored in this report, is to substantially relax requirements for land use and transportation in Corridors, or eliminate the Corridor designation entirely.

The policy changes are organized by the type of jurisdiction, from the one with the largest boundaries to the ones with the smallest:

- State (S) - ODOT
- Regional (R) - Metro

- Local (L) - City and County

STATE AGENCY RULES AND POLICIES

S1: Re-examine AASHTO interpretation within Corridors. ODOT should re-examine its policies regarding street-tree spacing and other street design elements along Corridor sections to allow the provision of street trees and other street design changes envisioned in the Corridor land use and development alternatives.

S2: Designate UBAs only in Neighborhood Centers. As part of individual corridor plans, the local jurisdiction, Metro, and ODOT should consider whether the use of a UBA would assist in the transition of land uses within neighborhood centers.

S3: Develop state-local agreements regarding transportation and streetscape improvements in the Corridors. ODOT, Metro, and local governments should prepare local 2040 Corridor Plans as refinements to Transportation System Plans (TSPs). The 2040 Corridor Plans should identify the functional classifications related to land use and provide system detail for all modes, the desired cross-section, street design, access management, mobility standard, funding strategies, and the best timing for implementing new road designs or improvement projects. These plans should identify who is responsible for the construction, operations, and maintenance of improvements and the plans should note if a transfer of ownership is planned for the corridor. This recommendation does not suggest that ODOT should require additional management plans beyond the existing freight route plans. The intent is to recognize that the complex ownership status of some Corridors can be a hindrance to the appropriate redevelopment of the right-of-way and application of new standards. Intergovernmental agreements (IGAs) are one way to clarify improvement schedules and responsibilities.

S4: Increase funding for Corridors in the State Transportation Improvement Program (STIP). Funding for transportation improvements along Corridors is necessary to support the land use and development alternatives. Since many 2040 Corridors are state highways, ODOT should work with Metro and local jurisdictions to identify and create opportunities for funding Corridor transportation improvements. For example, more state funding may be available if the region provides matching funds, which would satisfy state funding criteria for leveraging local funds. In addition, ODOT preservation and safety projects in the STIP should also provide a significant opportunity to leverage the long-term vision for these areas.

REGIONAL AGENCY RULES AND POLICIES

R1: Recognize Corridor segment typologies as a tool for corridor planning. Two questions about Metro's Corridor policy should be addressed at the policy level: (1) Should all the Corridors now designated

continue to be Corridors? and (2) For whatever Corridors remain, should policy recognize different Corridor types and requirements?

Number of Corridors. The consultant team recommends that all 2040 Corridors be re-evaluated to determine if they should still be designated as Corridors in the 2040 Growth Concept, based on the likelihood that the Corridor could be transformed to the proposed land use and transportation alternative. Some corridors will be easier to restructure to accommodate residential growth (or other types) based on the existing uses, land characteristics, or the ability of the local jurisdiction to invest supportive streetscape and transit improvements.

The evidence suggests that there are more Corridors than the market or public funding will be able to restructure over the next 20 years. Metro has identified over 400 miles of Corridors in the 2040 Growth Concept. Roadway improvement funds already fall well short of the need—narrowing the number of Corridors that potentially could be in competition for funds is practical.

The question for Metro is one of focus. On the one hand, all the Corridors could remain designated if the policies that apply to them are relatively general—if they point to a desired direction for change without mandating near-term changes that are inconsistent with current markets or funding capacity and, thus, strong impediments to continued development in the Corridors. On the other hand, if the policies are to be stronger, then they should be focused on the Corridors that are most important and most likely to be redeveloped; that focus also focuses public funding.

The question about the number of Corridors is not independent of the question about Corridor types: a larger number of Corridors is more likely to be workable if there are subcategories of Corridor types that have different requirements, and different priorities for the timing of the conversion.

Corridor Types. Phase 1 of this study made clear that 2040 designated Corridors are very different in function and character, and that not all Corridors are suitable for redevelopment to the proposed alternative. The consultant team recommends that whatever Corridors remain as Corridors (after the re-evaluation of the number of Corridors recommended above) should be classified by the Corridor segment typologies identified in Phase 1, Chapter 2 (defined below). These typologies can help identify which Corridors or segments of Corridors may be vulnerable to change, and which ones may have the potential support of the community for change. One result of this re-evaluation may be that portions of the currently designated 2040 Corridors remain so designated, but that other sections drop that designation, resulting in a non-continuous pattern of Corridor designation along some routes. Another outcome is the prioritization of Corridors for redevelopment funding purposes (described in greater detail in R2).

There is a decision to made about whether the Corridor designations are to describe *existing conditions* or *desired future conditions*. In general, plan

designations do the latter. The designations that follow, however, do the former.

- **Residential Parkway.** These segments are characterized by exclusively residential uses on properties contiguous to a Corridor right-of-way, and are almost always buffered from the thoroughfare by landscaping, grade changes, or an orientation of development away from the roadway. The northern half of Canyon Road is an example. These segments in general do not seem very vulnerable to change. The consultant team assumes that there would be little support at the regional, municipal, or neighborhood levels for policy to encourage these areas redevelop as Corridors envisioned in the 2040 Growth Concept. Metro policy should not be interpreted as encouraging a conversion of these residential areas to employment areas, and it should have some guidance on what, if any, requirements there are for residential types and density, and transportation design. This should include guidance on what levels of residential density are appropriate to support the 2040 Corridor objectives and the level of transit service planned for the corridor in the RTP.
- **Specialty Segments (dominance by a single land use such as automobile sales and service, or office employment).** There is a strong market demand for specialty uses (like automobile sales and service) along some Corridors. This segment recognizes the need for these uses and the appropriate locations based on the large scale and low coverage of the properties, the need for substantial on site parking, and the need for visibility and access for prospective customers. These segments are not vulnerable to change in the near future, and the consultant team does not recommend use changes. However, these segments may need streetscape improvements to improve pedestrian, bicycle, and transit use.
- **Commercial Strip.** These primarily retail-oriented Corridors are characterized by auto-dominated, low-intensity development with rapidly moving traffic, and a lack of integrated design or design standards. The result is so well-known that it needs only the name—commercial or retail strip—for most people to get an image of what it looks like. That image, typically, is one high function but low aesthetics. These areas are usually described as locations of general retail rather than specialty or clustered retail, and of low-intensity and lower-quality development. For reasons described in the Phase I report, these areas provide some of the best opportunity for change and should be prioritized for redevelopment funding.
- **Neighborhood Sales and Service.** These areas often share many of the characteristics of strip development except for their short length. They are often short interruptions in residential parkway corridors that provide neighborhood uses to those adjacent residential areas. They are often found along the narrower Corridors and not along the wider ones with the greatest vehicular capabilities. There is potential for

smaller scale change to increase retail and service support for the adjacent neighborhoods.

R2: Provide Functional Plan support for retail clusters. An important element of the case-study land use and development alternative is to cluster retail development into nodes (i.e., into regional-center-support areas and neighborhood centers, as defined below). Building on the 2040 Corridors that have the potential to transform to mixed-use pedestrian friendly environments (Policy R-1), Metro should add sub-categories (see definitions below) to the Corridor design type as defined in the Functional Plan Section 3.07.130. These non-regulatory sub-category descriptions, derived from the case study analysis, could assist in the development of local government corridor plans by the identification of locations along Corridors that have the greatest potential for redevelopment. The Functional Plan should include criteria to determine the appropriate location and type of retail nodes. The Functional Plan could also encourage local governments to use a variety of tools to achieve retail clusters.

CORRIDOR SUB-CATEGORIES DESCRIPTIONS AND CRITERIA FOR LOCATION

- **Regional Center Support.** Large-format retailers are concentrating at major Corridor intersections and freeway on-and-off ramps that are near Centers. Auto-oriented commercial sales, drive-in uses, sales of large-scale goods.

  Potential criteria for designation: Land adjacent to Corridors with existing or the potential for large format retailers. Land aggregation potential may be necessary to realize large format retailer uses.

- **Neighborhood Center.** A Corridor segment at major intersections with small-scale businesses anchored by supermarkets oriented to nearby neighborhoods, preferably integrated into a mixed-use building.

  Potential criteria for designation: major intersections with land aggregation potential of a minimum of 10 to 15 acres/pre-existing commercial nodes that are under-utilized/concentration of like uses such as recreation and school facility/existing anchor facility.

- **Workforce District.** An established employment portion of the Corridor that is functioning as a distinct and separate land use of sufficient size and quality to ensure its continued existence. An example may be a cluster of office parks that are integrated into the fabric of the adjacent residential uses.

  Potential criteria for designation: Areas of existing employment that can be strengthened by improving the transportation system or by increasing workforce housing in nearby locations.

- **Corridor Neighborhood.** A Corridor segment between Regional, Town and neighborhood centers that does not have one of the previous Corridor designations. Land uses envisioned are mid-to-high-density residential, office, lodging, institutional, or limited retail uses.

Potential criteria for designation: High vacancy rates or low land values (compared to other commercial Corridors), disinventment, congestion, poor pedestrian environment, and limited transit opportunities.

TOOLS TO ACHIEVE RETAIL CLUSTERS

- New development code district/overlays (see "Local" section for details)
- New performance-based development code language
- Economic studies that support rezoning efforts
- Street improvements

R3: Emphasize the importance of corridor planning to improve transportation system and enhance centers. Metro could reinforce the importance of corridor planning and implementation of the 2040 Regional Plan at the local level with regulations (R2 and R3), funding (R4), or both. Metro could require that planning for Corridors be done as part of local TSP/TSP updates and refinements for governments within Metro boundaries. If this option were pursued, then the level of TSP refinements that would trigger Corridor planning would need to be identified. It is not the intent of this recommendation that Corridor plans are triggered when a local jurisdiction is completing a minor adjustment for an entirely different purpose.

Corridor plans should determine the functional classifications for all modes, the appropriate cross-section (including number and type of lanes and widths), street design, access management, mobility standards, funding and implementation strategies, and the best timing for implementing new road designs or improvement projects. Corridor plans should establish policy both for the roadway and the land use, so that improvements in the desired direction may be made over time as development occurs.

As part of the Centers improvement measures being recommended by the Get Centered program, Metro could require local governments to examine existing Corridors, classify their segments, and evaluate their potential economic relationship to proximate Centers. Metro should provide assistance in the form of funding or staff time. A jurisdiction would then suggest, as with the case study Corridors in this report, specific measures it would take to implement the 2040 Corridor objectives.

R4: Increase the priority of Corridor funding in the Metropolitan Transportation Improvement Program (MTIP). Funding for transportation improvements along Corridors is necessary to support the land use and development alternatives. Metro may need to recognize the need for corridor improvements in MTIP and other regional funding priorities and award credits for projects that propose corridor improvements in accordance with corridor plans and improvements that will encourage Regional Corridor goals.

This policy is obviously a controversial one. On the one hand, there is not enough money in the MTIP to do many of the improvements that are desirable *within* centers. On the other hand, if there is to be no funding for streetscape improvements in Corridors, then change will be slower and, in some cases, impossible. Individual property owners, even with the assistance of local governments, will not be able to assemble the capital to complete a concentrated and coordinated redevelopment of the streetscape, resulting in piecemeal development that is unlikely to create an integrated streetscape.

If funding is not available, it would be preferable for Metro to acknowledge that the Corridor policy is suggestive and voluntary: it could (1) state its belief that a restructuring of land use and transportation in Corridors along the lines described above would be advantageous for citizens, local governments, and the private sector; (2) provide materials that show the private sector and local governments how that restructuring could take place in a world of limited public funds and incremental private development; and (3) hope that '1' plus '2', plus changing market conditions and local government desires, are enough to get the desired change in some Corridors.

Metro should continue to monitor street preservation and modernization programming and track conversions of "complete street" Corridors to ensure coordination with other potential funds to reinforce the importance of the Corridor goals of the Metro 2040 Plan. There are other funding mechanisms for Corridor planning, such as urban renewal funding (Tax Increment Financing) that local governments may be able to use in addition to MTIP funds. The recommendation here does not preclude any other creative financing, but suggests that the regional funding priorities make the connection between improvements to Corridors as one way to improve Centers in certain circumstances.

R5: Clarify the use of medians along corridors. Metro could amend the Regional Street standards to specify that raised medians should be used along the majority of corridors to provide comfortable and safe multimodal travel. The appropriate spacing and location of median breaks should be established through a corridor refinement plan that comprehensively reviews the state and local access management requirements, the local grid network, and the type of land uses adjacent to the corridor. In most cases, the breaks in the medians should occur no closer than 600 feet. Right-in-right-out accesses could be provided at closer intervals. Metro could also amend the RTP to support the use of access lanes, cross-over easements, and other tools that can be used to support successful access management in corridors. The use of these access management strategies and tools are needed to achieve the goals of corridors.

R6: Develop gateways in the Corridors. The case study concluded that the Beaverton Corridors would be improved if they had some feature that gave some relief to the sameness of the commercial strip to announce a new sub-area: a "gateway." No policy changes are necessary to implement gateways. The description of Metro design types should include a discussion of

gateways and their value. Regional transportation funding could be used in new gateway projects (with the same caveat: in a world of constrained funding for roadway maintenance and improvements, how likely is it that the available funding will be shifted to the creation of gateway features?).

R7: Coordinate with housing providers and advocacy groups to identify and implement a pilot project. Metro should coordinate with housing providers and advocacy groups to identify and obtain sources of funding to complete additional studies on implementation issues. This would include the initial groundwork for the identification and implementation of a pilot project. A pilot project is useful in demonstrating to the development community that a mixed-use nodal focused development project can be successful while supporting the continued growth of the nearby Center.

LOCAL GOVERNMENT POLICIES AND DEVELOPMENT CODES

L1: Change road design policies within Transportation System Plans (TSPs) and/or public works standards to encourage transportation improvements that support the land use and development alternatives and remove barriers. Local governments should encourage different road designs for Corridors in their TSPs or public works standards, remove policy obstacles, and acknowledge the importance of road improvements, streetscape, and funding as alternatives to achieve 2040 Corridor objectives. See also R.3 related to funding.

L2: Rezone the neighborhood corridor segments to limit the amount of retail and allow for the density of residential, office, lodging, institutional and limited commercial uses envisioned by the land use and development alternatives. This could be achieved through the following policy changes:

- Examine commercial zoning types along corridors, see if the following designations could apply, create a vision for each corridor, and match local districts as appropriate to the following zoning categories. Create new districts (or existing Corridor commercial zoning districts as needed) in Development Codes with use restrictions and design standards that buffer adjacent single-family residential areas.
- In terms of applying the districts, work with local private organizations such as chambers of commerce or local business groups to get property owners to voluntarily apply the new districts and make the changes "friendly legislative changes" or streamlined individual zone changes consistent with a locally adopted corridor plan.
- New district categories:
  - Regional Center Support: allows big box, auto-oriented development

- Workplace District: allows employment uses (both commercial and industrial)
- Corridor Neighborhood: a new district that allows mid- to high-density residential, office, lodging, and other limited commercial uses)
- Neighborhood Center: Allows mixed-use and a concentration of neighborhood oriented retail, such as an anchor grocery store with additional retail. Expected retail building sizes would be less than 40,000 square feet and would have building orientation towards the street. The uses include retail, small offices, and residential above ground floor non-residential uses.

L3: Implement transportation and street-design strategies to support the land use and development alternative. Improvements could include:

- Standards for "public frontage," sidewalk location, and street tree planting (where appropriate) for new development.
- Volunteer tree planting and publicly/privately funded maintenance programs.
- Redevelopment (required or encouraged) off street-side parking lots and frontages to achieve better pedestrian protections.

L4: Review current codes for appropriate design guidelines and development standards for retail in corridors. The appropriate standards should include:

- Minimum building heights for retail buildings
- Maximum building setbacks (or "build to" lines) to a certain percentage of "frontage coverage" along street lot lines
- Public street frontage requirements
- Public street network circulation and spacing guidance
- Limitations on parking location and design (to the side and rear and with "orchard" landscaping of one tree per five spaces and exterior screening)
- Building entrances oriented to streets as well as parking lots
- Limits on building massing (required "breaks" and/or material/color changes)
- Design of open air storage and display

L5: Provide incentives to encourage the redevelopment of Corridors. There are numerous regulatory and non-regulatory incentives that local jurisdictions could provide to property owners and developers to encourage implementation of 2040 Corridor objectives. Other studies on

Centers[4] describe regulatory and non-regulatory tools to increase density. Many of these tools are appropriate in Corridors, if the objective of the regulation or incentive is adjusted to the 2040 Corridor objectives.

Examples of regulations that encourage the redevelopment of Corridors:

- Regulatory relief in the permitting process or design standards.
- Mixed-use zoning in neighborhood centers with limited application in neighborhood corridors.
- Interim development standards that limit development through large lot zoning, development moratoria, or land banking until the land can be developed at planned densities.
- Shadow platting to allow infill of higher density uses in the future.

Examples of incentives are:

- Form of Vertical Housing District(s) to provide incentives for mixed use and higher intensity developments. Review or "audit" existing code specifications for residential densities so that residential densities are appropriate (not too high or too low) for the desired, or expected development.
- Conduct research and education to inform property owners, developers, and others of the long-term benefits of implementing the 2040 Corridor objectives.
- Purchase or transfer of development rights that allow for property owners to purchase development rights from M37 claimants to increase the density of development on their property (or other benefit).
- Purchase small parcels of land and assemble them into larger parcels for easier development.

NEXT STEPS

The consultant team identified four immediate steps Metro should take to implement the findings of the project. They are:

- **Determine if Metro will change policy to implement the 2040 Corridor goals.** The recommendations listed above and the next steps in this section are contingent on a decision by Metro Council that it wants to dedicate the time and resources necessary to affect greater change in land use and transportation in Corridors. That probably requires that a Councilor recommend such action to the Council, and

[4] *The Beaverton Downtown Regional Center Development Strategy*, (2004), a study of Metro Centers, and *Metro Urban Centers: An Evaluation of the Density of Development*, (2001).

agree to provide direction to staff and champion the recommendations at Council.

- **Work with ODOT and local jurisdictions to implement policy changes.** There is a fundamental choice about the number of segments and miles that Metro wants to cover with Corridor policy. Since local support is critical to the implementation of the recommendations in this report, Metro may want to encourage additional input from local jurisdictions that are interested in implementing 2040 Corridor policies within their jurisdictions.
- **Reevaluate the Corridor designation and prioritize Corridors for funding purposes.** If the decision is made to apply policy to more than a small number of similar Corridors, then Metro should distinguish between types of Corridors and establish priorities for planning and funding.
- **Identify funding sources.** Most of the recommendations require funding and staff resources for implementation. Implementing streetscape recommendations and transportation system improvements will require significant funding in most locations.
- **Conduct a pilot project.** Given limited funding, Metro should look to a Corridor where market and land-use conditions are encouraging of redevelopment, local government supports such redevelopment, and ODOT is planning to make transportation improvements. A pilot project should include an economic study that can address Measure 37 issues, and a public outreach plan, but it should ultimately be a construction project (e.g., change in traffic design and streetscape for a four-block length of a Corridor at a key intersection). The best way to get the many Metro Corridors to redevelop in the ways that Metro policy desires is to show that such redevelopment is possible and successful.

Appendix A Corridors as Defined in Metro Policy Documents

This appendix is a summary of how corridors are defined in different Metro policy documents as well as a brief summary of the Metropolitan Transportation Improvement Plan (MTIP) funding process as it relates to corridors[1]. It has five sections:

- 2040 Growth Concept
- Regional Transportation Plan
- Creating Livable Streets Handbook—Street Design Guidelines
- Green Streets Handbook—Innovative Solutions for Stormwater and Stream Crossings
- Transportation funding process—Transportation priorities 2006-09

2040 GROWTH CONCEPT

Corridors are not as dense as centers, but are also located along good quality transit lines. They provide a place for densities that are somewhat higher than today and feature a high-quality pedestrian environment and convenient access to transit. Typical new developments would include rowhouses, duplexes and one- to three-story office and retail buildings, and average about 25 persons per acre. While some corridors may be continuous, narrow bands of higher-intensity development along arterial roads, others may be more nodal, that is a series of smaller centers at major intersections or other locations along the arterial that have high quality pedestrian environments, good connection to adjacent neighborhoods and good transit service. As long as the average target densities and uses are allowed and encouraged along the corridor, many different development patterns – nodal or linear – may meet the corridor objective.

Metro's Urban Growth Management Functional Plan reiterates a recommendation for population and employment density of 25 persons per acre in Corridors.

REGIONAL TRANSPORTATION PLAN

For funding purposes the RTP places the 2040 Design Types into a hierarchy based on investment priority (see Table A-1). Corridors are in the secondary land-use component classification and occupy the last position within the classification.

[1] Summarized by Metro staff (Tim O'Brien), March 2005.

Table A-1. Hierarchy of 2040 Design Types

Primary land-use components	Secondary land-use components
Central city	Station communities
Regional centers	Town centers
Industrial areas	Main streets
Intermodal facilities	Corridors
Other urban land-use components	**Land-use components outside of the urban area**
Employment areas	Urban reserves
Inner neighborhoods	Rural reserves
Outer neighborhoods	Neighboring cities
	Green corridors

Source: Metro, Regional Transportation System Plan, 2004.

While more locally oriented than the primary components, the secondary components are significant areas of urban activity. Because of their density and pedestrian-oriented design, they play a key role in promoting public transportation, bicycling, and walking as viable travel alternatives to the automobile, as well as conveniently close services from surrounding neighborhoods. As such, these secondary components are an important part of the region's strategy for achieving state goals to limit reliance on any one mode of travel and increase walking, bicycling, carpooling, carpooling, and use of transit.

Corridors will not be as intensively planned as station communities, but similarly emphasize a high-quality bicycle and pedestrian environment and convenient access to public transportation. Transportation improvements in corridors will focus on nodes of activity – often at major street intersections – where transit and pedestrian improvements are especially important. Corridors can include auto-oriented land uses between nodes of activity, but such uses are carefully planned to preserve the pedestrian orientation and scale of the overall corridor design.

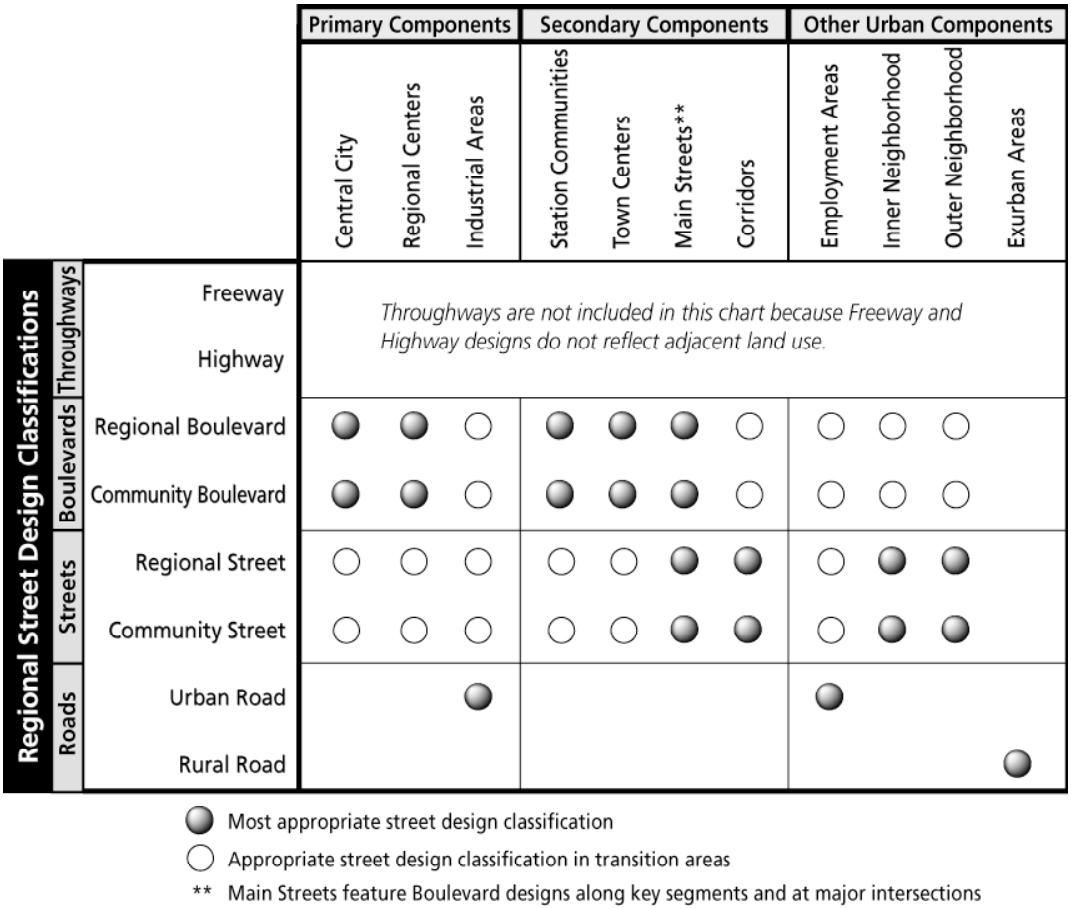
The target for non-single-occupancy-vehicle (SOV) trips within Corridors and Centers is 45-55% of all trips—slightly higher than the 40-45% non-SOV share for neighborhoods, industrial areas, and employment areas, but significantly lower than the 60-70% target for the Central City.

Beaverton Hillsdale Highway and Canyon Road are both classified as "regional streets" within the Regional Street Design Classification. The regional street design classification is intended to serve multiple modes of travel in a manner that supports the specific needs of the Corridor 2040 Design Type.

REGIONAL STREETS

Regional streets are designed to carry significant vehicle traffic while also providing for public transportation, bicycle, and pedestrian travel. These facilities serve a development pattern that ranges from low-density residential neighborhoods to more densely developed corridors and main streets, where buildings are often oriented toward the street at major intersections and transit stops. Regional street designs accommodate moderate motor vehicle speeds and usually include four vehicle lanes. Additional motor vehicle lanes may be appropriate in some situations. These facilities have some to many street connections, depending on the district they are serving. Regional streets have few driveways that are combined whenever possible. On-street parking may be included, and a center median serves as a pedestrian refuge and allows for left turn movements at intersections.

Figure A-1. Regional Street Design Classifications and the 2040 Growth Concept

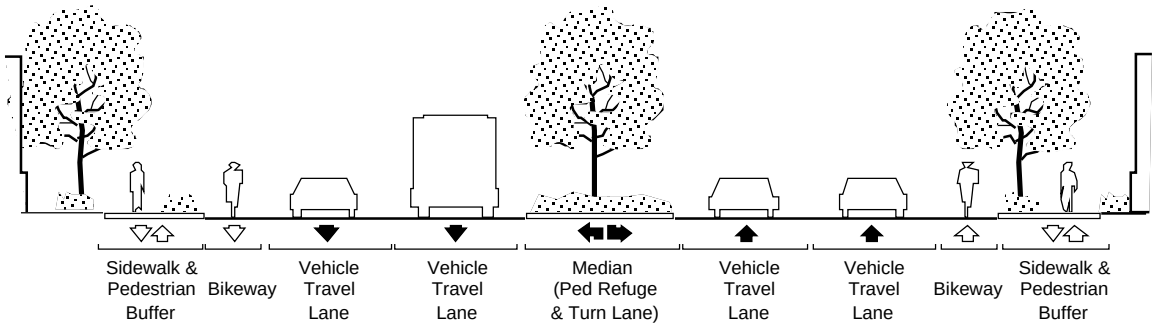


Source: Metro, Regional Transportation System Plan, 2004.

These facilities are designed to be transit-oriented, with high-quality service and substantial transit amenities at stops and station areas. Although less substantial than in boulevard designs, pedestrian improvements are important along regional streets, including sidewalks that are buffered from motor vehicle travel, crossings at all intersections and special crossing amenities at major intersections. Regional streets have bike lanes or wide outside lanes where bike

lanes are not physically possible, or are shared roadways where motor vehicle speeds are low. They also serve as primary freight routes and may include loading facilities within the street design, where appropriate. Figure A-2 illustrates a typical cross-section of a regional street.

Figure A-2. Regional Street Design Elements



Source: Metro, Regional Transportation System Plan, 2004.

REGIONAL MOTOR VEHICLE SYSTEM

The regional motor vehicle system is designed to provide access to the central city, regional centers, industrial areas and intermodal facilities with an emphasis on mobility between these destinations. Beaverton Hillsdale Highway and Canyon Road are both classified as Major Arterials in the Regional Motor Vehicle System.

MAJOR ARTERIALS

Major arterials serve as primary links to the principal arterial system. Major arterials, in combination with principal arterials, are intended to provide general mobility for travel within the region. Motor vehicle trips between the central city, regional centers, industrial areas and intermodal facilities should occur on these routes. Major arterials serve as freight routes, with an emphasis on mobility. These routes fall within regional boulevard, regional street, urban road and rural road designs, as defined in the regional street design concepts.

Major arterial system design criteria:

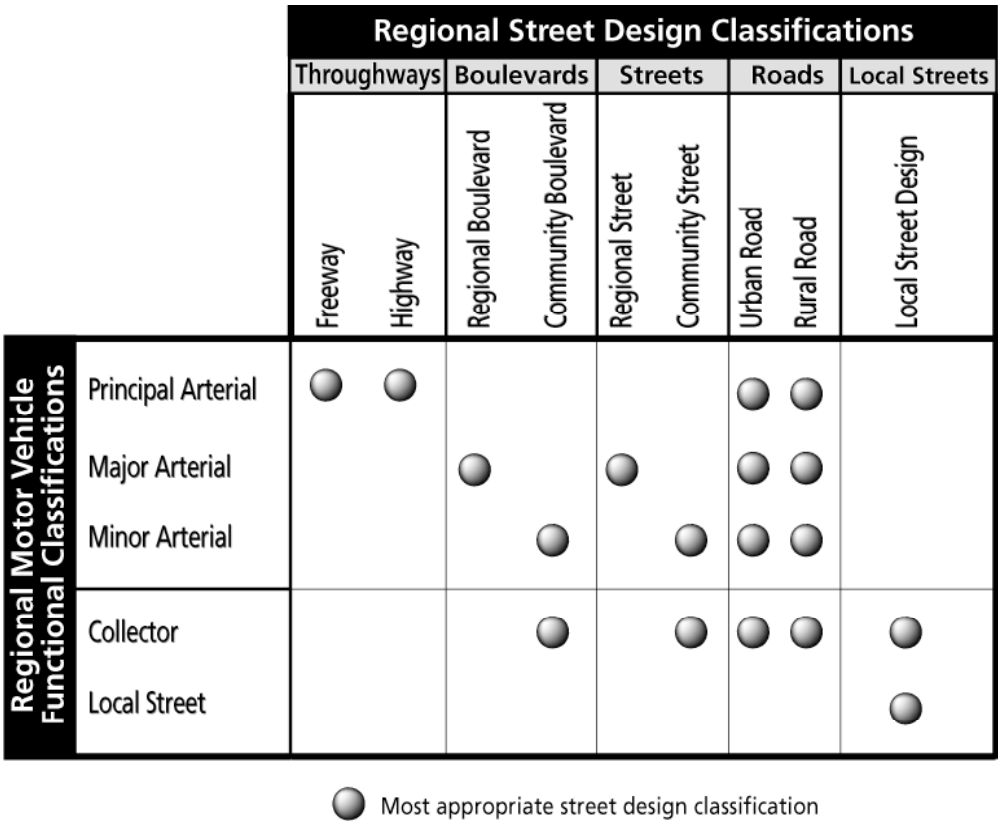
- Major arterials should provide motor vehicle connections between the central city, regional centers, industrial areas and intermodal facilities and connect to the principal arterial system. If more than one route is available, the more direct route will be designated when it supports the planned urban form.

- Major arterials should serve as primary connections to principal arterials, and should also connect to other arterials, collectors and local streets, where appropriate.

- Freight movement should not be restricted on the principal arterial network.

- The principal and major arterial systems in total should comprise 5-10 percent of the motor vehicle system and carry 40-65 percent of the total vehicle miles traveled.

Figure A-3. Relationship Between Regional Street Design and Motor Vehicle Classifications



Source: Metro, Regional Transportation System Plan, 2004.

REGIONAL FRAMEWORK PLAN

The Transportation Chapter of the Regional Framework Plan (RFP) discusses the implementation of the 2040 Growth Concept, similar to funding hierarchy stated in the RTP.

20.1 2040 Growth Concept implementation

Implement a regional transportation system that supports the 2040 Growth Concept through the selection of complementary transportation projects and programs.

- Place the highest priority on projects and programs that best serve the transportation needs of the central city, regional centers, intermodal facilities and industrial areas.

- Place a high priority on projects and programs that best serve the transportation needs of station communities, town centers, main streets and corridors.

2.11 Regional Street Design

Design regional streets with a modal orientation that reflects the function and character of surrounding land uses, consistent with regional street design concepts. Support local implementation of regional street design concepts and *Green Streets* design alternatives in local transportation system plans and development codes.

CREATING LIVABLE STREETS HANDBOOK: STREET DESIGN GUIDELINES

The purpose of the handbook is to provide regional street design guidelines that support the goals adopted in the 2040 Growth Concept and the RTP. The design guidelines in the handbook focus on a broader set of design classifications that support the 2040 Growth Concept, linking the design of streets to multi-modal street function, community livability and economic vitality. All of the guidelines are consistent with RTP street design policies and are organized into four areas: street realm, travelway realm, pedestrian realm, and adjacent land use. Within the handbook are street-sections for the regional street classification.

GREEN STREETS HANDBOOK: INNOVATIVE SOLUTIONS FOR STORMWATER AND STREAM CROSSINGS

The Green Streets Handbook was created to further develop a strategy for designing streets that builds upon the Creating Livable Streets Handbook. The handbook addresses the potential conflict of protecting or restoring streams and wildlife corridors with the development of an efficient and safe multi-modal transportation system. The book includes a potential street section for the regional street classification, similar to the street section in the Creating Livable Streets Handbook.

TRANSPORTATION FUNDING PROCESS: TRANSPORTATION PRIORITIES 2006–09

The primary policy objective for the Transportation Priorities 2006 – 09 program is to leverage economic development in priority 2040 land-use areas through investment that support:

- 2040 Tier I and II mixed-use areas (central city, regional centers, town centers, main streets and station communities)
- 2040 Tier I and II industrial areas (regionally significant industrial areas and industrial areas), and
- 2040 Tier I and II mixed-use and industrial areas within UGB expansion areas with completed concept plans.

2040 designated Corridors are not included in the list of Tier I and II mixed-use areas, even though they are identified as a Tier II or secondary 2040 land use component in the RTP. This is due to the fact that there has been no direction at the regional level to determine how mixed-use corridors are to function. It is expected that a regional policy direction and implementation at the local level would need to be completed prior to Corridors being added to the funding list.

Of the total 100-point scoring system for transportation funding, 40 points are related to how the proposed project supports 2040 land use objectives. Of the 40 points, 20 points are related to economic and community development.

Appendix B Policy options to implement Metro corridor objectives

This appendix reproduces the policy options for restructuring corridors as presented in Chapter 5 of the Metro Corridors Case Study Report. It has two sections:

- Introduction
- Policy issues and recommended changes

INTRODUCTION

The rest of this chapter uses the term "policy" broadly to mean "anything that the public sector might do." It includes not only policies, but also strategies, actions, programs, incentives, and investments. Its general topic is policies related to land use and transportation that *should be revised* if the objective is to increase the probabilities of getting land use and transportation development along the lines described in Chapter 4. This chapter does not discuss he many ways in which existing policies (strategies, actions, programs and incentives) may be used to implement the preferred land use alternative.

- **Policy issues and recommended changes** identifies existing policies that possibly conflict, or at least do not support, the land use and development alternatives (specifically) and, by implication, Metro's development objectives for land use and transportation in its designated corridors. The top level of organization for the presentation of policy issues and corresponding policy changes is by *type of jurisdiction*, from the one with the largest boundaries to the ones with the smallest:
  - **State (S)**
  - **Regional (R)**
  - **Local (City and County) (L)**

  The discussion of policies at each jurisdictional level has two parts:
  - **Policy issues**. Each section starts with a summary of the main policy issues regarding the implementation of the land use and development alternatives (described in Chapter 4).
  - **Policy changes necessary to achieve the land use and development alternative**. For state, regional, and local jurisdictions, the policy implications begin with a general description, and is then followed by a summary of *what type, who,* and *when.*

POLICY ISSUES AND RECOMMENDED CHANGES

The recommendations in this section start from the assumption that Metro and the local jurisdictions affected by its requirements *want to achieve* Metro's stated objectives (in its 2040 planning documents) for land use and transportation development designated Corridors. Not everyone on the case-study advisory group agreed with all those objectives; it seems safe to conclude that a similar group assembled for other Corridors would have similar differences of opinion.

It is not the task of this report to make an *absolute* recommendation about what to do in Corridors. Rather, it is making a *contingent* recommendation: *if* you want to move in the direction of meeting 2040 objectives for Corridors more thoroughly or more rapidly, *then* here are the kinds of things that should be done. Those things are described for three levels of governments: state (ODOT), region (Metro), and local (cities and counties). An obvious alternative, and one not explored in this report, is to substantially relax requirements for land use and transportation in Corridors, or eliminate the Corridor designation entirely.

STATE AGENCY RULES AND POLICIES

POLICY ISSUES

State agencies have many policies that affect redevelopment in 2040 Corridors. The case study showed that several existing Oregon Department of Transportation (ODOT) policies might be in conflict with, or at least have policy implications for, the development of the case-study land use and development alternatives and corresponding transportation strategies. No policy changes are recommended for statewide planning goals and their associated rules (Goal 9, Economic Development, and Goal 12 and its associated Transportation Planning Rule). The three state policy issues are:

- Interpretation of AASHTO policy regarding the placement of street trees
- Corridor segment designations
- Maintenance issues

The case study documents potential conflicts with ODOT interpretations of AASHTO (American Association of State Highway and Transportation Officials). The interpretations would restrict the location of street trees and other objects that may impair the vision of drivers. According to ODOT's interpretation of the policy, the spacing of street trees could occur at a minimum of 300 feet from intersections. This policy effectively prohibits the use of street trees and other objects due to the spacing of accesses and intersections along the corridor. This requirement for the spacing of trees or other objects would make the creation of a leafy corridor (along the corridor) difficult if not impossible.

Other agencies throughout Oregon and the nation have interpreted the same AASHTO policy so as to not place these restrictions on street trees in the right-of-way. ODOT's interpretation should be reexamined to reflect current research and the practices of other agencies. Research suggests that constrained sight lines

along busy roads can increase driver awareness and produce slower speeds. Trees in the median and roadside features that frame the Corridor reduce speeds, communicate expectations of pedestrian activity and increased conflict points to motorists, and enhance the roadway environment for non-vehicular modes. Further, the inability to enhance Corridors with trees and landscaping reduces the potential to attract infill with the mix of activities that can achieve the transportation and land use goals of the 2040 Corridor objectives.

The Oregon Highway Plan (OHP) includes policies and actions that recognize that some highway segments should be planned, designed, and managed differently than other highway segments. In accordance with the OHP, Corridors could be designated as Special Transportation Areas (STAs), Urban Business Areas (UBAs), or urban other. As discussed in Chapter 4, the potential for UBA designations was evaluated as part of the case study. The UBA designation was created to enable transition from auto-oriented strip retail commercial development patterns to multi-modal mixed-use patterns. UBA designations in 2040 Corridors will be most beneficial at neighborhood centers. Local plans should align access standards and land uses described in the OHP policies for a UBA designation to ensure that the access and parking provided along Corridors advance both the goals of the UBA designation and 2040 Corridor objectives.

Though local jurisdictions want greater flexibility in street design standards than allowed by ODOT policies, they are often unwilling or unable to commit the funds necessary to improve and maintain these facilities themselves. It is often difficult for ODOT to justify construction and maintenance of enhancements when weighed against demands for greater highway capacity and safety. Therefore, since public resources are typically insufficient and noncompetitive for beautification alone, such projects should be considered and receive priority based on their ability to:

- Stimulate redevelopment
- Create greater non-SOV mode share
- Increase taxable revenue

Projects meeting these goals can then justifiably benefit from local general fund support, state transportation fund support, and business improvement district assessments.

POLICY CHANGES NECESSARY TO ACHIEVE THE LAND USE AND DEVELOPMENT ALTERNATIVE

S1: Re-examine AASHTO interpretation within Corridors. ODOT should re-examine its policies regarding street-tree spacing and other street design elements along Corridor sections to allow the provision of street trees and other street design changes envisioned in the Corridor land use and development alternatives.

What type: Voluntary

Who: ODOT
When: Immediate/ongoing

S2: Designate UBAs only in Neighborhood Centers. As part of individual corridor plans, the local jurisdiction, Metro and ODOT should consider whether the use of a UBA would assist in the transition of land uses within neighborhood centers.

What type: Voluntary
Who: ODOT and local jurisdictions through Transportation System Plan amendments
When: Immediate/ongoing

S3: Develop state-local agreements regarding transportation and streetscape improvements in the Corridors. ODOT, Metro, and local governments should prepare local 2040 Corridor Plans as refinements to Transportation System Plans (TSPs). The 2040 Corridor Plans should identify the functional classifications related to land use and provide system detail for all modes, the desired cross-section, street design, access management, mobility standard, funding strategies, and the best timing for implementing new road designs or improvement projects. These plans should identify who is responsible for the construction, operations, and maintenance of improvements and the plans should note if a transfer of ownership is planned for the corridor. This recommendation does not suggest that ODOT should require additional management plans beyond the existing freight route plans. The intent is to recognize that the complex ownership status of some Corridors can be a hindrance to the appropriate redevelopment of the right-of-way and application of new standards. Intergovernmental agreements (IGAs) are one way to clarify improvement schedules and responsibilities.

What type: Voluntary IGAs
Who: ODOT and local jurisdictions
When: Ongoing

S4: Increase funding for Corridors in the State Transportation Improvement Program (STIP). Funding for transportation improvements along Corridors is necessary to support the land use and development alternatives. Since many 2040 Corridors are state highways, ODOT should work with Metro and local jurisdictions to identify and create opportunities for funding Corridor transportation improvements. For example, more state funding may be available if the region provides matching funds, which would satisfy state funding criteria for leveraging local funds. In addition, ODOT preservation and safety projects in the STIP should also provide a significant opportunity to leverage the long-term vision for these areas.

What type: Funding
Who: ODOT
When: Ongoing

REGIONAL AGENCY RULES AND POLICIES

POLICY ISSUES

The case-study land use and development concept described in Chapter 4 suggests that, in general, retail uses should be more limited in the Corridors and concentrated in neighborhood centers as well as in existing centers (regional and town centers). Current Metro design types (i.e., designations in the 2040 documents of categories of Centers and Corridors) do not address retail at a smaller scale than "Main Street," and not at sub-levels within Corridors. Given that the implementation of the land use and development alternatives requires Corridors with long commercial strips to transition to Corridors with retail concentrated at major intersections, new design types at the sub-corridor level may be necessary.

Phase I concluded that Metro's designated Corridors are not identical throughout the region; that there are different corridor types. Metro should consider whether some Corridors types continue to have residential targets in Metro's capacity calculations. For example, does it make sense to have residential targets in primarily employment corridors?

Prioritizing Corridor improvements is necessary for implementation of the land use and development alternatives. Transportation improvements (such as corridor corridor streetscape) may be the most effective way to initiate land use changes along Corridors. Currently, Metro's RTP and transportation funding program focuses on leveraging economic development in priority 2040 land uses through investments in mixed-uses areas (the central city, regional centers, town centers, main streets and station communities) and industrial areas. Metro can change transportation funding priorities to implement the alternatives that also include mixed-use areas at the sub-corridor level. In addition, Metro can revise the Urban Growth Management Functional Plan and the RTP, a Metro functional plan, to refine the objectives for 2040 Corridors and encourage the implementation of these objectives.

Finally, because the recommendations at the regional level include suggestions that funding for improvements and studies be increased for Corridors, one recommendation suggests guidance on the levels of density and mixed-use components are needed to qualify these areas as a regional priority for funding. In addition, if this project moves forward with 2040 Corridor sub-category recommendation, then the subcategories could be given comparable priority to other 2040 designations for purposes of identifying funding priority–for example neighborhood centers = main streets; freeway oriented retail and specialty areas = employment areas; corner store = inner/outer neighborhood).

POLICY CHANGES NECESSARY TO ACHIEVE THE LAND USE AND DEVELOPMENT ALTERNATIVE

R1: Recognize Corridor segment typologies as a tool for corridor planning. Two questions about Metro's Corridor policy should be addressed at the policy level: (1) Should all the Corridors now designated continue to be Corridors? and (2) For whatever Corridors remain, should policy recognize different Corridor types and requirements?

Number of Corridors. The consultant team recommends that all 2040 Corridors be re-evaluated to determine if they should still be designated as Corridors in the 2040 Growth Concept, based on the likelihood that the Corridor could be transformed to the proposed land use and transportation alternative. Some corridors will be easier to restructure to accommodate residential growth (or other types) based on the existing uses, land characteristics, or the ability of the local jurisdiction to invest supportive streetscape and transit improvements.

The evidence suggests that there are more Corridors than the market or public funding will be able to restructure over the next 20 years. Metro has identified over 400 miles of Corridors in the 2040 Growth Concept. Roadway improvement funds already fall well short of the need—narrowing the number of Corridors that potentially could be in competition for funds is practical.

The question for Metro is one of focus. On the one hand, all the Corridors could remain designated if the policies that apply to them are relatively general—if they point to a desired direction for change without mandating near-term changes that are inconsistent with current markets or funding capacity and, thus, strong impediments to continued development in the Corridors. On the other hand, if the policies are to be stronger, then they should be focused on the Corridors that are most important and most likely to be redeveloped; that focus also focuses public funding.

The question about the number of Corridors is not independent of the question about Corridor types: a larger number of Corridors is more likely to be workable if there are subcategories of Corridor types that have different requirements, and different priorities for the timing of the conversion.

Corridor Types. Phase 1 of this study made clear that 2040 designated Corridors are very different in function and character, and that not all Corridors are suitable for redevelopment to the proposed alternative. The consultant team recommends that whatever Corridors remain as Corridors (after the re-evaluation of the number of Corridors recommended above) should be classified by the Corridor segment typologies identified in Phase 1, Chapter 2 (defined below). These typologies can help identify which Corridors or segments of Corridors may be vulnerable to change, and which ones may have the potential support of the community for change. One result of this re-evaluation may be that portions of the currently designated 2040 Corridors remain so designated, but that other sections drop that designation, resulting in a non-continuous pattern of Corridor designation along some routes. Another outcome is the prioritization of Corridors for redevelopment funding purposes (described in greater detail in R2).

There is a decision to made about whether the Corridor designations are to describe *existing conditions* or *desired future conditions*. In general, plan designations do the latter. The designations that follow, however, do the former.

- **Residential Parkway.** These segments are characterized by exclusively residential uses on properties contiguous to a Corridor right-of-way, and are almost always buffered from the thoroughfare by landscaping, grade changes, or an orientation of development away from the roadway. The northern half of Canyon Road is an example. These segments in general do not seem very vulnerable to change. The consultant team assumes that there would be little support at the regional, municipal, or neighborhood levels for policy to encourage these areas redevelop as Corridors envisioned in the 2040 Growth Concept. Metro policy should not be interpreted as encouraging a conversion of these residential areas to employment areas, and it should have some guidance on what, if any, requirements there are for residential types and density, and transportation design. This should include guidance on what levels of residential density are appropriate to support the 2040 Corridor objectives and the level of transit service planned for the corridor in the RTP.
- **Specialty Segments (dominance by a single land use such as automobile sales and service, or office employment).** There is a strong market demand for specialty uses (like automobile sales and service) along some Corridors. This segment recognizes the need for these uses and the appropriate locations based on the large scale and low coverage of the properties, the need for substantial on site parking, and the need for visibility and access for prospective customers. These segments are not vulnerable to change in the near future, and the consultant team does not recommend use changes. However, these segments may need streetscape improvements to improve pedestrian, bicycle, and transit use.
- **Commercial Strip.** These primarily retail-oriented Corridors are characterized by auto-dominated, low-intensity development with rapidly moving traffic, and a lack of integrated design or design standards. The result is so well-known that it needs only the name—commercial or retail strip—for most people to get an image of what it looks like. That image, typically, is one high function but low aesthetics. These areas are usually described as locations of general retail rather than specialty or clustered retail, and of low-intensity and lower-quality development. For reasons described in the Phase I report, these areas provide some of the best opportunity for change and should be prioritized for redevelopment funding.
- **Neighborhood Sales and Service.** These areas often share many of the characteristics of strip development except for their short length. They are often short interruptions in residential parkway corridors that provide neighborhood uses to those adjacent residential areas. They are often found along the narrower Corridors and not along the wider ones with the greatest vehicular capabilities. There is potential for smaller scale change to increase retail and service support for the adjacent neighborhoods.

What type: Non-regulatory planning descriptions
Who: Metro and local governments
When: Immediate/ongoing

R2: Provide Functional Plan support for retail clusters. An important element of the case-study land use and development alternative is to cluster retail development into nodes (i.e., into regional-center-support areas and neighborhood centers, as defined below). Building on the 2040 Corridors that have the potential to transform to mixed-use pedestrian friendly environments (Policy R-1), Metro should add sub-categories (see definitions below) to the Corridor design type as defined in the Functional Plan Section 3.07.130. These non-regulatory sub-category descriptions, derived from the case study analysis, could assist in the development of local government corridor plans by the identification of locations along Corridors that have the greatest potential for redevelopment. The Functional Plan should include criteria to determine the appropriate location and type of retail nodes. The Functional Plan could also encourage local governments to use a variety of tools to achieve retail clusters.

CORRIDOR SUB-CATEGORIES DESCRIPTIONS AND CRITERIA FOR LOCATION

- **Regional Center Support.** Large-format retailers are concentrating at major Corridor intersections and freeway on-and-off ramps that are near Centers. Auto-oriented commercial sales, drive-in uses, sales of large-scale goods.

  Potential criteria for designation: Land adjacent to Corridors with existing or the potential for large format retailers. Land aggregation potential may be necessary to realize large format retailer uses.

- **Neighborhood Center.** A Corridor segment at major intersections with small-scale businesses anchored by supermarkets oriented to nearby neighborhoods, preferably integrated into a mixed-use building.

  Potential criteria for designation: major intersections with land aggregation potential of a minimum of 10 to 15 acres/pre-existing commercial nodes that are under-utilized/concentration of like uses such as recreation and school facility/existing anchor facility.

- **Workforce District.** An established employment portion of the Corridor that is functioning as a distinct and separate land use of sufficient size and quality to ensure its continued existence. An example may be a cluster of office parks that are integrated into the fabric of the adjacent residential uses.

  Potential criteria for designation: Areas of existing employment that can be strengthened by improving the transportation system or by increasing workforce housing in nearby locations.

- **Corridor Neighborhood.** A Corridor segment between Regional, Town and neighborhood centers that does not have one of the previous

Corridor designations. Land uses envisioned are mid-to-high-density residential, office, lodging, institutional, or limited retail uses.

Potential criteria for designation: High vacancy rates or low land values (compared to other commercial Corridors), disinventment, congestion, poor pedestrian environment, and limited transit opportunities.

TOOLS TO ACHIEVE RETAIL CLUSTERS

- New development code district/overlays (see "Local" section for details)
- New performance-based development code language
- Economic studies that support rezoning efforts
- Street improvements

What type: Implementation guidance for local governments
Who: Metro
When: Immediate/ongoing

R3: Emphasize the importance of corridor planning to improve transportation system and enhance centers. Metro could reinforce the importance of corridor planning and implementation of the 2040 Regional Plan at the local level with regulations (R2 and R3), funding (R4), or both. Metro could require that planning for Corridors be done as part of local TSP/TSP updates and refinements for governments within Metro boundaries. If this option were pursued, then the level of TSP refinements that would trigger Corridor planning would need to be identified. It is not the intent of this recommendation that Corridor plans are triggered when a local jurisdiction is completing a minor adjustment for an entirely different purpose.

Corridor plans should determine the functional classifications for all modes, the appropriate cross-section (including number and type of lanes and widths), street design, access management, mobility standards, funding and implementation strategies, and the best timing for implementing new road designs or improvement projects. Corridor plans should establish policy both for the roadway and the land use, so that improvements in the desired direction may be made over time as development occurs.

As part of the Centers improvement measures being recommended by the Get Centered program, Metro could require local governments to examine existing Corridors, classify their segments, and evaluate their potential economic relationship to proximate Centers. Metro should provide assistance in the form of funding or staff time. A jurisdiction would then suggest, as with the case study Corridors in this report, specific measures it would take to implement the 2040 Corridor objectives.

What type: Consistency with the Regional Transportation Plan (RTP)

Who: Metro and local jurisdictions

When: Immediate/ongoing

R4: Increase the priority of Corridor funding in the Metropolitan Transportation Improvement Program (MTIP). Funding for transportation improvements along Corridors is necessary to support the land use and development alternatives. Metro may need to recognize the need for corridor improvements in MTIP and other regional funding priorities and award credits for projects that propose corridor improvements in accordance with corridor plans and improvements that will encourage Regional Corridor goals.

This policy is obviously a controversial one. On the one hand, there is not enough money in the MTIP to do many of the improvements that are desirable *within* centers. On the other hand, if there is to be no funding for streetscape improvements in Corridors, then change will be slower and, in some cases, impossible. Individual property owners, even with the assistance of local governments, will not be able to assemble the capital to complete a concentrated and coordinated redevelopment of the streetscape, resulting in piecemeal development that is unlikely to create an integrated streetscape.

If funding is not available, it would be preferable for Metro to acknowledge that the Corridor policy is suggestive and voluntary: it could (1) state its belief that a restructuring of land use and transportation in Corridors along the lines described above would be advantageous for citizens, local governments, and the private sector; (2) provide materials that show the private sector and local governments how that restructuring could take place in a world of limited public funds and incremental private development; and (3) hope that '1' plus '2', plus changing market conditions and local government desires, are enough to get the desired change in some Corridors.

Metro should continue to monitor street preservation and modernization programming and track conversions of "complete street" Corridors to ensure coordination with other potential funds to reinforce the importance of the Corridor goals of the Metro 2040 Plan. There are other funding mechanisms for Corridor planning, such as urban renewal funding (Tax Increment Financing) that local governments may be able to use in addition to MTIP funds. The recommendation here does not preclude any other creative financing, but suggests that the regional funding priorities make the connection between improvements to Corridors as one way to improve Centers in certain circumstances.

What type: Policy (change to Regional Transportation Plan) and (change to Transportation Priorities Program funding criteria)

Who: Metro

When: Ongoing

R5: Clarify the use of medians along corridors. Metro could amend the Regional Street standards to specify that raised medians should be used along the majority of corridors to provide comfortable and safe multimodal travel. The appropriate spacing and location of median breaks should be established through a corridor refinement plan that comprehensively reviews the state and local access management requirements, the local grid network, and the type of land uses adjacent to the corridor. In most cases, the breaks in the medians should occur no closer than 600 feet. Right-in-right-out accesses could be provided at closer intervals. Metro could also amend the RTP to support the use of access lanes, cross-over easements, and other tools that can be used to support successful access management in corridors. The use of these access management strategies and tools are needed to achieve the goals of corridors.

What type: Regulatory
Who: Metro
When: Ongoing

R6: Develop gateways in the Corridors. The case study concluded that the Beaverton Corridors would be improved if they had some feature that gave some relief to the sameness of the commercial strip to announce a new sub-area: a "gateway." No policy changes are necessary to implement gateways. The description of Metro design types should include a discussion of gateways and their value. Regional transportation funding could be used in new gateway projects (with the same caveat: in a world of constrained funding for roadway maintenance and improvements, how likely is it that the available funding will be shifted to the creation of gateway features?).

What type: Funding
Who: ODOT, Metro, and local jurisdictions
When: Immediate/ongoing

R7: Coordinate with housing providers and advocacy groups to identify and implement a pilot project. Metro should coordinate with housing providers and advocacy groups to identify and obtain sources of funding to complete additional studies on implementation issues. This would include the initial groundwork for the identification and implementation of a pilot project. A pilot project is useful in demonstrating to the development community that a mixed-use nodal focused development project can be successful while supporting the continued growth of the nearby Center.

What type: Funding and coordination
Who: Metro

When: Immediate

IMPLICATIONS FOR LOCAL GOVERNMENT POLICIES AND DEVELOPMENT CODES

POLICY ISSUES

The case study suggests that street design should be "contextual"—matched to support and encourage the desired adjacent development. This concept does not fit neatly within current TSP requirements, nor with the way a road hierarchy is mapped and roads are built. If local jurisdictions are to implement the transportation and streetscape improvements, they most evaluate their design policies to encourage connectivity between the Corridor and the surrounding neighborhood.

The case study suggests that certain segments of the Beaverton Corridors should be transformed to Corridor Neighborhood, a new land use overlay or district concept that would help the Corridor act like a green seam between neighborhood, town, and regional centers. The Corridor Neighborhood district has less commercial activity and uses; instead it includes transit supportive uses such as residential, office, and lodging in long green segments. One way that local governments can limit the amount of retail along corridor corridors is by adopting new zoning districts.

There are a variety of tools that local governments can use to implement the land use and development alternative without changing the zoning. For example, regional and local governments can provide educational opportunities (like the Metro program Get Centered!) that discuss the issues with 2040 Corridor objectives and how developers can avoid pitfalls. There are also tax incentive programs that local jurisdictions can adopt, or they could waive fees for pilot projects and pay moving costs for businesses that relocate out of the corridor.

Vertical Housing Tax Credits provide financial incentives to developers of mixed-use buildings within a Vertical Housing Tax Credit district. Local governments must adopt these special tax districts, and only buildings built or renovated within those areas are eligible. Local Governments can spur redevelopment and mixed-use buildings by using this relatively new state law (ORS 285C.450 to 285C.480)[1].

The case study existing conditions analysis, focus groups, developer interviews, and advisory committee all found that the design aesthetics of buildings and the streetscape need improvement. They recommended that design standards be encouraged or required in the corridors.

[1] The 2005 legislature is considering changes to the existing law that may change the details described in this section.

POLICY CHANGES NECESSARY TO ACHIEVE THE LAND USE AND DEVELOPMENT ALTERNATIVE

L1: Change road designs policies within the Transportation System Plans (TSPs) or public works standards to encourage transportation improvements that support the land use and development alternatives and remove barriers. Local governments should encourage different road designs for Corridors in their TSPs or public works standards, remove policy obstacles, and acknowledge the importance of road improvements, streetscape, and funding as alternatives to achieve 2040 Corridor objectives. See also R.3 related to funding.

What type: Revise TSPs (regulatory) during updates and refinements
Who: Local jurisdictions
When: Immediate/ongoing

L2: Rezone the neighborhood corridor segments to limit the amount of retail and allow for the density of residential, office, lodging, institutional and limited commercial uses envisioned by the land use and development alternatives. This could be achieved through the following policy changes:

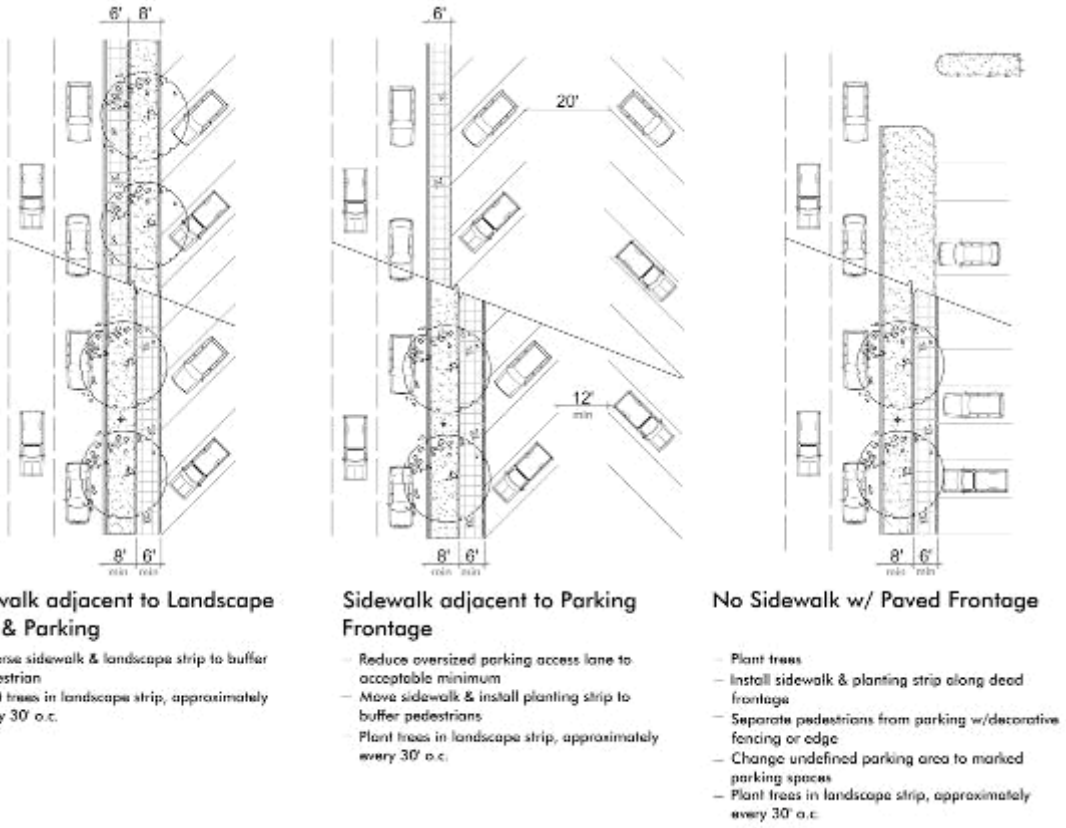
- Examine commercial zoning types along corridors, see if the following designations could apply, create a vision for each corridor, and match local districts as appropriate to the following zoning categories. Create new districts (or existing Corridor commercial zoning districts as needed) in Development Code with use restrictions, design standards that buffer adjacent single-family residential areas.
- In terms of applying the districts, work with local private organizations such as chamber of commerce or local business groups to get property owners to voluntarily apply the new districts and make the changes "friendly legislative changes" or streamlined individual zone changes consistent with a locally adopted corridor plan.
- New district categories:
  - Regional Center Support: allows big box, auto-oriented development
  - Workplace District: allows employment uses (both commercial and industrial)
  - Corridor Neighborhood: a new district that allows mid- to high-density residential, office, lodging, and other limited commercial uses)
  - Neighborhood Center: Allows mixed-use and a concentration of neighborhood oriented retail, such as an anchor grocery store with additional retail. Expected retail building sizes would be less than 40,000 square feet and would have building orientation towards the street. The uses include retail, small offices, and residential above ground floor non-residential uses.

What type: Regulatory
Who: Local jurisdictions
When: Immediate/ongoing

L3: Implement transportation and street-design strategies to support the land use and development alternative. Improvements could include:

- Standards for "public frontage," sidewalk location, and street tree planting (where appropriate) for new development.
- Volunteer tree planting and publicly/privately funded maintenance programs.
- Redevelopment (required or encouraged) off street-side parking lots and frontages to achieve better pedestrian protections, as shown in Figure B-1.

Figure B-1. Possible right-of-way and street front parking configurations, Beaverton-Hillsdale Highway and Canyon Road case study corridors, 2005



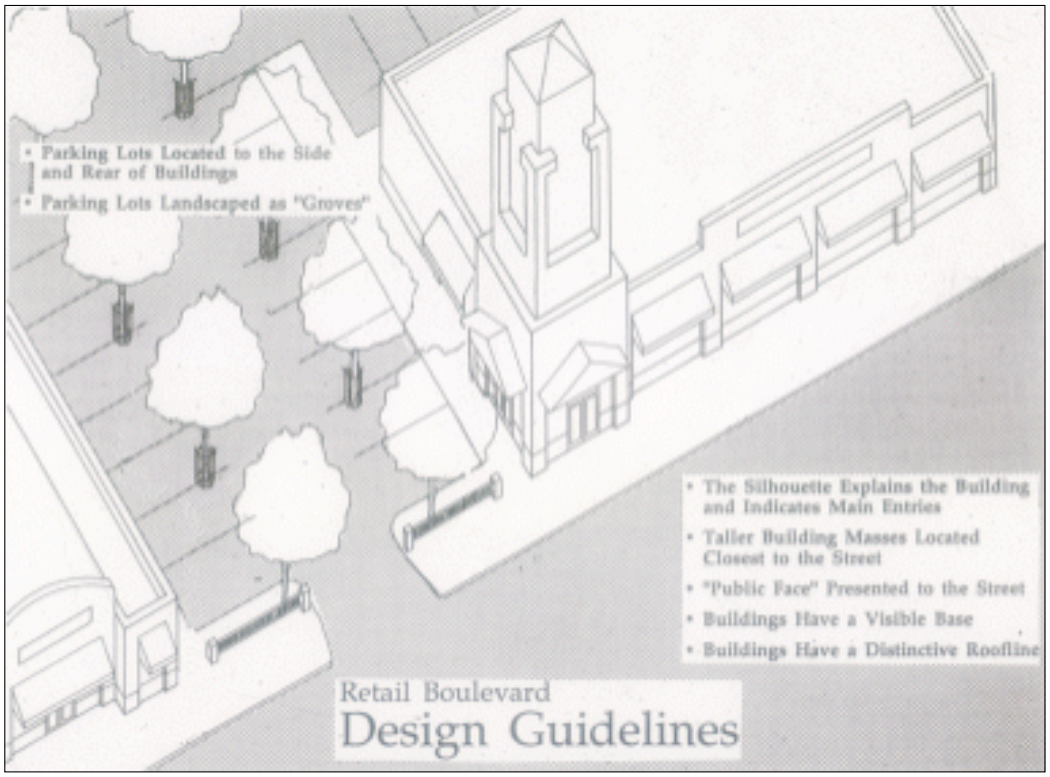
Source: Freedman Tung & Bottomley, 2005.

What type: Revise TSPs, fund streetscape improvements
Who: Local jurisdictions
When: Immediate/ongoing

L4: Review current codes for appropriate design guidelines and development standards for retail in corridors. The appropriate standards should include:

- Minimum building heights for retail buildings
- Maximum building setbacks (or "build to" lines) to a certain percentage of "frontage coverage" along street lot lines
- Public street frontage requirements
- Public street network circulation and spacing guidance
- Limitations on parking location and design (to the side and rear and with "orchard" landscaping of one tree per five spaces and exterior screening)
- Building entrances oriented to streets as well as parking lots
- Limits on building massing (required "breaks" and/or material/color changes)
- Design of open air storage and display

Figure B-2. Example of retail design, (side of building with parking)



Source: Freedman Tung & Bottomley, 2005.

What type: Revise TSPs, fund streetscape improvements
Who: Local jurisdictions
When: Immediate/ongoing

L5: Provide incentives to encourage the redevelopment of Corridors. There are numerous regulatory and non-regulatory incentives that local jurisdictions could provide to property owners and developers to encourage implementation of 2040 Corridor objectives. Other studies on Centers[2] describe regulatory and non-regulatory tools to increase density. Many of these tools are appropriate in Corridors, if the objective of the regulation or incentive is changed to the 2040 Corridor objectives.

Examples of regulations that encourage the redevelopment of Corridors:

- Regulatory relief in the permitting process or design standards.
- Mixed-use zoning in neighborhood centers with limited application in neighborhood corridors.
- Interim development standards that limit development through large lot zoning, development moratoria, or land banking until the land can be developed at planned densities.
- Shadow platting to allow infill of higher density uses in the future.

Examples of incentives are:

- Form of Vertical Housing District(s) to provide incentives for mixed use and higher intensity developments. Review or "audit" existing code specifications for residential densities so that residential densities are appropriate (not too high or too low) for the desired, or expected development.
- Conduct research and education to inform property owners, developers, and others of the long-term benefits of implementing the 2040 Corridor objectives.
- Purchase or transfer of development rights that allow for property owners to purchase development rights from M37 claimants to increase the density of development on their property (or other benefit).
- Purchase small parcels of land and assemble them into larger parcels for easier development.

What type: Regulation and incentives
Who: Local jurisdictions
When: Immediate/ongoing

[2] *The Beaverton Downtown Regional Center Development Strategy*, (2004), a study of Metro Centers, and *Metro Urban Centers: An Evaluation of the Density of Development*, (2001).

Leadership in a New Era

Arthur C. Nelson

More than half of the built environment of the United States we will see in 2025 did not exist in 2000, giving planners an unprecedented opportunity to reshape the landscape. The Federal Housing Act's 701 planning grant program reflected the concerns and attitudes of the first half of the 20th century, and that template shaped America's suburbs, accounting for three-quarters of the nation's growth between 1950 and 2000. The realities of the 21st century are different: Our newest public health concerns relate to low-density, single-purpose development, not the dangers of density; only about a quarter of all households will have children in 2025; and public sentiment increasingly favors integrating land uses. Changes like these will drive the rebuilding of much of America's built environment. For planning to succeed in this new era, I argue that we must understand future demand across all land uses, realistically assess opportunities for redeveloping existing urbanized areas, remove constraints on land use that are inconsistent with modern planning goals, and champion the financial incentives and institutional changes that will make it possible to meet future needs.

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Between 1954 (when Congress passed the 1954 Federal Housing Act, which included the landmark Section 701 planning grant program) and 1980, the federal government spent more than a billion dollars[1] principally to assist suburbanizing jurisdictions prepare land use plans, as well as support state and regional planning (Hoben, 2001).[2] There has been no steady source of federal funds for local land use planning since. For the most part, those 701 plans were based on a template that dominated planning for the second half of the 20th century. That template had five components, all separated from one another: housing subdivisions, retail centers, employment centers (office and business parks), civic institutions (schools, churches, libraries, etc.), and streets and roads (Duany, Plater-Zyberk, & Speck, 2000). The rationale for that template no longer exists. We need a new template to guide planning into the next era.

The 701 plans prepared by thousands of suburbanizing jurisdictions were shaped by ideas from the years surrounding the Great Depression, as explained by Jackson in *Crabgrass Frontier* (1985). To stimulate the economy, President Franklin Roosevelt and Congress created the Federal Housing Administration (FHA), which insured lending institutions against mortgage defaults, requiring them to reduce down payment requirements and extend mortgage periods in exchange. With homeownership its principal objective, the FHA was clearly biased toward single-family detached and owner-occupied housing from its inception.

To assist local governments with planning for single-family detached homes, the FHA recommended standardized subdivision design practices that later became a template for suburban subdivisions nationwide. Moreover, in its *Underwriting Manual* (Federal Housing Administration, 1939) the FHA openly recommended that subdivision developers use restrictive covenants to prevent the sale of homes to minorities. Mortgage redlining, which designated certain sections of an urban area as unsuitable for FHA-insured mortgages, was common. These efforts were intended to reduce the risk that homeowners would default on their mortgages. It was not until 1949 that discriminatory restrictive covenants were declared unconstitutional. By then the FHA had formed the nation's planning template, including subdivision design standards, mortgage redlining practices which extended into the 1980s (Galster, 1999) and arguably continue in various disguises (Galster & Godfrey, 2005), and a bias toward detached single-family owner-occupied housing.[3]

Public health concerns were another influence on this template. During the first half of the 20th century, planners worried about the relationship between housing conditions, human congestion, and public health. The prevailing attitude was that many cities were over-populated and that low-density housing would improve public health (American Public Health Association, 1941, 1950; Sloane, 2006).

Other influences worth mentioning include the Federal-Aid Highway Act of 1956, which created the interstate highway system and provided up to 90% federal matching grants for qualifying state and local highways. The Federal Water Pollution Control Act of 1972 (later replaced by the Clean Water Act of 1977) provided federal funding for up to 75% of the cost of expanding or building new wastewater treatment plants. The Supreme Court sanctioned zoning as a constitutional exercise of the police power in *Euclid v. Ambler Realty*. Euclidian zoning assigns each area of a community a specific, narrow range of land uses, resulting in segregation of many land uses that were formerly integrated.

Because of these and other influences, America became a suburban nation during the last half of the 20th century: The share of Americans living in suburban areas[4] rose from 27% in 1950 (U.S. Census Bureau, 1974) to 52% in 2000 (U.S. Census Bureau, 2002). The suburban population grew by 100 million, from 41 million to 141 million, and suburbia accounted for three-quarters of the nation's population change.

The 21st century will be very different. In 1950 more than half of all households had children, single-person households accounted for slightly more than 10% of all households, and the average household included 3.4 persons. In 2000 only about a third of all households had children, one quarter were single-person households, and the average household contained 2.5 persons. As I will show later, by 2025 only about a quarter of all households will have children and nearly 30% will include only a single person, although the average household size will not change much. The needs of a society dominated by childless households, a growing share of which have only one person, will be different than those of the mid-20th century, when households with children were in the majority.

A growing body of evidence suggests that the very low-density, single-use suburbs created in part based on the 701 planning template have become less healthy than higher-density, mixed-use communities (Ewing, Schmid, Killingsworth, Zlot, & Raudenbusch, 2003; Frumkin, Frank, & Jackson, 2004; Lucy & Phillips 2006). An emerging body of work is also suggesting that higher-density, mixed-use developments are more economically and fiscally efficient land uses than segregated ones (Burchell, Downs, Mukherji, & McCann, 2005; Burchell et al., 1998, 2002).

Recognizing the implications of these emerging trends, Fishman (2005) foresees a "fifth migration,"[5] wherein mostly upper-income/affluent households and immigrant families return to cities and first-tier suburbs. I consider this the next planning era, and I expect it to affect the outer suburbs as well. In fact, unlike Fishman, I still expect most growth to occur in the outer suburbs. However, he and I agree that the 701 planning template is ill-suited to meet future needs.

What is at stake? Up to $30 trillion will be spent on development between 2000 and 2025. Half the structures I expect in 2025 did not exist in 2000. With so much change coming, now is the time for planners to craft a new template that meets the challenges of the next planning era. Planners are the only profession charged with shaping the built environment to preserve public goods, minimize taxpayer exposure, maximize positive land use interactions, distribute the benefits and burdens of change equitably, and elevate the quality of life (Nelson, 2000). Although they largely created the 701 planning template, society looks to planners to learn from the past and reshape the future.

How can this be done? First, we must understand the nature of future demand across all land uses. Second, we must assess opportunities for redeveloping existing urbanized areas. Third, we must find ways to remove constraints on land use that are inconsistent with modern planning goals. And, fourth, we must champion the financial incentives and institutional changes that will make it possible to meet future needs. Other professions should join us in these endeavors, of course, but planners have the unique capacity to provide leadership in each of these areas. Framing how we should assert that leadership is the purpose of this Longer View.

Residential Development

In 2025, the U.S. population will exceed 349 million, 67 million more than in 2000 (U.S. Census Bureau, 2005a). No quarter-century of the nation's history will have seen such growth. The demographic characteristics of the population will be very different from the past as well. In 1960, just about half of all households had children. Table 1 shows that only about a third of all households had children in 2000, and by 2025 perhaps just over a quarter will.

Table 2 shows that the nation will add about 32 million households between 2000 and 2025, (Masnick, Belsky, & Di, 2004), but only about four million of these will have children (Masnick, et al., 2004; Riche, 2003).[6] Single-person households will account for 34% of the growth

Many single-person households are elderly. Already more people are turning 65 each year than ever before. In 2012 more than a million will turn 65, and in 2025 nearly two million will turn 65 (see Figure 1).

These changes will affect housing demand, and thus, the appropriate planning template. Low suburban land prices coupled with inexpensive transportation has meant that millions of American households could buy single-family detached homes on modest to large lots. Many of the costs of this type of development (see Burchell et al., 2002), have been spread broadly across society rather than incurred directly by suburban homeowners. The advantages of suburban homeownership are not trivial and include: space and relative privacy, a broad set of communities to choose from, tax advantages, investment appreciation, and arguably a high quality of life relative to alternatives (Burchell et al., 2002). The suburban template (homes on large lots) has largely delivered desirable communities at an affordable price.[7] However, this housing type dominates the national housing market, as shown in Table 3, and some argue the template has failed to address growing demand for different housing products (Levine, 2006).

Emerging evidence suggests that the housing units existing in 2003 are unlikely to meet housing needs through the first quarter of the 21st century. The first several years after 2000 were characterized by record low home mortgage rates, inexpensive energy, and favorable construction prices. But now mortgage rates have begun to climb toward historically normal levels (see Freddie Mac, 2006), energy prices have increased (Deffeyes, 2003) and prices for construction materials have risen (see EEF, 2004; Guido, 2004; Reynolds, 2005) due to greater global competition. These factors combined with changing demographic characteristics may influence the future demand for housing.

One important market signal is already evident: For the first time, condominium and cooperative resale prices exceed those of detached homes and townhouses in two of the four regions (Northeast and Midwest) and nationwide. Because price appreciation rates for condominiums and cooperatives are substantially higher than those of detached and townhouse homes in all regions, their prices may be poised to overtake detached homes in the other two regions by 2010.[8] The following indicates how several real estate development professional groups have interpreted trends for their clients recently.

> The demographic trends continue—empty nesters move back into cities for more convenient lifestyles while their children delay marriage and build careers in urban nodes. . . . High gas prices and suburban congestion also stimulate more interest in urban alternatives. . . . Transit-oriented development . . . almost can't miss. . . . New mixed-use town centers in the suburbs are also one of the hottest development trends. . . .[9] (Urban Land Institute & PriceWaterhouseCoopers, 2006, p. 14)

Table 1. Percent of households with and without children, 1960, 2000, and 2025.

	1960	2000	2025
Households with children	48%	33%	28%
Households without children	52%	67%	72%
Single-person households	13%	26%	28%

Sources: U.S. Census for 1960 and 2000; author's 2025 projections based on Riche (2003) and Masnick, Belsky and Di (2004).

Table 2. Projected household change, by type, 2000 and 2025.

	2000[a]	2025[a]	Change[a] 2000–2025	Share of change
Total households	108,000	140,000	32,000	100%
Households with children	35,000	39,000	4,000	12%
Households without children	73,000	101,000	28,000	88%
Single-person households	28,000	39,000	11,000	34%

Note:
a. In thousands of households rounded to nearest million.

Sources: U.S. Census for 2000; author's 2025 projections based on Riche (2003) and Masnick, Belsky & Di. (2004).

What do households want? Housing preference surveys routinely find that most people prefer single-family detached homes on large lots.[10] The most recent survey was conducted by the National Association of Realtors and Smart Growth America, and found that 57% of respondents preferred a single-family house on a one-acre lot (Belden, Russonello, & Stewart Research and Communications, 2004). But such surveys conducted since the late 1990s come to reasonable consensus on demand for other options. (See Malizia and Exline (2000) and Myers and Gearin (2001) for reviews.) The Fannie Mae Foundation (1997) found that between 16 and 19% of a national sample of households preferred townhouses, while a survey by the National Association of Home Builders (NAHB, 1999) found 15% preferred townhouses. The NAHB study also

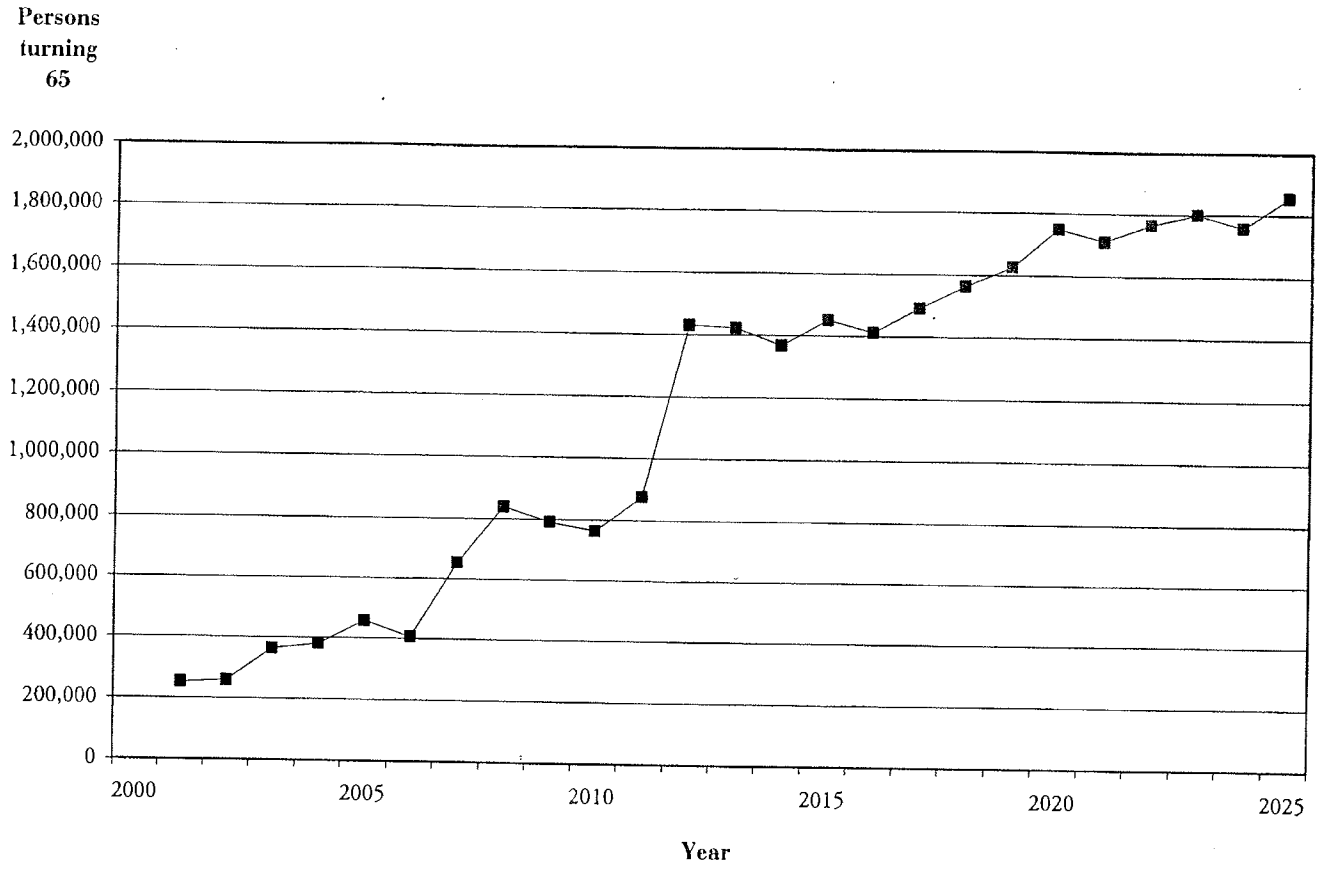

Figure 1. Persons turning 65 annually, 2001 to 2025.

Source: Author's calculations based on U.S. Census Bureau (2005a, 2006b).

showed that up to a quarter of people over age 55 preferred townhouses over other housing types. The Fannie Mae study (1997) also found that 14% to 18% preferred apartments. The apparent preference for condominiums ranges from 9% to 14%, according to Myers & Gearin's (2001) interpretation of surveys conducted iin the 1990s. Although most households prefer single-family detached units, 37% to 57% prefer such homes on small lots (defined as 7,000 square feet or less), also according to Myers and Gearin's (2001) survey interpretations.[11] It is important to note that these surveys were conducted at a time when baby boom households still had many children living at home, with retirement looming still a decade or so ahead.

Although there have been no comprehensive surveys of housing preference since 1999, one recent stated-preference survey conducted in 2002 appears to corroborate the demand for small lots. Levine and Frank (in press) conducted a survey of 1,455 metropolitan Atlanta households to assess, among other things, their willingness to trade-off smaller lots and cul-de-sac streets for more amenities (sidewalks, narrower connected streets, shops and services, parks, sense of community, etc.). Among those living in single-family detached neighborhoods (most on lots of over one quarter acre, which the study defined as large) they found that about 40% would trade large lots for smaller ones in exchange for those amenities. This figure is consistent with the lower estimate of demand for small lots noted above.

The problem with preference surveys, of course, is that what people say is not necessarily how they behave. (For example, perceived crime and poor school quality in central cities may overwhelm preferences for the physical design of central city neighborhoods when households actually choose their locations, raising the question of how much impact physical design alone can have.) I would suspect them more if they had been conducted by planning interests, but only the study reported by Levine and Frank (in press) involved a public agency, in cooperation with the Urban Land Institute. All the other studies reviewed above were conducted

Table 3. Occupied housing units by type, 2003.

	Percent
Multi-family housing (apartments, condominiums, etc.)	25.4%
Housing units on small lots (townhouses and units on lots under 1/6 acre[a])	20.5%
Detached housing units on large lots (⅙ acre or larger)	54.2%

Note:
a. Estimated as all units on lots under ⅛ acre and half the units on lots between ⅛ and ¼ acre.

Source: Adapted from U.S. Census Bureau, 2004, Table 2–3.

by the development industry to inform the development industry. While they clearly show a majority preferring single-family detached homes (at least 60%), the preference for alternative housing types developed from these surveys is not trivial, as Table 4 shows.

Table 5 estimates occupied housing unit demand by type in 2025 using the 2003 distribution of units by type shown in Table 3 and the results of the development-industry housing preference surveys summarized in Table 4 plus a midpoint between the two. With changing demographics, homeownership at a historically high rate,[12] and rising energy and construction prices, maintaining the 2003 distribution of housing units by type may be unlikely. The preference survey results also suggest that the market is currently significantly oversupplied with detached single family homes on large lots relative to demand in 2025.[13] Levine and Frank's (in press) work supports this conclusion.

> The main point of our work is this: for the majority of our sample, preferences for a more compact/mixed-use/pedestrian-and-transit orientation were positively correlated with the desire for change in the physical design of one's neighborhood. When generalized to the study population, this suggests a systematic undersupply of compact development, relative to current demand. If there were no such undersupply, one would expect people who prefer walkable neighborhoods to sort themselves into areas consistent with their preferences at the same rate as people who prefer auto-oriented neighborhoods. We interpret this to be partially attributable to the presence of binding regulatory constraints (such as zoning) and lending policies that favor conventional development and limit the supply of alternatives to sprawl. (Personal communication from Jonathan Levine, May 31, 2006)

Even the midpoint projection, that 39.6% of demand for homes will be for homes on large lots, suggests that the existing supply of large-lot homes is sufficient to meet demand in 2025. Of course some existing large lots will be redeveloped, meaning there will be at least some market for new large-lot homes in 2025, but it seems likely to be small. Put differently, the market demand for new homes through 2025 may be almost exclusively for attached and small-lot units.[14]

There is a final consideration: Some number of existing housing units will be replaced either because of disaster, owner preference, or conversion to another use. Nationally, existing homes are replaced at the rate of about 0.6% annually, compounded (Nelson, 2004a). The total demand for housing units from all these sources is summarized in Table 6.

Nonresidential Development

I estimate demand for nonresidential development, including retail, office, warehousing, government, civic, and all other nonresidential structures in Table 7. (See also Nelson, 2004b.) I assume that most jobs need space, and thus that the number of workers drives demand for nonresidential space, now and in the future. In 2000, the U.S. labor force numbered 141 million (Toossi, 2002), with many millions holding two or more jobs. I interpolate from Toossi's projections a 2025 labor force of about 167 million, or 26 million more workers than in 2000. Using

Table 4. Summary of housing preference survey results.

Preferred housing type	Share of total demand
Attached housing total	38%
Apartments	14%
Condominiums	9%
Townhouses	15%
Small-lot detached housing (less than 1/6 acre)	37%
Large-lot detached housing	25%
	100%

Note:
Share of demand for townhouses is based on interpretations of surveys by Myers and Gearin (2001), and is not weighted to reflect the age distribution of households in 2025.

Sources: Author's analysis.

Table 5. Projections of 2025 housing unit demand[a] by type.

Unit type	2003		% distribution matches 2003			% distribution matches survey results			% distribution midway between 2003 and survey results		
			% distribution	Demand[a]	Net new units[a] needed	% distribution	Demand[a]	Net new units[a] needed	% distribution	Demand[a]	Net new units[a] needed
Attached	27,000	25.4%	25.4%	35,000	8,000	38.0%	53,000	26,000	31.7%	44,000	17,000
Small lot	22,000	20.5%	20.5%	29,000	7,000	37.0%	52,000	30,000	28.7%	40,000	18,000
Large lot	57,000	54.2%	54.2%	76,000	19,000	25.0%	35,000	−22,000	39.6%	56,000	−1,000
Total	106,000	100.0%	100.0%	140,000	34,000	100.0%	140,000	34,000	100.0%	140,000	34,000

Note:

a. In thousands of units, rounded to the nearest million.

data from the Energy Information Administration (2005) and the Society of Industrial and Office Realtors (2005), I estimate that there were about 81 billion square feet of occupied and vacant nonresidential space in 2000, or about 573 square feet per labor force member (Nelson, 2006).

To understand how telecommuting and the Internet will influence the need for nonresidential space in the future, consider that between 1992 and 2003, a period during which Internet hosts grew from fewer than 1 million to more than 150 million and reached most American households (Hellwig, 2006), per capita space for retail, office, medical, and service activities actually rose from 145 square feet to 149 (Nelson, 2006). Salomon and Mokhtarian (1997) projected that there would be 25 million telecommuters by 2000, yet there were only about 9 million by 2005 (Korzeniowski, 2005). Hence I assume these influences will not reduce future space demands significantly.

Thus Table 7 assumes a constant 573 square feet per labor force member, suggesting that the United States will need about 96 billion square feet of nonresidential space in 2025, or about 15 billion square feet more than existed in 2000. However, data from the Energy Information Administration (1995, 2005) indicates that the useful life of a non-residential building ranges from 17 years for retail structures to 65 years for offices and institutional buildings such as schools. Conservatively assuming nonresidential buildings will have average useful lives of 50 years (Birch, 1991) I conclude that about 63 billion square feet of nonresidential space may require conversion to another use or replacement between 2000 and 2025. Thus to accommodate both the growth and replacement I expect, the United States will need about 78 billion square feet, or nearly as much again as existed in 2000. If my assumption of a nonresidential building's average useful life underestimates the frequency with which buildings are left vacant and become derelict, even more space will need to be constructed to meet future needs.

Implications

During the 2000s, construction in all sectors averaged $1.1 trillion annually (U.S. Census Bureau, 2005b). Projected to 2025 and including modest compounding, I estimate that construction during the period 2000 to 2025 will top $30 trillion. Although I expect over half of all development on the ground in 2025 will not have existed in 2000, even more important is that by 2025 much of society will have been spatially rearranged. An increasing number of empty-nesters, young professionals, and others will choose the city and first-tier suburban locations over outer suburban ones. According to Fishman (2005), they will drive up housing prices beyond the reach of many existing residents who may then be pushed to the suburban fringe and exurbs. Rising energy prices and declining demand for suburban homes on large lots may reduce the value of these homes, yielding important implications for the future.

First, the American dream of owning one's own home may result in millions of senior households living in auto-dependent suburban homes which have lost value compared to smaller homes in more central locations where many of their services will be located.[15]

Second, as the value of large homes on large lots far from central locations erodes, they could become affordable

Table 6. Projected housing units to be constructed, 2000–2025.

	Units to be constructed (millions)
Units to be constructed to accommodate growth	34.5
Units to be constructed to replace/rebuild/ convert[a] existing occupied units	17.0
Total occupied units[b] in 2025	51.5

Notes:

a. Share of units to be replaced, rebuilt, and converted assumed to be equal to the share of housing units existing in 2000 in excess of the number reported in the 1990 Census plus those built during the 1990s.

b. This table includes only occupied units. Roughly 10% of all housing stock remains vacant year-round, and only 3% of the housing stock is for seasonal use (U.S. Census Bureau, 2006a). Some of these vacant units may become occupied or, perhaps more likely, replaced entirely with new occupied housing units, or new types of development, or simply removed physically, creating urban green spaces.

Table 7. Projected nonresidential square feet to be constructed, 2000–2025.

	Sq. ft. (millions)
Space to be constructed to accommodate growth	15,000
Replacment space	63,000
Total space	78,000

Source: Author's analysis based on Energy Information Administration (1995, 2005) and Birch (1991).

housing for millions of households in the future. Many millions of these homes have more than 4,000 square feet of living area (U.S. Census Bureau, 2004) and may be easily subdivided internally to accommodate two, three, or more families. (If this were to happen on a large scale it could replace other sources of housing units.) This could cause fiscal stress in the localities where these homes are located (see below). And because those homes are not accessible to transit, low- and moderate-income households displaced to suburban fringe locations from central cities and first-tier suburbs may have greater difficulty reaching jobs than they do now.

Finally, such a scenario turns workforce housing and jobs-housing balance concerns upside down. Ever since John Kain wrote of spatial mismatch between low-income centrally located households and the jobs they could not get to in outlying suburbs (Kain, 1992), planning and public policy has been preoccupied with rectifying the situation. Past solutions included expanding job opportunities in central cities, improving accessibility to suburban employment centers, and changing zoning practices to allow a wider variety of housing options near those centers. In Fishman's scenario, empty-nesters, young professionals, and other affluent households move to cities and first-tier suburbs, where they outbid low- and moderate-income households for housing and enjoy the advantages of proximity to work and urbane leisure. This scenario actually exacerbates problems of proximity between jobs and housing because rather than being clustered, low- and moderate-income households are dispersed toward the suburban fringe, as in developing countries.

This would also increase the risk of mortgage failure for homes on large lots, especially at the suburban fringe. If Table 4 is correct, many millions of homes on large lots will lose value between now and 2025. Thus many households may come to owe more on their mortgages than their homes are worth, and some may choose to default rather than pay off these mortgages (see Fletcher, 2005; Hudson, 2006). Others may choose to ride out what they hope is a temporary cycle, deferring both relocation and reinvestment in their existing residences as a result. This could leave many millions of older homeowners in poorly maintained, suburban homes on large lots. Even a less extreme outcome like my midpoint scenario will have this effect on some households.

Such scenarios cause the property tax base of suburban fringe jurisdictions to erode, and because low-density development is more expensive to maintain than higher-density development (see Burchell et al., 2005), such jurisdictions are likely to become fiscally stressed in the future. Lucy and Phillips (2006) have already found evidence of this in some of the most rapidly growing metropolitan areas.

A similar phenomenon may occur for nonresidential development. A survey of nonresidential developers by the Urban Land Institute and PriceWaterhouseCoopers (2004) asked in which of 13 types of areas they would advocate investing over the next several years. Four of the top five types of areas were: proximate to transit stations, in pedestrian-oriented suburban business districts, in inner-ring suburbs, and in central business districts. At the bottom were such locations as suburban strip commercial centers, suburban business parks, and exurbia. Their conclusions match mine, as the supply of the areas they recommended is constrained, while demand for them continues to grow, making them good places to invest.[16]

There are important environmental implications as well. Stone (2005) shows that modern commercial buildings and associated black asphalt parking lots produce ozone. This effect could be ameliorated if relatively low-cost, high-albedo products or additives were used to roof new structures, reroof old ones, and resurface parking lots. Given the amount of new nonresidential construction I expect between 2000 and 2025 this could greatly reduce the heat-island effect within a generation.

New development at higher densities could also lead to energy savings. Decentralization of development since the 1960s has also resulted in increasing losses in energy transmitted to residential consumers, as illustrated in Figure 2. During the period 1960 to 2004, the energy lost in transmission to residential consumers more than doubled from less than 20 to more than 40%.

Finally, it is possible that with greater demand for locations in cities and first-tier suburbs, and outer suburbs declining in value, pressure to develop in farming regions and on sensitive rural landscapes may diminish. The rearrangement of the population may also enhance the economic viability of alternative transportation options, even in some of the outer suburban areas.

Toward a New Planning Template

In this section, I suggest two templates to help planners prepare for the opportunities created by the future I have described above, the barriers that must be overcome within planning, and a set of changes needed in larger social institutions in order to achieve planning goals in the new era.

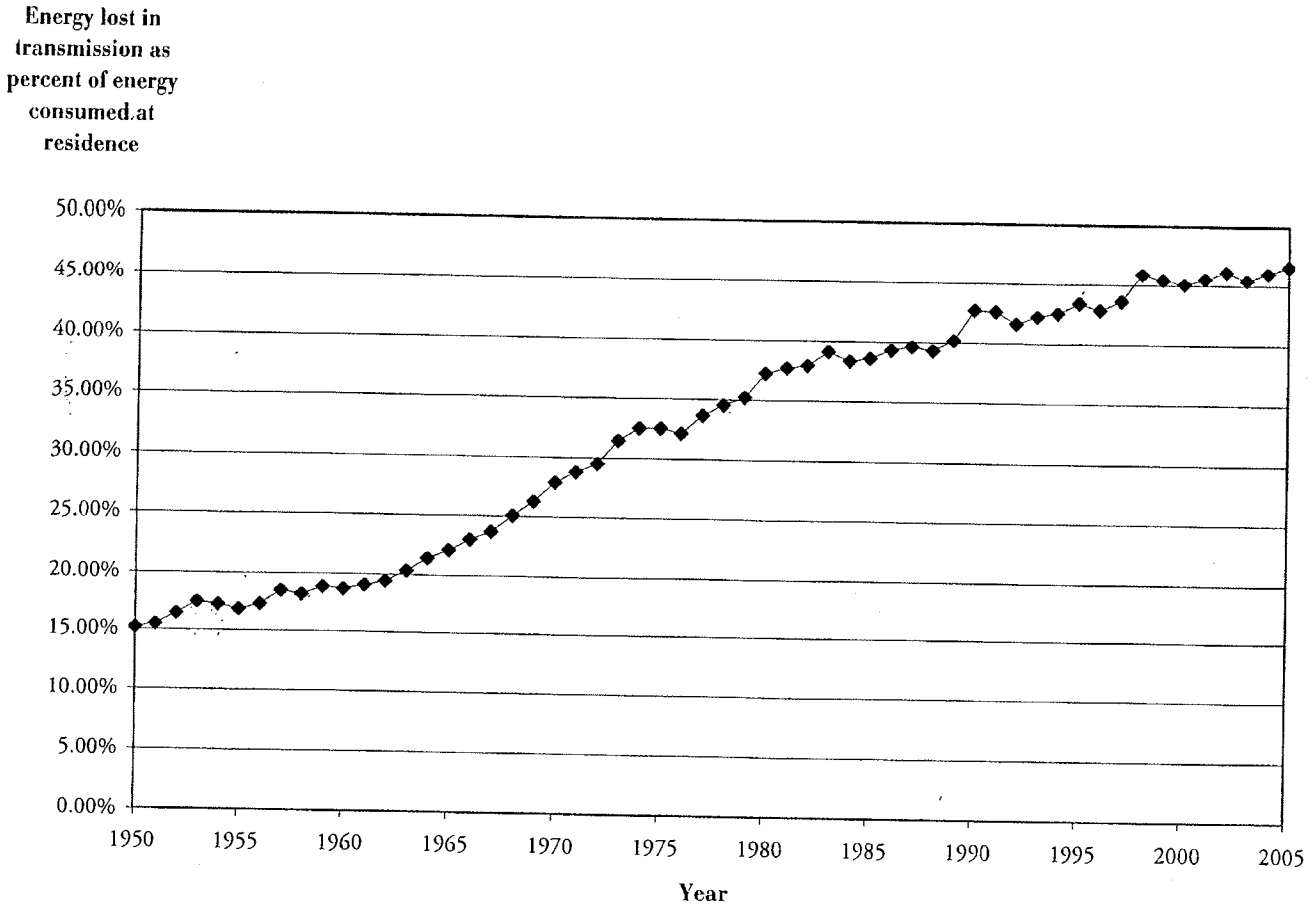

Figure 2. Percent of energy lost in transmission to residential consumers, 1950 to 2005.

Source: Author's analysis using data from the Energy Information Administration (2006).

Central cities normally experience development followed by stagnation, decline, sometimes blight, and then often, but not always, renewal (Bourne, 1974). Lucy and Phillips (2006) have shown that outer suburbs undergo a similar cycle, yet may be less resilient and more resistant to renewal than central cities and first-tier suburbs because they have mostly homogenous housing stocks and non-residential buildings of roughly the same age. By contrast, central cities and many first-tier suburbs are richly diverse; their structures and areas are in different stages of deterioration and ripeness for conversion, so that as one part of a city declines another part is renewed (Belmont, 2002; Hudnut, 2003). Lucy and Phillips (2006) and Levine (2006) note that most zoning controls in outer suburbs inhibit renewal and thus facilitate decline. Declining suburbs are found everywhere, including in otherwise burgeoning metropolitan areas (Lucy & Phillips, 2000).

Assuming that metropolitan areas exceeding one million residents in 2000 make up a constant share of the population, I project that they will add about 37 million new residents between 2000 and 2025, accounting for about 55% of the nation's growth. I project that outer suburbs in those metropolitan areas will grow by about 25 million, equal to about two-thirds of projected growth. Thus I outline below two templates; one for central cities and first-tier suburbs, and the other for outer suburbs.

Template for Central Cities and First-Tier Suburbs

Being in the center of their metropolitan regions, central cities and first-tier suburbs are poised to absorb a large share of growth over the next 20 years (Puentes, 2006). I estimate that central counties in metropolitan areas larger than 1 million residents in 2000 (which are a reasonable proxy for central cities and their first-tier suburbs) will grow by at least 12 million between 2000 and 2025, absorbing about 20% of the nation's growth.[17]

What is the role of planners in central cities and first-tier suburbs? While these areas seem already built-out, they still offer many opportunities for infill and redevelopment (Suchman, 2002). Although planners do not have special knowledge of potential investors, they are well positioned to understand the market for local redevelopment projects. They also play an important role in engaging stakeholders (especially nearby neighborhoods) in working out general land use parameters. In the early 1980s in Arlington County, Virginia, planners helped neighborhoods and investors identify acceptable uses around metropolitan Washington's heavy-rail transit stations. The plan focused future development at the stations while also preserving established neighborhoods. This had the desirable effect of reducing neighbors' not-in-my-backyard (NIMBY) reactions to change when it came. The Urban Land Institute gave Arlington County its Award of Excellence, and the U.S. Environmental Protection Agency gave Arlington its award for National Excellence in Smart Growth for this forward-looking planning and its results.

Arlington County is successful because it planned to fill a particular market niche, which, while small, is growing. There may be other opportunities for planners to facilitate greater use of fixed rail in the future. For example, a study conducted for the Federal Transit Administration (FTA) by the Center for Transit-Oriented Development (2004) shows that about half of the new housing needs in metropolitan areas with rail transit could be met within walking distance (one half mile) of existing or planned fixed-rail transit stations.[18] In 2000, about 7 million households lived within half a mile of fixed-rail transit systems, and by 2025 the FTA study estimates this may grow to 14 million. During the same period, these metropolitan areas will add about 16 million households (growing from 52 to 68 million). This means that 45% or more of future growth may occur near existing lines, considering the new and expanded rail systems announced since the FTA study was published.

Downtowns, including those emerging in suburbs, are not likely to absorb a large share of the nation's growth, although many will be essentially rebuilt. In 2000, downtowns accounted for less than 1% of the nation's population (Birch, 2002). Nonetheless, downtowns will play an increasingly important role as a niche, and planners can help position downtowns to attract a share of the future population (Leinberger, 2005). One of the challenges facing central cities and first-tier suburbs is assuring that new developments, especially those oriented to transit, improve the quality of community life. Bryce, Studley, Oakley, and Manomaitis (2005) provide an approach to guide planning for transit oriented development.

Template for Outer Suburbs

The outer suburbs of metropolitan areas with more than 1 million residents in 2000 will grow by at least 25 million people between 2000 and 2025.[19] Failure to recognize redevelopment and infill opportunities may cost outer suburban communities dearly. Lucy and Phillips (2006) show that hundreds of suburbs made up mostly of single-family detached homes are already facing economic and fiscal challenges. Home values in many hundreds of outer suburbs once flush with tax revenue are now in decline, compromising the fiscal integrity of their local governments. What can their planners do?

One of the first things planners can do is make realistic projections of land use needs. Does the current supply of

land zoned for large-lot homes reflect reality? Can the community sustain itself fiscally with only large-lot homes, given weakening demand for them? These assessments can help communities reconsider the wisdom of their current zoning (see Levine, 2006).

Second, they can assess housing demand in outer suburban communities realistically. Not all the affluent, empty-nester, and young professional households will be attracted to cities and first-tier suburbs. Maybe most will not. But it is increasingly unlikely that many will want homes on large lots. Planners can conduct or contract for market studies to estimate demand for different kinds of housing in outer suburban communities over the next generation. They must also provide leadership to encourage creative housing solutions such as accessory dwelling units to accommodate demand for small homes by young people, elderly people, and people in life transitions, and inclusionary zoning, especially for affordable housing (Porter, 2004).

Third, outer suburban communities have some unique strategic opportunities as a result of their abundance of land. Planners should consider ways to take advantage of their land bases to create niche markets attractive to those who value open space (see Daniels & Daniels, 2003; Randolph, 2005).

Fourth, while cities and first-tier suburbs often lack large tracts of land under common ownership, creating significant barriers to redevelopment, many suburbs possess large, well-located tracts of commercial land belonging to a single owner. Because retail uses are usually redeveloped or converted within 20 years and low-rise office buildings within 60 years, over a 25-year period a large share of these commercial properties should become ripe for conversion to more intensive uses. The floor-area ratio of a site is the gross area inside buildings on the site divided by the site's land area. For a land tract of 100,000 square feet, a FAR of 0.20 (typical of shopping centers) means the building encloses 20,000 square feet, with the balance usually devoted to parking, loading, and other paved surfaces. Redeveloping existing low-intensity land uses to FARs of just 1.00 may absorb all new future demand for retail, office, and attached housing in outer suburban communities with only a modest increase in parking costs.[20] By facilitating redevelopment of commercial centers along major streets planners can help protect established suburban neighborhoods from real or imagined land use intrusions, reducing potential NIMBY opposition.

Fifth, although most outer suburban communities are not accessible by transit, those that are could engage a planning process to take advantage of this. Many suburban commuter rail stations fail to maximize their economic potential. For example, nearly half of the stations along the Virginia Railway Express's commuter rail 20-mile route from Fredericksburg to Lorton (the outer suburban segment) have no urban-scale development around them. There are no studies assessing the extent to which development occurs in and around commuter rail stations.

The challenge for planners in the outer suburbs is to organize land uses and infrastructure investments to meet current development pressures while preparing for future down cycles and shifts in market demand. There may be little time to waste.

Barriers within Planning

Levine (2006) observes that there is now a mismatch between what many suburban governments allow (single-family homes on large lots) and where the market is heading (attached homes and small-lot options). Levine also observes that some scholars and commentators claim that planning innovations (such as cluster development, new urbanism, and the like) give people the communities that planners think they should have, instead of the large homes on the large lots that they truly prefer. Yet, as I noted earlier, the large home on a large lot is a product of a federally sanctioned planning template.

What can planners do? Several approaches seem to be gaining favor nationally. First, planners should question whether land uses need be separated at all. Some certainly may, but we are no longer in the 1920s, when a Euclid, OH hog-rendering plant could locate adjacent to residences. Euclidian zoning needs to give way to zoning that favors mixed land uses. Second, innovations such as form-based codes, and conceptualized pre-platting (where general plan maps illustrate desired lot, street and public space configurations), permit a high quality built environment that anticipates change. Although they may not be applicable broadly, they can facilitate redevelopment of older areas facing economic decline. Third, communities should consider using financial incentives and concessions to encourage redevelopment they want in the long term, but whose rates of return would be insufficient to attract investors. Tax abatement, fee waivers, tax-increment financing, below-market financing, and other techniques could be considered, all of which carry relatively low to modest risk to local governments.[21] Fourth, when reviewing development proposals requiring land use decisions, communities should consider how easily the proposed development might be converted to serve other uses once the intended use is no longer viable. Planning in advance for such renewal is not common, but can make communities more resilient in the long term.

Institutional Challenges

Planners have no direct influence over institutional lending practices or federal biases, but this does not mean they should be silent. Consider the institution of mortgage lending. Under the "drive until you qualify" mentality of mortgage financing, lenders typically do not permit a household's monthly mortgage principal, interest, tax, and insurance payment to exceed about 28% of household income. Average households spend about 40% of their incomes on housing and transportation (Bureau of Labor Statistics, 2006), with about 26% for housing and 14% for transportation. This implies that if transportation costs could be reduced by half (perhaps by locating closer to employment centers) households could spend 33% of their income on housing, likely pleasing homebuyers as well as improving transportation efficiency. Because households with low transportation expenditures generally get no special breaks from the home mortgage industry, they are pushed to travel further than they would have preferred. However, Fannie Mae is sponsoring a pilot product called a location-efficient mortgage to address this concern (National Resources Defense Council, 2006). Because energy costs are also not considered in the mortgage-lending calculation, but are an increasingly large share of housing costs, similar energy-efficient mortgages are also being tested in five states (U.S. Department of Housing and Urban Development, 2006a). Still, these efforts are not part of the mortgage lending mainstream.

It is also true that the federal government and most states give preference to home ownership over renting. Homeowners can deduct their mortgage interest and property taxes from their federal taxable income. Many states also give preferential property tax treatment to homeowners, thereby shifting property tax incidence in part to rental housing.[22] These policies create incentives for people to own their own homes. Yet while home ownership is desirable for many millions of households, it depends upon location[23] and life-cycle stage; it is not appropriate for all households everywhere. For a fair comparison between the economic costs of renting versus owning, see National Multi Housing Council and National Apartment Association (2004). Policies that benefit home owners may be difficult to change politically, but evening the playing field for rental housing will be important as the population changes.

The property tax system in the United States also penalizes land improvements and encourages speculation, leading to inefficient land use patterns. In most of the nation, property taxes are based on the combined value of improvements and land, and on land's value in its current use rather than on its market value in its most valuable use (Ladd, 1998). By taxing improvements, the system discourages density and intense investment. Taxing property based on its current use encourages property owners to keep their property in low-value uses, like surface parking lots in urban centers. Owners thus become speculators, since it costs them little to hold land off the market until the price becomes very high. In the meantime, development is delayed and displaced to more distant locations. If all land were taxed based on its highest market value, land use would be more intensive, land speculation would be reduced, and development would be more compact, especially if the land use regulatory system becomes more forward looking. Land-value taxation is not a cure-all but it does reshape the land use investment, development, and especially the planning landscape to enhance value. Such an approach would likely make fiscal systems more resilient. In a sense, planning would play a much more important role under such a system, since it would determine the type, scale, and intensity of land use and the tax system would reinforce it by taxing land based on its market value considering its highest-and-best use.

Regional and/or metropolitan governance systems need to be modernized as well. While there may be some fiscal efficiencies associated with governmental fragmentation (Fisher, 1996), it creates numerous other externalities in complex metropolitan regions (O'Sullivan, 2007). Since fragmented local governments are not required to act in the broader regional or metropolitan interest they make decisions that worsen jobs-housing imbalance, prevent equal access to economic opportunity, and impose higher tax burdens on those with the lowest incomes (Downs, 1994). Most of the solutions that have been proposed (including regional tax-base sharing, regional asset financing, regional fair-share housing, regional transit and alternative transportation mode planning and investment, and regional environmental management) have been ad hoc (Foster, 2001). Crafting governance systems so that all jurisdictions depend on the others for long-term vitality is key (Greenstein & Wievel, 2000).

The Canvas Beckons

A regional visioning movement is spreading across the nation. Duncan & Clark (in press) will provide an inventory of notable visioning efforts of the past decade. These efforts focused mostly on desirable urban forms, affordable and workforce housing needs, sensitive landscapes, community character, and so forth. The new visioning movement uses technology to inform citizens and evaluate scenarios relative to community goals. These visioning exercises

estimate future land use needs based on demographic shifts; assess opportunities for redeveloping nonresidential areas, especially in low-intensity strip commercial and suburban activity nodes; evaluate the role of transit in facilitating infill and redevelopment; and develop metrics to monitor progress in implementing the regional vision. Planners may want to study these efforts and apply the most relevant elements to their communities.

In this Longer View, I see planners presented with a new canvas on which to sketch America's built environment over the next generation. Between 2000 and 2025 nonresidential construction may equal the entire volume of nonresidential space existing in 2000. New residential construction may equal half of all residential units that existed in 2000. The composition of American households will be very different from the past. In 2025 only slightly more than a quarter of all households will have children and more than quarter will be singles, yet zoning codes in place across the nation today assume the greater prevalence of households with children. Clearly, market forces are poised to reshape America's built environment over the next generation and beyond. Because of their skills and values, planners have a special role in guiding how this happens. There is no better time for leadership.

Notes

1. There is no formal accounting of funds expended through the 701 program. Hoben (2001), a former administrator of the program, notes that "in the 1970s, the annual grant total zoomed from $25 million a year to more than $125 million (about $300 million in today's dollars)." The billion dollar estimate in 2006 dollars seems conservative considering the program lasted 35 years.

2. Hoben (2001) notes that most of the funds went initially to towns with populations under 25,000, and later 701 planning grant funds were shared between smaller, suburbanizing jurisdictions and state and metropolitan planning efforts. As a practicing planner throughout the West during the 1970s, I and my professional planning colleagues came to view 701 planning grants as the principal source of planning funds for suburbanizing jurisdictions.

3. The U.S. Department of Housing and Urban Development notes that over the FHA's history more than 33 million homes have been insured along with more than 47,000 multi-family housing projects. (U.S. Department of Housing and Urban Development, 2006b). There is no firm figure for units per multi-family structure, but 100 is commonly used, implying that perhaps five million multi-family units have received FHA assistance over its 60-year history, or roughly 13% of the total.

4. Calculated as the percent of persons living in standard metropolitan statistical areas outside central cities in 1950 (U.S. Census Bureau, 1974) and percent of persons living in the suburbs of metropolitan statistical areas in 2000 (U.S. Census Bureau, 2002).

5. The first four migrations were (1) pioneers settling North America, (2) movement from farms to factory towns, (3) relocation from farms and the hinterlands into large metropolitan areas, and then (4) decentralization from large cities into suburbs and exurbs within commuting range of central cities.

6. Riche (2003) projected households by type including family households with and without children, and nonfamily households including single-person households. Masnick, Belsky, and Di (2004) also projected family and nonfamily households to 2025. They used data that were not available to Riche. For 2000, Riche estimated 68.4% family households while Masnick, Belsky, and Di put the figure at 68.8%. For 2025 the figures were 67.1% and 67.5% respectively. Though they are clearly very similar, I use Riche's distribution because it breaks out households with and without children, and single-person households. On the other hand, I use Masnick, Belsky and Di's higher number of total households in 2025 because it is based on more recent census projections (Census, 2005).

7. For current commentaries, see Levine (2006) and Lucy and Phillips (2006).

8. This conclusion is based on sales data available online from the National Association of Realtors (2005).

9. Other observations in a similar vein have appeared in this publication every year since 2000, and on Robert Charles Lesser & Company's corporate website, http://www.rclco.com/

10. Home-purchase preference surveys usually do not show how people would make trade-offs. To address this problem, Myers and Gearin (2001) observe that the NAHB (1999) asked respondents to trade-off housing size, lot size, type, and other attributes when given choices on how to spend $150,000 for a new home. The survey found that as households age, an increasing percentage prefer townhouse living opportunities in an urban environment, rising from 9% among householders aged 25–34 to 24% for householders older than 55. They also surmise that one third to one half of respondents prefer smaller lots to larger ones.

11. According to Myers and Gearin (2001), the surveys defined a small lot as one-sixth of an acre. Small lot is defined here as one quarter acre because this conforms to the American Housing Survey categories.

12. Between 1965 and 1995 the average home ownership rate was 64.5% (Chambers, Garriga & Schlagenhauf, 2005). Between 1995 and 2005 it rose to a high of 69.2% (U.S. Census Bureau, 2006a). Reasons for the increase include more flexible mortgage instruments and during the early 2000s hisrorically low mortgage interest rates. For example, the average annual rate for a 30-year fixed mortgaged with 20% down was 7.38% in 1972, rising to a peak of 16.63% in 1981 before leveling to the middle to high 7.00% range in the late 1990s. Between 2000 and 2003, however, rates fell from 8.05% to 5.83% and stayed below 6.00% through 2005. (Freddie Mac, 2006) Coincidentally, the home ownership rate fell from a peak of 69.2% in the fourth quarter of 2004 to 68.5% in the first quarter of 2006 (U.S. Census Bureau, 2006a).

13. To be conservative, I do not present the high range of preferences based on the same surveys in the main text. It is: 51% for attached units, 28% for small lots, and 21% for large lots. The resulting demand in 2025 would be for 71, 39, and 29 million units respectively for attached, small lot, and large lot units, or a difference between 2003 and 2025 of 46 million, 7 million, and −18 million units respectively.

14. Robert Charles Lesser & Company, a national market analysis firm, has conducted market studies consistently showing 25 to 33% of housing demand to be for attached and small-lot detached homes ("Consistent market found for NU," 2001). If one assumes this, all new housing constructed between 2000 and 2025 would have to be of these types.

15. I am indebted to an anonymous reviewer for this insight, referencing Jonathan Franzen's novel, *The Corrections*.

16. I am indebted to an anonymous reviewer for this insight.
17. This estimate is based on a constant-share apportionment of growth between 2000 and 2025 for central counties in metropolitan areas of more than one million residents in 2000 based on population change during the 1990s, using the U.S. Census Bureau (2005a) projections. Given the extent to which market factors reviewed earlier shift demand toward central cities and first-tier suburbs, these estimates may be low.
18. Using geographic information system technology and census data, this study evaluated the demographic characteristics of residents within one half mile of the 3,341existing and 630 planned fixed-rail stations in the U.S. as of the early 2000s. Using additional census data for the metropolitan areas where fixed-rail is located or will be, the study projected the population and demographic characteristics of metropolitan areas and estimated the share of the future population that may be attracted to areas near fixed-rail stations. I encourage readers to review the report for its methodological details, findings, and planning implications. The study does not assume any more fixed-rail systems or stations than existed or were planned in the early 2000s.
19. This estimate is based on a constant-share apportionment of growth between 2000 and 2025 in non-central counties of metropolitan areas with more than 1 million residents in 2000 based on population change during the 1990s, using the U.S. Census Bureau (2005a) projections. Given the extent to which market factors reviewed earlier shift demand away from rural and exurban areas, these estimates may be low.
20. Smith (2005) suggests that mixed land uses reduce parking demand by up to a third. Thus I estimate this would allow a doubling of typical low-intensity FARs from 0.20 to 0.40 without going to decked or underground parking. Decked parking costs about half as much per stall as underground parking and may be amortized with modest parking fees or low-interest public-sector loans provided to facilitate more intensive development.
21. Leinberger (2005) argues that "patient" capital is needed to help make desirable projects financially feasible. The problem with many infill projects is that near-term rates of return are below market rates, meaning the developments either are not built or require public subsidies. Leinberger advocates for a special source of funds that does not need market-rate returns and can wait for whatever returns may come. I suggest that many forms of public subsidies or concessions used to make a project financially feasible should be leveraged and not given away. For example, over a 15- to 20-year period, property tax abatement can have a major effect on private investor rates of return, especially after the first 5 to 10 years. Instead of outright abatement, the local governments might accept an equity position in the project. At the end of an investment period, the local government would receive all the abated taxes back plus nominal interest, perhaps equivalent to its tax-exempt rate plus one or two points.
22. In California, for example, owner-occupied homes pay property taxes based on their purchase price (adjusted nominally for inflation), but rental property owners pay property taxes based on current market values. In Louisiana owner-occupied homes are taxed based on their market value less $75,000, but rental housing is assessed at market value. For details, see Education Commission of the States at http://www.ecs.org/clearinghouse/32/14/3214.htm.
23. On their website (www.nahb.org) the National Association of Home Builders ranks metropolitan areas by their affordability. Yet homes purchased in the 1990s and sold in 2006 in most of the metropolitan areas more affordable than the national average would not have recouped inflation-adjusted costs, even after considering tax advantages.

References

American Public Health Association, Committee on Hygiene of Housing. (1941). Basic principles of healthful housing (2nd ed.). In American Public Health Association, Committee on Hygiene of Housing, *Housing for health: Papers presented under the auspices of the committee on hygiene of housing of the American Public Health Association* (pp. 184–216). Lancaster, PA: Science Press.

American Public Health Association, Committee on Hygiene of Housing. (1950). *An appraisal method for measuring the quality of housing: A yardstick for health officers, housing officials and planners* (Vols. 1–3). New York: American Public Health Association.

Belden Russonello & Stewart Research and Communications. (2004). *2004 American community survey: National survey on communities conducted for Smart Growth America and National Association of Realtors®.* Washington, DC: National Association of Realtors.

Belmont, S. (2002). *Cities in full.* Chicago: American Planning Association.

Birch, D. (1991). *America's future industrial space needs.* Washington: National Association of Office and Industrial Parks.

Birch, E. L. (2002). Having a longer view on downtown living. *Journal of the American Planning Association, 68*(1), 5–21.

Bourne, L. S. (1974). A descriptive typology of land use structure and change. *Land Economics, 50*(3), 271–280.

Bryce, S., Studley, J., Oakley, J. & Manomaitis, L. (2005). *Developing a transit oriented development livability matrix.* Retrieved September 16, 2006, from http://www.nvc.vt.edu/uap/docs/Student%20Projects/TOD_Livability_Matrix.pdf.

Burchell, R. W., Downs, A., Mukherji, S., & McCann, B. (2005). *Sprawl costs: Economic impacts of unchecked development.* Washington, DC: Island Press.

Burchell, R. W., Lowenstein, G., Dolphin, W. R., Galley, C. C., Downs, A., Seskin, S., et al. (1998). *Costs of sprawl—Literature review.* Washington, DC: National Academy Press.

Burchell, R. W., Lowenstein, G., Dolphin, W. R., Galley, C. C., Downs, A., Seskin, S., et al. (2002). *Costs of sprawl—2000.* Washington, DC: National Academy Press.

Bureau of Labor Statistics. (2006). *Consumer expenditures in 2004.* Washington, DC: U.S. Department of Labor.

Center for Transit-Oriented Development. (2004). *Hidden in plain sight: Capturing the demand for housing near transit.* Washington, DC: Federal Highway Administration, U.S. Department of Transportation.

Chambers, M., Garrita, C., & Schlagenhauf, D. E. (2005). *Accounting for changes in the homeownership rate.* Tallahassee, FL: Department of Economics.

Consistent market found for NU. (2001) *New Urban News, 6*(1). Retrieved May 27, 2006 from www.newurbannews.com/market.html

Daniels, T., & Daniels, K. (2003). *The environmental planning handbook for sustainable communities and regions.* Chicago: American Planning Association.

Deffeyes, K. S. (2003). *Hubbert's peak.* Princeton, NJ: Princeton University Press.

Downs, A. (1994). *New visions for metropolitan America.* Washington, DC: Brookings Institution.

Duany, A., Plater-Zyberk, E., & Speck, J. (2000). *Suburban nation: The rise of sprawl and the decline of the American dream.* New York: North Point Press.

Duncan, J. & Clark, B. (Eds.). (in press). *Through the eyes of the community: A guide to regional visioning.* Chicago: American Planning Association.

EEF. (2004). *Steel market situation.* London: UK Steel. Retrieved August 4, 2005 from http://www.uksteel.org.uk/matsurv.pdf#search='steel%20market%20situation'

Energy Information Administration. (1995). *1992 commercial buildings energy consumption survey.* Washington, DC: U.S. Department of Energy.

Energy Information Administration. (2005). *Commercial buildings energy consumption survey for 2003.* Washington, DC: U.S. Department of Energy.

Energy Information Administration. (2006). *Residential sector energy consumption, 1949–2004.* Retrieved June 6, 2006, from http://www.eia.doe.gov/emeu/aer/txt/stb0201b.xls.

Ewing, R., Schmid, T., Killingsworth, R., Zlot, A., & Raudenbusch, S. (2003). Relationship between urban sprawl and physical activity, obesity, and morbidity. *American Journal of Health Promotion, 18*(1), 47–57.

Fannie Mae Foundation. (1997). *National housing survey.* Washington, DC: Author.

Federal Housing Administration. (1939). *Underwriting manual: Underwriting and valuation procedure under Title II of the National Housing Act with revisions to February, 1938.* Washington, DC: Author.

Fischer, R. C. (1996). *State and local public finance* (2nd ed.). Chicago: Irwin.

Fishman, R. (2005). The fifth migration. *Journal of the American Planning Association, 71*(4), 357–366.

Foster, K. A. (2001). *Regionalism on purpose.* Cambridge, MA: Lincoln Institute of Land Policy.

Freddie Mac. (2006). *30-year fixed-rate mortgages since 1971.* Retrieved May 29, 2006, from http://www.freddiemac.com/pmms/pmms30.htm.

Fletcher, J. (2005). *House poor: Pumped-up prices, rising rates, and mortgages on steroids.* New York: Collins.

Franzen, J. (2002). *The corrections.* New York: Picador.

Frumkin, H., Frank, L. D., & Jackson, R. J. (2004). Urban sprawl and public health: Designing, planning, and building for healrhy communities. Washington, DC: Island Press.

Galster, G. C. (1999). The evolving challenges of fair housing since 1968: Open housing, integration, and the reduction of ghettoization. *Cityscape: A Journal of Policy Development and Research, 4*(3), 123–146.

Galster, G. C., & Godfrey, E. (2005). Racial steering by real estate agents in the U.S. in 2000. *Journal of the American Planning Association, 71*(3), 251–265.

Greenstein, R., & Wievel, W. (2000). *Urban-suburban interdependencies.* Cambridge, MS: Lincoln Institute of Land Policy.

Guido, A. (2004). Concrete shortage begins to harden. *Cincinnati Enquirer.* Retrieved July 14, 2004, from http://www.enquirer.com/editions/2004/07/14/biz_cement14.html.

Hellwig, A. (2006). *Number of internet hosts.* Retrieved May 29, 2006, from http://www.isc.org/index.pl?/ops/ds/host-count-history.php.

Hoben, J. (2001). My 30 Years at HUD. *Planning, 67*(8), 62.

Hudnut, W. H. III. (2003). *Halfway to everywhere: A portrait of America's first-tier suburbs.* Washington, DC: Urban Land Institute.

Hudson, M. (2006). The new road to serfdom. *Harpers, 312*(1872), 39–46.

Jackson, K. (1985). *Crabgrass frontier: The suburbanization of the United States.* New York: Oxford University Press.

Kain, J. F. (1992). The spatial mismatch hypothesis: Three decades later. *Housing Policy Debate, 3*(2), 371–460.

Korzeniowski, P. (2005). Telecommuting climate getting chilly. *TechNewsWorld.* Retrieved May 29, 2006, from http://www.technewsworld.com/story/47786.html.

Ladd, H. F. (Ed.). (1998). *Local government tax and land use policies in the United States: Understanding the links.* Cambridge, MA: Lincoln Institute of Land Policy.

Leinberger, C. (2005). *Turning around downtown: Twelve steps to revitalization.* Washington, DC: Brookings Institution.

Levine, J. (2006). *Zoned out: Regulations, markets and choices in transportation and metropolitan land-use.* Washington, DC: Resources for the Future.

Levine, J., & Frank, L. D. (in press). Transportation and land-use preferences and residents' neighborhood choices: The sufficiency of compact development in the Atlanta region. *Transportation.*

Lucy, W. H., & Phillips, D. L. (2000). *Confronting suburban decline: Strategic planning for metropolitan renewal.* Washington, DC: Island Press.

Lucy, W. H., & Phillips, D. L. (2006). *Tomorrow's cities, tomorrow's suburbs.* Chicago: American Planning Association.

Malizia, E. & Exline, S. (2000). *Consumer preferences for residential development alternatives. Working Paper 2000–02.* Chapel Hill, NC: Center for Urban and Regional Studies.

Masnick, G. S., Belsky, E. S., & Di, Z. X. (2004). *The impact of new census bureau interim national populations projections on projected household growth in the United States.* Cambridge, MA: Harvard Univetsity Joint Center for Housing Studies.

Myers, D., & Gearin, E. (2001). Current preferences and future demand for denser residential environments. *Housing Policy Debate, 12*(4), 633–659.

National Association of Home Builders. (1999). *Smart growth:: Building better places to live, work and play.* Washington, DC: Author.

National Association of Realtors. (2005). *Existing home sales series.* Retrieved August 4, 2005, from http://www.realtor.org/research.nsf/pages/EHSPage?OpenDocument

National Multi Housing Council and National Apartment Association. (2004). *Renting can be a smart investment.* Washington, DC: Author.

National Resources Defense Council. (2006). *Location efficient mortgages.* Retrieved September 15, 2006 from http://www.nrdc.org/cities/smartGrowth/qlem.asp

Nelson, A. C. (2000). Growth management. In C. Hoch, L. Dalton, & F. S. So (Eds.), *The practice of local government planning,* (3rd ed., pp. 375–400). Washington, DC: International City/County Management Association.

Nelson, A. C. (2004a). *Planners' estimating guide.* Chicago: American Planning Association.

Nelson, A. C. (2004b). *Toward a new metropolis: The opportunity to rebuild America.* Washington, DC: Brookings Institution.

Nelson, A. C. (2006). *Reshaping America.* Chicago: American Planning Association.

O'Sullivan, A. O. (2007). *Urban economics* (6th ed). New York: McGraw-Hill.

Porter, D. R. (2004). *Inclusionary zoning for affordable housing.* Washington, DC: Urban Land Institute.

Puentes, R. (2006). *One-fifth of the nation: America's first suburbs.* Washington, DC: Brookings Institution.

Randolph, J. (2005). *Environmental land use planning and management.* Washington, DC: Island Press.

Reynolds, R. (2005, June 15). *Cement shortage threatens home builders.* Retrieved August 4, 2005, from http://msnbc.msn.com/id/8220043/.

Riche, M. F. (2003). *How changes in the nation's age and household structure will reshape housing demand in the 21st century.* In Office of Policy Development and Research (Ed.), *Issue papers on demographic trends important to housing* (pp. 125–147). Washington, DC: Department of Housing and Urban Development.

Salomon, I., & Mokhtarian, P. L. (1997, Spring). Why don't you telecommute? *Access, 10,* 27–29.

Sloan, D. C. (2006). From congestion to sprawl: Planning and health in historical context. *Journal of the American Planning Association, 72*(1), 10–18.
Smith, M. (2005). *Shared parking* (2nd ed.). Washington, DC: Urban Land Institute.
Society of Industrial and Office Realtors. (2005). *United States industrial market and overview.* Retrieved February 14, 2006, from www.sior.com/news_room.asp?id=63&newsid=11
Stone, B. (2005). Urban heat and air pollution: An emerging role for planners in the climate change debate. *Journal of the American Planning Association, 71*(1), 13–25.
Suchman, D. R. (2002). *Developing successful infill housing.* Washington, DC: Urban Land Institute.
Toossi, M. (2002). A century of change: The U.S. labor force, 1950–2050. *Monthly Labor Review, 125*(5), 15–28.
Toulan, N. A. (1994). Housing as a state planning goal. In C. Abbott, D. Howe, & S. Adler, (Eds.), *Planning the Oregon way: A twenty-year evaluation* (pp. 91–120). Corvallis: Oregon State University Press.
Urban Land Institute & PriceWaterhouseCoopers. (2004). *Emerging trends in real estate.* Washington, DC: Urban Land Institute.
Urban Land Institute & PriceWaterhouseCoopers. (2006). *Emerging trends in real estate.* Washington, DC: Urban Land Institute.
U.S. Census Bureau. (1974). *Statistical abstract of the United States.* Washington, DC: U.S. Department of Commerce.
U.S. Census Bureau. (2002). *American housing survey for the United States: 2001, Current Housing Reports H150/01.* Washington, DC: U.S. Census Bureau and U.S. Department of Housing and Urban Development Office of Policy Development and Research.
U.S. Census Bureau. (2004). *American housing survey for the United States: 2003, Current Housing Reports H150/03.* Washington, DC: U.S. Census Bureau and U.S. Department of Housing and Urban Development Office of Policy Development and Research.
U.S. Census Bureau. (2005a, April 21). *Interim state population projections, 2005.* Washington, DC: U.S. Department of Commerce.
U.S. Census Bureau. (2005b, July 1). *Value of construction put into place.* Washington, DC: U.S. Department of Commerce.
U.S. Census Bureau. (2006a, April 28). *Census Bureau reports on residential vacancies and homeownership.* Washington, DC: U.S. Department of Commerce.
U.S. Census Bureau. (2006b). *Table 2: Annual estimates of the population by selected age groups and sex for the United States: April 1, 2000 to July 1, 2005 (NC-EST2005-02).* Retrieved September 23, 2006 from http://www.census.gov/popest/national/asrh/NC-EST2005/NC-EST2005-02.xls
U.S. Department of Housing and Urban Development. (2006a). *Energy efficient mortgages, FHA mortgage insurance.* Retrieved September 15, 2006 from http://www.hud.gov/offices/hsg/sfh/eem/eem_prog.cfm
U.S. Department of Housing and Urban Development. (2006b). *The history of FHA.* Retrieved September 29, 2006 from http://www.hud.gov/offices/hsg/fhahistory.cfm

Comment on "Planning Leadership in a New Era"

Emil Malizia

Emil Malizia AICP (malizia@email.unc.edu), is professor and chair of the Department of City and Regional Planning, the University of North Carolina at Chapel Hill. His current teaching and research focuses on real estate development, urban redevelopment, and development finance.

In his Longer View, Nelson makes us aware of the unprecedented amount of urban development and redevelopment we can expect in the next two decades. Using information on consumer preferences, demographics, and space requirements, he predicts that households without children will exercise preferences for new housing and neighborhoods that are inconsistent with long-standing suburban development patterns. Nelson's views complement and extend the arguments posed in an earlier Longer View by Fishman (2005). Nelson argues for new templates to guide future development. He calls on planners to take leadership roles in the urban development and redevelopment process, and to use their knowledge of development futures effectively. In this comment, I will address consumer preferences, alternative strategies for planners, and the leadership role Nelson advocates.

Although Nelson interprets data on consumer preferences correctly, this information may not be terribly reliable. First, the samples are self selected rather than random, meaning we do not know that they represent the general population. Furthermore, the responses may be heavily influenced by the data collection method, since, for example, results from visual surveys are quite different than results from telephone surveys (Malizia, 1999). Finally, as Nelson notes, people often do not behave in ways that are consistent with the preferences or opinions they express. Certainly, no obesity epidemic would exist in the United States today if we acted on our desires to eat healthily and be physically active.

I also see Nelson's predictions as contingent on factors he does not discuss. Ability to pay shapes consumer preferences. The shift in demand Nelson anticipates will depend upon continued productivity gains and workers having sufficient bargaining power to increase wages. If real wages stagnate, affordability could become the overriding consideration of most new households, trumping their location preferences.

As for alternative strategies, Nelson provides many useful ideas about what planners can do. He offers two

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METRO

To: Metro Council

From: Dennis Yee, Chief Economist
Data Resource Center

Subject: Council of Economic Advisors' Findings and Results

Date: November 8, 2006

Background.

A technically capable and reasonable regional forecast is an integral element behind sound transportation and land use decision-making. The Metro regional forecast is prepared on a regular cycle to coincide with the Regional Transportation Plan (RTP) and the Urban Growth Report (UGR). The forecast also has major uses in a variety of corridor planning projects such as the Portland streetcar study, South corridor light rail study, I-5/99W Connector Study, and Columbia River Crossing Study – to name a few. In the past, an informal panel of local experts had been convened to validate the regional forecast. Now under more scrutiny, the Metro Council appointed an independent panel of economic advisors to formally review and validate the regional forecast and its methods. This memorandum summarizes their expert review of the regional forecast on behalf of the Metro Council.

The need for Metro's regional forecast to be validated has never been more acute. Various interest groups and local governments have challenged the accuracy of Metro's regional forecast. The Oregon appeals court recently ruled on the merits of the regional forecast and determined that it was reasonable, sound and demonstrated best practices.

Federal guidelines charge local metropolitan planning organizations (MPO) like Metro to perform feasibility studies for federally funded projects for highway and transit. There is an expectation that Metro's regional forecast meets tests of reasonableness and validity.

There are also legally mandated environmental guidelines that require Metro test for air conformity and address environmental justice concerns during the planning process. In accordance with FHWA guidance and regulations, best practices necessitate model

simulation tools like the ones Metro uses. The regional forecast is one of the standard tools in the toolkit that is needed to satisfy minimum planning requirements demanded by federal authorities.

The appointment of an independent expert review panel to critique and review the validity of Metro's forecasting approach is an important step in certifying the soundness and reasonableness of its regional forecast.

Summary of the Panel Proceedings

The council of economic advisors was called upon to review several main topics:

1. Validate the current modeling and forecasting approach,
2. Check the reasonableness of Metro's forecast,
3. And to review and to recommend alternative regional forecasting methods (i.e., point forecast vs. range forecasts).

The Metro regional forecast is prepared using a state-of-the-art regional macroeconomic model of the 7-county Portland-Vancouver-Beaverton PMSA. This econometric model is based on a structural model equation approach that produces detailed economic (e.g., employment, income and wages) projections by industry classifications and population and household projections by age. The household, income, age and employment forecast estimates feed directly into Metroscope and the Metro travel demand models. The econometric model provides essential data inputs to the operation of Metro's transportation and land use models.

1. Validation of the Metro forecast is checked at different points of the forecasting process. Validation at each stage adds to the credibility and thus reasonableness of the forecast if all the inputs and processes are deemed to be within the norm of customary and best practices. Key validation issues in the regional forecast include:

    - Is the model framework the right type and is it suitable for answering the kind of problem(s) it is tasked to answer? *The panel members noted that a structural model as typified by the Metro econometric model is best for the type of applications employed by Metro. A structural model has the advantage of being better suited at preparing credible long-range employment and population projections than any other econometric forms. It has the virtue of maximizing the use of all available data in generating a forecast that conforms to the data inputs needed by Metro's real estate and travel demand models.*
    - Is the structure of the model efficient and accurate? *Efficiency and model accuracy can be tested using econometric tests for goodness of fit (e.g., R-square, F-Test, t-test, etc.). Staff researched with panel members and participants using advanced statistical testing techniques (e.g., Inverted Autoregressive Unit Root Tests) to determine if individual model equations stood up to a battery of econometric tests. The panel specifically reviewed individual equations and the overall fit of the model. Metro's econometric model was deemed to use state-of-*

the-art modeling methods and represents one of the more advanced regional econometric models in the country. Members were intrigued with the embedded input-output coefficients, citing its unique ability to capture inter-industry economic flows.

- U.S. macroeconomic inputs and regional drivers? *The regional forecast utilizes Census, BLS, BEA and various state data sources in the estimation of coefficients in the model equations. This is standard practice. The panel was satisfied with Metro using U.S. economic projections from Global Insight (GI) as national factors to drive the regional forecast. It was noted that the State of Oregon also uses GI assumptions in the preparation of the biennium budget.*

2. The reasonableness of the forecast is verified by the soundness of the forecasting process and secondly by the behavior or sensitivity of the model to external (exogenous) shocks.

    - *The panel members reviewed the employment multipliers computed from the battery of sensitivity tests conducted by staff. They were given both short and long-run employment multipliers to examine. The multipliers summarize and describe the internal properties and workings of the model – it is one of many diagnostic tools. Exceedingly large multipliers would indicate the model to exhibit unstable properties and explosive non-convergence, which would tend to invalidate the model. None of the employment multipliers in the short or long-run displayed a significant problem with the calculated employment multipliers.*
    - *The regional model rigorously passed all the econometric and statistical tests for goodness of fit.*

3. Review of Alternative Economic Forecasting Methods

The panel of economic advisors discussed the merits between a single "base-case" trend forecast versus a range forecast. A range forecast could be developed in at least two ways:

- Scenario based – by hypothesizing and manipulating key economic and demographic inputs, alternative growth rates could be generated to represent high, medium or low growth options. Variations in these key inputs could be derived based on historical variances or subjective assessment of risk or ranges in these key inputs.
- Probability based – one approach jointly developed by staff with assistance from Dr. Larry Carter (professor emeritus - UO) is based on monte carlo simulation using boot-strapped probabilities that have been calculated from historical trends and forecasted error variances of key input variables.

Principal Findings and Conclusions

1. The Metro regional macroeconomic model represents one of the best models in the country for forecasting economic and demographic growth for a region. It is the right

type of model to be used for estimating long-range economic and population growth projections.

2. The regional forecast fully delivers what is expected from it. Econometric properties of the model exhibit sound economic theory. The model has been validated through a battery of rigorous econometric test and statistics.
3. The forecast passes reasonable tests of sensitivity, thus it is as accurate as are the statistics and the inputs that are used to generate the forecast.
4. In the context of risk analysis, a "range forecast" can be superior to a single "point forecast". Uncertainty in the future go hand-in-hand with forecast risk. To the extent that planners can help policy makers quantify this uncertainty using risk analysis, the likelihood of making a better decision can be improved.

There are certainly clear advantages to some form of probabilistic population (and employment) forecasting or scenario-derived population forecast. Staff has developed an in-house probabilistic population forecast model that is a monte carlo bootstrap to the regional model. Population forecast variances are derived from quantifying all the possible values a "risky variable" could take and the likelihood of each value occurring. Thus, through multiple sampling of each "risky variable", a probability distribution for population change begins to emerge from repeated sampling. This distribution can then be used to quantify a 90% confidence interval from which a population range can be drawn from.

Alternatively, a set of scenario ranges can be generated using the existing regional model with alternating high, medium and low growth rate assumptions taken from the U.S. Census Bureau and Global Insight. Both Census and GI have developed national population and economic drivers for high, medium and low growth projections. These alternate scenarios can be employed to generate a range forecast for the region.

The economic advisors stopped short of recommending one approach above the other, but were in favor of risk analysis as a means of quantifying growth risks. The panel also fell short of recommending a means of selecting a "point" out of a "range" forecast. It was felt that determination of a value within a range ultimately may have to be based on political and/or policy considerations that economic reasoning alone can not answer.

COMMUNITY
INVESTMENT
TOOLKIT

VOLUME 1

Financial Incentives

COMMUNITY INVESTMENT TOOLS

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The toolkit was developed through extensive research and collaboration with representatives from local governments, nonprofit organizations, and stakeholder groups, as well as developers, investors, and citizens through advisory committees and public forums such as the Regional Forum held in June 2006. We would like to thank everyone for participating and contributing to this volume of the toolkit. In particular, we would like to express our appreciation to the following individuals for their extra efforts in this regard:

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Financial Incentives Toolkit

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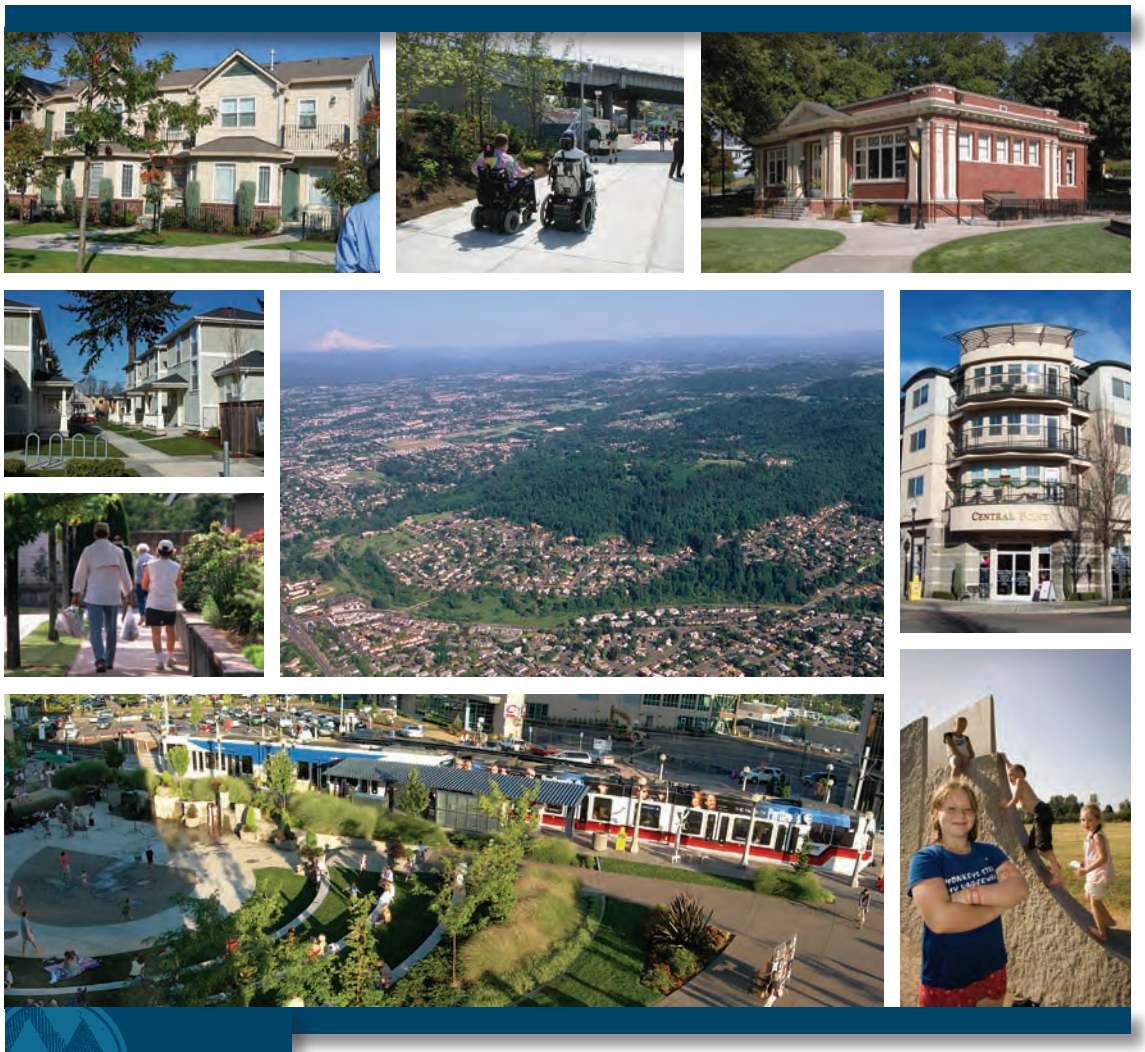


Toolkit

Regional choices for how we grow

In 1995 citizens of the region developed Metro's 2040 Growth Concept, a vision for how the region grows that is based on a set of shared community values identified through an extensive public process. These values have been reconfirmed over the years through public opinion research. The vision of the 2040 Growth Concept is to establish complete communities that include:

- safe and stable neighborhoods for families
- compact development that uses both land and money more efficiently
- a healthy economy that generates jobs and business opportunities
- protection of farms, forests, rivers, streams and natural areas
- a balanced transportation system to move people and goods
- and housing for people of all incomes in every community.

Since Metro adopted the 2040 Growth Concept in 1995, updated population forecasts predict the region will grow even more rapidly than initially expected, bringing new opportunities as well as new challenges. More people and the accompanying needs for land to provide jobs and housing place a premium on the efficient use and redevelopment of urban land. Rising costs for public facilities and services further highlight the need for efficient use and reuse of the limited supply of land that already has access to urban services, including roads, sewers, transit, and schools. An additional consideration is the aging of our population; as people get older, they often seek higher-density housing within walking distance of transit, retail areas, and medical facilities. Metro's New Look at Regional Choices is an effort to identify what we've been doing well in the region to achieve the vision of the 2040 Growth Concept, capitalize on our successes, and focus our efforts where we need to do better.

Policy framework

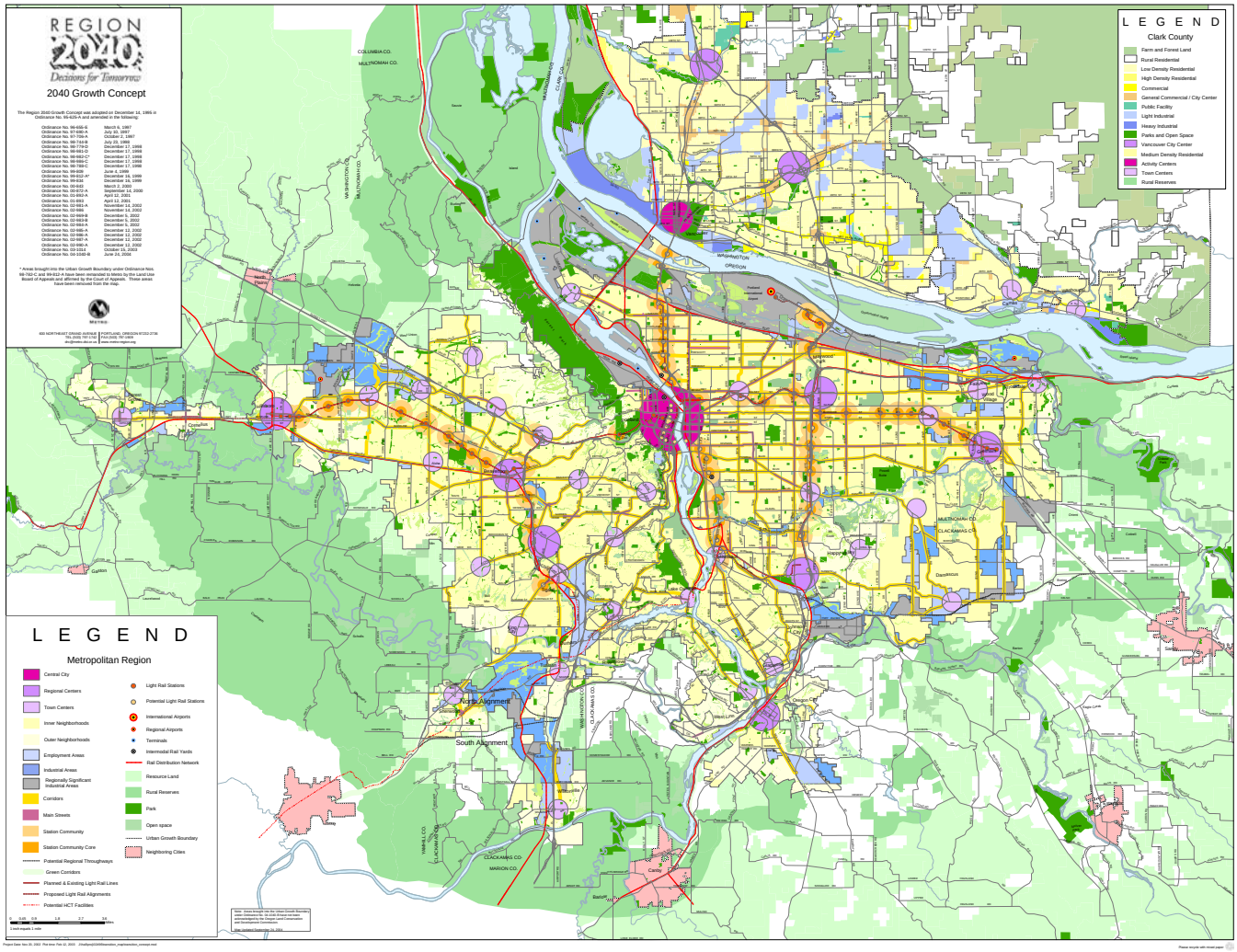
In 2006, the Metro Council and regional leaders developed a policy framework composed of six integrated elements that are intended to accelerate the achievement of the benefits envisioned in the 2040 Growth Concept. The policy elements are guided by principles stating that all regional growth and investment decisions should reinforce and support growth in centers, corridors and employment areas; that decisions to expand the boundary will balance urban needs with protection of agricultural and important natural areas; and that a collaborative approach is crucial to the successful implementation of the 2040 Growth Concept.

The six policy elements are:

1. Focus fiscal resources and taxation tools to stimulate development in centers, corridors and employment areas
2. Coordinate growth with neighboring communities
3. Base urban growth boundary expansion decisions on urban performance
4. Designate and plan urban reserves
5. Designate areas that shall not be urbanized
6. Prioritize and invest in transportation improvements that support efficient development and strengthen the economy

Investing in our communities

The first policy element is to focus efforts to stimulate investment in existing communities. A key component of investing in our communities is to develop strategies, partnerships, and tools to best use the land in centers, along corridors, and in employment and industrial areas. There are many examples of successful public investment that has stimulated private development within the region and in our neighboring cities, including several communities around light rail stations, Lake Oswego's downtown, and the South Waterfront area in Portland to name just a few.



More than one million additional people are expected to live in the metro region by 2040. Accommodating such growth while maintaining the quality of life residents expect will require substantial investment from the public and private sectors. Regional leaders have emphasized the importance of maximizing the land development potential in existing communities to help balance urban land needs with the importance of preserving land for the agricultural economy and retaining natural features.

The 2040 vision calls for growth to be concentrated in nearly 40 regional and town centers, along transit corridors, and in employment and industrial areas as an important strategy to maintain livable communities and support a strong economy. The benefits of developing in centers and along corridors include greater transportation choices, better air quality, and more effective targeting and coordination of public investments. Mixed-use centers also maintain consistently high property values, create a sense of community, and attract new businesses. Promoting redevelopment and well-designed residential development along major transportation corridors, which typically have good transit access and are often developed in low-density commercial uses, can provide similar benefits.

However, higher intensity urban development with the amenities that allow for an enhanced quality of life and redevelopment of underused urban land sometimes requires a higher initial investment than traditional greenfield and suburban development. Creative solutions are needed to help cities work with developers and lenders to achieve the types of development that enhance our communities as the region grows.

Exploring policy choices for public investment

To better understand how public investment can encourage the efficient use of land, Metro has explored scenarios using MetroScope, a simulation model for testing planning policies in the urban land marketplace. These scenarios described the effect of targeting public investment in specific locations and compare low, medium, and high levels of public investment in mixed-use areas throughout the region between today and 2035. The results were evaluated to determine how much investment is needed to attract enough households and jobs to make these communities vital and self-sustaining. Investment is defined as reducing the construction costs in targeted areas – this can be accomplished through a variety of development incentives. Potential tools include financial incentives, changes to local codes, and design standards that reduce development costs. This toolkit provides examples of local successes using these tools and includes resources to help focus investment in our communities.

Comparing the results of the low, medium, and high investment scenarios indicate that the provision of public investment in targeted areas is likely to be an effective tool to spark private investment and therefore achieve the benefits envisioned in the 2040 Growth Concept. The low investment scenario presumes that local resources will not continue to be targeted to spur private investments in these areas. The medium investment scenario assumes that local governments in the region will continue investing public resources at the current level of effort. The high investment scenario represents a significant increase in public investments across the region to accelerate the implementation of the 2040 vision. Therefore, local decisions to build on current successes and expand the use of public resources to invest in our communities will shape the future of the metro region.

> The analysis concludes that more investment could double the amount of housing developed in centers, while reduced investment in the region's centers pushes more jobs and housing out to our neighboring communities, increasing congestion and pressure on the transportation system.

Toolkit for investing in our communities

Metro's New Look at Regional Choices seeks to identify proven strategies and tools that can be used to stimulate investment in the region's centers, corridors, employment, and industrial areas to implement the 2040 Growth Concept. The strategies address:

- financial incentives
- local zoning and building codes
- urban design
- employment and industrial areas.

The toolkit provides local governments, developers, nonprofit organizations, property owners, and investors with important information, considerations, and local perspectives for the various investment tools in the region. Highlighting the region's success stories, the toolkit demonstrates how these strategies are achieving results and serves as a guide for future investors. With technical assistance from Metro consultants, this toolkit will help these investors build vibrant downtowns and main streets and create places for businesses to flourish.

The toolkit was developed through extensive research and collaboration with representatives from local governments, nonprofit organizations, and stakeholder groups, as well as developers, investors, and citizens through advisory committees and public forums such as the Regional Forum held in June 2006.

Achieving the benefits envisioned in the 2040 Growth Concept relies on initiative by local leaders and governments. Metro and its partners will continue to build awareness of innovative and successful development strategies and work to provide technical assistance to local leaders and practitioners. Metro's technical assistance will help facilitate the use of new and existing fiscal tools and resources, modify local policies, and broaden public awareness of these tools and policies and the potential benefits they bring for local community development. The toolkit is an integral component that complements this technical assistance. The toolkit supplies information and resources to help local communities achieve the benefits envisioned in the 2040 Growth Concept in a way that best fits their community needs.








Toolkit

Introduction

Financial incentives: tools for investing in our communities

Financial incentives are mechanisms to help achieve healthy communities throughout the region by reducing development costs for smart growth projects and stimulating the types of development desired and appropriate for different areas. Specific financial incentives, when used in the region's centers, corridors and employment areas, can encourage investments that help reach a balance between jobs and housing, create unique blends of urban amenities, and reduce transportation trips.

Tools for investing in our communities

Mixed-use, pedestrian-oriented development projects built around special places typically require a much higher up front cost, resulting in a higher risk to investors and developers regardless of impressive mid- and long-term returns. Thus, financial incentives can bridge the gap between traditional financing levels and the costs of building higher quality, more sustainable projects and make these desired developments possible in the region's centers and corridors.

Historically, federal funding programs have provided most of the financial resources for local community and economic development efforts. Current use of federal funding programs in the region such as Community Development Block Grants, Low Income Housing Tax Credits, and New Market Tax Credits can help achieve 2040 objectives. However, in the case of most federal funding programs, policy objectives and funding levels are set at the national level and then administered by state, county, or local agencies. Thus the local community does not determine the amount of available financial resources or programmatic guidelines. In addition, most federal funding programs help stimulate investment in low-income and underserved communities, and therefore, are available to a limited number of communities in the metro region.

These limitations, combined with an overall decrease in funding for these federal programs, present cities and counties with the need to find new sources of revenue to fund local community development activities. Several financial incentives exist in the region that can promote opportunities for efficient land use and investment in 2040 centers, corridors, and employment areas. Oregon's Vertical Housing Program, Oregon's Transit-Oriented Tax Exemption, brownfields assessment and cleanup funds, urban renewal and tax increment financing, local improvement districts, economic improvement districts, business improvement districts, impact-based system development charges, and enterprise zones are all financial incentives used to stimulate investment in the region's centers, corridors, industrial and employment areas. Many of these also promote housing choices for all citizens of the region.

Many cities and counties in the region are currently using financial incentives successfully as a method of encouraging development in specific locations. The following map, on page 5, depicts some of the financial incentives currently used by local cities and counties. Not all of the financial incentives used by local jurisdictions appear on the map. The tools depicted on the map relate to specific geographic areas, districts,

or zones within a city or county as opposed to being a site-specific or regionwide tool. The investment tools represented on the map include: the Vertical Housing Program, Transit-Oriented Tax Exemption programs, urban renewal areas, and improvement districts as well as enterprise zones, an important financial incentive in employment and industrial areas, which is discussed in further detail in the section of this guide that focuses on strategies for employment and industrial lands.

The financial incentives section of the toolkit explores and assesses the potential use of each of these incentive programs through additional application and modification. It also highlights the use of each financial incentive in the region and the issues and considerations that arise from the use of these tools. The various cities or counties in the metro region face different political, regulatory, and financial situations and will need to assess which financial tool or combination of tools can best stimulate investment in their communities. Thus the following section of the toolkit also examines the flexibility and applicability of each of the tools to the different types of cities and counties in the region.

It can be complicated to develop compact, mixed-use projects, particularly due to cost premiums to achieve vertical mixed-use in locations without existing comparable development types. Conventional financing for these types of projects may be difficult to implement, and creative approaches have often been necessary to close financing gaps. The financial incentives described in this section of the toolkit can serve to help close financing gaps; often several incentives need to be used in effective combinations.

Metro houses several technical and financial assistance programs that help overcome these financing gaps by encouraging or providing the use of financial incentives. Metro's Transit Oriented Development and Centers implementation program has been providing this assistance in various communities in the region, which includes several of the success stories highlighted in this guide. Metro's TOD/Centers program brings about the construction of "transit villages" and projects that concentrate a mix of retail, housing and jobs in areas around regional light-rail systems and other transit lines and in regional and town centers. The TOD/Centers program operates through a series of cooperative agreements between Metro, local jurisdictions and private developers. Metro's TOD/Centers program staff are experienced in working with local jurisdiction staff and developers to make complicated projects work, and provide both funds to purchase key properties and important technical resources. Examples of projects that have utilized this program include North Main Village in Milwaukie, and the Crossings and the Beranger in Gresham.

Metro's recommendations

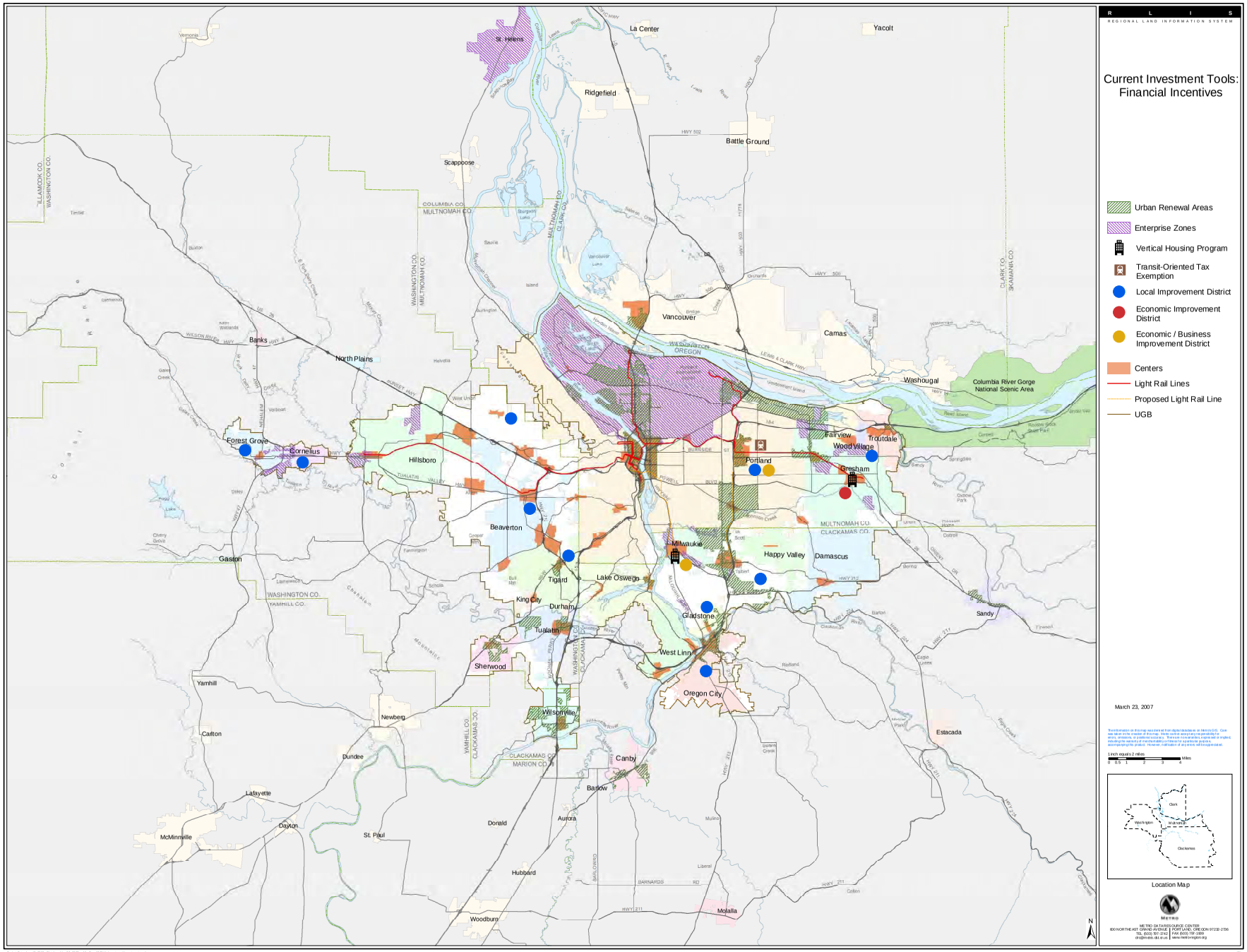
Through the process of developing this guide and documenting the successful use of these financial incentives by cities and counties in the region, Metro has identified the following recommendations to increase investment in our communities and accelerate implementation of the 2040 Growth Concept:

- Continue using these incentives to encourage dense, mixed-use housing and employment opportunities.
- Increase the use of these programs in our centers, corridors, and employment areas making local policy changes where needed in order to maximize the effective use of these tools.
- Consider collaborating with other local jurisdictions, stakeholders, and organizations to explore state legislative changes to make these tools work even better, particularly in the following areas:

  Vertical Housing Program: Explore ways to prevent special taxing districts from opting out of a Vertical Housing Development Zone after the zone is established.

  Urban Renewal and Tax Increment Financing (TIF): Modify the financing structure to provide some increase in fiscal return to local taxing districts prior to the expiration of the urban renewal area (e.g. rate of inflation, the increment increase on the land value, a kickback after set time periods) or expand the allowed costs under TIF to cover non-construction related items (e.g. fire trucks) in order to reduce opposition from local taxing districts, and create additional TIF authorities in order to use TIF separately from Urban Renewal.

  Local Improvement Districts: Expand what services and improvements the assessment fees can recover and also reduce the financial risks to local jurisdictions by clarifying the long-term liability and by tying the upfront costs to property owners.


R L I S
REGIONAL LAND INFORMATION SYSTEM
Current Investment Tools:
Financial Incentives
Urban Renewal Areas
Enterprise Zones
Vertical Housing Program
Transit-Oriented Tax Exemption
Local Improvement District
Economic Improvement District
Economic / Business Improvement District
Centers
Light Rail Lines
Proposed Light Rail Line
UGB
March 23, 2007
Location Map
Metro
St. Helens
La Center
Yacolt
Ridgefield
Battle Ground
Scappoose
Vancouver
Camas
Washougal
Columbia River Gorge National Scenic Area
Banks
North Plains
Forest Grove
Cornelius
Hillsboro
Beaverton
Gaston
Tigard
Lake Oswego
King City
Durham
Tualatin
Sherwood
Yamhill
Newberg
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Barlow
Hubbard
Woodburn
Molalla
Oregon City
West Linn
Gladstone
Milwaukie
Portland
Fairview
Troutdale
Wood Village
Gresham
Happy Valley
Damascus
Sandy
Estacada
Multnomah Co.
Clackamas Co.
Washington Co.
Clark Co.
Skamania Co.
Columbia Co.
Yamhill Co.
Marion Co.
Tillamook Co.

North Main Village, vertical housing project, City of Milwaukie

Toolkit

Financial incentives

Vertical Housing Program

Oregon's Vertical Housing Program offers a financial incentive to stimulate mixed-use development in centers and along corridors. It encourages developers to build dense, mixed-use projects in specific areas designated by local jurisdictions by reducing costs at the front end of the developer's investment through a temporary tax relief on the improvements. With immediate relief from a significant increase in taxes, developers can invest additional funds in projects that often have higher initial costs.

The nuts and bolts

Oregon's Vertical Housing Program (VHP) encourages construction or rehabilitation of properties in targeted areas called Vertical Housing Development Zones (VHDZs) by providing a tax abatement opportunity for higher density, mixed-use developments in these areas. The VHP provides the region with a strong financial tool for spurring housing and mixed-use to help achieve the growth envisioned for our 2040 centers and corridors. Developers, citizens, local jurisdictions, and the region benefit from the VHP, which is apparent when analyzing the applicability and manageability of the program as well as its effects on local taxing entities and local and regional community values.

How to use it: A local jurisdiction, or a combination of jurisdictions, may apply to the state for the designation of a Vertical Housing Development Zone (VHDZ). The state considers the proximity of light rail station areas, transit-oriented areas, and core areas of urban centers to help determine the merits of a proposed VHDZ. Once a VHDZ is approved, developers follow local project standards and codes, but apply directly to the state for the Vertical Housing tax abatement for projects within the zone.

To be eligible, projects must:

- be entirely located within an approved VHDZ
- be comprised of a multiple-story building, or a group of buildings, which include at least one multiple-story building
- include a portion of residential and nonresidential uses
- construct or rehabilitate each building included in the project
- follow required application procedures
- establish the costs of all new construction and improvements
- calculate residential development into equalized floors[1] contained in the project, not counting parking, patio, or porch areas unless granted an exception.

Abatement: All projects meeting state regulations receive the property tax abatement on the improvement value for a 10-year period. The number of floors constructed or rehabilitated for residential use in proportion to the total square footage of a project determines the tax exemption rate the developer will receive. The rate of the abatement ranges from 20 to 80 percent:

- 20 percent for one floor of housing
- 40 percent for two floors of housing
- 60 percent for three floors of housing
- 80 percent for four or more floors of housing.

Existing use of the tool in the region: Since the state created the program 10 years ago, it has approved four projects. The state approved most of these projects between May 2005 and October 2006. Currently in the region, only the cities of Gresham and Milwaukie have established Vertical Housing Development Zones. Alternatively, the City of Beaverton has decided to use this investment tool on a project-by-project basis, only pursuing a VHDZ for a project it wants to secure.

1. "Equalized Floor" means the quotient that results from the division of total square footage of a project (as determined by the Department) by the number of actual floors of the project that are at least 500 square feet per floor. Definition from OAR Chapter 813, Division 013.

Success story

City of Milwaukie

The City of Milwaukie set up a Vertical Housing Development Zone in 2002 at the request of a developer that needed the abatement to make a proposed mixed-use project in the city's downtown financially feasible. When the developer first approached the city, it was unaware of the VHP. When the city established the VHDZ, its sole intention was to secure the proposed development project. Thus, the VHDZ only encompassed the project site.

Before filing the VHDZ application, the City of Milwaukie met with special taxing districts (e.g. the fire district) within the proposed zone in order to explain the benefits of the program and relieve concerns about tax abatement. By working with special taxing districts, the city gained their full support and participation in the VHDZ. Learning that the tax abatement only applies to improvements, is limited to a maximum of 80 percent, and lasts only 10 years helped special taxing districts recognize that the improvements from the project would provide a greater benefit through an increase in overall tax revenue and may serve to attract additional development in the area. Both the city and the state recognize this outreach as a critical component to the success of Milwaukie's VHDZ and an important step for other jurisdictions to take when developing a Vertical Housing Program.

The City of Milwaukie regards the VHP as an ideal tool for smaller cities to provide an incentive to a developer since the tax abatement is limited and acquiring it is very manageable. If another developer hesitates and needs the assistance on a project, the city will consider using the VHP again and applying for another VHDZ either for the project site or to encompass a larger area in its downtown.

North Main Village project, City of Milwaukie, September 2006

"As Milwaukie's city manager, I have been actively involved in the creation of a vertical housing tax abatement zone. I believe that it is an economic development tool that works. Moreover, I believe that it is a tool that can be readily used by small jurisdictions such as mine."

– Mike Swanson
City Manager,
City of Milwaukie

"The VHP is superior to earlier tax abatement programs in two ways: it is streamlined and predictable. The streamlined process means that once the city has approved the program, it is not necessary to go through a permit process at the local level. The program is predictable in that developers know that if they propose a project that meets the definitions in the VHP ordinance, they receive the abatement."
– Janet Young, Economic Development Director, City of Gresham

Keep in mind. . .

Applicability: Cities and counties can set up a VHDZ as broad as a downtown area or as specific as a project site. In addition, there is no limit to the number of VHDZs a city or county may designate. This allows cities or counties to establish a VHDZ encompassing multiple sites in order to stimulate development in a specific area and minimize staff time processing the tax abatements or to establish site specific VHDZs for each project the city or county approves of in order to prevent giving unnecessary tax abatements and also to acquire additional community returns. Whether applied on a project-by-project basis or through a broader VHDZ, cities and counties can use this tool in numerous centers and corridors to increase density and mixed-use development. In addition, state statutes authorize local jurisdictions to acquire property located in a VHDZ for the purpose of developing vertical housing projects.

Manageability: This financial incentive demands minimal staff resources and expertise from the local jurisdiction and is relatively easy to use for both local jurisdictions and developers. Creating a VHDZ only requires a short, manageable application, and once a jurisdiction establishes a VHDZ it continues indefinitely. However, a jurisdiction can modify or discontinue its VHDZ at any time with a brief application to the state. This quick, non-restrictive program is easy to manage and also helps reduce unnecessary tax abatements.

Taxing districts: Municipalities and local taxing districts will not receive the total tax revenue generated on development improvements occurring within the VHDZ until the 10-year abatement period is over. This may be difficult for cities with limited resources. However, the tax abatement is limited to a portion of the tax revenue generated by qualifying improvements in the VHDZ. This minimizes the reduction in tax revenue to special taxing districts especially in comparison to other tax abatement programs. Often, the tax revenue generated to these taxing districts is higher than the revenue generated by the current use even with the Vertical Housing tax abatement in place.

Special taxing districts can opt out of the VHDZ while the city is establishing the zone or at any time after it is established. This could affect the amount of the tax abatement after it is approved for a project. This is of particular concern where special districts provide many municipal services. Thus far, local taxing districts affected by the Vertical Housing Program have participated in the local VHDZ recognizing the long-term benefits of increased development and overall revenue increases.

Community: The Vertical Housing Program does not replace or override any of the local building and planning regulations in the various jurisdictions, and thus it maintains design standards suitable for the local community. In addition, if a city or county chooses to apply the Vertical Housing Program on a site-by-site basis, it can apply the tax abatement to projects developing higher quality and sustainably designed projects.

Oregon statutes also allow cities and counties to acquire or dispose of real property located in the VHDZ for the purpose of developing vertical housing projects. The jurisdiction may sell this acquired property at real market value or, if it will prudently encourage the development of a vertical housing project, at a lesser value. This and the additional property tax abatement on the tax lot encourage the development of housing, including affordable housing units, and mixed-use development in various communities.

Success story

City of Gresham

The City of Gresham received approval for its Vertical Housing Development Zone from the state in March 2006. Gresham's VHDZ covers a large area of their regional center. In the past, the City of Gresham established a transit-oriented tax exemption program (TOTE) for a similar purpose of encouraging more mixed-use, dense development, particularly housing, in its center. However, that process included additional rules and required a public hearing process that left developers with uncertainty about receiving the abatement. Gresham determined that the VHP was a better tool for the city since public input occurs at the forefront, when the jurisdiction establishes the VHDZ and eliminates the public hearing process for each development project. Thus the City of Gresham conducted a public process to establish the VHDZ and public input led toward acceptance of the program. Now, when developers apply for the abatement, the state guarantees approval of the abatement to qualifying projects since the public process already approved the VHDZ.

The City of Gresham's experience with tax abatement financing resulted in more dense and attractive developments than were possible without the abatement. Thus, under the VHP, the city chose to establish a broad VHDZ in order to send a strong signal to the development community and attract mixed-use projects to this area. However, Gresham is also willing to consider other VHDZs on a case-by-case basis elsewhere in the city. Since adopting the VHDZ, the city of Gresham has received several inquiries from developers regarding the VHP and one developer planning to locate a project in the VHDZ submitted a project application to the state for the abatement.

Beranger Development Project, pending approval of the VHDZ abatement, City of Gresham

"Mixed-use development is extremely challenging and, coupled with high cost penalties due to its construction type and potential rents or sales not supporting pro forma gaps, it takes every tool available to reduce these gaps. Once understood, the Vertical Housing Program truly is a win/win tool for the jurisdiction, developer and taxing district. It facilitates the development of a project that has a much higher value than what would be developed otherwise, usually offsetting the abated taxes. When the abatement ends, a property with up to three to five times the market value of what would have otherwise been built, becomes fully taxable."

– Mike Rossman,
Peak Development, LLC,
Beranger Development
Project, City of Gresham

Vertical housing

Keep in mind. . .

Housing choices: The program provides abatements for both rental and for sale housing. If the project includes rental units, the developer directly receives the benefit of reduced costs over the first ten years of the project due to the partial tax abatement. When developing for sale housing, the tax abatement is passed on to the buyer who receives a partial property tax abatement over the first ten years. This reduction in costs to the buyer can help the developer secure quicker sale of the units. Alternatively, the developer could consider the reduction in monthly housing costs to the buyer in determining the sale price of the units and potentially capture some of the value of the tax exemption in the final sale price. Ultimately the local community benefits from additional rental and home ownership opportunities.

If a development project contains at least one equalized floor of low-income housing, the developer also receives a partial property tax exemption on the land value. The developer must identify in the application whether the project contains affordable housing units for persons or families with 80 percent or less of the area median income and continue to meet that requirement for the entire period for which the vertical housing project is certified. In the region, 80 percent household median income is approximately $38,000 in annual income for a single person, which equates to $850 per month in housing costs. This feature of the tool is particularly effective at achieving mixed-income housing developments, and when used in conjunction with other incentives and funding resources, it has the ability to improve the feasibility of projects comprising entirely affordable units.

Success story

City of Beaverton

The City of Beaverton assessed the local applicability of the Vertical Housing Program. It decided not to establish a VHDZ, but rather to use the program as a strategic tool on a case-by-case basis. The city prefers to maintain control of the certification process for projects the city supports and that have a distinct reason for the tax abatement. This allows the City of Beaverton to assure the abatement is only given when needed to finance the project or when a public benefit is provided by the project (e.g. plaza, route to transit, park, etc.). It also allows the City of Beaverton to place additional requirements on the development project in exchange for the tax abatement. By using this approach with the VHP, the City of Beaverton implements this investment tool through a development agreement for the project and then applies for a VHDZ for the project site.

Putting it together

The Vertical Housing Program is a financial incentive that can stimulate desired investments in centers and along corridors region wide. The program is particularly useful when targeted to specific areas where the local housing market is relatively flat or in local housing markets that are on the cusp of achieving sufficient rents or sale prices to support unsubsidized multi-story mixed-use development. However, the Vertical Housing Program contains the flexibility to allow each locale within the region to designate VHDZs in an approach appropriate to reaching its own community's goals.

Cities with more resources, a strong development interest, or higher land values may choose to apply the program on a project-by-project basis in order to limit tax abatements to only those projects that need it, provide additional community benefits, or make maximum density and preferred facilities (e.g. affordable housing or a parking structure) feasible. The Vertical Housing Program also provides cities or counties that have limited resources an opportunity to attract investments. Each city or county in the region has the ability to apply the Vertical Housing Program in a way that is most suitable for that area in order to focus density and increase investment in its centers and corridors.

Tips for implementing the Vertical Housing Program at the local level:

- Analyze the housing market and community environment in the city or county and choose the most applicable approach to meet the local community's needs.
- Calculate the local jurisdiction's threshold for the tax abatement before establishing a VHDZ.
- Work with special taxing districts when considering applying for a VHDZ.
- Consider the goals in the city or county when pursuing a VHDZ and the option of applying additional local requirements to achieve these goals by using the program on a site-by-site basis.
- Set a future date to analyze the results of using the program and reconsider the local jurisdiction's need for using the program and the appropriate approach.

City staff were involved in drafting the legislation that created the VHP, and the city supports it in concept. However, the lack of local control of approval of a property tax abatement for a project after a VHDZ is established has led the city to the position that we will only apply for a VHDZ for a project site after we are certain the project would benefit the citizens of Beaverton.

– Hal Bergsma,
Principal Planner,
Community Development Department,
City of Beaverton

Resources

For additional information on Oregon's Vertical Housing Program, including application materials, visit:

Oregon Housing and Community Services (OHCS)
725 Summer St. NE, Suite B
Salem, OR 97301-1266
(503) 986-2000
http://www.ohcs.oregon.gov/OHCS/HFS_VerticalHousingProgram.shtml

OHCS Metro Regional Advisor's Office
123 NE 3rd St., Suite 470
Portland, OR 97232
(503) 963-2289
http://www.ohcs.oregon.gov/OHCS/DO-RegionalAdvisors.shtml

For more information on the use of the Vertical Housing Program in the region, contact:

City of Gresham
Community and Economic Development
1333 NW Eastman Parkway
Gresham, OR 97030
(503) 661-3000
http://www.ci.gresham.or.us/departments/cedd/

City of Milwaukie
Community Development
City of Milwaukie Johnson Creek Facility
6101 SE Johnson Creek Blvd.
Milwaukie, OR 97206
(503) 786-7600
http://www.cityofmilwaukie.org/departments/cdadmin/cdadmin.html

City of Beaverton
Community Development
PO Box 4755
4755 SW Griffith Drive
Beaverton, OR 97076
(503) 526-2494
http://www.beavertonoregon.gov/departments/CDD/

For more specific details on the statutory guidelines of the VHP, see Oregon Administrative Rules (OAR) Chapter 803, Division 013 at:
http://arcweb.sos.state.or.us/rules/OARS_800/OAR_813/813_250.html

The Crossings,
TOTE recipient,
City of Gresham

Toolkit

Financial incentives

Transit-Oriented Development Tax Exemption (TOTE)

The Transit-Oriented Development Tax Exemption encourages the construction of transit-supportive, multiple-unit housing in urban centers in order to improve the balance between the residential and commercial nature of those areas. It seeks to ensure full-time use of urban centers as places where citizens of the community have an opportunity to live as well as work. Local jurisdictions design the local application of the TOTE to encourage dense, mixed-use projects in transit-oriented areas by reducing operating costs through a property tax exemption on the improvements. With immediate relief from a significant increase in taxes, projects become feasible and developers can invest additional funds in these developments.

TOTE

The nuts and bolts

The TOTE provides the region with a strong financial tool for spurring density, housing and mixed-use development to help achieve the growth envisioned for our 2040 centers and corridors. Developers, citizens, local jurisdictions, and the region benefit from local TOTE programs, which is apparent when analyzing the applicability and manageability of the program as well as its financial and community-based outcomes.

State law enables cities and counties to establish and design programs to attract new development of multiple-unit housing, and commercial and retail property, in areas located within a light rail station area, transit oriented area or downtown (city core) area by means of a local property tax exemption. According to state statutes, the local programs shall emphasize the following:

- the development of vacant or underutilized sites in light rail station areas, transit oriented areas or core areas, rather than sites where sound or rehabilitable multiple-unit housing exists
- the development of multiple-unit housing, with or without parking, in structures that may include ground level commercial space
- the development of multiple-unit housing, with or without parking, on sites with existing single-story commercial structures
- the development of multiple-unit housing, with or without parking, on existing surface parking lots
- the preservation, construction, addition or conversion of units at rental rates or sale prices accessible to a broad range of the general public.

How to use it: To use the Transit-Oriented Development Tax Exemption, cities and counties need to adopt, by resolution or ordinance through a public process, the provisions of ORS 307.600 to 307.637. Then, the city or county shall designate an area within which it proposes to allow exemptions through its TOTE program, which the city or county may amend at a later date. In addition, a city or county with a population of over 300,000 may apply the TOTE within a designated urban renewal or redevelopment area. A city may designate core areas, light rail station areas, or transit-oriented areas whereas a county may designate areas as light rail station areas or transit-oriented areas but may not designate core areas. A county's use of the tool is not limited to its unincorporated areas.

- **Light rail station area** means an area defined in regional or local transportation plans to be within one-half mile radius of an existing or planned light rail station.
- **Transit-oriented area** means an area defined in regional or local transportation plans to be within one-quarter mile of a fixed route transit service.

Once the jurisdiction establishes a TOTE area, cities or counties shall develop an application form as well as standards and guidelines to consider applications and make determinations about applying the TOTE. Applicants must apply on or before Feb. 1 the year prior to which the applicant is requesting the exemption. The city or county may permit the applicant to revise an application prior to making a final decision.

The local jurisdiction has 180 days to approve or deny an application for the TOTE. Before approving use of the TOTE for a project, a city or county must hold a public hearing in order to determine whether the project meets the qualifications. In addition, to receive the TOTE, a project needs the approval from local taxing districts represent-

Success story

City of Gresham

In the past, the City of Gresham has used the transit-oriented tax abatement. The projects receiving the TOTE resulted in significantly more dense and attractive projects than would have been possible without the exemption.

Receiving the tax abatement motivated the developers and helped make the projects feasible. The program proved successful in the City of Gresham resulting in more dense, attractive development projects near transit such as Central Point and Gresham Central Apartments. Each project required a public hearing process to decide whether or not the developer would receive the tax exemption. This was a lengthy process due to political considerations in the City of Gresham.

Despite these complications, the city recognized the importance of the exemption and continued to use the program until the state implemented the Vertical Housing Program. The City of Gresham saw this new program as a means to encourage similar development patterns while minimizing the review process experienced in Gresham with the locally controlled TOTE program.

Central Point (top, left), Landmark at 8th (top, right) and The Crossings all received the TOTE, City of Gresham

The nuts and bolts

ing 51 percent or more of the total combined rate of taxation levied on the property. Final action upon an application by the city or county shall be in the form of an ordinance or resolution approving or denying the application and the jurisdiction must provide to the applicant, in writing, the reasons for a denial.

Qualifying projects: In order for a local jurisdiction to approve a project for the TOTE, the project must meet the definition of a multiple-unit housing project:

- involves the production, rehabilitation, establishment or preservation of housing affordable to those with a defined level of household income in an agreement between a public agency and the property owner OR
- develops new structures, stories or other additions to existing structures as well as structures converted in whole or in part from another use to dwelling units.

It also needs to meet the following criteria:

- includes the minimum number of dwelling units as specified by the local jurisdiction
- excludes transient accommodations, including hotels and motels
- integrates design elements benefiting the general public as specified by the local jurisdiction, such as open spaces, parks, child care facilities, and pedestrian design elements
- conforms with all local plans and planning regulations applicable at the time the TOTE application is approved
- meets the local jurisdiction's basic requirements for a TOTE application
- relates physically or functionally to and enhances the effectiveness of the light rail line or mass transportation system if located in a light rail station or transit oriented area.

Tax exemption: If approved, the property receives a 100 percent tax exemption on the "improvement" value for all residential areas. The exemption may also include the parking constructed as part of the multiple-unit housing construction, addition, or conversion. In the case of a converted structure or additions to a structure, only the increase in value attributable to the addition or conversion is tax exempt. The tax exemption applies only to the taxes levied in that jurisdiction and of those taxing districts that agree to participate. The exemption can last for no more than 10 successive years. Local jurisdictions may terminate an approved Transit-Oriented Tax Exemption for failure to complete construction or comply with Oregon statute or local TOTE program provisions.

Existing use of the tool in the region: Since the state authorized local jurisdictions to establish abatement programs for transit-oriented development projects, numerous projects have received the TOTE. Currently in the region, only the City of Portland has an active transit-oriented development abatement program. In the past, the City of Gresham used the TOTE and approved several projects to receive the exemption.

Success story

City of Portland

The City of Portland created its Transit Oriented Development (TOD) tax abatement in 1996 to provide the TOTE to high density housing and mixed-use projects located on vacant or underutilized sites along transit corridors whose design and features encourage building occupants to use public transit. The PDC manages the TOD abatement program and sets the requirements and guidelines for projects eligible to receive the TOTE. The cost to apply in Portland is $5,000.

Project sponsors must first demonstrate that the property tax exemption is necessary to make the project financially feasible. The project must also contain ten or more dwelling units. The project design must provide for a continuous pedestrian connection to a light rail station or mass transit system, include one or more of several specific design features, and must provide one or more public benefits.

The Bookmark Apartments, in the Hollywood Town Center, is a mixed-use development with a ground floor library branch that received the TOTE through Portland's TOD abatement program. Other projects made feasible through Portland's program are Russellville Commons Townhouse Apartments at Southeast 102nd Avenue and Pine Street in a light rail station community on the abandoned Russellville School site; Gateway Towers in the Gateway Regional Center and the Cooper Street Town Homes in the Lents Town Center.

Ten years after implementing the program, Portland is still committed to providing tax abatements to multiple-unit housing projects in TOD areas. In 2006, the city renewed the TOD abatement program with revisions in order to increase the effectiveness of the program. With additional financial and staffing resources in the City of Portland, the advantages of a locally designed program outweigh complications experienced similar to those in Gresham.

The Bookmark Apartments in Hollywood Town Center, City of Portland

"The TOD Tax Abatement program has been an invaluable tool in our condominium developments in the Gateway area of northeast Portland. Nearly 93 percent of all purchasers have qualified for the tax abatement, and it is safe to say that nearly all of them would have been unable to qualify for their loans had they not had the advantage of the lower payment this afforded them. The TOD Tax Abatement program has increased our absorption rate and reduced our marketing costs, which has allowed us to keep our unit prices extremely affordable. The result in Gateway is 138 homeowners who would most likely still be renting if it were not for this program."

– Gordon C. Jones,
Real Estate Developer

Keep in mind. . .

Local programs: The Transit-Oriented Tax Exemption, similar to the Vertical Housing Program, provides local tax abatement for dense, mixed-use housing. However, with the TOTE program the jurisdiction has more control, because it establishes its own program and guidelines and approves the abatement locally. This enables a jurisdiction to tailor the program to the local needs. A jurisdiction may require an applicant to demonstrate the abatement is necessary to achieve economic feasibility for the project and may also leverage or require the project to develop other public benefits.

On the other hand, local control does require sufficient staff resources to develop and administer a local program. Taking advantage of the TOTE takes a significant amount of staff time to understand the state TOTE guidelines and then to create the local program and review abatement applications. The jurisdiction can offset the financial costs by setting an application fee with the assistance of the county assessor in an amount sufficient to cover the cost incurred by the local government in administering the program.

Even after setting up the program, the review requires a public hearing process which adds an additional time commitment for both the jurisdiction and the developer. This process carries a financial risk for the developer by slowing down the development process and presenting uncertainty as to whether or not the applicant will receive the abatement. The jurisdiction may also incorporate a pre-application meeting into the application process in order to reduce the risk to developers by providing information up front on how to prepare successful applications.

Community: This tax exemption encourages the development of housing and mixed-use development in centers and corridors. Since the state gives programmatic control to the local jurisdiction, the city or county can also leverage public benefits for the needs of the local community such as affordable housing, open space, ground floor service or commercial use, family-oriented recreational facilities, sustainable designs, or transit amenities. In addition, this program does not replace or override any of the local building and planning regulations in the various jurisdictions, and thus it maintains design standards suitable for the local community. There is no limit to the number of TOTE areas a jurisdiction may designate. Therefore, a program can be tailored to the specific needs of a variety of locations.

Housing choices: The state enacted legislation to provide the TOTE in order to promote the development of multiple-unit housing in core areas and transit areas. The program provides the tax exemption for both rental and for sale housing. This provides the local community with additional rental and home ownership opportunities, particularly in central areas with access to public transportation and services.

If the project includes rental units, the developer directly receives the benefit of reduced costs over the abatement period (maximum of 10 years) of the project. When developing for-sale housing, the tax abatement is passed on to the buyer who receives the tax abatement for up to ten years or longer if it is an affordable housing unit. Combined with the access to transit, which results in a potential reduction in personal transportation costs, the reduction in purchase price can help the developer secure quicker sale of the units. Alternatively, the developer could consider the reduction in monthly

housing costs to the buyer in determining the sale price of the units and potentially capture some of the value of the tax exemption in the final sale price.

The TOTE program encourages the preservation and creation of housing that is affordable to all segments of the population through the use of the 100 percent tax exemption for these types of properties in a TOTE area. Furthermore, a city or county may designate the entire city or county as a TOTE area in order to allow this tax exemption for affordable housing under an agreement between the public agency and the property owner. Likewise, the city or county may extend the duration of the TOTE for this type of affordable housing as long as it remains low-income housing under the agreement. This encourages a long-term supply of affordable housing units. If utilizing a TOTE for this type of housing, state statute requires the applicant to demonstrate that the TOTE is necessary to preserve or establish the low-income units. In addition, a local jurisdiction may establish its own housing affordability guidelines such as requiring qualifying projects to include a specific percentage of affordable housing units for different household median income ranges.

Fiscal impacts: The exemption provides 100 percent property abatement on the improvement value for the residential areas of a project rather than a partial abatement. In addition, if taxing jurisdictions representing 51 percent or more of the assessed value in the county approve the project for abatement, then the entire abatement is still received. This is more attractive to developers than a partial abatement program such as Oregon's Vertical Housing Program, which reduces the abatement a developer receives based on local taxing authorities that decide to opt out. Conversely, projects requesting the TOTE may receive additional opposition from local taxing districts, because of an increase in the loss of revenue they will experience.

Although local taxing districts will not gain tax revenue on project improvements during the temporary abatement, they will experience a significant increase in tax revenue after the expiration of the abatement. In most cases that increase in tax revenue would not have occurred without the project. If the TOTE secures the project, then the temporary exemption provides an integral role in increasing the livability and financial well being of an area. In addition, since the state gives programmatic control to the local jurisdiction, the city or county may require an applicant to demonstrate that the abatement is necessary for the project to achieve economic feasibility. This ensures local jurisdictions and taxing districts do not lose needed tax income due to giving unnecessary abatements.

In cities or counties that require transit supportive features, such as Portland, these features can raise the construction cost of a project significantly. Thus, in cities or neighborhoods not located in a strong housing market, affordable housing may not be an appropriate requirement or public benefit need whereas increasing density may be the primary goal and program requirement in order to promote investment in transit as a growth management strategy in keeping with the 2040 Growth Concept.

Additional TOTE projects include the Cooper Street Town Homes (top), Lents Town Center; Gateway Towers (center), Gateway Regional Center; and Russellville, City of Portland (bottom)

TOTE

Putting it together

One strategy for achieving the goals of the 2040 Growth Concept is to direct development to regional and town centers and along corridors in order to create higher-density areas that combine housing, employment, retail, and cultural and recreational activities in a walkable environment that is well-served by transit. The locally implemented TOTE program encourages this type of development, and both the City of Gresham and the City of Portland have experienced these results through successful use of the TOTE program. Additional centers and corridors can benefit from using the TOTE to encourage local investment and achieve development patterns that support the 2040 Growth Concept.

Tips for implementing the TOTE at the local level:

- Consider implementing a program in your jurisdiction to provide a TOTE to qualifying projects along main streets, frequent bus corridors, in light rail station areas, and along future light rail corridors.
- Carefully consider and seek advice on what guidelines and steps in the local application process to include in the local program.
- Assess what requirements and optional benefits the community needs and the local market can implement in determining the guidelines of the program.
- Consider providing developers with a choice of which public benefit(s) to incorporate into the project in order to provide flexibility to the developer and to meet the needs at a specific project location.

TOTE

Resources

For more specific details on the TOTE guidelines, see:

ORS Chapter
307.600 – 307.637
http://www.leg.state.or.us/ors/307.html

For additional information or clarification about the Portland TOD abatement programs, contact:

Portland City Code
Chapter 3.103
Portland Development Commission
(503) 823-3269
http://www.pdc.us/housing_serv/hsg_development/todguide.asp

For information on Gresham's past experiences, contact:

City of Gresham
Community and Economic Development Department
1333 NW Eastman Parkway
Gresham, OR 97030-3825
(503) 618-2504

The Oregon Convention Center was built on an old brownfield site, City of Portland

Toolkit

Financial incentives

Brownfields Assessment and Cleanup Funds

Properties with unknown environmental conditions deter communities, developers, and investors from developing these sites due to cleanup complications and added costs, leaving communities with unused and underutilized properties. The region's centers, corridors and employment areas contain such "brownfield" sites. Through brownfields assessment and cleanup funds from the state and the Environmental Protection Agency (EPA), cities, counties and property owners can identify and clean up brownfield sites, leading to their redevelopment. Recycling brownfields within the urban growth boundary helps reduce sprawl and implement the 2040 vision.

Keep in mind. . .

"A brownfield site is real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant."[2] In 1994, the EPA created the Brownfields Program to address the nation's 600,000 abandoned or underused properties due to suspicion of contamination. The program took a locally based approach to implement solutions and ensure benefits from the revitalization efforts remained in local neighborhoods. In 2002, the program expanded to incorporate technical assistance for a range of non-Federal brownfields stakeholders.

The U.S. EPA's Brownfields Program focuses on four basic principles: protecting the environment, partnering for success, stimulating the marketplace, and promoting sustainable reuse. The program empowers local brownfields programs primarily by providing grants for environmental assessment, cleanup, and job training activities. Brownfields programs and funds provide the region with a strong financial tool for spurring the redevelopment of underutilized lands for housing, mixed-use, and job creation opportunities in order to help achieve the growth envisioned for our centers, corridors, and employment areas. Developers, citizens, local governments, and the region benefit from recycling brownfields, which is apparent when analyzing the financial and community-based impacts of the program.

How to use it: The EPA Brownfields Program now provides funding for revolving loan fund grants, cleanup grants, and assessment grants of which the first two require a 20 percent cost share.

- **Revolving Loan Fund grants:** for coalitions to provide no- or low-interest grants from a revolving loan fund to carry out cleanup activities at brownfield sites
- **Cleanup grants:** for cleanup activities at a specific brownfield site
- **Assessment grants:** for site-specific or community-wide proposals that inventory, characterize, assess, and conduct cleanup and redevelopment planning and community involvement related to brownfield sites

Eligible applicants in the Metro region that may apply for these grant programs include: a unit of local government, quasi-governmental entity that operates as an agent of the local government, a government entity created by a state legislature, or a regional council or group of general purpose units of local government, a redevelopment agency, the state or an Indian Tribe. In addition, nonprofit organizations[3] may apply for site-specific cleanup grants. Also, a coalition of a group of two or more eligible entities may submit one revolving loan fund grant proposal under the name of the coalition. Finally, to receive a cleanup grant, the applicant must be the sole owner of the property that is the subject of its cleanup grant proposal.

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2. "Brownfields 2006 Grant Fact Sheet: Metro, Portland, OR." U.S. Environmental Protection Agency. May 2006.

3. "Nonprofit organization" means any corporation, trust, association, cooperative, or other organization that is operated mainly for scientific, education, service, charitable, or similar purpose in the public interest; is not organized primarily for profit; and uses net proceeds to maintain, improve, or expand the operation of the organization. Definition from Section 4(6) of the Federal Financial Assistance Management Improvement Act of 1999, Public Law 106-107, 31 USC 6101, Note.

Success story

City of Portland

Since 1996, the City of Portland has worked with businesses and communities to foster the restoration and reuse of contaminated land and promote revitalization of neighborhoods in Portland. Through public and private partnerships, the city has cleaned up and recycled hundreds of acres of contaminated property and created thousands of jobs, while promoting brownfields redevelopment, pollution prevention, and greenspace protection.

In 1998, Portland received national recognition as one of sixteen Brownfield Showcase Communities located throughout the United States. Today, the Portland Brownfield Program continues to restore properties and revitalize the city's neighborhoods by providing Environmental Site Assessments (ESAs) and technical assistance on properties throughout Portland.

The Portland Brownfield Program assisted in the redevelopment of a site at North Interstate Avenue and North Skidmore Street. Formerly a gas station, this site remained a vacant lot prior to redevelopment. The Environmental Site Assessment identified petroleum contamination that led to cleanup efforts, which isolated the contamination.

Redevelopment of the site resulted in a new building which now houses a coffee shop, dance studios, office and workshop space. The developer utilized sustainable building practices and products during waste disposal and construction. The City of Portland recognizes redevelopments such as this as an important component of continuing to revitalize the community along the North Interstate corridor.

"Successful brownfield redevelopment achieves environmental, economic and social goals all in one project. For example, the Arciform project took a blighted property, cleaned it up and integrated green building in a manner that supported small business. Brownfield projects also have risks, but public programs such as those at the City of Portland and Metro help to answer the unknowns and make formerly unthinkable projects feasible again."

– Clark Henry,
Portland Brownfield Program,
City of Portland

Photographs of the site at North Interstate Avenue and North Skidmore Street before (left) and after (right), City of Portland

The nuts and bolts

Currently, the EPA reviews all applications on a yearly basis with grant applications generally due the December prior to the year for which an entity is requesting funds. When reviewing the applications and issuing the different grants, the EPA considers the following factors: community need, impact on human health and the environment, site eligibility or selection process, effective use of existing infrastructure, community involvement, leveraging of other funds, eligibility for funding from other sources, and the ability to manage grants.

Brownfields Law excludes the following three types of properties from funding eligibility:

- facilities listed (or proposed for listing) on the National Priorities List
- facilities subject to unilateral administrative orders, court orders, administrative orders on consent or judicial consent decrees issues to or entered into by parties under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), commonly known as Superfund
- facilities that are subject to the jurisdiction, custody or control, of the U.S. government.

In addition, no part of a grant or loan from EPA may be used to pay costs at a brownfield site for which the recipient of the grant or loan is potentially liable. Potentially liable parties consists of current owners and operators of a facility, owners and operators of a facility at the time of disposal of a hazardous substance, parties that arranged for the treatment or disposal of hazardous substances, and parties that accepted hazardous substances for transport to disposal or treatment facilities.

The South Waterfront Redevelopment project began with major environmental challenges and now is quickly developing into a dense, mixed-use neighborhood with residential units, public services, riverfront amenities, a section of the Willamette Greenway and public transit connections. City of Portland

Success story

Metro

Through a grant awarded by the U.S. Environmental Protection Agency (EPA), Metro has developed a Brownfields Recycling Program to provide technical and financial assistance to local jurisdictions, landowners and other stakeholders. In collaboration with local jurisdictions and regional experts, Metro will research and select properties for Environmental Site Assessments.

Site selection will focus on properties that are located in communities where a significant portion of the census tracts has a household income below the median income for the region or contain a higher percentage of minority populations than the regional average, are not currently served by other EPA brownfields programs, and have a high potential for positive economic, social, and environmental impacts. Findings from these assessments will aid in the development of plans to move sites toward cleanup and redevelopment.

Metro can assist local governments working with property owners and developers in their communities to overcome redevelopment obstacles by providing assistance in the investigation of potentially contaminated properties, identifying and securing funding in the form of grants and loans, and accessing technical resources needed for site cleanup and redevelopment. Metro will also conduct informational meetings and technical workshops with property owners, developers, local jurisdictions, regulators, and environmental experts.

In providing assistance, Metro will draw on its experience with the acquisition of more than 8,000 acres of land for natural areas as well as the 240-acre St. Johns Landfill, the region's primary waste disposal site for 50 years until it closed in 1991. Metro took over operations from the City of Portland in 1980 and assumed ownership in 1990. Since then, Metro has implemented a restoration program designed to convert the site from a liability to a community asset within the Metro-managed Smith and Bybee Wetlands Natural Area. The program includes environmental protection and monitoring systems, habitat development using native plants, streambank repair, and planning for trails that will connect the site to the St. Johns neighborhood. Currently, Metro is also conducting a detailed site investigation to identify and remediate any remaining risks not controlled by the existing program.

"Through this program, the region has an extraordinary opportunity to identify the most contaminated sites and promote their restoration as community assets. Brownfield cleanup provides significant opportunities to create jobs in the region by developing industrial and mixed-use centers, as well as affordable housing, parks or open spaces."

– David Bragdon,
Metro Council President

St John's landfill before and after (far right) cleanup and redevelopment by Metro, City of Portland

The nuts and bolts

However, certain liability protections also exist to protect owners and prospective purchasers of contaminated properties who are not responsible for the contamination (and not affiliated with a responsible party) and comply with certain specific conditions provided in federal statute CERCLA §107. In addition, the Brownfields Law clarified the innocent landowner defense and established liability protections for contiguous property owners and bona fide prospective purchasers of contaminated land.

Despite these recent improvements, the federal liability protections remain quite limited. In Oregon, the Prospective Purchaser's Agreement (PPA) offers additional support to prospective purchasers of contaminated land. The PPA is a legally binding agreement with Oregon's Department of Environmental Quality (DEQ), which defines and limits the buyer's potential liability to DEQ for environmental cleanup of the property. In return for this liability release, the purchaser must provide the state with a substantial public benefit such as commitment to perform substantial cleanup or productive reuse of a vacant facility.

Both federal and state programs, despite their limitations, can be integral to the acquisition, cleanup, and redevelopment of contaminated property. A PPA reduces the potential risk for both buyers and investors making redevelopment possible. Likewise, property owners or prospective purchasers of a contaminated site that qualify for one of the federal liability protections also become eligible for funding, which can bridge a financing gap for a brownfield redevelopment project.

In order to qualify for any of these programs, landowners must comply with certain obligations to take "appropriate care" after purchasing a property, and a prospective landowner must conduct "all appropriate inquiries" prior to purchasing a property.

- **Appropriate care** includes cooperating and not impeding with cleanup, site access, site information requests, and legal notice requirements; stopping any continuing releases, preventing future releases, and preventing or limiting human and environmental exposure to releases; and complying with land use controls.
- **All appropriate inquiries** is the federally mandated process of evaluating a property's environmental conditions and assessing potential liability for any contamination. These must be conducted or updated within one year prior to the date of acquisition of a property by an environmental professional.

Existing use of the tool in the region: Currently in the region, Gresham, Portland, Clackamas County and Metro have received EPA funds and established brownfields programs. Individual property owners have also applied for and received federal and state site-specific assessment and cleanup funds to redevelop and revitalize properties.

Success story

Clackamas County

Clackamas County received an EPA assessment grant in May 2002 and a second in September 2006. The county's primary objective is to stimulate the cleanup and redevelopment of brownfields in order to reuse the county's industrial land areas. The county's goal is to collaboratively redevelop strategic brownfield sites and to focus on economic diversification and revitalization that will help the county to create more jobs, increase property values, and reduce blight and health hazards for its citizens.

The county used its EPA funds to host brownfields forums, reach out to industrial property owners to assist them with brownfields issues, conduct environmental site assessments on certain properties, and develop a remediation plan with cleanup strategies and next steps for selected sites. Clackamas County provided in-depth technical assistance to forty property owners, completed twenty-seven Phase I ESAs, and conducted seven Phase II ESAs of which six received "no further action" letters from the Oregon Department of Environmental Quality. These sites are now an asset to the county and are ready for reuse or redevelopment.

Clackamas County found ten sites with redevelopment potential if cleanup efforts could be stimulated, six sites already in the clean up process, and four sites with property owners willing to cover cleanup costs or uninterested in addressing contamination issues in the near term due to the ongoing businesses located on those sites. After conducting these assessments, the county can now pursue grants for those sites ready for cleanup efforts and explore incentives for private sector brownfields redevelopment.

"The EPA Pilot Assessment program has been critical to Clackamas County's brownfield program and successful in spurring industrial property owners to understand and address contamination issues on their sites. Technical assistance and assessment funds are effective incentives for redevelopment. The ultimate goal of the program is economic development, increased assessed values, additional sites for traded sector industries and family wage jobs."

– Renate Mengelberg,
Clackamas County Business and Economic Development Services

Keep in mind. . .

Community: The redevelopment of brownfield sites provides economic, social and environmental benefits and reinvigorates communities through the facilitation of job growth, creation of affordable housing, parks and open spaces, elimination of health risks, and an increase in the community's tax base. The community benefits from reclaiming these properties from blight and recycling them into spaces that provide the community with an improved image, a sense of pride and an important neighborhood asset. Recycling these sites also utilizes existing infrastructure and removes development pressure from undeveloped, open land by focusing growth within the urban growth boundary.

However, designation of a brownfield without providing clear information about the site and a plan for mitigation can create a stigma for that property and the surrounding properties. Even though there is little requirement for formal community involvement in project planning, working with the community and property owners is essential to a successful brownfields program.

Financial: Federal and state programs provide liability assistance and funding to assess and clean up brownfield sites. This reduces the contamination risks and financial burdens to potential property owners and redevelopment projects. The federal program leveraged more than $6.5 billion in private and public funds for brownfields cleanup and redevelopment creating approximately 25,000 new jobs. However, the application for these funds is extremely competitive. Less than half of applicants receive funding, and besides the revolving loan fund, grants do not exceed $200,000 each. Federal funding also comes with Davis-Bacon wage requirements, which can increase project costs. In addition, certain communities struggle with the political will to address blighted properties and the lack of additional economic incentives needed for development.

Local programs: The federal Brownfields Program provides states with the authority to design and implement independent cleanup programs. This allows a state to focus resources and tailor their local programs to address their specific situations and concerns. As a result, Oregon could establish the Prospective Purchaser Agreement program to provide additional liability protections and develop a number of financial and technical assistance programs under the DEQ and Oregon Economic and Community Development Department to more successfully facilitate the redevelopment of local brownfield sites. Local jurisdictions and nonprofit organizations can also obtain federal EPA funds to set up locally tailored and targeted programs that can finance the assessment and clean up of brownfield sites. This offers another resource to property owners, prospective purchasers and local communities.

The Oregon Museum of Science and Industry resides on an old brownfield site cleaned by Portland General Electric and the Bureau of Environmental Services' Brownfield Program. City of Portland

Success story

Ava Roasteria in Beaverton

Ava Roasteria is a new coffee shop located in the City of Beaverton's town center on the site of an abandoned gasoline station. Several years ago, Oregon's Department of Environmental Quality identified the site as a brownfield needing immediate attention. The previous owners were unable to finance the cleanup. At the time, the state paid for the evaluation of the contamination and installed monitors due to conern regarding groundwater contamination.

Interested in developing the property, NEEK Engineering signed a prospective purchaser's agreement with the DEQ and worked with the previous property owners in order to purchase their interests in the site. The firm then secured a cleanup loan with the Oregon Economic and Community Development Department, which works with property owners and DEQ to move brownfield projects forward.

NEEK Engineering removed four underground storage tanks and the contaminated soil. The firm also worked with the community to identify a desired future use of the building and with the city to design an innovative project that also met local code. Neighboring properties, frustrated by the contaminated site for years, sent letters of gratitude and support for the redevelopment work. NEEK Engineering also enjoys the income generated by the increased land values associated with moving the property from an abandoned gas station to an operating community business.

Ava Roasteria, site of a previously abandoned gas station, City of Beaverton

"It's been an exciting addition to the downtown core. It serves as an example of the kinds of projects urbanized areas can utilize. I hope we see more of this kind of revitalization."[4]

– Rob Pochert,
Economic Development
Program Manager,
City of Beaverton

4. Lent, Christina. Fresh Brew: Ava Roasteria perks up a former brownfield site in downtown Beaverton. The Beaverton Valley Times, September 28, 2006.

Putting it together

Properties with unknown environmental conditions exist throughout the region. In keeping with 2040, the region should prioritize the recycling of brownfields in order to reduce sprawl to surrounding farmland, forestland and natural areas and to promote investments, job growth, affordable housing, parks, and the elimination of health risks. Local jurisdictions, property owners, and developers can all benefit from recycling brownfields and using local and federal funding programs when needed in order to assess, cleanup, and redevelop these sites.

Tips for implementing a brownfields program at the local level:

- Prioritize the identification and redevelopment of brownfield sites in centers, corridors, and employment areas.
- Apply for federal community-wide and/or site-specific assessment and/or cleanup funds from the EPA.
- Develop outreach materials to inform the community of the benefits and plans for local brownfields initiatives.
- Work with local property owners to educate them and facilitate the move toward assessment, cleanup and redevelopment.
- Facilitate the connection between property owners, regulators, investors and developers in order to ease concerns and brainstorm opportunities.
- Seek technical and financial assistance from state, regional, and local jurisdictions with brownfields program experience.

Brownfields cleanup

Resources

If you know of a property that may be contaminated or would like more information about the Metro Brownfields Recycling Program including upcoming informational meetings, technical workshops and other resources, **contact Metro's Planning Department at (503) 797-1839**

For more information about local programs, eligibility, and technical support, contact:

City of Portland
Bureau of Environmental Services, Portland, OR 97204
(503) 823-5863 • http://www.portlandonline.com/BES/index.cfm?c=dfaai

Clackamas County
Business & Economic Development
9101 SE Sunnybrook Blvd., Clackamas, OR 97015
(503) 353-4329 • http://www.co.clackamas.or.us/business/assist/toolbox.htm

City of Gresham
Community and Economic Development Department
1333 NW Eastman Parkway, Gresham, OR 97030
(503) 661-3000
http://www.ci.gresham.or.us/departments/cedd/bia/industrial/brownfields.asp

The State of Oregon's Brownfields Redevelopment Fund is a direct loan and grant program to assist municipal and non-municipal applicants with environmental actions linked to site redevelopment that facilitates economic development or community revitalization. http://www.econ.state.or.us/brownfields.htm

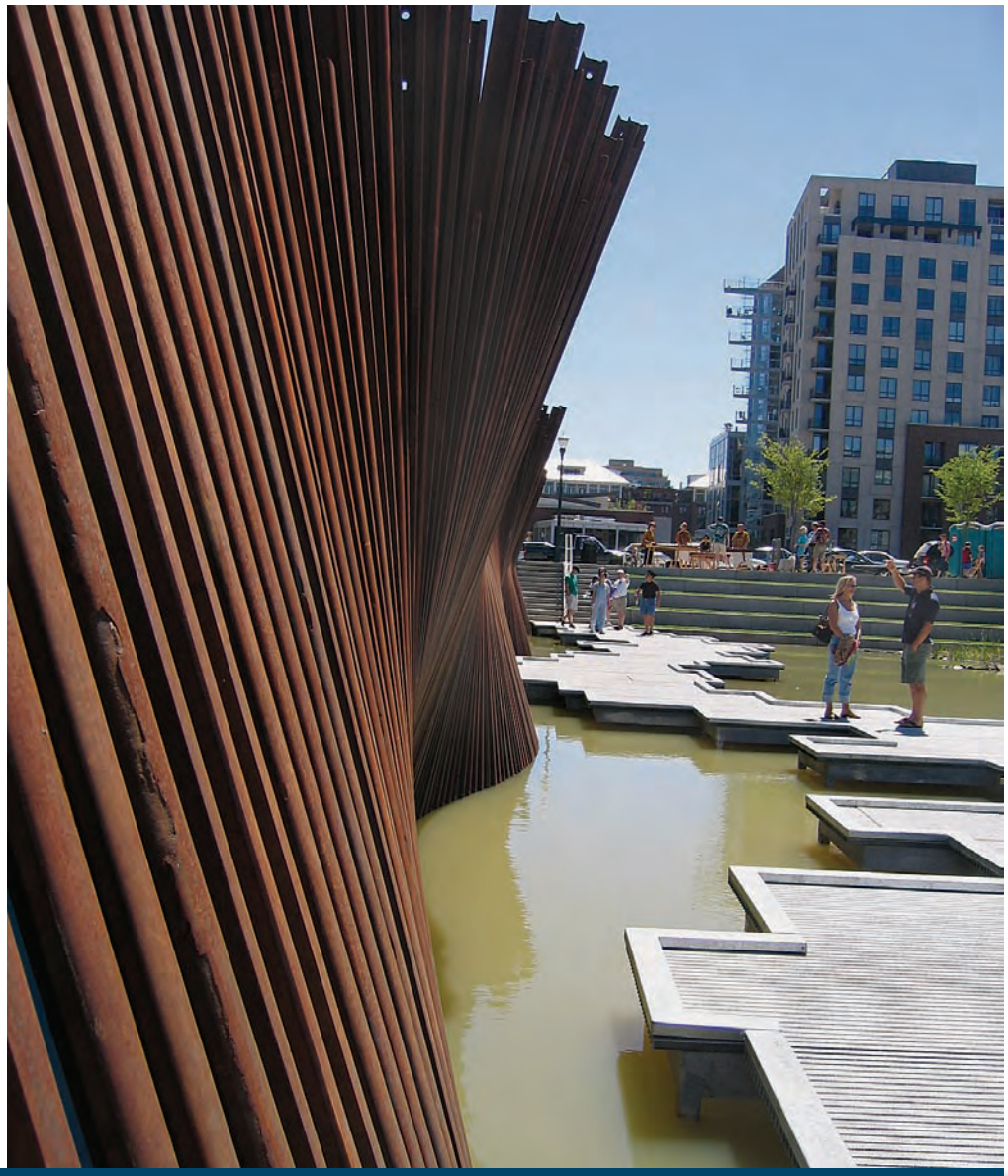
The Technical Outreach Services for Communities (TOSC) is a free program, housed at Oregon State University, that provides assistance to communities affected by environmental contamination. http://tosc.oregonstate.edu/

More information on EPA's Brownfields Cleanup and Redevelopment Program can be found online at http://www.epa.gov/brownfields

CERCLA §104(k) contains more detailed information on sites eligible for Brownfields funding. http://www.epa.gov/R5Brownfields/pdf/term_and_conditions_cleanup.pdf

Liability protection information for contiguous property owners and prospective purchasers can be found at http://www.epa.gov/compliance/resources/policies/cleanup/superfund/common-elem-guide.pdf

All appropriate inquiry information can be found at:
http://www.epa.gov/brownfields/regneg.htm
http://www.epa.gov/brownfields/aai/aai_final_factsheet.pdf



Tanner Springs Park in the Pearl District is part of the River District Urban Renewal Plan, City of Portland, Portland Development Commission

Toolkit

Financial incentives

Urban Renewal and Tax Increment Financing

In Oregon, urban renewal and its associated financial tool, tax increment financing (TIF), serve as a strong financial incentive to stimulate investment in targeted areas by borrowing against the projected increase in property values in those areas. Some of the region's centers, corridors, and employment areas suffer from a lack of investment due to a range of development risks that diminish confidence in investment returns, making them difficult to develop. Using TIF allows these areas to provide a substantial source of equity to make capital improvements and development projects financially viable while kick-starting private investments.

The nuts and bolts

Urban Renewal began as a federal program that offered municipalities federal loans and grants to redevelop communities and stimulate private investment in areas that otherwise would remain stagnant. In 1951, the Oregon Legislature enabled legislation for local urban renewal agencies. Voters approved a constitutional amendment in 1960, which authorized the use of tax increment financing to increase available local resources to match the federal urban renewal funds. In 1979, the Oregon legislature expanded the definition of "blighted" to make it relatively broad. This means central areas needing capacity improvements for their infrastructure as well as newly incorporated areas that are underdeveloped and lacking adequate infrastructure can both qualify as urban renewal areas.

Through TIF, the assessed value of real property within the defined area of investment is frozen and the authorized agency acquires capital by issuing bonds against the future projected increase in property taxes for that area. The bond proceeds are invested in improvements or projects within the area. Public and private investments in the designated area increase property values above the frozen assessment, and the tax revenue collected on the incremental property value is then used to service the bonded debt.

Urban renewal and the use of tax increment financing provide the region with a strong financial tool for spurring housing and mixed-use to help achieve the growth envisioned for our centers, corridors, and employment areas. Developers, citizens, local jurisdictions, and the region benefit from urban renewal, which is apparent when analyzing the applicability and financial impacts of the program as well as its effects on local communities in the region.

How to use it: Any municipality can benefit from tax increment financing if it establishes an urban renewal area, adopts an urban renewal plan, and manages these through an urban renewal agency consisting of the governing body or an independent organization. To be eligible:

- the urban renewal agency must complete an eligibility and feasibility study of an area
- an area must be defined by "blight," which consists of deteriorated buildings or lack of adequate infrastructure
- an urban renewal plan must contain goals and objectives, authorized projects, specific provisions for acquiring and disposing of land, expenditures, and a process for amending the plan
- projects must involve construction or improvement of streets, utilities, and other public uses; rehabilitation or conservation of existing buildings; acquisition and improvement of property; and/or resale or lease of property.

Oregon's statutes place limitations on the use of tax increment financing. This financial tool is limited to use within urban renewal areas. In addition, in municipalities with more than 50,000 people, according to the latest state census, the total land area of all the urban renewal areas using TIF in the municipality cannot exceed 15 percent of the total land area of that municipality, and the total assessed value for all the urban renewal areas using TIF in the municipality cannot exceed 15 percent of the total assessed value of that municipality (this excludes any increased assessed value for other urban renewal areas). For municipalities with less than 50,000 people, according to the

Success story

City of Sherwood

The City of Sherwood formed its Urban Renewal District on August 29, 2000 in order to rejuvenate the Old Town area. The goals and objectives of the Urban Renewal plan include promoting private development and performing arts; rehabilitating the existing buildings; and improving the streets, streetscapes, open spaces, local utilities, parking, and public facilities. In addition, the plan outlined an investment strategy for telecommunications infrastructure. This brought high speed Internet and free Wi-Fi hot spots into Old Town, which resulted in a business owner developing a multi-use building, relocating to Old Town, and increasing the tax rolls in the area. This represented the first building permit in Old Town in over forty years.

The City of Sherwood also worked with the school district in order to receive their support for the Urban Renewal area. Thus, the urban renewal plan included improvements for the local high school's playing fields and field house. Currently, the city has spent approximately $20 million of the $35 million generated through TIF on façade improvements, a civic building and library, street and utility improvements, high speed Internet hot spots, a multi-purpose facility for a field house and office space, a turf field for the high school, and the demolition and remediation of a blighted building in the city's Old Town.

New construction in Old Town sparked by the Urban Renewal Internet investment strategy, City of Sherwood

"The urban renewal process has been critical to Sherwood as we have revitalized our city's core. It has not only had a huge impact on our citizens, but, some of the projects made possible by urban renewal have had positive impacts on the region."

– Ross Schultz,
City Manager,
City of Sherwood

The nuts and bolts

latest state census, the total land area of all the urban renewal areas using TIF in the municipality cannot exceed 25 percent of the total land area of that municipality, and the total assessed value for all the urban renewal areas using TIF in the municipality cannot exceed 25 percent of the total assessed value of that municipality (this excludes any increased assessed value for other urban renewal areas).

Tax laws also place limitations on TIF. As a result of Measure 5 (1990), TIF is categorized as local government taxes subject to the $10 per $1,000 real market value tax limit. Measure 50 (1997) limits property taxes and results in 50 to 60 percent less revenue through TIF than under Measure 5. As a result, existing urban renewal plans were grandfathered and allowed to complete their projects without this limitation. Despite a decrease in revenue due to these tax measures, especially for new urban renewal areas, TIF remains a powerful financial tool for redevelopment projects.

Existing use of the tool in the region: In the Metro region, 10 of 25 cities and Clackamas County currently have urban renewal areas in place. In addition, three neighboring cities use urban renewal, and 11 of the 2040 centers are located or partially located within an urban renewal area. Urban renewal programs in the region have revitalized deteriorated communities, produced catalyst projects, and completed significant public improvements. The Portland Development Commission has received national recognition for its ability to provide extensive public improvements such as Tom McCall Waterfront Park, Pioneer Place, and Union Station. Despite the successful use of this tool, many jurisdictions within the region are not using urban renewal at all or to the capacity allowed by state law as shown in Table 1.

Table. 1. Use and capacity of urban renewal in the region[5]

Jurisdiction	Percent allowed in UR areas	Percent of total land in UR areas	Percent of assessed value in UR areas	Percent UR capacity used
Portland	15%	14.0%	9.4%	93.5%
Wilsonville	25%	22.1%	2.7%	88.5%
Sherwood	25%	19.2%	9.4%	77%
Gladstone	25%	18.1%	14.5%	72.4%
Gresham	15%	8.1%	7.4%	53.8%
Oregon City	25%	14.2%	2.7%	69.4%
Tualatin	25%	13.9%	.7%	55.5%
Unincorporated Clackamas Co.	15%	3.1%	.4%	20.8%
Tigard	25%	2.5%	not available	10.2%
Lake Oswego	25%	2.3%	1.0%	9.1%
Troutdale	25%	1.5%	not available	6.2%

5. The table shows the local jurisdictions in the region using urban renewal, the capacity (in percent) allowed by the state for that jurisdiction, the percentage of total land area designated within urban renewal areas for each jurisdiction, the total percent of the jurisdiction's assessed value that is within its urban renewal areas, and the remaining capacity for the use of urban renewal within the jurisdiction. The capacity used is measured by the percentage each jurisdiction is using of its total urban renewal capacity allowed in urban renewal areas.

Success story

Oregon City

The City of Oregon City established its urban renewal plan in 1983 and has two urban renewal districts: the Hilltop Urban Renewal District and the Downtown/North End Urban Renewal District. The plans' strategies focused on promoting activities, transportation, parks and open spaces, redevelopment assistance, civic improvements, infrastructure, property acquisition and planning and administration. The plan also established the maximum debt level for the urban renewal areas by estimating projects costs, the increment of increased value, and bonding and borrowing capacities.

Oregon City established the Hilltop District in 1989 and discontinued the area as an Urban Renewal district in 2005. The city estimated the net assessed value of the Hilltop District grew from $5 million to $65 million during this time period. A significant improvement in this district was the improvement and expansion of Beavercreek Road through TIF and funds from SDCs and Public Works.

The city established the Downtown/North End Urban Renewal District in 1990 in its 2040 Regional Center. Thus far, the city estimates the net assessed value of the Downtown/North End District grew from $50 million to $132 million with tax revenues increasing approximately $2.2 million. Objectives specific to this area include mitigating blighted conditions on an old landfill site, cultural and historical rehabilitation, and achieving 2040 Regional Center goals. The Seventh Street Corridor project provided a significant improvement to this district resulting in dozens of storefront improvements, additional restaurants, and a renewed interest in Oregon City. With matching funds from the Oregon Department of Transportation and the Metropolitan Transportation Improvement Program, the district's next major project encompasses significant improvements to McLoughlin Boulevard and the Riverfront.

"Urban renewal districts provide a creative way for cities to invest in their future by using long term public funding to leverage private investment for projects that can transform a community to a more livable place. These projects often include downtown redevelopment, affordable housing, infrastructure improvements and economic development."

– Dan Drentlaw,
Community Development Director,
City of Oregon City

Transportation improvements and historic rehabilitation completed in Oregon City's Urban Renewal districts, City of Oregon City

The nuts and bolts

The map on page 47 shows regional capacity for urban renewal by land area. It depicts what percentage each jurisdiction is using of its total urban renewal capacity by land area. The jurisdictions represented in white use zero percent of their capacity, as they do not have urban renewal areas, and therefore have 100 percent of their capacity available, whereas the jurisdictions with the darkest shade are close to meeting their urban renewal capacity allowed by state law.

The city and county capacity by assessed value is not depicted on the map. According to state law, the use of urban renewal cannot exceed the same percentage in either land area or assessed value within a jurisdiction. In the Metro region, the percent of total land area in urban renewal areas exceeds the percent of total assessed value in urban renewal areas for every jurisdiction in the region as shown above in Table 1. Thus, at this time, the capacity for urban renewal for each jurisdiction is measured by the difference between the total land area currently in urban renewal areas and the percent allowed by state law for each jurisdiction.

Keep in mind. . .

- **Fiscal impacts:** By establishing an urban renewal area, local jurisdictions can use tools such as low-interest loans and selling land at "fair reuse value" in order to lower redevelopment costs and stimulate activity in disinvested urban and non-urban areas. Tax increment financing provides an immediate funding source, which can leverage additional sources of revenue and private sector partnerships in order to complete important or more extensive public improvement projects. However, some communities lack the economy to gain enough of an increment to finance any consequential redevelopment. Alternatively, unnecessary subsidies for the private sector could occur if too much land is included in an urban renewal area or if the market is nearly ready to invest in that area.

- **Taxing districts:** Local taxing districts, such as schools and fire departments, do not gain revenue from the increase in tax value for the properties located in an Urban Renewal area until the program expires even though the urban renewal improvements often add new customers that the local districts need to serve. Therefore, these taxing districts sometimes oppose urban renewal in their communities. Jurisdictions in this region have resolved this opposition by including projects for the taxing districts in the urban renewal plan. Another local solution, used by the City of Wilsonville, is to periodically modify the urban renewal area boundaries to return properties back to the tax rolls at their total assessed value, and thus, provide the taxing districts with additional tax revenue before the completion of the urban renewal plan.

  Local experts and practitioners have discussed other approaches that would require modifications of the existing law. One solution would allow certain taxing entities to opt out in order to get the urban renewal area approved. Another would limit the tax increment to the improvements only, which would allow the taxing entities to capture revenues from the increased land value. Taxing entities could also collect the share of the

Success story

City of Tualatin

The City of Tualatin established its first Urban Renewal area in 1975 with the adoption of the Central Urban Renewal Plan. Initially, the city adopted urban renewal to alleviate blighted conditions in the city's core caused by a manufacturing industry within the commercial district. Over the years, the city expanded the original Central Urban Renewal area and attempted to develop a Village Square during the late 1980's. The city turned to community members for input and received clear direction for a pedestrian oriented downtown with a strong civic focus.

The result of this engagement was the Tualatin Commons development at the heart of the Central Urban Renewal District. Tualatin Commons consists of a mix of restaurants, office buildings, a hotel, townhomes and apartments, and open space surrounding a 3-acre lake. The city's plan for this area also outlines future improvements to remove blight and to further ensure the vitality of the Tualatin Commons and downtown area including projects to add pedestrian crossings, and enhance the streetscape and signage. The city's last amendment of the Central Urban Renewal plan occurred on May 22, 2002.

Tualatin adopted a second urban renewal area in 1982, the Leveton Tax Increment District. The city annexed a large area of land located west of the existing city limits in order to provide the level of infrastructure and services necessary to support appropriate industrial development. The city wanted the area for a highly demanded campus-like industrial development. The area provided a significant opportunity for this with its single property owner, relatively flat landscape, and accessibility within the region. The city established an urban renewal area in order to use tax increment financing to add services such as sewer, water and roads to the annexed area, which was blighted, underdeveloped, and faced a variety of physical and economic obstacles to its future use. The result is the Tualatin Business Campus, significant infrastructure investment, and an opportunity for the city to recruit businesses.

Tualatin Commons, a project located in Tualatin's Urban Renewal area, City of Tualatin

"Tualatin lacked a strong identity of its own and was in danger of becoming simply an ordinary suburb—that is, until a combination of circumstances and vision and hard work led to a solution: the development of a central place, a downtown, a civic "living room" on a 19-acre site. This new city center has given Tualatin a unique and positive identity. Its realization testifies to the power of a true public-private partnership."[6]

— Dave Leland, Developer

6. Unsprawl Case Study: Tualatin Commons, Oregon. http://www.terrain.org/unsprawl/4

Keep in mind. . .

revenue from increased improvement values that is tied to the rate of inflation. In addition, expanding the costs allowed under urban renewal to allow local jurisdictions to provide items such as fire trucks and park maintenance would reduce the costs of and opposition from local taxing districts. Finally, a change to current law that would allow a pass through agreement to provide resources to the local taxing districts after a certain time period, but before the end of the urban renewal period.

Housing choices: Urban renewal is an effective program with the potential to help achieve a number of public policy objectives. Through local legislation a portion of TIF revenue can be dedicated to a specific policy objective, including the provision of affordable housing. The Portland Development Commission and the City of Portland, guided by the city's Comprehensive Plan Housing Policy, adopted policy (Ordinance No. 180547) that dedicates 30 percent of TIF revenue over the life of all city urban renewal districts for the sole purpose of developing, rehabilitating and preserving housing for households with incomes below 100 percent of median family income.

While the Portland 30 percent TIF set aside is applicable to all urban renewal districts, proposed income guidelines under consideration as of January 2007 would allow variation between districts in the allocation of revenues to housing units serving 0 to 30 percent, 30 to 60 percent, and 60 to 100 percent of median family income. However, it should be noted that the proposed income guidelines would require a minimum threshold expenditure on housing serving 0 to 30 percent median family income and cap expenditure on housing serving 60 to 100 percent median family income. Flexible income guidelines allow for a more targeted approach that considers housing policy objectives for each individual district.

Community: Although new urban renewal areas commonly incorporate community involvement as an integral component to their plans, some of the first urban renewal programs in the country cleared large areas, demolishing entire neighborhoods, in order to rebuild these areas. This can still stir up fear and opposition to new urban renewal programs. In addition, defining an area as "blighted" can carry a negative stigma. Furthermore, many urban renewal programs lead to and do not reduce the impacts of gentrification, and therefore, current residents oppose urban renewal in fear of their eventual displacement. In this region, some jurisdictions also have provisions in their charters requiring voter approval for urban renewal areas or even prohibiting the use of urban renewal due to previous community opposition.

Some jurisdictions in the region have resolved community issues by limiting the use of eminent domain, remaining transparent and honest through the urban renewal planning and development processes, working with and gaining the support of the local fire departments and school districts, and by demonstrating the jurisdiction's current and past planning and development successes to the local citizenry.

Flexibility: While tax increment financing was authorized in Oregon as an urban renewal financing method, many other states have enacted legislation that permits the use of TIF as a funding mechanism for local jurisdictions to finance redevelopment in other areas. Using TIF independently from urban renewal would enhance the flexibility of this tool in the region. Jurisdictions could continue to use urban renewal as a powerful redevelopment tool but could also use TIF for other areas and development oppor-

tunities where it is important to remove the additional barriers associated with urban renewal.

Some situations in which TIF can be used outside of urban renewal include:

- in non-blighted areas that may just need infrastructure improvements
- in small business districts where setting up a separate urban renewal agency and plan would be unmanageable but the area needs upfront financial assistance to improve the area and attract additional revenue
- and in communities where urban renewal would face opposition.

Using TIF independently also allows site specific and small TIF districts as opposed to the traditionally large urban renewal areas.

These small TIF districts often face less opposition from local taxing districts because the opportunity cost of forgone incremental tax revenue is less than in a large urban renewal area. Despite consisting of small areas that generate less tax increment for investment, many main street programs and business improvement districts have successfully used TIF to make important streetscape, façade, and infrastructure improvements to attract and retain development, commercial tenants, and pedestrian and consumer activities. Using TIF separately from urban renewal would allow additional communities in the region, particularly those in centers and along corridors, to use TIF to encourage additional development. In order to take advantage of this financial tool in these situations, legislative authority would need to change state statute by adding a section defining redevelopment areas and enabling the use of TIF in such defined areas.

Tax increment financing helped fund the redevelopment of the Heritage Building (before, left and after, right) in the Convention Center Urban Renewal Area, City of Portland, Portland Development Commission

Putting it together

Urban renewal provides a powerful financial tool that can enable redevelopment projects to improve local infrastructure, revitalize communities, and spur additional investments to the area. In this region, jurisdictions of various sizes and attributes have experienced great success from using urban renewal.

As outlined by Tashman Johnson, LLC, most successful urban renewal plans in Oregon are rooted in a clear vision for the area, contain a re-evaluation process, link to adopted community plans, provide flexibility to take risks, anticipate and resolve controversial issues, maintain honesty with the local citizens, and leverage other resources.[7] Likewise, projects including a mix of residential and industrial or commercial uses generate the greatest increment and more fully revitalize a community.

Tips for implementing urban renewal and tax increment financing at the local level:

- Use urban renewal and TIF in centers, corridors, and employment areas to make important infrastructure and redevelopment projects possible or more extensive.
- Determine the financial capability for establishing an urban renewal area/TIF district.
- Calculate the estimated time needed to generate enough of a tax increment to service the debt on the first project.
- Analyze community reception to urban renewal/TIF and resolve any issues in order to make urban renewal/TIF districts possible in the local jurisdiction.
- Work with special taxing districts to alleviate their concerns and establish support for the urban renewal area/TIF district and plans.
- Consider setting aside a portion of the tax increment to finance public goods and social infrastructure such as affordable housing.

7. Tashman Johnson, LLC (2002). Urban Renewal in Oregon: History, Case Studies, Policy Issues, and Latest Developments.

Success story

Other states

The State of Michigan uses tax increment financing independently as a powerful financing tool for various re-investment programs. State law authorizes four TIF authorities. Downtown development authorities focus on business and main street districts. A general TIF authority is broader and focuses on all types of urban neighborhoods. Both capture the tax increment within the set plan boundaries. A local development financing authority focuses on employment and economic growth and captures the tax increment on each eligible property or within certified business and technology parks, and a brownfields authority focuses on brownfield redevelopment zones capturing the tax increment for each of the brownfield parcels included in the brownfields plan (one or more parcels). A city can set up more than one TIF authority, but only one of each type. Each authority has a slightly different focus, but the general purpose for all of them is not to reinvest in blighted areas, but to prevent deterioration and promote economic development, revitalization and historic preservation in all areas.

The State of Massachusetts also uses tax increment financing separate from Urban Renewal through the Development Improvement Financing program. Cities and towns are eligible to utilize this financing alternative without qualifying the district as blighted, substandard, or economically impaired. A city or town first designates a development district and a corresponding development program, which must be certified by the state. Each district must have an implementation and financial plan for infrastructure and development improvements. A development district may be as small as one parcel or may comprise up to 25 percent of a town or city's land.

The State of Vermont established a new Tax Increment Financing District Program in 2006 despite a different political environment than when most TIF programs were established in the 1970's and 1980's. The program was companion legislation to their growth centers program in order to provide a new financial mechanism for municipalities to fund infrastructure improvements, such as sewer and parking, within their growth centers. The purpose is to provide revenues for improvements in the district, which will stimulate development, employment, and economic vitality without a requirement for "blight" in the community. Eligible communities are expected to be able to submit applications for TIF District designation beginning in 2007.

Resources

For additional information on urban renewal in Oregon, and to link to additional Urban Renewal Resources, visit:

The Association of Oregon Redevelopment Authorities
http://orurbanrenewal.org/

For more information about local programs, visit:

City of Portland
222 NW Fifth Ave., Portland, OR 97209
(503) 823-3200
http://www.pdc.us

City of Sherwood
22560 SW Pine Street, Sherwood, OR 97140
(503) 625-4202
http://www.ci.sherwood.or.us/index.html

City of Oregon City
P.O. Box 3040, 320 Warner Milne Road, Oregon City, OR 97045
(503) 657-0891
http://www.orcity.org/

For information on programs using TIF separately from urban renewal, visit:

The Council of Development Finance agencies
http://www.cdfa.net/cdfa/cdfaweb.nsf/pages/tifstatestatutes.html

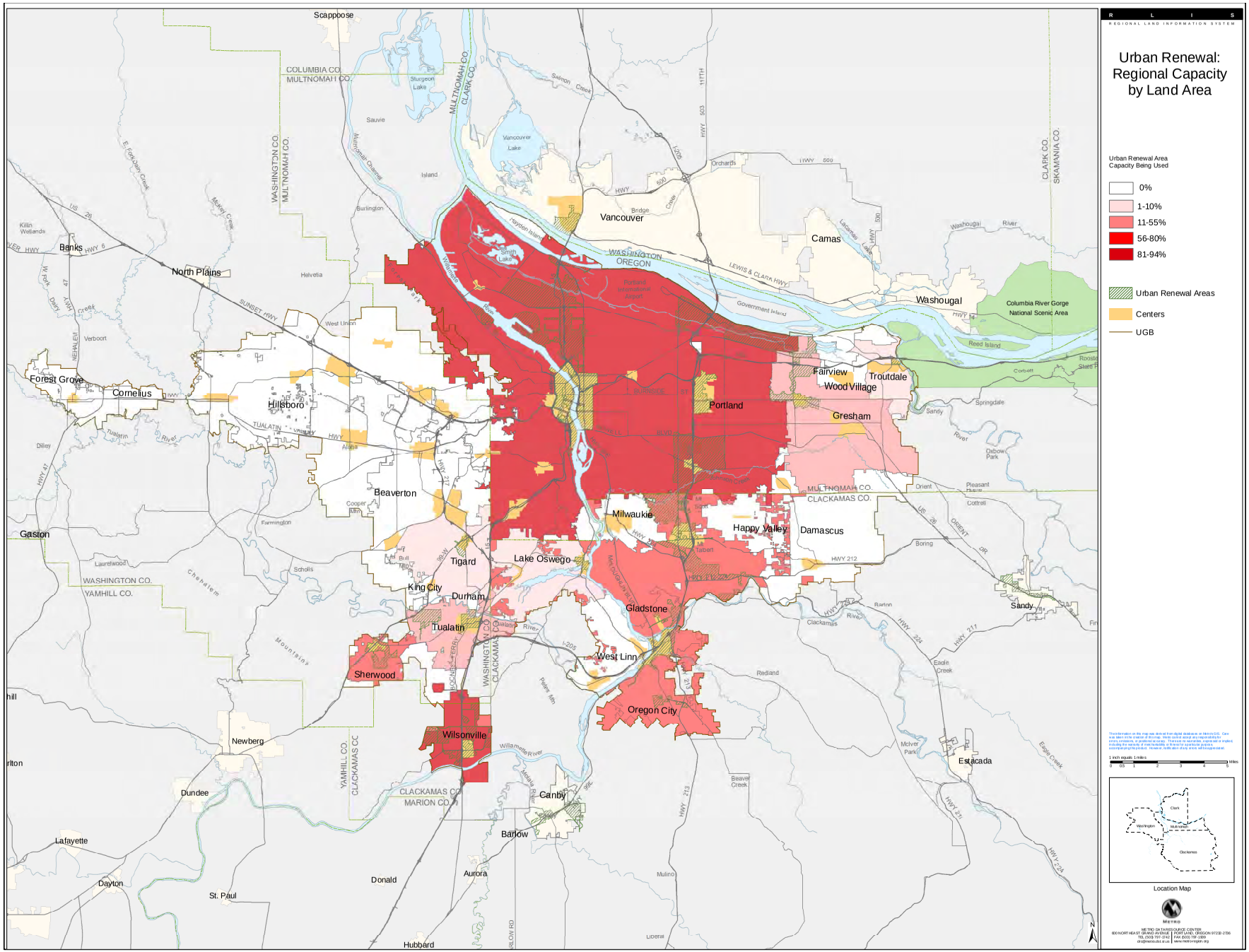
State of Michigan TIF Authorities
Citizens Research Council of Michigan
Livonia Office: (734) 542-8001 • Lansing Office: (517) 485-9444
http://www.crcmich.org/EDSurvey/toc.html#fpta

Massachusetts TIF Program
http://www.mass.gov/envir/smart_growth_toolkit/pages/mod-diftif.html

Vermont TIF District Program
Department of Economic Development
Vermont Economic Progress Council
National Life Building, Drawer 20
Montpelier, VT 05620-0501
(802) 828-5256
http://www.thinkvermont.com/vepc/index.html

For more specific details on the statutory guidelines of urban renewal and TIF in Oregon, visit:

ORS Chapter 457 at http://www.leg.state.or.us/ors/457.html


R L I S
REGIONAL LAND INFORMATION SYSTEM
Urban Renewal: Regional Capacity by Land Area
Urban Renewal Area Capacity Being Used
0%
1-10%
11-55%
56-80%
81-94%
Urban Renewal Areas
Centers
UGB
Location Map
Scappoose
Vancouver
Camas
Washougal
Columbia River Gorge National Scenic Area
Banks
North Plains
Forest Grove
Cornelius
Hillsboro
Beaverton
Gaston
Tigard
Lake Oswego
King City
Durham
Tualatin
Sherwood
Newberg
Dundee
Lafayette
Dayton
St. Paul
Donald
Aurora
Hubbard
Wilsonville
Canby
Barlow
Oregon City
West Linn
Gladstone
Milwaukie
Portland
Fairview
Troutdale
Wood Village
Gresham
Happy Valley
Damascus
Sandy
Estacada
Mulino
Beavercreek
Redland
Eagle Creek
Springdale
Orient
Pleasant Hill
Cottrell
Boring
Scholls
Laurelwood
Farmington
Cooper Mtn.
Bull Mtn.
Helvetia
Verboort
West Union
Burlington
Sauvie Island
Government Island
Reed Island
Corbett
Orchards
Bridge
Smith Lake
Vancouver Lake
Sturgeon Lake
Killin Wetlands
Dilley
Alsea
Oxbow Park
Metzger Park
Mt. Talbert
Mt. Scott
Peters Mtn.
Mclver Park
Rarton
Clackamas River
Willamette River
Tualatin River
Yamhill River
Molalla River
Salmon Creek
Multnomah Channel
Tanner Creek
Johnson Creek
Chehalem Mountains
Hayden Island
Smith and Bybee Wetlands
Portland International Airport
WASHINGTON CO.
MULTNOMAH CO.
CLARK CO.
SKAMANIA CO.
COLUMBIA CO.
YAMHILL CO.
CLACKAMAS CO.
MARION CO.
WASHINGTON
OREGON
LEWIS & CLARK HWY
SUNSET HWY
TUALATIN VALLEY HWY
BURNSIDE ST
POWELL BLVD
ORIENT DR
HWY 212
HWY 224
HWY 213
HWY 99W
HWY 43
HWY 47
HWY 6
HWY 26
HWY 30
HWY 500
HWY 503
HWY 14
I-5
I-205
Urban Renewal: Regional Capacity by Land Area
Financial incentives: urban renewal
June 2007
47

The Hillsboro City Council approved a LID in August 1996 to build pedestrian and streetscape improvements as well as transit amenities to implement the vision of the downtown light rail improvements, City of Hillsboro

Toolkit

Financial incentives

Improvement Districts (LIDs, BIDs and EIDs)

By establishing Improvement Districts, local jurisdictions can provide another incentive for investment in centers, corridors and employment areas. Improvement districts fund integral physical and visual improvements as well as the activities needed to maintain these vibrant, healthy neighborhoods and to attract additional development, investment and public use.

The nuts and bolts

Improvement districts are assessment districts in which property owners choose to be assessed a fee, which is collected on their behalf by the local jurisdiction in order to finance local improvements or to promote a business area. Slight differences exist between Local Improvement Districts (LIDs), Economic Improvement Districts (EIDs), and Business Improvement Districts (BIDs).

These improvement districts provide communities with a financial tool to pay for infrastructure and program management activities that support the growth envisioned for our centers, corridors, and employment areas. Developers, citizens, local jurisdictions, and the region benefit from the use of improvement districts, which is apparent when analyzing the applicability and manageability of the program as well as its effects on local communities.

Table. 2. Improvement districts: types and attributes

Improvement district	Funding source	Finances	Approval source	Time period	Jurisdictional use
Local Improvement District (LID)	Fee collected from property owners	Infrastructure improvements	Ordinance or resolution by local jurisdiction	Until project debt is fully paid	Cities of Beaverton, Cornelius, Forest Grove, Gladstone, Hillsboro, Oregon City, Portland, Tigard and Wood Village; Clackamas and Washington counties
Economic Improvement District (EID)	Assessment to property owners of businesses	Non-physical revitalization programs and projects	City council approval	Five years; renewal option	City of Gresham
Business Improvement District (BID)	A fee or surcharge to the business owner on the business license	Non-physical revitalization programs and projects	City council approval	Five years; renewal option	City of Portland
Economic and Business Improvement District combined	Assessment to property owners and a fee or a surcharge to the business owner	Non-physical revitalization programs and projects	City council approval	Five years; renewal option	Cities of Portland and Milwaukie

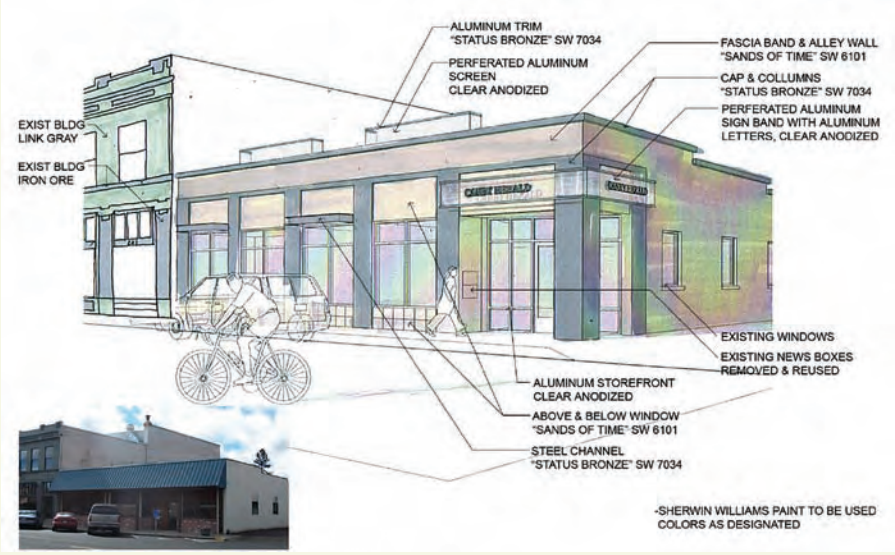
Success story

City of Canby

The City of Canby has an EID, which funds the operation of Canby Business Development (CBD) through assessments to commercial and industrial property owners. CBD is a nonprofit organization, started in 1994, which promotes and develops Canby's commercial and industrial areas while supporting continued revitalization efforts. The organization provides information and assistance to new and existing commercial and industrial businesses regarding development resources and available properties, as well as providing market, promotional, and technical materials and support.

In addition, CBD works with the Canby Urban Renewal District Agency to provide and implement projects such as a Commercial Market Analysis, Canby Downtown/Highway 99E Design Standards Project, Redevelopment Grant Program, and the Canby Façade Improvement Program. The Façade Improvement Program provides matching grants for design work and zero-interest loans for construction activities. The first project assisted by the Façade Improvement Program is the Canby Herald building, which is in the permit stage of development. The city's Urban Renewal program also provides funds to the CBD for the Redevelopment Grant program. The program provides financing to property owners in the downtown area in order to hire an architect and create a redevelopment plan for that property. Last year, the program awarded four grants. Three of these grants have advanced into $20 million in development projects.

The EID in Canby is a great example of how partnerships between agencies and the collaboration of financing can result in significant developments in a community. The City Council, the local Chamber of Commerce, and the Canby Business Development each have a role in the various projects. This combined effort of management and financing makes the programs feasible and successful.



The Canby Herald building with renderings of the facade improvements, Canby Business Development Facade Improvement Program, City of Canby

"I am an advocate of Economic Improvement Districts because they provide a stable funding source that allows staff to work for at least three to five years focused on specific projects rather than on fundraising. In Canby, the EID has been a great tool for marketing and recruitment of companies in the industrial park and revitalization projects in the downtown, because staff can focus on marketing and development efforts and responding to business inquiries."

– Catherine Comer,
Executive Director,
Canby Business Development

Improvement districts

The nuts and bolts

Local Improvement Districts collect fees to pay for infrastructure improvements including new construction or the reconstruction of deteriorated facilities such as storm and sanitary sewers, street paving, curbs, sidewalks, water lines, recreational facilities, street lighting, and off-street parking. The local jurisdiction determines the cost to develop the improvements in order to establish the fee collected from the local property owners. The following are characteristics of a LID:

- State statute outlines collection guidelines for the assessments, but local governments (cities and counties) may impose additional procedural requirements.
- Many jurisdictions choose not to establish LIDs unless initiated by local property owners.
- If a jurisdiction initiates and imposes the assessment for local improvements, owners of any property charged may seek a review of the assessment.
- If a local government reaches its taxing limits imposed by Measures 5, 47, or 50, the LID needs voter approval for the city to issue LID bonds for particular projects.
- Payment continues until the debt from the project is paid.

Economic Improvement Districts are similar to Local Improvement Districts but are meant to fund non-physical projects as part of a revitalization program including business retention and recruitment, planning, promotion and marketing, maintenance, and management. It can also fund landscaping and the maintenance of public spaces as well as improvements in parking systems or parking enforcement. EIDs may determine the assessment fee in a variety of ways. Examples include basing the assessment on the value of the property, the amount of square footage of the parcel, linear footage of the storefront, or the assessed or market value of the building. In any year, the total assessment cannot exceed one percent of the real market value of all the real property located within the district.

Business Improvement Districts are similar to Economic Improvement Districts in what they fund as part of a revitalization program including business retention and recruitment, planning, promotion and marketing, landscaping, parking facilities, maintenance, and management. The difference is that the business owner pays a fee or a surcharge on the business license in a BID. As with an EID, the BID can establish various assessment criteria. Examples include the number of employees or the gross revenue of the business. BIDs may be voluntary, meaning a business can opt out, or involuntary.

Characteristics of Business Improvement Districts and Economic Improvement Districts are as follows:

- Only commercial properties may be assessed within the district.
- Only cities can establish a BID or EID, and the city council establishes the district.
- The district may continue for a maximum of five years; but it may be renewed indefinitely.
- Assessed properties decide the district boundaries, assessment formula, budget, and program.
- After the city council determines the amount of the assessment for each property in the district, property owners may object at a public hearing, and the council shall reconsider and may adopt, correct, or modify the proposed assessments.
- If property owners equaling more than 33 percent of the total assessment object, the council shall not pass the district; cities can choose to lower this percentage.

- A city council may choose to make the district voluntary or involuntary: voluntary means the council will waive the fee from those property or business owners objecting to the assessment, and involuntary means all property or business owners are obligated to pay the assessment fee if the district passes; however, a new owner of that property may agree to the assessment later, and the council must reapportion the assessment fees.
- Assessed property remains subject to assessment even after change of ownership.

Another option for improvement districts is to combine an EID and a BID to provide a more comprehensive funding mechanism for downtown revitalization projects. In addition, the existence of local improvement districts or urban renewal districts in a city does no affect the creation of an EID or BID.

How to use it: Typically local property and business owners benefiting from and paying for the improvements initiate improvement districts. Then they request, or petition, the city to establish a funding district on their behalf. Once the city council approves an enabling ordinance, the improvement district proposal or plan is sent to all affected property owners. The council then conducts public hearings. If there is no significant opposition from affected business and property owners, the council generally approves the improvement district. On average, passing a new improvement district can take a minimum of 10 to 12 months.

Steps to implement an improvement district successfully include:[8]

- forming a district committee composed of local owners and representatives from local organizations and government involved in downtown development ready to commit the time needed to form the district
- selecting the right funding mechanism for the district
- working with city staff to define roles and responsibilities in the collection process once the district passes
- setting well-defined and achievable goals for the local owners
- developing a district proposal, which establishes an assessment method and budget, designates boundaries, outlines organization programs and funding needs, and accounts for political and financial realities present in the area
- gathering support through local organizations, leaders and chamber of commerce
- administering the district program as outlined in the proposal
- highlighting achievements, involving owners and keeping owners informed for long-term management and district renewals.

Existing use of the tool in the region: Several local governments in the region currently use LIDs. These include: Beaverton, Cornelius, Forest Grove, Gladstone, Hillsboro, Oregon City, Portland, Tigard, Wood Village, Clackamas County, and Washington County. In addition, Wilsonville, Lake Oswego, and Sherwood have had LIDs in the past, but do not currently have active districts. This level of use reflects the widespread knowledge of LIDs and the benefits of their use to meet specific goals especially in the region's downtown areas. However, far fewer EIDs and BIDs operate within the region. The City of Portland has a BID and the City of Gresham has an EID. The City of Portland and the City of Milwaukie both have a combined EID/BID.

8. Oregon Downtown Development Association (1999). The EID/BID Handbook.

Keep in mind. . .

Fiscal impacts: Local Improvement Districts provide a source of funding for infrastructure improvements. LID bonds also increase the financial security for private developers by sharing the risk of new development with the local government and taking advantage of lower government interest rates. However, it is difficult for low-income areas to establish and maintain an improvement district. Nonetheless, the Lents neighborhood in Portland made a LID feasible by combining the property owners' contribution with a TIF contribution from the local urban renewal area. The City of Canby also combines funds from the BID and the urban renewal area to finance some of its economic development programs.

LIDs can also carry a significant financial risk. The final expenses for the infrastructure improvements remain unknown until a design is developed. If the project turns out to be expensive, this can cause the LID process to fall apart. This presents a huge risk to the party that initially put forth the money for the design process. Established LIDs also face the risk of property owners not being able to pay the fee in the future. The ultimate responsibility to pay this debt falls upon the local government bond issuer. According to state statute, assessments shall become a lien upon the property. Thus, a transfer of the property is subject to the lien, and the local government may cause the real property to be sold to collect unpaid assessments after one year from the due date of the assessment. This process and its implications can often cause a city council to deny a LID even if there is 100 percent support from the currently affected property owners.

Administrative: A city may find that managing several Local Improvement Districts at any one time is a cumbersome process. To resolve this issue, some jurisdictions in the region streamlined the LID process by using development agreements instead. This requires the developer to pay for the infrastructure improvements up-front at time of development. If the developer is not the sole owner, then the city collects payment from property owners as they move into the new development and returns these funds to the developer. The city can also incorporate the cost of staff time spent administering the LID into the assessment fee, which compensates the city for their work, but also increases the cost to the owners and decreases the feasibility of the LID.

Community: LIDs provide a source of funding for much needed and deteriorated infrastructure, and these improvements can increase the safety and value of the neighborhood. However, LIDs take strong commitment and consensus from the local property owners. It is very difficult for the property owners to come to a consensus on the improvements, how to complete them, and how much money they are willing to spend. In addition, this process can take months to complete. Regional representatives with experience establishing improvement districts also highlight the importance for a local jurisdiction to work on a marketing strategy for a BID or EID with the local property owners to shape the message before beginning promotion throughout the broader community. This can take a lot of one-on-one meetings with various groups to get the support needed to make these districts work.

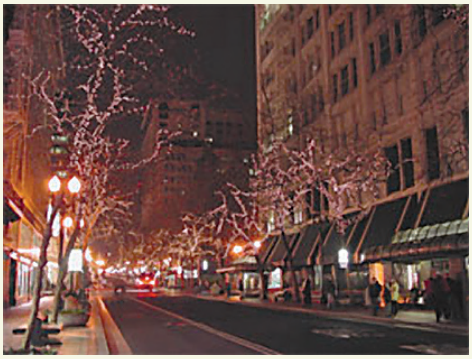
The voluntary EID and BID also present an important equity issue in the community. The property owners that opt out of paying for the improvements or services still receive the benefits paid for by the other owners in the district because of their location.

Success story

City of Portland

Downtown Portland's Business Improvement District (BID), one of the oldest, largest and most successful BIDs in the nation, encompasses a 213-block area of downtown Portland. Businesses within this district tax themselves to raise money that supplements publicly financed services for neighborhood improvement.

Portland's BID funds the Downtown Clean and Safe Program, which provides cleaning, security and community justice services downtown; the Downtown Retail and Marketing Program, which focuses on market research, retail advocacy, marketing and communication; and the Sidewalk Ambassador Program, which offers information and assistance to downtown visitors. The BID has been in place since 1988.[9]



Through the Downtown Retail and Marketing Program, Portland's BID funds the annual tree lighting and provides lights for the festive holiday season in downtown Portland

The City of Portland's Business Improvement District boundaries, http://www.portlandalliance.com

9. Portland Business Alliance (2006). http://www.portlandalliance.com

"Downtown property owners have been focused over the last year on public safety, and this reduction in crime shows that these efforts are working. We have seen a very positive impact downtown from our Clean and Safe Program and our work with Mayor Potter on public safety issues."

– Sandra McDonough, President and CEO, Portland Business Alliance

Putting it together

Improvement districts provide an important mechanism to complete needed infrastructure improvements or to promote additional investment in a business area. This is apparent by the extensive use of these districts throughout the entire metro region. Jurisdictions of varying size and characteristics use these districts to make targeted investments and improvements in their local communities. The representatives from these areas consistently expressed that improvement districts are most successful when established for small, very localized projects due to the nature of the issues that can arise when establishing these districts and since this financial incentive is initiated and managed locally.

Tips for implementing improvement districts at the local level:

- Expand the use of improvement districts in centers, corridors, and employment areas.
- Market improvement districts by focusing on promoting the ideas and vision for the area and by highlighting the different benefits, including financial advantages, of the new investments.
- Develop outreach and resolution strategies to work with local property owners to establish consensus and implement and maintain LIDs, BIDs, and EIDs.
- Identify sources within your jurisdiction that can provide a matching fund to the assessment fees, especially to cover the costs associated with staff work time.
- Consider whether a voluntary or involuntary BID is most appropriate given the specific circumstances and try to find additional ways to resolve the equity issues that may arise from a voluntary BID.
- Explore less risky ways to fund the design work costs and upfront investments.

Resources

For additional information or to seek technical assistance in implementing a BID or EID in your jurisdiction, contact

Oregon Downtown Development Association
161 High St. SE #236
Salem, OR 97301
(503) 587-0574
http://www.odda.org/

For more information about local programs, eligibility, and technical support, visit:

City of Portland
Portland Business Alliance
200 SW Market St., Suite 1770, Portland, OR 97201
(503) 224-8684
http://www.portlandalliance.com/

City of Portland
Office of Transportation
1120 SW Fifth Ave., Rm 800, Portland, OR 97204
(503) 823-5185
http://www.portlandonline.com/transportation/index.cfm?c=35715

City of Canby
Canby Business Development
PO Box 438
253 NW Second Ave., Canby, OR 97013
(503) 266-3720
http://www.canbydevelopment.com/

For more specific details on the statutory guidelines, see:
ORS Chapter 223.387-223.401 (LIDs), 223.112-223.132 (EIDs), and 223.141-223.161 (BIDs)
http://www.leg.state.or.us/ors/223.html

Bioswale at the New Columbia housing development controls stormwater runoff, one way to reduce stormwater system development charges, City of Portland

Toolkit

Financial incentives

Impact-based System Development Charges

Creative approaches for applying System Development Charges (SDCs) can serve as a financial incentive for more efficient provision of facilities and services, to manage urban growth and reduce urban sprawl, and to encourage infill development. Cities and counties can restructure their SDC methods and fee schedules to more accurately capture the costs of infrastructure development, determine charges reflective of the impact of different development patterns, and promote development consistent with the 2040 Growth Concept Plan.

SDCs

The nuts and bolts

System Development Charges (SDCs) provide a mechanism for local governments to pay for infrastructure needs associated with growth without raising taxes or fees for services. Government entities levy SDCs against developers at the time of development to cover the additional costs to serve the new development. Oregon law allows the collection of SDCs for only five types of infrastructure: water, wastewater, stormwater, transportation, and parks and recreation.

SDCs provide the most common source of funds for capital improvements in Oregon. However, most cities and counties assess a uniform SDC throughout the jurisdiction without consideration for the variation in impacts related to development design or location. This creates a disincentive for developers interested in building compact projects in centers and corridors that already have higher development costs. However, restructuring SDC fee schedules to reflect the real impact of development on infrastructure can reduce the financial burden of developing in centers and corridors, provide an incentive to build lower-impact projects and encourage development in areas with access to existing infrastructure systems.

How to use it: Cities and counties calculate SDC fees to recover the cost of infrastructure needed to serve new customers and can assess these SDCs differently in order to meet local needs. In accordance with Oregon law, SDCs may consist of reimbursement and improvement fees.

- **Reimbursement fees** recover the costs to serve future system users with facilities already constructed or under construction. In determining this fee, a local jurisdiction must consider the cost of the existing facilities, previous contributions and sources of financing, and the value of the unused capacity available for future system users.
- **Improvement fees** charge for the costs associated with capital improvements to be constructed. In determining this fee, a city or county must specify in an ordinance or resolution the projected costs of capital improvements as identified in an adopted plan, which is required to increase capacity and meet the demands of new development.

When determining the final SDC fee schedule, cities and counties can choose to charge one or both types of fees as well as the percentage of the costs it intends to recover through the SDC. Some jurisdictions also choose to recover the costs of developing their capital improvement plans (CIP) through SDCs by incorporating these planning expenses into the fees. Oregon statute allows SDCs to recover all costs of complying with the statutory provisions, which require the preparation of a capital improvement plan and development of a SDC methodology and accounting system.

State law also requires cities and counties to provide credits against improvement fees in the SDC if the developer constructs qualified public improvements. Local jurisdictions may choose to use this method as an opportunity to complete a more extensive public improvement. In some cases a well-capitalized developer can more efficiently construct a public improvement by including the cost in the overall project development budget, which in turn would limit the number of project funding sources and speed the pace of construction. In exchange for constructing and funding the public improvement the developer would receive credit toward SDC fees.

Success story

City of Wilsonville

The City of Wilsonville recently updated its SDCs working cooperatively with the development community in the adoption of the amendment and the methodology. The city established impact-based methodologies that help acquire the accurate and varying costs of development projects. The methodology includes costs associated with estimated project financing as well as a revenue credit provided for future rate payments needed to remedy existing deficiencies. The city also developed a compliance charge that recovers facility planning and SDC fund accounting costs.

Likewise, the city uses a demand system to determine SDC fees by identifying the different demands on facilities for various size dwelling units, number of persons per household, and type of development. Basing cost on demand also allows the city to develop alternate SDC calculations for specific developments such as projects built near light rail lines and senior citizen centers, which place less demand on the road system and more demand on public transit. The city also calculates and uses their transportation SDCs to cover pedestrian improvements and parking structures that are part of their transportation system.

In addition, the city uses supplemental SDCs to cover the costs of significant infrastructure improvements in developing areas with increased demand. For example, the demand at the ramp intersections on Wilsonville Road and at the adjacent intersections recently exceeded its level of service capacity. The city amended its transportation capital improvements plan to include its share of the improvement project. To pay back the initial financing, the city then calculated and collected a supplemental SDC from developments in the local area whose trip generation led to the need for the added capacity. The supplemental SDC allowed the city to add capacity, which led to new developments such as a $50 million mixed use development of commercial retail, office space, and residential apartments and condominiums.

"By basing SDCs on demand and the actual impact to infrastructure facilities, the city can offer developers an equitable adjustment process. The city will complete alternate calculations for specific development projects to reflect a project's actual demands so the fee will be fair."

– Mike Kohlhoff, Attorney, City of Wilsonville

The ramp intersections on Wilsonville Road before (left) and after(right) the infrastructure improvements that were funded, in part, by the supplemental SDC, City of Wilsonville

SDCs

The nuts and bolts

SDC methodologies generally include unit costs of capacity, revenue credits for other funding sources, and a demand schedule establishing capacity requirements for different type or sizes of developments. Impact-based SDCs and innovative approaches to calculating SDCs consider additional variations for each of these items when calculating their fee schedules. The best approaches reflect both full cost recovery, including facility planning and construction and SDC development and management, and recognition of potential cost variations across the service area. To the extent that development may be less costly to serve based on density, location, configuration, or other considerations, SDCs can be a tool to encourage this type of development, and at the same time fully recover infrastructure costs.

Existing use of the tool in the region: More and more jurisdictions throughout the country and the State of Oregon are implementing SDC methodologies designed to recover the real costs of infrastructure development and promote sustainable development patterns. Jurisdictions within the region that have adopted innovative SDC approaches with these goals in mind include the City of Gresham, City of Portland, and City of Wilsonville.

SDCs

Keep in mind

Housing choices: SDCs do increase the amount of upfront capital a developer must have, resulting in higher total per housing unit cost. However, some innovative SDC approaches address this issue by lowering SDCs for projects with a lower impact on public facilities. Thus, residential development located near transportation corridors and in mixed-use development areas, as well as housing developments that service specific populations that use transportation less frequently, would pay a lower transportation SDC than other housing projects.

Impact-based and innovative SDCs present a concern to some affordable housing advocates. If location and density impact SDC rates, developers may not find affordable housing feasible in areas with high SDCs resulting in the concentration of affordable housing to specific areas. However, some local jurisdictions may choose to waive, reduce, or defer the SDC fee for developments that include affordable housing. The reduction in upfront capital costs to the developer provides an incentive that improves the financial feasibility of an affordable housing project.

Manageability: Connecting SDCs directly to the specific projects included in facilities plans that are linked to capital improvement plans can require a lot of work up front for the jurisdiction to create alternative calculations and establish various SDC fees and funds that reflect the actual infrastructure improvement projects. Developing innovative SDC approaches, which include varying SDCs by location and development characteristics, may also take more time up front to develop the data to support the fee differentials, construct the SDC methodology, educate the public and elected officials, and implement necessary administrative procedures.

Success story

City of Gresham

The City of Gresham recently developed a new SDC methodology, which established three districts for calculating and collecting SDCs: Pleasant Valley, Springwater, and within current city limits. The city calculated the rates based on the costs of servicing these areas determined by facilities plans. Water and wastewater charges remained the same for all three areas, but the transportation facilities, parks, and stormwater facility charges increased in Pleasant Valley and Springwater due to the additional costs of the needed infrastructure projects in these areas. Location, lack of existing infrastructure facilities, and landscape features contributed to the increase in costs. The result of this approach is fees that are significantly higher in the new districts, compared to the current city limits.

"Funding urbanization of major urban growth boundary expansion areas requires careful facility planning."

– Dale Jutila,
Department of Environmental Services,
City of Gresham

In addition, the City of Gresham lowered its SDC fees due to the effect of low-impact design elements it established in its development codes. The city set green street requirements for street developments and improvements to help capture and manage the local rainwater. By integrating this green design element, the city did not need as many holding tanks, decreasing facility costs. Furthermore, the margin of cost differential between the green street designs and traditional streets was not significant. Thus, the overall SDC fee for development decreased while supporting lower impact development.

A property tax credit is also included in the city's SDC methodology to recognize the potential contribution of new growth to the costs needed to remedy existing deficiencies. The city also charges a compliance fee that includes the costs of master planning; annual SDC and capital improvement plan management, accounting, and reporting costs; and the costs associated with development of the SDC methodology. Finally, the methodology includes a basis for adjusting the fees annually for construction and land inflation. During the process of establishing the new SDC methodology, the city ensured the legal defensibility, educated the public, and built public and political acceptance for the differing SDC rates.

Using pervious pavers, porous concrete, and swales are all green streets practices that can reduce impact fees, City of Gresham

Keep in mind

However, as these methods become institutionalized within the region, they will enhance data availability and public awareness and may support further development and administration of such approaches. Furthermore, greater coordination among land use and facility planning functions and SDC approaches will develop data regarding the differing costs and impacts of various development patterns and designs. It can also make updating SDCs easier. Jurisdictions can reflect any changes made to planned facility projects by modifying that portion of the SDC calculation and developing a new SDC fee. Despite the additional up-front efforts, this process helps establish a more accurate SDC, and cities and counties can include these costs of planning for future capital needs and developing methodologies to pay for the facilities in the fees.

Equity: Applying a methodology that calculates SDCs directly based on capital improvement plans and planned facilities projects can establish a more accurate SDC fee schedule. Incorporating the different levels of demand on the infrastructure system from various types and locations of developments also helps establish a more accurate SDC fee schedule. In addition, this fee schedule promotes a more equitable approach by connecting the actual impact of a project to the SDC paid by that project.

More defined SDCs ensure that development and growth more accurately pays for itself and its impacts on the community's infrastructure without being compensated by the rest of the community or other developments. This helps maintain that compact, infill development near services pays for the infrastructure improvements in that area, but is not subsidizing the more expensive infrastructure expansions to newly developing areas.

Community: Cities and counties can face pressure from current residents and the development community regarding SDCs. Current residents are concerned about being charged twice and developers assume the up-front costs for the public improvements. As a result, many jurisdictions choose not to recover the full costs of new facilities through SDCs. However, if cities and counties can demonstrate that the SDCs are based on impact to the system and link the charges to impact, then where impact varies, different charges are defensible and this approach can gain more public and political acceptance. Politically, cities and counties also need to demonstrate the link between SDCs and overall community development goals. By connecting SDCs to facility plans based on comprehensive plans, the resulting SDC fee schedules can then promote development patterns envisioned by the community and create greater public and political approval.

Sustainability: Applying varying SDC rates based on the impacts to public facilities promotes sustainable development patterns. Lower SDC fees for low-impact, green development and compact infill and redevelopment may encourage developers to build more environmentally-friendly projects in sustainable locations.

Putting it together

Traditionally, cities and counties in Oregon determine SDC fees at the local level and make some distinctions between level of service and type of use. However, innovative SDC fee schedules base fees more specifically on the impact of the development to public facilities. This approach charges lower fees for development in areas with access to existing infrastructure and higher fees for projects in areas where little or no infrastructure is currently in place.

Metro hired a consultant to further research opportunities to recalibrate SDCs in the region. The study is intended to provide cities and counties with another potential tool to accelerate the implementation of the 2040 Growth Concept. As part of this work, a subcommittee representing city and county needs and expertise provided input and guidance throughout the process to inform and enhance the final report.

The report, "Promoting Vibrant Communities with System Development Charges," provides model approaches and recommendations for modifying SDCs throughout the Metro region in order to acquire the real costs of infrastructure development and promote more sustainable development throughout the region. These approaches outline SDC methodologies and approaches that promote more efficient provision of facilities and services, manage containment of urban growth to reduce urban sprawl, and encourage infill development. The model approaches for SDCs provide flexibility and applicability for the different cities and counties in the region.

Tips for implementing Impact-based System Development Charges at the local level:

- Coordinate land use and facility planning functions with SDC development.
- Ensure SDCs recover all of the costs needed to serve development as it is currently envisioned by the comprehensive plan and proposed through planned facilities projects.
- Define level of service standards for different development designs and locations when calculating SDCs.
- Consider having multiple SDCs based on the different impact and demand levels of various development patterns.
- Take into account the full array of costs needed to plan, design, construct, and finance public facilities for future growth and include these costs in the SDCs.
- Work with developers and educate the public whenever recalculating SDCs to build support for the new fee schedule and necessary infrastructure for projected development.
- Review the report, "Promoting Vibrant Communities with System Development Charges," for more information on the different calculation methodologies, compare to the jurisdiction's current methodology, and consider modifications to promote local and regional development goals.
- Use the report, "Promoting Vibrant Communities with System Development Charges," to revise SDC methods and fee schedules to incorporate applicable model SDC approaches.
- Regularly update fees and methodologies to keep pace with inflation and changing land use and facility plans.

Resources

To access "Promoting Vibrant Communities with System Development Charges," contact:

Metro
600 NE Grand Ave.
Portland, OR 97232
(503) 797-1839
http://www.metro-region.org

For more information on the use of Impact-based SDCs in the region, contact:

City of Gresham
1333 NW Eastman Parkway
Gresham, OR 97030
(503) 661-3000
http://www.ci.gresham.or.us

City of Wilsonville
Wilsonville City Hall
29799 SW Town Center Loop E
Wilsonville, OR 97070
(503) 682-4960
http://www.ci.wilsonville.or.us

For more details on the statutory guidelines for SDCs, see:

OAR 223.297
http://www.leg.state.or.us/ors/223.htm

For more information on innovative approaches to calculating and assessing SDCs, visit:

http://www.impactfee.org
http://www.impactfee.com

About Metro

Clean air and clean water do not stop at city limits or county lines. Neither does the need for jobs, a thriving economy and good transportation choices for people and businesses in our region. Voters have asked Metro to help with the challenges that cross those lines and affect the 25 cities and three counties in the Portland metropolitan area.

A regional approach simply makes sense when it comes to protecting open space, caring for parks, planning for the best use of land, managing garbage disposal and increasing recycling. Metro oversees world-class facilities such as the Oregon Zoo, which contributes to conservation and education, and the Oregon Convention Center, which benefits the region's economy.

Your Metro representatives

Metro Council President
David Bragdon

Metro Councilors
Rod Park, District 1
Brian Newman, District 2
Carl Hosticka, District 3
Kathryn Harrington, District 4
Rex Burkholder, District 5
Robert Liberty, District 6

Auditor
Suzanne Flynn

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www.metro-region.org

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METRO

PEOPLE PLACES
OPEN SPACES

Promoting vibrant communities with

System Development Charges

Report by Galardi Consulting in association with Dr. Arthur C. Nelson, Paramatrix, and Beery, Elsner, and Hammond, LLP

July 2007

METRO

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Executive Summary

Project Overview

Metro's New Look at Regional Choices work program is re-examining the way we carry out the region's long-range plan, the 2040 Growth Concept. A portion of the New Look work program focuses on promoting opportunities for efficient land use and stimulating investment in 2040 centers, corridors, and employment and industrial areas. A key component of this work is to identify various new and existing tools that finance planning and infrastructure, promote job creation and economic vitality, and encourage desired developments in centers and along corridors.

System development charges (SDCs)[1] are a principal source of funding for the region's planning and infrastructure costs related to growth, and also provide a tool for promoting sustainable development patterns. As the relative cost of serving developments within the targeted 2040 centers and corridors is often less than serving development outside these areas – due to reduced system impacts, and often lower infrastructure costs per unit -- assessing differential SDCs can promote greater financial equity and at the same time promote the region's 2040 Growth Concept by reducing the up-front costs of targeted developments. SDCs are only one – sometimes relatively small – part of overall development costs; however, reducing SDCs in the targeted areas may help level out the "playing field" across the region, supporting efforts to attract development to urban centers where developers may face additional costs.

Some local jurisdictions within the Metro area do not levy sufficient funds through SDCs to pay for the total cost of needed infrastructure development to serve growth. In addition, most cities and counties in the Metro area charge a uniform SDC for development within their jurisdiction regardless of whether the costs of servicing different developments vary due to factors such as location and density.

Through identification of model approaches to SDCs from around the region and country that are designed to both fully recover the costs of needed planning and infrastructure, and by recognizing the varying costs of providing services to developments of different types and locations, Metro can support local communities as envisioned by the region's long range plan. Local jurisdictions in the Metro area can review the model approaches contained in the full report and select approaches that best integrate SDC development and assessment with the community's broader development policy objectives.

For purposes of this study, the scope did not include an evaluation of the impact of SDC programs on development choices, but instead focused on the methodologies applicable to this region for achieving impact-based SDCs and cost recovery through SDCs. In addition, recovering the full costs of development could incorporate recommendations for establishing SDCs for public facilities such as schools, fire, safety, and libraries. However, this study provided recommendations within

[1] SDCs are one-time charges to new development – usually assessed at the time a building permit is issued – designed to recover the costs of infrastructure capacity needed to serve that development. Since 1989, Oregon law (ORS 223.297 to 223.314) has authorized the imposition of SDCs for water, wastewater, storm drain, transportation and park systems.

the framework of current Oregon legislation in order to offer local jurisdictions approaches they can apply immediately. Next steps should include additional research in these areas for application in the region.

Findings and Recommendations

Jurisdictions may choose among a number of different technical and policy options when crafting an SDC methodology. The selection of specific methodological approaches is generally a function of technical, financial, political and legal considerations. As infrastructure system design and community development characteristics vary across jurisdictions, approaches that are valid in one jurisdiction may not be applicable to another. The full report: *Promoting Vibrant Communities through SDCs* provides information on an array of methodological options available to local jurisdictions, including examples of how these options have been applied by other communities to meet local conditions and objectives. Below is a summary of the key findings and recommendations from this study.

Full Cost Recovery

Based on Oregon law, SDCs may consist of a **reimbursement fee** (to recover existing facility capacity available for growth), an **improvement fee** (to recover planned capacity improvements for growth), or both. In many cases, both components are needed to fully recover capacity costs needed to serve growth. Beyond the cost of the improvements themselves, SDCs may also recover costs associated with compliance with the SDC statutes and with placement of the facilities in service (including the planning and financing of improvements.)

The recommended model SDC approaches related to full cost recovery include the following:

- **Long-term project cost recovery**: The SDC methodology is based on a recently adopted capital improvement or facility plan that projects needed improvements for a minimum of 10 years to serve existing and future growth as defined by the comprehensive plan. These comprehensive and facility plans also need to be updated to incorporate the facility types needed to serve development consistent with the 2040 Growth Concept Plan, to the extent such facilities may be related to provision of capacity for growth.
- **Existing system cost recovery**: To the extent that existing system facilities will be used to meet the service delivery needs of new development, the fee structure reflects a reimbursement component designed to recover available capacity costs from growth.
- **Recovery of other costs**: Beyond the direct facility costs themselves, the methodology allows for recovery of costs associated with the placement of facilities in service (e.g., planning and financing costs), and the recovery of costs related to compliance with SDC statutes (e.g., SDC fund accounting and development of the methodology).
- **Inflationary adjustments**: the methodology includes a mechanism for adjusting the fees annually for changes in cost factors, including land and materials.

As capital funding sources are limited and face continued pressure from the need to address infrastructure rehabilitation and replacement, in addition to expanding capacity, the extent that SDCs can more fully fund the infrastructure needed for growth, will allow for addressing more of the region's capital needs. Furthermore, as more and more jurisdictions across the region adopt real cost recovery SDCs, political concerns related to relative fee levels may be mitigated.

Impact-Based SDCs

A goal of this study is to develop SDCs that reflect the real costs associated with serving different developments. A new development's impact on public infrastructure may relate to its specific type (e.g., single family residential vs. multifamily residential), size, density, location, or configuration. The relevancy of different development characteristics to system design and capacity requirements varies across infrastructure systems. Therefore, development of impact-based SDCs should consider the relevant system service units as follows:

- **Parks:** Service units are generally measured as people and, therefore, are most significantly impacted by development size and type, although location may also be a factor to the extent that household demographics vary across the service area.
- **Transportation:** Service units are trips and vehicle miles traveled (VMT), so cost of service is influenced by household and building type and size, as well as location, density and configuration. Development type and size are potential indicators of motor vehicle trip generation rates. Density influences the choice of transportation modes used to reach particular destinations and the distance traveled to reach those destinations. Location, to the extent that it relates to proximity to public transit may also be a significant factor related to system impact. Development configuration is also a factor in system impact for transportation systems. When services that support living, working and shopping activities are all nearby, fewer car trips are needed and the distance traveled is reduced.
- **Water, Sewer, and Stormwater:** Service units are typically volume (and in some cases, quality) of use or discharge, which most significantly relates to development type and size. Higher density development generates smaller lot sizes, which generally correlate to reduced water demand per unit. If the amount of impervious area attributable to each lot is also lower, stormwater fees based on impervious area may also favor (through reduced fees) higher density development. Area density may also impact certain cost components (distribution and conveyance networks, for example), with more dense areas requiring less reduced pipe length per unit. Location may also be a factor in determining relative cost of utility service if unique facilities are required to provide service, or demand differences may be established.

With respect to 2040 Growth Concept, development consideration of density, location and configuration are the most relevant characteristics, though to the extent that higher density development is characterized by smaller structures and lot sizes, SDCs that, at a minimum, favor (through lower fees) smaller structures and lots may promote higher density goals. The use of approaches based on density, configuration and location are recommended for consideration, particularly for transportation systems, by jurisdictions facing significant growth and the need to address varying development patterns and locations.

Recognition of Cost Variations by Location

Historically, SDCs have been assessed uniformly across service areas based on system-wide average costs. However, as discussed above, location can be an important indicator of relative cost of serving development, and use of location-based SDCs can also promote 2040 Growth Concept development. In addition to being a potential indicator of system impact (as discussed above), location can impact the cost of providing services due to variations in cost factors (e.g. land prices) and levels of service (e.g., a portion of the service area desires significantly more park acreage per capita).

Consideration of location-based SDCs is recommended for jurisdictions with diverse areas, where cost differences may be significant and consistent. This approach is particularly relevant for areas that anticipate growth in new, currently unserved areas vs. existing served areas, and for communities that want to direct growth into particular areas, like Regional and Town Centers.

Green Design

Historically, consideration of "green" design characteristics have had limited application in the assessment of SDCs. However, recent examples within the region highlight potential use of these design characteristics in the future, particularly for stormwater systems. For example, adoption of green design standards applicable to all development has lead to reduced SDCs in some communities, through reduced need for public infrastructure investment. Communities have also adopted SDC schedules that include discounts for implementation of certain building and site design features that are designed to reduce system impact. Local governments are encouraged to further consider green design impacts on infrastructure systems and incorporate such features in SDC schedules.

Technical vs. Policy-Based Solutions

The development of SDC schedules may reflect technical or policy-based considerations. Technical approaches allow for development of impact-based SDCs that reflect costs of providing service to developments of different characteristics. The vision of the 2040 Growth Concept promotes redevelopment and infill growth patterns. To the extent that these types of development may be less costly to serve due to reduced infrastructure impact related to density, location, configuration, or other considerations, the SDC fees for these developments should reflect the lower costs. Thus, technically-based SDC methodologies can encourage 2040 development patterns and at the same time fully recover infrastructure costs, as costs may be allocated among developments in proportion to impact. This can result in lower fees for development types and locations that are less costly to serve and higher fees for more costly developments. Developing a technical basis for SDC differentials will likely require additional planning and analysis by local jurisdictions, as well as additional stakeholder education. The additional resources required to develop and implement such approaches should be considered in the context of the jurisdiction's community development and infrastructure cost recovery goals.

In contrast, policy-based approaches tend to offer a less rigorous approach to reducing SDCs to targeted developments. Such discounts are generally supported conceptually by cost relationships from national data sources, and may reflect qualitative rather than quantitative analyses. Policy-based adjustments may also include exempting targeted developments from certain costs (like existing capacity costs), and are generally not offset by increases in fees to other developments, but instead may be funded through other revenue sources (e.g., general fund support). As such, policy-based approaches, aligned with community development goals need to be weighed against infrastructure cost recovery goals.

Conclusion

This report shows the role of SDCs in providing necessary revenue to fund infrastructure generally, as well as playing an important role in helping communities achieve broader policy objectives related to community and economic development. Local jurisdictions can choose among a number of technical and policy-based approaches to tailor SDCs to meet the physical and financial requirements of the systems and promote infrastructure and development as envisioned in local comprehensive and system plans. Jurisdictions in the Metro region do not have to look far for examples of approaches to achieving real cost recovery through SDCs; there are a number of local communities that have implemented innovative approaches to SDC development and assessment in recent years, and more are likely to follow as the region's infrastructure funding needs continue to grow. Metro can work in partnership with local jurisdictions, the development community and other stakeholders to raise awareness related to regional infrastructure needs and development impacts, as well as support the implementation of SDC approaches that will encourage 2040 development patterns and further strengthen the region's local communities.

Section 1

Introduction

Background

Metro's New Look at Regional Choices work program is re-examining the way we carry out the region's long-range plan, the 2040 Growth Concept. A portion of the New Look work program focuses on promoting opportunities for efficient land use and stimulating investment in 2040 centers, corridors and employment and industrial areas. A key component of this work is to identify various new and existing tools that finance planning and infrastructure, promote job creation and economic vitality, and encourage desired developments in centers and along corridors.

During the past decade, communities across the country have turned to system development charges (SDCs) [2] as a principal source of revenue for funding infrastructure system facilities. This trend is due, in part, to the fact that state and federal assistance for system construction has become more limited. As much of the capital cost burden has shifted to the local level, SDCs have taken on even greater importance, as communities look for ways to address the significant costs for ongoing infrastructure rehabilitation and replacement, as well as meeting additional capacity needs.

Some local jurisdictions within the Metro area do not levy sufficient funds through SDCs to pay for the total cost of infrastructure development and improvements. In addition, most jurisdictions in the Metro area charge one standard SDC fee for development within their jurisdiction regardless of whether the costs of servicing different developments vary due to factors such as location and density. In January 2007, Metro initiated a project to identify model approaches to development and assessment of SDCs for parks, transportation, water, wastewater, and stormwater that can help local governments implement the region's 2040 Growth Concept, as described in local visions and comprehensive plans. The products from this work effort will be integrated with additional research efforts evaluating other financial, regulatory, and informational tools into a "Toolkit" for focusing investment in centers, corridors, and employment lands. Local jurisdictions will be able to use the work products to revise their SDC methods and fee schedules to incorporate the model SDC approaches identified through this effort.

Promoting 2040 Growth Concept Development

In addition to their role in providing necessary revenue to fund infrastructure generally, SDCs can also play an important role in helping communities achieve broader policy objectives related to community and economic development, including promoting 2040 growth patterns. As the relative cost of serving developments within the targeted 2040 centers and corridors is often less than serving development outside these areas – due to reduced system impacts and often lower infrastructure costs per unit -- assessing differential SDCs can promote greater financial equity, and

[2] SDCs are a one-time charge to new development – usually assessed at the time a building permit is issued – designed to recover the costs of infrastructure capacity needed to serve that development. Oregon state law (ORS 223.297 to 223.314) has authorized the imposition of SDCs for water, wastewater, storm drain, transportation and park systems, since 1989.

at the same time promote the region's 2040 Growth Concept by reducing the up-front costs of targeted developments. SDCs are only one – sometimes relatively small – part of overall development costs. However, reducing SDCs in the targeted areas may help level out the 'playing field' across the region, supporting efforts to attract development to urban centers where developers may face additional costs.

This report presents examples from communities across the country and in Canada that have adopted SDC schedules reflecting various development characteristics, including location, configuration, and density. As will be demonstrated in subsequent sections of this report, these fee systems often result in lower SDCs for developments located in high density, mixed use areas, often with direct access to public transportation. The development of such programs is generally reflective of a desire to increase the equity of the fee system (costs are assessed in proportion to system impact), and in many cases to encourage certain types of development (e.g., high density or redevelopment) or locations (e.g., areas with proximity to existing public services or transit networks).

Project Authorization and Scope

Galardi Consulting, LLC was authorized by Metro in January 2007 to perform a review of SDC approaches used by jurisdictions throughout North America to promote real cost recovery of infrastructure and sustainable development patterns. For purposes of this study, 'real' cost recovery is intended to reflect both full cost recovery (costs related to both the array of facility and cost types needed to provide capacity for growth generally and specifically related to implementing the 2040 vision are included), as well as recognition of potential cost variations among developments, with respect to specific development characteristics, like density, location, and configuration.

The project scope included the following tasks:

1. Research examples from jurisdictions, both inside and outside the Portland metropolitan area (Metro area) that set SDC fee schedules which acquire the real costs of infrastructure development and promote development in urbanized areas before building in undeveloped, non-serviced areas.
2. Evaluate the applicability and potential use of the different model SDC fee systems to the Metro area.
3. Identify the potential issues local jurisdictions in the Metro area may face while adopting the model SDC approaches and recommend steps for implementation.
4. Prepare a comprehensive report that summarizes the complete findings and recommendations.

The scope of this study does not include an evaluation of the impact of SDC programs on development choices, but instead is intended to provide examples from other communities of:

- Technical approaches for evaluating system impacts by development type/location
- Designing SDCs to reflect system impacts
- Implementing policy-based adjustments to provide certain development incentives.

In this way, jurisdictions in the Metro area can evaluate potential approaches that support the implementation of 2040.

Report Organization

The following sections of this report are:

Section 2: **Legal and Methodological Framework** -- includes a brief discussion of the legal framework and SDC methodological concepts.

Section 3: Cost Recovery of 2040 Infrastructure – describes approaches to recovering the costs of 2040 infrastructure through SDCs, applicability of approaches to jurisdictions in the Metro region, and recommended steps to implementation.

Section 4: Assessment of Impact-Based SDCs – describes approaches for varying SDCs for different developments based on characteristics like location, configuration, and design. Applicability of the approaches to jurisdictions in the Metro region, and steps to implementation, are also discussed.

Section 5: Summary of Recommendations – The recommendations are summarized.

The following **Appendices** are provided to supplement the information provided in the core sections of this report:

A. Oregon Statutory Requirements

B. SDC Methodological Considerations and Components

C. Examples of Model Approaches to Real Cost Recovery

D. Examples of Model Approaches to Assessment of Impact-Based SDCs

Section 2

Legal and Methodological Framework

Legal Authorization

Oregon state law has authorized the imposition of SDCs since 1989. The statutes, at Oregon Revised Statutes (ORS) 223.297 to 223.314, as they have been amended over the past 18 years, authorize cities, counties and special districts to assess SDCs on new development to fund identified public facility needs. In broad overview, the statutes address:

- Which public facilities may be funded in whole or in part with SDCs;
- How the amount of SDCs must be determined;
- How revenue generated from SDCs must be expended; and
- How a new or modified SDC may be judicially reviewed.

As defined by the statutes, SDCs may consist of a **reimbursement fee**, an **improvement fee**, or both. Improvement fees are fees associated with capital improvements to be constructed; reimbursement fees are designed to recover the costs associated with capital improvements already constructed or under construction. In combination, for example, a reimbursement component may be developed to recover a portion of the cost of existing facilities for which there is excess capacity to serve new development (such as water and wastewater treatment plants having more capacity available to serve new development than is needed to serve existing development), and an improvement component may help fund improvements under construction or planned to extend service to new development.

Appendix A includes a more detailed summary of Oregon SDC law, along with the actual text from the statutes.

SDC Methodological Concepts

In order to understand how SDCs may potentially be used to help jurisdictions achieve infrastructure and development objectives, it is first necessary to have an understanding of the basic SDC methodological components.

SDC methodologies generally include the following basic components:

1. **Unit Cost:** The capital cost of constructing capacity to serve new development is determined on a per service unit[3] basis after subtracting any non-local funding sources, such as state and federal funds, and local contributions.

[3] Service units will vary by infrastructure system. For example, water and wastewater service units are typically measured by volume of water consumed or wastewater discharged; park units are generally people; drainage units may be square feet of impervious area or other land measure, and transportation units are generally trips generated or vehicle miles traveled.

2. **Revenue credits**. New development generates revenue that may be used to help finance facilities also financed by SDCs. For example, a bond issue to expand park and recreation facilities paid from property taxes means that new development paying such taxes will help retire the bond. Such "revenue credits" are generally subtracted from the total capital cost per unit to assure that new development is not paying twice for the same facilities. The result is "*net capital cost.*"

3. **Demand Schedule**: Units required to service different development types are estimated. Such schedules may differentiate demand by land use type, size, location, or other factors.

The SDC for a specific development is the product of the net capital cost and the total service units attributable to the development.

For individual development projects, the SDC may be reduced to reflect contributions of facilities offered by a development, such as a new public park that was shown as needed in the capital improvement plan (CIP) to accommodate new development. For example, if the park and recreation SDC would be $1 million and the park value is $500,000, the impact fees are reduced to $500,000. These "construction credits" (also known as credits for "qualified public improvements" under Oregon SDC law) are determined on a case-by-case basis.

Within each of these basic methodological components, jurisdictions may choose among a number of different options when crafting an SDC methodology. The selection of specific methodological approaches is generally a function of technical, political and legal considerations.

A more detailed discussion of SDC methodological components is provided in Appendix B.

Technical Terms and Abbreviations

2040 Growth Concept – the Portland metropolitan region's strategy for managing growth that was adopted in December 1995 through the Region 2040 planning and public involvement process

Asset Valuation—the costs attributed to existing system facilities, for purposes of developing the reimbursement fee unit cost

CAC—Citizen Advisory Committee

CBD—Central Business District

CIP—Capital Improvement Plan

DCC—Development Cost Charge

DU—Dwelling Unit

ERU – Equivalent Residential Unit

GIS—Geographical Information System

Greenfield Development—new development on a parcel or parcels of more than one contiguous acre

IGA—Intergovernmental Agreement

Improvement Fee—the portion of the SDC charged to cover an equitable share of the capital improvements required to increase capacity of the system to accommodate new development

Infill Development—new development on a parcel or parcels of less than one contiguous acre located within the UGB

ITE—Institute of Transportation Engineers

LOS—Level of Service -- the measure of the relationship between service capacity and service demand for public facilities in terms of demand-to-capacity ratios

Metro—The Regional Government of the Portland metropolitan area

MGD—Million Gallons per Day

Mixed Use Development –includes areas of a mix of at least two of the following land uses and includes multiple tenants or ownerships: residential, retail, and office

OCP—Official Community Plan

ORS—Oregon Revised Statutes

Redevelopment—development that replaces or significantly alters an existing structure or structures

Reimbursement Fee—the portion of the system-specific SDC charged to recoup the community's past or current investment in extra capacity in anticipation of future growth

Revenue Credits—adjustments to the SDC unit cost to recognize past or future contributions by new development to system improvements

System Improvements —capital improvements that are public facilities and are designed to provide service for the community at large, as opposed to specific developments

SDC—System Development Charge, means a reimbursement fee, an improvement fee or a combination thereof assessed or collected at the time of increased usage of a capital improvement or issuance of a development permit, building permit or connection to the capital improvement (ORS 223.299)

SDC Unit Cost —costs associated with serving future development, stated in terms of a cost per unit of system capacity

SDC Demand Schedule —the capacity requirements attributable to different development types or locations for purposes of assessing SDCs

SFE—Single Family Equivalent

TDM—Transportation Demand Management

TGSF—Thousand Gross Square Feet

UDB—Urban Development Boundary

UGB—Urban Growth Boundary

VMT—Vehicle Miles Traveled

Section 3

Cost Recovery of 2040 Infrastructure

Introduction

An objective of this study is to develop model SDC approaches that recover costs of infrastructure needed to support 2040 Growth Concept development. This objective is primarily addressed in the SDC methodology through calculation of the SDC unit cost. Issues related to revenue credits are also discussed. The fundamental question to be addressed is whether the SDCs accurately capture the range of costs needed to deliver service to new development under the 2040 Growth Concept model.

From a methodological framework, development of the unit cost and revenue credits requires the following steps:

1. Definition of system improvement costs to be recovered through the SDCs.
2. Selection of a unit cost structure and valuation approach.
3. Updating to keep SDCs current with inflation and system planning assumptions.
4. Adjustment for past or future payments by new development for capital improvements.

Appendix B provides a detailed description of the methodological issues and approaches related to development of the SDC unit cost and revenue credits. This section focuses on those approaches that are considered most consistent with the objective of real cost recovery and Oregon SDC law (discussed generally in Section 2 and in more detail in Appendix A). Recommended steps to implementation of these approaches are also identified in this section.

Model Approaches to Cost Recovery of 2040 Infrastructure

Table 3-1 summarizes the model approaches for cost recovery of 2040 infrastructure. The model approaches are identified for each element of the SDC methodology related to the development of the unit cost and revenue credits.

Definition of System Improvement Costs

Project List Sources and Planning Horizon

Real cost recovery SDCs are supported by planning documents beginning with the comprehensive plan that defines the service delivery standards for each infrastructure system. The service standards and development projections contained in the comprehensive plan form the basis for development of specific infrastructure system plans that identify capital improvements needed over the planning period to deliver service to existing and future development.

Table 3-1. Model Approaches to Cost Recovery of 2040 Infrastructure

Methodology Component	Model Approaches	Rationale	Appendix C Example(s)
Determination of System Improvements			
Project List Source(s)	Infrastructure system plan(s).	Required by Oregon law; ensures consistency with planning documents and 2040 Growth Concept.	All
Planning Horizon	Long-term (10 or more years).	Unless the system has ample existing excess capacity throughout, a long-term planning horizon is generally needed to fully capture all of the facility types/costs needed for growth as envisioned by local comprehensive plans.	All
Project Cost Allocation	A structured process is established by which individual capital improvement projects are evaluated for their role in providing capacity to growth, including projects needed specifically to support 2040 growth concept development.	Oregon law requires demonstration that projects or portions of projects to be recovered through SDCs are: • Needed to provide capacity for future growth at a level of service consistent with existing system users. • Not being funded by other sources.	Metropolitan Wastewater Management Commission of Eugene/Springfield (MWMC) Sewer SDCs City of Wilsonville Sewer SDCs City of Portland Transportation SDCs
Other costs	Consider costs associated with placing the facilities in service, including planning and financing costs and SDC law compliance costs.	Oregon law allows for SDCs to be used to pay debt service and for compliance with SDC statutes.	City of Wilsonville Sewer SDCs City of Kelowna, BC (Appendix D)
Unit Cost Structure			
Basic approach	Improvements-based	Required by Oregon law	All
Fee structure	▪ Buy-In ▪ Capacity Expansion ▪ Marginal Cost ▪ Average Cost, and ▪ Total Cost-Attribution (Combined Improvement and Reimbursement")	Oregon law allows for recovery of both existing and future facility costs. Selection of specific approach will depend on level of service analysis which will show how capacity needs for growth will be met – through existing facilities, future facilities, or a combination.	*Total Cost Attribution*: MWMC Sewer SDC and City of Wilsonville Sewer SDC *Capacity Expansion:* City of Portland Transportation SDC, City of Gresham Parks SDC, City of Albuquerque Parks SDC
Existing System Valuation Basis	▪ Book value ▪ Original cost ▪ Replacement cost ▪ Replacement cost less depreciation	The selection of a valuation approach is a local policy decision.	*Replacement Cost*: MWMC Sewer SDC *Original Cost*: City of Wilsonville Sewer SDC

Table 3-1. Model Approaches to Cost Recovery of 2040 Infrastructure

Methodology Component	Model Approaches	Rationale	Appendix C Example(s)
Differential Unit Costs	Vary unit costs within the service area	To the extent that capital improvement costs or service standards vary significantly and consistently by area, differential unit costs and SDCs may promote real cost recovery.	City of Albuquerque Parks SDC City of Scottsdale Water SDC City of Gresham Parks SDC Sacramento Regional County Sanitation District Sewer SDC
Updating			
Inflation	Annually adjust fees based on a construction or land index, or a combination of the two.	Oregon law allows for periodic adjustment of fees based on a specific cost index or data source published by a recognized organization, separate from the SDC methodology.	City of Gresham Parks SDC
Methodology	The methodology is reviewed regularly (3-5 years), to ensure consistency with projected facility needs and costs, and planning assumptions.	Regular updating needed to reflect accurate mix/cost of projects and level of service.	MWMC Sewer SDC
Revenue Credits			
Past Payments	Determine present value of past estimated payments by undeveloped property for infrastructure.	Prevent growth from being charged twice for system improvements.	MWMC Sewer SDC
Future Payments	Determine present value of future estimated payments for existing system deficiencies.	Prevent growth from being charged twice for system improvements.	MWMC Sewer SDC and City of Wilsonville Sewer SDC

Oregon law requires that improvement SDCs be based on "a capital improvement plan, public facilities plan, master plan or comparable plan that includes a list of the capital improvements that may be funded with improvement fee revenues and the estimated cost and timing for each improvement."[4] Basing the SDC unit cost development on a long-term infrastructure plan will allow for cost recovery consistent with adopted service standards and development patterns. It is important that system plans be kept current with comprehensive plans, so that the SDCs may recover the specific facility types and costs needed to service the particular development that is anticipated.

Project Cost Allocation

Further, to comply with Oregon law, the SDC methodology must include an evaluation of each capital improvement on the capital project list, and its role in providing capacity for growth. Specifically, ORS 223.304(2) describes that the improvements included in the SDC must be "needed to increase the capacity of the systems to which the fee is related" and that cost recovery is limited to that amount that can be demonstrated to provide capacity for future users.

A structured process for evaluation of capital improvement projects includes:

- Identification of relevant facility design criteria and level of service (LOS) standards.[5]
- Estimation of total capacity to be provided by each improvement, and that portion of capacity related to meeting the needs of future growth vs. remedying existing service deficiencies.
- Any necessary adjustments in SDC-related cost for external funding sources (e.g. grants or developer contributions).

Example Allocation

To illustrate the required analysis to support project cost allocation, consider the following park SDC examples. The relevant design criteria are generally the type of park or facility (e.g., neighborhood or community parks). Assume a neighborhood park, where the jurisdiction has adopted a LOS of 5 acres of park land per 1,000 residents. Further, assume a project improvement that will add 5 acres of park land, and that the community is expected to grow by 1,000 people over the planning horizon, such that the capacity needed to serve the new population is 5 acres. If the community has 1,000 people now and 5 acres of neighborhood parks, then new development will need 5 new acres of park land, and the total costs of the project improvement may be allocated to growth, assuming that the jurisdiction does not anticipate a grant or other external funding for that improvement.

Alternatively, if the community has only 4 acres of park currently, then based on its adopted LOS, it is deficient by 1 acre with respect to meeting current resident needs. In this case, assuming an expanded project improvement of 6 acres (in order to address both the 1 acre existing deficiency and 5 acre future development need), approximately 16 percent (1 divided by 6 acres) of the acquisition cost and capacity is needed for existing residents; therefore, in determining the SDC unit cost only about 84 percent of the project costs are growth-related.

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[4] ORS 223.309(1).

[5] Level of service is a *measure of the relationship between service capacity and service demand for public facilities in terms of demand-to-capacity ratios.*

2040 Growth Concept Projects

The 2040 Growth Concept, as relevant here, encourages development in urban centers at higher densities; therefore improvements that support higher density development and urban centers, such as parking structures and upgrades to existing infrastructure capacity should be considered for inclusion in the SDC methodology. The primary legal consideration applicable in this context is again that the improvements must be "needed to increase the capacity of the systems to which the fee is related" and that cost recovery is limited to that amount that can be demonstrated to provide capacity for future users.

As communities further identify the infrastructure investments needed to implement 2040, it is important that system plans be updated to include such projects, and that the SDC methodologies reflect the portion of those costs associated with meeting the capacity needs of future development. Appendix C includes a case study from the City of Portland that demonstrates consideration of 2040-related infrastructure in its SDC project list. Among projects included in the city's existing SDC methodology are street car and regional center improvements.

Other Costs

Oregon statutory provisions related to expenditure of SDCs provide guidance on what does and does not constitute an SDC eligible cost; specifically, ORS 223.307:

- States that both reimbursement and improvement SDCs may be used for expenditures relating to repayment of debt.
- Excludes "costs associated with the construction of administrative office facilities that are more than an incidental part of other capital improvements."
- Allows for expenditure of SDC revenue on "costs of complying with the provisions of ORS 223.297 to 223.314, including the costs of developing system development charge methodologies and providing an annual accounting of system development charge expenditures."

The fact that SDCs may be used to fund debt service suggests that beyond facility improvement costs, the SDCs may also recover costs of debt financing (e.g., interest costs). In addition, the methodology may also allow for recovery of compliance costs, which generally include the costs of developing the SDC methodology, conducting annual SDC fund accounting, and planning costs associated with the development of the SDC project list. All of these cost components are 'real costs' associated with providing capacity needs for growth, and therefore should be considered in the SDC methodology.

In its *20 Year Servicing Plan and Financing Strategy 2020*, the City of Kelowna, BC recognizes the additional costs associated with financing wastewater treatment capacity by including an interest component in the development charges. Additional aspects of Kelowna's development charge methodologies are presented in Appendix D.

Unit Cost Structure

Basic Approach

The requirement that the improvement fee be based on a specific list of capital improvements, limits the SDC methodology to an 'improvements-based' approach. This basic approach is compared and contrasted to the 'consumption-based' approach in Appendix B. Examples of both approaches may be found across the country; however, model approaches for jurisdictions in

Oregon are limited to the improvements-based approach, as required by law. Furthermore, to the extent that the capital project list is kept current and linked to comprehensive plans, the use of the improvements approach may allow for more accurate estimation and recovery of real costs of development.

Fee Structure

Great flexibility is provided within the statutory requirements with respect to selection of a unit cost fee structure and valuation approach, given that SDCs may include a reimbursement fee, an improvement fee, or a combination of the two. The key methodological requirement is demonstration that the SDC results in recovery of costs related to capacity which will serve the needs of growth – either through existing system available capacity, future capacity expansion, or a combination.

Of critical importance to determination of costs needed to serve new development – and establishment of a unit cost structure that will effectively recover those costs -- is the relationship between the adopted LOS and the actual LOS existing at the time the SDCs are developed. For example, if a community has adopted a higher LOS than it is currently providing, then the system is deficient in capacity to meet the needs of even existing development. In this case, the SDC structure would be limited to an improvement fee, as there is no existing available capacity for new development to utilize. Similarly, if the system is just meeting the adopted LOS, then there is sufficient capacity for existing development, but again there is no excess capacity available for growth. Only in cases were the existing system has excess capacity (as is the case when the existing LOS is higher than the adopted standard) may a reimbursement component be considered. An example is a water system with a storage standard of 2.0 times the average day water demand (to meet peak and emergency demands). If the system currently has capacity to provide storage of 2.5 times average day demand (i.e., the actual LOS exceeds the standard), then there is available capacity in the system to help meet the needs of future growth.

Because LOS and capacity requirements and conditions vary across communities, what is deemed to be the optimal SDC approach in one community may differ from that of another community. The important consideration is not whether jurisdictions prescribe to a single unit cost approach, but whether the local jurisdiction has conducted the necessary planning to identify the needs of growth, and whether the selected methodology accurately reflects the conditions specific to that jurisdiction.

As described in Appendix B and listed in Table 3-1, there are various methodological approaches to development of reimbursement (also referred to as "buy-in") and improvement fee unit cost structures; the selection of which depends on a number of factors including cost recovery goals (related to existing system valuation discussed below) and financial and engineering data availability.

Existing System Valuation

To the extent that existing system facilities will be used to meet the capacity needs of growth, an approach to valuing that capacity must be selected. In Oregon, reimbursement fees must be calculated consistent with the elements of ORS 223.304, which requires in essence that the fees be based on the "value of unused capacity available to future system users." Selection of a valuation approach is a policy decision, and various methods are used across the state and country, perhaps the most common approaches being original cost and replacement cost (sometimes adjusted for accumulated depreciation). Appendix B further discusses the valuation approaches and provides numerical examples.

Differential Unit Costs

The most common approach to establishing SDC unit costs (and assessment of fees) historically has been to develop system-wide average unit costs, without differentiation within the service area. However, to the extent that real costs of infrastructure vary significantly and consistently across the service area due to differences in land values, area-specific improvements, or other factors, development of differential unit costs (and assessment schedules) may further promote real cost recovery. Appendix C includes examples of jurisdictions that have adopted differential unit costs based on the following approaches:

1. **Variations due to cost factors**: The City of Albuquerque, NM adopted SDCs for parks that vary across planning areas within the city. The differences in SDCs reflect in part, different assumptions about the value of land in each of the service areas. Similarly, the City of Scottsdale assesses water SDCs for two different areas within the city. Fees are reduced in one area, reflecting the fact that additional water rights are not required, whereas the other area requires procurement of future supplies. Similarly Kelowna, BC allocates planned capital improvement projects among different service areas and develops specific fees for each area, reflecting the estimated cost of service.

2. **Variations due to levels of service**: The City of Gresham implemented parks SDCs for separate areas within the overall parks planning area, based on the specific LOS to be provided in each area. Because newly developing areas have a higher LOS for parks than other areas of the city, the fees are higher.

3. **Variations due to cost allocations**: The Sacramento Regional County Sanitation District adopted an alternative SDC designed to encourage infill development by offering reduced fees in specified infill areas, compared with "new growth" areas. The fee differences reflect an alternative cost allocation process, whereby new growth areas are allocated the higher initial costs of conveyance system improvements, while infill areas are allocated the lower incremental costs of upsizing the facilities for full build-out needs. Redevelopment areas are also eligible for lower treatment fees made available through an Economic Development Treatment Bank which purchased low-cost capacity from industries that left the service area.

4. **Variations due to policy-based decisions**: The City of Albuquerque's parks SDC schedule reflects a decision to not charge for historical system investment that will provide capacity to growth. As the degree of reliance on existing system facilities varies across the service area, this contributes to differential SDCs.

Updating

Oregon SDC law allows for regular updating of SDCs to reflect changes in "the cost of materials, labor or real property applied to projects or project capacity" upon which the fees are based, presuming that the update is based on "the application of one or more specific cost indexes or other periodic data sources…published by a recognized organization or agency that produces the index or data source for reasons that are independent of the system development charge methodology." Such adjustments are required to be "incorporated as part of the established methodology or identified and adopted in a separate ordinance, resolution or order."[6]

[6] ORS 223.304(8)

Beyond regular inflationary adjustments, comprehensive review and update of the methodology should be conducted regularly as system planning documents are revised and new long-term capital improvement plans are adopted. Likewise, these facility plans should be updated as comprehensive community plans get revised.

Revenue Credits

While not explicitly required by Oregon law, it is standard practice around the country to include a mechanism in the SDC methodology to adjust fees for past or future non-SDC revenues paid by new development that fund capital projects for existing system users, including the costs to remedy existing deficiencies. As the SDCs are designed to recover from new development, full costs up-front for capacity needs, past or future contributions to capacity improvements may be construed as over collecting with respect to real cost recovery. The model approach to calculating revenue credits is to estimate the present value of past and future contributions, and adjust the SDC unit cost accordingly.

Recommended Steps to Implementation of Model Approaches to Cost Recovery of 2040 Infrastructure

Steps to implementation of the model approaches discussed above are provided in Table 3-2.

Financial/Technical

Implementation of SDCs reflecting real cost recovery requires current planning and cost data to support the SDC methodology. Figure 3-1 illustrates how the SDC methodology is informed by various planning processes, including the comprehensive plan, facility and master planning, and financial planning to ensure that the SDCs reflect the needed infrastructure to meet anticipated growth needs, and are consistent with development and financial policies.

Figure 3-1. Model Approaches: Recommended SDC Development Process

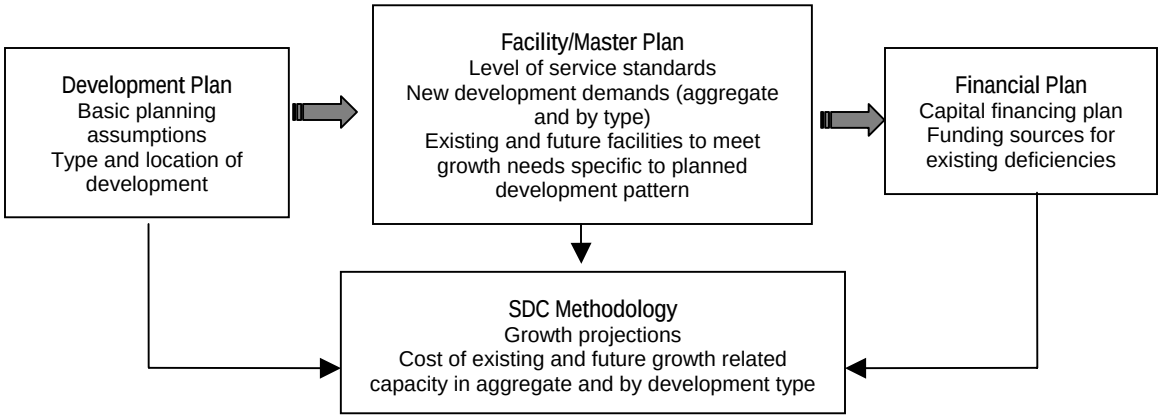

Table 3-2. Steps to Implementation of Model Approaches to Cost Recovery of 2040 Infrastructure

Consideration	Specific Issue(s)	Recommended Action(s)	Ownership
Financial/Technical			
Data to clearly identify real costs to serve growth.	System plans and SDC project list is not current with respect to development plan. Project list does not address long-term development needs. SDC methodology does not include costs associated with placing assets in service.	Keep system plans and SDC project lists current with development plans. Tie SDC updates to completion of master or facility plans. Base SDCs on long-term (e.g. 20-year or build-out) projected needs, as defined by system plans. Coordinate development of SDC methodology with update of capital financing plan to estimate financing costs and revenue credits. Include planning costs in SDCs to allow for more frequent updating of system plans and SDC methodology.	Local jurisdictions: Coordination among finance, planning, and public works departments. Metro: Help identify infrastructure related to 2040 development through completion of regional infrastructure analysis.
Political/Governance			
Political support to implement real cost recovery SDCs.	Not all potentially eligible projects get funded.	Develop structured process for project selection that is linked to other policies and objectives (e.g., prioritize projects that help implement 2040 growth concept). Provide references to studies that show SDCs not a barrier to economic development.	Local jurisdictions: Demonstrate linkages between development plans, infrastructure, and SDCs. Engage stakeholders to balance community objectives. Metro: Increase public education about the importance and use of SDCs as funding mechanism (e.g., tool kit).
Legal/Regulatory			
Costs specifically related to growth capacity needs.	Certain types of projects the local jurisdiction would like to fund may not be SDC eligible.	Develop structured process for evaluation of each project in the capital plan and how it relates to meeting growth capacity needs, including 2040-related improvements.	Local jurisdictions

A key recommendation is that local jurisdictions use a coordinated process for development and updating of SDCs to reflect current development, facility, and financial plans. Infrastructure system plans should be updated regularly to keep current with development projections and patterns. Update of system plans should trigger review and update of both the system capital financing plan and the SDC methodology. The SDC methodology will determine what portion of capital costs may legally be funded through SDCs; the capital financing plan will identify how existing deficiencies will be funded, as well as how SDCs will be used – either to cash fund facilities, or to repay debt service over time. To the extent that debt will be used to finance the costs of facility expansion, the SDC methodology may consider the additional costs associated with long-term financing (e.g., interest and issuance costs).

Inclusion of planning costs in the SDC methodology[7] can help to offset costs of developing and updating the capital project lists.

Metro can help promote real cost recovery by initiating studies to identify regional infrastructure needs and financing specifically related to 2040 Growth Concept development.[8]

Political/Governance

Political support is needed to implement real cost recovery SDCs. Building support may require overcoming the perception that SDCs will limit growth in general and economic development specifically. While the number of studies on the impact of SDCs on economic development is still limited, recent reports suggest that SDCs can in fact promote economic development, through provision of necessary infrastructure.[9]

Local governments can help strengthen political and public support for SDCs by demonstrating how SDCs will fund high priority projects, in a manner that is consistent with the community's development goals. By coordinating development of the SDC methodology with development of system plans, linkages can be made between SDCs and delivery of service at *required* standards (in the case of regulated systems like water, sewer, and in some cases stormwater) and locally and regionally *desired* standards (in the case of parks and transportation). Coordination of the SDC methodology with development of the capital financing plan can help illustrate funding gaps associated with general revenue supported infrastructure, as well as the impacts on other revenue sources (like utility rates) of implementation of SDCs at levels below real cost recovery.

Many communities use a citizen advisory committee process (CAC) to develop SDC recommendations. This can be an effective way to balance local objectives related to infrastructure funding and development. This can be a particularly effective process when the CAC has also been involved in the development of the system plans, so that there is greater understanding of the need for the capital improvements themselves.

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[7] Master planning costs may be prorated between growth and existing development based on population, future capacity needs, overall allocation of capital improvement costs, or other relevant basis

[8] Metro is embarking on a study in June 2007 to analyze regional infrastructure needs and financing mechanisms. Results from this process are expected to be available in early 2008.

[9] See for example: *Paying for Prosperity: Impact Fees and Job Growth* (2003). The Brookings Institution Center on Urban and Metropolitan Policy.

The City of Albuquerque, NM adopted SDCs in 2004 (some of which are described in Appendix C and D), which resulted from a large-scale, community-driven visioning approach to address issues of urban form, land use and facility efficiencies, equity, long-range capital facility financing, and related "big picture" issues. That process led to the Planned Growth Strategies plan which was adopted in 2004. This plan served as the policy framework from which the city's SDCs were developed.

Legal/Regulatory

Oregon SDC law limits costs that may be included in the SDC methodology to capacity-related capital improvement needed for growth. Local governments should conduct a detailed evaluation of each project (using processes described previously in this section and examples presented in Appendix C) on the capital improvement plan to determine potential SDC eligibility within the allowable infrastructure systems. Certain improvements – such as safety improvements, improved pedestrian and bicycle access, and similar improvements – will require careful articulation of the specific ways in which they contribute to additional capacity. Generally, an increase in capacity can be demonstrated by:

- **Adding additional facilities** – this can mean adding more of the same type of facilities already existing in the system (e.g., additional neighborhood parks or wastewater clarifiers), and adding new facility types (e.g., skate parks or a new treatment process). In the latter case it is important to recognize that existing development will also benefit from the new facility types, so growth cannot be required to pay for the entire improvement costs.
- **Increasing the level of performance provided by existing facilities** (e.g., building a parking structure to remove existing on-street parking).
- **Upsizing existing facilities**, to the extent that any replacement capacity cost benefiting existing development is not allocated to growth.

Summary of Model Approach Recommendations

SDC methodologies from communities within the Metro region and around the country were reviewed to identify approaches that would support the objective of real cost recovery. For purposes of this report, 'real' cost recovery is intended to reflect both full cost recovery (the full array of facility and cost types needed to provide capacity for growth generally and specifically related to 2040 growth concept development are included), as well as recognition of potential cost variations across the service area. The model approaches are provided in Table 3-1, along with references to examples of these approaches as applied in specific communities and described in Appendix C. Below is a summary of the recommendations related to full cost recovery and cost variation.

Full Cost Recovery

Key attributes of the recommended model SDC approaches related to full cost recovery include the following, as illustrated in Figure 3-2:

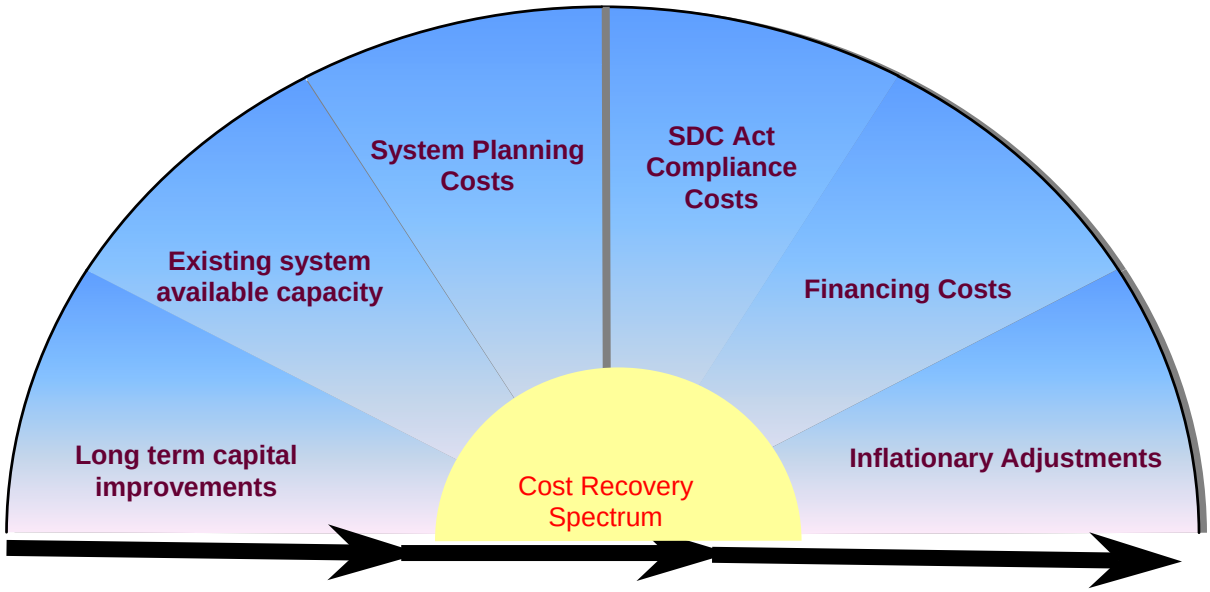
- **Long-term project cost recovery**: The SDC methodology is based on a recently adopted capital improvement or facility plan that projects needed improvements for a minimum of 10 years to serve existing and future growth as defined by an up-to-date comprehensive plan. As such, the project list includes facilities needed to build-out the system according to

local and regional growth objectives, including costs oriented to urban center facilities, to the extent that these projects relate to provision of capacity for growth.

- **Existing system cost recovery**: To the extent that existing system facilities will be used to meet the service delivery needs of new development, the fee structure reflects a buy-in component designed to recover available capacity costs from growth.
- **Recovery of other costs**: Beyond the direct facility costs themselves, the methodology allows for recovery of costs associated with placing facilities in service (e.g., planning and financing costs), and recovery of SDC act compliance costs (e.g., SDC fund accounting and development of the methodology).
- **Inflationary adjustments**: the methodology includes a mechanism for adjusting the fees annually for changes in cost factors, including land and materials inflation.

FIGURE 3-2

Spectrum of Full Cost Recovery



Recognition of Cost Variations

Historically, SDCs have been assessed uniformly across service areas based on system-wide average unit costs of capacity. The review of model approaches yielded examples both within the Metro region and elsewhere around the country, where cost variations within service areas have been developed in order to promote equity and development objectives. Specifically, four types of model approaches were identified with variations based on:

1. Cost factors
2. Levels of service
3. Cost allocations
4. Policy-based decisions

The first three approaches are designed to achieve full cost recovery with respect to costs of serving growth. The fourth approach, as applied in the Albuquerque example, resulted from a large scale community visioning process. Among the outcomes of this process was establishment of service tiers across the city: "fully served," "partially served," and "unserved." The purpose of the tiers was to recognize that some areas of the city already had most or all the infrastructure needed to serve new development but other areas did not. Also, "fully served" areas were more likely than "partially served" ones to have infill and redevelopment opportunities. From the city's perspective, it would be a more efficient use of existing resources to encourage development in fully served areas – where facilities already exist – and also encourage more efficient development patterns in partially served areas through a pricing structure in part based on SDCs.

Section 4

Assessment of Impact-Based SDCs

Introduction

An objective of this study is to develop model SDC approaches to assessment of SDCs based on system impact. As discussed previously, assessment of impact-based SDCs is one tool local jurisdictions can use to promote 2040 Growth Concept development, as the relative cost of serving developments within targeted high-density nodes and transit corridors is often less than serving development outside these areas, due to reduced system impacts. This objective is primarily addressed in the SDC methodology through development of the demand schedule, which defines how capacity requirements will be measured overall, and with respect to particular development characteristics.

The fundamental question to be addressed is whether the SDCs reflect the *impact* of new development on facilities. Variations in system impact related to the following development characteristics are considered:

- Land use type
- Development Size
- Density
- Location
- Configuration

This section presents the model approaches considered most consistent with the objective of assessment of impact-based SDCs. Recommended steps to implementation of these approaches are also identified in this section.

Model Approaches to Impact-Based SDC Assessment

Table 4-1 summarizes the model approaches to impact-based SDC assessment. As development characteristics vary in impact on different infrastructure systems, the table is organized by infrastructure system and development characteristic. Examples of some of these approaches may be found in Appendix D (with some references to the examples in Appendix C).

A discussion of system impacts by development characteristic follows.

Table 4-1. Model Approaches to Assessment of Impact-Based SDCs

System/Development Characteristic	Model Approaches	Rationale	Appendix D Example(s)
Transportation			
Land Use Type	Vary fees by dwelling and nonresidential land use type.	Data from Institute of Transportation Engineer (ITE) manuals provide data on trip characteristics by numerous land use categories.	City of Tucson City of Albuquerque
Development Size	Vary residential fees by house size.	Nonresidential SDCs are commonly assessed based on development size, based on data from ITE manuals. Recent examples of residential SDC assessment relate trip generation to number of occupants and house size.	City of Tucson City of Albuquerque
Density	Vary residential fees based on number of units per lot.	Higher density development has less impact on roadway system and is less costly to serve per unit due to reduced linear feet of roadway.	City of Kelowna City of Prince George
Location and Configuration	Reductions in SDCs for downtown core and mixed use areas. Reductions in SDCs for development along transit/bus corridors.	Compact nature of area leads to reduced trip generation and shorter trips. Proximity to nonmotorized modes and mixed use leads to reduced trip generation and shorter trips.	City of Tucson City of Olympia City of Atlanta
Green Design	SDC discounts for transportation demand management measures and site design features.	Certain site design features (e.g., bike parking) may reduce vehicle trip generation.	City of Olympia
Water			
Land Use Type	Vary fees based on average number of occupants/employees per unit.	The average number of occupants per unit varies by dwelling type (single family vs. multifamily) and land use type (nonresidential employment density). The number of occupants/employees is an indicator of potential water demand.	City of Prince George
Development Size	Vary residential fees by lot size.	Systems are sized for peak demands which often relate to summer irrigation and lot size. Offers greater variation in fees than standard scaling measures like meter size.	City of Santa Fe City of Scottsdale (single family)

Table 4-1. Model Approaches to Assessment of Impact-Based SDCs

System/Development Characteristic	Model Approaches	Rationale	Appendix D Example(s)
Density	Vary residential fees by density of lot.	The number of units per lot is an indicator of both house and lot size, and thus an indicator of potential water demand. Higher density/reduced lot width per unit requires reduced linear feet of water main.	City of Scottsdale (multifamily) City of Kelowna, BC City of Prince George, BC
Location	Vary fees by area.	Projected demand per unit varies by area.	City of Scottsdale
Green Design	Discount SDCs for certain building or site design features.	Building and site design may be a factor in reducing water use per unit.	None identified.
Storm Water			
Land Use Type	Vary fees based on estimated runoff equivalencies.	Potential runoff is generally a function of the amount of impervious area which relates to the dwelling density for residential, site coverage for nonresidential, and average percent impervious coverage by land use type.	City of Prince George
Development Size	Vary fees by impervious area of specific development.	The amount of impervious area is an indicator of potential runoff which may be measured for each individual development.	City of Albuquerque (Appendix C)
Density	Vary fees by number of residential units per acre.	Higher density/reduced lot width per unit requires reduced linear feet of stormwater mains.	City of Prince George
Location	Vary fees by area.	Projected capital investment needs vary by area.	City of Prince George
Green Design	Discounts for on-site detention above development standards; Reduced fees overall as a result of required design standards (e.g., green streets).	On-site improvements may be effective at controlling runoff beyond standards. Requiring all developments to control runoff can reduce need for system capacity overall.	City of Eugene City of Prince George City of Gresham
Sewer			
Land Use Type	Vary fees based on average number of occupants or employees per unit.	The average number of occupants per unit varies by dwelling (single family vs. multifamily) and land use type (nonresidential employment density). The number of occupants/employees is an indicator of potential water demand and resulting wastewater volume.	City of Prince George City of Scottsdale

Table 4-1. Model Approaches to Assessment of Impact-Based SDCs

System/Development Characteristic	Model Approaches	Rationale	Appendix D Example(s)
Development Size	Vary residential fees by house size.	House size relates to number of occupants, which relates to winter average water use (typically used to estimate sewage flow).	City of Eugene
Density	Vary residential fees by density of lot.	The number of units per lot is an indicator of house size, and thus an indicator of potential wastewater volume. Higher density/reduced lot width per unit requires reduced linear feet of sewer mains.	City of Scottsdale (multifamily) City of Kelowna, BC City of Prince George, BC
Location	Vary fees by area.	Projected system flow contribution per unit varies by area. Projected capital investment needs vary by area.	City of Scottsdale City of Prince George
Green Design	Discount SDCs for certain building design features.	Building design may be a factor in reducing wastewater flow volume.	None identified
Parks			
Land Use Type	Vary fees by dwelling and nonresidential land use type.	Dwelling type is an indicator of number of occupants. Nonresidential depends on nexus, but generally related to number of employees per unit.	City of Prince George
Development Size	Vary fees by house size.	House size is an indicator of number of occupants.	City of Albuquerque (Appendix C)
Density/Location	Vary fees by location/density.	Number of occupants per unit varies by location/density.	City of Albuquerque (Appendix C) City of Olympia
Configuration, Green Design	None identified.	None identified.	None identified

Land Use Type

Land use is a factor in SDC assessment especially for parks and transportation systems, which at a minimum, reflect land use type and most often, include differentiations by dwelling type to recognize variations in average number of occupants per unit. For stormwater, water, and wastewater systems, SDCs are often assessed based on a scaling measure that is uniformly applied to all land use types. For example, impervious area is most often used for assessment of stormwater[10] SDCs for all land use types. Similarly, SDC programs for water and sewer are often based on plumbing fixture units or meter size and assessed uniformly for all development types.

In some cases, certain land uses may be exempt from SDCs altogether. Historically, this has been most often the case for nonresidential land uses and park SDCs. Assessment of SDCs requires demonstration of a rational nexus between the development and need for system capacity. Recently, more and more jurisdictions have adopted park SDCs for nonresidential development, including the cities of Beaverton, Gresham, Hillsboro, Lake Oswego, Oregon City, Sherwood, Tigard, Washington Co., and Wilsonville. The nexus for nonresidential development and park demand is typically established through park surveys, hours of opportunity (where potential park use is estimated for work vs. home-based time), or other models.

Development Size

Most fee schedules for all infrastructure systems include some basis for assessing differential SDCs to nonresidential development based on development size. Scaling measures are common in the assessment of SDCs for nonresidential development, due to the wide variation in developments (see Appendix B for common scaling measures). Variation in SDCs based on size of development has been less common practice for assessing residential development, though that is changing. As with dwelling type, dwelling size is a potential indicator of the number of occupants, and therefore an important factor in park and other system SDC assessments.

Table 4-2 shows the relationship between house size, persons per unit, and lot size based on national data; specifically, as house size increases so does persons per unit and lot size.

Table 4-2. Relationship between House Size, Persons per Unit, and Lot Size

House Size	Persons	Lot Size
Less than 500 square feet	2.21	0.22
500 to 999 square feet	2.27	0.25
1,000 to 1,499 square feet	2.51	0.33
1,500 to 1,999 square feet	2.69	0.37
2,000 to 2,499 square feet	2.89	0.43
2,500+ square feet	3.02	0.52

Source: Adapted from American Housing Survey 2001.

[10] The use of land use categories is sometimes used to estimate impervious area based on standard coverage ratios. Also, as runoff water quality issues become more important and costly to address, development of differential fees based on the quality of runoff by land use type may become more common practice.

The relationships illustrated in Table 4-2 may vary locally, particularly for lot size, when there is a high incidence of large homes on small lots. Appendix D provides examples (City of Tucson and City of Eugene) of how house size has been correlated to system impacts for transportation and utilities based on local census and other data.[11]

Density

Density of the geographic area within which development occurs (as opposed to density of the development itself) is an important characteristic for certain infrastructure systems, namely transportation and utilities.

Transportation

As indicated by Table 4-3, for transportation systems, density has a strong influence on mode choice to destinations and distance to destinations. Higher-density areas may lend themselves to more walking and bicycling to some destinations than lower-density areas, and higher-density areas may have public transit options that lower-density areas do not. Also, higher-density areas may make the trips between destinations shorter.

Table 4-3. Trip Distribution by Density, 2001

Housing Units Per Square Mile	Private Motor Vehicle	Bus	Rail	Bicycle	Walk	All Other Modes
26 – 750	97.0%	0.5%	0.3%	0.1%	1.7%	0.5%
751 - 2,000	95.4%	1.1%	1.2%	0.3%	1.4%	0.6%
2,001 - 4,000	92.4%	2.8%	1.6%	0.4%	2.4%	0.4%
4,001 - 6,000	82.4%	7.4%	3.2%	1.4%	5.0%	0.7%
6,000+	56.6%	13.7%	18.7%	1.4%	8.6%	0.9%
All (average)	90.9%	2.90	2.5%	0.5%	2.8%	0.5%

Source: Adapted from *Nationwide Household Transportation Study 2001*, calculated based on mode journey to work by workers using only complete responses and grouping detailed mode categories into the ones reported here.

As shown in Table 4-3, although the private motorized vehicle mode (car, van, sport utility vehicle, pick-up truck, large truck) dominates in all categories, use of this mode falls considerably between the 4,000-6,000 and over 6,000 unit-per-square-mile categories (essentially cluster home to townhouse density). The data show that trips via bus nearly double between the same density categories, while rail trips increase nearly six-fold. Walking to work increases at about the same rate between the three most-dense categories.

Regional data from Metro's 1994 Travel Behavior Survey also show that area density and proximity to transit reduce vehicle miles per capita, as reliance on auto use decreases in favor of transit and other modes (walking and bike).

[11] For a more complete discussion of using house size as a variable in impact fee assessment, see "Impact Fees and Housing Affordability: A Guidebook for Practitioners" (U.S. Department of Housing and Urban Development, Washington DC, April 2007)

As indicated in Table 4-1, Appendix D provides examples of impact-based SDC assessment, where reduced fees are assessed in the high-density urban core area, relative to other parts of the city.

Utilities

Studies have also shown that area density is a substantial influencing factor in extending water, wastewater and stormwater systems. Burchell's synthesis of literature suggests that areas with higher-density development (more than 6 units per acre) are about 20 percent to 30 percent less costly to serve with utility services than lower density.[12] Two separate issues are considered. First, as density decreases the cost of providing the network of mains and other improvements outside subdivisions increases. Second, the costs of central water and wastewater facilities are roughly constant for average daily personal use, but increases in water demand in certain months occurs as density declines reflecting greater outdoor use for irrigation, swimming pools, and car washing.

For the network cost, consider a very simplistic set of assumptions: a) the same size of water and wastewater main can serve the same number of people whether they are concentrated in one square mile of development or 10 (that is, as land area increases density decreases proportionately); b) the main traverses through the center of a square mile and residential developments tap onto it and internalize costs of extending the network within them (that is, each connecting development serves an area a half mile wide); c) the terrain is unproblematic; and d) the cost to install a mile of water and wastewater mains is $250,000 each or $500,000 together. These simplistic assumptions allow for calculation of the variation in water and wastewater network costs by density which is shown in Table 4-4.

Table 4-4. Water and Wastewater Network Costs per Unit by Density

Residential Units Per Square Mile, Range	Residential Units Per Square Mile, Average	Cost Per Unit*
26 – 700	500	$1,000
701 - 2,000	1,200	$417
2,001 – 4,000	3,000	$167
4,001 – 6,000	5,000	$100
>6,000	7,000	$71

*Based on $250,000 per mile for water and wastewater mains

While the example in Table 4-4 indicates that costs of providing the network of mains may decrease in higher density areas, the simplifying assumptions may not hold true in all cases and tends to limit use of density as a factor in SDC assessment. Specifically, for high density areas where infill and redevelopment requires upsizing existing mains, installation costs per unit may actually be higher than lower density areas due to construction complexities (e.g., the need to dig up existing infrastructure beyond just the water mains to replace the existing facilities).

An example of assessing SDCs based on area density was discussed in Section 3 (Sacramento Regional County Sanitation District Sewer SDC). In this case, the SDC schedule for higher density infill areas was lower than the fees in other areas, reflecting a reduced allocation of conveyance

12 Robert Burchell, et al., *The Costs of Sprawl Revisited*, National Academy of Sciences (2000).

system costs that stemmed from the district's policy objective to encourage development in infill areas. Appendix D provides an example from the City of Prince George, BC, where higher density developments are assessed lower fees based on the reduced lot width, which is assumed to correlate to reduced linear feet of required water, sewer, and stormwater mains.

As discussed above, area density may be an indicator of peak water demands that impact sizing of capacity in central facilities. Peak water use is driven largely by outdoor water uses, and in particular lawn irrigation and in some areas swimming pools, both which tend to increase with larger lots. However, lot size is the more common approach to assessing SDCs. As indicated in Table 4-1, the City of Scottsdale assesses SDCs based on the density of the lot (number of units per acre) which is an indicator of individual unit lot sizes which the city has further correlated to variations in water use per unit. Similarly, the City of Kelowna, BC, has determined relative water and sewer capacity demands per unit for four levels of residential density.

Location

Location in this section focuses on distance from service and demand variations by area, as a potential indicator of system impact. Section 3 addressed location variations attributable to cost factors like land prices and LOS considerations.

Proximity to service as a factor in SDC assessment has been most commonly applied in transportation SDC development, related specifically to proximity to public transit. National studies have shown that dwelling units within one-half mile of transit stations have about 60 percent fewer automobiles than their metropolitan area averages. Such data led the City of Atlanta to offer discounts on SDCs to developments located near transit. In addition, studies have shown that rail transit ridership ranges from 25 to 50 percent of workers living within ¼ mile of stations and half that between ¼ and ½ mile. Bus transit ranges from 15 to 30 percent for workers living within ¼ mile of the bus line and about half that between ¼ and ½ mile. Local data to conduct such analyses is available from the Census Transportation Planning Package for metropolitan areas.

Research for this project did not reveal any examples of location variation with respect to distance from service for other infrastructure systems (i.e., utilities and parks). The integrated nature of utility systems tends to limit the use of distance from service as an indicator of system impact. As Table 4-1 indicates, the City of Scottsdale does assess differential water SDCs to two service areas within the city reflecting both differences in water supply costs by area (as discussed in Section 3), and area-specific water demand patterns per unit.

Parks system impact is predominantly measured by people, which generally relates more to density, unit size or type, than location. Though, as indicated in Table 4-1, the City of Albuquerque has developed a park SDC that varies by location, reflecting area-specific average occupants per unit. The City of Olympia also charges a lower SDC to multifamily developments locating in the downtown area, compared to other parts of the City, reflecting analysis of downtown demographics indicating a reduction in demand for parks.

Configuration

Development configuration as a factor in system impact and SDC assessment, like proximity to service, is generally limited to transportation systems. Mixed uses and, greater still, master-planned mixed-use developments, have been found to reduce automobile use substantially. When living-working-shopping-services are all nearby, fewer car trips are needed and the distance traveled is reduced. For example, in a typical single-use office/business park, walking trips may

account for 3 to 8 percent of all mid-day trips. That figure rises to 20 to 30 percent when other uses are accessible such as shopping, and personal and financial services.

Even greater gains are made when new community design combines compact development, mixed uses, connectivity, and networks of pedestrian and bicycle pathways - even in the suburbs. Modern neo-traditional or new urbanism designs reduce trip lengths and induce non-vehicular use for short trips, especially if also served by mass transit. Studies in California have shown that when compared to conventional suburban subdivisions with single or few uses, curvilinear streets, and cul-de-sacs, modern new community design can reduce vehicle miles traveled (VMT) by 50 percent. These adjustments would need to be made on a case-by-case basis.

On this point, it is useful to note that most road SDC ordinances allow a developer to prepare an "individual fee calculation study" to demonstrate that their project will have less impact on the road system than indicated by the fee schedule. The developer of a mixed-use project could use this option to quantify the reduction in external trips that should be expected due to the nature of the project. For example, the current edition of ITE's *Trip Generation* shows an across-the-board reduction of about 10 percent in trips generated within planned unit developments.

Green Design

Though historically, consideration of 'green' design characteristics have had limited application in the assessment of SDCs, recent examples within the region highlight potential use in the future, particularly for stormwater systems. For example, adoption of green design standards applicable to all development have led to reduced SDCs in some communities, through reduced need for public infrastructure investment. Communities have also adopted SDC schedules that include discounts for implementation of certain building and site design features that are designed to reduce system impact. For example, the City of Olympia provides reductions in SDCs for implementation of transportation demand management measures, including installation of bicycle parking structures, and other features to encourage reduced motor vehicle use.

Recommendations to Implementation of Model Approaches to Impact-Based SDC Assessment

Recommended actions related to the implementation of impact-based SDCs are provided in Table 4-5.

Table 4-5. Steps to Implementation of Model Approaches to Impact-Based SDC Assessment

Considerations	Specific Issue(s)	Recommended Action(s)	Ownership
Financial/Technical			
Information to substantiate cost differences by development characteristic.	Cost factors vary by jurisdiction. Need to quantify development characteristic/system impact relationships. Impacts of green design features less established and require mechanism for long-term enforcement.	Utilize all available local data sources (e.g., system models, water use records, U.S. Census data, and engineering studies). Supplement local data with regional and national data, and developer-provided information. Disaggregate SDC cost components to allow for discount of particular component costs (e.g., water treatment vs. distribution). Consider policy-based adjustments to encourage particular development design features (e.g., bike parking or green streets). Consider municipal code revisions to allow for enforcement (e.g., long-term maintenance of drainage systems or other features).	Local jurisdictions: data analysis and development; policy based adjustments Metro: Regional source of data for transportation system information. Continue to share information on other infrastructure systems as regional infrastructure analysis continues.
Perceived need to create benefit districts.	Limiting revenue to a particular district will limit flexibility and feasibility of funding projects.	Establish assessment districts except in limited circumstances when specialized facilities are required for specific areas.	Local jurisdictions
Political/Governance			
Political support to implement differential SDCs.	Public understanding of relative impacts. Concern about increased administrative burden. Intergovernmental coordination may be required.	Outreach/involve stakeholders in the SDC development process. Focus on the equity of linking different fees to different system impacts. Use SDC revenue to pay for initial methodology development cost. Track costs over time. Pursue intergovernmental agreements for joint planning areas.	Local jurisdictions
Legal/Regulatory			
Statutory requirements do not limit consideration of development characteristics.	Challenges require demonstration that SDC decisions are based on substantial evidence.	Document methodological decisions.	Local jurisdictions

Financial/Technical

Establishing Development Characteristic/System Impact Relationships

One of the primary considerations related to implementation of model approaches that differentiate SDCs is establishing the cost of service differences of specific development characteristics.

As discussed above, our research found a number of development characteristic and system impact relationships fairly well documented and accepted,[13] including:

- Lower roadway system impact associated with higher density (particularly central city/urban core) and mixed use development areas and areas with proximity to alternative transportation modes.
- Reduced water and sewer demand for smaller house sizes and lots.
- Increased park system and other system impacts associated with larger house sizes and dwelling unit types with greater number of occupants per unit.[14]

In addition, the notion that it is less expensive to add capacity than length (i.e., higher density development can be served at a lower cost per unit) is generally accepted when it comes to developing new areas (as illustrated in Table 4-4 for example). However, if additional capacity is required in already developed areas (particularly urbanized areas), then construction costs may be impacted by the need to navigate existing infrastructure, traffic, etc., which may potentially mitigate some of this cost savings of serving higher density development in urban areas, relative to greenfield areas, at least in the short run. However, the fact that existing developed areas tend to have some amount of available capacity already, may make the average costs of accommodating higher density infill and redevelopment relatively lower than unserved areas.

As illustrated by the examples in Appendix D, local jurisdictions can use both technical and policy-based approaches to establish differential SDCs reflective of development characteristics. Specifically, as indicated in Table 4-5, local jurisdictions can take the following steps to build a basis for assessing impact-based SDCs:

- Explore local sources of data to evaluate development demand characteristics related to location (primarily transit corridors and centers vs. other areas), density, and house size. Data sources may include transportation models, water use records, and census data.
- Supplement local data with regional or national data on demand characteristics including: alternative transportation modes, trip lengths, water/wastewater demand by house/lot size, and persons per household.
- Allow developers to submit impact studies based on defined parameters (as discussed previously in this section under "Configuration").

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[13] See Appendices C and D for sample analyses conducted at a local level; other studies include, *The Costs of Sprawl Revisited*, National Academy of Sciences (2000). And "Do Development Cost Charges Encourage Smart Growth and High Performance Design? An Evaluation of Development Cost Charge Practices in British Columbia", Coriolis Consulting Corp for West Coast Environmental Law (September 2003)

[14] See "Impact Fees and Housing Affordability: A Guidebook for Practitioners" (U.S. Department of Housing and Urban Development, Washington DC, April 2007)

- Consider existing local data (e.g., planning and engineering studies, recent capital improvement project experience) available to support development of cost differences by location and density.

Green Design Issues

As discussed previously in this section, incorporation of building design and site feature impacts in SDC assessment is still limited, but examples of green design application are growing, particularly in the Metro area.

Recommended steps related to continued development of green design SDC applications include:

- 'Unbundling' the SDCs – computing separate cost elements for each system component – to allow for a technical basis for discounting specific SDC components. For example, water SDCs may comprise multiple components including: supply/treatment, distribution, and storage components. To the extent that green building features are expected to delay need for additional water supply, then the portion of the SDC related to that cost element could be discounted.
- Use of policy- based reductions for implementation of best management practices (BMPs). For example, the City of Eugene provides nominal reductions in SDCs to encourage implementation of BMPs.
- Incorporation of green design features in development codes, as a means of reducing capacity needs system-wide and therefore reducing SDCs for all development, as has been done in Gresham.
- Exploring grant funding from state and federal agencies for pilot projects to evaluate the impacts of different design concepts. Grant funds from the Environmental Protection Agency are currently being used to explore stormwater design impacts in the Metro area through a project administered by Portland State University, with participation from the City of Wilsonville and Costa Development Communities in the Villebois community.
- Municipal code revisions to provide an ongoing enforcement mechanism of green design features. This is sometimes done for affordable housing SDC waivers, where code provisions require that the land use be maintained for a certain number of years in order to be eligible for the SDC reduction; otherwise, there is a mechanism to recover the fees should development change.

Assessment vs. Benefit Districts

Finally, a consideration specific to implementation of location-based SDCs is whether the money collected in the specific area, also needs to be spent in the specific area, potentially limiting the flexibility and the feasibility of funding capital projects throughout the service area. There are two approaches to location-based SDCs: 1) assessment districts, and 2) benefit districts. In both cases, differential SDCs are assessed by district. The difference between the two types of districts is how the revenue collected is *spent* within the service area. In the case of assessment districts (as used for example by the City of Olympia for transportation and parks SDCs), the revenue may be applied *system-wide* (it is not limited to expenditure within the district); however, in the case of benefit districts (as used for example by the City of Scottsdale for water SDCs), the revenue *remains in the specific area collected*.

The following recommendations are provided with respect to districts:

- Clearly identify the basis for SDC differences; charge differentials based on demand characteristics (e.g., in Olympia, trip generation rates and average household occupancy) alone would not lend themselves to establishment of benefit districts, as the unit cost for the SDCs (the costs and facilities upon which the SDC is based) is the same system-wide.
- Consider benefit districts in limited cases where SDC differential is based on cost, for example, when specialized investments are needed to serve an area (for example, the City of Scottsdale, where additional water resource investments were needed to serve a particular area), or where multiple jurisdictions are servicing an area (as in the case of the City of Santa Fe's transportation SDC) such that there is an expectation that the differential fees will result in investments unique to the area.

Political/Governance

Since most jurisdictions currently charge uniform SDCs, implementation of SDCs that differentiate by location or other development characteristic may require additional education to explain the rationale for the changes. However, once stakeholders understand how the revised approaches help achieve greater equity, public and political support will likely follow. An additional consideration for location-based SDCs is the need to develop intergovernmental agreements with neighboring jurisdictions for joint planning and assessment of charges (this was done for example in Clackamas County where an agreement was established for development and collection of transportation SDCs for new development in Happy Valley).

Recommendations related to political/governance considerations include:

- Enhance public education support through outreach/involvement of stakeholders in the SDC development process. To the extent that stakeholders understand the basis for potential cost differences, there is likely to be greater support.
- Initial development of these model approach SDCs may in fact require added time and expense up-front to develop the methodology. However, SDC statutes allow for recovery of costs associated with development of the methodology through the SDCs. As local and regional systems are put in place and data is developed to support these model approaches, the cost of updating/maintaining these models should be reduced. Frequent updates to these documents can also lead to long-term cost effectiveness as jurisdictions make only relevant changes regularly rather than overhauling facility plans and SDC assessments when completing an update.
- Consider development of intergovernmental agreements (IGA) where necessary to allow for joint planning and assessment of SDCs in areas where more than one jurisdiction has a financial interest. While development of an IGA may require additional efforts up-front, such an agreement is necessary to ensure that roles and responsibilities of each jurisdiction with respect to development, assessment, and accounting of the SDC have been clearly defined, in order to reduce problems later.

Legal/Regulatory

Oregon SDC law does not specifically address assessment of differential SDCs based on development characteristics, nor does the law address service areas specifically. Therefore, there are no legal limitations to the establishment of the model approaches related to impact-based assessment. Should a local jurisdiction have its methodology challenged, the local government must demonstrate the decision is based on substantial evidence. Therefore, as with any

methodological issue, it is important that the methodology be well-documented and based on the best available data.

Summary of Model Approach Recommendations

SDC methodologies from communities within the region and around the country were reviewed to identify approaches that would support the objectives of impact-based SDC assessment. For purposes of this report, impact-based SDCs are intended to reflect the costs of serving growth with respect to specific development characteristics, including development characteristics relevant to promotion of the 2040 Growth Concept (in particular, density, location, and configuration). The recommended approaches are provided in Table 4-1, along with references to examples of these approaches as applied in specific communities and described in Appendix D.

Development Characteristic Impacts by System

As described in this section, some development characteristics are more relevant to determining SDCs for different infrastructure systems as follows:

- **Parks:** Service units are generally measured as people, and therefore, are most significantly impacted by development size and type, although location may also be a factor to the extent that household demographics vary across the service area.
- **Transportation:** Service units are number of trips or VMT, so cost of service is influenced by household and building type and size, as well as location, density and configuration. Development type and size are potential indicators of motor vehicle trip generation rates. Density has a strong influence on mode choice to destinations and distance to destinations. Location, to the extent that it relates to proximity to public transit may also be significant factor related to system impact. Development configuration is also a factor in system impact for transportation systems; when living-working-shopping-services are all nearby, fewer car trips are needed and the distance traveled is reduced.
- **Water, Sewer, and Stormwater:** Service units are typically volume (and in some cases, quality) of use or discharge, which relates to development type and size. Higher density development generates smaller lot sizes, which generally correlate to reduced water demand per unit. If the amount of impervious area on each lot is also lower, stormwater fees based on impervious area may also favor (through reduced fees) higher density development. Area density may also impact certain cost components (distribution and conveyance networks, for example), with more dense areas requiring reduced pipe length per unit. Location may also be a factor in determining relative cost of utility service if unique facilities are required to provide service, or demand differences may be established.

To the extent that these characteristics are not included in SDC methodologies, development that is less costly to serve may pay proportionately more than its impact, while development that is more costly pays less. The issue of proportionality is one of the keys to sustainability. If SDCs are charged based on the real cost of serving development with higher cost development paying more than lower cost development, development will likely be resorted to become less costly on average. More compact development would occur, as would infill and redevelopment.[15]

[15] Residential development is the focus of this discussion, as it is the single largest consumer of land and arguably the most sensitive to costs as a location factor.

Applicability of Approaches to Specific 2040 Growth Goals

In order to develop model SDC fee systems that are relevant to cities and counties throughout the Metro area with respect to 2040 Growth Concept development objectives, Table 4-6 provides a summary of the recommended model approaches related to specific objectives and infrastructure systems. The following objectives are considered:

- **Encourage higher density development**: With higher density development, come smaller lot sizes, which generally correlate to reduced water demand per unit. To the extent that structures are also smaller and potentially have fewer occupants *per unit*, a correlation may be established between higher density development and reduced sewer, park, and transportation impact per unit. If the amount of impervious area attributable to each lot is also lower, stormwater fees based on impervious area may also favor (through reduced fees) higher density development.

- **Direct growth into infill areas**: The fact that infill areas are already served by infrastructure, provides an opportunity for recognizing potential cost to serve differences between areas served by existing excess capacity vs. planned improvements, at least for system components that serve localized areas (e.g., local water, sewer, storm water mains) as opposed to centralized facilities (e.g., water supply and treatment facilities). Relative LOS for infill and other areas (to the extent that infill areas have a lower LOS) may be another technical basis for reducing fees in these areas. Fee differentials based on relative costs of service will at the same time, support real cost recovery, in contrast to a policy based approach that attempts to direct development to already served areas by not charging for existing available capacity. Local jurisdictions need to weigh cost recovery and development objectives when considering policy-based adjustments.

- **Direct growth into Regional and Town Centers**: To the extent that Regional and Town Centers are already served to some extent by existing infrastructure or exhibit reduced LOS standards, the strategies discussed under infill development may also apply. Furthermore, for transportation systems, Regional and Town Centers – through greater access to public transportation and mixed use development patterns – provide an opportunity for reducing SDCs for developments in these areas based on system impact. Policy-based adjustments, most often in the form of discounts for transit oriented development may also be used to encourage development along transit corridors. As discussed previously, the impact of policy-based adjustments on cost recovery should also be considered.

- **Assign Real Costs to Greenfield Development**: As Greenfield areas require building infrastructure "from the ground up", larger investment in new facilities may be required relative to already served areas. To the extent that these new areas may also desire a higher LOS, higher SDCs for Greenfield development may promote real cost recovery objectives. Consideration should also be given to relative demand characteristics in Greenfield vs. other areas, particularly for transportation systems.

Table 4-6. Model Approaches to Fee Assessment by Infrastructure System and 2040 Growth Objectives

	2040 Objectives			
Infrastructure System	**Encourage Higher Density Development**	**Direct Growth into Infill Areas (mixed densities)**	**Direct Growth into Regional or Town Centers (mixed use/access to services)**	**Assign "Real Costs" to Greenfield Areas (mixed densities/less access to services)**
Water	Scale fees based on lot size (Santa Fe), density of lot (Scottsdale) or house/building size.	Incremental cost allocation of pipe size to infill areas (Sacramento County).	Establish assessment districts that recognize cost differentials related to availability of existing capacity and specific planned improvements.	Geographically differentiated fees based on improvement cost allocation. (Kelowna)
Sewer	Scale fees based on density of lot (Kelowna) or house/building size (Eugene).	Incremental allocation of pipe size to infill areas (Sacramento County).	Establish assessment districts that recognize cost differentials related to availability of existing capacity and specific planned improvements.	Geographically differentiated fees based on improvement cost allocation. (Kelowna)
Stormwater	Scale fees based on impervious area (Eugene) or density of lot (Kelowna).	Incremental allocation of pipe size to infill areas (Sacramento County).	Establish assessment districts that recognize cost differentials related to availability of existing capacity and specific planned improvements.	Geographically differentiated fees based on improvement cost allocation. (Kelowna and Albuquerque)
Parks	Scale fees based on dwelling type or house/building size (Albuquerque).	Reduced or no charge if total growth need to be met by existing facilities only *(Albuquerque).*	Establish assessment districts based on area-specific LOS and demographics (Gresham and Olympia).	Geographically differentiated fees based on improvement cost allocation. (Gresham and Albuquerque)
Transportation	Scale residential fees based on house size (Albuquerque) or density of lot (Prince George).	Reduced or no charge if total growth need to be met by existing facilities only (Albuquerque).	Assessment districts based on area-specific trip rates and trip lengths (Olympia and Tucson). Discounts for TOD (Atlanta).	Geographically differentiated fees based on improvement cost allocation. (Kelowna)

Section 5

Summary of Recommendations

SDC methodologies from communities within the Metro area and around the country were reviewed to identify approaches that would support the objectives of: 1) real cost recovery, and 2) impact-based SDC assessment. For purposes of this report, 'real' cost recovery is intended to reflect both full cost recovery (the full array of facility and cost types needed to provide capacity for growth generally and specifically related to 2040 Growth Concept development are included), as well as recognition of potential cost variations across the service area. Impact-based SDCs are intended to reflect the costs of serving growth with respect to specific development characteristics, including development characteristics relevant to promotion of the 2040 Growth Concept (in particular, density, location, and configuration).

The recommended approaches are provided in Tables 3-1 and 4-1, along with references to examples of these approaches as applied in specific communities described in Appendices C and D. A summary of the key attributes of the recommended approaches are summarized below, including considerations for local jurisdictions.

Full Cost Recovery

The recommended model SDC approaches related to full cost recovery include the following:

- **Long-term project cost recovery**: The SDC methodology is based on a recently adopted capital improvement or facility plan that projects needed improvements for a minimum of 10 years to serve existing and future growth as defined by the comprehensive plan.
- **Existing system cost recovery**: To the extent that existing system facilities will be used to meet the service delivery needs of new development, the fee structure reflects a buy-in component designed to recover available capacity costs from growth.
- **Recovery of other costs**: Beyond the direct facility costs themselves, the methodology allows for recovery of costs associated with placing facilities in service (e.g., planning and financing costs), and recovery of SDC act compliance costs (e.g., SDC fund accounting and development of the methodology).
- **Inflationary adjustments**: the methodology includes a mechanism for adjusting the fees annually for changes in cost factors, including land and materials.

Long-term system plans are required for water, wastewater, and transportation systems, from which SDC methodologies may be developed. Some smaller communities may not have access to park and stormwater system plans, so may need to rely on shorter term capital improvement plans for purposes of SDC development. The optimal frequency of updating the system plans and associated SDC methodologies will vary by jurisdiction based on size, development plans, and other factors. Regardless of how often comprehensive updates to SDC project lists and methodologies occur, local jurisdictions are encouraged to apply annual inflationary adjustments to SDCs to keep current with rising construction and land costs. Recovery of other types of costs should at least include recovery of SDC act compliance costs, which are generally straightforward to estimate based on professional service fees. For some jurisdictions, inclusion of debt financing

costs may be technically and politically difficult to implement, without a corresponding capital financing plan.

It is recommended that to the extent possible, SDCs reflect the full array of facility types and capacity costs needed to serve new development including costs associated with development of 2040 centers and corridors (like parking garages), to the extent such facilities may be related to provision of capacity for growth. As capital funding sources are limited and face continued pressure from the need to address infrastructure rehabilitation and replacement, in addition to expanding capacity, the extent that SDCs can more fully fund the needed infrastructure for growth, will allow for addressing all of the region's capital needs. Furthermore, as more and more jurisdictions across the region adopt real cost recovery SDCs, political concerns related to relative fee levels may be mitigated.

Impact-Based SDCs

Recommendations for impact-based SDCs include development of fee schedules that reflect development characteristics, including land use type, size, density, location and configuration. Some development characteristics are more relevant when determining impact-based SDCs for the different infrastructure systems, as follows:

- **Parks:** Service units are people, so most significantly impacted by development size and type, although location may also be a factor to the extent that household demographics vary across the service area.
- **Transportation:** Service units are trips and VMT, so cost of service is influenced by household and building type and size, as well as location, density and configuration. Density has a strong influence on mode choice to destinations and distance to destinations. Location, to the extent that it relates to proximity to public transit may also be significant factor related to system impact. Development configuration is also a factor in system impact for transportation systems. Mixed uses and, greater still, master-planned mixed-use developments, have been found to reduce automobile use substantially. When living-working-shopping-services are all nearby, fewer car trips are needed and certainly the distance traveled is reduced.
- **Water, Sewer, and Stormwater:** Service units are typically volume (and in some cases, quality) of use/discharge, which relates to development type and size. With higher density development, come smaller lot sizes, which generally correlate to reduced water demand per unit. If the amount of impervious area attributable to each lot is also lower, stormwater fees based on impervious area may also favor (through reduced fees) higher density development. Area density may also impact certain cost components (distribution and conveyance networks, for example), with more dense areas requiring less reduced pipe length per unit. Location may also be a factor in determining relative cost of utility service if unique facilities are required to provide service, or demand differences may be established.

With respect to 2040 Growth Concept development consideration of density, location and configuration are the most relevant characteristics, though to the extent that higher density development is characterized by smaller structures and lot sizes, SDCs that at a minimum, favor (through lower fees) smaller structures and lots, may promote higher density goals. The use of

approaches based on density, configuration and location are recommended for consideration, particularly for transportation systems, by jurisdictions facing significant growth generally, and the need to address varying growth types and locations.

Recognition of Cost Variations by Location

Historically, SDCs have been assessed uniformly across service areas based on system-wide average costs. However, location can be an important indicator of relative cost of serving development, and use of location-based SDCs can also promote 2040 Growth Concept development. In addition to being a potential indicator of system impact (as discussed above), location can impact the cost of providing services due to variations in cost factors (e.g. land prices) and levels of service (e.g., a portion of the service area desires significantly more park acreage per capita).

Consideration of location-based SDCs is recommended for jurisdictions with diverse areas, where cost differences may be significant and consistent. This approach is particularly relevant for areas that anticipate growth in new, currently unserved areas vs. existing served areas, and for communities that want to direct growth into particular areas, like Regional and Town Centers.

Technical vs. Policy-Based Solutions

The development of SDC schedules may reflect technical or policy-based considerations. Technical approaches allow for development of impact-based SDCs that reflect costs of providing service to developments of different characteristics. The 2040 vision promotes redevelopment and infill growth patterns, and to the extent that these types of development may be less costly to serve due to reduced infrastructure impact related to density, location, configuration, or other considerations, the SDC fees for these developments should reflect the lower costs. Thus, technically-based SDC methodologies can be a tool to encourage 2040 development patterns, and at the same time fully recover infrastructure costs, as costs may be allocated among developments in proportion to impact – resulting in lower fees for development types and locations that are less costly to serve and higher fees for more costly developments. Developing a technical basis for SDC differentials will likely require additional planning and analysis by local jurisdictions, as well as additional stakeholder education. The additional resources required to develop and implement such approaches should be considered in the context of the jurisdiction's community development and infrastructure cost recovery goals.

In contrast, policy-based approaches tend to offer a less rigorous approach to reducing SDCs to targeted developments. Such discounts are generally supported conceptually by cost relationships from national data sources, and may reflect qualitative rather than quantitative analyses. Policy-based adjustments may also include exempting targeted developments from certain costs (like existing capacity costs), and are generally not offset by increases in fees to other developments, but instead may be funded through other revenue sources (e.g., general system revenue). As such, policy-based approaches, aligned with community development goals need to be weighed against infrastructure cost recovery goals.

Appendix A: Oregon SDC Statutory Requirements

Summary of Oregon SDC Law

Public Facilities Eligible for Funding

The purpose of Oregon's SDC law is "**to provide equitable funding for orderly growth and development in Oregon's communities.**[16]" The statutes allow SDCs to be assessed, collected and spent for capital improvements for the following identified public facilities:

- Water supply, treatment and distribution;
- Waste water collection, transmission, treatment and disposal;
- Drainage and flood control;
- Transportation; and/or
- Parks and recreation.

Notably, the law does not authorize the imposition of SDCs for schools, police or fire services; previous attempts to amend the law by broadening it to include these categories of improvements have to date been unsuccessful.[17]

SDC Calculation

SDCs may consist of a **reimbursement fee**, an **improvement fee**, or both. Improvement fees are fees associated with capital improvements to be constructed; reimbursement fees are designed to recover the costs associated with capital improvements already constructed or under construction. In combination, for example, a reimbursement component may be developed to recover a portion of the cost of existing facilities for which there is excess capacity to serve new development (such as water and wastewater treatment plants having more capacity available to serve new development than is needed to serve existing development), and an improvement component may help fund improvements under construction or planned to extend service to new development. The statute requires that where a combination SDC is charged, the methodology must demonstrate that "the charge is not based on providing the same system capacity.[18]"

16 ORS 223.297.

17 Two bills currently pending before the 2007 Oregon Legislature would amend the SDC law to add eligible facilities. HB 2581 would add law enforcement, fire protection, libraries and K-12 public schools to ORS 223.299. SB 45 would amend the SDC statutes to authorize system development charges to fund capital improvements for schools that are made available for public recreation uses, while limiting the amount of system development charges that local government may collect for parks and recreation and schools.

18 ORS 223.304(3).

Reimbursement fees must be calculated consistent with the elements of ORS 223.304, which requires in essence that the fees be based on the "value of unused capacity available to future system users" and a list of other factors. The goal, as stated in the statute, is that future system users should be asked to contribute "no more than an equitable share" to the cost of previously constructed facilities that will benefit those users. This standard, being subject to interpretation, is frequently the basis of challenges to SDC methodologies. Since a reviewing court will defer to the local government's determinations of factual matters, careful attention to this aspect of the legal requirements is warranted in the development of a reimbursement component of a new or modified SDC.

The other potential component of a SDC, the improvement fee, is a capital charge for needed future capacity that the local government must build to meet future demands. The statute requires that the improvement fee be based on "a capital improvement plan, public facilities plan, master plan or comparable plan that includes a list of the capital improvements that may be funded with improvement fee revenues and the estimated cost and timing for each improvement."[19] In rough terms, the improvement fee equals the expected cost of the capital improvements needed to meet the future demands of the growing community divided by the increase in capacity in the relevant unit of measurement (for example, new automobile trips generated by growth in a transportation improvement fee). For the same reasons discussed above relative to the reimbursement fee, the allocation of needed improvements as a cost to new development must be carefully articulated in the adopted SDC methodology. [20]

The requirement that the methodology capture only the capital improvements identified in the applicable project list means that local government is limited to funding capital improvements, as contrasted with the cost of operating and maintaining those improvements, with SDC revenues.[21] Other revenue sources must be considered in the methodology, so that the total revenue collected pursuant to an adopted SDC does not exceed the total cost of the needed or reimbursable improvements.[22]

In addition to recovery of the cost of the improvements themselves, **the SDC methodology may be designed to recover certain other identified costs**. For example, where debt is incurred as in the issuance of bonds, both the improvement fee and the reimbursement fee may include the cost of debt financing. The local government can also recover the cost of compliance with the statutes in its methodology.

Credits for Qualified Public Improvements

A final component that must be considered in the development of the SDC methodology is that a **credit policy** is required for the improvement fee portion of the SDC. In essence, the credit policy is intended to fairly compensate developers who are required as a condition of development approval

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[19] ORS 223.309(1).

[20] See, for example, *Home Builders Association of Lane County, et al v. Cities of Eugene and Springfield*, Lane County Circuit Court Case Nos. 16-04-15534 and 15996, decided June 17, 2005.

[21] ORS 223.299(1)(b) excludes operation and maintenance from the definition of "capital improvement."

[22] ORS 223.304(1)(a)(C) *specifically* requires that the methodology consider "gifts or grants from federal or state government or private persons." The combination of other requirements in the statutes, though, results in the requirement that additional factors that would reduce the total cost of the needed improvements be considered, as discussed herein.

to make improvements to one or more of the identified public facilities in the capital improvement plan that forms the basis for the SDC. The credit is required to be available where those improvements are either not on the development site or are required to be constructed at a greater capacity than is actually needed to serve the development itself.[23]

Authorized Expenditures

Expenditures of funds generated by the imposition of SDCs are limited by statute to payment for the identified capital improvements in the capital improvement plan, plus certain limited additional purposes.[24] These additional purposes include the cost of issuing debt to fund the improvements, and the cost of complying with the statutes (i.e., development of a legally sound methodology). The revenues generated to build a particular category of improvements may only be spent on those same improvements (water SDC revenues may not be spent on roads, for example) and there is a special limitation at ORS 223.307(3) prohibiting the use of SDC revenues for all but a very limited category of "administrative office facilities."

Legal challenges to SDCs

The state law establishes a limited window and limited judicial review for challenging a new or modified SDC methodology. Such challenges are to be filed within 60 days of the local government decision adopting or modifying a methodology. The challenges are filed as writ of review proceedings pursuant to a separate statutory scheme at ORS Chapter 34,[25] and are not land use decisions.[26]

The writ of review statutes provide for a limited scope of review of local government action, but a careful local record must be generated since the court will base its decision on the local government record. The local government decision must be demonstrated to be based on substantial evidence, and as such the reviewing court's inquiry is very fact-specific. Writs of review, being creatures of statute, are also subject to arcane and complex legal precedent governing who has standing to seek a writ, the scope of the court's authority to grant relief, and what actions the local government may take following conclusion of the litigation. This is an evolving area of the law in Oregon at present, making careful documentation at the local level even more critical.

Recent amendments to the SDC laws also impose additional procedural requirements that must be adhered to in the adoption or modification of a methodology. A public hearing is required, and 90 days' advance notice to persons who have requested such notice must be provided.[27]

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[23] ORS 223.304(4) and (5).

[24] ORS 223.302 (administrative provision) and 223.307 (spending limitations).

[25] ORS 223.309(2)(d).

[26] ORS 223.314.

[27] ORS 223.304(7). Prior to adoption of any new or modified SDC methodology, the local government should update the list as allowed by ORS 223.304(7)(a) so that the recipients of notice are clearly identified.

Oregon Revised Statutes (ORS) 223.297 to 223.314, "System Development Charges"

SYSTEM DEVELOPMENT CHARGES

223.297 Policy. The purpose of ORS 223.297 to 223.314 is to provide a uniform framework for the imposition of system development charges by local governments, to provide equitable funding for orderly growth and development in Oregon's communities and to establish that the charges may be used only for capital improvements. [1989 c.449 §1; 1991 c.902 §25; 2003 c.765 §1; 2003 c.802 §17]

Note: 223.297 to 223.314 were added to and made a part of 223.205 to 223.295 by legislative action, but were not added to and made a part of the Bancroft Bonding Act. See section 10, chapter 449, Oregon Laws 1989.

223.299 Definitions for ORS 223.297 to 223.314. As used in ORS 223.297 to 223.314:

(1)(a) "Capital improvement" means facilities or assets used for the following:

(A) Water supply, treatment and distribution;

(B) Waste water collection, transmission, treatment and disposal;

(C) Drainage and flood control;

(D) Transportation; or

(E) Parks and recreation.

(b) "Capital improvement" does not include costs of the operation or routine maintenance of capital improvements.

(2) "Improvement fee" means a fee for costs associated with capital improvements to be constructed.

(3) "Reimbursement fee" means a fee for costs associated with capital improvements already constructed, or under construction when the fee is established, for which the local government determines that capacity exists.

(4)(a) "System development charge" means a reimbursement fee, an improvement fee or a combination thereof assessed or collected at the time of increased usage of a capital improvement or issuance of a development permit, building permit or connection to the capital improvement. "System development charge" includes that portion of a sewer or water system connection charge that is greater than the amount necessary to reimburse the local government for its average cost of inspecting and installing connections with water and sewer facilities.

(b) "System development charge" does not include any fees assessed or collected as part of a local improvement district or a charge in lieu of a local improvement district assessment, or the cost of complying with requirements or conditions imposed upon a land use decision, expedited land division or limited land use decision. [1989 c.449 §2; 1991 c.817 §29; 1991 c.902 §26; 1995 c.595 §28; 2003 c.765 §2a; 2003 c.802 §18]

Note: See note under 223.297.

223.300 [Repealed by 1975 c.642 §26]

223.301 Certain system development charges and methodologies prohibited. (1) As used in this section, "employer" means any person who contracts to pay remuneration for, and secures the right to direct and control the services of, any person.

(2) A local government may not establish or impose a system development charge that requires an employer to pay a reimbursement fee or an improvement fee based on:

(a) The number of individuals hired by the employer after a specified date; or

(b) A methodology that assumes that costs are necessarily incurred for capital improvements when an employer hires an additional employee.

(3) A methodology set forth in an ordinance or resolution that establishes an improvement fee or a reimbursement fee shall not include or incorporate any method or system under which the payment of the fee or the amount of the fee is determined by the number of employees of an employer without regard to new construction, new development or new use of an existing structure by the employer. [1999 c.1098 §2; 2003 c.802 §19]

Note: See note under 223.297.

223.302 System development charges; use of revenues; review procedures. (1) Local governments are authorized to establish system development charges, but the revenues produced therefrom must be expended only in accordance with ORS 223.297 to 223.314. If a local government expends revenues from system development charges in violation of the limitations described in ORS 223.307, the local government shall replace the misspent amount with moneys derived from sources other than system development charges. Replacement moneys must be deposited in a fund designated for the system development charge revenues not later than one year following a determination that the funds were misspent.

(2) Local governments shall adopt administrative review procedures by which any citizen or other interested person may challenge an expenditure of system development charge revenues. Such procedures shall provide that such a challenge must be filed within two years of the expenditure of the system development charge revenues. The decision of the local government shall be judicially reviewed only as provided in ORS 34.010 to 34.100.

(3)(a) A local government must advise a person who makes a written objection to the calculation of a system development charge of the right to petition for review pursuant to ORS 34.010 to 34.100.

(b) If a local government has adopted an administrative review procedure for objections to the calculation of a system development charge, the local government shall provide adequate notice regarding the procedure for review to a person who makes a written objection to the calculation of a system development charge. [1989 c.449 §3; 1991 c.902 §27; 2001 c.662 §2; 2003 c.765 §3; 2003 c.802 §20]

Note: See note under 223.297.

223.304 Determination of amount of system development charges; methodology; credit allowed against charge; limitation of action contesting methodology for imposing charge; notification request. (1)(a) Reimbursement fees must be established or modified by ordinance or

resolution setting forth a methodology that is, when applicable, based on:

(A) Ratemaking principles employed to finance publicly owned capital improvements;

(B) Prior contributions by existing users;

(C) Gifts or grants from federal or state government or private persons;

(D) The value of unused capacity available to future system users or the cost of the existing facilities; and

(E) Other relevant factors identified by the local government imposing the fee.

(b) The methodology for establishing or modifying a reimbursement fee must:

(A) Promote the objective of future system users contributing no more than an equitable share to the cost of existing facilities.

(B) Be available for public inspection.

(2) Improvement fees must:

(a) Be established or modified by ordinance or resolution setting forth a methodology that is available for public inspection and demonstrates consideration of:

(A) The projected cost of the capital improvements identified in the plan and list adopted pursuant to ORS 223.309 that are needed to increase the capacity of the systems to which the fee is related; and

(B) The need for increased capacity in the system to which the fee is related that will be required to serve the demands placed on the system by future users.

(b) Be calculated to obtain the cost of capital improvements for the projected need for available system capacity for future users.

(3) A local government may establish and impose a system development charge that is a combination of a reimbursement fee and an improvement fee, if the methodology demonstrates that the charge is not based on providing the same system capacity.

(4) The ordinance or resolution that establishes or modifies an improvement fee shall also provide for a credit against such fee for the construction of a qualified public improvement. A "qualified public improvement" means a capital improvement that is required as a condition of development approval, identified in the plan and list adopted pursuant to ORS 223.309 and either:

(a) Not located on or contiguous to property that is the subject of development approval; or

(b) Located in whole or in part on or contiguous to property that is the subject of development approval and required to be built larger or with greater capacity than is necessary for the particular development project to which the improvement fee is related.

(5)(a) The credit provided for in subsection (4) of this section is only for the improvement fee charged for the type of improvement being constructed, and credit for qualified public improvements under subsection (4)(b) of this section may be granted only for the cost of that portion of such improvement that exceeds the local government's minimum standard facility size or capacity needed to serve the particular development project or property. The applicant shall have the burden of demonstrating that a particular improvement qualifies for credit under

subsection (4)(b) of this section.

(b) A local government may deny the credit provided for in subsection (4) of this section if the local government demonstrates:

(A) That the application does not meet the requirements of subsection (4) of this section; or

(B) By reference to the list adopted pursuant to ORS 223.309, that the improvement for which credit is sought was not included in the plan and list adopted pursuant to ORS 223.309.

(c) When the construction of a qualified public improvement gives rise to a credit amount greater than the improvement fee that would otherwise be levied against the project receiving development approval, the excess credit may be applied against improvement fees that accrue in subsequent phases of the original development project. This subsection does not prohibit a local government from providing a greater credit, or from establishing a system providing for the transferability of credits, or from providing a credit for a capital improvement not identified in the plan and list adopted pursuant to ORS 223.309, or from providing a share of the cost of such improvement by other means, if a local government so chooses.

(d) Credits must be used in the time specified in the ordinance but not later than 10 years from the date the credit is given.

(6) Any local government that proposes to establish or modify a system development charge shall maintain a list of persons who have made a written request for notification prior to adoption or amendment of a methodology for any system development charge.

(7)(a) Written notice must be mailed to persons on the list at least 90 days prior to the first hearing to establish or modify a system development charge, and the methodology supporting the system development charge must be available at least 60 days prior to the first hearing. The failure of a person on the list to receive a notice that was mailed does not invalidate the action of the local government. The local government may periodically delete names from the list, but at least 30 days prior to removing a name from the list shall notify the person whose name is to be deleted that a new written request for notification is required if the person wishes to remain on the notification list.

(b) Legal action intended to contest the methodology used for calculating a system development charge may not be filed after 60 days following adoption or modification of the system development charge ordinance or resolution by the local government. A person shall request judicial review of the methodology used for calculating a system development charge only as provided in ORS 34.010 to 34.100.

(8) A change in the amount of a reimbursement fee or an improvement fee is not a modification of the system development charge methodology if the change in amount is based on:

(a) A change in the cost of materials, labor or real property applied to projects or project capacity as set forth on the list adopted pursuant to ORS 223.309; or

(b) The periodic application of one or more specific cost indexes or other periodic data sources. A specific cost index or periodic data source must be:

(A) A relevant measurement of the average change in prices or costs over an identified time period for materials, labor, real property or a combination of the three;

(B) Published by a recognized organization or agency that produces the index or data source for

reasons that are independent of the system development charge methodology; and

(C) Incorporated as part of the established methodology or identified and adopted in a separate ordinance, resolution or order. [1989 c.449 §4; 1991 c.902 §28; 1993 c.804 §20; 2001 c.662 §3; 2003 c.765 §§4a,5a; 2003 c.802 §21]

Note: See note under 223.297.

223.305 [Repealed by 1971 c.325 §1]

223.307 Authorized expenditure of system development charges. (1) Reimbursement fees may be spent only on capital improvements associated with the systems for which the fees are assessed including expenditures relating to repayment of indebtedness.

(2) Improvement fees may be spent only on capacity increasing capital improvements, including expenditures relating to repayment of debt for such improvements. An increase in system capacity may be established if a capital improvement increases the level of performance or service provided by existing facilities or provides new facilities. The portion of the improvements funded by improvement fees must be related to the need for increased capacity to provide service for future users.

(3) System development charges may not be expended for costs associated with the construction of administrative office facilities that are more than an incidental part of other capital improvements or for the expenses of the operation or maintenance of the facilities constructed with system development charge revenues.

(4) Any capital improvement being funded wholly or in part with system development charge revenues must be included in the plan and list adopted by a local government pursuant to ORS 223.309.

(5) Notwithstanding subsections (1) and (2) of this section, system development charge revenues may be expended on the costs of complying with the provisions of ORS 223.297 to 223.314, including the costs of developing system development charge methodologies and providing an annual accounting of system development charge expenditures. [1989 c.449 §5; 1991 c.902 §29; 2003 c.765 §6; 2003 c.802 §22]

Note: See note under 223.297.

223.309 Preparation of plan for capital improvements financed by system development charges; modification. (1) Prior to the establishment of a system development charge by ordinance or resolution, a local government shall prepare a capital improvement plan, public facilities plan, master plan or comparable plan that includes a list of the capital improvements that the local government intends to fund, in whole or in part, with revenues from an improvement fee and the estimated cost, timing and percentage of costs eligible to be funded with revenues from the improvement fee for each improvement.

(2) A local government that has prepared a plan and the list described in subsection (1) of this section may modify the plan and list at any time. If a system development charge will be increased by a proposed modification of the list to include a capacity increasing capital improvement, as described in ORS 223.307 (2):

(a) The local government shall provide, at least 30 days prior to the adoption of the modification, notice of the proposed modification to the persons who have requested written notice

under ORS 223.304 (6).

(b) The local government shall hold a public hearing if the local government receives a written request for a hearing on the proposed modification within seven days of the date the proposed modification is scheduled for adoption.

(c) Notwithstanding ORS 294.160, a public hearing is not required if the local government does not receive a written request for a hearing.

(d) The decision of a local government to increase the system development charge by modifying the list may be judicially reviewed only as provided in ORS 34.010 to 34.100. [1989 c.449 §6; 1991 c.902 §30; 2001 c.662 §4; 2003 c.765 §7a; 2003 c.802 §23]

Note: See note under 223.297.

223.310 [Amended by 1957 c.397 §3; repealed by 1971 c.325 §1]

223.311 Deposit of system development charge revenues; annual accounting. (1) System development charge revenues must be deposited in accounts designated for such moneys. The local government shall provide an annual accounting, to be completed by January 1 of each year, for system development charges showing the total amount of system development charge revenues collected for each system and the projects that were funded in the previous fiscal year.

(2) The local government shall include in the annual accounting:

(a) A list of the amount spent on each project funded, in whole or in part, with system development charge revenues; and

(b) The amount of revenue collected by the local government from system development charges and attributed to the costs of complying with the provisions of ORS 223.297 to 223.314, as described in ORS 223.307. [1989 c.449 §7; 1991 c.902 §31; 2001 c.662 §5; 2003 c.765 §8a; 2003 c.802 §24]

Note: See note under 223.297.

223.312 [1957 c.95 §4; repealed by 1971 c.325 §1]

223.313 Application of ORS 223.297 to 223.314. (1) ORS 223.297 to 223.314 shall apply only to system development charges in effect on or after July 1, 1991.

(2) The provisions of ORS 223.297 to 223.314 shall not be applicable if they are construed to impair bond obligations for which system development charges have been pledged or to impair the ability of local governments to issue new bonds or other financing as provided by law for improvements allowed under ORS 223.297 to 223.314. [1989 c.449 §8; 1991 c.902 §32; 2003 c.802 §25]

Note: See note under 223.297.

223.314 Establishment or modification of system development charge not a land use decision. The establishment, modification or implementation of a system development charge, or a plan or list adopted pursuant to ORS 223.309, or any modification of a plan or list, is not a land use decision pursuant to ORS chapters 195 and 197. [1989 c.449 §9; 2001 c.662 §6; 2003 c.765 §9]

Appendix B: SDC Methodological Considerations and Components

Component #1: SDC Unit Cost

Determining the capital cost per service unit involves the following considerations:

- Definition of system improvement costs
- Selection of unit cost structure

Each is discussed below.

Definition of System Improvements

An important step in the SDC fee methodology is establishing the criteria that distinguish "system improvements" from "project-level improvements." The former are funded through SDCs while the latter are addressed through development agreements for individual projects. *System improvements* may be considered capital improvements that are public facilities and are designed to provide service for the community at large, in contrast to project improvements. If an improvement or facility provides or will provide more than incidental service or facilities capacity to persons other than users or occupants of a particular project, or, if a project is included in a plan for public facilities approved by the governing body of a municipality or county, it should be considered a system improvement. Finally, system improvements must create additional service capacity to serve new growth and development.

Legal Environment

Certain impact fee statutes are explicit in defining what constitutes an eligible capital improvement. For example, the Colorado statute states: "Capital expenditure means any expenditure for an improvement, facility, or piece of equipment necessitated by land development, which is directly related to a local government service, has an estimated useful life of 5 years or longer…."[28] Georgia law requires a capital improvement to have a useful life of 10 years. The Georgia law limits the types of public facilities eligible for expenditure, and has a lengthy description of what constitutes system improvement costs:

> *'System improvement costs' means costs incurred to provide additional public facilities capacity needed to serve new growth and development for planning, design and construction, land acquisition, land improvement, design and engineering related thereto, including the cost of constructing or reconstructing system improvements or facility expansions, including but not limited to the construction contract prices, surveying and engineering fees, related land acquisition costs (including land purchases, court awards and costs, attorneys' fees, and expert witness fees), and*

[28] Colorado Impact Fee Act, 29-1-802.

> *expenses incurred for qualified staff or any qualified engineer, planner, architect, landscape architect, or financial consultant for preparing or updating the capital improvement element, and administrative costs, provided that such administrative costs shall not exceed 3 percent of the total amount of the costs. Projected interest charges and other finance costs may be included if the impact fees are to be used for the payment of principal and interest on bonds, notes, or other financial obligations issued by or on behalf of the municipality or county to finance the capital improvements element but such costs do not include routine and periodic maintenance expenditures, personnel training, and other operating costs.*[29]

Oregon law simply states the types of public facilities considered "capital improvements," which include: water supply, treatment and distribution; waste water collection, transmission, treatment and disposal; drainage and flood control; transportation; or parks and recreation. The law further states that "capital improvement does not include costs of the operation or routine maintenance of capital improvements."[30] Oregon statutory provisions related to expenditure of SDCs do provide some additional guidance on what does and does not constitute an SDC eligible cost; specifically, ORS 223.307:

- Excludes "costs associated with the construction of administrative office facilities that are more than an incidental part of other capital improvements," and
- Requires that capital improvements being funded with SDC revenues be included in an adopted capital plan or list, and
- Allows for expenditure of SDC revenue on "costs of complying with the provisions of ORS 223.297 to 223.314, including the costs of developing system development charge methodologies and providing an annual accounting of system development charge expenditures."

Selection of Unit Cost Structure

There are essentially two approaches to designing unit costs for SDC purposes – *improvements-based* and *consumption-based*. The consumption-based approach involves calculating the cost per service unit needed to accommodate growth based on current cost figures and adopted levels of service. Under this approach, revenue collected is not tied to a specific set of improvement projects; instead recent project experience is used to estimate the cost of capacity per service unit. Conversely, development of the SDC unit cost under the improvements-based approach is tied to a specific set of improvements, as identified in a capital or facility plan. Use of this approach is required in some states (like Oregon), as it creates a direct link between the design of the SDC and the local jurisdiction's capital improvements programming process, which when also linked to the comprehensive plan promotes real cost recovery and development according to the community's goals.

Within these two broad unit cost structures, there are a number of specific approaches to unit cost valuation that may be employed to meet local policy objectives:

- Buy-In or Reimbursement (in the form of "Recoupment" or "Replacement Cost")

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[29] Georgia Development Impact Fee Act, 36-71-2.

[30] Oregon Revised Statutes (ORS) 223.299.

- Capacity Expansion
- Marginal Cost
- Average Cost, and
- Total Cost-Attribution (also known as "Combined Improvement and Reimbursement")

The buy-in or reimbursement methods that rely exclusively on existing system facilities for valuation tend to have the lowest fees, and those methods that exclusively use recent or planned expansion costs (capacity expansion and marginal cost approaches) have the highest fees. The average and total cost attribution methods utilize a combination of existing and planned facilities, and the results tend to fall in-between the other approaches. For these latter approaches, the fee level is influenced by the selection of valuation basis for existing system facilities (book value, original cost, replacement cost, etc), and how the existing system available capacity is determined (on an average or incremental basis). In the case of the average cost approach, all costs – existing and planned – are shared proportionately by all users, while the total cost attribution method may weight existing and new facility costs differently, based on how each will contribute to servicing growth needs. Each approach is described in more detail below, along with numerical examples that provide a sample SDC per Equivalent Residential Unit (ERU).

Buy-In Methods

The recoupment value method (see Table B-1) uses the existing system fixed asset value (original cost less accumulated depreciation) and capacity to value the cost per service unit. The recoupment method is based on the total fixed asset value of the existing system; it does not distinguish between improvements made mostly for the benefit of new development, nor does it consider the cost of expanding system capacity to accommodate new development.

TABLE B-1

Buy-In Method: RECOUPMENT VALUE

CALCULATION CONSIDERATION	RESULT
Total Existing System Asset Value	$150,000,000
Existing System Capacity (gallons)	32,000,000
Recoupment Value ($/gallon)	$4.69
ERU Demand (gallons)	250
SDC Per ERU	$1,172

The replacement cost method (see Table B-2) is conceptually similar to the recoupment value method with the difference being it is based on the cost of replacing the entire system presently in place.[31] The result is higher impact fees than calculated under the recoupment value method.

[31] The recoupment and replacement valuation approaches represent the upper and lower ends of a range of valuation methods used to value existing system assets for the purposes of establishing SDCs under a "Buy-In" type approach. Other approaches include original cost and appreciated cost (original costs adjusted for inflation) valuation. The recoupment and replacement approaches are presented here, as they illustrate the potential range of options.

TABLE B-2

Buy-In Method: REPLACEMENT COST

CALCULATION CONSIDERATION	RESULT
Total Existing System Replacement Cost	$325,000,000
Existing System Capacity (gallons)	32,000,000
Replacement Value ($/gallon)	$10.16
ERU Demand (gallons)	250
SDC Per ERU	$2,539

Capacity Expansion Method

The capacity expansion method (see Table B-3) uses the planned capacity increment in the CIP to value the cost per service unit. No consideration is given to existing system facilities, or to system functions that may not be covered by the current CIP.

TABLE B-3

Capacity Expansion Method

CALCULATION CONSIDERATIONS	RESULT
CIP Capacity Improvements, 10-year CIP	$85,000,000
Planned Expansion (gallons)	5,000,000
Capacity Expansion ($/gallon)	$17.00
ERU Demand (gallons)	250
SDC Per ERU	$4,250

Marginal Cost Method

Marginal cost is defined here as composed of two parts resulting in *growth-related* marginal costs. The first part is the cost of the prior expansion; these are facilities that have been installed in the past to serve future development. The second part is the cost of installing CIP capacity-related improvements (also required for future development). As shown in Table B-4, these two figures are summed and then divided by the combined capacity increment of the two expansions. It is important to note, that the previous expansion cost, unadjusted for depreciation is used for this calculation, as marginal cost analysis is concerned with the costs of serving the *next* unit of demand. Moreover, well-designed capital improvement programs provide continuous replacement and upgrading of facilities to maintain their value to the system.

TABLE B-4

MARGINAL COST METHOD

CALCULATION CONSIDERATION	AMOUNT
Previous Expansion Cost	$75,000,000
CIP Growth-Related Improvements, 10-year CIP	$85,000,000
Total Growth-Related Marginal Cost	$160,000,000
Recent & Planned Expansions Combined (gallons)	10,000,000
Growth-Related Marginal Cost ($/gallon)	$16.00
ERU Demand (gallons)	250
SDC Per ERU	$4,000

Average Cost Method

Under the average cost method (see Table B-5), the costs of replacing and expanding the entire system are considered in relation to the total capacity of the system to accommodate all development, both existing and new. As in the case of marginal cost analysis, average cost analysis is based on replacement or expansion costs, not asset values that include depreciation.

TABLE B-5

AVERAGE COST METHOD

CALCULATION CONSIDERATION	AMOUNT
Total Existing System Replacement Cost	$325,000,000
Total CIP Expenditures, 10-year CIP	$85,000,000
Total (Combined) Costs	$410,000,000
Total Future Capacity (gallons)	38,000,000
Average Cost ($/gallon)	$10.79
ERU Demand (gallons)	250
SDC Per ERU	$2,697

Total Cost Attribution Method

Like the average cost method, the total cost attribution method (see Table B-6)) considers both the contribution of existing system and CIP facilities to the accommodation of new development. However, unlike the average cost method, that allocates all costs to existing and future users proportionate to total capacity needs, this method explicitly allocates existing and CIP improvements to growth based on the relative role each will play in providing service. In the

example provided in Table B-6, growth's total needs are 9.5 mgd; 7.0 mgd of which is provided through the existing system, and 2.5 mgd is provided through CIP facilities. Since growth needs represent 50 percent of the planned 5.0 mgd expansion, growth is allocated 50 percent of the expansion costs. Under the average cost method, growth would only be allocated 25 percent of the expansion costs, since all costs are shared proportionate to total future capacity needs, and growth within the current planning window represents 25 percent of total future capacity (9.5 mgd/38.0 mgd.) Since the cost per unit of future facility expansion is more costly than existing capacity (on a per unit basis), this approach results in a higher SDC per unit than the average cost method (assuming replacement cost is used for existing system valuation in both cases).

Table B-6 presents two forms of the total cost attribution approach: 1) based on current asset value (original cost less depreciation), and 2) based on replacement cost of existing assets (not adjusted for depreciation).[32]

TABLE B-6
Total Cost Attribution Approaches

	Asset Value	Replacement Cost
Growth-Related Asset Value/Cost	$32,810,000	$71,090,000
Growth-Related CIP Cost	$42,500,000	$42,500,000
Total Growth Cost	$75,310,000	$113,590,000
Growth Demand Units	9,500,000	9,500,000
Total Cost/Gallon	$7.93	$11.96
ERU Factor, Gallons	250	250
Total Cost Attribution Based Impact Fee Per ERU	$1,982	$2,989

Component#2: Revenue Credits

As mentioned previously, new development generates revenue that may help finance facilities also financed by SDCs. Two types of revenue credits are generally considered in an SDC methodology:

1. Past payment credits
2. Future payment credits

Past Payment Credits

The extent to which new development has paid for existing facilities can be determined. Such payments would be credited to new development, in order to avoid assessing new development for both improvements it demands and facilities currently used by existing development. Take for example a local government with a five-year park plan financed solely from property taxes to

[32] As with the "Buy-In" type approaches discussed previously, further modifications of this method consider alternative approaches to valuing existing system assets including original cost, and appreciated cost (with and without depreciation).

construct a park system serving only existing development. Vacant, developable land has been assessed property taxes to help pay for the parks. In this case, the SDC methodology can include a credit equal to the present value of past property tax payments that went to finance the new parks.

Future Payment Credits

Likewise, the extent to which new development will pay for existing facilities in the future can also be estimated. For example, property taxes assessed on new development to retire bonds used to construct facilities for existing development may be credited. Another example is where current deficiencies will be remedied by property taxes assessed on all property in the future; new development can be credited for its future contributions to remedy current deficiencies.

Some local governments account for future payments a development may make toward roads financed by SDCs. If motor fuel taxes are used to construct system improvements, the SDC methodology may provide a credit based on the present value of motor fuel taxes that new households will pay in the future. Perhaps the road SDC without future motor fuel tax payments is $2,785 per new single-family unit. The average new household occupying a single family unit will contribute $77 per year in motor fuel taxes used by local government to build the very roads financed in part by road SDCs. Thus, over 25 years, the present value of those future contributions, discounted at 6 percent, is $990. The SDC in this case would be $1,795 per unit ($2,785 minus $990).

A primary purpose of past and future payment credits is to avoid double charging for capacity. New developments that pay for a facility or service through both an SDC and by its stream of taxes over time may be double charged. The common solution to double charging is to conduct fiscal and economic analyses to define the nature and distribution of revenues. Local government can appropriately discount each type of fee until the combination of SDCs and other revenues does not exceed 100 percent of the total facility expansion. Accurate documentation of the SDC system will help avoid double charging.

Component#3: Demand Schedule

The unit cost structure is the mechanism for determining the costs to be recovered from new development as a whole. Of equal concern to local governments and the development community alike, is how the fees are then assessed to specific developments. The demand schedule defines the applicable service units associated with each system and development type. At the very least, the demand schedule will usually address different requirements by land use type (e.g., residential -- in some cases by dwelling type, and nonresidential). For nonresidential, some scaling measure is generally identified since impact may vary by size of development. Table B-7 shows typical demand units and scaling measures by infrastructure system.

TABLE B-7
Typical Demand Units and Scaling Measures by Infrastructure System

System	Demand Units	Scaling Measure
Transportation	Trips or Miles	Square feet, dwelling units, rooms, beds, acres
Parks	Persons	Square feet, dwelling units
Drainage	Square footage	Square feet, dwelling units, acres
Water	Gallons	Meter size, plumbing fixture units, dwelling units, square feet (house or lot size)
Wastewater	Gallons	Meter size, plumbing fixture units, equivalent residential units, dwelling units, square feet (house size)

Residential fee schedules have historically reflected little variation by dwelling size, density, and configuration. However, more sophisticated methodologies are being implemented to reflect these differences and their impacts to different infrastructure systems.

The demand schedule will also define the service area(s) to be used for assessment. In many cases, fees may be assessed uniformly throughout the public facility service area; in other cases, multiple service areas may be developed for SDC assessment, reflecting differences in the cost to construct facilities or in the demand generated by new development. With respect to the latter, service area differentials may reflect differences in density of the geographic area, as well as proximity to service, or other system usage characteristics (e.g. water use or sewage flow per unit).

Appendix C: Examples of Model Approaches to Real Cost Recovery

Portland, Oregon (Transportation SDCs)

The City of Portland is undertaking a project to update its transportation SDCs. In developing the SDC project list for purposes of calculating the improvement fee, capital improvements must meet the following minimum criteria:

1. Project includes a component that adds capacity to the transportation system.
2. Project is in the Transportation System Plan.
3. Project is on a public street classified above local service, except for city bikeways and city walkways, exclusive of regional traffic and regional transit ways.
4. Project is designed to serve additional population and/or employment over the next 10 years.
5. Project is not a maintenance project.
6. Project is not for purchase of rolling stock, but may be for facilities supporting rolling stock/equipment.

Projects that meet these minimum criteria are then prioritized according to the criteria shown in Table C-1.

The city is currently working with a citizen advisory committee to evaluate projects for inclusion in the SDC methodology. While the current methodology has yet to be adopted, it is presented here as a potential model approach of a structured process for development of the SDC project list to meet community, including 2040 growth objectives. The list of criteria (shown above and in Table C-1) is very similar to the criteria used by the city previously to develop the current SDC project list, which includes the following types of urban center projects (in addition to street extensions and general roadway and intersection upgrades):[33]

- Light rail improvements
- Central city street car improvements
- Transit communication system initiatives
- Regional center improvements
- Pedestrian improvements (bridges, sidewalks, and signals)
- Parking improvements

[33] Transportation System Development Charges Rate Study for Portland, Oregon, Henderson, Young & Company, Final Report, June 11, 1997.

TABLE C-1
CITY OF PORTLAND
Transportation SDC Update
Preliminary Project Evaluation Criteria

Criteria	Sub-Criteria
Level A Criteria	
1. Support bicycle, pedestrian and/or transit modes (i.e., add capacity, improve access, improve connections, remove bottlenecks, fill in missing links)	▪ Accommodates increased density ▪ Supports mixed use development ▪ Supports 2040 Growth Concept land-use components ▪ Improves connections and access from neighborhoods to employment and industrial areas ▪ Fills a gap ▪ Improves safety
2. Improve movement of freight and goods	▪ Reduce conflicts between freight and non-freight uses ▪ Provide access to inter-modal terminals and related distribution facilities ▪ Fills a gap ▪ Improves safety ▪ Support emergency services
3. Reduce congestion, improve access and/or circulation	▪ Among business districts ▪ To and within activity centers ▪ Fills a gap ▪ Improves safety ▪ Support emergency services
Level B Criteria (only applies if project also meets one or more of Level A criteria)	
4. Community and business priority	▪ Priority expressed by neighborhood and business interests ▪ Addresses equitable geographic distribution of projects
5. Strong potential leverage	▪ Amount and likelihood of potential funding from other sources

Albuquerque, New Mexico (Parks and Stormwater SDCs)

A capital improvement plan is required by New Mexico law to be the basis of impact fee programs, and it is to be applied to each service area based on adopted LOS standards. For parks and recreation, seven areas were created. To account for topographical features creating unique drainage sheds, five drainage facility service areas were created. Where revenue was known to be available to help finance needed facilities, costs were reduced to a "net" impact cost. For parks, recreation facilities, trails and open space the LOS was based on residents, and for drainage, LOS was based on impervious surface. Tables C-2 and C-3 provide the impact fee calculations for each system for residential structures.

TABLE C-2

City of ALBUQUERQUE

Parks, Recreation Facility, Trail and Open Space Level of Service, Net Impact Cost, and Impact Fees by Service Area{ TC "Table 5-4. Albuquerque Parks, Recreation Facility, Train and Open Space Level of Service, Net Impact Cost, and Impact Fees by Service Area" \f T \l "1" }

SERVICE AREA	Academy/ NE	Central/ University	Foothills/ SE	North Albuquerque	North Valley/I-25	SW Mesa	NW Mesa/ Volcano
Local Parks (Neighborhood & Community)							
Level of Service per 1,000 People	2.600	2.600	2.600	2.600	2.600	2.600	2.600
Needed Additional Acres	2.13	0.00	8.88	20.07	16.71	71.29	110.44
Acres Available in Inventory	26.49	12.74	47.61	59.00	3.95	81.53	109.02
Acres to be Acquired	0.00	0.00	0.00	0.00	12.76	0.00	0.00
Acquisition Cost per Acre	$125,000	$110,000	$105,000	$125,000	$122,500	$72,000	$120,000
Acquisition Cost	$0	$0	$0	$0	$1,562,708	$0	0.00
Acres to be Developed	2.13	0.00	8.88	20.07	16.71	71.29	110.44
Existing Surplus	0.00	78.17	7.11	0.00	0.00	0.00	22.90
Net Acres to be Developed	2.13	0.00	1.77	20.07	16.71	71.29	87.54
Development Cost per Acre	$175,000	$175,000	$175,000	$175,000	$175,000	$175,000	$175,000
Development Cost	$373,555	$0	$309,225	$3,511,690	$2,923,830	$12,475,645	$15,319,465
Facilities Cost per Acre	$226,007	$226,007	$226,007	$226,007	$226,007	$226,007	$226,007
Facilities Cost	$482,434	$0	$399,354	$4,535,228	$3,776,027	$16,111,871	$19,784,567
Total Cost Local Parks	$855,989	$0	$708,579	$8,046,918	$8,262,565	$28,587,516	$35,274,864
Cost per Capita	$1,042.62	$0	$207.49	$1,042.62	$1,285.80	$1,042.62	$830.45
Less Grants	($70.41)	$0	($14.01)	($70.41)	($86.84)	($70.41)	($56.08)
Less Bond Credit	($208.52)	$0	($41.50)	($208.52)	($257.16)	($208.52)	($166.09)
Net Local Park Cost	*$763.69*	*$0*	*$151.98*	*$763.69*	*$941.80*	*$763.69*	*$608.28*
Cost per Capita	$21.88	$21.88	$21.88	$21.88	$21.88	$21.88	$21.88
Less Grants	($1.48)	($1.48)	($1.48)	($1.48)	($1.48)	($1.48)	($1.48)
Less Bond Credit	($4.38)	($4.38)	($4.38)	($4.38)	($4.38)	($4.38)	($4.38)
Net Trails Cost	*$16.03*	*$16.03*	*$16.03*	*$16.03*	*$16.03*	*$16.03*	*$16.03*

TABLE C-3.

ALBUQUERQUE NET IMPACT COSTS, PROJECTED IMPERVIOUS ACRES, AND DRAINAGE IMPACT FEE PER ACRE BY SERVICE AREA

Service Area	Net Impact Costs	Total Area (Acres)	Projected Impervious Acres, 2000-2025	Cost Per Impervious Acre
NW	$ 55,015,528	15,490	3,915	$ 14,052
SW	$ 35,393,166	9,021	2,757	$ 12,836
Fully Served	$ 0	40,250	2,009	$ 0
Tijeras	$ 2,933,604	2,611	221	$ 13,290
Far NE	$ 15,044,434	11,753	1,474	$ 10,208

The adopted SDC program is unique for a number of reasons, including its attention to differences in facility costs between different areas of the city. As shown in Table C-2, neighborhood and community park acquisition costs vary among the seven park service areas (from $72,000 per acre to $125,000 per acre) reflecting differences in land values. Open space and trail costs are calculated on a citywide basis. The methodology determines additional acres needed for growth both in terms of acquisition and development by service area (for neighborhood and community parks), based on a citywide adopted LOS.

While the establishment of multiple service areas helps the city more accurately establish 'real' costs of serving development across the city, as reflected by different land values, it is interesting to note that in areas ("Central/University" in Table C-2) where the existing inventory is more than adequate to meet projected future needs (i.e., no improvements are needed to meet service standards), no fee is charged for existing neighborhood and community park capacity (indicated by a Net Local Park Charge of $0 in Table C-2). Similarly, development in the "Fully Served" storm drainage service area is not charged an SDC. Not charging development in areas fully served by existing facilities may be an effective policy-based approach to encourage development within these areas, by keeping impact fees lower than in other areas; however, if 'real' costs are to include historical investments in capacity, the methodology is not fully capturing these costs.

Metropolitan Wastewater Management Commission of Eugene/Springfield, Oregon (Wastewater SDCs)

The Metropolitan Wastewater Management Commission of Eugene/Springfield (MWMC) recently updated its wastewater SDC methodology following adoption of a wastewater system facilities plan. The unit cost structure is generally based on the total cost attribution (combined improvement/reimbursement) approach, as growth needs will be met by a combination of existing facility excess capacity and planned capacity expansion. Existing system valuation is based on replacement cost (as estimated by applying a historical inflationary index to the original asset cost), but has been adjusted to recognize historical grant contributions.

Like many wastewater systems, MWMC faces a range of conditions with respect to the adopted versus existing level of service. Therefore, the methodology includes a rigorous project cost allocation process, whereby each project on the 20-year capital project list is evaluated and allocated between existing and new development based on the type of project, and growth's relative need for the improvement, as shown in Table C-4 below.

TABLE C-4
METROPOLITAN WASTEWATER MANAGEMENT COMMISSION

Wastewater SDC Methodology
Summary of Project Type Allocation Criteria

Project Type	Potential Criteria	Growth Allocation Basis
Capacity	Adds new facilities/expands existing facilities Provides new capacity beyond existing system design standard or beyond the current permitted capacity	In proportion to growth's share of capacity need: *(Growth capacity need – Existing Deficiency) / Planned capacity increment*
Performance	Adds new facilities/improves existing facilities Provides capacity/enhanced capability sized for total future capacity needs Driven by new regulatory requirement	In proportion to total future system capacity: *Total growth capacity / Total system capacity*
Rehabilitation	Replaces existing facility or portion of facility Does not serve growth either through existing available or new capacity Preserves existing facility performance/capacity	No growth component

Source: MWMC Wastewater SDC Methodology (April 2004, CH2M HILL and Galardi Consulting)

The MWMC methodology also includes an adjustment to the unit cost for potential financing costs, and a credit for future rate payments to be made by new development to support capital improvement costs related to existing system deficiencies.

City of Wilsonville (Wastewater SDCs)

The City of Wilsonville recently updated its wastewater SDC methodology following adoption of a wastewater system facilities plan. The unit cost development follows a process similar to the MWMC process described above. Notably, the methodology includes costs associated with estimated project financing, and a revenue credit is provided for future sewer rate payments needed to remedy existing deficiencies. The city also developed a compliance charge that recovers facility planning and separate SDC fund accounting costs, both types of which are incurred to comply with state statutes.

City of Gresham (Parks SDCs)

The City of Gresham recently developed an SDC methodology for the parks system. The methodology is notable because it develops separate unit costs for neighborhood parks and open space for three (3) separate service areas based on individual community plans. The fee areas are: 1) the current city limits with the exception of the Pleasant Valley and Springwater Plan Districts as they existed on January 1, 2006, 2) the Pleasant Valley Plan District, and 3) the Springwater Plan District. Community park and trail costs are recovered on a system-wide basis. The result of this

approach is an SDC schedule where fees are significantly higher in the new districts, compared to the current city limits.

The SDC methodology includes the costs associated with all park types, including acquiring and developing urban and pocket parks in the downtown area.

A property tax credit is included in the methodology to recognize the potential contribution of new growth to the costs needed to remedy existing deficiencies. The city also charges a compliance fee that includes the costs of master planning, annual SDC-CIP management, accounting, and reporting costs, and the costs associated with development of the SDC methodology. Finally, the methodology includes a basis for adjusting the fees annually for construction and land inflation.

Sacramento Regional County Sanitation District (Sewer SDCs)

Sacramento Regional County Sanitation District adopted an alternative impact fee on April 1, 2002, designed to encourage infill development by offering reduced fees in specified infill areas. Rather than applying a uniform rate throughout the region, the District developed differential conveyance fees between "infill" and "new growth" areas. Infill areas are defined as those greater than 70% developed, that is, the percentage of connected equivalent single-family dwellings (ESDs) or percentage of connected acreage is at least 70%. The District justified lower fees for infill areas based on the argument that growth in new areas requires the majority of initial infrastructure costs, while infill development requires limited incremental expansion costs, since the District plans capacity through build-out. The adopted fees reflect the District's revenue needs to fund its capital improvements program, and lower fees in infill areas are accompanied by higher fees in new growth areas. The resulting fees are $4,300 higher in new growth areas per single or equivalent connection.

Current rates[134] for residential and commercial users are:

- $2,700 per ESD for infill communities;
- $7,000 per ESD for new communities.

It is important to note that while this methodology encourages infill with varying fees depending on location, there is no relationship between that variation and distance from the Sacramento Regional Wastewater Treatment Plant.

In addition to the two-tiered fee system, the District formed the Economic Development Treatment Capacity Bank to provide reduced sewer impact fees for local jurisdictions. SRCSD purchased $12.3 million of unused industrial wastewater capacity (the equivalent of 16,606 ESDs) and uses this capacity, or "Bank," to encourage economic development for industrial, commercial, residential (such as septic tank conversions or low/moderate-income housing), and transit-oriented projects. Qualifying jurisdictions can purchase the credits for only $923 per ESD regardless of the charge per ESD mandated by the current SRCSD fee schedule.

[34] *Source*: Sacramento Regional County Sanitation District website (www.srcsd.com).

Appendix D: Examples of Model Approaches to Assessment of Impact-Based SDCs

City of Atlanta, Georgia, (Transportation SDCs)

The City of Atlanta recognizes the reduced impact on roads because of close proximity to public rail transit. The city reduces impact fees by 50 percent for all developments within 1,000 feet of a rail transit station. Georgia law requires that revenues not collected from impact fees must be offset from sources of revenue other than impact fees. This requirement to collect from other sources does not apply to the rail transit reduction, because studies show that traffic impact is reduced roughly proportionate to this relationship.[35]

Tucson, Arizona (Transportation SDCs)

The City of Tucson, Arizona, recently adopted an impact fee methodology for roads that uses both location and dwelling unit size in assessing impact fees. Both elements of the methodology are discussed below.

Variation in Location

The methodology includes reduced residential road impact fees in the downtown core area of the city. The 2000 Census data on average travel time to work for workers over sixteen years of age using other modes than public transportation, is summarized in Table D-1. The data revealed a modest difference between the central core area (19.1 minutes) and the rest of the city (21.6 minutes). Additional analysis revealed little differences between other sections of the city. Not only do central core residents travel somewhat quicker (and presumably shorter) routes to work when they use automobiles and other private forms of transportation, they are also more likely to use alternative modes of travel. Only 78.8 percent of central core residents take private motor vehicles to work compared to 90.8 percent of other city residents. Taking into account both the reduced tendency to use private motor vehicles and shorter trip lengths, residential development in the central core can be expected to generate only about 77 percent of the vehicular travel demand generated by residential development in other parts of the city, as shown in Table D-1.

[35] "Impact Fees and Housing Affordability: A Guidebook for Practitioners" (U.S. Department of Housing and Urban Development, Washington DC, April 2007)

Table D-1. Road Reduction Factor for Core Residential Development

	Central Core	Rest of City	Ratio
Percent Driving Private Motor Vehicle to Work	78.8%	90.8%	0.87
Travel Time, Non-Public Transportation (minutes)	19.1	21.6	0.88
Reduction in Road Impact for Residential in Central Core			0.77

Source: Duncan Associates, Road and Park Impact Fee Study for the City of Tucson, June 2004, based on 2000 U.S. Census, SF-3 sample data (1 in 6 sample) of workers 16 years or older; Central Core area approximated by Pima County census tracts 1-19, 22, 24-25.01, 26-29.01, 38.01, 45.04-45.05.

Variation by Size

As shown in Table D-2, the average number of vehicle trips generated per day is almost directly proportional to the number of people living in the dwelling unit which is strongly related to the size of the dwelling unit. In order to then develop trip rates by the size of the unit in square feet, it is necessary to first find the relationship between average household size and size characteristics reported by the Census Bureau.

Table D-2. Vehicle Trips by Household Size

Household Size	Daily Trips	PM Peak Hr Trips	
		Single-Family	Multi-Family
One Person	3.5	0.369	0.323
Two Persons	6.7	0.707	0.618
Three Persons	8.8	0.928	0.812
Four Persons	10.6	1.118	0.978
Five Persons or More	12.5	1.319	1.154

Source: Daily trips from Transportation Research Board, NCHRP Report 365, "Travel Estimation Techniques for Urban Planning," Washington, D.C.: National Academy Press, Table 9 (for urban areas with populations of 500,000 to 1 million), 1998; PM peak hour trips based on 10.55% of daily trips in PM peak hour for single-family and 9.23% of daily trips in PM peak hour for apartment units from ITE, Trip Generation, 7th edition, 2003.

The most recent and reliable data on average household size by number of bedrooms or rooms are the five percent sample data from 2000 U.S. Census. The five percent sample data for the City of Tucson are combined with sample data for some other cities and unincorporated portions of Pima County. The City of Tucson makes up 73 percent of the total population sampled; therefore, the results obtained should be representative. The average household size for all single-family units from the two samples is identical, and for multi-family is almost identical. Because of the nature of the data sources for unit size in square feet, the average household size was varied by rooms for single-family units and by bedrooms for multi-family, as shown in Table D-3.

Table D-3. Average Household Size by Rooms and Bedrooms

Housing Type	Sample Households	Weighted Population	Weighted Households	Avg. HH Size
Single-Family, 4 Rooms or Fewer	1,245	58,662	24,141	2.43
Single-Family, 5 Rooms	1,744	91,937	34,494	2.67
Single-Family, 6 Rooms	1,674	93,632	33,617	2.79
Single-Family, 7 Rooms	1,010	60,023	20,513	2.93
Single-Family, 8 Rooms or More	657	44,646	13,585	3.29
All Single-Family Detached Units	**6,330**	**348,900**	**126,350**	**2.76**
Multi-Family, Efficiency	433	15,132	10,140	1.49
Multi-Family, One Bedroom	1,409	53,483	32,345	1.65
Multi-Family, Two Bedrooms	1,533	78,925	34,582	2.28
Multi-Family, Three Bedrooms	353	23,902	7,885	3.03
Multi-Family, Four Bedrooms or More	72	6,014	1,533	3.92
All Multi-Family Units	**3,800**	**177,456**	**86,485**	**2.05**

Source: U.S. Census Bureau, 2000 Public Use Microdata Sample (PUMS), 5 percent weighted sample data for portions of Pima County including the City of Tucson (PUMAs 201, 202, 204, 206 and 207) for households occupying single-family detached and multi-family units.

The above information on household size by room/bedrooms is combined with the trip rate data by household size presented earlier (Table D-2) to derive peak hour trip rates by the size of the unit, represented by rooms and bedrooms, as shown in Table D-4.

Table D-4 Peak Hour Trips by Rooms and Bedrooms

Housing Type	Avg. HH Size	Peak Hr Trips
Single-Family, 4 Rooms or Fewer	2.43	0.806
Single-Family, 5 Rooms	2.67	0.860
Single-Family, 6 Rooms	2.79	0.884
Single-Family, 7 Rooms	2.93	0.917
Single-Family, 8 Rooms or More	3.29	0.983
All Single-Family Detached Units	**2.76**	**0.872**
Multi-Family, Efficiency	1.49	0.488
Multi-Family, One Bedroom	1.65	0.546
Multi-Family, Two Bedrooms	2.28	0.683
Multi-Family, Three Bedrooms	3.03	0.822
Multi-Family, Four Bedrooms or More	3.92	0.983
All Multi-Family Units	**2.04**	**0.628**

Source: Average household sizes from Table 22; peak hour trips derived from Table 21 using linear interpolation.

To determine a relationship between the unit square footage and peak hour trip rates, a data set was compiled with information on the square footage of dwelling units from single-family detached and multi-family units derived from two different data sources. For single-family detached units, the Pima County Tax Assessor data for the 2004 tax year was analyzed. Tax Assessor data give total living space in square feet and the total number of rooms for the majority of single-family homes in the City of Tucson.

Data from the Arizona Multi-Family Housing Association provides information on all apartment complexes in the City of Tucson consisting of 20 or more units. This information includes the number of dwelling units by floor plan, and the floor plan information includes number of bedrooms and square footage. From these two data sources, a stratified random sample was taken that was distributed in the same proportion by housing type and size (rooms for single-family and bedrooms for multi-family) as households from the 2000 Census.

The combined data base consisted of information on 10,000 single-family detached and multi-family dwelling units. To this data base, a variable for peak hour trips was added, based on housing type and number of bedrooms or rooms shown in the preceding table. Regression analysis was then performed to determine the relationship between unit size in square feet and persons residing in the unit. Housing type turned out to be significant, with single-family and multi-family units displaying much different relationships.

Both linear and logarithmic regressions were performed for single-family detached and multi-family data sets. In both cases, logarithmic equations were determined to provide the best explanation of the data.[36] The curves described by the equations are shown in Figure D-1.

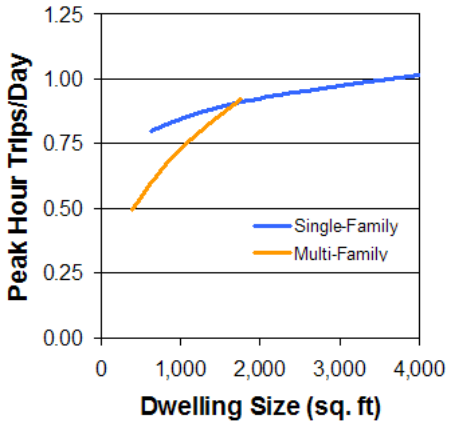

Figure D-1. Relationship of Trips to Dwelling Size

36 THE EQUATION FOR SINGLE-FAMILY DETACHED UNITS IS LN(Y) = 0.1271 * LN(X) - 1.0433, WHERE Y IS PEAK HOUR TRIPS PER DAY AND X IS THE FLOOR AREA OF THE UNIT IN SQUARE FEET; THE R2 IS 0.600 AND THE T-STATISTICS ARE 94 FOR THE X-COEFFICIENT AND -108 FOR THE Y-INTERCEPT. THE EQUATION FOR MULTI-FAMILY UNITS IS LN(Y) = 0.4182 * LN(X) - 3.2062; THE R2 IS 0.763 AND THE T-STATISTICS ARE 114 FOR THE X-COEFFICIENT AND -135 FOR THE Y-INTERCEPT.

While the equations for single-family detached and apartment units are very different, there is actually relatively little overlap and at 1,125 square feet, the midpoint of the 1,000 to 1,250 square feet category, the two equations produce the identical result. Only 2.2 percent of the apartment units in the sample are larger than 1,250 square feet, and while 21.6 percent of the single-family units in the sample are less than 1,000 square feet, it is unlikely that very many homes that size are being built in Tucson today. Consequently, the progressive residential rates were based on the multi-family equation for up to 1,000 square feet, and on the single-family equation for the larger size categories.

Using the regression equations, peak hour trip rates were derived for 12 square footage size categories. The two curves intersect in the 1,250 to 1,500 square foot range. Since the multi-family equation yields the lower trip rate estimates, and since relatively few single-family units are being built in the lower size range, the multi-family equation is used for unit sizes less than 1,500 square feet, and the single-family equation for larger units. The results are shown in Table D-5.

Table D-5. Residential Road Impact Fees by Size Category

Housing Type/Size Category	Midpoint	Peak Hour Trips	Road Fee
Less than 500 sq. ft.	375	0.48	$2,186
500 - 749 sq. ft.	625	0.60	$2,743
750 - 999 sq. ft.	875	0.69	$3,198
1,000 - 1,249 sq. ft.	1,125	0.76	$3,462
1,250 - 1,499 sq. ft.	1,375	0.83	$3,829
1,500 - 1,999 sq. ft.	1,750	0.91	$4,196
2,000 - 2,999 sq. ft.	2,500	0.95	$4,386
3,000 - 3,999 sq. ft.	3,500	0.99	$4,562
4,000 sq. ft. or more	4,500	1.03	$4,738

Source: Duncan Associates and James C. Nicholas, *Road and Park Impact Fee Study for the City of Tucson*, June 2004

Olympia, WA (Transportation and Park SDCs)

The City of Olympia collects impact fees for various facilities including parks and transportation. The City has reduced the transportation impact fees for downtown commercial uses to reflect the fact that the downtown is compact and alternative modes of transportation are accessible. Consequently, the theory is that each business generates less traffic. Table D-6[37] shows the transportation SDC schedule for selected land uses in the downtown and other city areas.

Reduced fees for the downtown area reflect the following characteristics:

- Reduced trip lengths based on an analysis of data from the regional planning agency's household travel survey and travel model, and the ITE Trip Generation Manual.
- Lower percent of new trips (or more "pass-by" trips) for certain land uses (walk-in bank and supermarket) based on ITE data and other national studies.
- Reduced trip lengths for both home based work trips and total trips, based on data from the regional transportation model showed reduced average trip lengths to/from the Olympia Central Business District (CBD).

[37] City of Olympia Transportation Impact Fee Program Update, April 2006 (Mirai Associates)

Table D-6
Transportation Impact Rate Schedule
City of Olympia
Effective January 1, 2007

Land Uses	Unit of Measure	Impact Fee	
		Other Areas	Downtown
Multi Family Residential -Townhouse, Duplex	dwelling	$1,091	$504
Senior Housing/Accessory Dwelling	dwelling	$413	$209
Asst. Living/Nursing Home, Group Home	bed	$330	$224
Daycare	Sq ft/GFA	$10.60	$2.88
Health Club	Sq ft/GFA	$5.05	$2.88
Bank	Sq ft/GFA	$18.40	$7.89
Hotel/Motel	Room	$1,266	$939
Movie Theater	seat	$73	$61
Marina	berth	$284	$174
Restaurant	Sq ft/GFA	$10.93	$2.88
Fast Food Restaurant	Sq ft/GFA	$18.58	$10.65
Retail			
Up to 49,999 sq ft	Sq ft/GFA	$3.48	$1.65
50,000 - 99,999 sq ft	Sq ft/GFA	$3.05	$1.65
100,000 - 199,999 sq ft	Sq ft/GFA	$2.98	$1.65
200,000 - 299,999 sq ft	Sq ft/GFA	$2.71	$1.65
300,000 - 399,999 sq ft	Sq ft/GFA	$3.22	$1.65
over 400,000 sq ft	Sq ft/GFA	$3.62	$1.65
Supermarket > 5,000 sq ft	Sq ft/GFA	$8.83	$4.93
Convenience Market < 5,000 sq ft	Sq ft/GFA	$16.44	$8.09
Video Rental	Sq ft/GFA	$5.58	$4.32

Source: Mirai Associates, Transportation Impact Fee Program Update for the City of Olympia, April 2006

The transportation impact fee may be reduced through Transportation Demand Management (TDM) credits, which provide alternate modes of commuting, reducing peak-hour traffic, and thus reducing the need to build some transportation improvements. Eligible projects may reduce transportation impact fee assessments by providing specific TDM and Commute Trip Reduction measures including operational improvements such as installation of parking spaces that are designated as paid parking and/or physical improvements such as construction of a direct walkway connection to the nearest arterial.

Furthermore, the City has reduced the residential rates for parks and schools because of the demographic of the downtown resident (fewer people per household). Park impact fees, which apply to residential development only, are assessed per dwelling unit and include a reduced fee for multifamily development in the downtown area as indicated in Table D-7.

TABLE D-7
City of Olympia Park Impact Fee (Per Dwelling Unit -- Applies to residential development only)

*Effective April 24, 2002**

HOUSING TYPE	IMPACT FEE
Single Family (including manufactured homes on individual lots)	**$1,843**
Duplex (per unit)	**$1,385**
Multifamily (including Townhouses)	**$1,223**
Downtown Multifamily per unit (including Townhouses)	**$ 840**
Mobile Home in Mobile Home Parks	**$1,236**
Accessory Dwelling Units (only separate structures)	**$ 707**
Single-room Occupancy	**$ 718**

Source: City of Olympia, Community Planning & Development, 2007 Impact Fee Fact Sheet*

Albuquerque, New Mexico (Transportation SDCs)

As shown in Table D-8, the Albuquerque model for transportation SDCs recognizes differences in trip rates and lengths by dwelling type and differences in trip rates by sizes for single-family dwellings. The SDCs by house size were developed using a similar analysis described previously for the City of Tucson. The City's program is notable for a couple of other features, including:

- Impact fees for affordable housing for projects located within certain centers and corridors identified in the comprehensive plan are waived completely.
- To attract nonresidential development into areas currently devoid of employment and service opportunities, the city discounts impact fees for nonresidential development from 30 percent for retail to 70 percent for industrial development.

TABLE D-8.

ALBUQUERQUE LEVEL OF SERVICE, NET IMPACT COST, ROAD IMPACT FEES BY SERVICE AREA

Land Use	Trip Rate (PM Peak)	Trip Rate (Daily)	Assessable Trip Length	Total Trip Length	% New Trips	Total Impact Cost	Annual Gas Tax Proxy	Gas Tax Proxy Offset	Net Impact Cost	Downtown	NE Heights	Near North Valley	Far NE Heights	I-25 Corridor	NW Mesa	SW Mesa	Fee
Single Family Detached																	
Less than 1,500 sf	0.68	6.35	6.28	6.78	100%	$3,617	$17	$233	$3,384	$0	$0	$0	$1,069	R2,113	$2,626	$2,702	N/D
1,500 sf to 2,499 sf	1.02	9.57	6.28	6.78	100%	$5,425	$25	$351	$5,075	$0	$0	$0	$1,585	$3,160	$3,933	$4,046	$3,068
2,500 sf or Larger	1.14	10.74	6.28	6.78	100%	$6,063	$28	$394	$5,670	$0	$0	$0	$1,754	$3,521	$4,388	$4,516	N/D
Multi-Family	0.67	6.72	4.19	4.69	100%	$2,376	$12	$170	$2,206	$0	$0	$0	$512	$1,276	$1,651	$1,706	$1,902
Condominium/Townhouse	0.52	5.86	4.19	4.69	100%	$1,844	$11	$148	$1,695	$0	$0	$0	$218	$885	$1,212	$1,260	$1,657
Mobile Home Park	0.60	4.99	4.29	4.79	100%	$2,178	$9	$129	$2,049	$0	$0	$0	$765	$1,344	$1,629	$1,671	$1,687
Retirement Home	0.35	3.71	2.39	2.89	100%	$709	$4	$58	$651	$0	$0	$0	$74	$335	$462	$481	$828
Congregate Care Facility	0.20	2.02	3.09	3.59	71.6%	$375	$2	$28	$347	$0	$0	$0	$67	$193	$255	$264	N/D

Eugene, OR (Wastewater and Stormwater SDCs)

The City of Eugene, Oregon adopted a wastewater SDC methodology based on residential house size. The residential fee schedule is based on a nominal base fee per dwelling, and a charge per square foot of house size, as shown in the table below.

Table D-9
City of Eugene Wastewater SDC Schedule

Residential Dwelling Unit (RDU)	Base Fee	Rate per square foot of living area
Single-family home, single-family accessory unit, each space of a mobile home park, each unit of a duplex or each unit of an apartment complex	$331.91	$0.0805
Additions to residential units that increase the living area		$0.062

Source: City of Eugene SDC methodologies, April 2006

The city's rates advisory committee selected area of living space as the variable on which to establish the new residential local wastewater rate. In addition to showing a correlation to actual wastewater flow (as shown in the table below), this approach has the added advantage of being based on information already being gathered in the building permit review process.

Table D-10
City of Eugene Wastewater SDC Methodology
Average residential monthly winter water usage (1)

Square Feet of Living Area sans garage area

Number of Square Feet	1000 or less	1000 to 1400	1401 to 1800	1801 to 2200	2201 to 2600	2601 to 3000	3001 or more	Total Average (2)
1,000 gals/month	4.6	5.2	5.4	5.9	6.3	6.5	7.4	5.5
% of average	84	95	98	107	115	118	135	100
% deviation from average	-16	-5	-2	7	15	18	35	0
% of sample	12	32	25	15	8	4	4	100

(1) Source: Lane Council of Governments; based on billing records from the Eugene Water and Electric Board (EWEB)
(2)This figure reflects the average water use of all residential 1997 EWEB users and is to be used to compare with the averages in each category.

The pattern of flows between homes of different size correlate at the 98 percent level for all size of homes, except for the smallest homes. The greater than 1,000 square foot homes show more difference from all other sizes, but correlations are still relatively high.

Eugene stormwater SDCs are based on a formula related to the cost of future capacity enhancing projects (improvement component) and the cost to buy in to existing excess system capacity or replacement (reimbursement component). The SDC impact measurement for the stormwater system is based on square footage of impervious surface area within the urban

growth boundary. Stormwater SDCs are calculated by taking the SDC eligible costs, and dividing them by the by the additional impervious surface area. This results in a per unit SDC fee which is then applied to the number of square feet of impervious surface area dependent on development type.

TABLE D-11
City of Eugene
Stormwater System Development Charge Schedule

Small Residential (building footprint =< 1,000 sq. ft.)	$297.00
Medium Residential (building footprint > 1,000 sq.ft. and < 3,000 sq. ft.)	$478.50
Small Duplex (unit building footprints =< 1,000 sq. ft.)	$594.00
Medium Duplex (unit building footprints >I ,000 sq. ft. and < 3,000 sq. ft.)	$957.00
Manufactured Home Park	
Per space (assumes 1,684 sq. ft. per space)	$277.86
Plus	
Per sq. ft. actual impervious surface area, additional common areas	$0.17
All Other Development	
Per sq.ft. actual impervious surface area equivalent	$0.17

Source: City of Eugene, Systems Development Charge Methodologies, Appendix F, May 2007

The City of Eugene offers two forms of credits that can potentially reduce the overall SDC charge: stormwater destination and quantity reduction as well as stormwater pollution reduction.

1. Mitigation of stormwater which otherwise would be discharged into the public stormwater system may result in a corresponding reduction of stormwater SDCs collected at the time of building and development permit issuance. For the most part, reduction of the charge is in proportion to the reduction of runoff entering the public system from the fully developed site. However, qualifying for an SDC credit is dependent on development type. Because stormwater SDCs for single-family and duplex development are based on estimated average amounts of impervious surface areas, these buildings can only qualify for one of two impact reduction rates: 100 percent SDC reduction for complete containment and management of runoff or 50 percent SDC reduction for partial reduction and management of runoff, regardless of the amount of reduction. For manufactured home parks, multi-family, and nonresidential development stormwater SDCs are reduced proportional to the reduction in total stormwater runoff entering the system.

2. Reduction of stormwater pollution through water quality treatment techniques may also result in a reduction of stormwater SDCs. A single-level water quality SDC credit of 10% of the total stormwater SDC is applied to three categories of development, depending on whether they are subject to Eugene standards for stormwater treatment. In general, the rule of thumb requires that the development mitigate 20 percent of the impervious surface area runoff impact through treatment or removal in order to qualify for a credit.

City of Scottsdale (Water SDCs)

The City of Scottsdale charges development fees for water development (water lines, pump stations, etc.), water resource development (Central Arizona Project water leases and recharge/reuse), and sewer development (sewer lines, lift stations, and treatment facilities). Fees vary across two geographic locations: Zone A, which includes the downtown area, and Zone B-E, which includes less developed areas north of downtown. Table D-12 provides a snapshot of single-family and multi-family development fees based on square footage. For efficiency purposes, we have included 5 of the 13 single family categories and 7 of the 11 multi-family categories. The City also charges development fees for non-residential development based on average daily gallons used per day.

TABLE D-12
City of Scottsdale
Development Fee Table 2006-07

Single - Family Zone A

Net Lot Size*

Minimum Sq. Ft.	Maximum Sq.Ft.	Water Develop.	Admin 0.46%	Water Resources	Admin 0.46%	Sewer Develop.	Admin 0.46%
2,500	3,999	479.96	2.21	365.49	1.68	445.9	2.05
4,000	5,499	738.51	3.4	562.38	2.59	445.9	2.05
5,500	6,999	824.55	3.79	627.9	2.89	534.1	2.46
7,000	8,499	910.59	4.19	693.42	3.19	534.1	2.46
8,500	11,799	996.63	4.58	758.94	3.49	534.1	2.46
			Single - Family Zone B-E				
2,500	3,999	1651.40	7.60	421.79	1.94	2523.43	11.61
4,000	5,499	2541.00	11.69	649.00	2.99	2523.43	11.61
5,500	6,999	2818.20	12.96	719.80	3.31	3022.57	13.90
7,000	8,499	3095.40	14.24	790.60	3.64	3022.57	13.90
8,500	11,799	3372.60	15.51	861.40	3.96	3022.57	13.90
			Multi - Family Zone A				
815	1,569	500.31	2.30	380.99	1.75	445.90	2.05
1,570	2,339	518.63	2.39	394.94	1.82	445.90	2.05
2,340	3,109	555.28	2.55	422.85	1.95	445.90	2.05
3,110	3,869	582.76	2.68	443.78	2.04	445.90	2.05
3,870	4,639	610.25	2.81	464.71	2.14	445.90	2.05
4,640	5,399	646.89	2.98	492.61	2.27	445.90	2.05
5,400	6,169	683.54	3.14	520.52	2.39	534.10	2.46
			Multi - Family Zone B-E				
815	1,569	1934.24	8.90	494.03	2.27	2523.43	11.61
1,570	2,339	2005.08	9.22	512.12	2.36	2523.43	11.61
2,340	3,109	2149.07	9.89	548.90	2.52	2523.43	11.61
3,110	3,869	2239.93	10.30	572.10	2.63	2523.43	11.61
3,870	4,639	2293.06	10.55	585.67	2.69	2523.43	11.61
4,640	5,399	2363.90	10.87	603.77	2.78	2523.43	11.61
5,400	6,169	2434.74	11.20	621.86	2.86	3022.57	13.90

* Net lot size and fees may be reduced by dedicating Natural Area Open Space to the City.

Source: http://www.scottsdaleaz.gov/bldgresources/Fees/2006/06-07_WaterDevelopmentFeeTable.pdf

As indicated in Table D-12, the water fees (both development and resources) increase for each lot category; whereas, sewer fees have fewer thresholds, presumably because wastewater flows are less sensitive to lot size, as irrigation does not represent a return flow to the sewer system.

City of Santa Fe, New Mexico (Water SDCs)

Santa Fe, New Mexico, recently adopted water impact fees that vary by lot size, based on a study of water use records that found water usage is strongly related to lot size, as shown in Table D-13.

TABLE D-13
City of Santa Fe Water Impact Fee Methodology
Residential Equivalency Factors

Housing Type	Consumption/ Unit (gpd)	SFEs/Unit	Net Cost per Unit or Meter
Single-Family Detached (average)	223	1.00	$2,156
Lot Size Less than 6,000 sq.ft.	179	0.80	$1,725
Lot Size 6,000 - 10,890 sq.ft.	223	1.00	$2,156
Lot Size Larger than 10,890 sq.ft.	286	1.28	$2,760
Multi-Family	187	0.84	$1,811
Mobile Home	179	0.80	$1,725

Source: Duncan Associates, Impact Fees Capital Improvements Plan for the City of Santa Fe, August 2003, based on estimated consumption per unit from the City of Santa Fe Planning& Land Use Department, Water Use in Santa Fe, February 2001; SFEs per unit is ratio of consumption to single-family consumption.

In addition to water impact fees, the City of Santa Fe has developed variable SDCs by dwelling unit size for a broad array of facilities, including wastewater, roads, and parks.

City of Kelowna, British Columbia (Various SDCs)

Development Cost Charges (DCCs) are those levies, adopted by bylaw, which are required to be paid by new development to assist with the financing of major off-site services required to accommodate new growth. Development Cost Charges are currently limited to arterial/collector roads, water and sewer systems, parks acquisition and development, and storm drainage facilities. The City updated its DCCs in April 2007.[38] The framework of the DCC methodology includes:

- Using a sector approach to assessment of DCCs – where projected improvement costs are attributed to specific geographic areas – to recognize that costs of servicing outlying areas may be greater on a per unit basis than the inner urban areas.

[38] City of Kelowna 20 Year Servicing Plan and Financing Strategy 2020 (April 1, 2007)

- Assessing DCCs in proportion to estimated impacts of different land uses. As a result, fees for higher density residential development units are generally lower than single family units.

Updated DCCs for water and wastewater systems are shown in Table D-14.

Table D-14
City of Kelowna
Development Cost Charges Applicable to Development Within the Municipality

Development Type	Sector A All City	Sector A Inner City	Sector B South Mission	Sector D Glenmore/ Clifton
Water				
Residential 1		$1,646	$1,292	$2,943
Residential 2		$1,103	$866	$1,972
Residential 3		$790	$620	$1,413
Residential 4		$560	$439	$1,001
Commercial - Per 1,000 sq ft		$633	$497	$1,132
Industrial/Campground Per Acre		$4,609	$3,618	$8,240
Current Residential 1 Rate		$1,507	$1,176	$2,670
Wastewater Trunk Mains				
Residential 1		$1,143	$1,533	
Residential 2		$949	$1,273	
Residential 3		$640	$859	
Residential 4		$617	$828	
Commercial - Per 1,000 sq ft		$440	$590	
Industrial/Campground Per Acre		$3,200	$4,293	
Current Residential 1 Rate		$972	$1,422	
Wastewater Treatment				
Residential 1	$2,542			
Residential 2	$2,110			
Residential 3	$1,423			
Residential 4	$1,373			
Commercial - Per 1,000 sq ft	$978			
Industrial/Campground Per Acre	$7,117			
Current Residential 1 Rate	$1,689			

Source: City of Kelowna, *20 Year Servicing Plan and Financing Strategy*, April 2007

Residential Growth Assumptions – Density Gradient

The 2020 - 20 Year Servicing Plan & Financing Strategy has four categories of residential density and is based on the density of development rather than on the type of dwelling unit. Density gradient based residential DCC's are established based on the relative impact of the dwelling unit on municipal services. The four categories were developed based on engineering data and planning analysis to reflect local considerations.

The four categories, including a typical building form, are:

- **Residential 1 –** developments with a density of not more than 15 units per net hectare (single family, secondary suite, duplex)
- **Residential 2 –** developments with a density greater than 15 and less than or equal 35 units per net hectare (small lot single family, row housing)
- **Residential 3** - developments with a density greater than 35 and less than or equal to 85 units per net hectare (row housing and up to four story apartment buildings)
- **Residential 4** - developments with a density greater than 85 units per net hectare (apartments greater than four levels)

Unit Equivalent Considerations

The purpose of a DCC is to recover some of the investment the City is forced to make in extending and upgrading a service to accommodate population growth and the development which accompanies it. There is a relatively direct correlation between population growth and the impacts to water, sanitary sewer, roads and parks services.

Since it is not feasible to charge a DCC directly on population, the City has adopted a system based on equivalent units. Equivalent units are an indirect but effective way of representing population. To facilitate DCC calculations, the planning staff projects population growth in terms of both residential and non-residential development. Since the unit of development for each land use category differs (houses for single family residential, apartments for multi-family residential and floor area for commercial and institutional), each Development Unit is converted to a common reference unit called an Equivalent Unit. Currently, the impact of one (1) Equivalent Unit on a service is defined to be equivalent to the impact of one (1) single family residence. That is:

One (1) Equivalent Unit = 1 S.F. Residential Unit

Development Units for land use categories other than Single Family Residential are converted to Equivalent Units according to the overall average impact of each different type of Development Unit.

Equivalency factors are established to reflect the relative impact on infrastructure for each service. The land use category, residential 1, serves as the baseline for the assessment of impacts on infrastructure of the other three residential land uses.

TABLE D-15
City of Kelowna DCC Methodology
Residential Equivalency Factors by Infrastructure System

	Roads	Water	Sewer
Residential 1	100%	100%	100%
Residential 2	80%	67%	83%
Residential 3	55%	48%	56%
Residential 4	52%	34%	54%

The impact for parkland requirements is considered to be the same for each residential category. Although there could be an argument to use a different parkland rate for the different

residential categories based on density, it is also true that parkland requirements in multi-family areas is more expensive than in single family areas.

Growth by Development Area - By Service Type

The number of growth units, when converted to single family residential equivalents, differs for different services for the following reasons:

- Not all of the growth units as projected by the Planning Department will be serviced by sanitary sewer services. Sanitary sewer services are based on the assumption that growth in the South East Kelowna sector will be serviced by septic disposal or by a batch treatment plant (Gallaghers Canyon) with field disposal of effluent.
- Not all growth units will be serviced by the City's water system. This plan assumes that Irrigation Districts will service all growth units within their service boundaries. Irrigation Districts which will provide water service to support the growth plan are South East Kelowna Irrigation District, Black Mountain Irrigation District, Rutland Water Works and the Glenmore-Ellison Irrigation District.
- As previously detailed, the demand on services as equated to a single family residential unit is different for each service. This will result in a different number of equivalent residential units for purposes of cost-sharing of program costs for each service.

Common facilities (roadways within the inner city area) are distributed pro-rata to all sectors; some sectors (outlying newly developed sectors) also include specific growth related costs to be paid only by that sector (net of "assist factor"), which is paid by general taxation dollars to reflect benefits to existing development.

City of Prince George, British Columbia (Various SDCs)

The City of Prince George has DCCs established for growth related transportation, storm drainage, water, sanitary sewer and park development. In 2001, the City adopted a new Official Community Plan (OCP) which outlines a Growth Management Plan within the Urban Development Boundary (UDB). The OCP sets out to implement Smart Growth Principles by phasing future development to ensure that it occurs in a sequential manner based on available services. The theory behind phasing is to expand servicing infrastructure efficiently such that its use is maximized by the development area it serves and to consider the life cycle cost to operate, maintain, repair, upgrade and, eventually, replace the servicing infrastructure. The City has also developed infrastructure system plans to identify needed improvements to accommodate future growth and replace aging infrastructure.

The DCC rates are designed to encourage Smart Growth Principles by:

- Encouraging infill development in established areas where sufficient infrastructure already exists by reducing DCCs in those areas;
- Increasing the use of development density (e.g. units per hectare) as a factor in setting residential DCC rates for single family and multi-family projects; and,
- Crediting projects that place lower demands on municipal infrastructure (e.g. where a development is able to incorporate on-site stormwater ground recharge systems and

contain all the additional storm runoff and/or where the development is predicted to have a lower than average impact on traffic).

Variation by Location

Prior to adoption of new fees in 2007, most DCC charges in the city were assessed uniformly across each infrastructure service area. As part of its 2006 DCC update study,[39] the City established four geographic areas to reflect the policy direction of the OCP, to consider mature areas of the City where growth can be accommodated with fewer infrastructure improvements. Implementation of geographically differentiated fees was recommended to reflect the true costs of serving different growth and promote efficient expansion of services.

The OCP Urban Phasing Map outlines the four urban development phasing areas within the UDB:

- Area A – Phase 1 and part of Phase 2 of the Urban Phasing Map. These areas are located close to downtown and throughout existing developments.
- Area B – The balance of Phase 2, Phase 3 and Phase 4 of the Urban Phasing Map. These areas are located farther from the downtown area and extend out to the UDB.
- Area C – Airport lands
- Area D – Downtown area

The City's growth-related capital improvement costs projected for a 10-year period (adjusted for other funding sources) are allocated among the four areas. Some improvements are assumed to provide city-wide benefits (e.g., water line looping and city-wide trail system), while other projects serve specific areas. The costs are spread over the aggregate equivalent population projected for each area over the planning period to determine the unit cost of capacity by area. DCCs for individual developments reflect the cost per unit multiplied by the equivalency factor per unit by land use category and the number of units for the particular development. Equivalency factors have been calculated in these areas for the following land use categories:

- Residential (single and two family)
- Residential – Higher Density (single and two family)
- Manufactured Home Park
- Residential – Multiple Family (medium and high density)
- Commercial
- Industrial
- Institutional.

Equivalency factors relate to equivalent population for water, sewer, and park systems. For streets, equivalency factors relate to trip generation, and stormwater fees reflect estimated

[39] Development Cost Charge Review prepared for City of Prince George, McElhanney Consulting Services, Ltd., March 16, 2006

impervious area per unit. The equivalency factors are uniform city-wide; however, the DCCs vary by area, as shown in Table D-16, due to the allocation of improvement costs by area.

TABLE D-16

City of Prince George

Development Cost Charge Schedule

DEVELOPMENT COST CHARGE RATES ($) – Area A

Type of Development	Park Land	Highway Facilities	Drainage Facilities	Sewage Facilities	Water Facilities	TOTAL
Residential (single and two family)	222	1,257	417	846	1,089	3,831
Residential Higher Density	222	1,100	365	740	953	3,380
Manufactured Home Park	222	1,257	417	846	1,089	3,831
Residential - Multiple Family (medium and high density)	148	852	204	564	726	2,494
Commercial	1.11	19.75	3.44	4.23	5.44	34
Industrial	3,326	13,164	12,420	12,693	16,332	57,935
Institutional	0.74	15.8	2.48	2.82	3.63	25
DEVELOPMENT COST CHARGE RATES ($) – Area B						
Residential (single and two family)	529	3,036	720	850	2,602	7,737
Residential Higher Density	529	2,657	630	744	2,277	6,837
Manufactured Home Park	529	3,036	720	850	2,602	7,737
Residential - Multiple Family (medium and high density)	352	2,057	352	567	1,735	5,063
Commercial	2.64	47.69	5.94	4.25	13.01	74
Industrial	7,930	31,795	21,452	12,747	39,034	112,958
Institutional	1.76	38.15	4.29	2.83	8.67	56
DEVELOPMENT COST CHARGE RATES ($) – Area C						
Residential (single and two family)	222	1,257	417	846	1,089	3,831
Residential Higher Density	222	1,100	365	740	953	3,380
Manufactured Home Park	222	1,257	417	846	1,089	3,831
Residential - Multiple Family (medium and high density)	148	852	204	564	726	2,494
Commercial	1.21	21.01	2.59	3.66	3.29	32
Industrial	3,635	14,006	9,370	10,969	9,855	47,835
Institutional	0.81	16.81	1.87	2.44	2.19	24

TABLE D-16 (CONTINUED)

City of Prince George
Development Cost Charge Schedule

DEVELOPMENT COST CHARGE RATES ($) – Area D

Type of Development	Park Land	Highway Facilities[2]	Drainage Facilities[2]	Sewage Facilities[2]	Water Facilities[2]	TOTAL
Residential (single and two family)	222	1,257	417	846	1,089	3,831
Residential Higher Density	222	1,100	365	740	953	3,380
Manufactured Home Park	222	1,257	417	846	1,089	3,831
Residential - Multiple Family (medium and high density)	110	124	53	15	48	350
Commercial	0.82	2.87	0.89	0.11	0.36	5
Industrial	2,475	1,912	3,213	340	1,069	9,009
Institutional	0.55	2.29	0.64	0.08	0.24	4

Source: City of Prince George, Bylaw No. 7825

Variation by Residential Density

Fees for higher density (more than 20 units per hectare) reflect the fact that such developments reflect shorter length of linear infrastructure such as roads, and utility mains. Specifically, the city analyzed the width of lots in subdivisions of standard vs. high density developments, and found that the average lot width is 12.5 percent less per unit in high density developments. DCCs for roads, water, sewer, and storm drain systems are therefore reduced by 12.5 percent for high density residential development projects.

Reduction for Site Design

Nonresidential developments may be exempt from stormwater DCCs if through development of onsite recharge systems, the development contains run-off at pre-development rates. To be eligible for the exemption, the development must meet a number of criteria established in municipal bylaws related to construction and inspection of facilities.

Municipal Assist Factor

In order to determine what percentage of project costs can be funded from DCCs, the City implements a municipal assist factor. In 1997, the Council adopted a municipal assist factor of 50 percent to reduce impact on the development industry as the City introduced DCCs; however, the Council recently adjusted the municipal assist factor to 10 percent. This means that when a project proceeds to construction that has no benefit to existing users, that is, it is only required because of growth, 90 percent of the project costs can be funded from DCC reserves.

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Section 4 of this report draws heavily on research conducted in conjunction with a study prepared for the U.S. Department of Housing and Urban Development (Office of Policy Development and Research). The research is presented in the paper: Proportionate Share Impact Fees and Housing Affordability (August 2005), prepared by the following authors:

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About Metro

Clean air and clean water do not stop at city limits or county lines. Neither does the need for jobs, a thriving economy and good transportation choices for people and businesses in our region. Voters have asked Metro to help with the challenges that cross those lines and affect the 25 cities and three counties in the Portland metropolitan area.

A regional approach simply makes sense when it comes to protecting open space, caring for parks, planning for the best use of land, managing garbage disposal and increasing recycling. Metro oversees world-class facilities such as the Oregon Zoo, which contributes to conservation and education, and the Oregon Convention Center, which benefits the region's economy.

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David Bragdon

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Brian Newman, District 2
Carl Hosticka, District 3
Kathryn Harrington, District 4
Rex Burkholder, District 5
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METRO

PEOPLE PLACES
OPEN SPACES

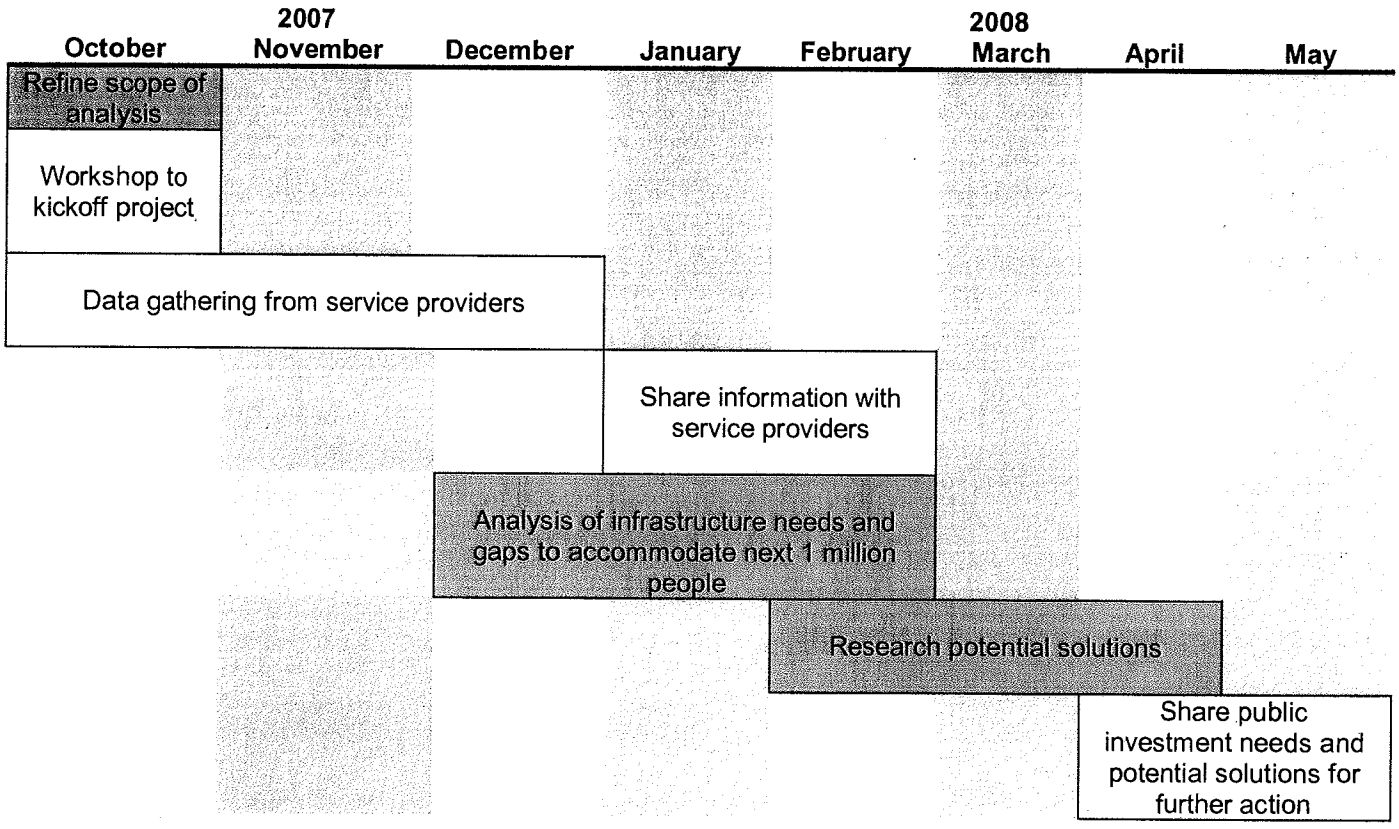
Metro's Infrastructure and Public Investment Analysis

Goal:
Define issues, opportunities and potential strategies to align public investments with the region's 2040 goals and to accommodate the next one million people.

Objectives:

- Identify issues and opportunities for infrastructure in the Portland metro region.
- Identify potential traditional and non-traditional infrastructure policy and financing strategies to provide infrastructure that is aligned with 2040 objectives.
- Consider innovative approaches to service provision and demand management.
- Build a coalition of service providers willing to discuss and pursue solutions to regional infrastructure needs.
- Produce public investment action plan that describes solution(s) to address the region's infrastructure needs for Metro area to implement.

Schedule:



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ANNUAL

REPORT

2007

Transit-Oriented DEVELOPMENT AND Centers PROGRAM

METRO


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Transit-Oriented Development and Centers Program

ANNUAL REPORT 2007

Under the rally cry, "Planning is not enough", Metro's Transit - Oriented Development Implementation Program (TOD Program) set out in the mid-nineties to provide public policy makers, private developers, and citizens of the region built examples of growing "up, not out," and to demonstrate the potential of public-private partnerships for placemaking-- an ethereal mixture of principled urban design, commerce, and the human desire for physical community.

After only a decade of operation, the TOD Program has been instrumental in the completion of many of the regions' most important TODs and has acquired key opportunity sites at light rail stations. Moreover, because the TOD Program has been actively engaged in the design and construction of real projects, it has had the opportunity to tease out, then remove obstacles relating to the creation of transit villages, main streets and mixed-used urban centers.

The first section of this *2007 Annual Report* provides an overview of the Program, its objectives, benefits, customers, funding history and milestones. The second section constitutes a compilation of statistics. The metrics used are a direct response to a request by Councilor Robert Liberty, the TOD Program's liaison to the Metro Council. The third and final section describes the Program's administration, governance, cost-benefit analysis used to evaluate potential projects, and the funding mechanisms most frequently employed to fund projects.

North Main Village

AWARDS & RECOGNITION

Center Commons
AIA / HUD National Mixed Use Project Award

Central Point
Governor's Livability & Design for Best TOD Award

The Crossings
Multi-housing News Best Transit-Oriented Design Award

North Main Village
Oregon Downtown Development Association Pioneering Award

Bside 6
AIA Portland Unbuilt Merit Award 2007

PROGRAM OVERVIEW

Program Context

Metro's growth management plan, the 2040 Growth Concept, calls for the region to grow up rather than out, away from farm and forest land by limiting expansion and focusing growth around the region's 44-mile MAX Light Rail Transit (LRT) line, along frequent bus corridors and in mixed-use urban centers. The TOD/Centers Program pursues the Growth Concept by providing public investments to developers to build more intensely and with higher attention to creating a walkable environment than the market would complete on its own. A TOD or Centers development will result in a higher share of travel from transit, walking and biking and a lower percent by an automobile.

In a survey of the Merrick, a TOD project in the Lloyd District, only 53% of the travel trips generated were by auto, compared to 87% for the balance of the region; 60% of the residents state they drive a little to a lot less and 70% use transit a little to a lot more. On commute to work or school, only 44% of the residents regularly use a private vehicle. Clearly, travel behavior can be dramatically influenced by the shape of the community surrounding transit.

Planning allows, but does not cause certain development patterns. Metro or a local government may choose a course of regulation and/or public incentives to achieve desired results. Metro through the TOD/Centers Program uses public investment to help shape desired development.

In essence, the TOD Program attempts to "push the envelope." For example, if the real estate market at an LRT station area or center will typically support building three stories, the Program pushes for four stories. If the market supports four stories, the Program pushes for five stories, etc. Similarly, the Program pushes for single-use projects to become mixed-use projects and encourages lower parking ratios.

The TOD Program is the only Metro program that attempts to influence development by delivering "bricks and mortar" rather than providing traditional planning and regulation. It has been in existence since 1998, has already funded 29 projects, helped bring 17 projects to construction or completion, and has 9 more in design and development. The Centers Implementation Program, which was initiated in 2004, has already resulted in 3 different projects, which are included in that total; one completed (Milwaukie North Main); one under construction (Watershed in Hillsdale); and one in design and development (Milwaukie-Texaco).

Metro's TOD Program is the first in the United States that used federal transit administration funds to acquire a TOD development site for private development. The program was featured in the British Broadcasting Corporation's (BBC) series, "The World's Best Public Services," in August 2006 and shown worldwide.

Program Benefits

The TOD Program encourages private-sector construction of higher-density, mixed-use projects near transit stations, with pedestrian amenities. The primary benefit is that the Program helps shape the community for increased transit, walking or biking. Other benefits include:

- Greater cost effectiveness for transit-related expenditures - national studies have shown that development of projects like those encouraged under the TOD Program are 8 to 14 times more cost-effective than building additional light rail transit lines. The Program is also cost-effective compared to conventional congestion mitigation measures, such as new LRT construction, freeway expansion and vanpools.
- Improved air quality and reduced auto traffic congestion by developing more "urban-scale" buildings with reduced parking ratios and ready access to transit. Studies indicate that, compared to typical suburban development, transit oriented development, can reduce traffic congestion and air pollution by up to 25 to 50 percent.
- Enhanced economic development – transit-oriented development attracts consumers, businesses and social services to areas surrounding LRT stations.
- Enhanced housing and transportation options - the Program seeks to encourage mixed-use and mixed-income development next to transit.
- Enhanced livability - Metro's regional growth management plan concentrates population and job growth within designated regional and town centers. The LRT system serves most centers, including downtown Portland, Gateway, Hillsboro, Beaverton and Gresham, and is anticipated to serve Milwaukie and Clackamas as well. Thus, Metro estimates that residents of a TOD project will be provided convenient and inexpensive access to most of the region's major locations of jobs, services and trade centers.

Program Customers

Metro's TOD Program provides services to a variety of customers and partners that are internal and external to the agency including:

- Private developers
- Lending institutions
- Tenants/owners in TOD Projects
- Transit riders
- Public at large
- Metro Council
- TOD Steering Committee
- Local jurisdictions
- State agencies
- Federal Transit Admin.
- TriMet

The developer's role in the partnership is to secure financing, and build, rent/sell and maintain the project. Each partner, private and public, expects to receive a return on investment. For the developer, the return is often the developer's fee and net profits from managing the project. For the public agency, the return may be a lease or sale amount for the land or the implementation of public policy, such as new ridership, reduced traffic congestion and area redevelopment. For Metro, the return is vibrant mixed-use communities in designated centers and station communities, a concrete affirmation of its growth vision.

PROGRAM RESULTS 1997-2007

Housing Units: 2514
Affordable:
758 @ 80%
359 @ 60%
15 @ 30%

Office: 783,737 s.f.

Retail: 438,436 s.f.

Relieves Pressure on the Urban Growth Boundary

TOD Projects = 80 acres
If conventional
Development = 587 ac.
Acres saved = 507 ac.

FY 2006-07

PROJECTS COMPLETED

The Crossings
Gresham Civic

North Main Village
Milwaukie

Pacific University
Hillsboro

Burnside Rocket
Central Eastside, Portland

CONSTRUCTION STARTED

The NEXUS
Hillsboro

The Beranger
Gresham Downtown

The Watershed
Hillsdale

DEVELOPERS SELECTED ON METRO SITES

Milwaukie Town Center

Gresham Civic Neighborhood South

Gresham Civic Neighborhood North

Program Timeline

TOD Program milestones from the period of 1995 from before the Program commenced through 2009 are shown in **Appendix A**. The timeline depicts both TOD Program milestones (below timeline), which focus on policy proclamations and Metro Council enactments of operating enabling legislation and Project milestones (above timeline), which focus on the successful employment of new joint development tools, the acquisition of "opportunity sites," and the implementation milestones of major projects.

Major Accomplishments This Year - FY 2006-07

- Construction was completed on The Crossings project, a five story mixed-use project located at the MAX station in Gresham's new civic neighborhood; the market rate apartments were well received, leased quickly and currently has a waiting list.
- Construction was completed on North Main Village, a mixed-use project including 64 affordable apartments, 33 market rate condominiums, storefront retail, and a rain garden. The presence of new residents and businesses is adding vitality to historic downtown Milwaukie.
- Construction was completed on the Pacific University Health Professions Campus building located along the MAX line in Hillsboro. This 5 story, 104,000 square foot mixed-use building includes the Virginia Garcia Health Clinic and a café at the street level with four floors of classrooms above.
- Construction was completed on the Burnside Rocket, a four story mixed-use project located on East Burnside at 11th Avenue. The developer has applied for LEED certification at the Platinum level.
- Construction started on the Nexus, 422-unit housing project with ground floor retail that creates a link between the original Orenco Station community on Cornell Road and the MAX light rail station a half of a mile south.
- Construction started on The Beranger, a four-story mixed-use project with market rate condominiums, a green roof, and street front retail located in downtown Gresham near its future performing arts center.
- Construction started on The Watershed, a four-story mixed-use project with affordable senior housing above retail located on a former brownfield in the Hillsdale town center in SW Portland.
- Completed development offering, selected a developer, and started predevelopment work on the Milwaukie Town Center Project.
- Completed development offering, selected developers, and started predevelopment work on the Gresham Civic Neighborhood mixed-use south of the station and mixed-use north of the station.

Major Accomplishments This Year (continued)

- Acquired 1.90 acres NE of the Gresham Civic MAX Station in the Gresham Civic Neighborhood for the site of a future anchor tenant use such as a grocery store, small department store, or retail with office above.
- Demolished and decommissioned the former Olson Brothers' Texaco gas station on the Milwaukie Town Center site.
- Three entirely new projects were selected for funding through TOD easements: an affordable housing and mixed-use project - NE 82nd Avenue Place; an innovative mixed-use office and retail project – Burnside 6; and an infill mixed-use project in historic Gresham- NW Miller and 3rd.
- The Salvation Army Site project had been previously approved as a land acquisition; instead, it was privately acquired and approved for TOD easement funding as a mixed-use brewpub restaurant and condominium project.
- Russellville Commons III was approved as a mixed-use project with housing for active seniors and ground floor retail; the TOD Program committed to support this final development phase of Russellville Commons when the overall master plan was developed.
- As administrative housekeeping actions, five projects were slated for cancellation because they are no longer viable. In most cases, the developers who originally requested TOD Program support are no longer interested in redeveloping the sites (Candice Commons, Gresham; Metro Access, Washington County; and The Madison, Portland.) In another case, the project scope has changed (Beaverton Round Phase III.) In some cases, site control was never established and the interested developers are no longer actively pursuing the project (Denver/Kenton Loan, Portland; 162nd & E. Burnside, Portland; and Hollywood Trifecta, Portland)
- During this period, the Program selected 9 new developers who had not previously worked with the TOD/Centers Program.
- Projects were approved and construction initiated in six centers. Since its inception, the Program has projects located within a total of ten centers throughout the region.
- Prepared study scope, issued RFP, and commissioned Johnson Gardner LLC to conduct empirical research on the pricing effects of Urban Living Infrastructure on mixed use residential development.
- The Get Centered! material on the "Relationship Between Parking and Density" prepared by TOD staff has been used by the University of Wisconsin and Claremont University in course work.
- Numerous academic institutions have interviewed the TOD Program the past year, including the University of Maryland, for an EPA study on TODS, University of Wisconsin, and others.

FY 2006-07

LAND ACQUIRED & SITES PREPARED

Gresham Civic Anchor Tenant

Milwaukie Town Center
demolition & decommissioning

PROJECTS APPROVED

NE 82ND Avenue Place
Portland

Burnside 6
Central Eastside, Portland

NW Miller & 3rd
Gresham Historic Downtown

Salvation Army Site
Gresham Historic Downtown

Russellville Commons III
Gateway Regional Center, Portland

STUDIES

Urban Living Infrastructure
Johnson Gardner

The Merrick Travel Behavior Survey
PSU

The private market will not build high density and mixed-use projects in most centers unless it is economically feasible to build "up" rather than to build "out."

Gresham Civic Southwest

Westgate Theater Demolition

Issues and Challenges

Over the past few years, there has been a palpable increase in public enthusiasm and market momentum for development of compact, mixed-use centers. Market demand for smaller, higher density residential units has been demonstrated in a growing number of suburban centers including Gresham, Milwaukie, Lake Oswego, and Hillsboro, as well as on urban main streets such as Alberta, Belmont, and Hawthorne Boulevard. However, the private market will not build high density and mixed-use projects in most centers unless it is economically feasible to build "up" rather than to build "out." Mid-rise housing development will require achievable sales pricing in the range of $300 to $350 per square foot for condominiums, increasing to $400 to $450 per square foot for high-rise construction. The construction cost gap has widened between wood frame over concrete vs. a reinforced all concrete building. The result is attempting projects more than five stories in most suburban centers will be more difficult. Achievable pricing for parking would need to be in the range of $20,000 to $40,000 per space if sold, or $200 per month if leased to support structured parking.

The regional for-sale housing market cooled in 2006–07, increasing developers' carrying costs and decreasing sales revenues. With construction costs continuing to rise at an alarming rate, mixed-use projects have been even more financially challenging. Increased public investment may be needed in order to make projects feasible. In the region more developers turned to constructing market rate rental housing and away from condominium housing. TOD/Centers projects typically have many other sources of funding, but State funding limitations are decreasing project investment from sources such as the Community Incentive Fund (CIF). The recent instability of the secondary mortgage markets has raised the most recent danger signs. If rates increase substantially, many potential buyers simply will not be able to secure a loan.

Despite the decrease in the pace of condominium sales, many suburban centers seem to be poised for possible mixed-use projects with the proper public investment. The timing is right to take the TOD and Centers Implementation Program to the next level: developers and local leaders are becoming more enthusiastic and the technical challenges of mixed-use development are becoming more broadly understood. It is important to build on this energy, and to ensure the momentum continues even as the market conditions become less favorable. Program expansion would help strengthen local real estate markets to the point where higher density condos will become financially feasible in some centers without further public investment. Other projects for mixed-use or higher density market rate rentals and affordable ownership units may still require public financing in those markets. Public financing will continue to be necessary to support a healthy blend of rental and ownership housing. The public is a critical partner and needs to increase its investment in higher density mixed-use development and the supporting amenities and services within walking distance of housing.

Objectives for Next Year

[Per Metro Budget for 2007-08]

- Assist 1-3 local communities to attract/enhance a farmers' market or grocery store, locally owned restaurants, theater, theater restaurant, and/or a local arts initiative in order to catalyze main street development, bolster local entrepreneurial activity, and help create a place for higher density housing.
- Identify and pursue strategies for creating an increased, long-term revenue stream to support development of the TOD & Centers Implementation Program and be less reliant and more flexible than Metropolitan Transportation Improvement Program (MTIP) funding.
- Collaborate more extensively with select local communities (Gresham, Milwaukie, Beaverton, and Hillsboro) by providing a broader range of services and development tools in order to build communities, not just individual projects.
- Complete construction on the Nexus mixed-use project located on Cornell Road between Orenco Station and the MAX station.
- Attempt to secure an important project at the Orenco MAX Station to better connect Orenco Village and all of the development near Cornell Road to the MAX station.
- Complete construction on The Beranger in downtown Gresham.
- Complete construction on The Watershed in the Hillsdale town center.
- Complete predevelopment work on the four projects in the Gresham Civic Neighborhood, including a station building, new plaza, and mixed-use development.
- Complete predevelopment work on the Milwaukie Town Center Project.
- Complete predevelopment work on the Hillsboro Central project in downtown Hillsboro.
- Select a developer and start predevelopment work on the Westgate Regal Cinema site project in Beaverton.

Westgate Site

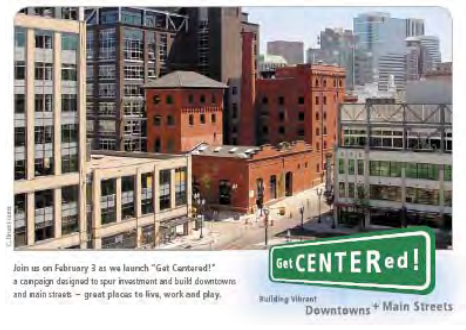
The Beranger

Developer Kevin Cavenaugh, Metro Councilors, TOD Steering Committee and Staff

Design Phases of The Crossings

Metro President Bragdon & Councilor Liberty Tour "The Rocket"

2040 Growth Concept



Get Centered!

Program Funding

The primary source of funding for the TOD Program is from federal funds distributed every two years through the Metropolitan Transportation Improvement Program (MTIP). The funds fall under the Regional Flexible Funds category along with bike trails, transit, and other projects. MTIP funding is exchanged with TriMet local funds in order to facilitate timely expenditure in a manner conducive to public/private partnership projects. Other funding sources to date have included CMAQ funds, direct FTA funds and earmarks, local government funds and interest earned. These local funds have included Metro general funds, local general funds, urban renewal funds, system development charge revenues, land sale proceeds, and Business Energy Tax Credits.

Relation to New Look

The New Look effort was launched as part of the Long Range Planning Division's efforts to evaluate progress on 2040 goals including the performance of designated centers throughout the region. Through discussions with the TOD Steering Committee, Metro Council, and Long Range Planning and TOD Program staff, it was determined that the TOD Program could enhance performance of 2040 centers by focusing more resources in fewer areas. This "focus centers" approach will: use a strategy of repeated investment to achieve "lift-off;" include more integrated planning department role with participation from both TOD/Centers Program staff and New Look staff in Long Range Planning; involve an integrated approach to attempting to lift barriers to centers development; and will help local governments build the capacity to carry program objectives forward. The end result is hoped to be development of some centers to a higher level and also development of more reliable local government resources to continue the effort.

Areas of Operation

TOD projects are eligible within a ¼ mile of the light rail, streetcar or commuter rail station and within 800 feet of a frequent bus stop. Projects in the urban centers are eligible if located within any of the seven designated regional centers, 30 town centers, and the Portland City Center.

Future Opportunities

During the last Metro Council review, a panel of development experts suggested that TOD Program funding needed to be increased to total $5 - $10 million per year and be sustained for ten years in order to catalyze the real estate markets in centers to reach self-sustaining levels of reinvestment. In the past MTIP cycle, the combined TOD/Centers funding was increased to $2.5 million per year. The TOD Program needs to increase, diversify and stabilize its funding, while utilizing program resources in the most effective manner possible.

Future Opportunities [continued]

In the coming year, staff will seek authorization from the TOD Steering Committee and Metro Council to test two new Program approaches to further improve TOD Program effectiveness. The first is to designate "Focus Centers" where there will be repeated investments in order to help create a visible sense of market momentum, and attract other investments. A broader set of implementation support services and strategies would be provided in Focus Centers by collaborating with other Metro programs, including New Look and Nature in Neighborhoods.

The second new approach will be to implement an "Urban Living Infrastructure" program in order to improve the economic feasibility of mixed use development in Focus Centers. A recent Metro-commissioned study by Johnson Gardner, a leading Northwest real estate and land use economics consulting firm, provides new empirical evidence about the positive effects of urban living infrastructure (such as specialty grocers, cinemas, bookstores, cafes) on housing prices. Having urban living infrastructure within walking distance adds value to the residential experience, which in turn raises the value of residences. Improving urban living infrastructure in a center benefits the broader neighborhood as a whole by raising achievable pricing for housing within walking distance of the center. Using pro-forma analysis, Johnson Gardner demonstrated that having urban living infrastructure in place could change the market conditions of a center so that mid-rise buildings become economically feasible where they were not before. Metro's new evidence-based strategy of investing in the urban living infrastructure would begin as a pilot program, funded with $600,000 of interest earned on TOD funds since the Program inception.

The combination of investing in urban living infrastructure and increasing the number of people living in a center is economically self-reinforcing, and improves the financial viability of future compact, mixed use projects. Improving the urban living infrastructure helps to close the financial gap in projects by increasing the rents or sales revenues. Constructing additional residential units increases the customer base for specialty grocers, restaurants, cafes, and other local urban living infrastructure businesses. The TOD Program will continue to fund compact, mixed use projects so people can live and work closer to transit, in walkable urban centers. Metro's purchase of a TOD easement or land value write down helps to close the financial gap in projects by reducing net construction costs.

Other areas that have been discussed for broader Metro funding for Centers include a fund for amenities infrastructure (plaza, woonerfs, and streetscape), conventional infrastructure (pavement and pipes) and a creation of a developer equity loan fund. The TOD Program is also interested in being certain that there is a Metro sponsored program for funding affordable housing in TODs and Centers, whether or not this specific program is administered by the TOD/Centers Program. The Program will also examine the future make up and the role of the TOD Steering Committee in 2040 implementation.

Lake Oswego Farmers' Market

Northwest 23rd Avenue Placita

North Main Village Rain Garden

North Main Village

Buckman Terrace

Milwaukie Town Center Demolition

PROGRAM STATISTICS

Completed Projects

As shown in Table 1, eleven projects have been completed to date with the assistance of the TOD Program. Of those one was initiated by Metro with a land purchase and the remaining ten included Metro's acquisition of TOD/Centers easements. Projects have ranged from mixed-use housing and commercial to office and restaurant uses. A project summary list is provided in Appendix B**,** which includes completed and active projects.

Table 1. Completed Projects

Project Name		TOD Project Funding
Buckman Terrace		100,000
Center Commons	*	1,108,157
Central Point		60,000
GCN SE - The Crossings I	**	876,317
Milwaukie North Main Village		560,528
N. Flint Infill		30,851
Pacific University		200,000
Russellville Commons I & II		325,000
The Merrick		200,000
The Rocket		275,000
Villa Capri		42,000
Total	$	3,777,853

* Center Commons net project cost was $322,157; $776,000 was received from land sale proceeds.

**Metro also contributed $450,000 in land value to The Crossings. The net capital cost of the project is $1,076,317 after deducting the estimated $250,000 value of a buildable residual parcel retained in Metro ownership.

Active Projects

The TOD Steering Committee has authorized $2.85 million in funding in support of projects that have yet to be completed but are either in the design/development stage or under construction. These projects are listed in Table 2.

Table 2. Active Projects – Easements

Project Name	Location	Status	TOD Funds Spent/ Allocated
82nd Avenue Place	Portland	design development	$ 225,000
Burnside 6	Portland	design development	50,000
Killingsworth Station	Portland	design development	250,000
NW Miller & 3rd	Gresham	design development	345,000
Salvation Army Site	Gresham	design development	265,000
Metro Air Rights Study	Portland	inactive	28,000
Nexus	Hillsboro	under construction	301,475
Russellville Commons III	Gateway-Portland	under construction	175,000
The Beranger - loan	Gresham	under construction	300,000
The Beranger - grant	Gresham	under construction	285,335
The Round	Beaverton	under construction	200,000
The Watershed	Hillsdale	under construction	230,275
		Total	$2,855,085

Table 3 presents a list of Metro initiated projects where Metro has purchased sites and/or is a joint landholder with the local jurisdiction. The level of TOD Program financial participation has not yet been determined for these future development projects.

Table 3. Active Projects – Metro sites

Project Name	Location	Status	Land Costs
GCN Civic Anchor Tenant	Gresham	Design development	$ 592,500
GCN NW Parcel	Gresham	Design development	2,235,068
GCN Civic SW Parcel	Gresham	Design development	1,435,183
GCN – The Crossings Phase II	Gresham	Design development	250,000
Milwaukie Town Center	Milwaukie	Design development	812,000
Westgate Site	Beaverton	Developer selection	2,000,917
Wells Fargo Site	Hillsboro	RFP/Q Development	656,630
		Total	$ 7,982,298

In addition to the projects listed above, Metro is actively involved in the design and development of the Gresham Civic Transit Station ($2 million.)

The Rocket

Central Point

Metro Councilor Carl Hosticka With Beaverton Mayor Rob Drake at the Westgate Acquisition Ceremony

Program Expenditures

The TOD Program is expected to have expended $17,344,541 in support of transit-oriented development and Centers projects from inception through June 2007. As shown in Figure 1, of those funds expended, $7,952,798 has been on land acquisition for key sites and the remaining $5,199,320 was spent on easements on projects initiated by other partners (private, public, non-profit). In addition $4,192,423 has been spent on operating costs including consultants, project soft costs, and Metro overhead charges. Operating costs have increased over time as more projects have been authorized and as TOD Program activities have shifted from land acquisition to property disposition, which has higher demands on staff time due to coordination and involvement with local jurisdictions and community members. In addition, technical assistance and advocacy work, such as Get Centered! has increased as the TOD Program has grown over time.

Figure 1. Program Expenditures

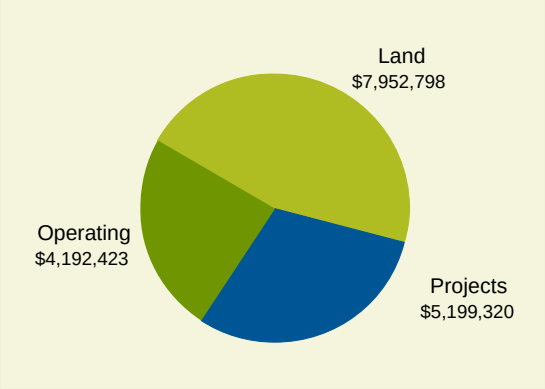
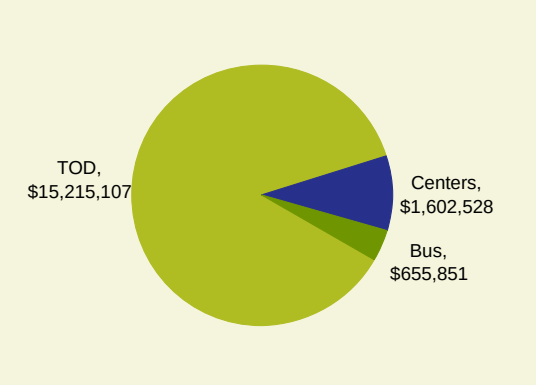


Figure 2, below, shows the total funds of $17,473,486 have been spent to date or allocated to approved projects for expenditure through FY09; TOD Program operating costs are not included. The three categories of eligible Program activity are: transit oriented development (TOD), frequent bus (Bus), and 2040 plan designated regional or town centers (Centers). Frequent bus and Centers were added to the TOD Program Work Plan in 2005.

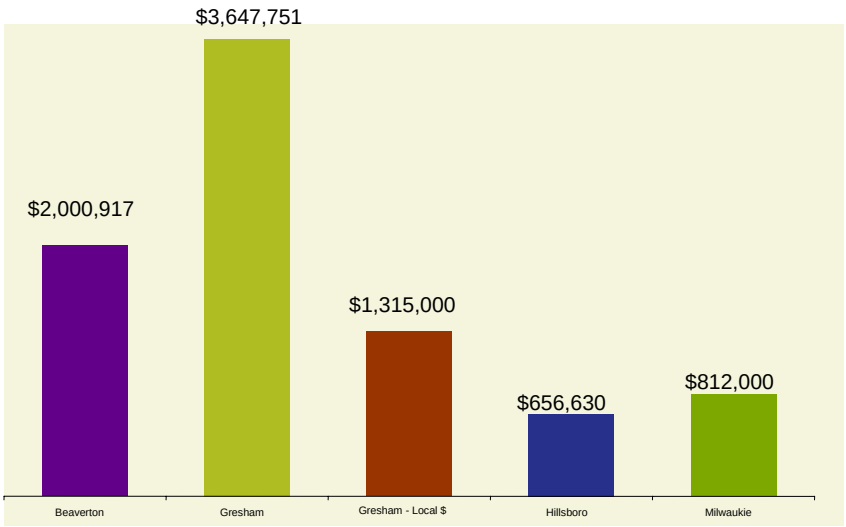
Figure 2. Expenditures by Program Activity



The TOD Steering Committee and Metro Council have authorized funding for a number of projects which were later cancelled, terminated or did not come to fruition for a variety of reasons. These projects reflect the effort of the TOD Program to fund transit oriented development throughout the Metro region. TOD Program staff are in the process of officially terminating funding for these projects through TOD Steering Committee action.

TOD Program land acquisition investments have been distributed across the region in the cities of Beaverton, Gresham, Hillsboro and Milwaukie. A total of over $8.4 million has been expended to purchase 21.7 acres, at an average cost of $8.80 per square foot. These land values reflect the fact that higher density mixed-use projects are not yet economically feasible without public partnerships (the rule of thumb in land economics is that developers will build on parking and other uses when land value exceeds the cost of constructing a platform. In the Portland region, this is currently at $50.00 to $65.00 a square foot). The significant amount of land acquisition costs in Gresham are due to the Gresham Civic Neighborhood acquisitions of 4 key properties: The Crossings (completed), Northwest Parcel, Southwest Parcel, and the Anchor Tenant parcel. Gresham Civic Neighborhood presented a unique opportunity for the TOD Program to develop a complete mixed-use community adjacent to a transit stop because two factors converged: 1) availability of nearly 100 acres of vacant land on both sides of the future transit station, and 2) availability of funds ($2,250,000 being reallocated from a previous funding commitment for The Beaverton Round to prevent the project from going into bankruptcy, and $1,315,000 from the City of Gresham reallocated from other Gresham controlled projects). As a result, the land acquisition costs are out of proportion to other communities. Figure 3 below shows land acquisition costs by jurisdiction.

Figure 3. Land Acquisition Costs by Jurisdiction



The Crossings

The Rocket
Chesterfield Tour

Councilor Rex Burkholder at 82nd Avenue Place Groundbreaking

Councilor Brian Newman with Mayor Jim Bernard, Councilor Carlotta Colette and other dignitaries at the Grand Opening for North Main Village

The Nexus

Milwaukie Town Center North Main Partners Concept Sketch

Figure 4 below presents cumulative funding by jurisdiction for all approved projects (figures are in addition to land acquisition costs.) The funding totals include funds already spent and the balance of funds allocated for each project by the TOD Steering Committee.

Figure 4. Development Project Funding by Jurisdiction

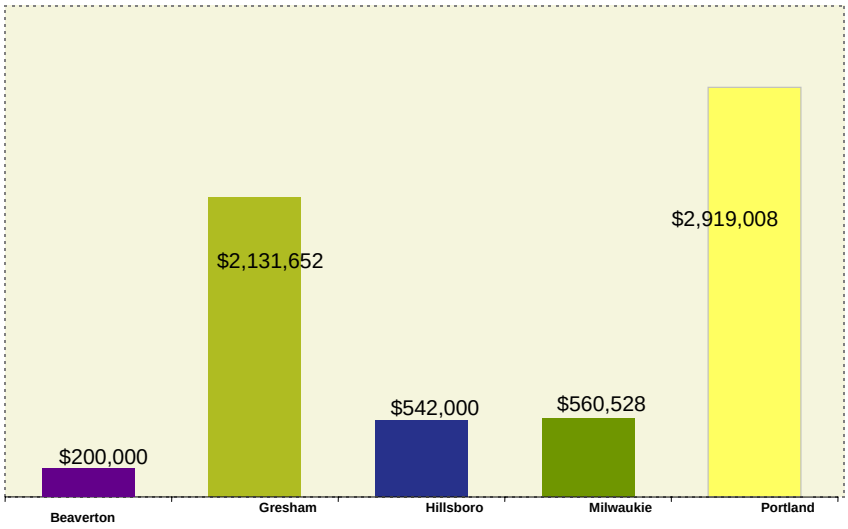


Table 4 below lists all funded projects, status, jurisdiction, developer, and the allocated funds. **Appendix B** includes a more detailed summary for each project and **Appendix C** shows a map of the TOD Program eligible areas and project locations.

Table 4. Development Projects Funded

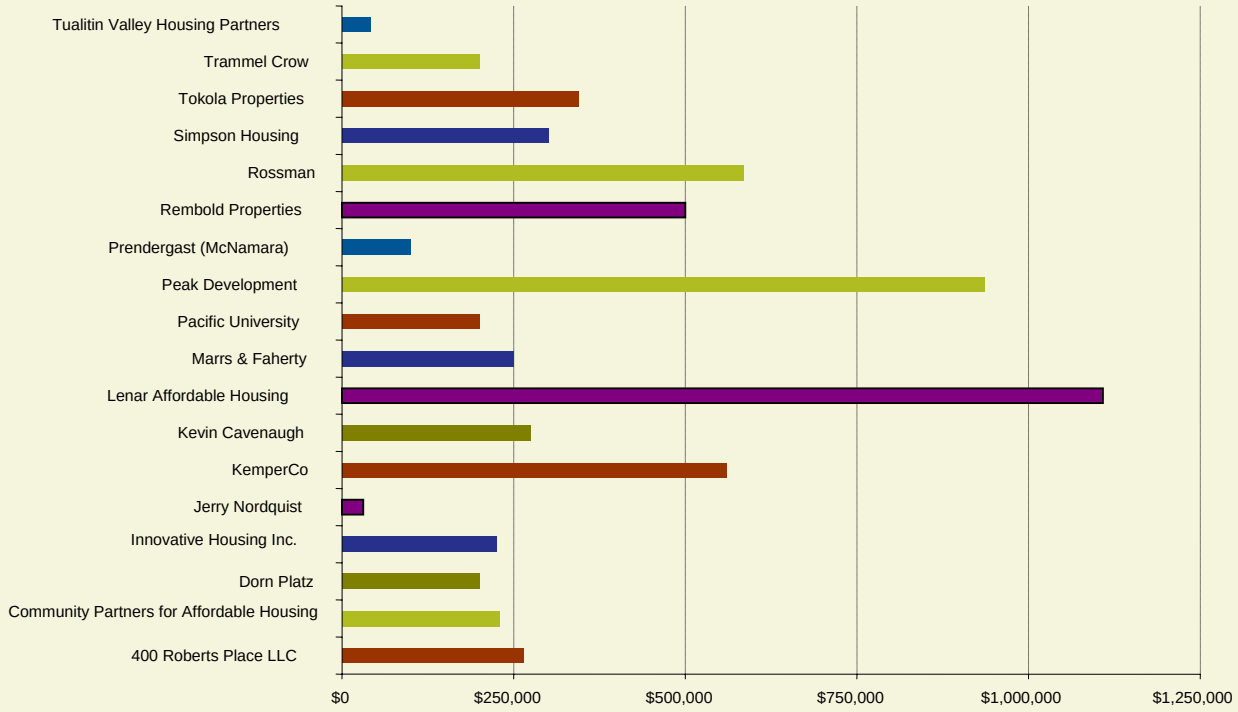
Project Name	Status	Jurisdiction	Developer Selected	Spent/ Approved
Beaverton Round Phase I, II, III	Active	Beaverton	Dorn Platz	200,000
Westgate Site	Active	Beaverton	-- to be determined --	*
Central Point	Complete	Gresham	Peak Development	60,000
Gresham Civic Anchor Tenant	Active	Gresham	CenterCal	**
Gresham Civic NW Parcel	Active	Gresham	CenterCal	**
The Crossings	Complete	Gresham	Peak Development	***876,317
Gresham Civic SW Parcel	Active	Gresham	Rossman	**
NW Miller & 3rd	Active	Gresham	Tokola Properties	345,000
Salvation Army Site	Active	Gresham	400 Roberts Place LLC	265,000
The Beranger - loan	Active	Gresham	Rossman	300,000*
The Beranger – grant	Active	Gresham	Rossman	285,335
Nexus	Active	Hillsboro	Simpson Housing	300,000
Pacific University	Complete	Hillsboro	Pacific University	200,000
Villa Capri West	Complete	Hillsboro	Tualatin Valley Housing	42,000
Milwaukie North Main Village	Complete	Milwaukie	KemperCo	560,528
Milwaukie Town Center	Active	Milwaukie	Main Street Partners	**
82nd Avenue Place	Active	Portland	Innovative Housing Inc.	225,000
Buckman Terrace	Complete	Portland	Prendergast McNamara)	100,000
Burnside 6	Active	Portland	Marrs & Faherty	250,000
Center Commons	Complete	Portland	Lenar Affordable Hsng	
N. Flint Infill	Complete	Portland	Jerry Nordquist	30,851
Russellville Commons I & II	Complete	Portland	Rembold Properties	325,000
Russellville Commons III	Active	Portland	Rembold Properties	175,000
The Merrick	Complete	Portland	Trammel Crow	200,000
The Rocket	Complete	Portland	Kevin Cavenaugh	275,000
The Watershed	Active	Portland	Community Partners for Affordable Housing	230,000
			Total	$6,353,188

* Metro invested $2.0m in land acquisition costs at Westgate and may reduce the land sale price to the developer in order to achieve specific public benefits that are not currently supported by the market.
** Developers have been selected for these projects on Metro TOD property, but the level of TOD project funding has not yet been determined.
*** Metro also contributed $450,000 in land value to The Crossings. The net capital cost of the project is $1,064,567 and $216,750 of BETC tax credit revenue after deducting the estimated $250,000 value of a buildable residual parcel retained in Metro ownership.
**** Center Commons net project cost was $322,157; $776,000 was received from land sale proceeds.

Metro Councilor Rod Park at The Beranger

The TOD Program is also actively engaged in the planning, design, and development of the Gresham Civic Transit Station located in the heart of Civic Neighborhood. TOD Program staff, TriMet, the City of Gresham, and private development partners are working together to ensure that the station and adjacent development are developed in a coordinated manner that maximizes the unique opportunity presented by the station location. The station project has allocated funds totaling $2,000,000. Figure 6 below shows TOD Program funds spent or allocated by development entity. Note that many developers create separate LLC's for each individual project to protect existing projects and/or assets and may also have different partners in the separate corporations. TOD Program staff are currently negotiating with the developers of Gresham Civic (CenterCal and Rossman Development), which are not represented in Figure 5 as development agreements have not been finalized nor have project funding commitments been approved.

Figure 5. TOD Program Funding Development Entity



Notes:

1) The managing principal in KemperCo was previously the project manager for Lenar Affordable Housing.
2) Peak Development total includes two projects: Central Point and The Crossings. Rossman is principle in Peak Development and the sole managing developer in Rossman Development Corp.

Program Results

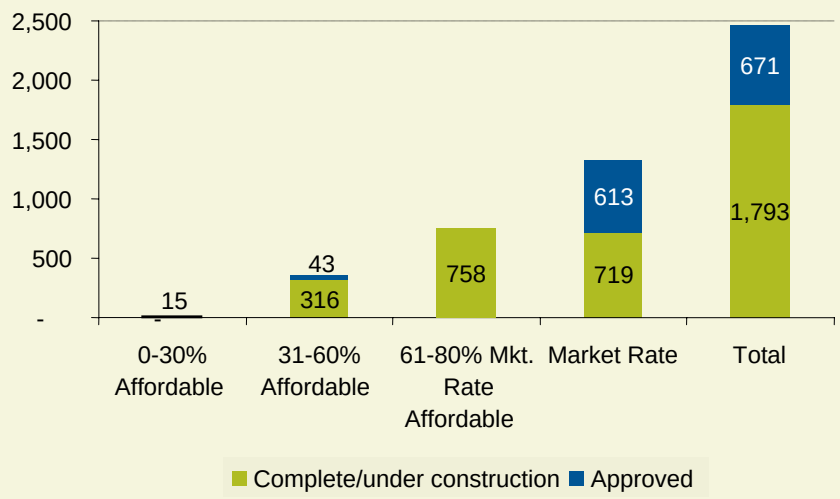
TOD Program results are highlighted in Table 5 for projects already completed or now under construction, for approved projects, and for total anticipated Program results.

Table 5. Program Results

	Completed or under construction	Approved projects	Totals
Housing Units			
Affordable - 30%	0	15	15
Affordable - 60%	316	43	359
Market Rate Affordable - 80%	758	-	758
Market Rate	719	663	1,382
Total	1,793	721	2,514
Commercial			
Office SF	560,537	223,200	783,737
Retail SF	193,700	244,736	438,436
Total	754,237	467,936	1,222,173
Induced Riders Per Day	2,317	822	3,139

Figure 6 below presents the total number of housing units completed broken down by market and affordability levels.

Figure 6. Housing Development by Median Family Income [MFI] Affordability



Metro Councilors Robert Liberty and Brian Newman at North Main Village

Metro Councilor Katheryn Harrington at Pacific University, Hillsboro

Former Councilor Susan McLain at the Nexus Ground Breaking

PROGRAM ADMINSITRATION

Staff

The TOD Program currently has authorized five full time staff positions including a Program Manager, Assistant Manager, Senior Development Project Manager and two Associate Development Project Managers.

Governance

The TOD steering committee is responsible for approving projects within criteria established by the Metro Council. Members of the steering committee include representatives of the Governor's Office (chair), Department of Environmental Quality, Oregon Department of Energy, Department of Land Conservation and Development, Oregon Housing and Community Services Department, Tri-Met, Metro Council, Oregon Department of Transportation, Oregon Economic Development Department, and Portland Development Commission. Once the Steering Committee takes action on a project a 7-day notice is sent to the Metro Council. The Council has the option to reconsider the Steering Committee action within 7 days. The current steering committee membership is listed below:

Mark Ellsworth – Chair Governor's office
Robert Liberty- Metro Council
Tamira Clark -Oregon Department of Transportation
Meg Fernekees - Dept. of Land Conservation & Development
Vince Chiotti - Oregon Housing & Community Services
Dave Kunz - Oregon Department of Environmental Quality
Vacant - Oregon Economic Development Department
Jillian Detweiler - Tri-Met
Cheryl Twete/Byron Estes - PDC

TOD Work Plan and Funding Mechanisms

The work plan describes the operating parameters for the various TOD Program elements, project selection criteria, Program operation and other Program activities and details. The Work Plan was adopted March 1998 to authorize the creation of the TOD Program and subsequently revised four times to expand and refine Program activities.

The TOD Program utilizes three main strategies to incent and facilitate transit-oriented development projects: 1) buying land to develop future transit oriented projects, and 2) purchasing transit-oriented development easements on projects requesting funding, 3) provision of site improvements (plaza, etc.) When the TOD Program jointly purchases land with a local jurisdiction, such as Hillsboro, Beaverton and Milwaukie, a partnership is created to undertake an RFP or RFQ process to select a developer for the site. Both methods use the increase in projected transit ridership which results in a capitalized farebox revenue figure and the anticipated cost premiums associated with higher density mixed-use projects to determine the level of Program funding for each project.

Additionally activities include the following:

- A small Green Building program (utilizing Business Energy Tax Credits) supports green building elements such as green roofs, innovative storm water features, and other sustainable elements.

- Education, Advocacy and Technical Assistance to local jurisdictions throughout the region. By providing expertise on a variety of topics such as parking and downtown revitalization these activities are directly related to centers development and strengthen Metro and the TOD Program's partnerships in the region.

- Small Projects and Loans, and Unsolicited proposals. These three mechanisms are used to increase the agility of the TOD Program and have been used to form strong public private partnerships when land acquisition or TOD easements are not feasible or practical.

Cost-Effectiveness Analyses

The TOD Program evaluates the cost effectiveness of a higher density transit oriented project compared to a base case development scenario that reflects what current market conditions would support. The difference in ridership generated by each project provides a metric for evaluating the cost effectiveness of a proposed project.

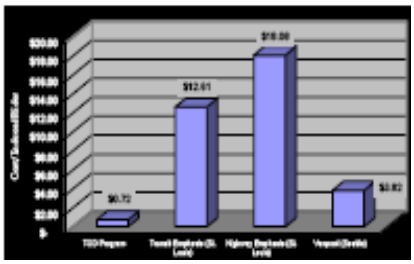
The ability of the project to create an environment where people choose to ride transit, walk or bike more often, and to drive less, is of primary concern in evaluating proposed projects. Empirical research shows that people make different travel mode choices depending upon the mix of building uses, proximity to good transit, and the urban form of an area. For example, Metro Travel Behavior Study found that the percentage of trips made by transit was more than ten times higher (11.5%) in areas with mixed-use urban form and good transit, compared to others areas in the region (1.2%). National research data on the number of trips associated with different building uses [referred to as trip generation data] is combined with the regional data on travel mode splits by urban form to calculate the "induced ridership" that would result from construction of the proposed TOD project, compared to the base case scenario.

"Cost per induced rider" is routinely modeled to provide a normalized basis for evaluating the cost-effectiveness of the proposed project, and comparing it to other investment alternatives. The direct TOD project funding amount (the capital cost) and a 15% allowance for TOD soft costs (the operating cost) are included; an annual cost is calculated using FTA's standard of a 30 year expected life for building structures. The annualized cost divided by the number of induced transit riders per year determines the "cost per induced rider. " The TOD Program's costs per induced rider compares extremely well with other transportation investment strategies.

The Crossings Rain Garden

North Main Village Rain Garden

The Beranger Eco-roof



TOD Cost per Induced Rider Lower Than Alternative Investments

North Main Village
Rain Garden Waterflower

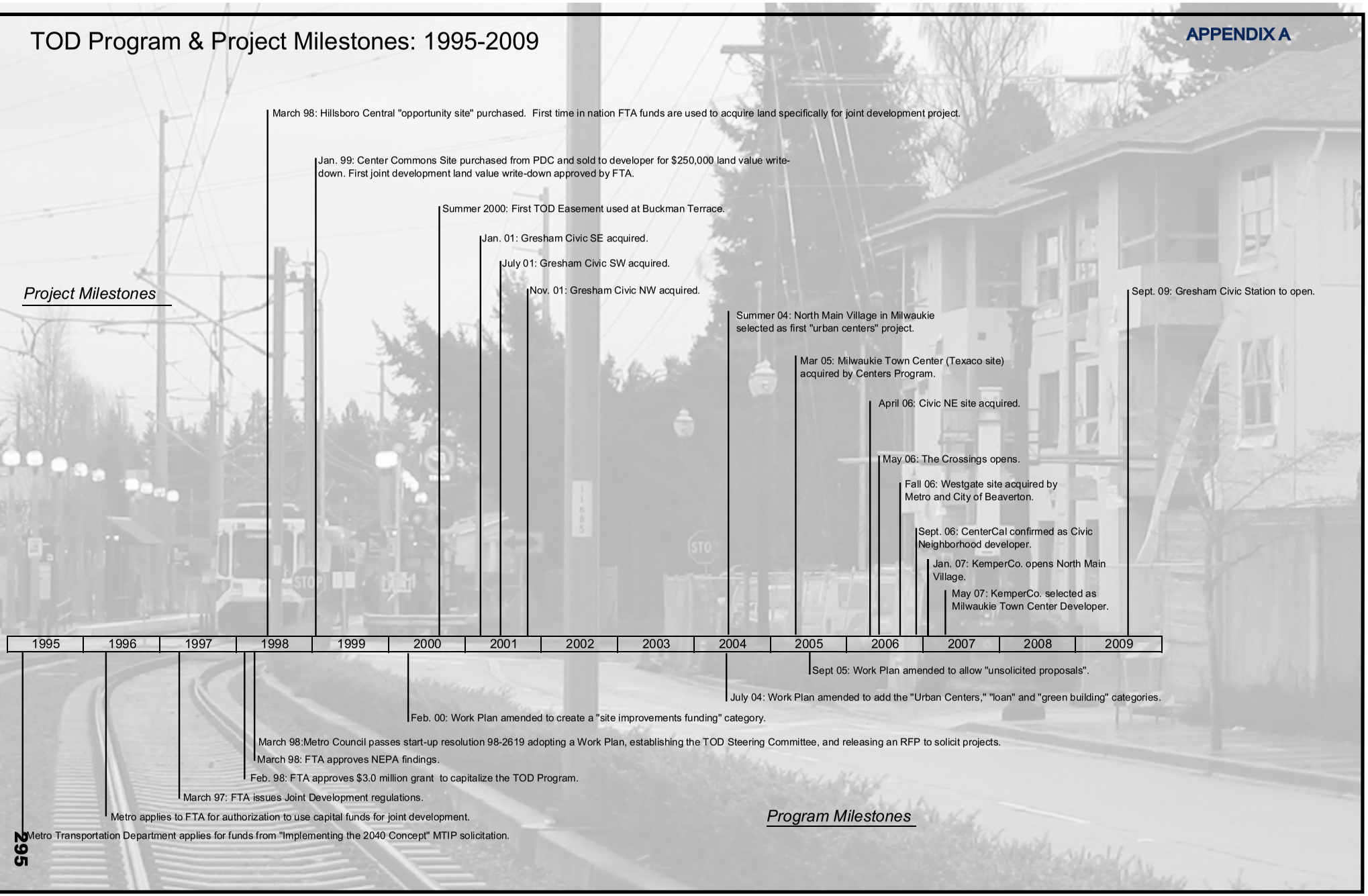
The additional farebox revenue that result from induced ridership over the 30-year expected life of the project provides a monetary measure of TOD project benefits. Recommended project funding does not generally exceed the net present value of future farebox revenues, which means that TOD Program funds invested are generally earned-back by the transit system in less than the first 30 years of operations.

The TOD Program analyzes the additional costs (cost premiums) associated with each specific proposed project, compared to the base case project. The construction methods required for mixed-use buildings are more expensive than single use buildings. Cost premiums may include: fire wall separations between commercial and residential uses; underground, structured, or tuck-under parking; fire stairs; sprinkler systems; moment frames; elevators; extraordinary foundation work; and associated design and engineering work. TOD Program staff determine the dollar value of each cost premium in a proposed project, and the cost premium total becomes another benchmark against which project funding levels are evaluated. Recommended project funding does not generally exceed the total value of cost premiums.

Gresham Civic Neighborhood Proposal, Southwest Parcel

TOD Program & Project Milestones: 1995-2009

APPENDIX A



Appendix B

COMPLETED PROJECTS

Buckman Terrace Apartments

The developer was planning to build 16 row houses on this site. With a TOD Program funding commitment, the developer changed the plan to 122 units of housing and a ground floor restaurant on that same parcel. This was developed in an area of car lots and a mattress sales business. The developer is also a first time developer to the TOD Program.

Project location:	NE 16th Ave. & NE Sandy Blvd., Portland
Developer	Pendergast & Associates/Ed McNamara
Architects:	Hennebery Eddy Architects
Project size:	0.83 acres
Mixed uses:	Mixed-use building: 122 market rate affordable apartments, 2,000 SF class A retail, structured parking very low (.65) parking ratio
Total project costs:	$ 7.2 million
TOD Program funding:	$100,000
Project status:	Completed 2000

Center Commons

This was the first project in the United States funded with FTA funds where the property was bought and sold in the same escrow to achieve a land value write-down. It won a National AIA HUD Award for mixed-use and was featured in, "Urban Land" magazine for its sustainable "woonerf" or plaza.

Project location:	NE 60th Ave. & NE Glisan St., at the MAX station, Portland
Developer:	Lennar Affordable Housing/Thomas Kemper
Architects:	Vallaster and Corl Architects; Otak Architects
Project size:	3.78 Acres
Mixed uses:	Mixed-use, mix-income project: 172 senior apartments, 60 affordable family apartments, 56 market rate apartments, 26 for sale row houses, 1,500 sq. ft. class A retail, child care center
Total project costs:	$30.4 m
TOD Program funding:	$1,108,157 total cost less $776,000 in land sale proceeds resulted in a $332,157 net cost
Project status:	Completed 2000

COMPLETED PROJECTS [continued]

Central Point

These 22 units were developed on a typical suburban single family lot size of 1/4 acre. Central Point has the highest density , (82 units per acre) and the lowest parking ratio of any housing project (.8 to 1) in Gresham. It achieved the highest rents in Gresham when it opened and won the Governor's Livability award for design excellence. We often use this project to demonstrate to a community that it is all about design and not density.

Project location:	302 NE Roberts St., Gresham
Developer	Peak Development
Architects:	Myhre Group Architects
Project size:	0.28 acres
Mixed uses:	Mixed-use building: 22 market rate workforce apartments, 3,000 SF class A retail, tuck-under parking
Total project costs:	$2.3 m
TOD Program funding:	$60,000
Project status:	Completed 2004

The Crossings

This is the first larger scale, mixed-use project in Gresham. At 76 feet in height, this is the tallest building in Gresham. It is designed to appear as a series of separate buildings . It has the first underground parking for a private development in Gresham and was featured in the BBC "World's Best Public Services Program," in August of 2006. The apartments are 100% leased and have a waiting list. It demonstrates that there is a pent up demand for denser "loft style" rental housing in suburban markets.

Project location:	NW Civic Drive, south of the MAX tracks, Gresham
Developer:	Peak Development
Architects:	Myhre Group Architects
Project size:	1.5 acres
Mixed uses:	Mixed-use building: 81 market rate and workforce apartments, 20,000 SF class A retail, underground structured parking
Total project costs:	$ 14.2 m
TOD Program funding:	$876,317.The net capital cost of the project is $ 1,109,567 including $750,000 land cost net of the estimated $250,000 value of a buildable residual parcel retained in Metro ownership, and $216,750 in anticipated Building Energy Tax Credit revenues.
Project status:	Completed 2006

COMPLETED PROJECTS [continued]

North Main Village

North Main Village was the first mixed-use, mixed-income project in downtown Milwaukie. It was also the first project funded from the Urban Centers Program, which was established by the Metro Council in 2004.

Project location:	10554 SE Main Street. Milwaukie
Developer	KemperCo
Architects:	Myhre Group Architects
Project size:	1.90 acres
Mixed uses:	Mixed-use development: 64 affordable apartments; 33 market rate condominiums, flats and townhomes; and 8,000 SF retail
Total project costs:	$ 14.0m
TOD Program funding:	$555,000 long-term low interest loan
Project status:	Completed 2006

North Flint

North Flint demonstrated Metro's agility and low program overhead by working with a small developer on a small project.

Project location:	2124 N. Flint Avenue, near frequent bus stop, Portland
Developer:	Jerry Norquist
Project size:	0.11 acres
Architects:	Sum Design Studio
Mixed uses:	Mixed-use building: 2,800 SF office for Cycle Oregon 1,236 s.f. of warehouse; 5 residential units ; no parking
Total project costs:	$ 0.82 m
TOD Program funding:	$30,851
Project status:	Completed 2006

COMPLETED PROJECTS [continued]

Pacific University

The Pacific University project is distinguished by: creating an urban scaled campus next to transit in historic downtown Hillsboro; class rooms above ground floor retail and services; and extensive education and incentive program for students and faculty to use MAX. This project has the lowest cost per induced transit ride of any TOD/Centers project in the entire system.

Project location:	222 SE 8th Avenue, on MAX , Hillsboro
Developer:	Pacific University / Gerding Edlen Development
Project size:	0.88 acres
Mixed uses:	Five-story vertically mixed-use building including class rooms, health and physical therapy clinics, and ground floor retail open to the general public.
Total project costs:	$ 30.0m
TOD Program funding:	$200,000
Project status:	completed 2007

Russellville Commons I & II

Russellville Commons has the largest number of housing units in a TOD built by single developer on the entire 42 miles of MAX. It was also the first higher density housing in the Gateway Regional Center, with a total of 576 units developed in three phases. There is also a central green commons that connects the entire project to the MAX light rail station.

Project location:	SE 102nd Ave. & E. Burnside St., at the MAX station, Portland
Developer:	Rembold Properties
Architects:	MCM Architects
Project size:	10.1 acres
Mixed uses:	Multi-phase mixed-use development: 283 market rate rental apartments with tuck under parking in phase I; and 154 senior independent living units in a 5 story building in phase II, and 139 units in Phase III organized around a central green that connects to the transit station.
Total project costs:	$ 60.0 m
TOD Program funding:	$325,000
Project status:	Phase I and II completed 2002

COMPLETED PROJECTS [continued]

The Merrick

The Merrick is the highest density housing project in the TOD Program: 198 units per acre. Two separate developers were used in partnership: CE John, a prolific commercial developer who often develops one to two story commercial; and Trammell Crowe, a successful housing developer. Use of light gauge steel for the structure resulted in very low "hard" construction costs (less than $80.00 per square foot). A Portland State University study of resident's travel behavior found a nearly half (47%) of all trips were made by transit, walking, or biking, leaving only 53% by auto.

Project location:	1239 NE MLK Blvd. , near Convention Center MAX station, Portland
Developer	CE John/Trammell Crowe
Architects:	Robert Leeb Architects
Project size:	0.9 acres
Mixed uses:	Mixed-use building: six-story apartment above 15,000 SF ground floor retail; 185 apartments; 206 structured parking spaces
Total project costs:	$ 24.0 m
TOD Program funding:	$200,000
Project status:	Completed 2005

The Rocket

The Rocket is a major catalyst project appealing to "edgy tenants" in an area of disinvestment; first new office outside downtown core to be built with no parking. It is seeking LEED Platinum certification and will become the first such building in the TOD/Centers Program. The project was 100% leased before completion because of edgy design and developer savvy. It was the first TOD project to use frequent bus criteria adopted by the Metro Council in 2004. It is also the first building to be built over Portland public sidewalk right of way in decades. Additionally, the Rocket includes sliding art panels (made by local artists) as window shutters.

Project location:	E. Burnside St. at NE 12th Ave., Portland
Developer:	Kevin Cavenaugh
Architect:	Kevin Cavenaugh
Project size:	0.09 acres
Mixed uses:	Mixed-use building: 16,037 SF of commercial including restaurants and creative office space
Total project costs:	$ 4.1 m
TOD Program funding:	$275,000
Project status:	Completed 2007

COMPLETED PROJECTS [continued]

Villa Capris

The Villa Capris is a higher density residential project located in suburban Hillsboro at the MAX station. The TOD Program purchased an easement to offset the cost of the elevator to achieve higher density and maintain ADA standards for 100% of units; very low parking ratio in suburban location.

Project location:	Corner of SE 12th & SE Washington, at the MAX Station, Hillsboro
Developer	Tualatin Valley Housing Partners
Project size:	0.49 acres
Mixed uses:	Higher density (45 du/acre) residential: 20 affordable apartments
Total project costs:	$ 2.4 m
TOD Program funding:	$42,000
Project status:	Completed 2002

ACTIVE PROJECTS

82nd Avenue Place

The 82nd Avenue Place project is located on a recycled freeway off-ramp, and is the first mixed use development in this area.

Project location:	NE 82nd avenue & NE Broadway Street, one block from MAX station, Portland
Developer	Innovative Housing, Inc.
Architects:	LRS Architects
Project size:	1.16 net buildable acres
Mixed uses:	Mixed-use development: Three and five-story buildings; 58 affordable rental units for incomes of 30 to 50% and 15 homeless families; and 5400 SF ground floor commercial and child care.
Total project costs:	$ 12.3 m
TOD Program funding:	$225,000
Project status:	Under construction; completion expected 2009

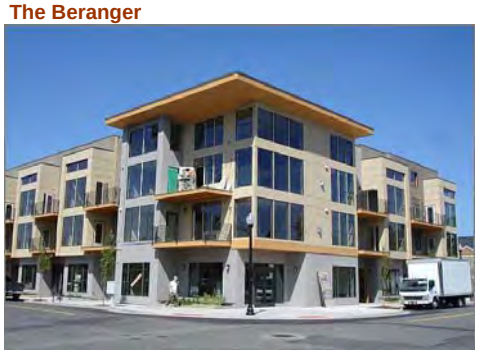
Beaverton Round

The Beaverton Round is most distinguished by its urban design: mixed-use buildings hug a large circular public plaza, with the MAX light rail transit station located in the middle. The image is considered to be an archetype of what a TOD should look like. Built on a former sewage treatment site and using newly designated wetland as an amenity, this TOD sets a new model for redevelopment of the numerous auto dealer lots and surface parking areas in the vicinity. It has the highest FAR [floor area ratio] of any TOD on the entire MAX line outside downtown Portland. It is also the fiirst project to be funded from the "site improvements" category of the TOD Work Program.

Project location:	Hall Blvd., at the Beaverton Central MAX station, Beaverton
Developer:	Dorn Platz
Project size:	7.9 acres ; 5.5 acres net developable land area
Mixed uses:	Plaza and fountain improvements as amenities to mixed-use development including 80,000 SF retail, 450,000 office, 800 structured parking spaces, and 64 condominiums.
Total project costs:	$ 120.0m
TOD Program funding:	$200,000
Project status:	partially completed; future work to be phased with development; 2009

ACTIVE PROJECTS [continued]

The Beranger



The Beranger offers the first higher density housing condominiums in Gresham, and is establishing new market comparables that will reduce risk and make it easier to secure financing for future projects. It has a "green" roof for stormwater management, and the enjoyment of residents.

Project location:	NE 3rd & NE Roberts St., in the historic downtown Gresham
Developer	Rossman Development
Architects:	Myhre Group Architects
Project size:	0.55 acres
Mixed uses:	Mixed-use building: 3 and 4-story project of 24 residential condominiums; 6100 SF of retail
Total project costs:	$ 5. 6m
TOD Program funding:	$ 585,335 (including a $300,000 low interest loan to be paid back from condominium sales)
Project status:	Under construction; completion expected 2007

bside6

bside6 and the Burnside Rocket are the first two office buildings located out of the historic core of downtown Portland that have been built recently with no parking. bside6 is designed with creative "street rooms " that project over the sidewalk, helping to narrow the feel of East Burnside Street and providing a unique perspective on the street and extended views. It has the highest FAR of any TOD funded project (7 to 1). This creative building will showcase hanging bikes in the lobby as art.

Project location:	E. Burnside & SE 6th, Portland
Developer:	Marrs, Faherty, Caruana
Architects:	Worls Partnership Architecture llc
Project size:	.09 acres
Mixed uses:	Mixed-use development: Seven story building with 27,000 SF retail, office and creative space
Total project costs:	$4,100,000
TOD Program funding:	$250,000
Project status:	Design development; construction completion expected 2009

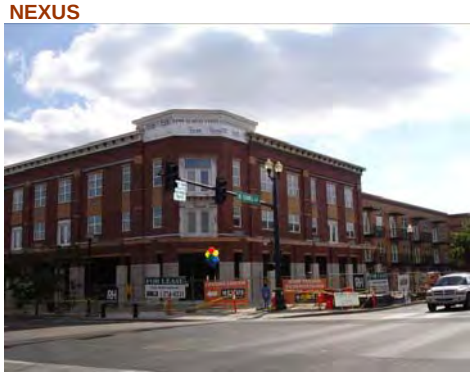
ACTIVE PROJECTS [continued]

Gresham Station and Plaza

The Gresham Station and Plaza project provides the opportunity to fully integrate new station and adjacent private mixed-use development.

Project location:	NW Civic Dr., at the future MAX station, Gresham
Developer	TBD
Project size:	1.10 acres
Mixed uses:	Station platform, building, and civic plaza
Total project costs:	$ 6.3 m
TOD Program funding:	$410,000; 2 million from separate specific non-TOD Program grant
Project status:	Design development; completion expected 2009

NEXUS



NEXUS creates an active link from Orenco Village on Cornell Road to the MAX light rail station.

Project location:	1299 Orenco Station Parkway, near the Orenco MAX Station, Hillsboro
Developer:	Simpson Housing
Architect:	Hensley Lamkin Rachel, Inc.
Project size:	10.42 acres
Mixed uses:	Mixed-use project: 422 market rate apartments; 7,100 SF retail
Total project costs:	$ 50.0m
TOD Program funding:	$300,000
Project status:	Under construction; completion expected 2007

ACTIVE PROJECTS [continued]

NW Miller & 3rd

This project provides efficient design with vertically integrated development that reduces construction costs. It includes underground parking. This is the first time this developer has partnered with the TOD Program.

Project location:	NW Miller & NW 3rd, in historic downtown Gresham
Developer	Tokola Properties, Dwight Unti
Architects:	Paul Franks Architecture
Project size:	0.62 acres
Mixed uses:	Mixed-use building: Four-story, 34-unit market rate rental housing project; 5436 square feet of ground floor retail; and underground parking
Total project costs:	$ 6.1 m
TOD Program funding:	$345,000
Project status:	Design development; completion expected 2008

Russellville Commons III

Completion of third and final phase of one of the original six projects funded by the TOD Program at its inception in 1998; completes development adjacent the MAX station

Project location:	SE 102nd Ave. & E. Burnside St., at the MAX station
Developer:	Rembold Properties
Architects:	MCM Architects
Project size:	1.2 acres
Mixed uses:	Multi-phase mixed use development: Phase III includes 139 senior housing units over 20,000 SF of retail over underground parking
Total project costs:	$ 13.0m
TOD Program funding:	$175,000
Project status:	Under construction

ACTIVE PROJECTS [continued]

Salvation Army Site

High quality condominiums with brewpub/restaurant; this is the first time this developer has partnered with the TOD Program.

Project location:	400 NE Roberts, in historic downtown Gresham
Developer	400 Roberts Place, LLC.
Architect:	Ankrom Moisan
Project size:	0.67 acres
Mixed uses:	Four and five story condo with 28 units; and a two story restaurant/brewpub in historic downtown Gresham
Total project costs:	$ 7.0 m
TOD Program funding:	$265,000
Project status:	Design development; construction completion expected 2008

Watershed

First mixed-use higher density project in the Hillsdale town center.

Project location:	SW Capitol Highway at Bertha Court, Portland
Developer:	Community Partners for Affordable Housing
Architects:	William Wilson Architects PC
Project size:	1.10 acres
Mixed uses:	Three and four-story buildings; 51 low-income affordable apartments; 2,700 SF ground floor commercial; 2,000 SF community space; and 37 structured parking spaces
Total project costs:	$ 11.0m
TOD Program funding:	$230,000
Project status:	Under construction; completion expected 2007

LAND ACQUISITION

The Crossings I - Land

The Crossings I Land Acquisition supported development of a mixed-use building: 81 market rate affordable apartments, 20,000 SF class A retail space, and structured parking.

Project location:	NW Civic Drive, south of the MAX track, Gresham
Developer	Peak Development
Project size:	1.6 acres
Total project costs:	$ 13.5 m [as developed]
TOD Program funding:	Net land cost $450,000 [$700,000 - $250,000 residual parcel for Crossings II]; additional project funding provided for development
Project status:	Acquired 2001

The Crossings II- Land

The Crossings II - Land is a residual parcel from The Crossings Phase it was optioned to Peak Development as part of the Crossings I transaction. It is currently proposed as four-stories with 24 rental housing units and ground floor retail.

Project location:	NW Civic Drive, just behind The Crossings I, Gresham
Developer	TBD
Project size:	0.05 acres
Total project costs:	TBD
TOD Program funding:	Assigned $250,000 value for land acquisition when Crossings I was sold to the developer.
Project status:	Acquired 2001; sale expected 2008

LAND ACQUISITION [continued]

Gresham Civic Neighborhood Anchor Tenant - Land

Land acquired for an anchor tenant use such as a grocery store, department store, theater/café of 2 stories, or smaller format specialty retail office above in a 2-4 story building.

Project location:	NW Civic Drive, northeast of the future Max station, Gresham
Developer:	CenterCal selected
Project size:	1.9 acres
Total project costs:	$ 20.0 m
TOD Program funding:	$ 592,500 for acquisition of 50% share of land; full recovery is expected from land sale proceeds if no structured parking
Project status:	acquired 2006;developer selected 2006; in design development; land sale expected 2009

Gresham Civic Neighborhood NW - Land

Land acquired for mixed-use development:
Brewpub/cafe theatre; 70,000 SF retail;
and 160-240 condo units in 2-3 towers , 6-8 stories high are expected.

Project location:	NW Civic Dr., north of the future MAX station, Gresham
Developer:	CenterCal selected
Project size:	6.7 acres
Total project costs:	$ 50.0 m
TOD Program funding:	$ 2,235,068 for land acquisition;
Project status:	Acquired 2001; developer selected 2006; in design development; land sale expected 2009

LAND ACQUISITION [continued]

Gresham Civic Neighborhood - SW Land

Land acquired for mixed use development:
30,000 SF retail; 150 housing units
in 3 buildings, 5-8 stories high are expected.

Project location:	NW Civic Dr., south of the future MAX station, Gresham
Developer	Rossman selected
Architects:	Myhre Group Architects selected
Project size:	4.4 acres
Total project costs:	$ 40.0 m
TOD Program funding:	$ 1,445,183 spent for land acquisition project funding has not yet been determined
Project status:	Land acquired in 2001; developer selected 2006;

Hillsboro Central - Land

Land acquired for a mixed use building:
75 residential units with 10,000 SF of retail are expected.

Project location:	350 E. Main St., at the Hillsboro Central/SE 3rd TC MAX Station, Hillsboro
Developer	TBD
Project size:	1.1 acres - jointly owned by Hillsboro and Metro
Total project costs:	$13.0 m
TOD Program funding:	$ 656, 630 for land acquisition project funding has not yet been determined
Project status:	Land acquired; developer selection anticipated 2008

LAND ACQUISITION [continued]

Milwaukie Town Center - Land

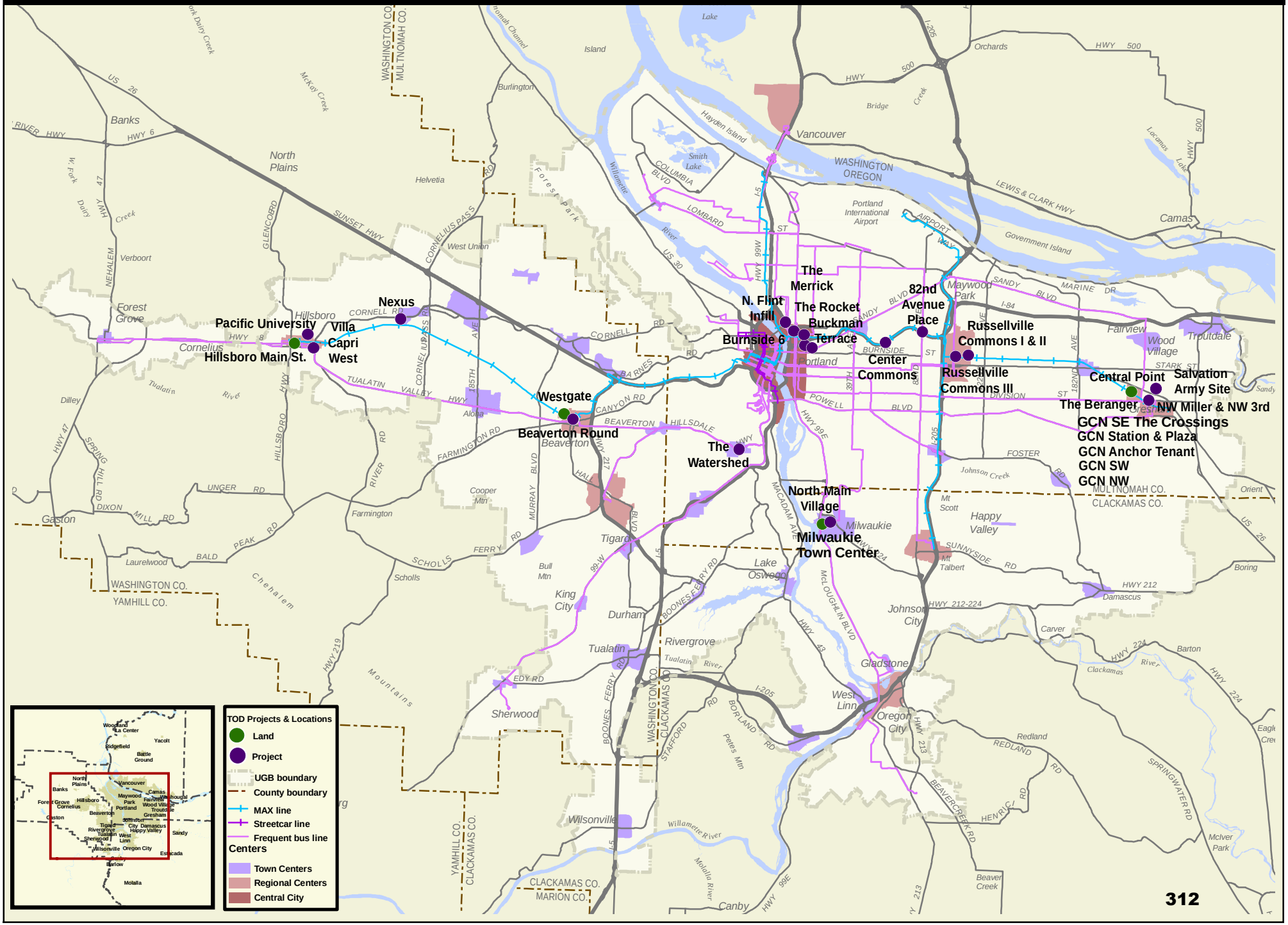
Land acquired by Metro to support IGA with the City of Milwaukie
for mixed-use building: four or five stories; 76 housing units;
15,000 SF retail

Project location:	SE McLaughlin Blvd. & SE Harrison, Milwaukie
Project size:	0.98 acres - jointly marketing two separately owned parcels; Metro and Milwaukie
Developer:	Main Street Partners selected
Architects:	Myhre Group Architects selected
Total project costs:	$ 21.5 m
TOD Program funding:	$ 812,000 for acquisition of property with operating gas station; project funding has not yet been determined
Project status:	Acquired 2005; station decommissioned 2006; developer selected 2007; in design development; land sale expected 2008; completion in 2009

Westgate - Land

Land acquired by City of Beaverton & Metro for
mixed-use development: 3+ buildings of 5-10 stories;
30,000+ SF retail; 90+ housing units; 200,000+ SF office

Project location:	Cedar Hills Blvd., at the Beaverton Central MAX station, Beaverton
Project size:	4.57 acres
Total project costs:	$ 100.0 m
TOD Program funding:	$2,000,917 spent for land acquisition; project funding has not yet been determined
Project status:	Acquired in 2006; developer selection underway in 2007; land sale expected in 2009; completion in 2011


Pacific University
Villa Capri West
Hillsboro Main St.
Nexus
Westgate
Beaverton Round
The Watershed
N. Flint Infill
The Rocket
The Merrick
Buckman Terrace
Burnside 6
82nd Avenue Place
Center Commons
Russellville Commons I & II
Russellville Commons III
Central Point
Salvation Army Site
The Beranger
NW Miller & NW 3rd
GCN SE The Crossings
GCN Station & Plaza
GCN Anchor Tenant
GCN SW
GCN NW
North Main Village
Milwaukie Town Center
TOD Projects & Locations
Land
Project
UGB boundary
County boundary
MAX line
Streetcar line
Frequent bus line
Centers
Town Centers
Regional Centers
Central City

METRO
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Chief Operating Officer
Michael Jordan

Planning Department
Andy Cotugno – Director

Transit Oriented Development and Centers Program
Phil Whitmore – Manager
Megan Gibb – Assistant Manager
Marc Guichard – Senior Development Project Manager
Meganne Steele – Development Project Manager
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EXHIBIT A
Contract Statement of Work
Metro Neighbor Community Coordination on Alternative Growth Scenarios

This statement of work has three main sections:

- **General Conditions**: project cooperation, key personnel, definitions
- **Project Description**: project background, transportation relationship, project objectives, project management structure, agency/public involvement
- **Project Approach**: work plan, deliverables, schedule, budget

GENERAL CONDITIONS

PROJECT COOPERATION

This statement of work describes the responsibilities of all entities involved in this cooperative project. In this contract the Contractor shall only be responsible for those deliverables assigned to the Contractor. All work assigned to other entities are not bound by this contract, but shall be bound by separate Intergovernmental Agreements which contain the same statement of work found in this contract. The references to all parties in this statement of work other than the Contractor are merely for informational purposes and are in no way binding, nor are they parties to this contract. Any tasks or deliverables assigned to a sub-contractor shall be construed as being the responsibility of the Contractor.
Any Contractor tasks or deliverables which are contingent upon receiving information, resources, assistance, or cooperation in any way from another entity as described in this statement of work shall be subject to the following guidelines:

A At the first sign of non-cooperation, the Contractor shall provide written notice (email acceptable) to Agency Contract Administrator of any deliverables that may be delayed due to lack of cooperation by other entities referenced in the statement of work.

B Agency Contract Administrator shall contact the non-cooperative entity/s to discuss the matter and attempt to correct the problem and/or expedite items determined to be delaying the Contractor/project.

If Contractor has followed the notification process described in item 1, and delinquency of any deliverable is found to be a result of the failure of other referenced entities to provide information, resources, assistance, or cooperation, as described in the statement of work, the Contractor will not be found in breach of contract. The Agency Contract Administrator will negotiate with Contractor in the best interest of the State, and may amend the delivery schedule to allow for delinquencies beyond the control of the Contractor.

KEY PERSONNEL

Contractor acknowledges and agrees that Agency selected Contractor, and is entering into this Contract, because of the special qualifications of Contractor's key people. In particular, Agency through this Contract is engaging the expertise, experience, judgment, and personal attention of ("Key Personnel"). Contractor's Key Personnel shall not delegate performance of the management powers and responsibilities he/she is required to provide under this Contract to another (other) Contractor employee(s) without first obtaining the written consent (email acceptable) of Agency. Further, Contractor shall not re-assign or transfer a Key Person to other duties or positions such that a Key Person is no longer available to provide Agency with his/her expertise, experience, judgment, and personal attention, without first obtaining Agency's prior written consent to such re-assignment or

transfer. In the event Contractor requests that Agency approve a re-assignment or transfer of a Key Person, Agency shall have the right to interview, review the qualifications of, and approve or disapprove the proposed replacement(s) for the a Key Person. Any approved substitute or replacement for a Key Person shall be deemed a Key Person under this contract.

DEFINITIONS

Table 1 defines common terms and abbreviations to be used during the Project.

Table 1 Definition of Terms

Term	Definition
2040 Growth Concept	Metro's long-term land use and transportation plan to accommodate estimated 2040 population within the Urban Growth Boundary
DRC	Metro's Data Resource Center
Metro	Regional government agency for the Greater Portland area
MetroScope	MetroScope is a simulation model developed by Metro staff for testing planning policies in the urban land market. It utilizes extensive data describing attributes of the region's land and economic growth potential including: land value, buildable vacant land, redevelopment land, environmental conditions, development trends and forecasts of population and employment growth.
Neighbor Communities	Neighbor Cities (expanded here to include counties) are an identified component of the 2040 Growth Concept Plan. The growth of neighbor cities and counties both influences and is influenced by growth policies and transportation investments in the Metro area. For the terms of this contract, Neighbor Communities include: Aurora, Banks, Boring, Canby, Carlton, Dundee, Estacada, Gaston, Hubbard, Molalla, Newberg, North Plains, McMinnville, Sandy, Scappoose, St. Helens, Woodburn, Yamhill, Columbia County, Marion County, and Yamhill County.
New Look at Regional Choices	The Metro Council's collaborative effort to find new, creative ways to absorb the arrival of one million new residents in this region in the next 25 years, while preserving the values of our long-term vision.
ODOT	Oregon Department of Transportation
OHP	Oregon Highway Plan
Regional Center	An area of mixed residential and commercial use. It is a high-density center well served by the transportation system with compact development in a walkable environment and offers efficient access to goods and services. Generally it is served by existing or planned light rail service with excellent access to the regional highway transportation system.
RTP	Regional Transportation Plan
TGM	Transportation and Growth Management Program
Town Center	An area of mixed residential and commercial use. It is a high-density center well served by transit with compact development in a walkable environment and offers efficient access to goods and services. Generally it serves the residents within a 2 to 3 mile radius.
UGR	Urban Growth Report

PROJECT DESCRIPTION

PROJECT BACKGROUND

Metro and regional leaders have identified the need for a different approach to selecting areas for urban expansion and for bringing these areas into the urban growth boundary. As a result, the Metro Council launched the New Look at Regional Choices work program to re-examine the way we carry out the region's long-range plan, the 2040 Growth Concept. One component of this work program, the Shape of the Region focused on balancing regional agricultural land needs with the protection of natural resources and the creation of great communities. As a result of this research and a successful regional legislative agenda that resulted in the passage of Senate Bill 1011 and House Bill 2051, the region is poised to embark on a collaborative process to frame a more thoughtful regional approach to how we plan for growth through the designation of linked urban and rural reserves. In order for a complete discussion to occur on the future urban and rural form for the greater region, other jurisdictions that are not normally involved in Metro region activities must be engaged.

The Metro 2040 Growth Concept was adopted as the long-term growth management vision of the Portland metropolitan region. It provides a strong policy statement to guide how the Portland metropolitan region intends to manage long-term population growth and to address the many issues associated with that growth. The primary objective of this policy direction, one that was heard over and over from the citizens of the region, is to preserve our access to nature while working to build better communities. The 2040 Growth Concept contains a number of elements directed at meeting this goal including: encourage more efficient use of lands in cities; protect natural areas, parks, streams and farmland; and promote a transportation system that includes all types of travel.

The 2040 Growth Concept also calls for coordination with neighboring communities to achieve a balance between jobs and housing and maintain a separation between each neighboring community and the metropolitan area. Coordination has not occurred as envisioned. Meanwhile significant population growth in neighboring communities means more people are living outside the region and commuting in for work. This situation puts pressure both on neighboring communities and on communities within Metro's urban growth boundary. Traffic along every roadway connecting neighboring communities to the metropolitan area has increased dramatically, more development pressure is affecting the land separating these communities from the metropolitan area and the quieter way of life and lower property values in these communities are attracting still more people.

Since the adoption of the 2040 Growth Concept the region's population has increased by 200,000 residents. This new growth brings jobs and opportunities, but also a number of challenges. New forecasts show that within the next 25 years, about a million more people will live in the five-county Portland metropolitan area.

It is imperative that the Portland region partners with our neighbors to ensure that future population growth is done in a way that benefits the greater region, which includes jurisdictions within and outside Metro's jurisdictional boundary. It is important to recognize that the Portland metropolitan area is part of a greater area comprised of communities in the Willamette Valley that form one economic and social unit and that if we work together we can help ensure the health of all of our communities. Citizens must feel good about their communities and celebrate the uniqueness of each community as well as advance the ability of each community to work together for the good of the greater region.

This coordination with Neighbor Communities is a key element of the Metro Council's New Look at Regional Choices work program. This work will also allow the neighboring communities to connect with the current update of the Regional Transportation Plan that is being closely coordinated with the land use elements of the New Look work program.

TRANSPORTATION RELATIONSHIP

Critical to any discussion about transportation is agreement on where and how to grow. A safe, reliable and efficient transportation system is vital to the economy of the greater Portland metropolitan region. Likewise, ensuring that people have a range of options for getting where they need to go is essential to support vibrant communities.

The region has aggressively implemented state policy calling for reduced reliance on any single mode of transportation. In practice this has meant complementing the region's roads and highways with a comprehensive public transit network, taking seriously the needs of pedestrians and bicyclists and integrating land use and transportation planning. Providing for future transportation needs will be made more difficult by several key challenges that have important implications for the region's ability to achieve its economic and community goals. As the region expands to accommodate the expected one million new residents, major new transportation investments will be necessary to serve both developed and developing areas. Increasing congestion will harm the region's ability to maintain and grow business, as projected growth in freight and general traffic cannot be accommodated on the current system. Finally, state and local funding for roads and transit is failing to keep pace with current needs, to say nothing of the growth expected in the coming decades.

In an average week the Portland area gains over 500 new residents. Metro's most recent population projections show about a million more people living in the metropolitan area by 2030, which represents substantially faster growth than had previously been expected. How this growth is accommodated may substantially affect the region's enviable quality of life through housing prices, economic opportunities, development in neighboring communities and traffic congestion. A key component of this work will be to highlight five criteria to analyze the consequences of different growth scenarios: housing price, vehicle miles traveled, density, population allocation, and infrastructure cost. For instance, increasing the amount of growth neighboring communities accommodate could negatively impact state highway routes such as Highway 99W or Highway 26 through increased commuting traffic, ultimately affecting freight movement. Emphasizing possible long-range impacts such as vehicle miles traveled will help inform decisions regarding future transportation funding priorities.

Having officials and citizens of the greater Portland metropolitan region aware of the issues related to accommodating future growth expectations will allow for a more collaborative discussion on the benefits and tradeoffs of different growth scenarios, resulting in better informed transportation and land use decisions for the northern Willamette Valley.

PROJECT OBJECTIVES

The objectives of the project are threefold.

- A greater understanding of implications for accommodating future growth and the need for collaboration
- A document that portrays the impacts of alternative growth scenarios on transportation and land uses
- An agreement or memorandum outlining a structure to coordinate on land use and transportation issues in the future

First it is essential that the elected officials and citizens of a much larger area than typically is defined as the Portland metropolitan area be engaged in the discussion of accommodating expected population and employment forecasts. This will allow for a more collaborative and inclusive decision making process for future transportation and land use decisions.

The second outcome is the creation of a document that highlights the potential impacts and resulting implications for the neighbor communities, based on various scenarios for accommodating the expected population and employment projections for the greater region. The document will be used to educate and inform the residents of the neighbor communities (and others) and possibly provide direction for how they envision their community should grow in the future.

The third outcome is an agreement or memorandum between officials at Metro, the tri-county area and neighboring counties and cities to continue to work collaboratively on future growth management decisions, resulting in the groundwork for identification and approval of urban and rural reserves and a vision for the greater metropolitan area.

PROJECT MANAGEMENT STRUCTURE

Tim O'Brien, Metro Senior Regional Planner is the project manager for this project. Chris Deffebach, Metro Long Range Planning Manager will provide project guidance. Tim will coordinate work form the following Metro departments that will also provide services for this project: Data Resource Center, Regional Transportation Planning, Transportation Research and Modeling Services and Public Affairs and Government Relations.

AGENCY/PUBLIC INVOLVEMENT

There is no specific public involvement strategy for the project. The neighbor Community Working Group (NCWG) meetings will be public meetings and will be notified accordingly.

PROJECT APPROACH

WORK PLAN

1. 1 Task 1: Project start-up

Objective:

Initiate the Neighbor Community Coordination on Alternative Growth Scenarios TGM project.

Subtasks:

1.1.a Metro shall:

- Establish a Neighbor Community Working Group (NCWG) composed of elected officials from cities and counties outside the Metro jurisdictional boundary as well as elected officials from Metro and Washington and Clackamas counties.
- Draft proposed meeting schedule
- Prepare Notebook for NCWG members and Contractor containing regional policies and information on Neighbor Communities, 2040 Growth Concept Map, New Look at Regional Choices, MetroScope and other pertinent resources.
- Solicit population and employment projections for each city in order to update the neighbor community expectation component in MetroScope to more accurately reflect the visions of the neighbor communities

1.1.b Working with Metro and ODOT the Contractor shall refine the meeting schedule and the engagement process to be used at the NCWG meetings.

Schedule: Completed within one month of notice to proceed.

Metro Deliverables:

1.1.A. Establishment of NCWG including:

- Membership rosters;
- Proposed schedule of meetings circulated electronically to NCWG members; and
- Final TAC meeting schedule following review from members.
- Updated population and employment projections for each participating jurisdiction

1.1.B. Notebook for Contractor and NCWG members containing regional policies and information on Neighbor Communities, 2040 Growth Concept Map, New Look at Regional Choices, MetroScope and other pertinent resources.

Contractor Deliverables:

1.1.A. Refined meeting schedule and documented engagement process.

1. 2 Task 2: Finalize MetroScope Alternative Growth Scenarios

Objective:

Finalize the MetroScope alternative growth scenarios that the NCWG will evaluate and discuss impacts to their respective communities in Task 1.5.

Subtasks:

1.2.a Metro shall: Finalize 2-3 alternative growth scenarios, utilizing the updated population and employment projections, showing differing levels of impact on the neighboring communities related to housing cost, type, population growth and the associated impact to transportation routes connecting those communities to the greater Portland region.

1.2.b Metro and Contractor shall meet to review the MetroScope documents and prepare for first NCWG meeting.

Schedule:

Completed within four months of notice to proceed.

Metro Deliverables:

1.2.A Finalization of results from MetroScope alternative growth scenarios.
1.2.B Meet with Contractor to prepare for first NCWG meeting

Contractor Deliverables:

1.2.A Meet with Metro staff to review MetroScope documents and prepare for first NCWG meeting.

1. 3 Task 3: First NCWG Meeting

Objective:

Convene the NCWG to convey intent of project, expected outcomes and schedule, a briefing on MetroScope and begin discussions on impacts of future growth and community values.

Subtasks:

1.3.a Metro shall convene and participate in first NCWG meeting and provide project expectations/outcomes, schedule and briefing on MetroScope

1.3.b The Contractor and Metro shall meet to prepare for the first NCWG meeting.
1.3.c The Contractor shall facilitate the NCWG meeting and provide a summary of the discussion.

Schedule:

Completed within three months of notice to proceed.

Metro Deliverables:

1.3.A Convene and participate in first NCWG meeting, provide project expectations/outcomes, schedule and briefing on MetroScope

Contractor Deliverables:

1.3.A Facilitate discussion on growth, community values and how MetroScope can reflect different growth impacts for the neighbor communities
1.3.B Provide summary points from meeting to help shape scenario discussion

1. 4 Task 4: Prepare for evaluation of growth scenarios

Objective:

Analyze and incorporate points of discussion from first meeting into the process for the NCWG to evaluate the findings from the MetroScope alternative growth scenarios

Subtasks:

1.4.a Metro shall:

- Meet with the Contractor to review the summary of the first NCWG meeting and prepare for presentation of the MetroScope alternative growth scenarios to NCWG.
- Distribute MetroScope alternative growth scenarios to NCWG two weeks prior to NCWG meeting.

Schedule:

Completed within four months of notice to proceed.

Metro Deliverables:

1.4.A Meet with Contractor to review results from first NCWG meeting and prepare for second NCWG meeting.

1.4.B Distribute MetroScope alternative growth scenarios to NCWG two weeks prior to next NCWG meeting.

Contractor Deliverables:

1.4.A Meet with Metro to review summary and prepare for next NCWG meeting

1. 5 Task 5: Second NCWG meeting to review MetroScope alternative growth scenarios

Objective:

A thorough review and understanding, by the NCWG, of the implications to their respective jurisdictions of each of the alternative growth scenarios as it relates to housing cost, type, population growth, commuting patterns and other transportation impacts.

Subtasks:

1.5.a Metro shall attend and participate in the NCWG meeting.

1.5.b The Contractor shall facilitate a discussion on the implications of the alternative growth scenarios, focusing on:

- Population impacts to the neighboring communities
- Housing prices
- Transportation impacts related to commute patterns and freight movement.

1.5.c The Contractor shall develop a summary document of the outcomes of the discussion on the alternative growth scenarios to be distributed to the participants and lay the groundwork for a memorandum of understanding for the continued involvement of the NCWG members in the Portland region's management of future growth expectations

Schedule:

Completed within five months of notice to proceed.

Metro Deliverables:

1.5.A Attendance and participation in NCWG meeting

Contractor Deliverables:

1.5.A Facilitation of discussion on alternative growth scenarios

1.5.B Summary of outcomes of discussion for distribution to participants

1.5.C Draft memorandum of understanding for continued involvement of NCWG participants

1. 6 Task 6: Impacts of alternative growth scenarios document

Objective:

Creation of a document that highlights the potential impacts and resulting implications for the neighbor communities to be used as an educational piece as well as a stimulus to possibly provide direction for community visioning.

Subtasks:

1.6.a Metro shall:

- Provide input and review document

- Print document
- Update the neighbor community assumptions in the scenarios with the new information provided by the participants

1.6.b The Contractor, with input from Metro and ODOT shall create a document (as a supplement to the updated scenarios document) that highlights the potential impacts and resulting implications for the neighbor communities

Schedule:
To be completed seven months of notice to proceed

Metro Deliverables:
1.6.A Input and review of supplemental document
1.6.B Update alternative growth scenarios document with new information
1.6.C Printing of supplemental document

Contractor Deliverables:
1.6.A Document that that highlights the potential impacts and resulting implications for the neighbor communities to be used as an educational piece as well as a stimulus to possibly provide direction for community visioning

1. 7 Task 7: Memorandum of Understanding

Objective:
Successful implementation of a memorandum of understanding that outlines the continued involvement of the NCWG members in the Portland region's management of future growth expectations

Subtasks:
1.7.a Metro shall review and comment on the memorandum of understanding.
1.7.b Metro shall distribute the memorandum of understanding to NCWG members
1.7.c The Contractor shall prepare a memorandum of understanding to be signed by the participants for providing a structure for continued discussions at the elected level between the Portland region and the neighboring communities.

Schedule:
To be completed eight months of notice to proceed

Metro Deliverables:
1.7.A Review and comment on the memorandum of understanding
1.7.B Distribution of the memorandum of understanding prior to final NCWG meeting

Contractor Deliverables:
1.7.A Preparation of the memorandum of understanding

1. 8 Task 8: Final NCWG Meeting

Objective:
Distribute final documents and provide and through the memorandums lay the groundwork for a continued dialogue at the elected level between the Portland region and the neighboring communities.

Subtasks:
1.8.a Preparation and attendance at final NCWG meeting

Schedule:
To be completed nine months of notice to proceed

Metro Deliverables:
1.8.A Distribution of final documents

Contractor Deliverables:
1.8.A Facilitation of final meeting

DELIVERABLE

Task 1.1 Project Start-up A Establishment of NCWG B Refined Meeting Schedule C Notebook for Contractor and NCWG members
Task 1.2 Finalize MetroScope Alternative Growth Scenarios A Finalization of results from MetroScope B Preparation for first NCWG meeting and review MetroScope
Task 1.3 First NCWG Meeting A Convene and participate in first NCWG meeting, provide project expectations/outcomes, schedule and briefing on MetroScope. B Facilitate discussion on growth, community values and how MetroScope can reflect different growth impacts for the neighbor communities. C Provide summary points from meeting to help shape scenario discussion.
Task 1.4 Prepare for evaluation of growth scenarios A Review results from first NCWG meeting and prepare for second NCWG meeting B Distribute MetroScope alternative growth scenarios to NCWG two weeks prior to next NCWG meeting.
Task 1.5 Second NCWG meeting to review MetroScope alternative growth scenarios A Second NCWG meeting – Preparation and attendance. B Facilitation of discussion on alternative growth scenarios. C Summary of outcomes of discussion for distribution to participants. D Draft memorandum of understanding for continued involvement of NCWG participants

Task 1.6 Impacts of alternative growth scenarios document
A Document that that highlights the potential impacts and resulting implications for the neighbor communities to be used as an educational piece as well as a stimulus to possibly provide direction for community visioning (supplement to the alternatives growth scenarios document)
B Update alternative growth scenarios document with new information
C Input and review of supplemental document
Task 1.7 Memorandums of Understanding
A A memorandum of understanding(s) to be signed by the participants that provides a structure for continued discussions at the elected level between the Portland region and the neighboring communities.
B Distribution of the memorandum of understanding prior to final NCWG meeting
Task 1.8 Final NCWG Meeting
A Final NCWG meeting – Preparation, attendance and facilitation.
B Distribution of final documents to all participants

SCHEDULE

Tasks	2008									
	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct
1.1 Start-up										
1.2 MetroScope scenarios										
1.3 First NCWG meeting										
1.4 Prepare for growth scenarios										
1.5 Second NCWG meeting										
1.6 Impact document										
1.7 MOU										
1.8 Final NCWG meeting										

BUDGET

Estimated project budget

	TGM Grant Amount	Metro Match Amount	Total
Metro: Labor		$35,000	$35,000
Metro: Direct Expenses	$7,500	0	$7,500
Contractor	$42,500	0	$42,500
TOTAL	$50,000	$35,000	$85,000

TOD Project Seven-Day Notice

Per the TOD Program Work Plan adopted by Council Resolution 98-2619, "as soon as practical upon approval by the Steering Committee, the Executive Officer will provide written notification to the Metro Council of potential TOD projects and the Council will have seven (7) days to notify the Executive of a request to review a potential project in executive session... "

Project Name: Urban Living Infrastructure Funding for The Crossings

Action Item: On December 13, 2007, the TOD Steering Committee authorized $40,000 in Urban Living Infrastructure program funding for The Crossings to make tenant improvements to 5,500 SF of ground floor retail space to make it more tenant ready for a restaurant use. The funding will be limited to a restaurant tenant and the developer will be required to maintain this space as restaurant or other uses that qualify as Urban Living Infrastructure for a period of five years.

Project Background: More than a decade ago, a vision emerged for a portion of Gresham Civic Neighborhood to become a mixed-use urban neighborhood with housing above retail organized along a "main street" with the MAX light rail as the focal point. From the beginning, the vision has been to create an active retail street at the ground level with housing above with restaurants and retail activity spilling out onto the sidewalks leading to the transit station. The Crossings was designed to be consistent with this vision with the retail built to the sidewalks. While the housing at The Crossings has been very successful, the retail has been less so. In discussing this with commercial brokers, they cite the following: the opposite side of Civic Drive is vacant (TOD owned SW corner);the project has a low parking ratio and is not visible from the street; potential tenants initially resist urban style buildings and often opt for "auto accommodated" sites with stand alone restaurants lots; and the cost of Tenant Improvement's (TI's) have increased substantially in the past two years, taking many restaurants and retail tenants out of the market for "cold shell space" (finished "warm space" is more desirable).

The proposed restaurant tenant for The Crossings is the Denick Restaurant Group, a small regional business operating restaurants in Washington and Oregon. They are serious about the space and will operate an IHOP (International House of Pancakes) restaurant with an upgraded menu and open in the evenings until 9:00 p.m. weekdays, and 10:00 to 11:00 p.m. weekends. IHOP owns Chili's and recently acquired Applebees and had previously operated as a national chain, now they franchise to local restaurant owners.

TOD staff determined the project meets the adopted Urban Living Infrastructure program site selection criteria and have analyzed the cost-effectiveness of the requested investment:

- The project is located in a designated focus center on a site controlled by a willing and capable private developer.
- The project will have a direct impact on the achievable pricing of the condominium and apartment projects across Civic Drive owned by Metro (4.3 acres parcel) and will increase the value of the proposed housing/mixed-use project to reduce the public investment needed for that development. The Johnson Gardner Report found that restaurants are one of the urban services that positively support value for nearby housing. For purposes of this analysis, the added value of the restaurant is calculated at 3%, the lowest of the urban services that can impact value. Assuming the value of the mixed-use on the 4.3-acre site across the street is $40 million with $20 million per phase, the restaurant could have a positive impact of $600,000 per phase on the housing/mixed-use project on the 4.3-acre parcel.
- The project funding supports construction of the building to make the space tenant ready – none of the costs are for equipment or operating expenses.
- The project is located in a building that supports place making – urban scaled mixed-use with the retail built to the sidewalk and is pedestrian, bike and transit friendly.
- The Urban Living Infrastructure Program supports uses such as "cinema-café, farmer's markets, grocery stores, bookstores, restaurants and cafes, bakeries, bike shops, garden/flower specialty retail." Therefore, the proposed use meets the use criteria.

Project Description: The Crossings is a five story mixed-use building with 81 market rate apartments, 20,000 sq. ft. class A retail, and 77 structured parking spaces. Urban Living Infrastructure funds will be used to make 5,500 SF of ground floor more tenant friendly. While the intent is to secure the restaurant tenant to improve the environment of housing in Gresham Civic, the TOD transaction should be characterized as improvement to the shell space to become more tenant ready to be consistent with the current practices in the market place.

Project Location: The Crossings is located in Civic Neighborhood of the Gresham Regional Center at the southeast corner of Civic Drive and the MAX tracks.

Project Budget: $40,000 has been allocated in Urban Living Infrastructure program funds; this allocation can be supported from the TOD and Centers Implementation Program Budget appropriations for 2007-08.

Potential Issues: None identified.

Michael Jordan, Chief Operating Officer — Date 1/4/08

The Crossings

TOD Project Seven-Day Notice

Per the TOD Program Work Plan adopted by Council Resolution 98-2619, "as soon as practical upon approval by the Steering Committee, the Executive Officer will provide written notification to the Metro Council of potential TOD projects and the Council will have seven (7) days to notify the Executive of a request to review a potential project in executive session... "z

Project Name: Steed Creek

Action Item: On December 13th, 2007, the TOD Steering Committee authorized $300,000 ($275,000 for the TOD Easement and $25,000 for a rain garden) for the purchase of a TOD Easement for a rental housing project with retail at the Elmonica LRT Station on SW 170th in un-incorporated Washington County with the following conditions 1). 4-story building height; 2). Podium construction (including parking) for 2-buildings built out to the sidewalk on 170th; 3). 66 housing units in the two podium buildings with a minimum of 200 total housing units on the site; 4). 3000 square foot minimum ground floor retail on 170th; 5). Rain garden design on 170th adjacent to retail; and 6). Building constructed as per illustrated drawings submitted.

Project Background: Located along the Westside light rail line, this project would bring a higher density, urban style product on a prime site located adjacent to the Elmonica Light rail station. The property is located in un-incorporated Washington County and is just outside the municipal boundary for the City of Beaverton. This would be the first TOD project in un-incorporated Washington County.

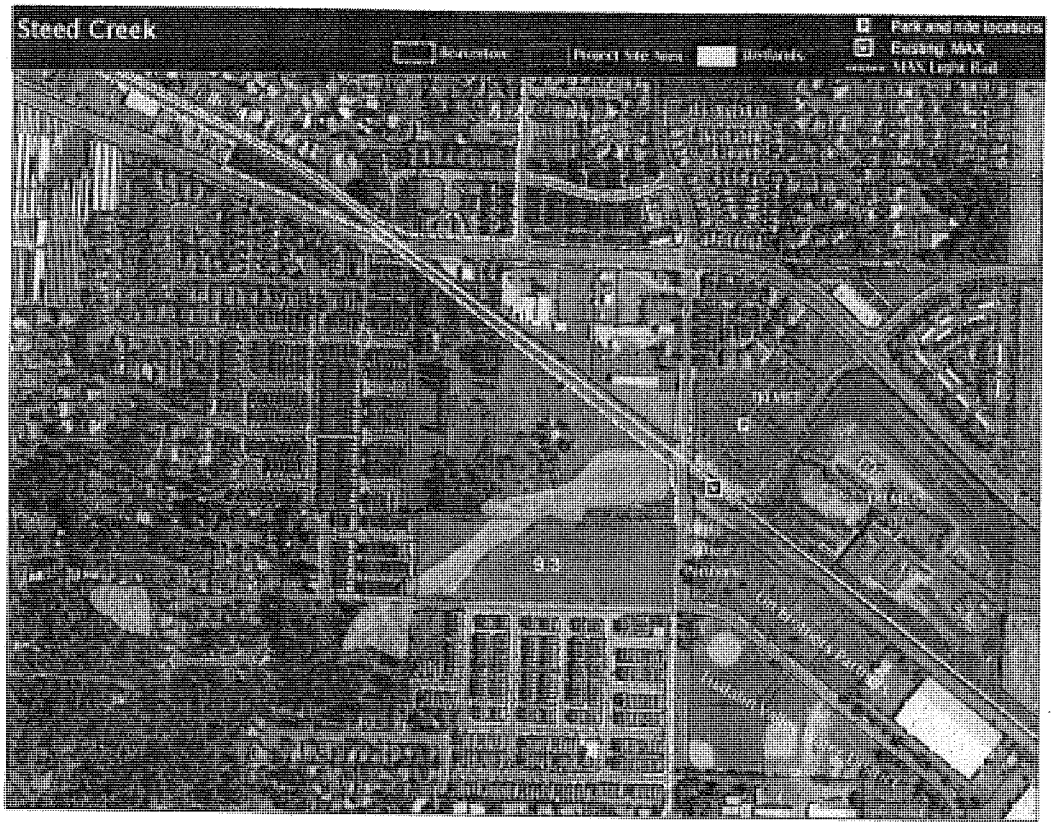
Project Description: The TOD funding will be for two buildings with podium parking and 3,000 square feet of ground floor retail located on SW 170th just south of Baseline Road. The buildings are part of a larger development of a total of 7 buildings that will include 200 market rate rentals. The balance of the site will be built as 4-story housing without a podium. The project is located on a 9.3-acre parcel, 6.4 acres of which are developable. The developer is Principal Real Estate Investment Group, and this is a new developer to the TOD/Centers Program.

Project Location: The site is located on 170th between Baseline Road and Tualitain Valley Highway, immediately adjacent to the Elmonica LRT Station.

Project Budget: Localized MTIP funding for the TOD Program will support this $300,000 project expense; The cost premiums for the project total $2,040,000 (parking/podium: $1,220,000, elevators: $140,000, fire sprinkler system: $25,000, fire stairs: $120,000, added plumbing and electrical: $185,000, moment frame: $200,000, added A & E: $75,000, and access control/doors: $75,000.) . The project results in 41 induced transit trips per day with a capitalized value of the fare box revenue range from $296,791 to $393,166 depending on an 8% or 12% modal split.

Potential Issues: Steed Creek will be the first TOD funded project located in unincorporated Washington County. The County has relatively sophisticated planning and zoning requirements, but podium construction may pose challenges to County inspectors. We will assist where possible. The project will need Vertical Housing Tax Abatement to move forward since the TOD funds offset only a small portion of the cost premiums.

Michael Jordan, Chief Operating Officer — Date 1/4/08


Steed Creek


MLG Steed Creek TOD

TOD IMPLEMENTATION PROGRAM

TOD Project Seven-Day Notice

Per the TOD Program Work Plan adopted by Council Resolution 98-2619, "as soon as practical upon approval by the Steering Committee, the Executive Officer will provide written notification to the Metro Council of potential TOD projects and the Council will have seven (7) days to notify the Executive of a request to review a potential project in executive session... "z

Project Name: Urban Living Infrastructure Funding for North Main Village

Action Item: On December 13, 2007, the TOD Steering Committee authorized $80,000 in Urban Living Infrastructure program funding for North Main Village to make tenant improvements to ground floor retail space to make it more tenant friendly, subject to the following:

1. The space be leased or subleased to a tenant that is included in the list of eligible tenants in the Work Plan for Urban Living Infrastructure; and
2. The developer will be obligated to keep that retail space in North Main Village with tenants consistent with the above list for a period of five years.

Project Background:
From the beginning, the vision has been to reactivate retail along Main Street in historic downtown Milwaukie, with housing above with restaurants and retail activity spilling out onto the sidewalks. North Main Village was designed to be consistent with this vision with the retail built to the sidewalks. While the housing in North Main that faces Main Street has been very successful, the retail has been less so. In discussing this with commercial brokers, they cite the following: in a area that is just starting retail revitalization, such as Milwaukie downtown, the potential tenants tend to be unsophisticated, usually inexperienced and their only criteria for leasing space is price; high quality "cold shell" space in a new building is not attractive because of the higher lease rates, the problem with contracting to finish the space and the high cost of constructing the tenant improvements; and the amount the developer has budgeted ($30 per square foot) for tenant improvements is not high enough. The developer has requested $15 per square foot or $80,000 as an overall commitment to the remaining space of 5,500 square feet with the understanding that the space will be leased to a tenant profile that fits the eligible list in the TOD Work Plan. With these smaller tenants, the most active time for decisions is at the end of the calendar year and early in the new year (which is now) so it is strategic to get the urban living infrastructure program in place now.

TOD staff determined the project meets the adopted Urban Living Infrastructure program site selection criteria and have analyzed the cost-effectiveness of the requested investment:

- The project is located in Milwaukie, which is a focus center and is controlled by a willing and capable private developer.
- The project will have a direct impact on the achievable pricing of existing and future housing sites nearby and will enhance the Milwaukie Main (Texaco site) so it can more feasibly be developed as higher density mixed-use. Based on the assumption that the Milwaukie Texaco site can support 76 housing units and ground floor retail with a value of $15 to $18 million, the proposed $80,000 investment would positively impact the Milwaukie Main site $450 to $540,000, assuming a positive impact of 3% for these urban services. This will make the higher density housing on the Texaco site more feasible, although there will still be a considerable financial gap on the project.
- The project funds are for construction improvements to help make the retail space more tenant ready.
- The project is located in a building that is pedestrian, bike and transit friendly.
- The proposal to provide an overall commitment to potential tenants is commercially reasonable so the broker can be specific in the tenant discussion.

Project Description: The Milwaukie North Main project is a three and four-story mixed-use of 97 units of housing with 8600 square feet of retail. Urban Living Infrastructure funds will be used to help finance the costs of making the remaining retail space more tenant friendly.

Project Location: The North Main Village project is located on the former Safeway sit in at the north end of downtown Milwaukie. It is just northeast of the intersection of North Main Street and Harrison Street, and one block east of McLoughlin Boulevard.

Project Budget: $80,000 has been allocated in Urban Living Infrastructure program funds; this allocation can be supported from the TOD and Centers Implementation Program Budget appropriations for 2007-08.

Potential Issues: None identified.

Michael Jordan, Chief Operating Officer — Date 1/4/08

North Main Village

Metro Policy Advisory Committee

January 9, 2008
Informational Item: Neighboring Communities Project

Kim Bardes - Fwd: January 12, 2008 Urban and Rural Reserves Meeting

From: Paulette Copperstone
To: Carl Hosticka; Carlotta Collette; David Bragdon; jeff.cogen@co.multnomah.or.us; Kathryn Harrington; marthasch@co.clackamas.or.us; Rex Burkholder; Robert Liberty; Rod Park; tom_brian@co.washington.or.us
Date: 12/18/2007 10:41 AM
Subject: Fwd: January 12, 2008 Urban and Rural Reserves Meeting
CC: brent_curtis@co.washington.or.us; Christina Deffebach; Chuck Beasley; Doug McClain; drendahowatt@co.clackamas.or.us; Emma Stocker; Kathryn Sofich; Lake McTighe; Linnea Nelson; maggied@co.clackamas.or.us; Noreen_Lee@co.washington.or.us; Paulette Copperstone; Robin McArthur; Sherry Oeser; warren.fish@co.multnomah.or.us
Attachments: Invitation letter 12-11-07.doc; neighbors.xls

Please note, this e-mail message was sent Friday, December 14 to neighboring counties and cities and the letter to same was mailed Monday, December 17, 2007. Comments or questions, please contact Sherry Oeser at 503-797-1721 or oesers@metro.dst.or.us. Thank you.

>>> Paulette Copperstone 12/14/2007 4:11 PM >>>
You are invited to join your neighbors in a meeting of elected officials from Clackamas, Columbia, Marion, Multnomah, Yamhill and Washington Counties to discuss efforts to designate urban and rural reserves – areas appropriate for urban development and areas to protect for their agricultural, forestry, or natural resource value – as this region continues to grow.

When: Saturday, Jan. 12, 2008
10 a.m. to 12 noon

Where: Metro Regional Center
600 NE Grand Ave., Portland

RSVP: Paulette Copperstone, copperstonep@metro.dst.or.us
(503) 797-1562 by Jan. 7, 2008

Attached is a letter with more information and a list with contact information.

December 13, 2007

Dear Colleague:

On behalf of the Reserves Steering Committee, I want to invite you to a special meeting that will take place on Saturday, January 12, 2008 from 10 a.m. to 12 noon at the Metro Regional Center, 600 NE Grand Ave., Portland. We want to discuss our efforts to designate urban and rural reserves during the next two years, how this effort may affect your community, how you can be involved, and how your community's concerns and values can be addressed.

What we do in the Portland metropolitan region affects you, and what you do in your community affects the metropolitan region. We are connected by transportation and economic networks and development patterns – people and freight moving in and out of our communities to go to and from work, home, school and recreational activities and to deliver products.

Our regional goals call for coordinating with neighboring communities and for maintaining a separation between each neighboring community and the metropolitan area. To meet those goals, we need a better understanding of your goals and plans. I hope you will participate in this meeting to share those plans with us as well as your thoughts on how we can work together to ensure the health of all of our communities.

As part of our on-going reserves work, we are establishing a Reserves Steering Committee composed of Metro, Clackamas, Multnomah, and Washington Counties, cities within the Metro boundary, stakeholders representing business, agriculture, development, real estate, and natural resources as well as state agencies. We would like a representative from neighbor communities to serve on this Steering Committee. We hope you will select a representative to serve on this committee before or at the January 12 meeting. To assist you in making this selection, we are including contact information for everyone from the neighboring communities receiving this letter.

During 2006, Metro, Clackamas, Multnomah and Washington Counties, and the state departments of Agriculture and Land Conservation and Development worked together on a project aimed at balancing regional agricultural needs and protecting natural resources with the creation of great urban communities. I will mail you under separate cover three documents from that project that will help in thinking about the work we have ahead of us.

I hope you will join us on January 12. If you are unable to attend, please ask another elected official in your jurisdiction or a staff member to attend. RSVP to Paulette Copperstone, copperstonep@metro.dst.or.us or at (503) 797-1562 by Monday, January 7.

Sincerely,
Kathryn Harrington
Councilor
Metro

On behalf of the Reserves Steering Committee

Tom Brian	Jeff Cogen	Martha Schrader
Chair	Commissioner	Chair
Washington County Board	Multnomah County Board	Clackamas County Board

Neighboring City Mayors

Sundeen	Don	MAYOR	CITY OF DUNDEE	503-537-9597	donsundeer@comcast.net
Strutz	Jennifer	Mayor	City of Aurora	503-678-1283	mayor@ci.aurora.or.us
Branstitre	Teri	Mayor	City of Banks	503-324-5112	mayor@cityofbanks.org
Thompson	Melody	Mayor	City of Canby	503 266-4021	melodyt@canby.com
Oriet	Kathie	Mayor	City of Carlton	503 852 7575	oriet@comcast.net
Austin	Bob	Mayor	City of Estacada	503-630-8270	mayor@cityofestacada.org
Lorenz	Rick	Mayor	City of Gaston	503 985-3340	gaston.city@comcast.net
McCain	Tom	Mayor	City of Hubbard	503-981-9633	vlnogle@cityofhubbard.org
Gormley	Edward	Mayor	City of McMinnville	503-434-7405	ed@gormleyplumbing.com
Clarke	Mike	Mayor	City of Molalla	503 829-6855	city@molalla.net
Andrews	Bob	Mayor	City of Newberg	503-538-9421	bob.andrews@ci.newberg.or.
Olson	Cheri	Mayor	City of North Plains	503 647-5555	cheri@northplains.org
Malone	Linda	Mayor	City of Sandy	503-668-5533	quiltmayor@yahoo.com
Burge	Scott	Mayor	City of Scappoose	503-543-7146	mayor@ci.scappoose.or.us
Peterson	Randy	Mayor	City of St Helens	503-397-6272	randyp@ci.st-helens.or.us
Figley	Kathy	Mayor	City of Woodburn	503-982-5222	kathryn.figley@ci.woodburn.o
Murphy	Randy	Mayor	City of Yamhill	503-662-3511	recorder@cityofyamhill.com

Neighboring County Commissioners

Corsiglia	Joe	Commissioner	Columbia County	503-397-4322	corsigj@co.columbia.or.us
Bernhard	Rita	Commissioner	Columbia County	503-397-4322	bernhar@co.columbia.or.us
Hyde	Tony	Commissioner	Columbia County	503-397-4322	hydet@co.columbia.or.us
Carlson	Janet	Chair	Marion County	503-588-5212	jcarlson@co.marion.or.us
Milne	Patti	Commissioner	Marion County	503-588-5212	pmilne@co.marion.or.us
Brentano	Sam	Commissioner	Marion County	503-588-5212	sabrentano@co.marion.or.us
George	Kathy	Chair	Yamhill County	503-434-7501	georgek@co.yamhill.or.us
Lewis	Leslie	Commissioner	Yamhill County	503-434-7501	lewisl@co.yamhill.or.us
Stern	Mary	Commissioner	Yamhill County	503-434-7501	sternm@co.yamhill.or.us

Neighboring City Managers/Administrators

BELL	MARGARET	CITY RECORDER	CITY OF GASTON	503-985-3340	gaston.city@comcast.net
WODARCZAK	SANDI	CITY RECORDER	CITY OF YAMHILL	503-662-3511	recorder@cityofyamhill.com
Boyce	Laurie	City Recorder	City of Aurora	503-678-1283	citycouncil@ci.aurora.or.us
Hough	Jim	City Manager	City of Banks	503-324-5112	citymanager@cityofbanks.org
Adcock	Mark	City Administrator	City of Canby	503-266-4021	adcockm@ci.canby.or.us
Weaver	Steve	City Manager	City of Carlton	503 852-7575	sweaver@ci.carlton.or.us
Daykin	Rob	City Administrator	City of Dundee	503-538-1958	dundeerob@comcast.net
Ealy	Randy	City Manager	City of Estacada	503 630-8286	ealyr@cityofestacada.org

Nogle	Vickie	City Recorder	City of Hubbard	503-981-9633	vlnogle@cityofhubbard.org
Lorenzen	Rose	City Administrator	City of McMinnville	503-434-7405	lorenzr@ci.mcminnville.or.us
Atkins	John	City Manager	City of Molalla	503-829-6855	atkins@molalla.net
Tardiff	Robert	City Manager Pro Te	City of Newberg	503-537-1207	robert.tardiff@ci.newberg.or.u
Otterman	Don	City Manager	City of North Plains	503-647-5555	don@northplains.org
Lazenby	Scott	CITY MANAGER	City of Sandy	503-668-5533	slazenby@ci.sandy.or.us
Hanken	Jon	City Manager	City of Scappoose	503-543-7146	jonhanken@ci.scappoose.or.
Little	Brian	City Administrator	City of St Helens	503 397-6272	brianl@ci.st-helens.or.us
Brown	John	City Administrator	City of Woodburn	503 982-5228	john.brown@ci.woodburn.or.u
Neighboring County Planning Directors					
Dugdale	Todd	Director	Columbia County	503-397-1501	dugdalt@co.columbia.or.us
Anderson	Sterling	Planning Director	Marion County	503-588-5038	smanderson@co.marion.or.u
Brandt	Mike	Planning Director	Yamhill County	503-434-7516	brandtm@co.yamhill.or.us

EXHIBIT A
Contract Statement of Work
Metro Neighbor Community Coordination on Alternative Growth Scenarios

This statement of work has three main sections:

- **General Conditions**: project cooperation, key personnel, definitions
- **Project Description**: project background, transportation relationship, project objectives, project management structure, agency/public involvement
- **Project Approach**: work plan, deliverables, schedule, budget

GENERAL CONDITIONS

PROJECT COOPERATION

This statement of work describes the responsibilities of all entities involved in this cooperative project. In this contract the Contractor shall only be responsible for those deliverables assigned to the Contractor. All work assigned to other entities are not bound by this contract, but shall be bound by separate Intergovernmental Agreements which contain the same statement of work found in this contract. The references to all parties in this statement of work other than the Contractor are merely for informational purposes and are in no way binding, nor are they parties to this contract. Any tasks or deliverables assigned to a sub-contractor shall be construed as being the responsibility of the Contractor.
Any Contractor tasks or deliverables which are contingent upon receiving information, resources, assistance, or cooperation in any way from another entity as described in this statement of work shall be subject to the following guidelines:

A At the first sign of non-cooperation, the Contractor shall provide written notice (email acceptable) to Agency Contract Administrator of any deliverables that may be delayed due to lack of cooperation by other entities referenced in the statement of work.

B Agency Contract Administrator shall contact the non-cooperative entity/s to discuss the matter and attempt to correct the problem and/or expedite items determined to be delaying the Contractor/project.

If Contractor has followed the notification process described in item 1, and delinquency of any deliverable is found to be a result of the failure of other referenced entities to provide information, resources, assistance, or cooperation, as described in the statement of work, the Contractor will not be found in breach of contract. The Agency Contract Administrator will negotiate with Contractor in the best interest of the State, and may amend the delivery schedule to allow for delinquencies beyond the control of the Contractor.

KEY PERSONNEL

Contractor acknowledges and agrees that Agency selected Contractor, and is entering into this Contract, because of the special qualifications of Contractor's key people. In particular, Agency through this Contract is engaging the expertise, experience, judgment, and personal attention of ("Key Personnel"). Contractor's Key Personnel shall not delegate performance of the management powers and responsibilities he/she is required to provide under this Contract to another (other) Contractor employee(s) without first obtaining the written consent (email acceptable) of Agency. Further, Contractor shall not re-assign or transfer a Key Person to other duties or positions such that a Key Person is no longer available to provide Agency with his/her expertise, experience, judgment, and personal attention, without first obtaining Agency's prior written consent to such re-assignment or

transfer. In the event Contractor requests that Agency approve a re-assignment or transfer of a Key Person, Agency shall have the right to interview, review the qualifications of, and approve or disapprove the proposed replacement(s) for the a Key Person. Any approved substitute or replacement for a Key Person shall be deemed a Key Person under this contract.

DEFINITIONS

Table 1 defines common terms and abbreviations to be used during the Project.

Table 1 Definition of Terms

Term	Definition
2040 Growth Concept	Metro's long-term land use and transportation plan to accommodate estimated 2040 population within the Urban Growth Boundary
DRC	Metro's Data Resource Center
Metro	Regional government agency for the Greater Portland area
MetroScope	MetroScope is a simulation model developed by Metro staff for testing planning policies in the urban land market. It utilizes extensive data describing attributes of the region's land and economic growth potential including: land value, buildable vacant land, redevelopment land, environmental conditions, development trends and forecasts of population and employment growth.
Neighbor Communities	Neighbor Cities (expanded here to include counties) are an identified component of the 2040 Growth Concept Plan. The growth of neighbor cities and counties both influences and is influenced by growth policies and transportation investments in the Metro area. For the terms of this contract, Neighbor Communities include: Aurora, Banks, Boring, Canby, Carlton, Dundee, Estacada, Gaston, Hubbard, Molalla, Newberg, North Plains, McMinnville, Sandy, Scappoose, St. Helens, Woodburn, Yamhill, Columbia County, Marion County, and Yamhill County.
New Look at Regional Choices	The Metro Council's collaborative effort to find new, creative ways to absorb the arrival of one million new residents in this region in the next 25 years, while preserving the values of our long-term vision.
ODOT	Oregon Department of Transportation
OHP	Oregon Highway Plan
Regional Center	An area of mixed residential and commercial use. It is a high-density center well served by the transportation system with compact development in a walkable environment and offers efficient access to goods and services. Generally it is served by existing or planned light rail service with excellent access to the regional highway transportation system.
RTP	Regional Transportation Plan
TGM	Transportation and Growth Management Program
Town Center	An area of mixed residential and commercial use. It is a high-density center well served by transit with compact development in a walkable environment and offers efficient access to goods and services. Generally it serves the residents within a 2 to 3 mile radius.
UGR	Urban Growth Report

PROJECT DESCRIPTION

PROJECT BACKGROUND

Metro and regional leaders have identified the need for a different approach to selecting areas for urban expansion and for bringing these areas into the urban growth boundary. As a result, the Metro Council launched the New Look at Regional Choices work program to re-examine the way we carry out the region's long-range plan, the 2040 Growth Concept. One component of this work program, the Shape of the Region focused on balancing regional agricultural land needs with the protection of natural resources and the creation of great communities. As a result of this research and a successful regional legislative agenda that resulted in the passage of Senate Bill 1011 and House Bill 2051, the region is poised to embark on a collaborative process to frame a more thoughtful regional approach to how we plan for growth through the designation of linked urban and rural reserves. In order for a complete discussion to occur on the future urban and rural form for the greater region, other jurisdictions that are not normally involved in Metro region activities must be engaged.

The Metro 2040 Growth Concept was adopted as the long-term growth management vision of the Portland metropolitan region. It provides a strong policy statement to guide how the Portland metropolitan region intends to manage long-term population growth and to address the many issues associated with that growth. The primary objective of this policy direction, one that was heard over and over from the citizens of the region, is to preserve our access to nature while working to build better communities. The 2040 Growth Concept contains a number of elements directed at meeting this goal including: encourage more efficient use of lands in cities; protect natural areas, parks, streams and farmland; and promote a transportation system that includes all types of travel.

The 2040 Growth Concept also calls for coordination with neighboring communities to achieve a balance between jobs and housing and maintain a separation between each neighboring community and the metropolitan area. Coordination has not occurred as envisioned. Meanwhile significant population growth in neighboring communities means more people are living outside the region and commuting in for work. This situation puts pressure both on neighboring communities and on communities within Metro's urban growth boundary. Traffic along every roadway connecting neighboring communities to the metropolitan area has increased dramatically, more development pressure is affecting the land separating these communities from the metropolitan area and the quieter way of life and lower property values in these communities are attracting still more people.

Since the adoption of the 2040 Growth Concept the region's population has increased by 200,000 residents. This new growth brings jobs and opportunities, but also a number of challenges. New forecasts show that within the next 25 years, about a million more people will live in the five-county Portland metropolitan area.

It is imperative that the Portland region partners with our neighbors to ensure that future population growth is done in a way that benefits the greater region, which includes jurisdictions within and outside Metro's jurisdictional boundary. It is important to recognize that the Portland metropolitan area is part of a greater area comprised of communities in the Willamette Valley that form one economic and social unit and that if we work together we can help ensure the health of all of our communities. Citizens must feel good about their communities and celebrate the uniqueness of each community as well as advance the ability of each community to work together for the good of the greater region.

This coordination with Neighbor Communities is a key element of the Metro Council's New Look at Regional Choices work program. This work will also allow the neighboring communities to connect with the current update of the Regional Transportation Plan that is being closely coordinated with the land use elements of the New Look work program.

TRANSPORTATION RELATIONSHIP

Critical to any discussion about transportation is agreement on where and how to grow. A safe, reliable and efficient transportation system is vital to the economy of the greater Portland metropolitan region. Likewise, ensuring that people have a range of options for getting where they need to go is essential to support vibrant communities.

The region has aggressively implemented state policy calling for reduced reliance on any single mode of transportation. In practice this has meant complementing the region's roads and highways with a comprehensive public transit network, taking seriously the needs of pedestrians and bicyclists and integrating land use and transportation planning. Providing for future transportation needs will be made more difficult by several key challenges that have important implications for the region's ability to achieve its economic and community goals. As the region expands to accommodate the expected one million new residents, major new transportation investments will be necessary to serve both developed and developing areas. Increasing congestion will harm the region's ability to maintain and grow business, as projected growth in freight and general traffic cannot be accommodated on the current system. Finally, state and local funding for roads and transit is failing to keep pace with current needs, to say nothing of the growth expected in the coming decades.

In an average week the Portland area gains over 500 new residents. Metro's most recent population projections show about a million more people living in the metropolitan area by 2030, which represents substantially faster growth than had previously been expected. How this growth is accommodated may substantially affect the region's enviable quality of life through housing prices, economic opportunities, development in neighboring communities and traffic congestion. A key component of this work will be to highlight five criteria to analyze the consequences of different growth scenarios: housing price, vehicle miles traveled, density, population allocation, and infrastructure cost. For instance, increasing the amount of growth neighboring communities accommodate could negatively impact state highway routes such as Highway 99W or Highway 26 through increased commuting traffic, ultimately affecting freight movement. Emphasizing possible long-range impacts such as vehicle miles traveled will help inform decisions regarding future transportation funding priorities.

Having officials and citizens of the greater Portland metropolitan region aware of the issues related to accommodating future growth expectations will allow for a more collaborative discussion on the benefits and tradeoffs of different growth scenarios, resulting in better informed transportation and land use decisions for the northern Willamette Valley.

PROJECT OBJECTIVES

The objectives of the project are threefold.

- A greater understanding of implications for accommodating future growth and the need for collaboration
- A document that portrays the impacts of alternative growth scenarios on transportation and land uses
- An agreement or memorandum outlining a structure to coordinate on land use and transportation issues in the future

First it is essential that the elected officials and citizens of a much larger area than typically is defined as the Portland metropolitan area be engaged in the discussion of accommodating expected population and employment forecasts. This will allow for a more collaborative and inclusive decision making process for future transportation and land use decisions.

The second outcome is the creation of a document that highlights the potential impacts and resulting implications for the neighbor communities, based on various scenarios for accommodating the expected population and employment projections for the greater region. The document will be used to educate and inform the residents of the neighbor communities (and others) and possibly provide direction for how they envision their community should grow in the future.

The third outcome is an agreement or memorandum between officials at Metro, the tri-county area and neighboring counties and cities to continue to work collaboratively on future growth management decisions, resulting in the groundwork for identification and approval of urban and rural reserves and a vision for the greater metropolitan area.

PROJECT MANAGEMENT STRUCTURE

Tim O'Brien, Metro Senior Regional Planner is the project manager for this project. Chris Deffebach, Metro Long Range Planning Manager will provide project guidance. Tim will coordinate work form the following Metro departments that will also provide services for this project: Data Resource Center, Regional Transportation Planning, Transportation Research and Modeling Services and Public Affairs and Government Relations.

AGENCY/PUBLIC INVOLVEMENT

There is no specific public involvement strategy for the project. The neighbor Community Working Group (NCWG) meetings will be public meetings and will be notified accordingly.

PROJECT APPROACH

WORK PLAN

1. 1 Task 1: Project start-up

Objective:

Initiate the Neighbor Community Coordination on Alternative Growth Scenarios TGM project.

Subtasks:

1.1.a Metro shall:

- Establish a Neighbor Community Working Group (NCWG) composed of elected officials from cities and counties outside the Metro jurisdictional boundary as well as elected officials from Metro and Washington and Clackamas counties.
- Draft proposed meeting schedule
- Prepare Notebook for NCWG members and Contractor containing regional policies and information on Neighbor Communities, 2040 Growth Concept Map, New Look at Regional Choices, MetroScope and other pertinent resources.
- Solicit population and employment projections for each city in order to update the neighbor community expectation component in MetroScope to more accurately reflect the visions of the neighbor communities

1.1.b Working with Metro and ODOT the Contractor shall refine the meeting schedule and the engagement process to be used at the NCWG meetings.

Schedule: Completed within one month of notice to proceed.

Metro Deliverables:

1.1.A. Establishment of NCWG including:

- Membership rosters;
- Proposed schedule of meetings circulated electronically to NCWG members; and
- Final TAC meeting schedule following review from members.
- Updated population and employment projections for each participating jurisdiction

1.1.B. Notebook for Contractor and NCWG members containing regional policies and information on Neighbor Communities, 2040 Growth Concept Map, New Look at Regional Choices, MetroScope and other pertinent resources.

Contractor Deliverables:

1.1.A. Refined meeting schedule and documented engagement process.

1. 2 Task 2: Finalize MetroScope Alternative Growth Scenarios

Objective:

Finalize the MetroScope alternative growth scenarios that the NCWG will evaluate and discuss impacts to their respective communities in Task 1.5.

Subtasks:

1.2.a Metro shall: Finalize 2-3 alternative growth scenarios, utilizing the updated population and employment projections, showing differing levels of impact on the neighboring communities related to housing cost, type, population growth and the associated impact to transportation routes connecting those communities to the greater Portland region.

1.2.b Metro and Contractor shall meet to review the MetroScope documents and prepare for first NCWG meeting.

Schedule:

Completed within four months of notice to proceed.

Metro Deliverables:

1.2.A Finalization of results from MetroScope alternative growth scenarios.

1.2.B Meet with Contractor to prepare for first NCWG meeting

Contractor Deliverables:

1.2.A Meet with Metro staff to review MetroScope documents and prepare for first NCWG meeting.

1. 3 Task 3: First NCWG Meeting

Objective:

Convene the NCWG to convey intent of project, expected outcomes and schedule, a briefing on MetroScope and begin discussions on impacts of future growth and community values.

Subtasks:

1.3.a Metro shall convene and participate in first NCWG meeting and provide project expectations/outcomes, schedule and briefing on MetroScope

1.3.b The Contractor and Metro shall meet to prepare for the first NCWG meeting.

1.3.c The Contractor shall facilitate the NCWG meeting and provide a summary of the discussion.

Schedule:

Completed within three months of notice to proceed.

Metro Deliverables:

1.3.A Convene and participate in first NCWG meeting, provide project expectations/outcomes, schedule and briefing on MetroScope

Contractor Deliverables:

1.3.A Facilitate discussion on growth, community values and how MetroScope can reflect different growth impacts for the neighbor communities

1.3.B Provide summary points from meeting to help shape scenario discussion

1. 4 Task 4: Prepare for evaluation of growth scenarios

Objective:

Analyze and incorporate points of discussion from first meeting into the process for the NCWG to evaluate the findings from the MetroScope alternative growth scenarios

Subtasks:

1.4.a Metro shall:

- Meet with the Contractor to review the summary of the first NCWG meeting and prepare for presentation of the MetroScope alternative growth scenarios to NCWG.
- Distribute MetroScope alternative growth scenarios to NCWG two weeks prior to NCWG meeting.

Schedule:

Completed within four months of notice to proceed.

Metro Deliverables:

1.4.A Meet with Contractor to review results from first NCWG meeting and prepare for second NCWG meeting.

1.4.B Distribute MetroScope alternative growth scenarios to NCWG two weeks prior to next NCWG meeting.

Contractor Deliverables:

1.4.A Meet with Metro to review summary and prepare for next NCWG meeting

1. 5 Task 5: Second NCWG meeting to review MetroScope alternative growth scenarios

Objective:

A thorough review and understanding, by the NCWG, of the implications to their respective jurisdictions of each of the alternative growth scenarios as it relates to housing cost, type, population growth, commuting patterns and other transportation impacts.

Subtasks:

1.5.a Metro shall attend and participate in the NCWG meeting.

1.5.b The Contractor shall facilitate a discussion on the implications of the alternative growth scenarios, focusing on:

- Population impacts to the neighboring communities
- Housing prices
- Transportation impacts related to commute patterns and freight movement.

1.5.c The Contractor shall develop a summary document of the outcomes of the discussion on the alternative growth scenarios to be distributed to the participants and lay the groundwork for a memorandum of understanding for the continued involvement of the NCWG members in the Portland region's management of future growth expectations

Schedule:

Completed within five months of notice to proceed.

Metro Deliverables:

1.5.A Attendance and participation in NCWG meeting

Contractor Deliverables:

1.5.A Facilitation of discussion on alternative growth scenarios

1.5.B Summary of outcomes of discussion for distribution to participants

1.5.C Draft memorandum of understanding for continued involvement of NCWG participants

1. 6 Task 6: Impacts of alternative growth scenarios document

Objective:

Creation of a document that highlights the potential impacts and resulting implications for the neighbor communities to be used as an educational piece as well as a stimulus to possibly provide direction for community visioning.

Subtasks:

1.6.a Metro shall:

- Provide input and review document

- Print document
- Update the neighbor community assumptions in the scenarios with the new information provided by the participants

1.6.b The Contractor, with input from Metro and ODOT shall create a document (as a supplement to the updated scenarios document) that highlights the potential impacts and resulting implications for the neighbor communities

Schedule:
To be completed seven months of notice to proceed

Metro Deliverables:
1.6.A Input and review of supplemental document
1.6.B Update alternative growth scenarios document with new information
1.6.C Printing of supplemental document

Contractor Deliverables:
1.6.A Document that that highlights the potential impacts and resulting implications for the neighbor communities to be used as an educational piece as well as a stimulus to possibly provide direction for community visioning

1. 7 Task 7: Memorandum of Understanding

Objective:
Successful implementation of a memorandum of understanding that outlines the continued involvement of the NCWG members in the Portland region's management of future growth expectations

Subtasks:
1.7.a Metro shall review and comment on the memorandum of understanding.
1.7.b Metro shall distribute the memorandum of understanding to NCWG members
1.7.c The Contractor shall prepare a memorandum of understanding to be signed by the participants for providing a structure for continued discussions at the elected level between the Portland region and the neighboring communities.

Schedule:
To be completed eight months of notice to proceed

Metro Deliverables:
1.7.A Review and comment on the memorandum of understanding
1.7.B Distribution of the memorandum of understanding prior to final NCWG meeting

Contractor Deliverables:
1.7.A Preparation of the memorandum of understanding

1. 8 Task 8: Final NCWG Meeting

Objective:
Distribute final documents and provide and through the memorandums lay the groundwork for a continued dialogue at the elected level between the Portland region and the neighboring communities.

Subtasks:
1.8.a Preparation and attendance at final NCWG meeting

Schedule:
To be completed nine months of notice to proceed

Metro Deliverables:
1.8.A Distribution of final documents

Contractor Deliverables:
1.8.A Facilitation of final meeting

DELIVERABLE

Task 1.1 Project Start-up A Establishment of NCWG B Refined Meeting Schedule C Notebook for Contractor and NCWG members
Task 1.2 Finalize MetroScope Alternative Growth Scenarios A Finalization of results from MetroScope B Preparation for first NCWG meeting and review MetroScope
Task 1.3 First NCWG Meeting A Convene and participate in first NCWG meeting, provide project expectations/outcomes, schedule and briefing on MetroScope. B Facilitate discussion on growth, community values and how MetroScope can reflect different growth impacts for the neighbor communities. C Provide summary points from meeting to help shape scenario discussion.
Task 1.4 Prepare for evaluation of growth scenarios A Review results from first NCWG meeting and prepare for second NCWG meeting B Distribute MetroScope alternative growth scenarios to NCWG two weeks prior to next NCWG meeting.
Task 1.5 Second NCWG meeting to review MetroScope alternative growth scenarios A Second NCWG meeting – Preparation and attendance. B Facilitation of discussion on alternative growth scenarios. C Summary of outcomes of discussion for distribution to participants. D Draft memorandum of understanding for continued involvement of NCWG participants

Task 1.6 Impacts of alternative growth scenarios document

A Document that that highlights the potential impacts and resulting implications for the neighbor communities to be used as an educational piece as well as a stimulus to possibly provide direction for community visioning (supplement to the alternatives growth scenarios document)

B Update alternative growth scenarios document with new information

C Input and review of supplemental document

Task 1.7 Memorandums of Understanding

A A memorandum of understanding(s) to be signed by the participants that provides a structure for continued discussions at the elected level between the Portland region and the neighboring communities.

B Distribution of the memorandum of understanding prior to final NCWG meeting

Task 1.8 Final NCWG Meeting

A Final NCWG meeting – Preparation, attendance and facilitation.

B Distribution of final documents to all participants

SCHEDULE

Tasks	2008									
	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct
1.1 Start-up										
1.2 MetroScope scenarios										
1.3 First NCWG meeting										
1.4 Prepare for growth scenarios										
1.5 Second NCWG meeting										
1.6 Impact document										
1.7 MOU										
1.8 Final NCWG meeting										

BUDGET

Estimated project budget

	TGM Grant Amount	Metro Match Amount	Total
Metro: Labor		$35,000	$35,000
Metro: Direct Expenses	$7,500	0	$7,500
Contractor	$42,500	0	$42,500
TOTAL	$50,000	$35,000	$85,000

METRO

600 NORTHEAST GRAND AVENUE | PORTLAND, OREGON 97232 2736
TEL 503 797 1540 | FAX 503 797 1793

Council President David Bragdon

January 28, 2008

Mayor Craig Dirksen
City of Tigard
13125 SW Hall Blvd.
Tigard, OR 97223

RE: Request to add unincorporated urban development to the Metro Policy Advisory Committee's work plan

Dear Craig:

I agree with your letter of January 15 to Mayor Norris, Chair of MPAC, requesting that MPAC deal with the question: "How should the region address the fiscal and social sustainability, fiscal equity, and governance challenges posed by unincorporated urban development?"

You have raised an important question, which in my opinion ought to be added to the MPAC work plan. Unincorporated urban development has created fiscal disparities and undermined the efforts of cities to create livable communities. The cross-subsidy of infrastructure and public services to unincorporated areas really needs to be addressed in terms of expense, equity and efficiency. As one Metro Councilor, I suggest we learn from the past by conditioning any future UGB expansions with a requirement that areas be annexed or incorporated into a city before urbanization. While such a policy won't un-do past practice, it would prevent exacerbating the problem going forward. With MPAC's encouragement, we could consider such an ordinance in advance of any further movement of the UGB.

I hope your peers at MPAC agree to address this issue.

Sincerely,

David L. Bragdon
Metro Council President

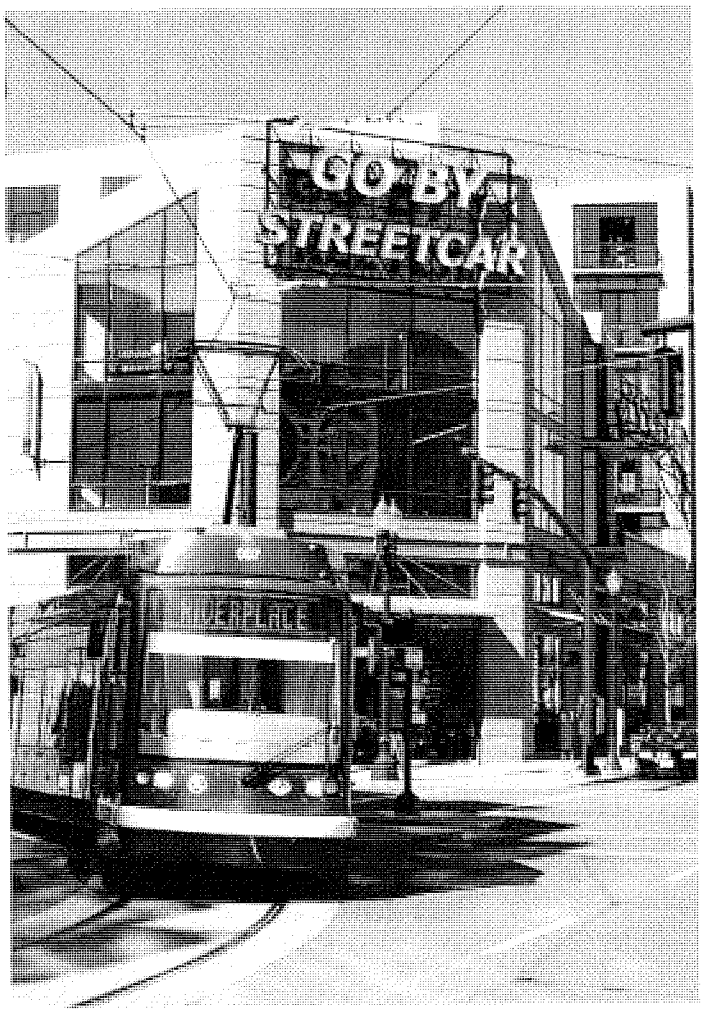
Cc: Metro Council
Michael Jordan, Metro Chief Operating Officer
Mayor Alice Norris, City of Oregon City
Tigard City Council
Craig Prosser, Tigard City Manager
Tom Coffee, Tigard Community Development Director

STREETCAR-DEVELOPMENT LINKAGE: THE PORTLAND STREETCAR LOOP

Revised Draft

Prepared for:

City of Portland
Office of
Transportation



February 2008

E. D. Hovee & Company, LLC

Economic and Development Services

Streetcar-Development Linkage: The Portland Streetcar Loop

Revised Draft

Prepared for:

City of Portland Office of Transportation
1120 SW 5th Avenue, Suite 800
Portland, OR 97204

Prepared by:

E. D. Hovee & Company, LLC
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Eric Hovee, Principal
Tess Jordan, Senior Economic Planner

February 2008

Table of Contents

I. INTRODUCTION

Starting in the mid to late 1800s, streetcar systems were implemented across America. Real estate owners and developers sought to increase sales by connecting their newly-built homes to Central City employment and retail via streetcar transit. Mass marketing of the automobile deflected attention from – and investment in – these systems in the 1900s in all but a handful of cities, including Toronto, New Orleans, Philadelphia and San Francisco.

In 2001, Portland opened a new Central City streetcar line, the first modern streetcar system built in America. Since that time, America appears to have collectively recalled the power of streetcar to support and compliment land use development, and five years later more than 80 American communities were planning for streetcar implementation. Portland is now seeking funding for the extension of its 4-mile streetcar line to a Portland Streetcar Loop encompassing both the west and east sides of its Central City.

DEVELOPMENT ORIENTED TRANSIT

The popularity of streetcar is attributed in part to its relative low cost and ease of construction in comparison with light rail. But perhaps even more so, streetcar's success can be attributed to the notable increases in development that have accompanied implementation in the handful of cities that now have demonstrated *post-streetcar development* track records.

Even more than with light rail, the economic development benefits of streetcar investment appears traceable to streetcar's fine-grained scale and intimate relationship with the street environment. If light rail systems function as highways and arterials, streetcar systems function as the *local streets*. Interest in bringing streetcar to more cities – and the higher density development with which it is associated – is constrained only by funding availability.

FTA SMALL STARTS FUNDING

In 2005, the U.S. Congress created a *Small Starts* program to fund projects such as streetcar, bus rapid transit and smaller light rail systems. The program – authorized in the Federal Transit Administration – is similar to the existing New Starts program but targets smaller projects costing less than $250 million and receiving no more than $75 million in federal funds. The intent of Congress was to support fixed guideway projects that were lower in cost and to simplify the federal review process.

FTA funding criteria has relied upon a cost-effectiveness rating based substantially on travel time savings. Transit System User Benefit (TSUB) is calculated by determining total benefit and dividing into the total cost of the project. This funding methodology does not recognize or reward the ability of transit investment to influence travel patterns by influencing the built environment, and in doing so, increase transit ridership.

FTA has proposed that Small Starts projects be rated for funding with the same TSUB cost effectiveness measure. The interim rules require that a medium rating on TSUB be achieved for a project to be eligible for funding.

Enabling legislative also includes economic development and proposed rulemaking as a factor in considering projects for funding; the FTA lists "positive effect[s] on local economic development" as one of its three primary criteria. This report suggests a methodology which with to implement this intent.

Measuring Economic Development

This report is intended as a discussion paper for evaluating the *streetcar-economic development nexus* more broadly across the U.S. It ultimately suggests five quantitative measures with which to evaluate streetcar projects seeking federal funding support.

- The first part of this report addresses the relationship between transit and development – particularly high density development – and the evidence that exists for the *streetcar-development linkage as experienced* to date in Portland, Oregon. This analysis also describes and quantifies five public benefits that high density development supports.
- The second part of this report suggests how 'economic development' – operationalized as real estate investment – *can be measured* for proposed Small Starts projects both now and in the future. Three criteria are suggested for evaluating streetcar projects that encompass both the regulatory and market environment. These criteria encompass the basic preparation and research that cities can take to ensure that transit investment is leveraged to the greatest extent possible – to truly yield the public benefits including ridership gains and containment of suburban sprawl that higher density urban development offers.
- Proposed measures include two metrics related to higher density development: global warming and trip reduction. High density development – which streetcar supports – has enormous and measurable impacts on these two key factors that are not currently considered in the FTA evaluation criteria. Calculations are offered on the amount of vehicle miles traveled (VMT) by residents that have chosen to live in the higher density environment supported by streetcar.

For the economic development criteria portion of the report, details are provided on an illustrative basis for the Portland Streetcar Loop Project, which is now seeking funding. This project will extend tracks, stations and service from the west side of the Willamette River (including Portland's historic downtown) across the existing Broadway Bridge to serve the eastern half of Portland's expanding Central City urban environment. The expanded project will serve 18 new and 16 existing stations (and station pairs), bringing new service to the eastside and also essentially doubling service frequency for westside stations.

Two appendices are provided with this report. Appendix A briefly profiles E. D. Hovee & Company, LLC as preparers of this document.

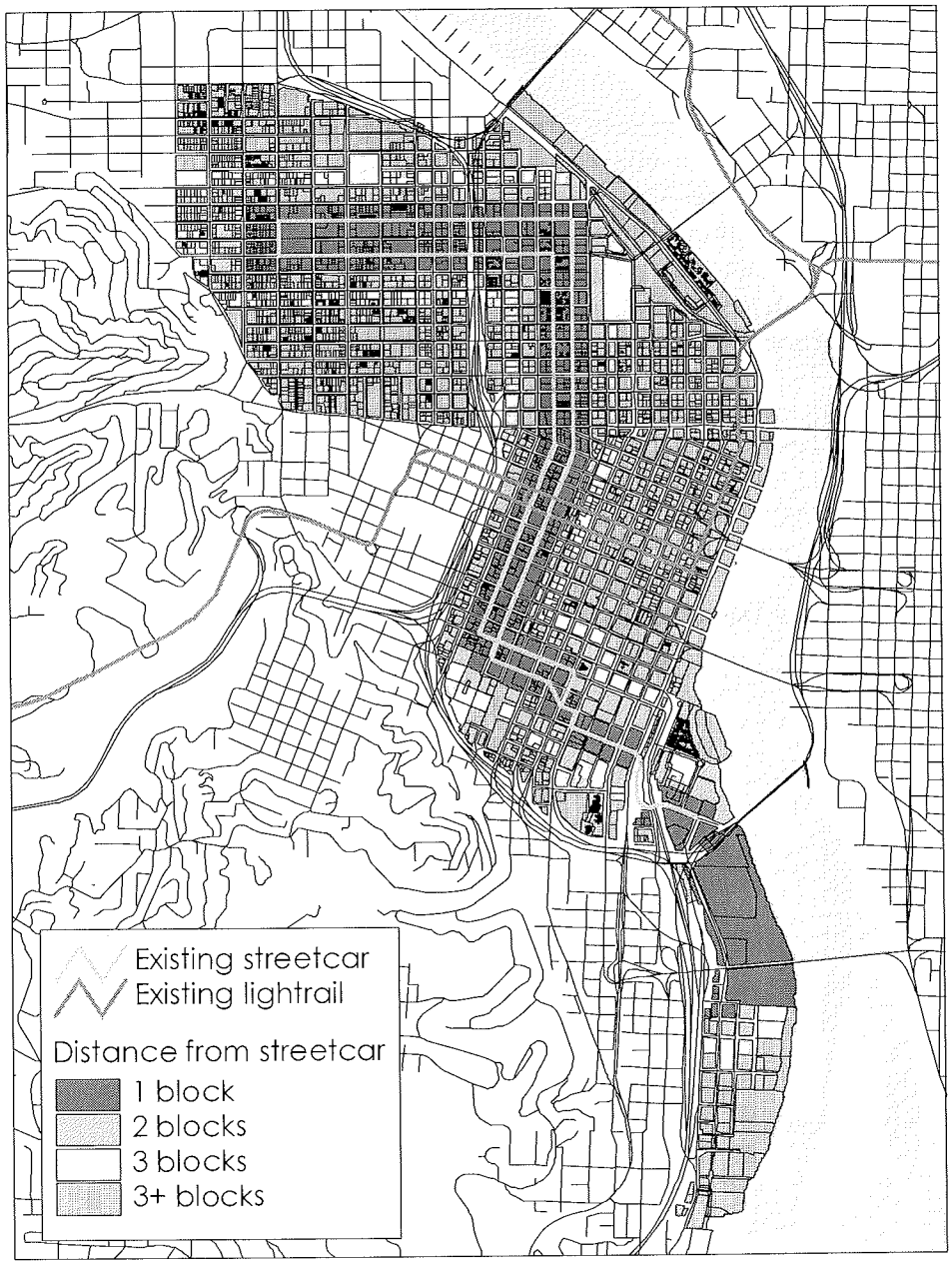
II. STREETCAR-DEVELOPMENT EXPERIENCE

Portland's westside streetcar line was committed in 1997, constructed in 2001, and extended three times by 2006. The now 10 years since initial funding was committed yields a track record of investment and development activity through which the impacts of this investment can be assessed. The observed relationship between Portland Streetcar investment and Portland's built environment supports the conclusion that streetcar promotes adjacent development at urban densities.

Portland's streetcar experience has demonstrated the importance of looking beyond *transit oriented development.* Because of streetcar's role as a development catalyst – not just at station area nodes but along an entire transit corridor – the more appropriate term may be *development oriented transit.* This chapter lists evidence gathered to date of this relationship.

A second focus of this chapter is to outline the broader community benefits of higher density development. These benefits can be conceived of as both public and private return on investment (ROI), and accrue to a city or neighborhood to the extent that high density development occurs.

Figure 1. Westside Streetcar Alignment with Area of Development Impact



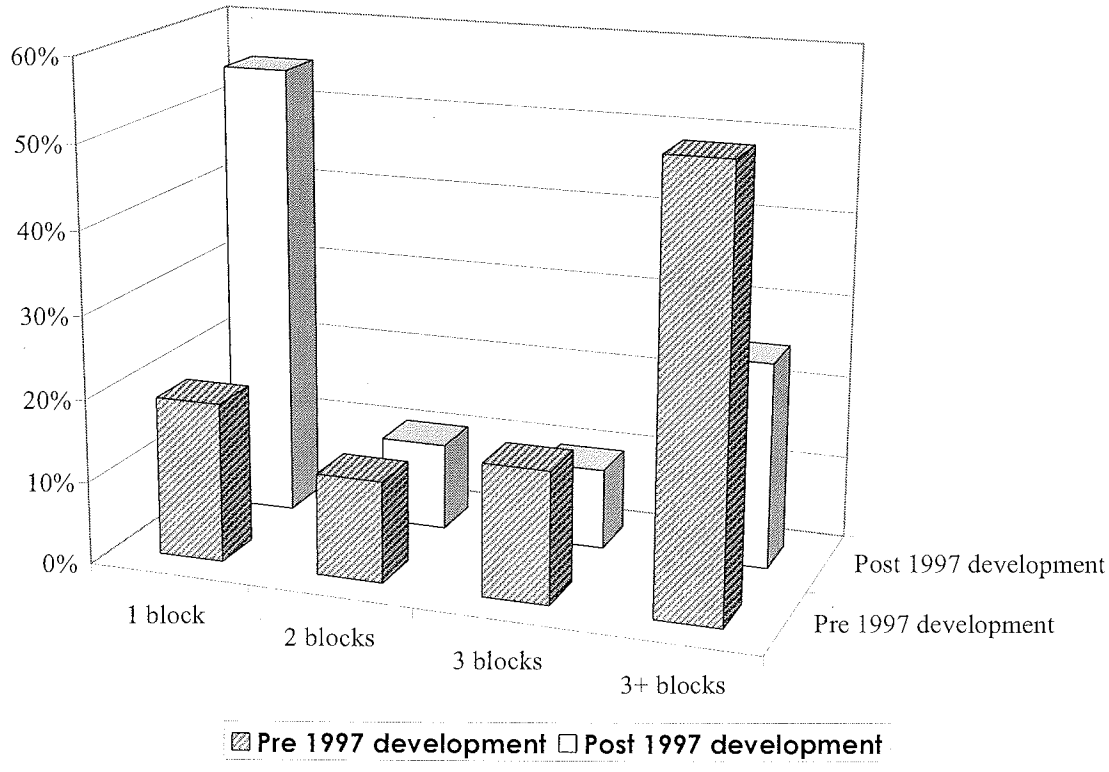
Source: 2005, *Portland Streetcar Development Impacts*, E. D. Hovee & Company, LLC.

A. Streetcar Promotes High Density Development

1. *Documented Results:* In Portland, tax assessor records indicate that post-streetcar development clustered near the alignment and achieved higher densities as proximity to the alignment increased.
2. *Developer Confidence:* Interviews with Portland developers and property owners reveal the development community's confidence in the catalytic potential of streetcar investment. Developer confidence may be the first and foremost indicator of successful development oriented transit investment.
3. *Property Owner Participation in Streetcar Investment:* Property owners expect that streetcar investment will increase in land value, as evidenced through the self-imposed taxing districts that have funded five phases of streetcar investment to date.

1. Documented Results: A 2005 study of real estate development within streetcar-served neighborhoods tracked Portland's development trends (pre- and post-streetcar) based on distance from the streetcar alignment.[1] It found that after streetcar investment was secured, lots within *one-block* of streetcar captured 55% of all new development within neighborhoods through which streetcar passed.

Figure 2. Percent of New Development by Distance from Streetcar



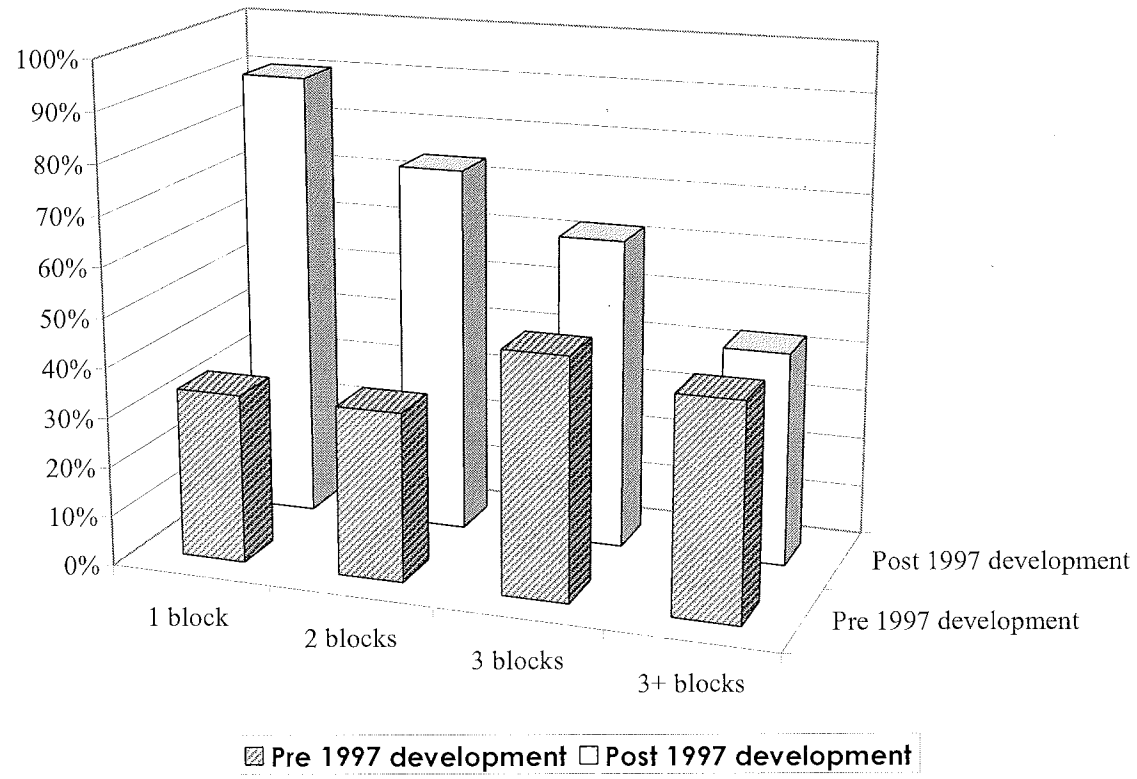
Source: E. D. Hovee & Company, LLC, *Portland Streetcar Development Impacts,* prepared for Portland Streetcar, Inc. November 2005.

Post-streetcar development was also much denser than development further from the streetcar line. Within one block of the streetcar line, post-streetcar development achieved 90% of the Floor Area Ratio (FAR) the zoning allowed.

The ratio of development experienced to zoned capacity steadily decreased as distance from streetcar increased – to only 43% of FAR for development more than three blocks from streetcar – despite a consistent FAR limit across all neighborhoods considered of around 6.0.[2]

The total estimated value of development along the westside alignment between 1997 – the year in which funding was secured – and January 2006 is more than $2.4 billion.

Figure 3. Density of Development by Distance to Streetcar



Source: E. D. Hovee & Company, LLC.

While this convergence of streetcar investment and high density development does not assert causality – and statistical research methods such as regression/hedonic modeling have not yet been employed – it is increasingly clear that more than chance has influenced Portland's development trends. This observation is based on the strength of the statistical evidence to date combined with what private developers and investors responsible for this change have to say.

Along with streetcar, key factors in recent Portland development have included development agreements with major property owners and consolidated land ownership, both of which

accompanied the first wave of development activity along the alignment. In Portland today, it is hard to imagine that in 1994 – when the westside alignment was first adopted – zoning within key downtown neighborhoods was a mere 14 units per acre and a market assessment projected potential condo absorption at just 30 units per year.

2. Developer Confidence: Over the past decade, the Portland Streetcar project has been recognized by the real estate and development community as a significant catalyst for redevelopment in Portland's extended downtown core area. Tax assessor records illustrate the catalytic role that streetcar has played to stimulate higher density urban development over the last decade. But the #1 consideration is: what does streetcar mean for developers investing in redevelopment and new construction of residential, commercial and mixed use space?

Interviews with property owners and developers along Portland's existing westside line and planned eastside line consistently indicate that streetcar investment supports development through three primary factors:

- *Timing:* Property owners and developers are willing to invest in an area earlier in the redevelopment trajectory because they recognize streetcar as a sign of public-private sector investment confidence. The investor is more comfortable putting debt and equity capital where others have already put their money. Even when private re-investment is in its early stages, streetcar investment facilitates developer comfort and confidence.
- *Scale:* Increased density means increased investment, and brings greater numbers of households and jobs to a site. Developer and property owner interviews indicate that streetcar investment increases developer comfort with larger buildings and the associated risks (more units to absorb, higher construction costs).
- *Pricing:* Developers indicate willingness to bring higher-end products to the market with the presence of streetcar. With an initial Central City alignment in place and redevelopment along the entire length now realized, developers have judged that streetcar's convenience, cost savings and cachet translates into consumer willingness to pay higher rents and sales prices. Increasingly, transit convenience makes it more possible to forego an automobile, freeing discretional financial resources for a more urban lifestyle. These new market trends, in turn, draw yet higher density projects to market within a shorter time frame.

Members of Portland's development community repeatedly express their confidence in the ability of streetcar to change the built environment. This is evidenced both in Portland's westside (Downtown, NW 23rd, Pearl and South Waterfront Districts) and eastside, for which the extension of the Streetcar Loop is planned.

Developers and property owners near the eastside alignment of the planned Portland Streetcar Loop are incorporating streetcar into their plans for their own properties and for larger neighborhoods. Examples of property owners' comments on the planned eastside alignment are reported below.

"From a development standpoint, streetcar is extremely important. I knew [streetcar was planned] when I bought the property years ago. Any 21st Century development comes down to transportation."

"Streetcar is an enhancement to the building's success and vice versa. The developer isn't opposed to creating units without parking because of the presence of streetcar."

"Streetcar is essential for the hotel and the development of the Convention Center district. The district has to grow for the health of the convention center and its future bookings, and streetcar is integral to that."

3. Property Owner Participation in Streetcar Investment: Lastly, adjacent property owners to the planned eastside alignment have asserted their conviction that streetcar investment increases property value by shouldering $15 million of the cost of streetcar development. This parallels westside experience where property owners have funded $19.4 million of the streetcar investment to date.

Figure 4. Westside Property Owner Contributions to Streetcar

Phase	Total Cost	LID Total	Percent LID	Assessment Methodology
Phase I & 2	$56.9	$9.6	17%	Frontage + rate x total value, 2 zones, rates vary by land use
Phase 3a	$14.4	$3.0	21%	Rate x total value with minimum
Phase 3b	$15.8	$2.0	13%	Rate x total value x distance factor
Phase 3c	$13.4	$4.8	36%	Rate x land area x distance factor
	$100.5	$19.4	19%	

Note: Dollars in millions.

Source: Portland Department of Transportation, E. D. Hovee & Company, LLC.

Local property owner investment has and will continue to occur through the property assessment mechanism of a Local Improvement District (LID). For the eastside, this investment represents over 10% of the project's anticipated cost.

B. Density Yields Public & Private Return on Investment

The high density development observed along Portland's existing westside alignment is associated with numerous public benefits that can be understood as a return on the public's investment in streetcar (ROI). These benefits include:

1. Reduced auto dependence by promoting *the trip not taken.*
2. Reduced *infrastructure* costs by reducing suburban greenfield development.
3. Reduced *sprawl* (land consumption).
4. Reduced *carbon footprint* resulting both from increased density of development and reduced auto dependence.
5. Increased *business and job generation* through attracting the *creative class* demographic to which future and ongoing economic vitality is linked.

1. Denser Development Reduces Auto Dependence: The relationship between land use and mode split – whether residents make trips by autos, bikes, streetcar or buses – is well established in Portland and throughout the U.S. The following table documents how mode split varies by transit availability and land use type within the Portland metro region.

Figure 5. Mode Split by Development Type

Land Use Type	Mode Split: Auto	Mode Split: Walk	Mode Split: Transit	Mode Split: Bike	Mode Split: Other	Daily Vehicle Miles per Capita	Auto Ownership per Household
Good Transit / Mixed Use	58.1%	27.0%	11.5%	1.9%	1.5%	9.8	0.9
Good Transit Only	74.4%	15.2%	7.9%	1.4%	1.1%	12.4	1.5
Remainder of Multnomah Co.	81.5%	9.7%	3.5%	1.6%	3.7%	17.3	1.7
Remainder of Region	87.3%	6.1%	1.2%	0.8%	4.6%	21.8	1.9

Source: Metro 1994 Travel Survey.

Residents of *mixed use neighborhoods* (integrated commercial and residential development) with *good transit service* are less likely to use autos than are residents with good transit service but no mixed use development: 58 versus 74 percent of trips are auto-based. Region-wide, the average percentage of auto-based trips across all neighborhoods is even higher, at 87%.

In mixed use neighborhoods, residents are almost twice as likely to walk, but they are also 45% more likely to use transit. This is because mixed use neighborhoods bring trip destinations within closer proximity, making non-auto modes of all kinds more convenient and attractive. Avoiding the need for auto-based travel can be referred to as *the trip not taken.*

Transit investment – and particularly fixed transit investment such as streetcar – creates a positive feedback loop, in which streetcar encourages denser development, which encourages transit usage and other non-auto modes of transportation, which facilitates yet denser urban-scale development.

Total daily vehicle miles per capita decrease significantly for residents living in mixed use, transit-rich neighborhoods: at 9.8 miles, it is 26% lower than transit-rich but non mixed use neighborhoods and 122% lower than the regional average. When this savings is compounded by the number of households located near streetcar, the impact on regional congestion, CO_2 omissions and air quality is significant.

A 2006 Portland Office of Transportation study *Portland Streetcar Development Oriented Transit* reported that 7,248 housing units had been constructed along Portland's westside streetcar line by the end of 2005. The following table illustrates the VMT savings of locating these households within a mixed use, transit-rich environment as opposed to an 'average' suburban environment.

Figure 6. VMT Reduced by Development Type (Portland Westside Results)

	High Density Environment	Suburban Environment
No. of Households	7,248	7,248
Total Persons*	15,946	15,946
Avg. Vehicle Miles/Day/Capita	9.8	21.8
Number of Days	315	315
Vehicle Miles/Year	49 million	109 million
Vehicle Miles Savings/Year	**60 million and growing**	

*Note: Assumed average households size of 2.2 persons.

Source: 1994 Metro Travel Survey, E. D. Hovee & Company, LLC.

The urban housing that has been developed within streetcar-served neighborhoods over the past few years – within six years of streetcar opening – has reduced vehicle travel on Portland's roadways by an estimated 70 million miles annually. This savings both reduces congestion and improves air quality.

The true cost of congestion is just beginning to be documented and quantified. A 2005 study by the Economic Development Research Group concluded that congested transportation networks have a significant impact on Portland's transportation-dependent economy, including the movement of freight.

Even with an anticipated $4.2+ billion in planned investments on the region's transportation capital improvements project list over the next 20 years, increased congestion was calculated to cost the Portland metro region $844 million annually by 2025 and 118,000 hours of vehicle time daily. Investments in transportation above what has been planned are estimated to generate an economic benefit (or ROI) of $2 for every dollar spent.[3]

2. Denser Development Reduces Infrastructure Costs: The Portland metro area is expected to add one million new residents by 2030. This is equivalent to adding two new cities the size of Portland to the region. The cost of providing infrastructure for household growth varies dramatically according to where these households locate.

One option is to locate households in greenfields, converting rural land uses to urban. The City of Damascus – a newly incorporated city on the eastern edge of the metro region – is an example of this approach, and is currently struggling to finance infrastructure for its 12,200 acres to accommodate a projected 24,900 new households. Damascus's transportation network alone is estimated to cost between $1.9 and $2.8 billion.

In contrast, westside streetcar investment of $100 million to date was instrumental in bringing over 7,000 new households within three blocks of the alignment (as of January 2006). On a cost per added household basis, streetcar investment was $14,000, an incremental number that falls as new units are constructed. In contrast, transportation infrastructure to serve the City of Damascus is estimated to cost between $76,000 and $112,000 per household.

Figure 7. Infrastructure Cost by Development Type (Westside Alternative vs. Suburban Alternative)

	Streetcar Alignment	Damascus	
Number of households	7,248	24,952	
Public investment	Actual	High	Low
Transportation infrastructure	$100,000,000	$2,800,000,000	$1,900,000,000
Cost per household	$14,000 and falling	$112,000	$76,000

Source: Portland Office of Transportation, *Portland Streetcar Development Oriented Transit*, January 2006, www.co.clackamas.or.us/dtd/damascus/, E. D. Hovee & Company, LLC.

Capturing future growth within mixed use, transit-served neighborhoods will best preserve our transportation infrastructure and reduce the staggering – and unfunded – costs associated with maintaining and expanding the transportation networks fundamental to continued economic growth for the city and the metro region.

3. Denser Development Limits Sprawl: In addition to reducing infrastructure costs, denser communities conserve land. Housing developed along Portland's westside streetcar alignment uses a remarkable 1760% less land than will planned housing development within the newly incorporated City of Damascus.

Figure 8. Land Use by Development Type (Westside Experience vs. Suburban Alternative)

	Streetcar Alignment	Suburban Environment
Households	7,248	7,248
Households per Acre	137	7.8
	Average realized units per building	Damascus average lot size is 5,600 square feet
Acres Required	53	932
Acres Saved	**879 and growing**	

Source: Portland Office of Transportation, *Portland Streetcar Development Oriented Transit*, January 2006, www.co.clackamas.or.us/dtd/damascus/, E. D. Hovee & Company, LLC.

The average number of units within the 52 residential buildings developed within three blocks of Portland's existing westside streetcar alignment is 137. Some of these buildings are smaller than a city block (which is roughly one acre), so this unit count per acre is conservative. In contrast, average planned lot size within Damascus equates to fewer than eight housing units per acre.

When these densities are multiplied by the units realized so far along the westside streetcar alignment, the resulting land savings is enormous. If streetcar-associated housing were located in greenfield development, it would have required an additional 879 acres, as opposed to the (maximum) 53 acres it now occupies.

4. Denser Development Reduces Carbon Footprint: A carbon footprint represents the total amount of carbon dioxide (CO_2) and related greenhouse gases emitted over the full life cycle of a product or service such as transportation or real estate development. Carbon footprint describes both construction carbon (carbon released through the manufacture, shipment and installation of materials) and operational carbon (released in heating, cooling, running electrical appliances, etc.).

Initial modeling indicates significant carbon savings for high density urban development compared to traditional suburban development: a 64% savings in transportation and 45% CO_2 improvement associated with an urban versus suburban development footprint.

Figure 9. Carbon Footprint by Development Type (Illustrative Westside Experience vs. Suburban Alternative)

	High Density Environment	Suburban Environment
Residential Footprint		
Annual Tons of CO_2 per Household	5.9	17.1
Annualized Per Household Savings	11.2	
Number of Households	7,248	7,248
Annual Tons of CO_2	43,007	118,466
Annualized High Density Savings	75,459	
% High Density Savings	64%	
Employment Footprint		
Annual Tons of CO_2 per Job	5.1	9.2
Annualized Per Job Savings	4.1	
Number of Jobs	11,500	11,500
Annual Tons of CO_2	14,016	25,283
Annual High Density Savings	11,267	
% High Density Savings	45%	

Note: Job growth was derived from 4,600,000 square feet of recorded commercial building development between 1998 and 2005, with an assumed job density of 400 square feet per employee. 25% of the demonstrated job growth has been attributed to streetcar investment.

Source: E. D. Hovee & Company, LLC.

Combined savings vary with environment, according to the mix of commercial and residential development realized. Carbon savings specifically derive from:

- Lower daily VMT per resident and employee;
- Less land and building area used for housing and commercial development;
- Reduced ongoing energy consumption with urban versus suburban densities of development; and
- Potential for further carbon reduction (beyond what is calculated to date) if future streetcar investments are accompanied by commitment for purchase of *green energy.*

5. Denser Development Facilitates Economic Development. Dense development – a key to pedestrian-filled streets and successful mixed use neighborhoods – is increasingly recognized as an economic generator because it attracts both residents and businesses who want to live in quality, vibrant communities. The idea that lifestyle can drive economic development was heralded by Richard Florida through this introduction of the 'Creative Class.' Florida attributes this newly coined demographic sector – and its lifestyle preferences – as the key driving force for post-industrial economic development in the USA.[4]

Economist Joe Cortwright operationalized the Creative Class concept by focusing on college-educated 25 to 34 year olds as the people creating the new ideas that help drive the economy forward, and documented his research in his 2004 study *The Young and Restless*.[5] This age group has completed its education and is pursuing careers; beyond this age, the likelihood of moving decreases sharply. If a region can attract young talent, it is likely to keep it. Cortright reports that Portland is succeeding in attracting this demographic cohort: between 1990 and 2000, this age group increased by 12% in Portland, in sharp contrast to its overall national decline of 8%.

Cortright conducted focus group in six American cities – Philadelphia, Memphis, Providence, Richmond, Tampa and Portland – and found that Portland elicited the most positive reviews:

> *"Its urban fabric has the special appeal, with participants citing the city's size, walkability, public transportation, bike-friendliness, distinctive neighborhoods and independent businesses as contributing to a feeling of community, manageability and safety."*

The focus groups generated themes to attractive communities, including the theme of *Vibrant Places*. Cortright's report states that the desire for Vibrant Places is expressed in many different ways, but always includes a successful downtown.

> *"Many mentioned their desire for a city animated by its walkability and mixed uses which give people reasons to walk. To supplement a city's walkability was the desire for mass transit. Based on the comments of focus group participants, good public transit seems to be required for a city to be judged the complete package for this demographic."*

Cortright's study concludes that the region's growth in young, college-educated adults has been fueled by the attractiveness of the Central City and Washington County, particularly the denser

inner neighborhoods – both in and near the Central City area. Young adults generally, and college-educated 25 to 34 year olds in particular, are now disproportionately represented in close-in Portland neighborhoods; residents within three miles of the city center are 50% more likely to be 25 to 34 years old.

Denser development – and the walkability, mix of uses, and supportive transit that it entails – is a proven attraction for older empty nesters and now is increasingly valued by young professionals. Attracting these professionals is an important economic development strategy for America's cities. This is especially true in an impending era of stagnant or shrinking labor force availability as baby boomers begin to exit the work force.

III. STREETCAR-DEVELOPMENT FUTURES

The reintroduction of streetcar to America's cities is so recent that there has not been time to consider long-term opportunities. Is streetcar a one-shot experience to link high amenity attractors – tourist, residential, retail, and institutional? Or should these initial streetcar investments be considered as step one to a more systematic, city- or region-wide approach to neighborhood based transit service?

The experience of cities with existing systems – notably San Francisco and Philadelphia – clearly suggest that streetcar is best viewed not as a single alignment, but in the context of a broader network of transportation accessibility and associated economic development opportunity.

This is clearly the path the City of Portland is currently pursuing:

- As its next initiative, Portland has proposed a 3.35-mile extension of the existing westside alignment across the Willamette River to the eastside, creating a Streetcar Loop.
- The city has embarked on an even more ambitious long-term planning program – a Portland Streetcar System Plan – outlining a possible streetcar network with multiple alignments as integral to the city's transportation and economic development future.

Using the Portland experience as a *springboard* for discussion, this chapter suggests criteria with which proposed streetcar projects can be ranked according to their potential economic development impact.

The private investment that cities leverage through their investment in streetcar may prove as diverse as the cities, neighborhoods and business districts that streetcars can serve. However, there are fundamental steps that cities can take to ensure that the regulatory environment is prepared to encourage investment. Beyond this, an independent assessment of an area's *market readiness for investment* is the best available means to estimate market response to streetcar.

Portland is investing in additional streetcar infrastructure to transform its current westside alignment into a complete loop encompassing both the west and east sides of its Central City. This chapter includes responses to the proposed criteria for the Portland Streetcar Loop. Responses indicate that further investment in Portland's streetcar infrastructure is a sound financial strategy: Portland streetcar is positioned to succeed in generating economic development returns.

Four primary criteria are proposed:

- How does streetcar investment promote and expand employment centers;
- Does the regulatory environment uniformly impel higher density development;
- Do market conditions support higher density development; and
- What public incentives beyond transit are available to support high density development?

A. Portland Streetcar Loop will Advance Employment Centers

1. The Streetcar Loop Connects Regional Employment Centers with Significant Development Potential. The existing westside alignment runs through the west end of downtown Portland, connecting two major medical institutions, two universities, and two significant tracks of largely vacant and redevelopable land. The proposed Portland Streetcar Loop will both extend and reinforce the benefits generated through the westside alignment.

The area within ½ mile of existing westside streetcar stations and planned eastside streetcar stations accommodated 204,800 jobs in 2005 and is expected to support 217,300 jobs by the year 2011. Job density in 2005 within this area was 37,923 jobs per square mile, forecast to increase to 40,240 jobs per square mile in the year 2011. Employment within this area represents virtually every economic sector.

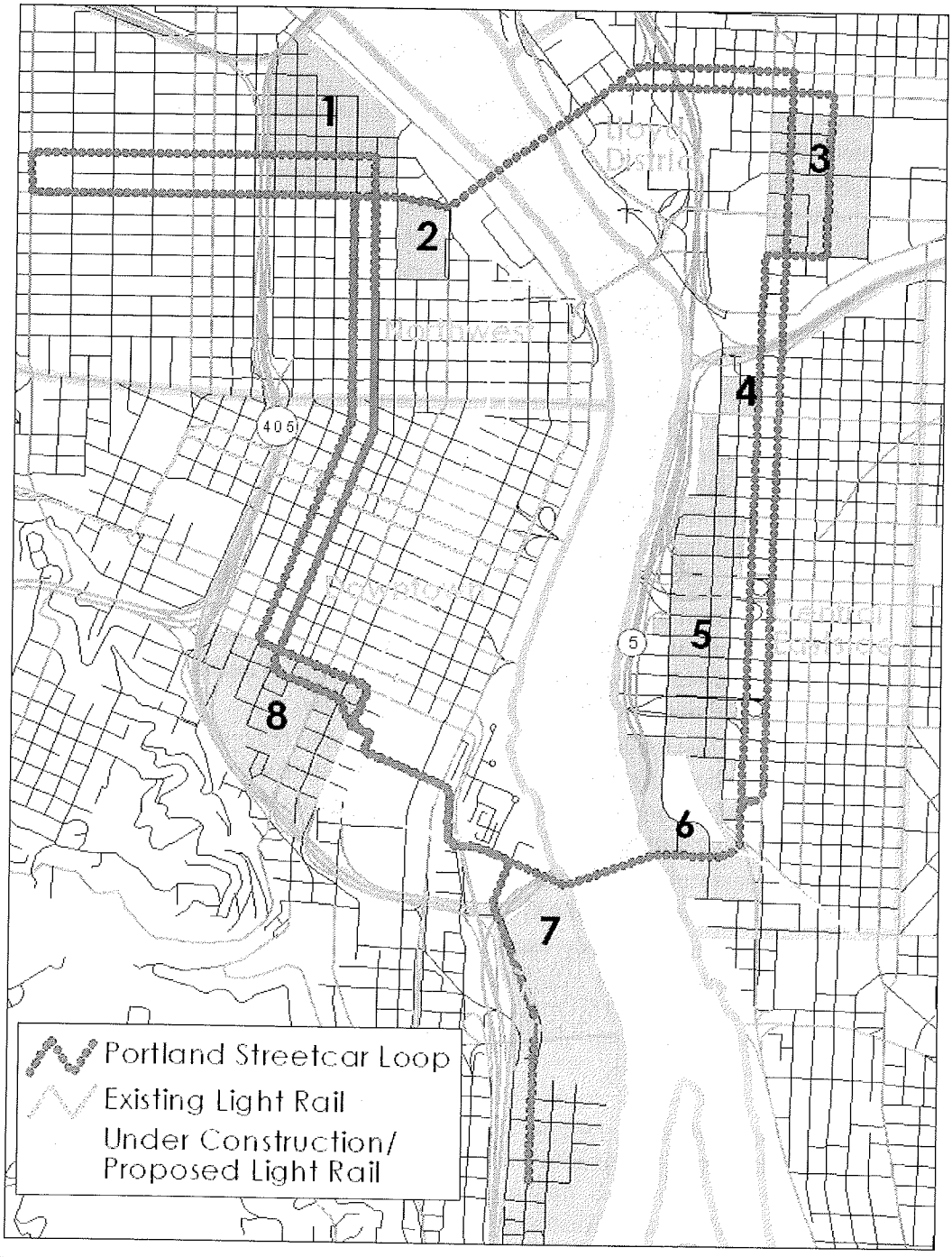
The Portland Streetcar Loop will connect the following Central City inner neighborhoods, each of which is a significant employment center:

- The Downtown Core, encompassing the region's highest densities of government and private offices at just under 17 million square feet of multi-tenant leased office space. As of fall 2007 Class A vacancies were 5%; four significant office towers are slated to begin construction in 2008 bringing an additional roughly one million square feet or 3,000 jobs to the district. Downtown also hosts the region's greatest density of art galleries and arts organizations, hotels, and entertainment venues.
- Northwest (including the Pearl, River District and Old Town neighborhoods), adjacent to downtown and distinguished by its industrial roots, considerable warehouse-to-condominium conversions, and significant recent investment in both urban housing and amenity-rich green office buildings (now 2.4 million square feet of multi-tenant leased office space, 425,000 additional square feet proposed for 2008).
- The Lloyd District, a regional retail destination with substantial federal, state and private office buildings (2.2 million square feet of multi-tenant leased office space), the state's largest professional sports complex and the Oregon Convention Center (newly expanded to 225,000 square feet of exhibition space).
- Central Eastside, a transforming industrial district that over the past decade has seen the highest density of redevelopment on the city's east side.
- South Waterfront, a former and largely vacant industrial area that since 2005 has realized three completed residential projects with four more underway or in planning. Approximately 30 acres is owned by Oregon Health Sciences University, which has completed its first building and plans to bring additional health, research and educational facilities to the district.

Eight areas within these neighborhoods – ranging from four blocks to 85 acres – are notable for their significant development potential and active development planning. All are served by the Portland Streetcar Loop Project. Combined, they represent close to 250 acres and an estimated potential of over $5 billion in additional investment. For each area, the realization of

redevelopment planning at the densities envisioned is dependent upon major access improvements.

Figure 10. Streetcar Loop Economic Development Generators



Source: PDC, Metro, E. D. Hovee & Company, LLC.

Areas of significant development potential are detailed below.

1. **North of Lovejoy:** Northwest Portland's Pearl District was developed primarily by Hoyt Street Properties, which owned the 40-acre Burlington Northern rail yards that were converted into a vibrant, urban mixed use district. This initial development was predicated on city investment in establishing the Portland Streetcar. The company's remaining undeveloped land plus additional acquisitions now total 20 acres. The service improvement associated with the Portland Streetcar Loop extension will increase accessibility and frequency of service, and support continued high value development in the area. Hoyt Street Properties' program for full build-out includes 1,700 units and 725,000 square feet of commercial space.
2. **Post Office Blocks:** On the westside of the Central City at NW Lovejoy and Broadway is a 12.4-acre site currently occupied by the U.S. Post Office. Initial feasibility work has been completed for relocating this facility to the Portland Airport, freeing up this central site for high density development with connections to Union Station, the Portland Transit Mall and Pearl District. Extension of the existing streetcar to the eastside would pass by this redevelopment site, before crossing the Willamette River. The planned streetcar and existing transit service would provide excellent access, enabling more intense development of the site.
3. **Lloyd Crossing:** The 25-acre site of the Lloyd Crossing – the heart of Portland's Lloyd District – has a zoned density that would allow 10 million square feet of additional construction. The property is primarily owned by Ashforth Pacific and Kaiser Permanente, both of whom have participated in area planning efforts such as the 2004 Lloyd Crossing Plan. Streetcar will provide an organizing principal for a new Main Street within this district along 7th Avenue, the planned northbound alignment. Area plans call for the transition of the district's adjacent surface lots into high density developments with structured parking (FAR in this area is 15:1). Ashforth Pacific President Hank Ashforth describes streetcar commitment as fundamental to realization of the district's potential.
4. **Burnside Bridgehead:** The Burnside Bridgehead project is a four-acre mixed used project in a pivotal location at the eastern end of downtown's gateway bridge. This project's key location at a north-south and east-west crossroads and significant size result in considerable potential to induce adjacent development. The development will be mixed use, with office or retail leading the first phase. Anticipated total development value ranges from $150 to $250 million.
5. **Employment Opportunity Subarea (EOS):** Effective in January 2007, this newly designated EOS zoning applies to 85 acres within the Central Eastside Industrial Sanctuary, which is located within one block of the proposed eastside alignment. The zoning allows for greater flexibility in office development, increasing square footage maximums and liberalizing the types of office use allowed outright within the industrial district. It responds to private market interest in transitioning this former warehousing district to flexible office space in demand by creative firms. The EOS will serve as an important test application for extending streetcar benefits to major sources of employment as well as residence.

6. **OMSI District:** The OMSI District centers on 22 acres owned by the Oregon Museum of Science and Industry (OMSI), but also includes the Portland Opera offices and Portland Community College. OMSI is now undertaking a master planning process that includes the redevelopment of existing surface parking and a recently acquired 6.2-acre parcel. Phase I plans call for a 100,000 square foot museum expansion and a 100,000 square foot science academy, to be run in partnership with Oregon Health Sciences University, that will attract high school students from throughout the state.

   Phase II plans focus on the newly acquired 6.2 acres. OMSI envisions office development compatible with its science focus. Current zoning would enable the development of over one million square feet. Phase II construction is slated for 2013-2014.

   In 2015, this district will connect to OHSU South Waterfront by the proposed Portland to Milwaukie light rail bridge, which is also proposed to accommodate the Portland Streetcar Loop when completed. The connection to the OHSU South Waterfront District will further development interest in both areas by increasing connectivity between these two related employment centers. Anticipated density has increased as a result of the increased access that both light rail and streetcar will provide.

7. **OHSU South Waterfront:** The south end of the Portland Streetcar Loop is proposed to be served by both streetcar and light rail. Approximately 25 acres within the South Waterfront District are owned by Oregon Health Sciences University, which has recently expanded its campus to the South Waterfront by building an aerial tram to connect the main campus on the Marquam Hill with the new streetcar-served waterfront property, 500+ feet below. The first 400,000 square foot building was completed in 2006 and represents a $145 million investment. An additional building is planned every five years, with a total build out capacity exceeding 3 million square feet. The ability to develop the transportation-constrained South Waterfront District at the planned intensity is entirely dependent upon assuring effective and convenient access to the district.

   The new light rail bridge – planned to open in 2015 – will connect South Waterfront with the emerging OMSI District, bringing together two employment and science centers on opposite sides of the Willamette River that will be within 90 seconds of one another.

8. **University District**: Portland State University is now Oregon's largest educational institution, with more students enrolled than at any other campus in the state. PSU currently owns 49 acres in the southern end of downtown Portland, and is acquiring more. Over the next ten years, the university plans to increase enrollment from 25,000 to 35,000 students; double research grants to $80,000,000 annually; develop close to 0.5 million square feet for academic, lab, research and classroom space; develop 200,000 square feet for retail and collaboration space, and develop between one and two million square feet of housing and dining services.

The acreage and value associated with each of these significant development areas is summarized in the following table.

Figure 11. Significant Development Areas Summary

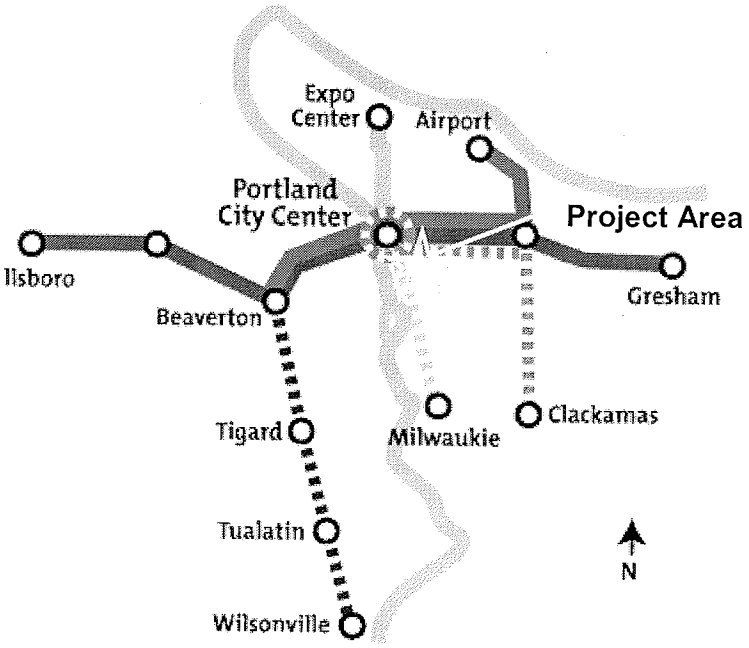
Map ID	Development Area Name	Acres	Potential Value	Use
1	North of Lovejoy *Contact: Tiffany Sweitzer, Hoyt Realty:*	20	More than $0.5 billion (50% of observed density of 137 units/acre)	Residential / Commercial
2	Post Office *Contact: Sarah Harpole, PDC:*	12.4	$0.5 billion (assuming FAR of 6, 25% infrastructure set aside, 50% development)	Residential / Commercial
3	Lloyd Crossing *Contact: Hank Ashforth, Ashforth Pacific*	25	More than $1 billion (50% of max potential SF)	Office / Retail / Residential
4	Burnside Bridgehead *Contact: Kia Selley, PDC*	4	$150 - $250 million (all phases)	Office / Retail / Residential
5	Employment Opportunity Subarea *Contact: Denyse McGrif, PDCf*	85	More than $0.5 billion (assuming 20% of property redevelops at an FAR of 3)	Office / Retail
6	Oregon Museum of Science & Industry (OMSI) District *Contact: Pat LaCrosse*	22	$229 million (50% of max potential SF)	Institutional / Educational / Office
7	OHSU South Waterfront *Contact: Mark Williams, OHSU:*	25	$3 billion +	Institutional / Office
8	University District *Contact: Mark Gregory, PSU*	49+	$700 million	Institutional / Residential / Commercial
	Total	242	Over $5 billion	

Source: Development representatives; E. D. Hovee & Company, LLC.

2. The Alignment Integrates with Existing Transit Investment to Connect Growing Neighborhoods with Employment. The proposed Portland Streetcar Loop Project would connect with five regional light rail lines, the existing streetcar line and 13 high-frequency bus lines. Approximately 80% of the regional system's riders – 240,000 on an average weekday – will have the opportunity to transfer to or from the Streetcar Loop.

The project would also pass approximately three blocks from Amtrak's Union Station and two blocks from the Greyhound bus station, offering daily intercity service to all of the cities of the west coast and the nation.

Figure 12. Overview of Portland Metro Area Rail System



Note: Red, blue and yellow solid lines represent existing light rail. Dashed lines are light rail extensions currently underway.

Source: TriMet, Metro.

This map illustrates streetcar's central position and transportation role from a regional perspective, illustrating the Regional Centers that fixed transit serves today and will serve in the future. The Streetcar Loop Project complements this system by intersecting with it and providing more frequent service within the region's most dense and mixed use central neighborhoods.

The light rail lines that connect the Central City with Portland's suburbs serve as *highways and arterials;* by comparison streetcar serves as a *local street* within the finer grain environment of Portland's Central City neighborhoods.

B. City Planning Promotes Higher Density Development

City planning positively affects density of development in two ways – encouragement of higher floor area ratios (FARs) together with facilitation of mixed use rather than single purpose development.

1. Zoning Allows for Floor Area Ratios Well in Excess of Current Development.

Since 1980 and the adoption of the Portland *Central City Plan*, the city has envisioned a transit streetcar circulator and crafted all city policies and regulations – including zoning, height limits and Floor Area Ratios (FARs) – to support high density land uses consistent with a streetcar-supported urban environment.

Portland measures density through Floor Area Ratios (FARs), which are regulated by zoning.[6] Maximum FARs for properties situated along the planned eastside alignment range from 4:1 to 12:1; most properties fall between 6:1 and 9:1. The amount of development potential – the difference between the maximum allowed FAR and the existing FAR – along and around the planned eastside alignment is substantial. Within the Central Eastside (the southern portion of the eastside alignment), the overall ratio of potential to existing building square footage is 6.5:1 – meaning that the district can support 6.5 times more square footage (by zoning) than is currently on the ground.

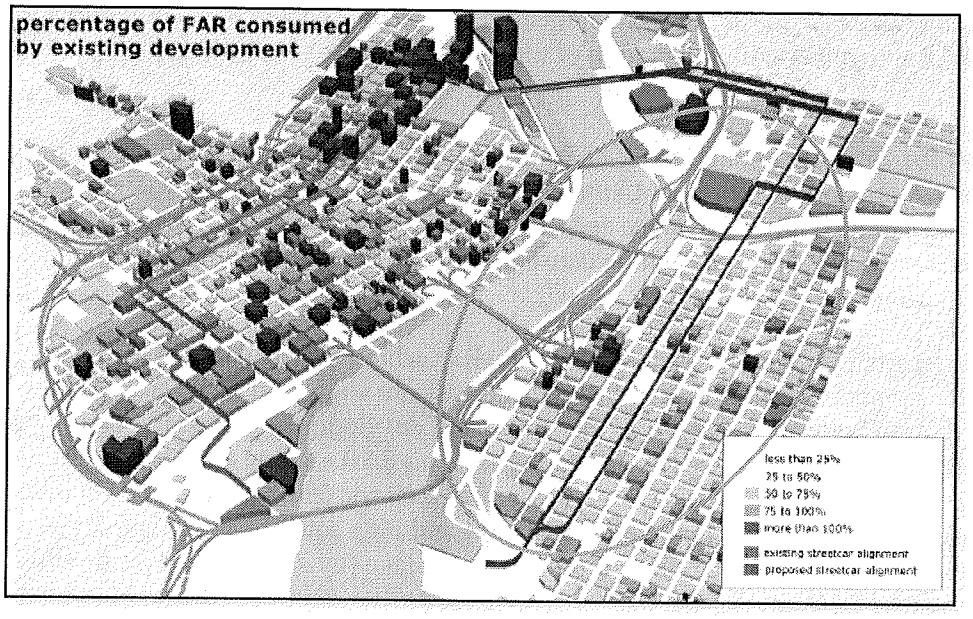
Within *three blocks* of the planned eastside alignment (the primary impact area), current development equals only 15% of maximum allowed development (according to FAR limits). Much of the existing development is single-story buildings, surface parking lots, or other undeveloped space. With the exception of the Oregon Convention Center blocks, there are fewer than four city blocks within the Project Area that currently utilize more than 50% of the allowed FAR.

Highlights of the density potential within the Portland Streetcar Loop Project Area include:

- The equivalent of approximately 36 city blocks zoned at 12:1 maximum FAR in the Lloyd District, 16 of them immediately adjacent to the Portland Streetcar Loop alignment.
- Fifty-three city block equivalents within one block of the alignment that are zoned for a maximum FAR of between 7:1 and 9:1.
- Thirty-two city block equivalents within one block of the alignment that are zoned for a maximum of between 5:1 and 6:1 FAR.

Existing and potential development is illustrated in the following two graphics. The red circle in the *first graphic* highlights the existing low densities along the proposed eastside extension.

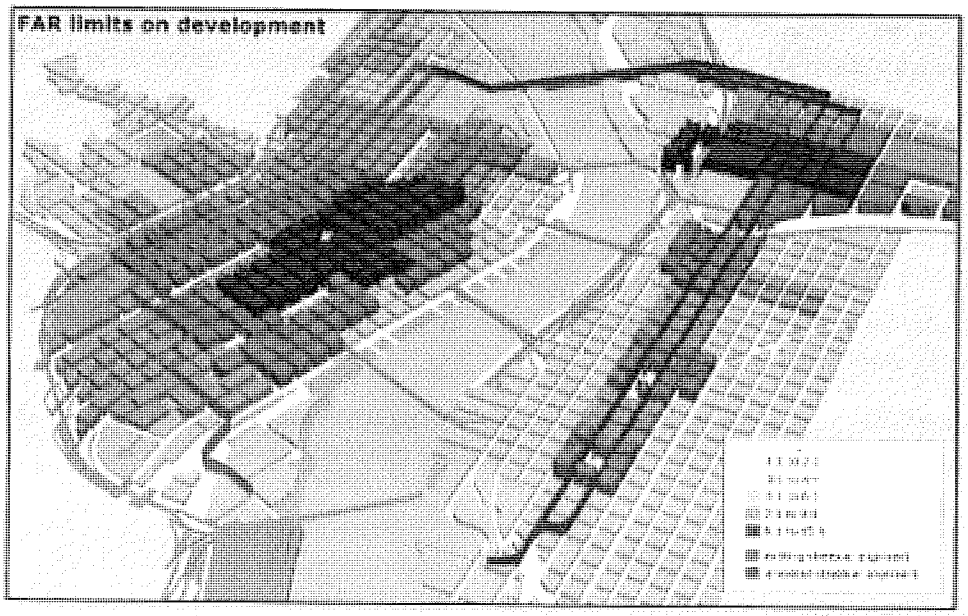
Figure 13. Existing FAR Density & Portland Streetcar Loop



Source: City of Portland, Bureau of Planning.

The *second graphic* (below) illustrates the significantly higher densities that zoning permits and which the proposed alignment is increasingly well-positioned to support.

Figure 14. FAR Development Potential with Portland Streetcar Loop



Source: City of Portland, Bureau of Planning.

The following table provides additional detail regarding existing and potential development surrounding the planned eastside streetcar alignment within the Central Eastside, the southern portion of the eastside alignment.

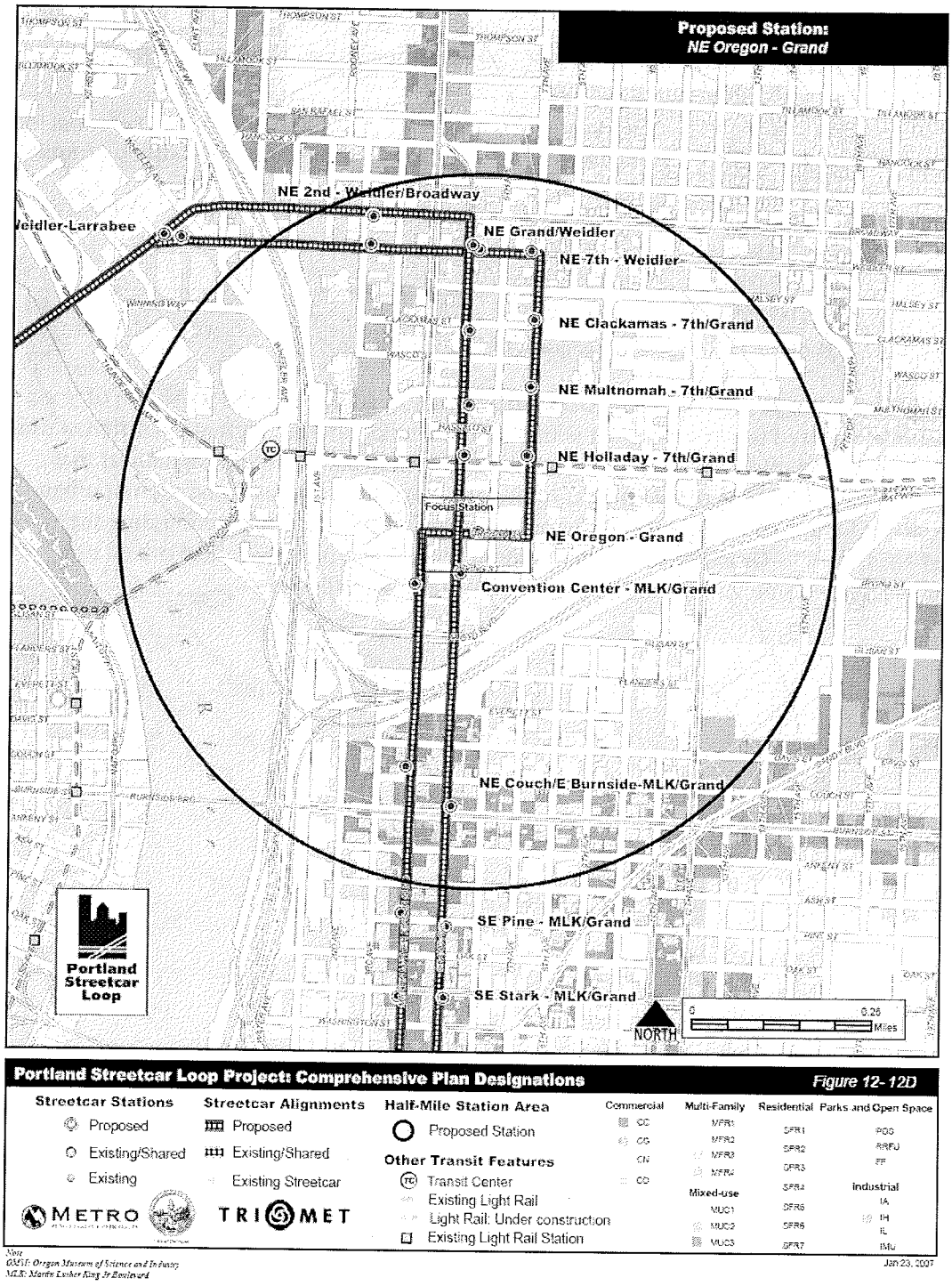
Figure 15. Existing Vs. Potential Building Square Footage, Central Eastside

Distance from Streetcar	Land Area (SF)	Existing Building SF	FAR	Potential Building SF	Potential to Existing SF Ratio
1 block	6,074,000	5,053,000	5.9	35,836,600	7.1
2 block	1,923,000	1,862,000	5.1	9,807,300	5.3
3 block	785,999	512,000	3.8	2,986,796	5.8
3 block+	707,000	687,000	5.3	3,747,100	5.5
	9,489,999	8,114,000	5.5	52,377,796	6.5

Source: City of Portland, E. D. Hovee & Company, LLC.

2. Zoning Encourages Mixed Use Development. In addition to the provision of good transit service, a mixed use environment is instrumental to facilitating high rates of transit usage. The planned eastside alignment has both comprehensive plan and zoning designations that provide for dense mixed use development, setting the stage for a compact and vibrant urban neighborhood. Figure 16 illustrates the comprehensive plan designations surrounding the proposed NE Oregon - Grand Ave. streetcar station. Purple and pink designate mixed use development, red is commercial, and orange is multi-family residential.[7]

Figure 16. Streetcar Alignment Comprehensive Plan Designations

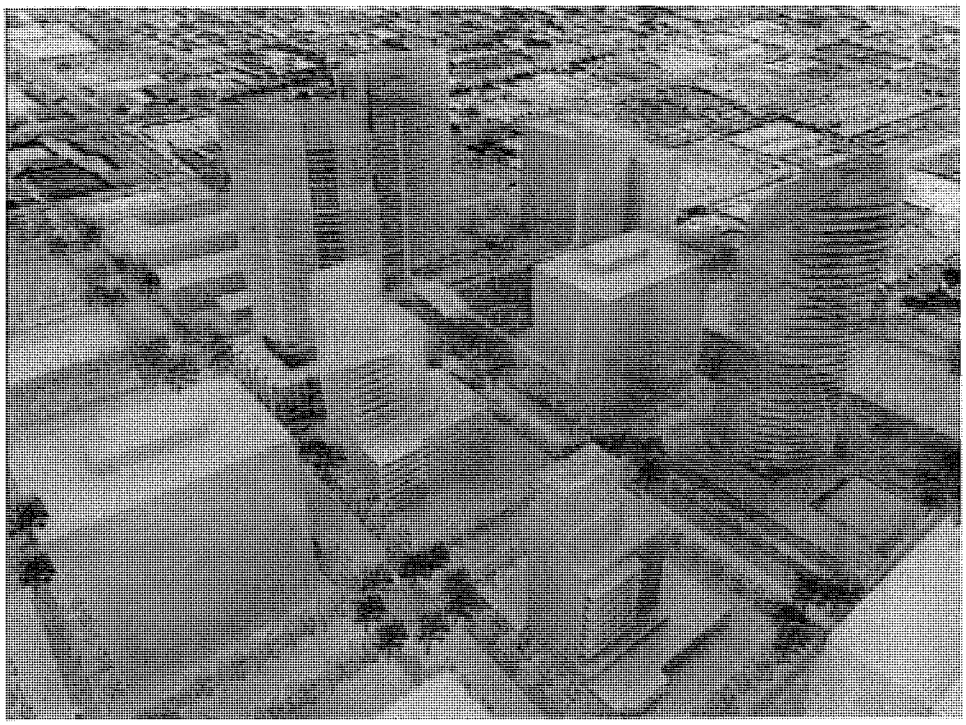


Source: Metro.

3. Beyond Regulations, Development Strategies Have Emphasized Denser Development. Portland's westside experience of significant redevelopment within streetcar-served neighborhoods was facilitated by both streetcar and accompanying investments and development agreements. These additional pubic incentives included master development agreements ensuring minimum densities with significant property owners in Northwest Portland and South Waterfront. In previously vacant areas within these districts, this public contribution to new parks development and support of unique district streetscape design (such as street lighting) furthered both the city's and developers' interest in creating distinctive urban neighborhoods.

Along the planned eastside alignment, the City of Portland is actively engaging property owners to encourage and influence redevelopment planning in response to the significant investment that streetcar represents. One example is the 2004 Lloyd Crossing project, which encompasses the 25-acre/34-block core of the Lloyd District – just east of the Willamette River. Project concepts developed to date have encouraged both visionary thinking and communication between large property owners.

Figure 17. High Rise Catalyst Project Concept, Lloyd Crossing



Source: Lloyd Crossing Sustainable Urban Design Plan & Catalyst Project, PDC.

Property owners have worked together to detail siting and design for over 8 million square feet of new development with an environmental footprint smaller than the area's existing 2 million square feet of building space. The amount of new development envisioned equates to about 70% of the area's zoned FAR. Streetcar will provide an organizing principal for a new Main Street within this district along 7th Avenue, the planned northbound alignment.

The Convention Center Hotel and the Burnside Bridgehead project are two additional major projects situated adjacent to the planned eastside alignment, both supported by public-private development agreements currently in negotiations. These projects are detailed in later sections of this report.

Even though eastside streetcar is still only in the planning stage, twenty planned investments have been identified along the alignment (also detailed below). The City or Portland is communicating with these property owners to encourage progress and identify means for public support. Through its development and transportation agencies, the city recognizes the importance of ongoing and in-depth conversations with and between property owners to encourage visionary thinking about the area's potential and to move the pace of redevelopment forward.

C. Market Conditions Support Higher Density Redevelopment

Based on Portland experience to date, indicators of market conditions supporting higher density development include increasing investment interest, capitalizing on low improvement to land value ratios, encouragement of new development along a proposed alignment, and confidence necessary to replicate this experience in one urban location, then another – all leading to development increasingly predicated on and oriented to streetcar investment.

1. Market Trends Indicate Opportunity for Increased Investment Interest.

Significant development was realized within just five years of Portland's *westside* streetcar investment. Many factors supported this extraordinary response in addition to streetcar, including public-private development agreements, significant under-developed tracts of land, consolidated land ownership, and a national resurgence in Central City housing options. These development factors can be found within neighborhoods adjacent to the planned eastside alignment as well.

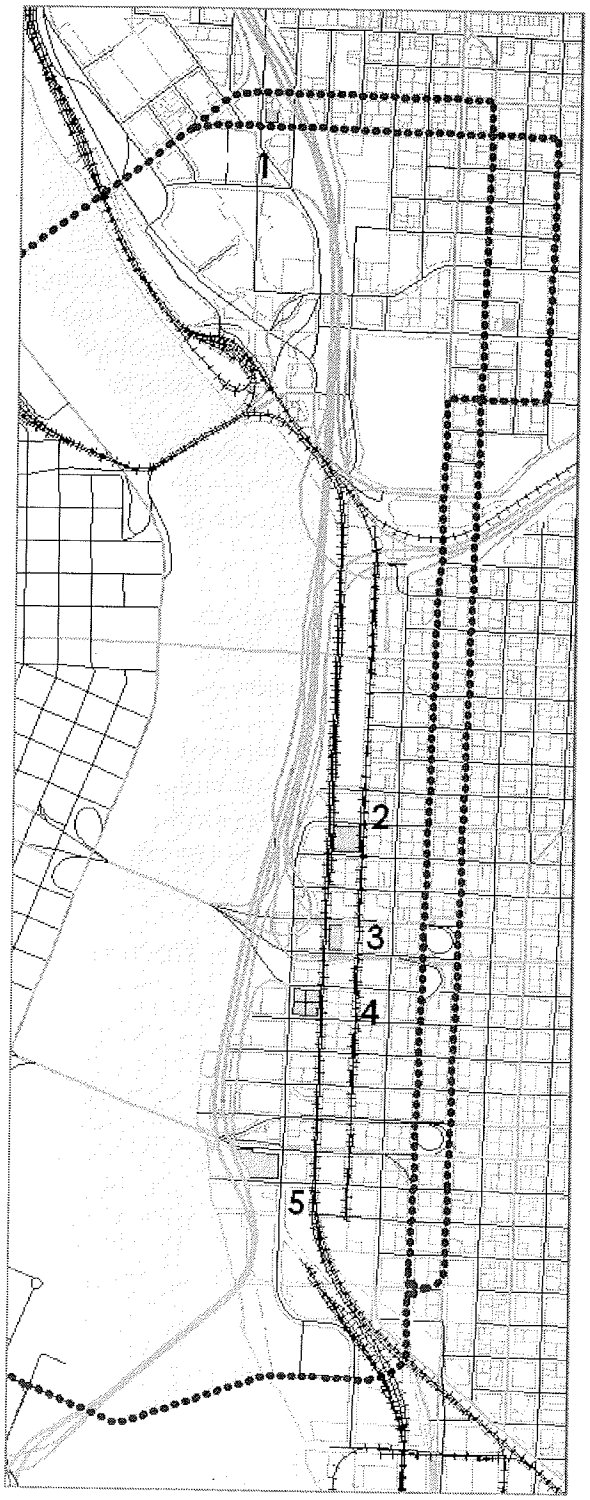
The *eastside* of Portland's Central City includes a wide range of buildings types, ranging from newer office towers and larger institutional and civic uses in the northern end to historic, vacant warehouses in the southern portion. Over the past decade, numerous significant historic warehouses have been renovated and occupied at much higher densities.

This reinvestment in and reuse of historic building stock is a recognized *first stage* of the urban real estate cycle. Lower cost renovated space attracts small, creative firms. Then, as occupancy and pedestrian activity increase, rents increase to a level that can support new construction.

The southern portion of the eastside alignment runs within one block of industrial sanctuary zoning. Recognizing market pressure to transform the aging warehouse stock within this centrally located industrial district, the City of Portland liberalized its zoning for the Employment Opportunity Subarea (EOS) in January 2007 to broaden the types of office and related uses considered appropriate for this district.

Examples of investment already occurring are described in the following table. This list is a sample only and by no means exhaustive.

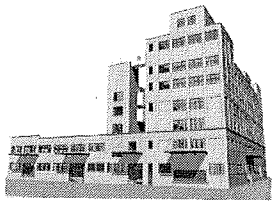
Figure 18. Recent Investment in Eastside Neighborhoods Planned for Streetcar



1. E. Alexander Building

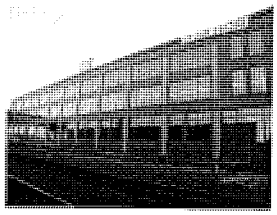
This former garage and inventor's workshop was renovated as office and commercial space in 2006. The developer is now beginning work on the full-block building immediately to the west.

2. Olympic Mills Commerce Center



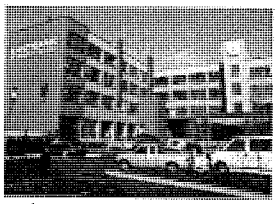
Renovation of this 172,000 square foot historic surplus grain mill is currently underway. Flexible work space will be ready for occupancy in early 2008.

3. Jones Cash Building



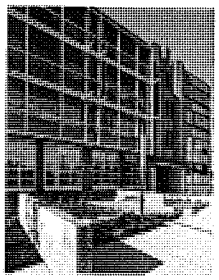
This 80,000 square foot former warehouse is one of Portland's first retail mail-order businesses; it was later renovated for use as a cold-storage warehouse. Portland firm Venerable Properties purchased and renovated the building in 2000 for creative workspace.

4. Eastbank Commerce Center



With renovation completed in 2002, this 160,000-square-foot former warehouse now houses light industrial facilities, office space, a restaurant and services under one roof with shipping, production and warehousing capabilities.

5. RiverEast Center



In 2006, this 91,000 square foot warehouse was remodeled and occupied by co-owners Group Mackenzie (architecture and engineering) and Coaxis (software development). The riverfront building features about 15,000 square feet of groundfloor space leased to Portland Boathouse Inc., including space for boat storage and public boat rentals.

2. Improvement to Land Value Ratios are Low Surrounding Planned Alignment.

Improvement to land value ratios are a clear indicator of the relative market worth of buildings to land. A low improvements to land value ratio can indicate that investment in an area is low enough that redevelopment of properties makes economic sense.[8]

On Portland's *westside*, an estimated 68% of new construction experienced post 1997 occurred on sites that had a *pre-development* building improvements to land value ratio of less than 0.5. For this redevelopment, on-site building improvements pre-1997 were valued at less than 50% of land value.

This data is compiled for sites for which there is complete valuation and square footage information covering pre-1997 and 2005 conditions.[9] An additional 19% of building square footage occurred on sites with improvements to land valuation of 0.5-1.0 and 13% on sites with improvements valuation that exceeded land valuation.

For Portland's westside, more than 200 acres (or 37%% of land area evaluated) within three blocks of the streetcar alignment had building improvements to land valuation ratios of less than 0.5 as of 1997. Despite substantial new investment, there is still substantial opportunity for continuing development on vacant and underutilized properties on Portland's westside.

Figure 19. Pre-1997 Improvement to Land Value Ratios of Westside Lots that Redeveloped from 1997-2005 (Portland Westside)

Improvement to Land Valuation Ratio	Tax Lots	Square Footage Developed	Percent of Square Footage Developed*
< 0.5	30	2,803,000	68%
0.5 - 1.0	11	767,000	19%
> 1.0	7	557,000	13%
Parcels w/incomplete data	90	3,101,000	---
Total	138	7,228,000	100%

* Note: Percentage distribution is for parcels with complete data available.

Source: Metro RLIS 1997-2005, E. D. Hovee & Company, LLC.

Applying these thresholds based on westside experience to eastside neighborhoods indicates strong potential for development stimulated with the extension of streetcar to the full Portland Streetcar Loop configuration as currently proposed. As was the case on the westside, a substantial portion of land within inner eastside neighborhoods at present supports only low value building investments – an important criterion in estimating the likelihood that redevelopment and increased investment will occur.

An estimated 37% percent of acreage within three blocks of the planned *eastside* alignment is associated with improvement to land value ratios of less than 0.5. This represents just over 120 acres of land that is either vacant or with low value building improvements at present. In effect, these sites can be considered as the most viable candidates for substantial redevelopment and new construction with an extension of streetcar to Portland's eastside.

An additional 6% of acreage within three blocks of the proposed eastside alignment (or close to 20 acres) falls within a ratio range of 0.5-1.0, representing a second (but smaller) tier of redevelopment candidates.

Figure 20. Improvement to Land Value Ratios within Three Blocks of Proposed Alignment (Portland Eastside)

Improvement to Land Value Ratio	Taxlots	Acres	Percent of Acreage
Less than 0.5	387	120.1	37%
0.5 - 1	83	19.8	6%
Over 1.0	461	187.7	57%
Excluded*	109	24.9	---
Total	1,040	352.5	100%

*Note: Excluded land includes right-of-ways and open space. This land was not included in the percentage allocation of land by improvement to land value ratio.

Source: Metro RLIS August 2007 update, E. D. Hovee & Company, LLC.

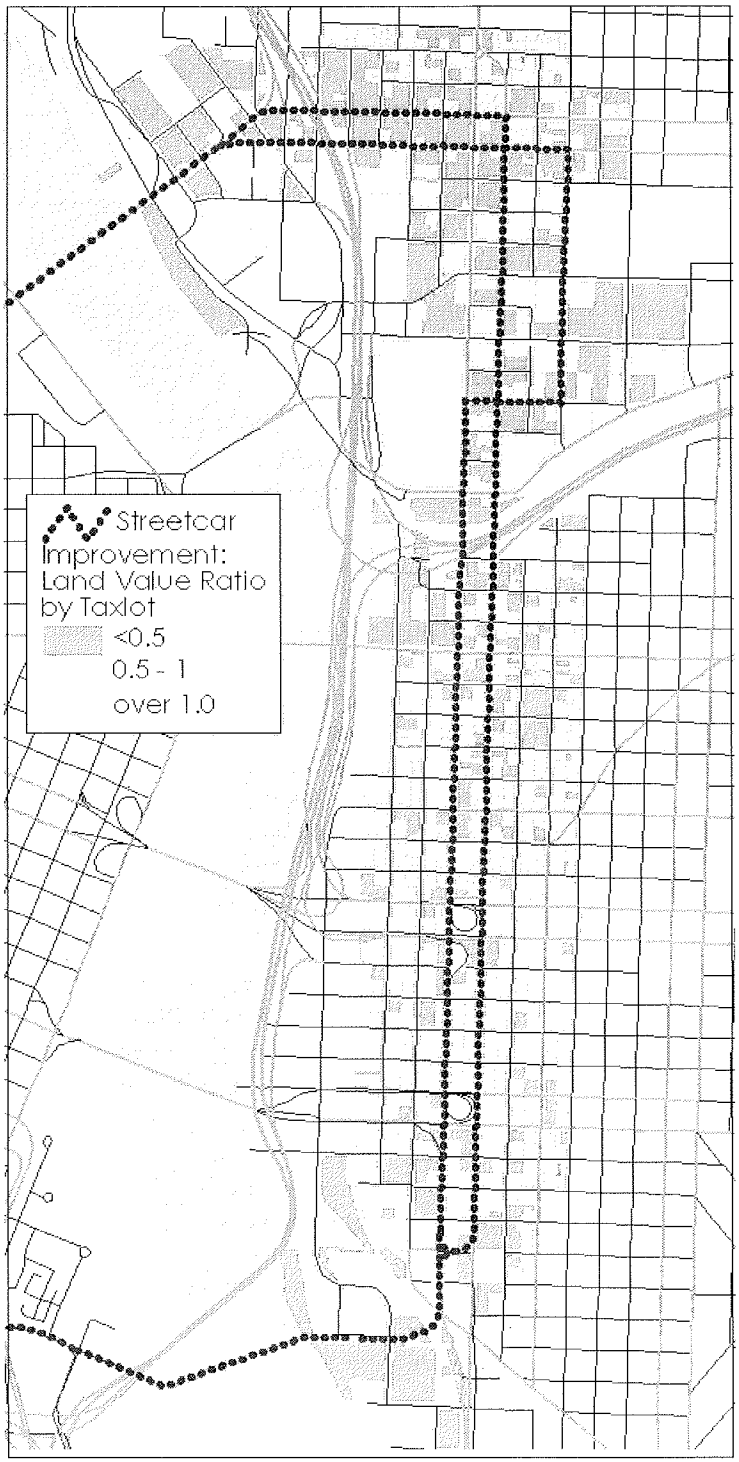
This measure does not ensure that all properties with low improvement values will eventually redevelop. Some low value buildings or even surface lots may provide income streams at very low risk compared with returns available from redevelopment.

However, given the strong correlation of sites with low valued building improvements on Portland's westside to subsequent redevelopment, these currently 'under-improved' sites clearly become front-runner candidates for streetcar oriented reinvestment and development.

A visual overview of the building to land value relationship for Portland's eastside is provided in the following map. This map indicates that under-improved land is distributed throughout the district, but is especially prominent in the Lloyd District (the northern portion of the planned eastside alignment).

The Lloyd District tends to have more contiguous whole block parcels with low improvement to land value ratios. By comparison, Central Eastside sites (south of the I-84 freeway) tend to be more fragmented and are more often situated in less than whole block configurations.

Figure 21. Map of Improvement to Land Value Ratios



Source: RLIS August 2007 update, E. D. Hovee & Company, LLC.

3. Significant New Development is Planned for the Proposed Alignment. Increased investment is already planned along the eastside alignment, despite the fact that complete funding has yet to be secured. (With funding not yet committed, it is too early to expect the market to fully respond to the catalytic potential of streetcar investment). Planned investment does, however, indicate the general trajectory of the neighborhoods for which streetcar introduction is planned.

Planned projects that have been shared with the authors of this updated Template 14 report are summarized below and organized within two categories:

- **Significant Projects** describe sizable projects dependent upon a development agreement with the City of Portland to proceed. These projects are highly dependent upon streetcar investment, for which developers are willing to commit to higher density construction.
- **Planned Projects** describe projects currently in planning phase, undertaken by property owners without city input. The size and value of Planned Projects has been estimated; project representatives have also rated the impact of streetcar investment on project plans and timing.

Significant Projects: There are two negotiations underway for two locally and regionally Significant Projects adjacent to the streetcar alignment. Streetcar development is a significant factor in both projects. Projects are mapped in Figure 23.

- **Convention Center Hotel (9):** The City of Portland has selected a hotel operator and development team for a two-block site adjacent to the Oregon Convention Center. Negotiations are underway to secure project financing. Developers state that the streetcar will provide access to the Pearl and OMSI Districts for convention visitors and significantly enhance the viability of the proposed hotel. Streetcar is also pivotal to redevelopment of the blocks adjacent to the Convention Center, which is necessary for bookings to grow.
- **Burnside Bridgehead (11):** This project was also listed above as a Development Area due to its magnitude. The four-acre site will be developed in a mix of uses; Phase I will focus on commercial and retail uses. The development team is now seeking tenants. Public commitment to streetcar is a key factor in negotiations with the city that include minimum site densities.

Other Planned Projects. The final category of anticipated investment is projects now in planning or construction phase that will be undertaken without city involvement.

The following table reports 20 projects identified to date (including the two significant projects detailed above). These projects represent a total estimated investment value of close to $1.2 billion. Private investment will only grow as streetcar funding is secured and the alignment is realized.

In the following table, all projects have been rated by project spokespeople in regard to their dependence on streetcar to move forward as planned. All but three project representatives describe their dependence on streetcar as 'high.'

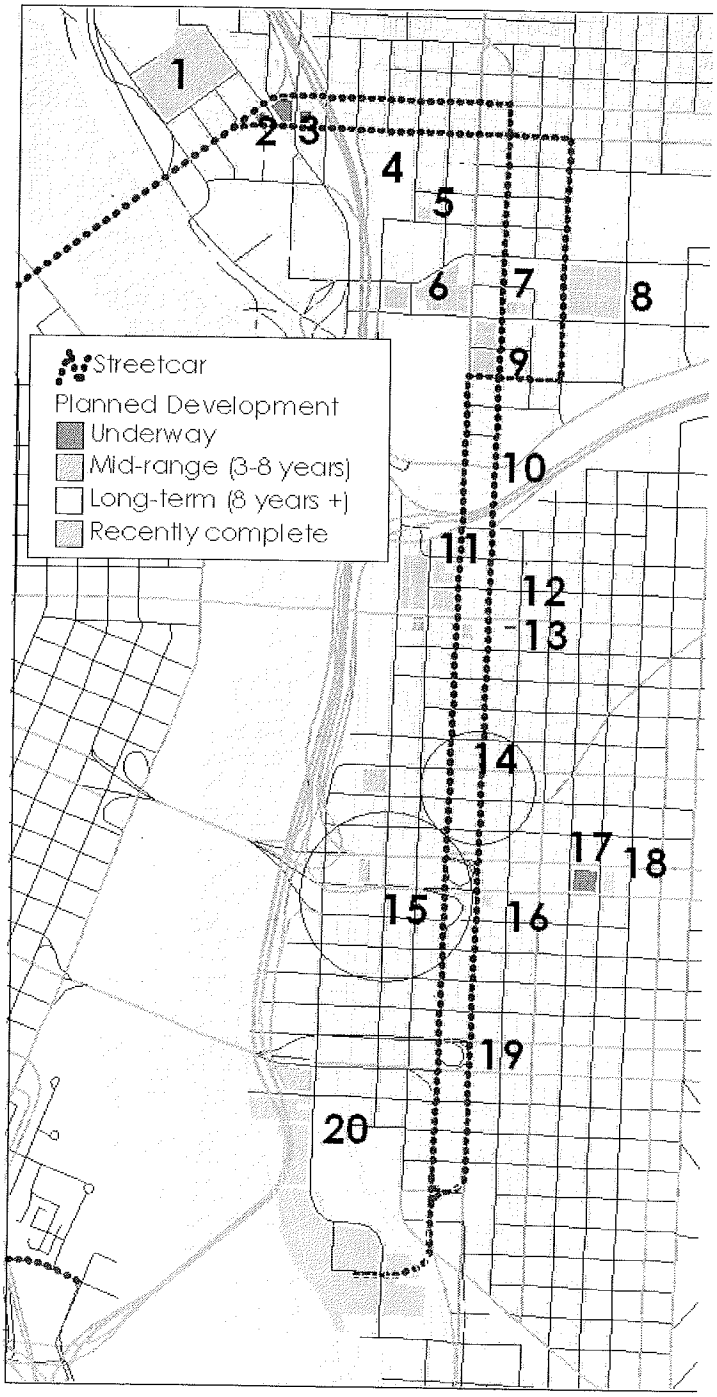
This list includes only eastside projects. However, the Portland Streetcar Loop Project will also support additional high density development on the westside by doubling the current frequency of service.

Figure 22. Planned Projects within Three Blocks of Eastside Streetcar

Project Name	Square Feet	Potential Value	New/Rehab Units	Use	Timing	Streetcar Dependence
1 **Blanchard Building** 501 N Dickson St *Carter MacNichol, Shiels Obletz Johnsen*	348,000	$70 million	Rehab	Office / Retail	2010+	High
2 **Left Bank** 240 N Broadway Blvd *Daniel Deutsch, Alora Properties*	66,000	$14.9 million	Rehab	Office / Retail	2007	High
3 **1618 N Vancouver Avenue** *Daniel Deutsch, Alora Properties*	20,000	$4.5 million	Rehab	Office / Retail	2007	High
4 **Bee Car Rental** NE 1st Ave & Weidler Blvd *Sara King, Portland Development Commission*	125,000	$36 million	New Units TBD	Residential	2010+	High
5 **Old Rosary Housing Site** NE Wasco & 2nd Ave *Sara King, Portland Development Commission*	50,000	$15 million	New Units TBD	Residential	2010+	High
6 **Schlesinger Holdings** Blocks 47-49 *Barry Schlesinger, Schlesinger Properties*	530,000 (Phase I)	$120 million	New	Office / Retail	2010	Medium
7 **Cosmopolitan Tower** NE Grand & Holladay St *Tom Gibbons, LRS Architects*	274,000	$82 million	New 204 units	Residential	2009	High
8 **Urban Village** NE 7th/9th/Holladay/Mult superblock *Hank Ashforth, Ashforth Pacific*	750,000	$300 million	New Units TBD	Office or Office/ Residential	Currently Marketing	High
9 **Westin Convention Center Hotel** NE MLK & Holladay St *Reed Wagner, Metro*	400,000 (Phase I)	$180 million	New	Hotel	2010+	High
10 **Rich's Deli** 430 NE Lloyd St *Joe Angel, Pacific Star*	35,000	$10.5 million	New Units TBD	Office / Residential	2010	High
11 **Burnside Bridgehead** East end of Burnside Bridge *Brian Bennett, OPUS*	365,000	$200 million	New	Office/ Retail / Residential	2010+	High
12 **United Finance** NE corner of Burnside & Grand *Richard Parker, United Finance*	33,500	$9.7 million	Rehab	Office	2010+	High
13 **Bside6** 340 SE 6th Ave *Lance Mars*	26,000	$5.5 million	New	Office	2007	High
14 **Burns Bros Inc. Properties** 4 blocks in CES *Bruce Burns*	Have long-term leases in place but have also been working with architects and feasibility consultants.				2010+	High
15 **Walt Pelett Properties** 5 blocks in CES Walt Pelett	Has considered offers for holdings				2010+	High
16 **514 SE Belmont St** *Mike Bolliger*	54,000	$19 million	New Units TBD	Retail / Residential	2010+	High
17 **Grand Central Building** 808 SE Morrison St *John Plew, Concept Entertainment*	37,600	$11.5 million	Rehab	Retail	2007	Low
18 **East of Grand Central** *John Plew, Concept Entertainment*	175,000	$60 million	New	Retail / Office / Residential	2010+	Low
19 **Burger King** 1525 SE Grand Ave *Joe Angel, Pacific Star*	40,000	$12 million	New	Office / Retail	2010+	High
20 **OMSI** 1945 SE Water Ave *Pat LaCrosse*	200,000	$79 million (phase I)	New	Institutional	2012+	High
TOTALS	**3,529,100**	**$1,229 million**				

Source: Development representatives; E. D. Hovee & Company, LLC.

Figure 23. Mapped Eastside Projects



Planned Projects Key

1 Blanchard Building
2 Left Bank
3 1618 N Vancouver Ave
4 Bee Car Rental
5 Old Rosary Housing Site
6 Schlesinger Holdings
7 Cosmopolitan Tower
8 Urban Village
9 Westin Convention Center Hotel
10 Rich's Deli
11 Burnside Bridgehead
12 United Finance
13 Bside6
14 Burns Brothers Inc. Properties
15 Walt Pelett Properties
16 514 SE Belmont St
17 Grand Central Building
18 East of Grand Central
19 Burger King
20 OMSI

Source: City of Portland, development representatives, E. D. Hovee & Company, LLC.

4. If Eastside Neighborhoods Mirror Westside Development Response, Eastside Development will Increase 65%. In 2005, an aspirational projection through 2025 was created for the proposed eastside alignment in which the rate and intensity of development mirrored that experienced along the westside alignment. The result was a 65% increase in the Central Eastside (CES) building stock and a 310% increase in the number of housing units anticipated. Details of the projection are summarized in the following table.[10]

Figure 24. Westside Development Experience Extrapolated to Eastside

Distance from streetcar	Land SF in redevelopment lots (2004)	Building SF in redevelopment lots (2004)	2007-2025 annual building dev.	Added building SF by 2025	Avg. zoned FAR	% of FAR realized 2007-2025	Land dev'd (SF) by 2025	Percent of land area vacant 2025*
1 Block	6,074,000	5,053,000	5.8%	4,752,000	5.9	90%	886,000	11%
2 Blocks	1,923,000	1,862,000	1.7%	429,000	5.1	74%	114,000	26%
3 Blocks	785,000	512,000	1.2%	71,000	3.8	62%	30,000	29%
3+ Blocks	707,000	687,000	1.0%	51,000	5.3	43%	22,000	16%
Total	9,489,000	8,114,000	2.0%	5,303,000	-		1,052,000	16%

Source: City of Portland, E. D. Hovee & Company, LLC.

The key ingredients in this Central Eastside development scenario were:

1. The westside track record of post-streetcar development trends;
2. Zoned FAR limits within the Central Eastside, and
3. Extent of existing development within the Central Eastside.

The zoned capacity of the CES is significant; its existing building stock is not. Applying westside experience – the percent of zoned FAR achieved by block from streetcar and the rate of development as a percentage of the existing building stock – to the CES produces an *aspirational projection* of over 5 million square feet of development that might be achieved within this district.

5. Eastside Development Forecasts Attribute 30-40% of Future Development Activity to Streetcar Investment. Two market studies have been completed for the eastside extension of the Portland Streetcar Loop project which provide a contextualized alternative to the aspirational projection summarized below.

Central Eastside Forecast: Development within the southern portion of the eastside extension – the Central Eastside Urban Renewal Area – was forecast in May 2007 May 2007 to inform tax revenue projections for the Central Eastside Urban Renewal Area.[11] This alternative forecast scenario was prepared for the more immediate purpose of issuing tax increment bonds based on a conservative estimate of future tax revenue growth. The long-term aspirational methodology for the entire eastside was accordingly modified to reflect a more conservative, bankable approach.

This modified approach was rooted in the specifics of the Central Eastside neighborhood, and also involved estimating prospective impacts of streetcar investment *in isolation* from other development influences. Key ingredients of this forecast were:

- 'Baseline' redevelopment trends covering documented activity over the past nine years were calculated from Multnomah County tax assessor records;
- The anticipated value and timing of known projects – both significant and planned, in the nomenclature of this report – were then layered onto baseline trend development; and
- A 'streetcar premium' was then estimated to reflect current market conditions with the addition of streetcar investment. This premium was the subjective assessment of economic development professionals familiar with the performance of the planned streetcar corridor over the past half decade. It reflects the most likely scale, land use type, volume and location of new investment along the corridor (for which a track record has not yet been established) should the corridor achieve a *tipping point* at which new construction can be supported.
- Two forecast scenarios were modeled, conservative and aggressive. The conservative scenario assumes no public involvement in supporting adjacent development. The aggressive scenario is predicated on additional public investment in traffic calming, streetscape improvements and development agreements along the alignment, to create the best possible pedestrian environment along the corridor (a key precursor to westside development along the alignment).[12]

Key conclusions of the 2007 market-based optimal investment/aggressive forecast are:

- Approximately 18% of projected investment in *building renovation* (much of which is already underway) can be attributed to streetcar investment;
- Up to 45% of projected investment in *new commercial construction* can be attributed to streetcar investment; and
- Up to half of projected *new residential construction* can be attributed to streetcar investment – an arena where streetcar clearly makes a difference based on westside experience.

Details of the Central Eastside urban renewal forecast scenarios are included with the following table.

Figure 25. Central Eastside Development Projections May 2007

	Commercial SF		Housing	
	Rehabilitated	New	Units	Notes
Conservative Scenarios				
a) Trend	2,325,000	-	-	Continuation of observed trends
b) Bridgehead	-	487,500	150	3 towers, reduced by 25%
c) Planned Projects	-	334,000	474	Plans delayed, reduced
d) Streetcar	512,000	480,000	-	Office/flex construction only
Total	2,837,000	1,301,500	624	
Subtotal w/o Streetcar	*2,325,482*	*821,500*	*624*	a + b + c
% Attributed to Streetcar	*18%*	*37%*	*0%*	d as percent of total
Aggressive Scenarios				
a) Trend	2,325,000	-	-	Trend scenario remains unchanged
b) Bridgehead	-	650,000	200	As profiled by PDC – value of increased density attributed to streetcar
c) Planned Projects	-	354,000	713	As profiled by developers – value of increased density attributed to streetcar
d) Streetcar	512,000	480,000	270	Commercial + housing with enhanced investment
Total	2,837,000	1,484,000	1,183	
Attributed to Streetcar	*512,405*	*662,500*	*559*	*Total of basic streetcar plus related public investment enhancements*
% Attributed to Streetcar	*18%*	*45%*	*47%*	

Source: E. D. Hovee & Company, LLC *Central Eastside Development Scenarios*, May 2007.

When projected development is reported in terms of *market value*, the total estimated value for the aggressive scenario is $994 million (in 2007 dollars). Thirty percent of the projected square footage is attributed to streetcar's influence; if an equivalent share of the projected value is attributed to streetcar the result is $298 million in development associated with streetcar investment.[13]

With an estimated total construction cost of $57 million for the CES portion of the streetcar alignment, the cost to benefit ratio according to this market-based development forecast is over 5:1.

Lloyd District Forecast: Lloyd District development was forecast in March 2008 for an area corresponding to roughly one-quarter mile around the planned alignment, totaling 305 acres within 930 taxlots. The bulk of the Lloyd District area considered is zoned RX, a dense, mixed-use zone dominant in the Central City. Industrial zones are found north of the Broadway bridge and west of I-5, and along the river (corresponding to the rail tracks). The northernmost lots within this geography are in residential zoning.

Lloyd District differs from the Central Eastside portion of the planned streetcar extension as it has seen fairly significant development activity (just over one million square feet) over the past 10 years. In the following table, realized development trends have been projected forward to estimate development within a 20 year horizon in the absence of significant public investment in

the district such as highway, parks or streetcar infrastructure investment. Total added developed square footage within a future 20 year timeframe is approximately 2.2 million.

Figure 26. Baseline Trend (1997-2007) & Development Projection (2008-2028)

	Development Experienced (1997-2007)					Base Projection (07-27)	
Building Type	Buildings	SF per Building	Total SF	Development % of Total	# of Units	Buildings In 20 Years	SF in 20 Years
Low-rise commercial	8	6,300	50,600	5%		16	101,200
Apartments	2	168,800	337,500	31%	150	4	675,000
Hotel	1	147,300	147,300	14%		2	294,600
Office	2	226,900	453,700	42%		4	907,400
Condos	2	46,400	92,800	5%	50	4	185,600
Total	15	72,127	1,081,900	100%	200	30	2,163,800

Source: Multnomah County Tax Assessor, E.D. Hovee & Company, LLC.

As with the Central Eastside, projects in planning phase were then profiled, providing some detail on future development such as approximate size and use. Eight projects were profiled, totaling 2.5 million square feet as described by development representatives.

Because development planning is not always realized, or realized at the pace or to the scale initially conceived, two versions of each project are suggested: an 'as described' version and a revised version, which reflects a more conservative build out. For projects without public sector involvement, a 50% reduction in size has been applied. For projects with public sector involvement – such as land ownership or anticipated project subsidy – a 25% reduction in size has been applied, reflecting the greater likelihood that projects with public backing and involvement come to fruition on the scale realized.

Figure 27. Known Lloyd District Planned Development Projects

Project Name & Address	Square Feet	Est. Value	Use	Timing	Streetcar Dependence	Public – Private	Revised SF Estimate	Revised Value Estimate
Blanchard Building 501 N Dickson St	348,000	$70 m	Office / Retail	2010+	High	Yes	261,000	$52 m
Bee Car Rental NE 1st Ave & Weidler Blvd	125,000	$36 m	Residential	2010+	High	Yes	93,750	$27 m
Old Rosary Housing Site NE Wasco & 2nd Ave	50,000	$15 m	Residential	2010+	High	Yes	37,500	$11 m
Schlesinger Holdings Blocks 47-49	530,000 (Phase I)	$120 m	Office / Retail	2010	Medium	No	265,000	$60 m
Cosmopolitan Tower NE Grand & Holladay St	274,000	$82 m	Residential	2009	High	No	137,000	$41 m
Urban Village NE 7th/9th/Holladay/Mult	750,000	$300 m	Office or Office/Res	market	High	No	375,000	$150 m
Westin Convention Center Hotel NE MLK & Holladay St	400,000 (Phase I)	$180 m	Hotel	2010+	High	Yes	300,000	$135 m
Rich's Deli 430 NE Lloyd St	35,000	$11 m	Office / Residential	2010	High	No	17,500	$5 m
Total	2,512,000	$814 m					1,486,750	$157 m
Housing	841,500	$288 m					464,500	$190 m
Commercial	1,270,500	$345 m					722,250	$135 m
Hotel	400,000	$180 m					300,000	$482 m

Note: Square footage for the Urban Village and Rich's Deli projects have been split between housing and commercial categories.

Source: Development contacts, E.D. Hovee & Company, LLC.

Not all of these planned projects – half of which are anticipated to occur beyond 2010 – may be realized, but they are considered representative of projects that may be undertaken in this district even if the responsibility is ultimately transferred to a different developer. The conservative version of these known projects has thus been considered as *part of* the base trend projection (from which 2.1 million square feet of development is anticipated over a 20 year period).

How does anticipated district development projection change with the introduction of streetcar? The difference between the revised (conservative) and 'as described' version of known projects is considered the 'streetcar premium,' which brings development to a density that the market may not deliver to this area in the absence of streetcar investment. This streetcar premium is roughly 1 million square feet, an increase of 69% over the 1.49 million square feet of development encompassed within the more conservative outline of known projects.

When this premium – 69% – is applied to the baseline trend (2.1 million square feet), total expected development increases to 3.65 million square feet. This translates into an annual square footage increase within the district of 1.9%, 0.8% of which is attributed to streetcar.

Figure 28. Lloyd District Rate of Development With & Without Streetcar

1	Baseline trend continuation over 20 years	2,163,800
2	Full version of known projects	2,512,000
3	Reduced version of known projects	1,486,800
4	Difference: known projects SF attributed to streetcar	1,025,300
5	Percentage of SF attributed to streetcar	69%
5	Total 20 year trend development + streetcar premium (69% increase)	3,650,600
7	Streetcar portion of total projected development	1,486,800
8	Existing district SF	9,800,700
9	Annual Increase in SF	1.9%
10	Annual Increase attributable to Streetcar	0.8%
11	Full value of known projects	$814 m
12	Reduced version of known projects	$482 m
13	Difference: known projects value attributed to streetcar	$331 m
14	Streetcar value extrapolated to total district development (45% increase)	$480 m

Source: E.D. Hovee & Company, LLC.

In effect, 40% of the composite Lloyd District market based development can be attributed to extension of the Portland Streetcar Loop with this forecast methodology. This composite 1.9% annual rate of development projected for the Lloyd District with streetcar is slightly below the 2.0% rate actually experienced on Portland's westside from 1997-2004.

Likewise, a portion of the dollar value of new development the district experienced can be attributed to the extension of the Portland Streetcar Loop. For known projects alone, the streetcar-associated portion of development value is over $331 million. If this amount is increased by 45% (the difference between line 4 and line 7 in the above table), the total value of projected streetcar-associated development increases to $480 million. With an estimated project cost of $38 million, the development that this investment could leverage is over 13 times this amount.

Figure 29. Cost:Value Estimates for Eastside Extension

District	Cost	Development Value*	Cost: Value Ratio
Central Eastside	$57,000,000	$298,000,000	5
Lloyd District	$38,000,000	$480,480,000	13
All	$95,000,000	$778,480,000	8

Source: E.D. Hovee & Company, LLC.

D. Public Incentives Beyond Transit Are Available

Portland's westside experience demonstrates the importance of public commitment to urban development through a myriad of approaches that reinforce and compliment streetcar investment. The tools available to encourage high density development along the proposed eastside alignment are summarized below.

1. Public-Private Development Agreements. Development agreements were crucial to high density development along the westside alignment. For the Hoyt Street Properties' original 40 acres at the northern end of the westside alignment, density minimums were increased incrementally for three separate public investments: 1) removal of an overhead ramp that bisected the property, 2) choosing and constructing a streetcar alignment adjacent to Hoyt Street property, and 3) development of a park on land donated by Hoyt Street Properties. Hoyt Street Properties has stated that without the streetcar and the accessibility it provides, the densities achieved would not have been possible.

On Portland's eastside, there are currently two specific projects underway in which development agreements play a key role – the Burnside Bridgehead project (four acres) and the Convention Center Headquarters Hotel (two city blocks). These projects are detailed on page 28.

Further development agreements are anticipated for at least a portion of properties within the Significant Development Areas depicted in Figure 10. In total, these areas represent *close to 250 acres* that are either in consolidated ownership, public ownership or for which interest in high density development has been expressed by private property owners.

2. Streetscape Investments. The City of Portland is committed to creating the pedestrian oriented environment along the alignment that best supports mixed use development at urban densities. Key to this is traffic calming measures which ensure frequent opportunities for pedestrian crossings. The Portland Streetcar Loop Project includes 41 new signalized crossings along the proposed 3.35 mile eastside alignment.

Figure 30. New Signals Included in Streetcar Funding

Streetcar Segment	New Signals
Pearl District (NW)	6
Broadway Bridge to NE 1st	2
NE 3rd - NE 7th	7
NE Wasco - I-84	7
NE Davis - SE Ankeny	8
SE Stark - SE Clay	10
SE Clay - OMSI	1
Total	41

Source: *Portland Streetcar Loop Transportation Management Plan Draft*, November 19 2007; E. D. Hovee & Company, LLC.

Additional priority streetscape investments include sidewalk improvements throughout the corridor (including street trees and eliminating driveways where possible), discouraging future auto oriented land uses, increasing pedestrian connections to the river and riverfront esplanade along four east-west streets, ensuring connections to the region's bike networks, and improving trail systems within a greenspace that intersects the alignment.

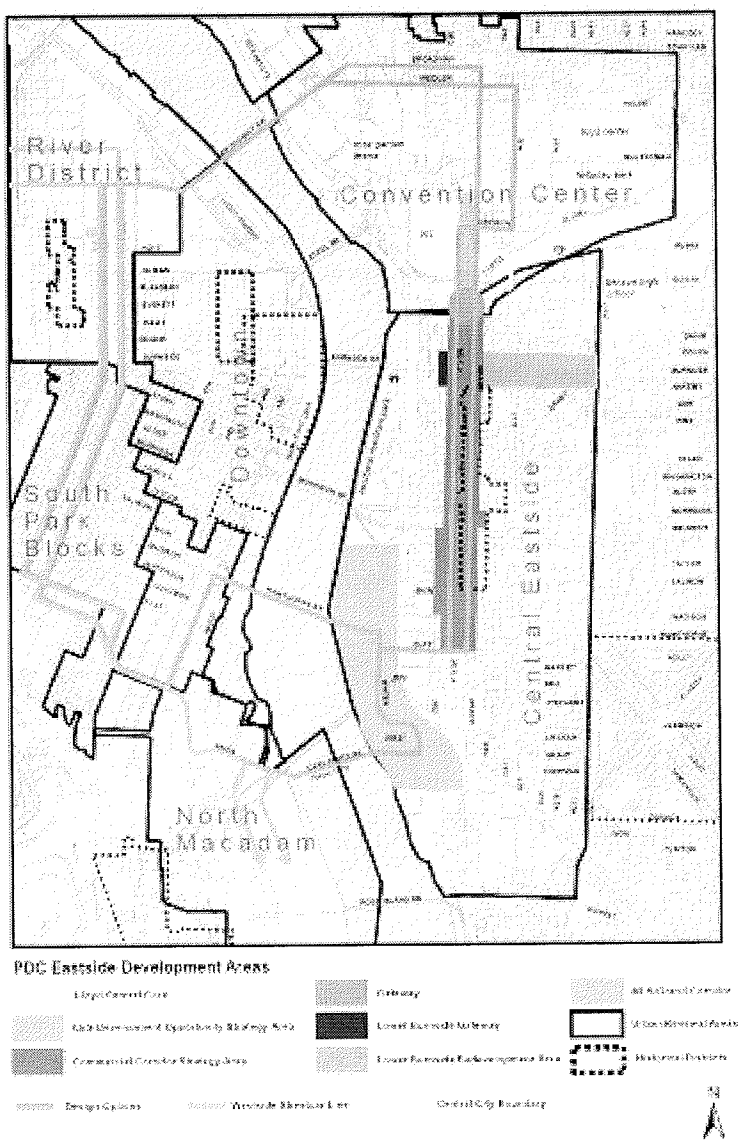
More significant aspirational streetscape investments include an additional I-84 auto crossing to reduce traffic congestion on the existing MLK and Grand north-south bridges and a park bridge across I-5 within the Lloyd District to connect residents with the river.

3. Urban Renewal Districts. In Portland's westside, Urban Renewal has been proven as a powerful tool in generating up-front funds for infrastructure investment, including park development and road improvements. The planned eastside alignment is also encompassed entirely by in-place Urban Renewal Districts, the most successful tool identified to date in generating redevelopment funds.[14] (As is true elsewhere in the U.S., tax increment districts freeze collected tax revenue and direct future revenue growth to redevelopment projects for the lifetime of the district.)

In Portland, tax increment funds can be used to support both streetcar construction and adjacent catalyst development projects. Three districts encompass the proposed completion of the Portland Streetcar Loop:

- **River District (Westside):** The streetcar extension proposed at NW 10th and Lovejoy is in the middle of this westside district, which extends from the existing Portland Streetcar alignment to the proposed Willamette River streetcar crossing on the Broadway Bridge.
- **Convention Center (Eastside):** This Urban Renewal District encompasses the proposed new alignment from the eastside of the Broadway Bridge, through the Lloyd District to the streetcar's crossing of the I-84 freeway. Tax increment funds are planned for acquiring properties and supporting additional housing development, in addition to supporting streetcar construction.
- **Central Eastside:** The time frame for this district was recently extended to allow support of the Burnside Bridgehead project and the Burnside Couch couplet (each further described below). District funding will also support streetcar construction. This district encompasses the remainder of the proposed eastside extension through its southern Willamette River crossing on the planned light rail bridge (north of the Ross Island Bridge), connecting back to the South Waterfront area on Portland's westside.

Figure 31. Urban Renewal Areas



Source: City of Portland.

4. Burnside Street Investments. The Burnside Bridgehead project has been previously described in this report. This four-acre project can accommodate significant jobs and housing; current Phase I plans center on office and retail uses. Urban Renewal funds are currently allocated to incent maximium density at this pivotal site.

The eastside Burnside-Couch couplet is a second project that will impact the Burnside vicinity, roughly the mid-point of the eastside alignment. The project will transform Burnside, a major traffic arterial, into a one-way street eastbound, while Couch (one block to the north) will carry westbound traffic.

Anticipated project benefits include:

- A significantly improved pedestrian environment by providing curb extensions to narrow pedestrian crossing distances across Burnside Street, wider sidewalks, and traffic signals at all intersections;
- A significantly improved biking environment, and reduced traffic conflicts between autos and bicycles, due to a striped bike lane; and
- Enhanced vehicle and transit access and traffic flow through the realignment of Burnside and Couch Streets into a one-way couplet system between the Burnside Bridgehead project and E. 14th Avenue.

Engineering for the couplet is underway as of January 2008. Construction is anticipated to begin in spring 2009 and be completed by summer 2010.

IV. STREETCAR-DEVELOPMENT BENEFIT METRICS

Based on this updated documentation of the streetcar-development nexus, the following *benefit metrics* are offered against which future Small Starts projects might be assessed. While drawn largely from Portland experience and projection, the metrics have broader national applicability as well:

1. **Density of New Development:** Development experienced on Portland's *westside* (between 1997 and 2004) has produced residential plus job densities estimated at YY persons per acre. Market based forecasts for the *eastside* indicate potential for ZZ persons per acre with streetcar extension.

2. **Return on Investment:** Portland's *westside* has captured a *total redevelopment* investment more than 24 times streetcar cost (through 2005). Market-based development projections have been prepared for the *eastside,* encompassing both the Central Eastside Urban Renewal Area and the portion of the Lloyd District within three blocks of the planned alignment. Anticipated value of added *development attributed to streetcar investment* is projected at $778 million versus streetcar project cost of $95 million, for an ROI of 8:1.

3. **Redevelopment Potential:** On Portland's *westside*, approximately 37% of land area within three blocks of the streetcar alignment had improvements to land valuation ratio (pre-streetcar construction) of less than 0.5:1. For Portland's *eastside*, a similar 37% of the proposed corridor extension is associated with a less than 0.5:1 ratio (as of 2007).

4. **Zoned Development Capacity:** *Westside* development experienced post-streetcar to 2004 within three block of the installed Portland Streetcar system has been three times the previously zoned capacity of development. For the proposed *eastside* extension, estimated development capacity within three blocks of the proposed alignment is more than six times existing square footage.

5. **VMT Reduction:** As the regional planning agency for the Portland metropolitan area, Metro has calculated that areas with *good transit and mixed use* experience 9.8 vehicle miles per day of travel per capita – compared with 21.8 miles per day for areas of the region without either good transit or mixed use. The per capita VMT reduction with streetcar-related development (both westside and eastside) is estimated at 55% compared with the suburban greenfield development alternative.

6. **Reduced Carbon Footprint:** Preliminary evaluation consistent with VMT reduction and urban building efficiencies indicates an approximately 65% savings in transportation and development footprint for urban residential use and a 45% reduction for employment use compared to the suburban greenfield development alternative (both westside and eastside).

APPENDIX A. PREPARERS PROFILE

E. D. Hovee & Company, LLC has served public, non-profit and private development clients both in and outside the Pacific Northwest since 1984. The firm has considerable experience in evaluating the nexus between transit and economic development. Within the Portland metro area, E. D. Hovee & Company has conducted transit-economic development assessments including:

- Central Eastside URA development projections with and without streetcar for the Portland Development Commission (2007)
- Portland Streetcar development impact analysis for Portland Streetcar Inc. (2005)
- Evaluation of effects on business and property values of Portland Transit Mall refurbishment and light rail extension – including both long-term valuation and shorter term construction impact assessments (2004-2005)

Both in and outside Portland's Central City, E. D. Hovee & Company, LLC has been involved in a wide range of transit and economic development assessments including light rail impact and station area planning (east, north, west and south MAX/LRT corridors), associated smaller city development (at Gresham and Hillsboro LRT termini). Central City development assessments have been conducted in the Pearl, Old Town, Downtown core, West End, University, South Waterfront, Lloyd and Central Eastside Districts over the last 20+ years.

Outside the Portland metro area, E. D. Hovee & Company, LLC has experience with urban redevelopment throughout the U.S. on behalf of cities, private firms and non-profit organizations such as the National Main Street Center and National Trust for Historic Preservation. The firm has conducted transit-economic development assignments in communities as diverse as West Orange (NJ), Santa Cruz (CA), SeaTac (WA), and Ketchikan (AK).

This streetcar-development report has been prepared by Tess Jordan, Senior Economic Planner and Eric Hovee, Principal.

END NOTES

[1] 2005. *Portland Streetcar Development Impacts*, E. D. Hovee & Company, LLC.

[2] An FAR of 6.0:1 indicates that building square footage is six times land area of the site occupied.

[3] 2005. *The Cost of Congestion to the Economy of the Portland Region.* Economic Development Research Group.

[4] 2002. *The Rise of the Creative Class: And how it's Transforming Work, Leisure, Community and Everyday Life.* Richard Florida.

[5] 2004. *The Young and the Restless: How Portland Competes for Talent.* Joe Cortright and Carol Coletta. www.Restlessyoung.com/public/pdf/Portland.pdf

[6] A floor area ratio (FAR) is defined as building square footage *divided by* square footage of land (or site) area.

[7] Larger scale maps for each station and vicinity are available; see City of Portland Comprehensive Plan Designations.

[8] Data for improvements to land valuation is available in most communities using tax assessor data. While not all tax assessments reflect 100% of market value, the analysis is useful so long as land and improvements are assessed in a similar ratio to market, or if varying ratios can be adjusted to a similar proportion of market.

[9] Excluded from the analysis are lots identified as having individual condominium units (an estimated 6,753 tax lots) as full assessor's information pre- and post-development is not available. Analysis is preliminary and subject to refinement based on further evaluation of pre-1997 and 2004 data sets.

[10] 2005. *Portland Streetcar Development Impacts*, E. D. Hovee & Company, LLC.

[11] 2007. *Central Eastside Development Scenarios, May 27, 2007*, E. D. Hovee & Company, LLC.

[12] Development projections were itemized and isolate the impact of the Burnside Bridgehead project, the remaining planned projects (in May this included only six projects, versus the 20 identified for this report) and streetcar investment. For the conservative scenario, the density of development assumed for the Burnside Bridgehead and planned projects was decreased from developer reports by 25-50%.

In the aggressive scenario, projects are assumed to move forward at the full density envisioned by developers. The increase in density – the difference between the conservative and aggressive scenarios – has been attributed to streetcar (and accompanying traffic calming measures) as the catalyst that will propel the Central Eastside District to densities beyond what the market is currently delivering.

[13] Investment values are estimated in nominal (current) dollars rather than future inflated and/or discounted dollars.

[14] The two eastside urban renewal areas are Central Eastside and Oregon Convention Center (OCC). As OCC is being sunsetted, it currently does not have the ability to participate in or benefit from the stimulus of added private investment.

MPAC Worksheet

Agenda Item Title (include ordinance or resolution number and title if applicable): Housing Need Study and Affordable Housing Inventory

Presenter: Gerry Uba and MTAC representatives

Contact for this worksheet/presentation: Gerry Uba

Council Liaison Sponsor: Councilor Robert Liberty

Purpose of this item (check no more than 2):

Information ✓
Update
Discussion ✓
Action

MPAC Target Meeting Date: February 13, 2008

Amount of time needed for:
Presentation: 20 minutes
Discussion: 15 minutes

Purpose/Objective (what do you expect to accomplish by having the item on *this meeting's* agenda): (e.g. to discuss policy issues identified to date and provide direction to staff on these issues)

The findings of two important projects related to housing choice conditions in the region will be presented to you. The Metro Council approved the affordable housing inventory and a region-wide housing needs assessment in the spring of 2007. As part of the 2040 New Look and Greatest Places efforts, the findings of these projects would be useful for addressing policy actions that can increase housing supply and entice private and public sectors to provide diverse range of housing types.

MPAC is requested to discuss and comment on the results of these projects, and to provide suggestions to Metro Council on how the results of these projects can be used to refine current housing choice planning efforts and existing housing choice policies.

Action Requested/Outcome (What action do you want MPAC to take at *this meeting?* State the ***policy*** questions that need to be answered.)

MPAC is requested to use answers to the following questions to suggest planning and policy actions to Metro Council:

1 How would you like to address current and predicted distribution of "low income singles and working class poor" households across the region? Does it really matter where these households live now and in the future? Would local governments like to reverse the trend?

2 When MPAC considers forecast and scenarios of where growth will go in the future, would you like to have the information take into consideration the eight household categories?
3 What are other applications you can see regionally and locally for the use of the housing need findings by Metro and local governments?
4 How should we measure the region's success toward providing housing choice for households in the region?
5 Is any local government interested in this presentation in their jurisdiction?
6 Which organizations should this study be presented to and what questions should we ask them?

Background and context:

In January 2007, the Metro Council made changes to the Functional Plan Title 7 (Housing Choice), and requiring local governments to assist Metro in the biennial affordable housing inventory. In Summer 2007, several public agencies assisted Metro to inventory affordable housing units in the region that used public subsidy. The agencies include Housing Authorities of Clackamas County, Portland/Multnomah County, Washington County, and Vancouver, Washington, and Portland Development Commission, and Cities of Beaverton, Gresham, Hillsboro, Portland, and Tigard.

The inventory of government-subsidized housing is the first inventory of its kind in the region, by including housing in all jurisdictions from a variety of funding sources. It reflects the changes identified in the Functional Plan Title 7, in 2007 that move us toward collecting data, in partnerships, to identify progress on meeting regional goals.

In March 2007, Metro Council supported efforts to produce a region-wide affordable housing needs assessment, as recommended by the 2006 Housing Choice Task Force. Subsequently, Metro signed an Intergovernmental Agreement with Portland State University to conduct the assessment. The methodology used in the new need assessment is a major shift from the methodology that was used to develop the 2000 housing needs assessment and which was used as the basis of the affordable housing targets in Title 7. The 2007 housing need methodology is based directly on projections of the demographics of housing consumers in this region, as well as their tenure and location choice. This approach allows us to estimate the demographic groups that are most cost burdened by housing costs.

The need assessment report and inventory summary (Fact Sheet) contain closely related new information, that, together will help the region to establish a baseline understanding of housing demand and supply in the region, by jurisdiction, tenure/housing type and housing cost. The findings should give the region insight into current and future need of various types of housing, including affordable housing, in Centers, Corridors and other locations as well as the needs for future urban areas.

MTAC discussed the study and its results on December 19, 2007 and January 16, 2008, and created an ad hoc team to assist Metro staff to frame the meaning of the results for MPAC discussion. Hence, MTAC representatives will participate in the presentation to MPAC on February 13, 2008.

What has changed since MPAC last considered this issue/item?

The proposed amendments to the Regional Framework Plan and Urban Growth Management Functional Plan Title 7 (Housing Choice) that were based on the recommendations of the 2006 Housing Choice Task Force was discussed by MPAC in November 2006 and January 2007. MPAC (and MTAC) comments and recommendations were used by Metro Council to complete the amendment in April 2007.

Following is the summary of the current housing choice policies and strategies in Title 7 pertaining to local jurisdictions:

- Ensure diverse range of housing types
- Increase opportunities for dispersed affordable housing
- Increase opportunities for all income groups to live in affordable housing
- Assist Metro to inventory affordable housing
- Adopt affordable housing targets for the purpose of gauging progress (Note: Two cities – Beaverton and Portland – adopted the affordable housing goals in 2005)

In response to the Housing Choice Task Force recommendation to develop new permanent regional resources for affordable housing especially in the 2040 Centers and Corridors, the Metro Council allocated $1 million as seed money for the creation of a $10-$20 million Regional Housing Choice Revolving Fund. The intent is to leverage $9-$19 million in matching contributions from public, private and charitable organizations to create the regional fund, which would be managed by an experienced nonprofit organization.

As stated earlier, Metro conducted an inventory of affordable housing units with the assistance of local governments and other public agencies, and also conducted a region-wide housing needs study.

What packet material do you plan to include? (must be provided 8-days prior to the actual meeting for distribution)

- *Executive Summary: Affordable Housing Needs Study for the Portland Metropolitan Area* (dated November 20, 2007)
- *Fact Sheet -- Regional Affordable Housing Rental Housing Unit Inventory (Housing that Used Public Subsidy)* (dated December 21, 2007)

What is the schedule for future consideration of item (include MTAC, TPAC, JPACT and Council as appropriate):

Metro Council will discuss the final draft of the housing needs study in late March or early April 2008, and direct staff on what to do next.

AFFORDABLE HOUSING NEEDS STUDY FOR THE PORTLAND METROPOLITAN AREA
DRAFT FINAL REPORT

NOVEMBER 20, 2007

Executive Summary

The purpose of this report is to respond to the recommendations of the Regional Housing Choice Task Force by providing information to guide housing choice policy for the Metro Council.

In particular, the objectives of this project were to:

- Estimate current and future affordable housing need for the Metro region;
- Describe the distribution of households by income, age, and size across the metro region;
- Describe the tenure of these households and the type of housing they will choose;
- Identify and describe those household types that are most likely to struggle to meet the cost of housing based on their income; and
- Make recommendations for improving analysis of affordable housing need in the future.

Our approach to this task was to use output from the *Metroscope* model, using the base case scenario, to forecast the housing consumption decisions of households from 2005 to 2035. We chose the *Metroscope* model after also considering the State of Oregon's Housing/Land Needs model. We concluded from examining the assumptions and abilities of each model that *Metroscope* is better able to offer the Metro Council the insight into the housing market required to inform housing choice policy.

The *Metroscope* model incorporates housing supply and demand for the entire four-county metropolitan region (Multnomah, Washington, Clackamas, and Clark counties). The region comprises a single housing market; residents travel throughout the region to work, shop, and socialize. Thus, it makes little sense to examine any one county in isolation. While this report does not include the results for Clark County, its impact on demand and supply of housing in the rest of the region is taken into account in the *Metroscope* model and is reflected in the results presented here.

Given the assumptions of the *Metroscope* model (described in Section 2), we address several questions, including:

- Where[1] will household growth occur?
- What kinds of households will grow?
- What kinds of housing will these households live in?
- What percentage of their income will they pay for housing?
- What demographic groups are most cost-burdened and where do those households reside?

Below, we offer a summary our findings regarding each of these questions.

[1] The distribution of households is analyzed and presented in County Subareas (see accompanying map).

Where will household growth occur?

The number of households in the three-county portion of the metropolitan region will grow by 59 percent from 2005 to 2035, from 624,700 households in 2005 to 993,900 in 2035 (i.e., under *Metroscope* Base Case Scenario). The subareas (see accompanying map) with the greatest growth in the number of households include the Happy Valley area (subarea 7) and Canby area (subarea 10). These areas will each grow by about 50,000 households, more than tripling their current numbers.

What kinds of households will grow?

By 2035, the percentage of householders 65 or over will grow from about 18 percent in 2005 to about 27 percent, while the percentage of householders in the other age groups fall slightly. The income distribution of households will also change, with households earning the lowest household income (less than $15,000) rising from 11.3 percent in 2005 to 13.5 percent in 2035. The proportion of households with the highest incomes ($100,000 or more) will also rise from 14.7 percent to 16.4 percent. Household size will be fairly stable between 2005 and 2035. The percentage of households with two people will drop from 32 to 30 percent; the percentage of households with children will remain about the same at just over 35 percent.

What kind of housing will they live in?

From 2005 to 2035, the percentage of renters will fall from 37.9 percent of all households to 32 percent of all households. The share of both rental single family and rental multifamily housing will fall. This loss in market share by rentals is captured in large part by the rise in owner-occupied multifamily housing, which doubles both in raw numbers and in terms of its share of total units, from 4 percent of total households in 2005 to about 8 percent in 2035. Owner-occupied single-family housing will also see its share rise from 58 percent today to 60 percent in 2035.

The demographic groups most likely to choose rental multifamily housing are the young, low-income, single-person households. Rental single-family units attract young, low-income families with children. Owner-occupied single-family housing is chosen by middle-age, middle and upper-income families with children. Owner-occupied multifamily housing is most popular with older, single-person households of all income ranges. Among householders 65 and older, the share living in owner-occupied multifamily housing will rise from just over 4 percent in 2005 to over 10 percent in 2035. However, even for the elderly, owner-occupied multifamily housing is a very small part of the housing market. As discussed in a recent report for Metro by Portland State University (Neil et al. 2006), the probability of moving declines with age; thus, attempts to significantly increase the share of owner-occupied multifamily housing will require appealing to 55-64 year old householders.

What percentage of their income will they pay for housing?

Across the three-county metro region, the percentage of all households paying 30 percent or more of their income for housing is about 43 percent in 2005. By 2035, the percentage of households paying more than 30 percent of their income for housing will rise to about 49 percent. The number of cost-burdened households rises everywhere and the rise is more or less uniform across the region. The largest increases occur in the places at the center of the region--east and west Portland. The only subareas in which the percentage of cost-burdened households falls corresponds roughly to the cities of West Linn (subarea 8), Lake Oswego (subarea 8), and Wilsonville (subarea 10).

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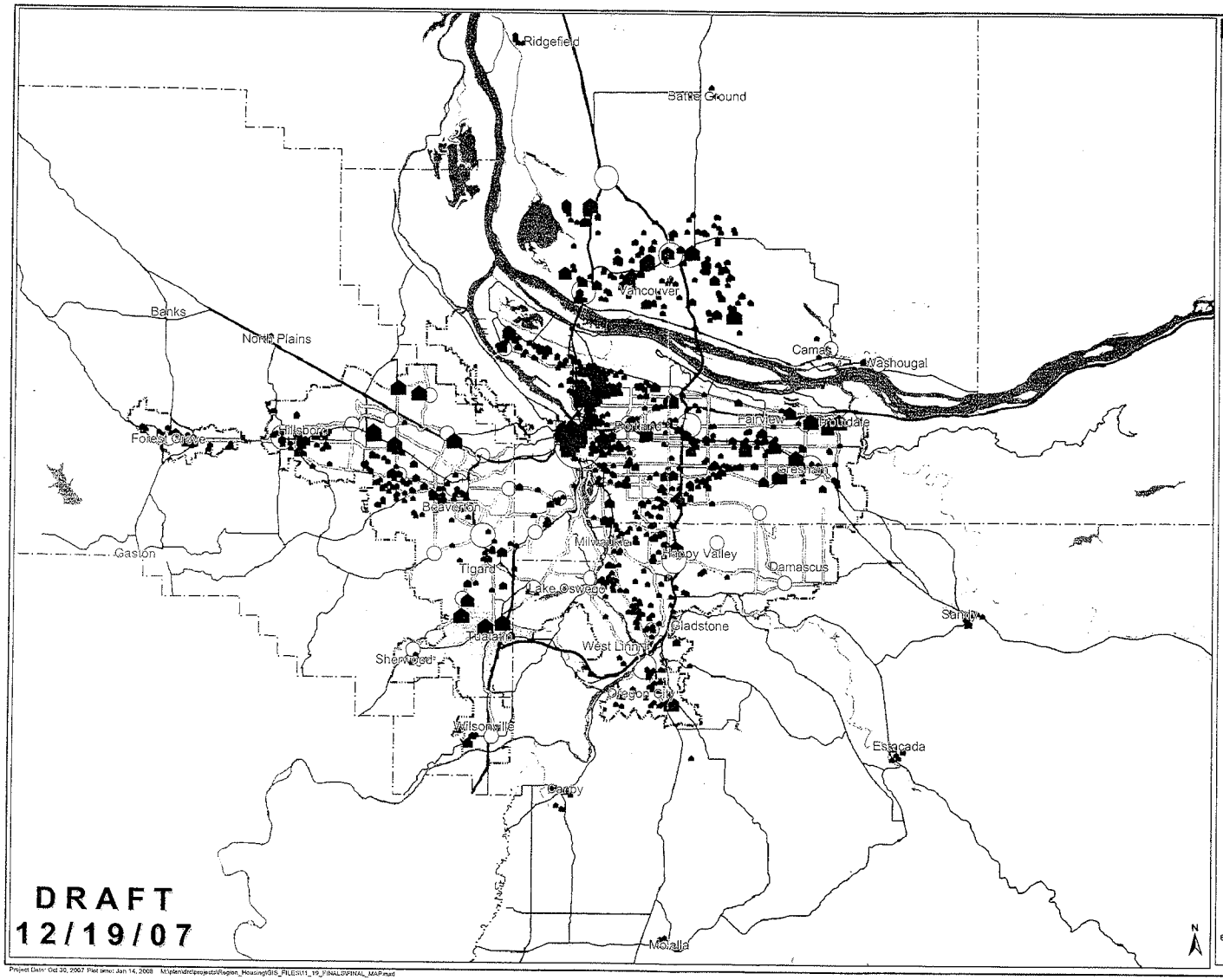


Project Date: Oct 30, 2007 Plot time: Jan 14, 2008 M:\plan\drc\projects\Region_Housing\GIS_FILES\11_19_FINAL\FINAL_MAP.mxd

R L I S
REGIONAL LAND INFORMATION SYSTEM

AFFORDABLE RENTAL HOUSING THAT USED PUBLIC SUBSIDY AND 2040 CENTERS/CORRIDORS

AFFORDABLE HOUSING UNITS

- 0 - 50
- 51 - 100
- 101 - 150
- 151 - 200
- 201 - 800

2040 Centers and Corridors

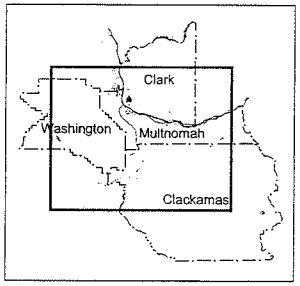
- Urban growth boundary
- Existing and proposed mass transit

SITES SHOWN ON MAP EXCLUDE SECTION 8 VOUCHERS BELOW

Clackamas Community Development = 1,542
Portland Housing Authority = 6,505
Washington County Housing Authority = 2,561
Vancouver Housing Authority = 2,187
TRI-COUNTY TOTAL = 10,608
FOUR-COUNTY TOTAL = 12,0795

0 2.5 5 10 Miles

1:300,000



Location Map

METRO

METRO DATA RESOURCE CENTER
600 NORTHEAST GRAND AVENUE | PORTLAND, OREGON 97232-2736
TEL (503) 797-1742 | FAX (503) 797-1909
drc@metro.dst.or.us | www.metro-region.org

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Draft

FACT SHEET

REGIONAL AFFORDABLE RENTAL HOUSING UNIT INVENTORY (Housing that Used Public Subsidy)

December 21, 2007

Why the Regional Affordable Housing Inventory was Conducted

The purpose of the inventory is to build a regional affordable housing database that will provide information that can be used by public agencies to report affordable housing progress. Additional uses of the database are explained in this fact sheet. The database excludes private market rate ownership and rental affordable housing produced by for-profit housing providers. There may be other information missing in the database, and it is important to point out that the database may never be complete with all of the housing information everyone would like to see in it. The Regional Affordable Housing Inventory is a collaboration of the following agencies:

- Metro
- Clackamas County Community Development
- Portland Housing Authority
- Portland Development Commission
- Washington County Housing Authority
- Washington County Office of Community Development
- Vancouver Housing Authority
- City of Beaverton
- City of Gresham
- City of Hillsboro
- City of Portland
- City of Tigard
- Oregon Housing and Community Services Department
- Portland Office of the US Housing and Urban Development Department (HUD)
- Rural Economic Development Offices of the US Department of Agriculture in Portland, Oregon and Olympia, Washington.

Knowledge of existing affordable housing in the region has always been a challenge. As the 1998 Metro Affordable Housing Technical Advisory Committee (HTAC) was developing land use and non land use affordable housing strategies, it also developed affordable housing production goals for local governments and ended up working with Metro staff to use patches of limited data from various sources for that purpose. Although the focus of the 2005 Regional Housing Choice Task Force (HCTF) was to refine previous Metro housing work by developing implementation strategies, the task force noted that an accurate assessment of the region's progress is an important piece of the regional affordable housing strategy, and acknowledged that such assessment has been difficult to conduct because of lack of data.

Metro Council used the recommendations of the HCTF to amend the Urban Growth Management Functional Plan, Title 7 (Housing Choice) in January 2007, and directed local governments to:

- Assist Metro in preparing biennial affordable housing inventory;
- Use the result of the inventory to report progress on affordable housing; and
- Adopt voluntary affordable housing production goals as a guide to measure progress[1]

In the fall of 2006, Metro staff invited the agencies listed earlier to assist in the inventory of affordable housing in the Portland metropolitan area built with local, state and federal money. In this document, those units are referred to as "regulated" units. The meeting merged into the Regional Affordable Housing Inventory Team.

Accomplishments of the Affordable Housing Inventory Team

Completion of this project is divided into two phases. The first phase focused on inventorying only public subsidized (otherwise referred to as "regulated") rental housing units in the four-county region (Clackamas, Washington, Multnomah and Clark). This work sheet contains the work that has been accomplished to date by the team in the first phase. The second phase will focus on identifying funding sources and amount of public subsidies that supported the development of the housing units. The accomplishment in the first phase is as follows:

1. Successful discussion of how to build a database of rental affordable housing units in the four-county region, built with some public subsidy
2. Structural design of the regional database (see attached Figure –Relationships for Regional Housing Database)
3. Standardized abbreviations and naming conventions.
4. Successful identification and fixing of duplicates, such as project name and address, sponsor name, number of units, affordability expiration date. A final comparison was made to original data supplied by the agencies to assure that all import and clean-up efforts didn't cause a systematic loss or corruption of data.
5. Missing data fields were identified, and the Regional Housing Inventory Team will determine how to fill them.
6. Members of the Regional Housing Inventory Team supplied all of the records used to build the current regional database.

It should be noted that data might not be available for all of the above data fields for a particular development?

Data Not Included in the Current Database

- Ownership units
- Limited information on market rate units
- HUD Section 8 Voucher units[2]

---

[1] The Regional Affordable Housing Inventory team may be requested to assist Metro to develop the methodology and criteria for reporting local and regional progress

[2] See Table 8 below for the number of Section 8 vouchers in the four-county region area.

- Funding types used to build housing projects
- Actual subsidy rates on occupancy or stated rates
- Shared bedrooms (i.e. dorms)
- Homeless shelters
- Personal information about tenants

(Note: As stated earlier, there may be other information missing in the database, and it is important to point out that the database may never be complete with all of the housing information everyone would like to see in it)

Sample of Database Query Results

A. THREE COUNTY REGIONAL SUMMARY: Projects occurring inside the UGB boundaries within Clackamas, Multnomah and Washington counties.

TABLE 1: SITES AND UNIT DETAILS BY CITIES WITHIN THE UGB

JURISDICTION	# OF SITES	TOTAL UNITS	REGULATED UNITS	% TOTAL REGULATED UNITS
Beaverton	43	819	501	1.56%
Cornelius	10	10	10	0.03%
Durham	1	210	210	0.65%
Fairview	3	525	480	1.49%
Forest Grove	31	604	597	1.86%
Gladstone	19	62	61	0.19%
Gresham	47	2,348	2,230	6.94%
Hillsboro	63	2,240	2,236	6.96%
Lake Oswego	1	30	29	0.09%
Milwaukie	33	313	312	0.97%
Oregon City	38	692	556	1.73%
Portland	742	21,428	19,777	61.57%
Sherwood	7	97	96	0.30%
Tigard	18	642	632	1.97%
Troutdale	4	464	464	1.44%
Tualatin	3	604	604	1.88%
UNINCORPORATED	204	3,145	3,001	9.34%
West Linn	11	15	15	0.05%
Wilsonville	7	314	311	0.97%
TOTAL	1285	34,562	32,122	100%

TABLE 2: SITES AND UNIT DETAILS BY COUNTY AREAS WITHIN UGB

COUNTY	# OF SITES	TOTAL UNITS	REGULATED UNITS	% TOTAL REGULATED UNITS
CLACKAMAS	232	2,658	2,382	7.42%
MULTNOMAH	796	24,765	22,951	71.45%
WASHINGTON	257	7,139	6,789	21.14%
TOTAL	1,285	34,562	32,122	100%

TABLE 3: SITES AND UNIT DETAILS INSIDE METRO 2040 CENTERS WITHIN UGB

CENTER TYPE	CENTER NAME	# OF SITES	TOTAL UNITS	REGULATED UNITS	% TOTAL REGULATED UNITS
CENTRAL CITY	PORTLAND	92	8,723	7,885	72.00%
REGIONAL CENTERS	BEAVERTON	11	48	31	0.28%
REGIONAL CENTERS	CLACKAMAS	3	123	123	1.12%
REGIONAL CENTERS	GATEWAY	3	317	317	2.89%
REGIONAL CENTERS	GRESHAM	9	386	384	3.51%
REGIONAL CENTERS	HILLSBORO	9	148	148	1.35%
REGIONAL CENTERS	OREGON CITY	12	68	68	0.62%
REGIONAL CENTERS	WASHINGTON SQUARE	1	32	32	0.29%
TOWN CENTERS	ALOHA	3	94	87	0.79%
TOWN CENTERS	FAIRVIEW	2	373	328	2.99%
TOWN CENTERS	FOREST GROVE	4	61	61	0.56%
TOWN CENTERS	GLADSTONE	11	54	53	0.48%
TOWN CENTERS	HILLSDALE	5	153	140	1.28%
TOWN CENTERS	HOLLYWOOD	2	333	305	2.78%
TOWN CENTERS	KING CITY	1	172	172	1.57%
TOWN CENTERS	LAKE GROVE	2	31	30	0.27%
TOWN CENTERS	LENTS	8	89	88	0.80%
TOWN CENTERS	MILWAUKIE	2	66	66	0.60%
TOWN CENTERS	ROCKWOOD	3	351	351	3.20%
TOWN CENTERS	SHERWOOD	2	48	47	0.43%
TOWN CENTERS	ST JOHNS	5	150	150	1.37%
TOWN CENTERS	TIGARD	2	86	86	0.79%
TOTAL		192	11,906	10,952*	100%

- NOTE: 10,952 REPRESENTS 34% OF REGULATED UNITS WITHIN THE UGB

TABLE 4: SITES AND UNIT DETAILS INSIDE METRO 2040 CENTERS WITHIN UGB

CENTER TYPE	# OF SITES	TOTAL UNITS	REGULATED UNITS	% TOTAL REGULATED UNITS
Central City	92	8,723	7,885	72.00%
Regional Centers	48	1,122	1,103	10.07%
Town Centers	52	2,061	1,964	17.93%
TOTAL	192	11,906	10,952*	100%

*NOTE: 10952 REPRESENTS 34% OF REGULATED UNITS WITHIN THE UGB

TABLE 5: SITES AND UNIT DETAILS INSIDE CORRIDORS WITHIN THE UGB

COUNTY	# OF SITES	TOTAL UNITS	REGULATED UNITS	% TOTAL REGULATED UNITS
CLACKAMAS	28	46	46	0.45%
MULTNOMAH	310	9,995	9,486	92.14%
WASHINGTON	34	828	763	7.41%
TOTAL	372	10,869	10,295*	100%

*NOTE: 10295 REPRESENTS 32% OF REGULATED UNITS WITHIN THE UGB

B. FOUR COUNTY REGION SUMMARY: Projects occurring inside the Clackamas, Clark, Multnomah and Washington counties

TABLE 6: SITES AND UNIT DETAILS BY CITY WITHIN FOUR COUNTY REGION

JURISDICTION	# OF SITES	TOTAL UNITS	REGULATED UNITS	% TOTAL REGULATED UNITS
Battle Ground	3	106	84	0.22%
Beaverton	43	819	501	1.32%
Camas	4	69	41	0.11%
Canby	8	343	343	0.90%
Cornelius	10	10	10	0.03%
Durham	1	210	210	0.55%
Estacada	8	95	95	0.25%
Fairview	3	525	480	1.27%
Forest Grove	31	604	597	1.57%
Gladstone	19	62	61	0.16%
Gresham	47	2,348	2,230	5.88%
Hillsboro	63	2,240	2,236	5.89%
Lake Oswego	1	30	29	0.08%
Milwaukie	33	313	312	0.82%
Molalla	5	113	112	0.30%
North Plains	1	33	33	0.09%
Oregon City	38	692	556	1.47%
Portland	742	21,428	19,777	52.13%
Ridgefield	5	12	12	0.03%
Sandy	12	147	147	0.39%
Sherwood	7	97	96	0.25%
Tigard	18	642	632	1.67%
Troutdale	4	464	464	1.22%
Tualatin	3	604	604	1.59%
UNINCORPORATED	294	4,679	4,441	11.71%
Vancouver	137	4,044	3,446	9.08%
Washougal	1	62	61	0.16%
West Linn	11	15	15	0.04%
Wilsonville	7	314	311	0.82%
TOTAL	1559	41,120	37,936	

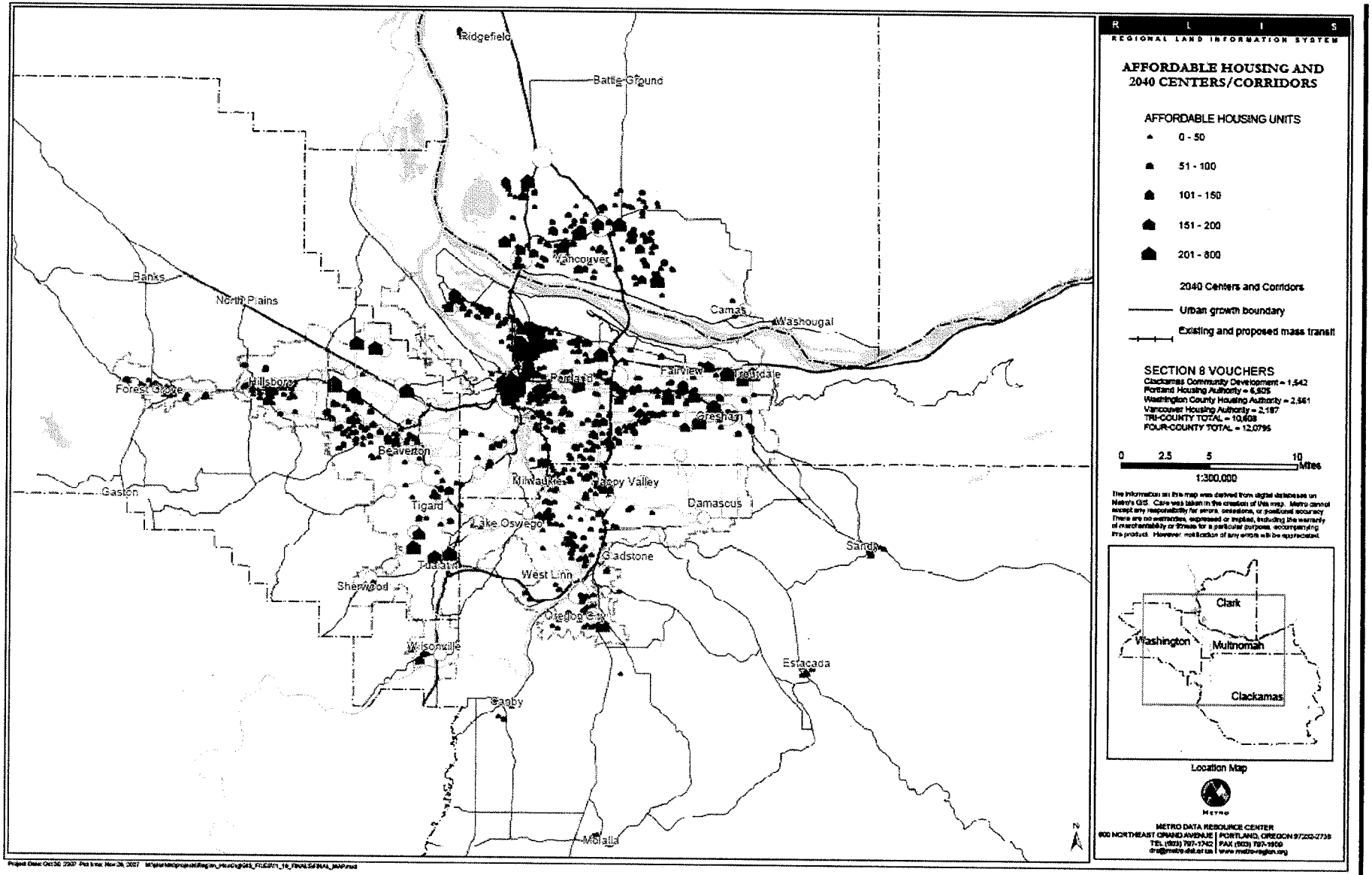
TABLE 7: SITES AND UNIT DETAILS BY COUNTY WITHIN FOUR COUNTY REGION

COUNTY	# OF SITES	TOTAL UNITS	REGULATED UNITS	% TOTAL REGULATED UNITS	SECTION 8 VOUCHERS
CLACKAMAS	268	3,406	3,129	8.25%	1542
CLARK	237	5,777	5,034	13.27%	2187
MULTNOMAH	796	24,765	22,951	60.50%	6505
WASHINGTON	258	7,172	6,822	17.98%	2561
TOTAL	1,559	41,120	37,936	100%	12795

TABLE 8: DISTRUBITION OF SECTION 8 VOUCHERS IN THE FOUR-COUNTY REGION:

Clackamas Community Development	1,542
Portland Housing Authority	6,505
Washington County Housing Authority	2,561
TRI-COUNTY TOTAL	**10,608 (83% of Four-County Total below)**
Vancouver Housing Authority	2,187
FOUR-COUNTY TOTAL	**12,795**

C. *MAP OF AFFORDABLE HOUSING UNITS AND 2040 CENTERS/CORRIDORS:* *A full scale map showing the distribution of housing projects that used public subsidy is available, upon request, from Metro staff.*



Some of what we learned

- Affordable housing is/is not distributed evenly across the Portland metropolitan area.
- About 52% of the units are located within the City of Portland.
- A significant amount of the units are located in the unincorporated areas.
- Some of the housing units are located near major transportation corridors and transit services.

Possible Uses of the Regional Database

1. Data can be used by local governments and Metro to report status and progress on affordable housing built and/or preserved, including those built and/or preserved in special locations, such as 2040 Centers.
2. Database can be queried to get a variety of information, such as:
    a. Regulated housing units within any local government boundary in the four county metropolitan area
    b. Regulated housing units within the Metro 2040 Centers
    c. Proximity of regulated housing units to 2040 Centers and Tri-Met Max train lines
    d. Proximity of regulated housing units to major transportation corridors in the region
    e. Regulated housing units in the Urban Renewal Areas in the City of Portland
    f. Breakdown of the types of units in the various locations
    g. Units with long term affordability restrictions that will be expiring in the next 12, or 24, or 36 months
    h. Population groups (senior, family, mixed, special needs) living in the subsidized units
    i. Construction type of the subsidized housing development
    j. Comparisons of percentage of total units to regulated units within select areas
3. Local governments can use the database to monitor units with long-term affordability restrictions that will be expiring so as to create partnerships that can raise the funds necessary to extend the affordability, or buy the expiring property before the expiration date. NOTE: Expiration date records are spotty. Only 50%+/- entered
4. Database could be used by private and public entities as part of the supply data for estimating housing and affordable housing need in the region, any sub-region, and local government area.
5. Improve our knowledge of what and where to build and not built more of specific housing types based on regional and sub-regional analysis of supply and demand.
6. Improve our knowledge of the relationship between housing and other issues, such as transportation system, infrastructure, school population and funding, etc.

Outreach: Where and how users can get the information in the database

In addition to this "Fact Sheet," there is also a flier [to be produced] explaining the highlights of this project, dates and where the database information will be presented, and how and where to get additional information generated with the database. The extent of distribution of the data beyond the team members has not been determined.

Database Maintenance and Update

Metro staff will explore the possibility of posting the database on the web and development of a web interface that could be used by agency partners to query and update the regional database. It is expected that the database will be updated biennially (every two years) as stated in the Metro Functional Plan, Title 7 (Housing Choice), and that local housing agencies and staff will continue to assist Metro to update the database.

Data Fields Definition

tblMain

Metro_ID	Unique ID number used to link records
Agency_ID	Agency_IDs assigned by local or State agency
Project_Name	Main project name for development
County	County that development is sited within
City	Mailing city
State	State that development is sited within
Zip	Zip code that development is sited within
Zip_4	Zip code plus four
Project_Address	Main address of development. Must be a single address rather than a range or multiple addresses.
Additional_Address_Data	Multiple address or address range information
Taxlot_ID	Regional taxlot identification number
R_Number	Regional taxlot accounting number
Sponsor_Name	Main group or agency contact for the development
Sponsor_Type	For-profit, Non-profit, Government
Construction_Type	General description of construction style
Project_Type	Description of the original form of development (Acquisition, New Construction, Rehab)
Year_Built	Year that development was originally constructed
Year_Rehabbed	Year that development was rehabilitated
URL	Link to website with supplemental information
Images	Link to web photos of site
Notes	City that development is sited within
Juris_City	City that development is sited within
Center_Name	2040 center name
Center_Type	2040 center type
Neighborhood	Neighborhood that development is sited within
UGB	Inside or outside Urban Growth Boundary
CORRIDOR	Inside or outside 2040 planning corridor

tblUnitData

Total_Units	Total number of units in the development
Regulated_Units	Number of regulated units in the development
Unregulated_Units	Number of unregulated units in the development

tblRegulatedUnitDetails

Number_Units	Total number of units in project unit grouping
Regulated_Type	Subsidy level for unit project unit grouping
PopulationGroup	Grouping of population types (Elderly, Family, Mixed, Special Needs)
PopulationType	Specific population types
Unit_Type	Type of unit (1B2, 2BR, 3BR, 4BR, 5BR, DORM, GRP, HOUSE, SRO, STUDIO, UNKN)
Affordability_Expiration_Date	Date that the unit becomes unregulated

tblCoords

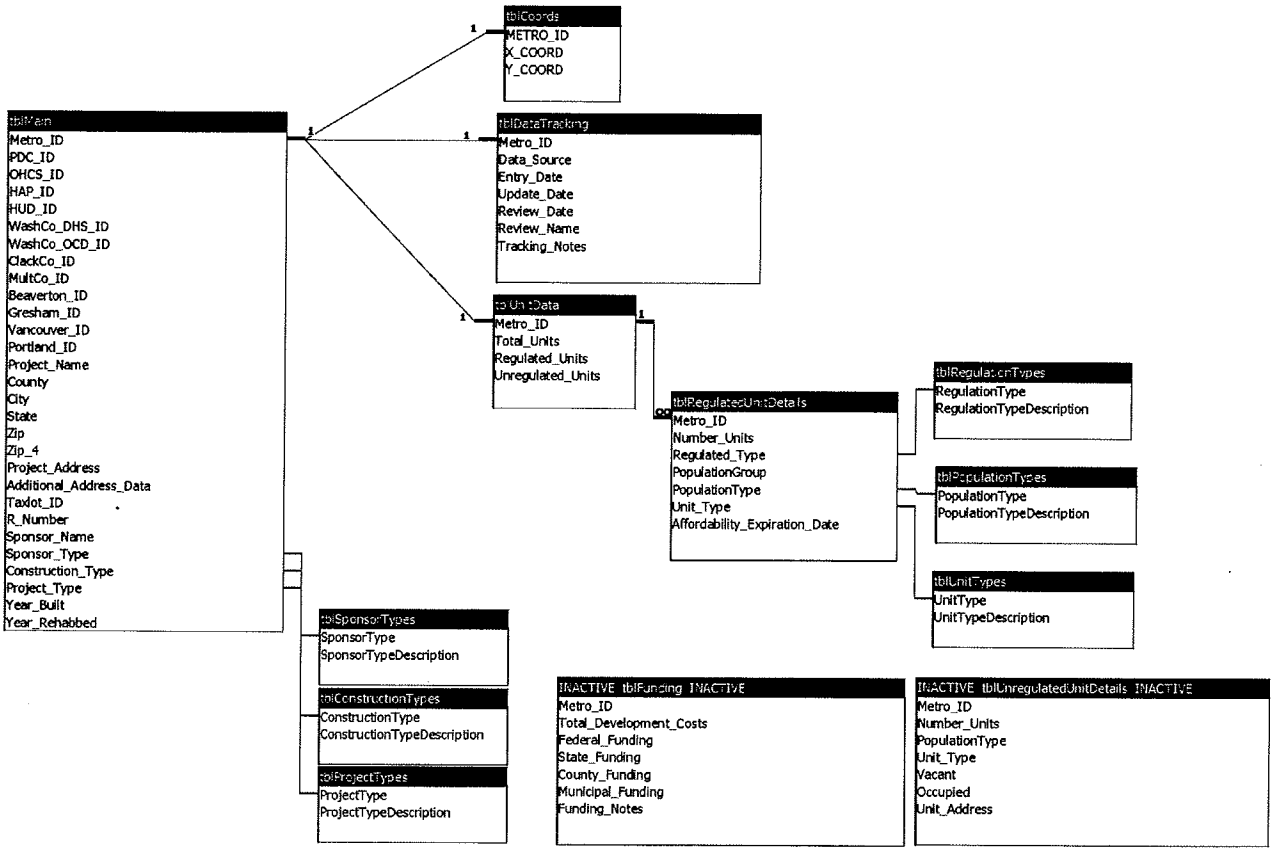
X_Coord	X coordinate value
Y_Coord	X coordinate value

tblDataTracking

Data_Source	Agency that data was imported from
Entry_Date	Date that record was entered into the database
Update_Date	Date that record was updated
Review_Date	Date that record was reviewed
Review_Name	Name of last individual to review the record
Tracking_Notes	Misc notes regarding the record

Database Diagram

Relationships for Regional_Housing_Database
Thursday, December 20, 2007



ROSTER

Regional Affordable Housing Inventory Team (Portland 4-County Area)

	Agency	Name	Remark
1	Clackamas County Community Development	▪ Gloria Lewton, 503-655-8359 glorial@co.clackamas.or.us ▪ Mark Sirois, 503-650-5664 marksir@co.clackamas.or.us	Asset Management and Database
2	Housing Authority of Portland	Michael Havlik, 503-802-8482 michaelh@hapdx.org Russ Baker, 503-802-8545 russb@hapdx.org	Asset Management Database
3	Portland Development Commission	Louise K Lauman, 503-823-0468 laumanl@pdc.us Andrew Sherman, 503 823-3398 shermana@pdc.us	Asset Management Database
4	Portland Bureau of Planning	Uma Krishman, 503-823-5771 Uma.Krishnan@ci.portland.or.us Barbara Sack, 503-823-9396 bsack@ci.portland.or.us	Planning/Housing/Tax Exempt Database Planning/Housing/Tax Exemption
5	Portland Bureau of Housing and Community Development	Antionette Pietka, 503-823-2394 apietka@ci.portland.or.us	CDBG Database
6	Washington County Housing Authority	Val Valfre, Jr., 503-846-4761 val_valfre@co.washington.or.us Susan Wilson, WHA, 503-846-4755 Susan_Wilson@co.washington.or.us Melanie Fletcher, 503-846-4773 Melanie_fletcher@co.washington.or.us	Asset Management Management Housing Database
7	Washington County Office of Community Development	Peggy Linden, 503-846-4435 Peggy_linden@co.washington.or.us	CDBG Management & Database
8	Clark County Department of Community Services	Peter Munroe, 360-397-2075 Pete.Munroe@clark.wa.gov	Housing and CDBG Management
9	Vancouver Housing Authority	Saeed Hajarizadeh 360-993-9510 shjarizadeh@vhausa.com Mike Conroy, 360-993-9517 mconroy@vhausa.com	Asset Management Database

	Agency	Name	Remark
10	Oregon Department of Housing and Community Services (OHCS)	Vince Chioti, 503-963-2284 vchiotti@hcs.state.or.us Liem Ngo, 503-986-2126 Liem.Ngo@state.or.us Natasha Detweiler, 503-986-6741 Natasha.Detweiler@state.or.us	Housing Database Database
11	Metro	Zac Christensen, 503-797-1591 christensenz@metro.dst.or.us Carol Hall, 503-797-1737 hallc@metro.dst.or.us Gerry Uba, 503-797-1737 ubag@metro.dst.or.us	Database Database Planning/Housing
12	City of Beaverton	Jeff Salvon, 503-526-3725 jsalvon@ci.beaverton.or.us William Hacck, 503-350-4072 whack@ci.beaverton.or.us	Planning/Housing Community Dev.
13	City of Gresham	Michael Parkhurst, 503-618-2416 Michael.parkhurst@ci.gresham.or.us	Urban Renewal/ Tax Abatement & Exemption
14	City of Hillsboro	Doug Miller, 503-681-6231 dougm@ci.hillsboro.or.us	Planning/Housing
15	City of Tigard	Duane Roberts, 503-639-4171 ext. 2444 Duane@tigard-or.gov	Planning/Housing/Tax Abatement and Exemption
16	Federal – HUD, Portland Office	Roberta Ando, 503326-5100 roberta_ando@hud.gov	Policy/Planning
17	Federal – USDA, Portland, Oregon Federal – USDA, Olympia, Washington	Jillene Davis, (503) 414-3353 jillene.davis@or.usda.gov Gayle Hoskison, (360) 704-7760 gayle.hoskison@wa.usda.gov	Policy/Planning

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AFFORDABLE HOUSING NEEDS STUDY FOR THE PORTLAND METROPOLITAN AREA DRAFT FINAL REPORT

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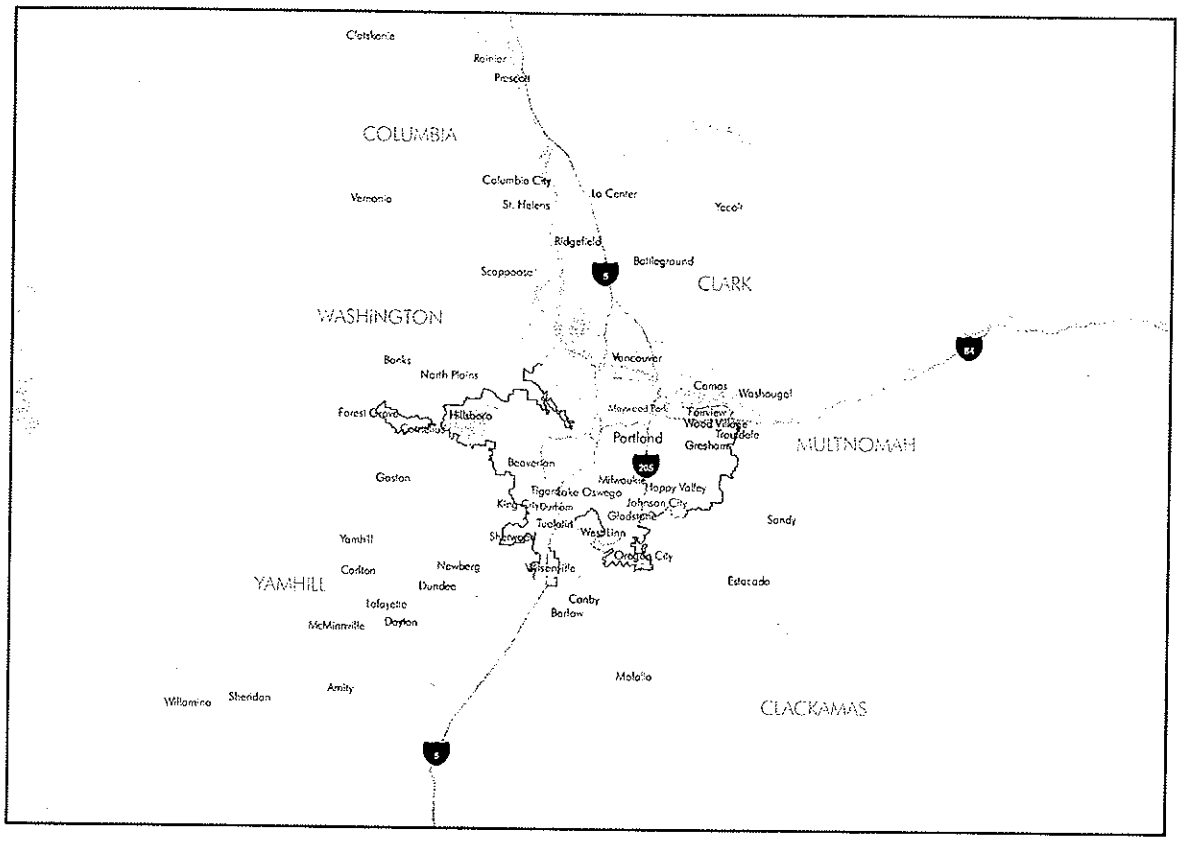
Portland State
UNIVERSITY



IMS Mission Statement

The Institute of Portland Metropolitan Studies is a service and research center located in the College of Urban and Public Affairs at Portland State University. The mission of the Institute is to serve the communities of the Portland-Vancouver metropolitan area and to further the urban mission of Portland State University by:

- Identifying the most pressing issues facing this metropolitan area and its communities, and developing the data and other information needed to fully communicate their scope and significance;

- Building capacity in the region to address critical metropolitan issues by:

  Brokering partnerships among faculty, students, and area communities to foster new understanding of and/or new strategies for addressing those issues; and

  Acting as a catalyst to bring elected officials, civic and business leaders together in a neutral and independent forum to discuss critical metro politan issues and options for addressing them; and

  Developing new resources to support research and service activities needed to meet those objectives.

By acting effectively on this mission statement, the Institute will enable the:

- University to help advance the economic, environmental, and social goals held by the communities of the region; and

- Communities of this region to act collectively to seek and secure a sustainable future for this metropolitan area.

Executive Summary

The purpose of this report is to respond to the recommendations of the Regional Housing Choice Task Force by providing information to guide housing choice policy for the Metro Council.

In particular, the objectives of this project were to:

- Estimate current and future affordable housing need for the Metro region;
- Describe the distribution of households by income, age, and size across the metro region;
- Describe the tenure of these households and the type of housing they will choose;
- Identify and describe those household types that are most likely to struggle to meet the cost of housing based on their income; and
- Make recommendations for improving analysis of affordable housing need in the future.

Our approach to this task was to use output from the *Metroscope* model, using the base case scenario, to forecast the housing consumption decisions of households from 2005 to 2035. We chose the *Metroscope* model after also considering the State of Oregon's Housing/Land Needs model. We concluded from examining the assumptions and abilities of each model that *Metroscope* is better able to offer the Metro Council the insight into the housing market required to inform housing choice policy.

The *Metroscope* model incorporates housing supply and demand for the entire four-county metropolitan region (Multnomah, Washington, Clackamas, and Clark counties). The region comprises a single housing market; residents travel throughout the region to work, shop, and socialize. Thus, it makes little sense to examine any one county in isolation. While this report does not include the results for Clark County, its impact on demand and supply of housing in the rest of the region is taken into account in the *Metroscope* model and is reflected in the results presented here.

Given the assumptions of the *Metroscope* model (described in Section 2), we address several questions, including:

- Where will household growth occur?
- What kinds of households will grow?
- What kinds of housing will these households live in?
- What percentage of their income will they pay for housing?
- What demographic groups are most cost-burdened and where do those households reside?

Below, we offer a summary our findings regarding each of these questions.

Where will Household growth occur?

The number of households in the three-county portion of the metropolitan region will grow by 59 percent from 2005 to 2035, from 624,700 households in 2005 to 993,900 in 2035 (i.e., under *Metroscope* Base Case Scenario). The subareas with the greatest growth in the number of households include the Happy Valley area (subarea 7) and Canby area (subarea 10). These areas will each grow by about 50,000 households, more than tripling their current numbers.

What kinds of households will grow?

By 2035, the percentage of householders 65 or over will grow from about 18 percent in 2005 to about 27 percent, while the percentage of householders in the other age groups fall slightly. The income distribution of households will also change, with households earning the lowest household income (less than $15,000) rising from 11.3 percent in 2005 to 13.5 percent in 2035. The proportion of households with the highest incomes ($100,000 or more) will also rise from 14.7 percent to 16.4 percent. Household size will be fairly stable between 2005 and 2035. The percentage of households with two people will drop from 32 to 30 percent; the percentage of households with children will remain about the same at just over 35 percent.

What kind of housing will they live in?

From 2005 to 2035, the percentage of renters will fall from 37.9 percent of all households to 32 percent of all households. The share of both rental single family and rental multifamily housing will fall. This loss in market share by rentals is captured in large part by the rise in owner-occupied multifamily housing, which doubles both in raw numbers and in terms of its share of total units, from 4 percent of total households in 2005 to about 8 percent in 2035. Owner-occupied single-family housing will also see its share rise from 58 percent today to 60 percent in 2035.

The demographic groups most likely to choose rental multifamily housing are the young, low-income, single-person households. Rental single-family units attract young, low-income families with children. Owner-occupied single-family housing is chosen by middle-age, middle and upper-income families with children. Owner-occupied multifamily housing is most popular with older, single-person households of all income ranges. Among householders 65 and older, the share living in owner-occupied multifamily housing will rise from just over 4 percent in 2005 to over 10 percent in 2035. However, even for the elderly, owner-occupied multifamily housing is a very small part of the housing market. As discussed in a recent report for Metro by Portland State University (Neil et al. 2006), the probability of moving declines with age; thus, attempts to significantly increase the share of owner-occupied multifamily housing will require appealing to 55-64 year old householders.

What percentage of their income will they pay for housing?

Across the three-county metro region, the percentage of all households paying 30 percent or more of their income for housing is about 43 percent in 2005. By 2035, the percentage of households paying more than 30 percent of their income for housing will rise to about 49 percent. The number of cost-burdened households rises everywhere and the rise is more or less uniform across the region. The largest increases occur in the places at the center of the region--east and west Portland. The only subareas in which the percentage of cost-burdened households falls corresponds roughly to the cities of West Linn (subarea 8), Lake Oswego (subarea 8), and Wilsonville (subarea 10).

What demographic groups are most cost-burdened and where do those households live?

Our analysis of demographic groups is collapsed into housing consumption categories that describe combinations of household characteristics based on their age, income, household size, and presence of children. There are eight consumption categories that describe the full-range of households and their housing characteristics, The lowest-income categories and those with the greatest housing cost burden occur in category 1 (Low-income singles) and category 2 (working class). These households are concentrated in the central areas of the region (subarea 2). This subarea will also experience the greatest increase in these households, although some of the farther out areas such as east county and the near west suburbs will also experience high growth in these low income households. By 2035, 100 percent of the renters in these two bins will pay 30 percent or more of their income for housing. Owners of single-family units in consumption bins 1 (low-income singles) 2 (working class) and 3 (emerging singles) will also have high rates of cost burden as defined by 30 percent of income.

Policy-Relevant Observations

A. While the model predicts that over 43 percent of owners of single-family units and over 60 percent of owners of multi-family units will pay over 30 percent of their income on housing by 2035, this is at least partially offset by the equity that owners build as they make payments on mortgages and as housing values rise. Furthermore, these statistics may overstate the actual cost burden these households feel because we know neither how much wealth these households possess nor the terms of their mortgages. In fact, the American Housing Survey reports that 29 percent of the owner-occupied housing in the Portland region is owned free and clear. For these households, cost burden is clearly overstated.

B. By 2035, about 55 percent of renters of multifamily units will be paying more than 30 percent of their income for housing, and about 38 percent will be paying 40 percent or more of their income for housing. These renters may have a difficult time achieving the savings necessary to change from renters to owners as their current housing situation takes an increasing share of their income.

C. Households trade off housing and transportation costs. The percentage of income that households spend on housing and transportation is relatively stable across the region; some choose more expensive close in housing and save on transportation costs; other choose cheaper housing in the suburbs that requires spending more on travel. We must consider these factors as we consider locations for affordable housing and the transportation options they provide.

Usefulness of Metroscope for Housing Need Analysis

Metroscope is a very valuable tool for the analysis of housing affordability issues. We recommend that the following steps be taken to ensure that it is wisely employed.

- Apply the eight households categories to housing and other housing related analysis so as to enhance understanding land use implications of households consumption decision.
- Widen the pool of analysts that work with the model so that its performance does not rely upon the presence of a few key individuals, and consider converting the software to an open source environment.
- Adapt use of the model to match demographic groups or income groups easily understood by policy makers. Metro might want to consider collecting data in areas that are currently lacking, such as household wealth and transportation costs, and integrating these into the model.
- Engage in more frequent discussions of the model's capabilities for analyzing complex policy questions, especially with different scenarios and model runs.

1 Introduction

In April of 2006, the Metro Council received the recommendations of the Regional Housing Choice Task Force. These recommendations, included, among others, integration of housing supply concerns, and specifically affordable housing, into all policy making and funding allocations.

The Regional Framework Plan specifies that Metro will maintain voluntary affordable housing production goals for the region, to be revised over time as new information becomes available, and that Metro will encourage the adoption of these goals by the cities and counties of the region.

In the past, these voluntary goals were articulated in Table 3.07-7 of the Metro Code, the Five-Year Voluntary Affordable Housing Production Goals. This table lists the number of needed new housing units for households at two household income levels: households earning less than 30 percent of median household income, and households earning 30 to 50 percent of median household income. For a number of reasons, these production goals do not provide sufficient information to Metro or to local governments regarding the affordable housing needs in their communities.

Metro contracted with Portland State University's Population Research Center and the Institute of Portland Metropolitan Studies to provide a more comprehensive analysis of the future affordable housing needs of the region. Using data derived from Metro's econometric model, *Metroscope*, PSU examined the model's predictions about what kinds of households will live in what types of housing. The model predicts these values for five-year increments from 2005 to 2035.

We examined the data to identify patterns of residential consumption. Some of these patterns may not be consistent with a local government's goals for their community. By calling attention to these patterns, we hope to assist in the development of strategies that could lead to outcomes more consistent with a community's housing goals and with our region's plans for growth.

Objectives

The objectives of this project were to:

- Estimate current and future affordable housing need for the Metro region;
- Describe the distribution of households by income, age, and size across the metro region;
- Describe the tenure of these households and the type of housing they will choose;
- Identify and describe those household types that are most likely to struggle to meet the cost of housing based on their income; and
- Make recommendations for improving analysis of affordable housing need in the future.

Legal Framework for the Analysis

Housing Choice Task Force

Created in March of 2005, The Housing Choice Task Force was charged by Metro with examining barriers to the implementation of affordable housing goals in the Metro region. The Task Force spent a year examining and discussing the housing market, housing affordability trends, and barriers to the implementation of affordable housing requirements ser by the 2000 Affordable Housing Technical Advisory Committee.

The Task Force's key recommendations include:

1. Integrate housing supply concerns, and specifically affordable housing, into all policy making and funding allocations, and create a permanent Housing Choice Advisory Committee.
2. Direct efforts toward development of a new, permanent regional resource for affordable housing, and lead advocacy for increased funding at the federal, state and regional levels.
3. Promote strategies identified to remove regulatory barriers and reduce the cost of developing housing and affordable housing specifically, especially in centers and corridors as identified in the 2040 Growth Plan.
4. Prioritize the budget for housing to provide technical assistance to local governments, such as land/site inventory, model codes, etc.

Amendment to the Regional Framework Plan

Consistent with the recommendations of the HCTF, Metro amended the Regional Framework Plan and Functional Plan to encourage local governments to implement land use regulations that allow for a diverse range of housing types, including affordable housing, especially in Centers and Corridors. They are also required to report on their progress.

In the past, local governments have been provided with voluntary affordable housing production goals as a simple table (Table 3.07-7) listing for each jurisdiction, the number of units needed that will be affordable for two income ranges: less than 30 percent of median household income and 30 to 50% of median household income.

This simple table provided very little information to local governments regarding

- the size of the households that need these units;
- the age of the households that need these units;
- whether these households have children; or
- whether tbe new units should be rental or owner units.

This lack of information made it very difficult for local governments to develop policy to encourage production of these units and to understand who would occupy them.

We hope to offer more complete information that will assist Metro and local governments in understanding what kinds of households will be most in need of affordable bousing and how they will be distributed around the region. This allows an opportunity to create policies that could change the predicted outcomes.

Uses of the data in this Report

This report contains data from the *Metroscope* model. The model contains a number of assumptions that will be discussed in the next chapter. The important thing to remember when examining these data is that their predictions are based on current policy assumptions; thus, a

change in policy, as with a change in the model's other assumptions, can affect the outcomes predicted in this report. Thus, the data should be used as an indication of issues that may arise in the housing market in the absence of additional policies to change these outcomes. The charts and tables in this report represent a starting point for policy discussions, not a prediction of what will happen.

Furthermore, the data also must be analyzed in the context of the *Metroscope* model's strengths and weaknesses, which we describe in Section 2.

Contents of this Report

This report includes three additional chapters and one appendix.

- Chapter 2 describes our methodology, including describing why we chose the *Metroscope* model to produce the data for the analysis.
- Chapter 3 describes the findings of the *Metroscope* model and contains a number of tables that describe the affordable housing situation from 2005 to 2035.
- Chapter 4 draws conclusions about the model predictions and discusses policy levers that could have a significant impact on those outcomes. It also describes recommendations for improving the accuracy and transparency of the *Metroscope* model and its output.
- The Appendix contains a memo describing in detail why we chose the *Metroscope* model for this analysis.

2 Methodology

Our task of providing richer information about affordable housing needs in the Portland metropolitan region began with choosing a model for the analysis. We first examined the choices available and inventoried their key differences. The Appendix contains a memo detailing this analysis.

This section summarizes our model choice and also explains some of the key assumptions and analysis limitations of the *Metroscope* model, which we chose for the analysis.

For a detailed description of the *Metroscope* model, please refer to "Metroscope: A Forecast Allocation Model & Policy Assessment Tool: A Brief Model Description;" and "Metroscope Documentation." These documents are available from the Data Resources Center staff at Metro.

Choice of Models

We were asked to choose between *Metroscope*, Metro's in-house econometric model, and the State of Oregon's Housing/Land Needs model (State Model) developed by the Oregon Department of Housing and Community Services. In the section below, we summarize the key factors motivating our choice of Metro's *Metroscope* model for this analysis. A more in-depth explanation of the two models is contained in Appendix A, the August 29th memo that contains our recommendations.

The State Housing Model

The State Model was developed as a tool for planning for new affordable housing units in a specified area. A number of smaller communities within Oregon have adopted the Sate model to meet their requirements for affordable housing needs analysis under Goal 10 of the Oregon Statewide Planning Goal.

The State Model forecasts the number of housing units needed at different price levels so that that no one in the forecasted population would be paying more than 30% of their income on housing costs. There are three models, one for each of type of study area: 1) urban, college or resort; 2) medium size rural; and 3) small rural. The State Model may be run for cities, counties, or larger regions, provided appropriate data are available.

The State Model is comprised of a housing needs model and a land needs model. The two models are inter-related, hut the housing needs model can be run without the land needs model.

The model predicts the "gap" between the expected future supply and the future demand of housing units by price and tenure. The model also predicts the area's land needs based on the housing gap and the available buildable land.

New housing supply is predicted from the current housing inventory, planned housing on the available buildable land supply by density and zone, expected demolitions of existing units, and expected vacancy. There is no mechanism within the State Model to forecast the production of housing by the private sector hased upon building costs, housing prices, and affordability. Instead, the housing tbat is produced is assumed to equal that allowed by zoning in the community. In that

sense, the State Model is not really an economic model. There is also no mechanism in the State Model for the housing stock to depreciate in value over time.

Future demand for housing units by price of housing and tenure is predicted by household income, the age of the householder, tenure and the price of the home as reported in Census 2000, and by the household's propensity to reside in a home that has housing costs that are either higher or lower than what the household can afford (affordability factors called in and out factors). Housing subsidies also affect housing demand. Since the model does not include transportation factors, housing demand is not affected by expected commuting patterns.

The State Model is a non-equilibrium model that might allow for significant housing shortages. The gap between housing prices and rents and production costs will not stimulate housing development in the State Model.

Metroscope

Metro's model was developed for land use and transportation policy evaluation for the Portland-Vancouver metropolitan region; it has other uses such as transportation planning and Urban Growth Boundary (UGB) analysis. The model's output provides a forecast of where and how much housing will exist in the future. The geographic level for which the output is generated is in Metro defined regions. The whole of the Portland-Vancouver metropolitan area consists of 20 Sub-county Area Districts (Clackamas, Multnomah, and Washington Counties, Oregon and Clark County, Washington). Each District's boundaries follow census tract boundaries and each was designed to represent its fair share of specified population and housing composition in the Portland-Vancouver area.

Metroscope is comprised of 4 inter-related models:

Economic (forecasts region-wide population and employment);

Location (comprised of residential and non-residential sub-models) that predicts where and how much housing will exist in the future based on predictions of how much and where employment activity will occur, the price of housing (incorporates the costs of development, locational amenities, and depreciation in value), household income and other wealth factors, and the age of householder;

Travel (estimates trip origins and destinations, and measures perceived cost of travel between regions which affects where people work and decide to reside); and

GIS/land tools and database (a.k.a. the Land Filter which monitors current residential development, and tracks where and how much land [parcels] will be available for development in the future, provides an inventory and accounting of developable land that is available, and its capacity for housing units and employment). All sub-models are interrelated, and they influence and provide inputs for one another.

For our purposes, the results of *Metroscope* are the future number of households by housing type (single-family, multi-family) and tenure, price levels, age of householder, income level, percent of income spent on housing costs, and household size reorganized into bin categories. The results are produced by location (district). *Metroscope* also produces non-residential results such as the location of commercial property and commuting patterns, which can be used for other planning purposes.

The housing supply/demand results of *Metroscope* are dependent on the region's forecast population, land capacity/amount of developable land available, housing choice (influenced by tenure, age of householder, household income, housing costs, household size and presence of children), and location choice (influenced by availability of housing, neighborhood attraction, distance to available employment opportunities of householder, and the Census 2000 household, income, age structure).

Metroscope is an equilibrium type of model that balances housing demand and housing supply by adjusting vacancy rates, prices, rents, and production. Housing prices and rents are bounded by household incomes to some extent, and housing production is determined partly by land use and zoning policies and by the interaction of rents, prices, and construction costs.

***Metroscope* Output.** The output of the *Metroscope* model will provide us a picture of how households will choose housing based on their income, age, household size, presence of children, and tenure preferences, and how developers will react to the market, regulations, and construction costs. It does not define a "gap" in affordable housing supply because it equilibrates demand and supply and each household chooses housing. However, the gap can be defined as the households paying an unacceptable percentage of their income on housing.

Housing costs in the model include rent or mortgage payment (assuming a 20 percent down payment) utilities, property taxes, household operations and housekeeping supplies.

Why we chose to use Metroscope for this analysis

We chose *Metroscope* for this analysis for the following reasons:

- *Metroscope* integrates the residential housing model with transportation, land use, and commercial location models. Thus, this analysis is consistent with the models and assumptions used for transportation and urban growth boundary (UGB) planning. It can therefore provide a fuller and more realistic model of housing development that incorporates the impact of household choice, development economics, and commuting preferences. These features are absent from the State model.
- *Metroscope's* estimates of the percentage of income spent on housing for the Portland area approach national BLS estimates. Figure A-1 in the Appendix shows that *Metroscope's* estimates of the percent of income spent on housing are within several percentage points of the BLS national estimates for all income levels.
- *Metroscope* can provide an understanding of how policy levers might affect the outcome (e.g. economic incentives for more supply; improved amenities to change demand, changes in zoning or land supply, and investment in transportation infrastructure).
- *Metroscope* can be run in-house by Metro and provides options for analysis at region-wide or other district levels.
- The State housing model does not provide an adequate depiction of the future supply of housing. It assumes that housing will be built as planned rather than by market profitability.
- *Metroscope* is an equilibrium type of model that balances housing demand and housing supply by adjusting vacancy rates, prices, rents, and production. By comparison, the State Model is a non-equilibrium model that might allow for significant housing shortages. The gap between housing prices and rents and production costs will not cause a spurt of housing development in the State Model.

Limitations of Metroscope

While we feel that the *Metroscope* model can provide a more complete picture of the housing market, it does have its limitations, including the following:

- The richness of the *Metroscope* model provides a wealth of information; however, its complexity also requires a careful and clear explanation of the results.
- The treatment of wealth in the model may not adequately account for the wealth effect on the demand for housing, especially among the elderly.

- The value of housing is sensitive to depreciation assumptions, and to assumptions about the annual growth in income.

Obtaining *Metroscope* Data

We obtained Metroscope data from Metro Data Resources Center staff. We used the "base case" scenario, which incorporates the following assumptions:

- Population estimates are derived from the Census Bureaus' middle series birth and death rates, calibrated by age cohort with population data and vital statistics for the region in 2000. They are consistent with state and national forecasts and with historical trends.
- Economic growth and job growth is pegged to a national forecast that calls for moderate future growth trends that taper off in the out years.
- Transportation assumptions are based on the financially constrained Regional Transportation Plan through 2025, with minor arterial upgrades assumed for expansion areas to accommodate urban development densities through 2035.
- A 20-year land supply is maintained in accordance with state law, adding about 6,500 acres within the urban growth boundary every 5 years.

To identify the specific data needed for the analysis, we took the steps described below.

Defining the relevant dimensions of the analysis

Geography. Figure 2-1 shows the geography included in our study; Figure 2-2 shows the same map with city boundaries included. Metro's data is typically divided into 20 subareas. Our analysis generally includes only the Oregon State part of the metropolitan region. Subarea 17, which includes Clark County, was usually removed from our analysis.

Housing type. *Metroscope* data cover the following housing types/tenures:

- renter-occupied single family (RSF);
- owner-occupied single family (OSF);
- rental multi-family (RMF); and
- owner-occupied multi-family (OMF).

Income, age, and household size and presence of children. To simplify the analysis, the *Metroscope* model produces output based on household consumption profiles, also known as bins. These profiles differ between owners and renters. The distribution of households by bin and income, age, household size and presence of children for owner occupied housing and for rental housing are shown in Tables 2-1 and 2-2.

Figures 2-3, and 2-4, and 2-5 provide a graphical representation of the characteristics of each bin, and how these characteristics vary by bin and between renters and owners. As shown in Figure 2-3, income is generally lower for renters than owners for all the consumption bins. For both owners and renters, income increases as we move from one bin to the next. Bin 1 includes very low-income households for both owners and renters, while bin 8 includes the most affluent households in both tenure categories.

Figure 2-4 shows how age varies by consumption bin. Age varies more for renters than for owners. Bin 1 includes many elderly, while bin 2 has a much higher concentration of young adults. The average age rises again for bins 3 and 4 and then falls for bins 5 and 6, rises slightly for 7, then falls again for bin 8. The average age of owners varies much less by bin, although the proportion of the elderly is highest in Bins 1 and 2, while the average age is much lower for bins 3, 4, 5, and 8.

Figure 2-5 shows how household size varies by bin. Household size is generally higher for the higher number bins, although bin 2 renters have a larger household size than renters in bins 3 and 4. Note that presence of school-aged children coincides somewhat with household size; thus, bin 8 renters and owners have both the highest household size and the highest percentage of households with school-aged children.

A summary of the bin characteristics can be described as follows.

- **Bin 1: Low-Income Singles.** For both owners and renters, these are the lowest income households. Among renters, these are exclusively single person households--primarily the elderly. Owners in Bin 1 have a more even age and household size distribution.
- **Bin 2: Working Class.** These households can be any age, but their income is among the lowest. The income distribution is a bit higher for owners than for renters. They are primarily childless. However, one-third of the renter households in this bin have school-aged children, while only about 1 in six of the owners in this bin have school-aged children.
- **Bin 3: Emerging Singles.** With a bit more income than Bin 2 households, these are primarily in the 25-44 age bracket. The renters are mostly single-person households. About half of bin 3 owners are two-person households and one third of the owner households contain school-aged children.
- **Bin 4: Established Singles and Couples.** With a broad age distribution and approaching middle income, these households are usually childless, especially among renters. Owner households in Bin 4 include more people and about 39 percent include school-aged children.
- **Bin 5: Young Middle-income families.** Bin 5 households are larger and wealthier. The Renter households in this category are older than the owners, with smaller household sizes. The owners are more likely than not to have children.
- **Bin 6: Fast Track Families.** With more income than Bin 5 households, almost half of this group is between 25 and 44. Although the majority do not have school-aged children, two- and three-person households are most common, with the owner households larger and more likely to have school-aged children.
- **Bin 7: Successful Middle Aged.** Mostly without children, these households include the very high-income couples, especially for owners. Interestingly, the renter households in Bin 7 are more likely to have children.
- **Bin 8: Movers and Shakers with Kids.** Among owners, most of these households have children; about 60 percent of renter households have children. They are the highest earners in their prime earning years.

Figure 2-1. County Subareas, Metro Region

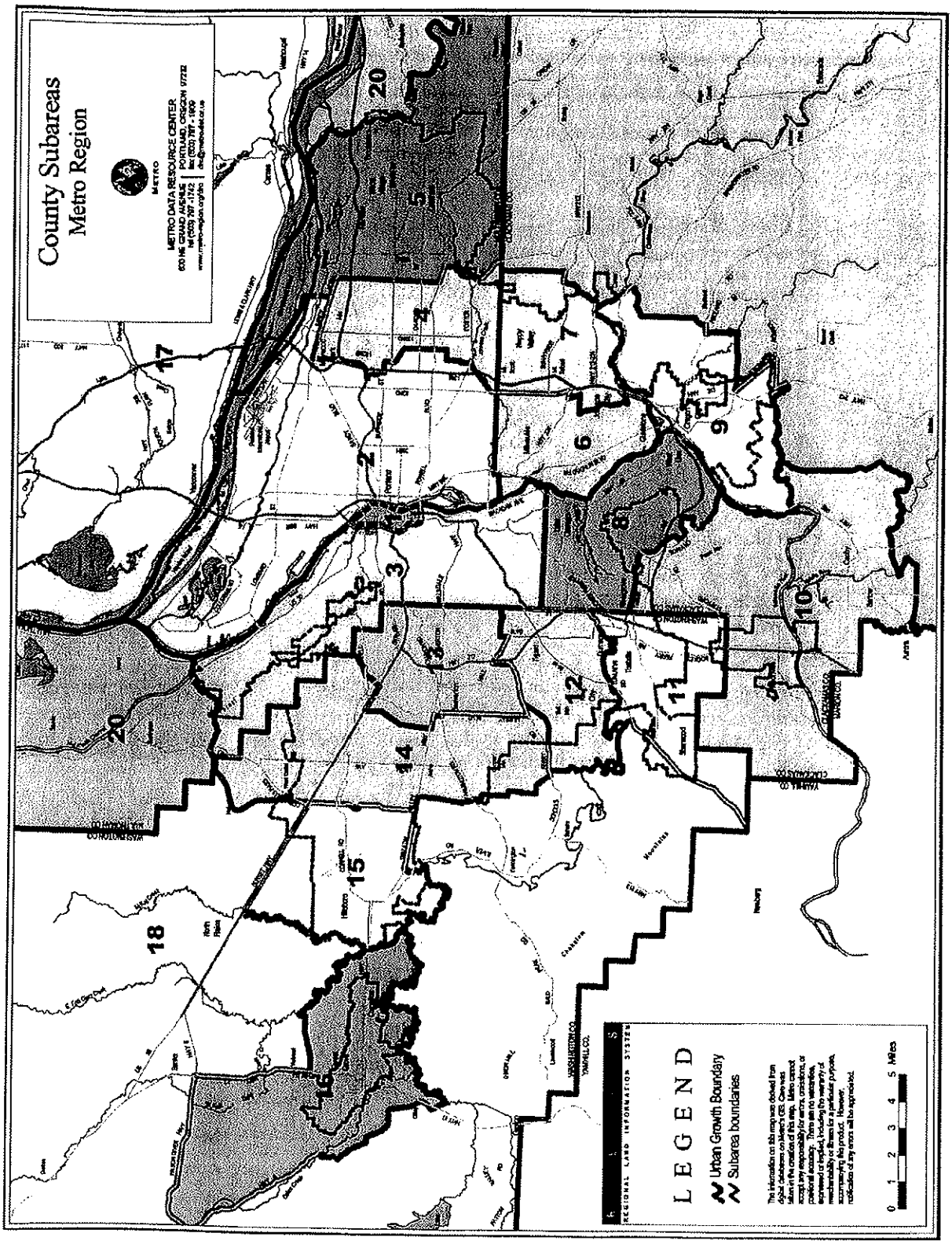


Figure 2-2. County Subareas, Metro Region, with Jurisdictional Boundaries

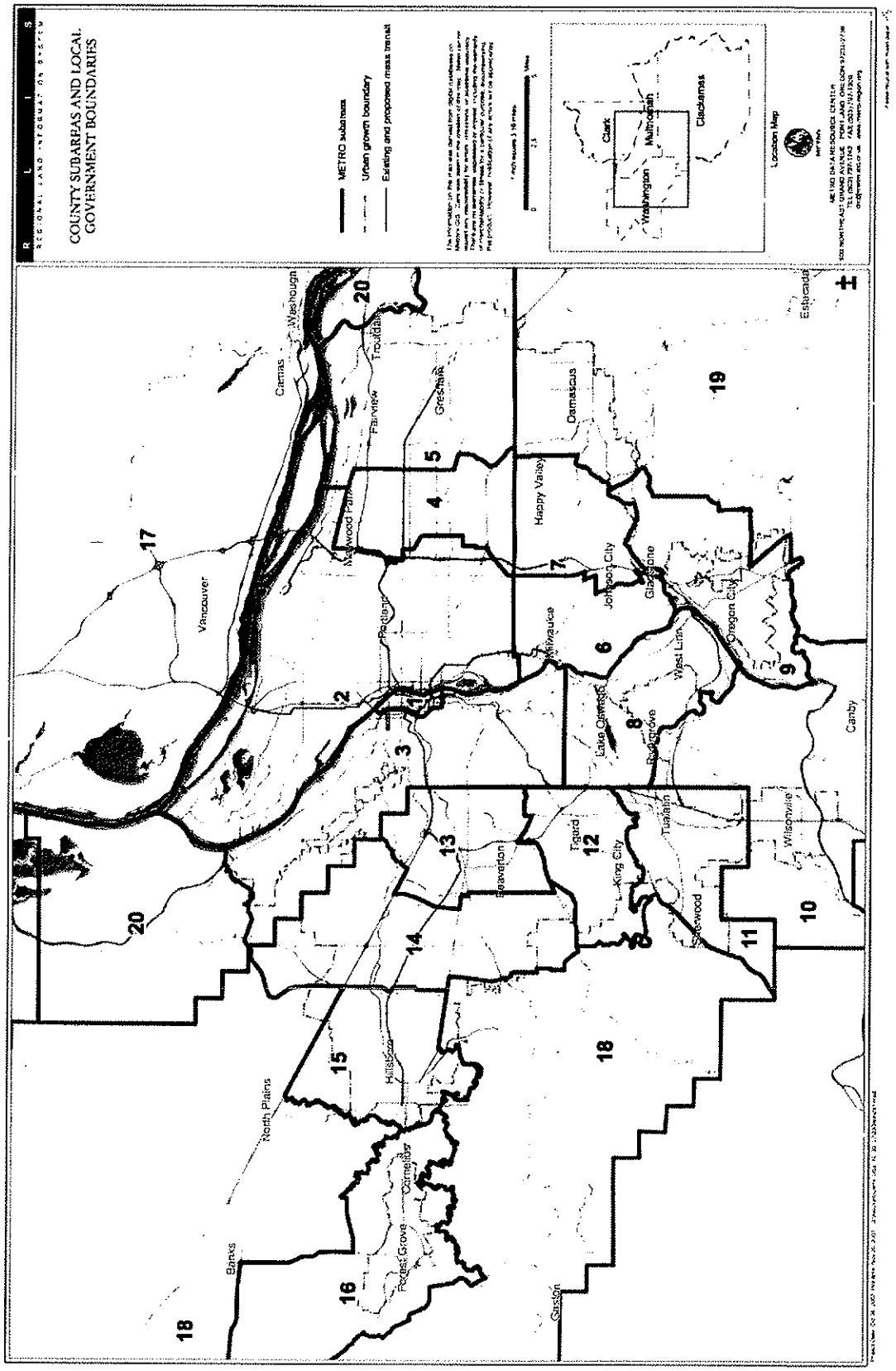


Table 2-1. Metroscope Residential Demographic Summary: Household Distribution by Bin, OWNERS

Age of Householder	Bin 1: Low-Income Singles	Bin 2: Working Class	Bin 3: Emerging Singles	Bin 4: Established Singles and Couples	Bin 5: Young Middle-Income Families	Bin 6: Fast-Track Families	Bin 7: Successful Middle-Aged	Bin 8: Movers & Shakers with Kids	Total HHolds	Percent HHlds
Under 25	12.8%	7.9%	7.0%	5.6%	2.2%	0.9%	1.1%	0.3%	5,158	1.3%
25 - 44	25.9%	26.4%	42.2%	40.4%	49.1%	45.3%	29.9%	53.9%	138,103	35.6%
45 - 54	11.4%	14.5%	19.3%	21.7%	23.6%	26.4%	29.7%	35.6%	98,948	25.5%
55 - 64	12.2%	16.7%	14.0%	16.6%	14.9%	17.2%	24.4%	8.8%	66,093	17.0%
65 and over	37.7%	34.6%	17.4%	15.8%	10.3%	10.2%	14.9%	1.4%	79,825	20.6%
									388,126	100%
Household Income										
LT $15,000	67.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	19,135	4.9%
$15,000 - $24,999	32.2%	36.8%	6.1%	0.0%	0.0%	0.0%	0.0%	0.0%	28,678	7.4%
$25,000 - $34,999	0.0%	56.6%	29.7%	9.1%	0.0%	0.0%	0.0%	0.0%	39,269	10.1%
$35,000 - $44,999	0.0%	6.6%	51.1%	28.5%	14.1%	0.0%	0.0%	0.0%	44,160	11.4%
$45,000 - $59,999	0.0%	0.0%	13.1%	54.4%	40.8%	18.7%	0.0%	0.0%	64,245	16.6%
$60,000 - $74,999	0.0%	0.0%	0.0%	8.0%	38.5%	30.2%	14.2%	0.0%	54,190	14.0%
$75,000 - $99,999	0.0%	0.0%	0.0%	0.0%	6.6%	42.9%	19.4%	33.9%	58,871	15.2%
$100,000+	0.0%	0.0%	0.0%	0.0%	0.0%	8.2%	66.4%	66.1%	79,577	20.5%
									388,126	100%
Household Size										
1	73.4%	35.4%	24.6%	7.1%	6.6%	8.2%	0.0%	0.0%	70,273	18.1%
2	13.9%	49.4%	37.2%	44.8%	28.9%	31.4%	51.3%	0.3%	137,842	35.5%
3	6.7%	9.0%	19.7%	21.3%	24.1%	23.0%	28.9%	17.8%	68,444	17.6%
4	3.5%	6.1%	11.6%	17.3%	25.7%	18.1%	4.3%	46.8%	63,086	16.3%
5+	2.5%	0.1%	6.9%	9.5%	14.7%	19.4%	15.5%	35.1%	48,481	12.5%
									388,126	100%
Presence of K-12 Children										
No	98.9%	83.8%	65.9%	61.3%	45.3%	51.8%	70.9%	7.9%	239,598	61.7%
Yes	1.1%	16.2%	34.1%	38.7%	54.7%	48.2%	29.1%	92.1%	148,528	38.3%
									388,126	100%

Table 2-2. *Metroscope* Residential Demographic Summary –Distribution by Bin, RENTERS

Age of Householder	Bin 1: Low-Income Singles	Bin 2: Working Class	Bin 3: Emerging Singles	Bin 4: Established Singles and Couples	Bin 5: Young Middle-Income Families	Bin 6: Fast-Track Families	Bin 7: Successful Middle-Aged	Bin 8: Movers and Shakers with Kids	Total HHolds	Percent HHlds
Under 25	12.3%	14.8%	11.7%	6.9%	7.5%	9.2%	3.7%	0.9%	35,894	15.2%
25 - 44	0.0%	43.6%	33.0%	26.7%	36.1%	40.3%	37.4%	45.9%	116,790	49.4%
45 - 54	0.0%	22.5%	11.8%	16.7%	16.5%	16.8%	21.6%	29.9%	34,278	14.5%
55 - 64	19.1%	7.3%	10.4%	15.6%	14.3%	14.8%	20.0%	15.2%	19,692	8.3%
65 and over	68.6%	11.8%	33.1%	34.2%	25.6%	19.0%	17.3%	8.0%	29,968	12.7%
									236,623	100.0%
Household Income										
LT $15,000	100.0%	100.0%	14.1%	0.0%	0.0%	0.0%	0.0%	0.0%	56,669	23.9%
$15,000 - $24,999	0.0%	0.0%	85.9%	47.4%	24.3%	0.0%	0.0%	0.0%	43,210	18.3%
$25,000 - $34,999	0.0%	0.0%	0.0%	52.6%	50.8%	35.7%	0.0%	0.0%	40,348	17.1%
$35,000 - $44,999	0.0%	0.0%	0.0%	0.0%	24.9%	46.8%	30.4%	0.0%	31,452	13.3%
$45,000 - $59,999	0.0%	0.0%	0.0%	0.0%	0.0%	17.5%	40.2%	18.0%	29,870	12.6%
$60,000 - $74,999	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	24.9%	16.2%	16,229	6.9%
$75,000 - $99,999	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.5%	27.5%	11,202	4.7%
$100,000+	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	38.3%	7,644	3.2%
									236,623	100.0%
Household Size										
1	100.0%	37.0%	81.1%	52.6%	24.9%	15.5%	9.7%	2.5%	99,110	41.9%
2	0.0%	38.9%	4.8%	39.5%	45.9%	42.4%	50.4%	23.7%	66,962	28.3%
3	0.0%	21.7%	0.0%	7.4%	11.6%	19.5%	17.1%	26.7%	31,933	13.5%
4	0.0%	2.3%	7.4%	0.3%	9.6%	13.0%	12.7%	27.6%	23,177	9.8%
5+	0.0%	0.1%	6.7%	0.2%	7.9%	9.5%	10.1%	19.6%	15,441	6.5%
									236,623	100.0%
Presence of K-12 Children										
No	100.0%	66.7%	85.9%	90.3%	72.0%	61.9%	67.4%	40.1%	164,963	69.7%
Yes	0.0%	33.3%	14.1%	9.7%	28.0%	38.1%	32.6%	59.9%	71,660	30.3%
									236,623	100%

Figure 2-3. Average Household Income by Consumption Bin, Renters and Owners

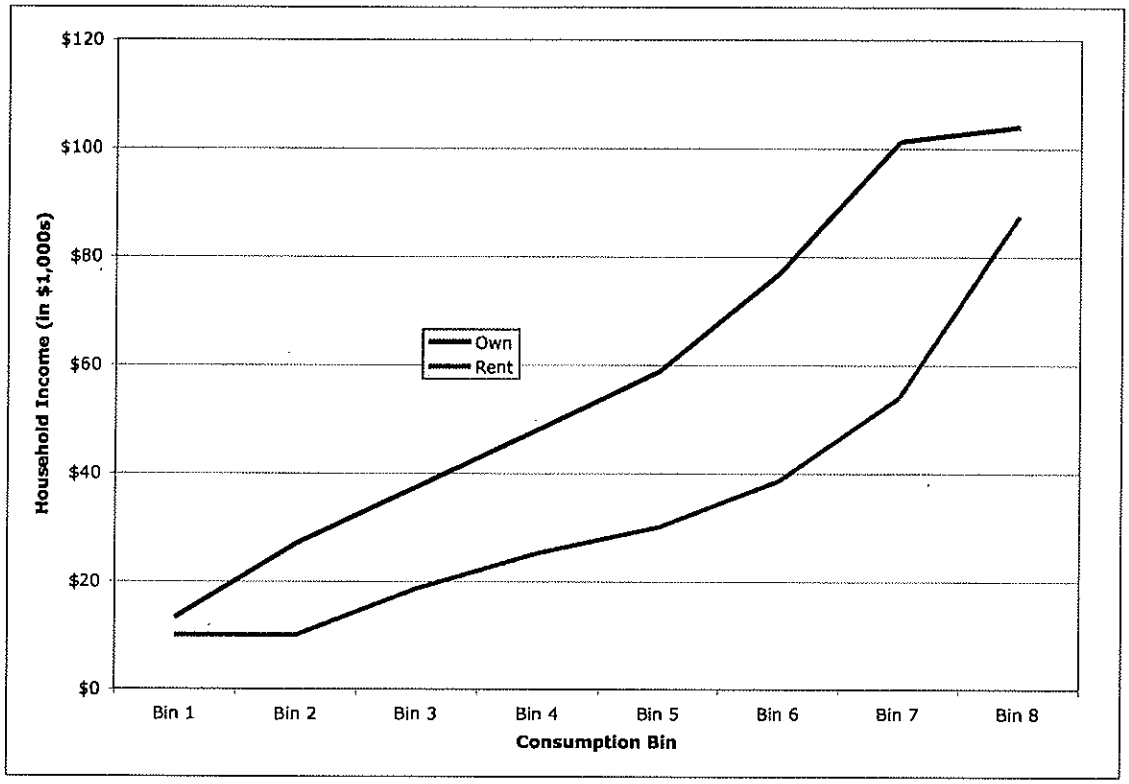


Figure 2-4. Age of Householder by Consumption Bin, Renters and Owners

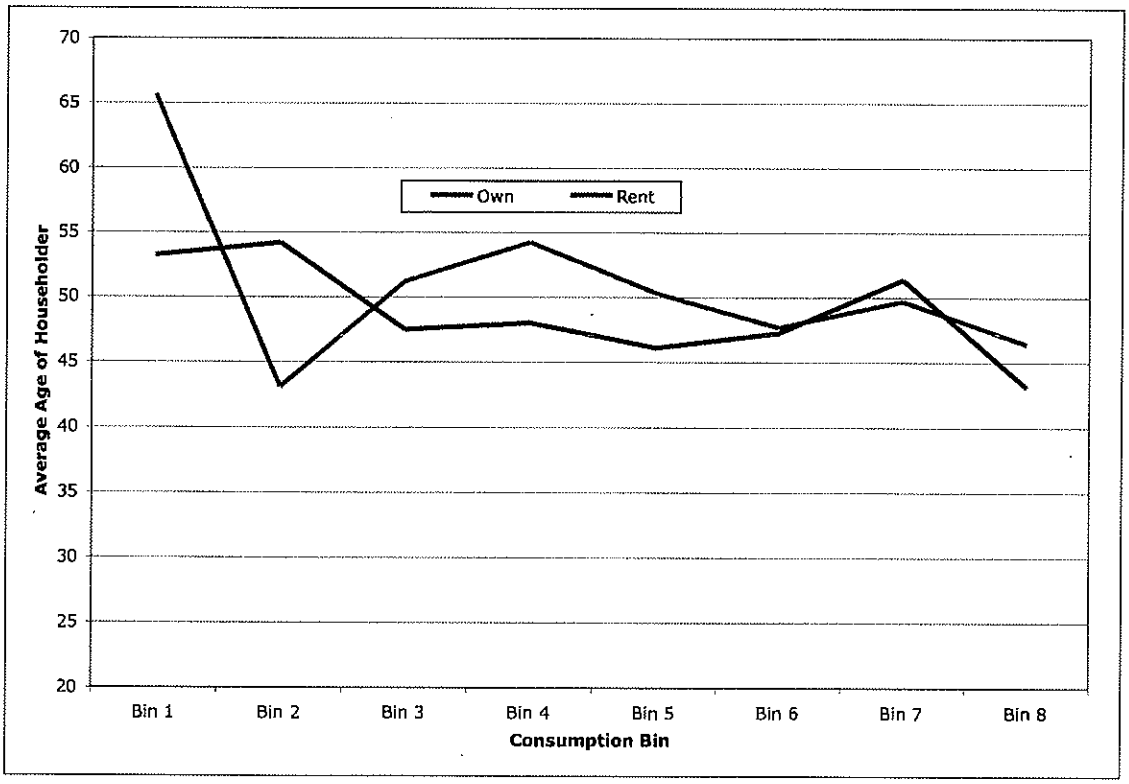
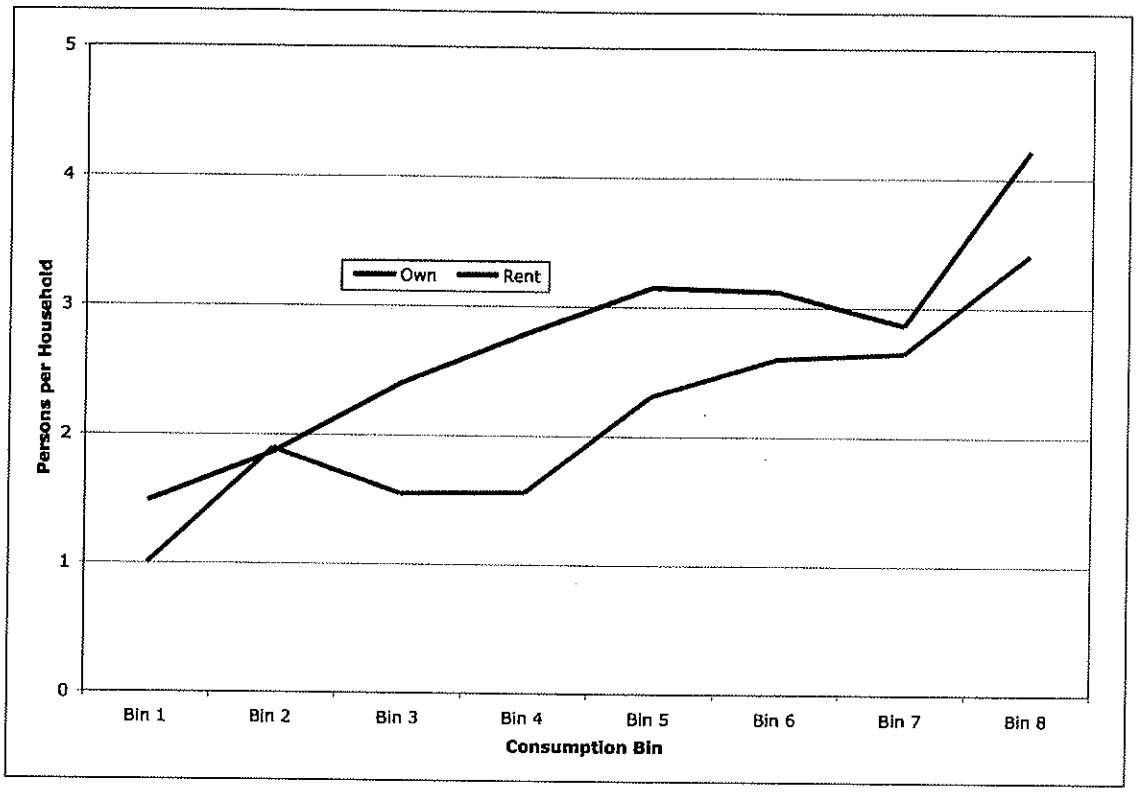


Figure 2-5. Household Size by Bin, Owners and Renters



Forecasting market results over time

The *Metroscope* model uses 2005 as the base year and produces forecasts for 2010 to 2035, in five-year increments. In the tables contained in Chapter 3, we do not always show each time period, except where this information is particularly pertinent to our findings.

Percent of income spent on housing – by type of household

The *Metroscope* model provides information regarding the percent of income spent on housing, given the household's income and the type and cost of housing chosen. Income in the *Metroscope* model is defined by the total personal income definition used by the Bureau of Economic Analysis (BEA). It includes wages & salary disbursements, dividends, interest, rent, other labor income, proprietor's income, and transfer payments less social insurance contributions. Personal income is then divided into income ranges based on sixteen Census 2000 income categories. *Metroscope* combines several of these categories and only operates with 8 income categories.

The primary weakness of this part of the analysis is the unavailability of information on wealth. No variable in the model directly measures a household's wealth. The age of household head variable picks up part of the wealth effect, resulting in higher rates of home ownership for lower income, older householders than for younger householders with the same income.

For many households, particularly older households, the wealth effect has an important impact on whether housing costs cause economic hardship. Households that have the wealth required to purchase an expensive home with a significant down payment will have a much lower mortgage payment than a household that must finance 80 percent of the cost, which is the assumption made by *Metroscope*. Thus, low-income elderly households paying a significant share of their income on housing may not be incurring hardship.

3 Findings and Analysis

In this section, we describe the *Metroscope* base case model's predictions for housing for the Oregon portion of the Portland Metropolitan region for 2005 to 2035. We examine the following questions:

- Where will household growth occur?
- What kinds of households will grow?
- What kinds of housing will these households live in?
- What percentage of their income will they pay for housing?
- What demographic groups are most cost-burdened and where do those households live?

Where will household growth occur?

Tahle 3-1 shows *Metroscope's* forecast for household growth from 2005 to 2035 by subarea (Subarea 17, Clark County, is included in the model but is not shown or included in the statistics). By 2035, the region (not including Clark County) will contain almost 994,000 households, a 59 percent increase in households. In 2035, these households will be distributed a bit differently than they are today, as shown in Figures 3-1 and 3-2. (Note that we use households and housing units interchangeably; in the *Metroscope* model, there is a nearly one-to-one correspondence between households and housing units.) The subareas with the greatest growth in households will be Subarea 7, the Happy Valley area, and Subarea 10, the Canby area. These areas will each grow by about 50,000 households, more than tripling their current numbers. On a percentage basis, the downtown area, Subarea 1, will also show significant growth of 188 percent.

The model predicts that about 14 percent of the region's new households will be located in the Canby area; Happy Valley will receive another 14 percent of the new households. Area 3 (northbwest) will receive about ten percent of the growth in households; area 2 (north, northeast, and near east Portland) will receive about nine percent of the new households.

Table 3-1. Total Number of Households by Metro Region Subarea, 2005 and forecast to 2035[1]

	Number of Households								
Metro Region Subarea	2005	2010	2015	2020	2025	2030	2035	Growth	Pct Growth
1	8,857	11,828	16,204	20,385	22,871	24,229	25,511	16,655	188%
2	140,159	144,810	152,576	157,067	162,488	167,461	174,217	34,058	24%
3	52,977	60,433	68,230	78,948	84,867	87,069	90,918	37,941	72%
4	37,135	39,159	41,499	43,353	45,618	47,518	50,038	12,903	35%
5	47,427	51,185	55,198	58,416	63,076	69,240	77,214	29,787	63%
6	30,635	31,757	32,659	33,346	34,178	34,894	35,777	5,142	17%
7	22,122	28,002	34,107	41,488	53,740	63,955	72,052	49,930	226%
8	29,882	31,704	35,169	35,797	38,357	39,273	42,465	12,583	42%
9	13,927	15,567	18,245	20,825	22,673	27,240	30,692	16,765	120%
10	20,893	24,547	28,427	39,757	48,554	56,095	72,232	51,339	246%
11	14,549	18,195	21,988	23,133	24,398	24,966	27,834	13,286	91%
12	26,631	29,295	31,161	32,657	34,505	35,865	37,660	11,029	41%
13	42,694	46,565	49,362	52,195	54,713	56,583	58,922	16,228	38%
14	62,185	68,062	72,402	76,720	82,245	86,797	91,438	29,253	47%
15	23,183	26,207	28,622	30,072	31,688	32,842	34,088	10,905	47%
16	10,773	11,633	12,668	13,590	14,904	16,312	17,467	6,694	62%
17									
18	11,184	15,287	16,112	16,242	16,798	16,956	18,461	7,277	65%
19	27,064	27,874	28,617	29,408	30,413	31,856	34,182	7,118	26%
20	2,472	2,498	2,531	2,542	2,588	2,590	2,718	247	10%
Total	624,749	684,609	745,778	805,941	868,673	921,742	993,887	369,138	59%

1. Table does not include Subarea 17, Clark County

Figure 3-1. Households by Metro Region Subarea, 2005

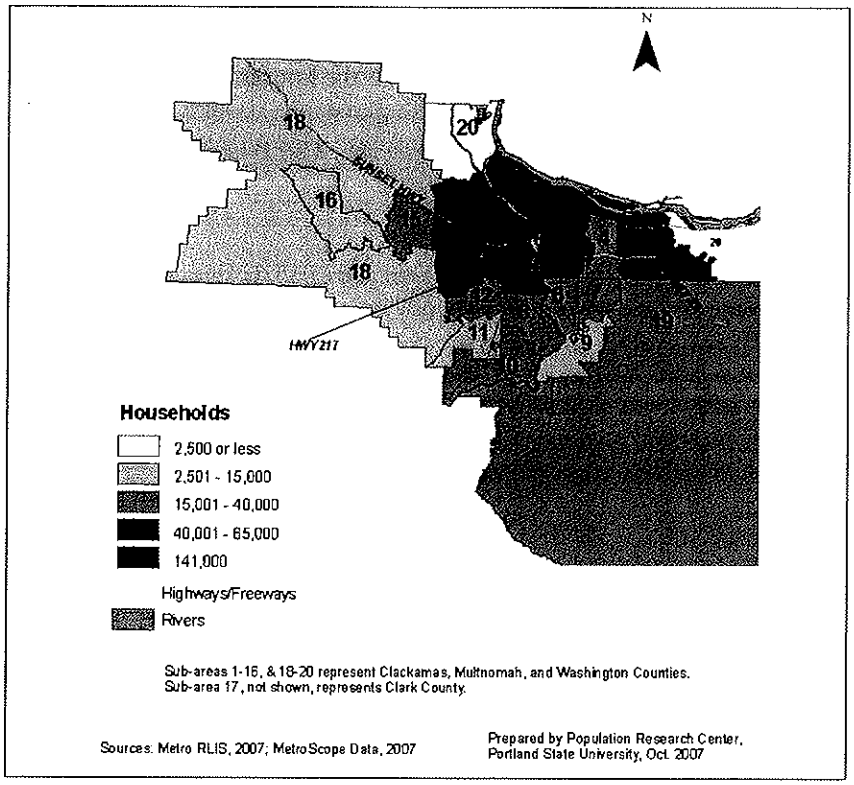
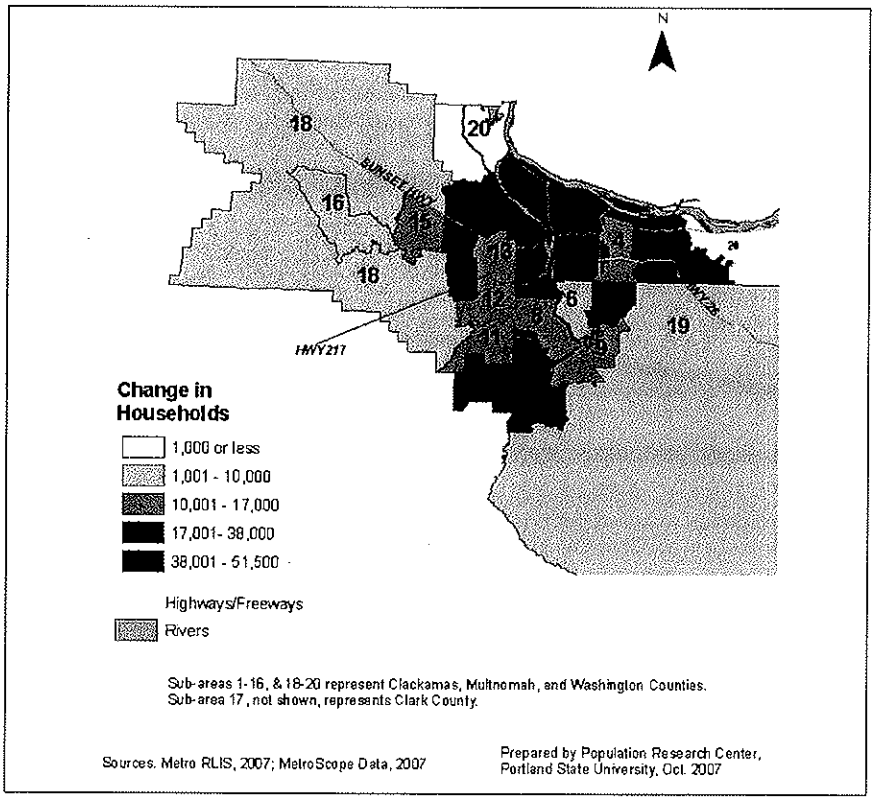


Figure 3-2. Change in Households by Metro Region Subarea, 2005-2035



What kinds of households will grow?

Households by Age

Figure 3-3 shows the distribution of the region's households by age of the householder. By 2035, the percentage of householders age 65 or over will grow from about 18 percent to about 27 percent, while the percentage of householders in each of the other age groups declines. This reflects the aging of the baby boom and the relatively smaller size of the age groups behind it.

Households by Income

Figure 3-4 shows the distribution of households by income for 2005 and 2035. It shows that the lowest income group, households with income less than $15,000, currently comprises about 11.3 percent of total households; this will rise to 13.5 percent by 2035. Similarly, the percentage of households in the following three income groups will rise from 2005 to 2035. But the share of households in the next three groups ($45,000 to $59,999; $60,000 to $74,999; and $75,000 to $99,999) will fall. The highest income category, households earning greater $100,000 or more, will rise from 14.7 percent of the population to 16.4 percent.

Household size

Household size is fairly stable over time, as shown in Figure 3-5; it has trended downward in the past and has now bottomed out. Nevertheless, the percentage of households with two people drops from 32 percent to 30 percent by 2035 as the aging population experiences empty children leaving the household or the death of a spouse. The percentage of households with children present is also fairly steady at just over 35 percent.

Figure 3-3. Household Age Distribution 2005-2035: Total Households

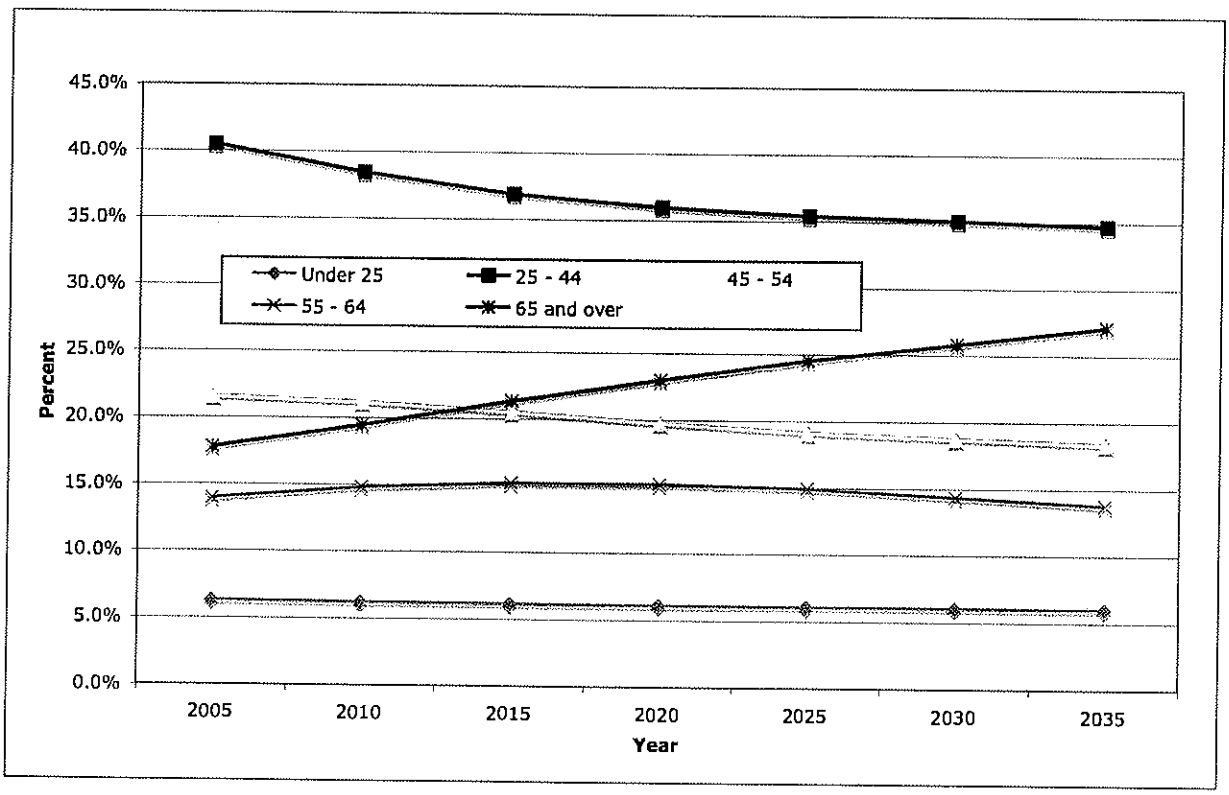


Figure 3-4. Household Income Distribution 2005 and 2035: Total Households

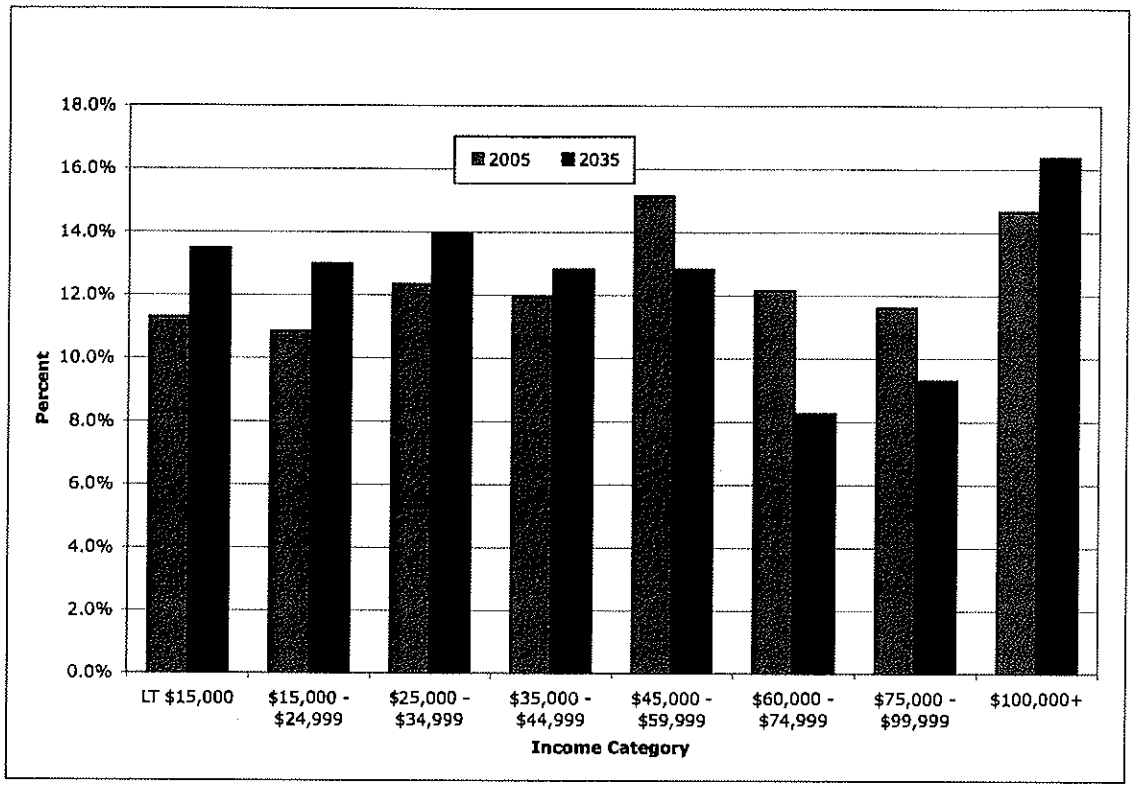
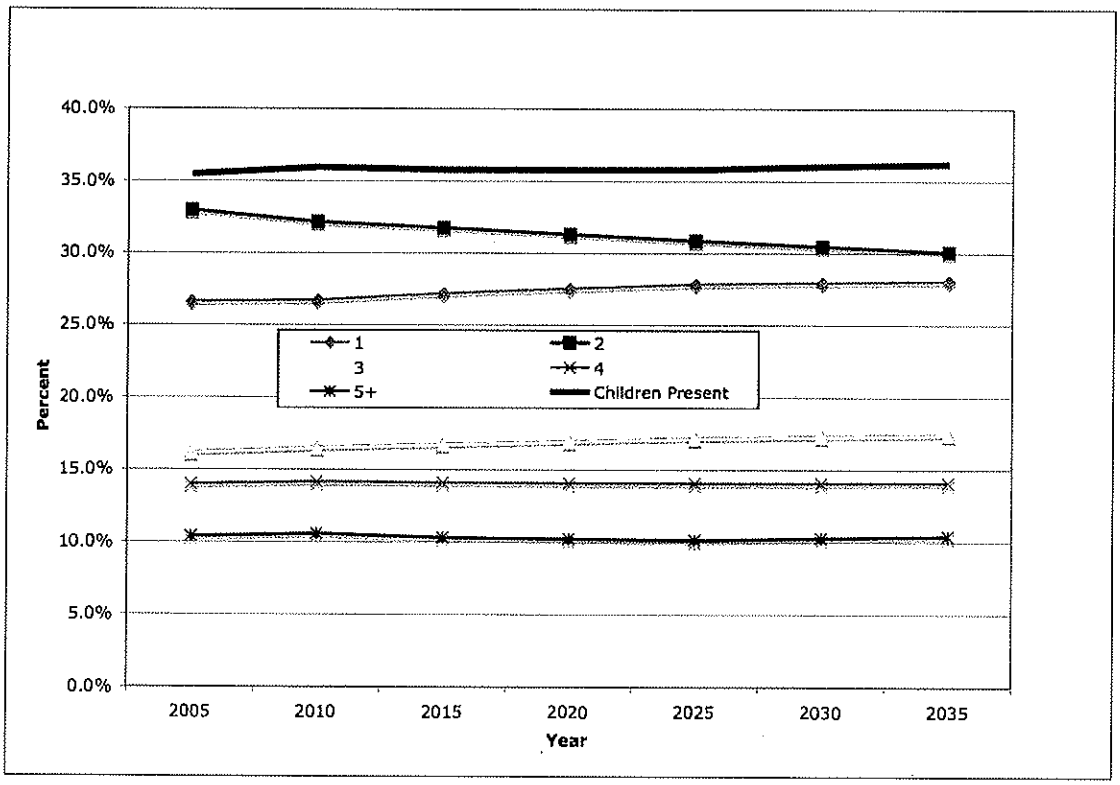


Figure 3-5. Household Size Distribution 2005 to 2035: Total Households



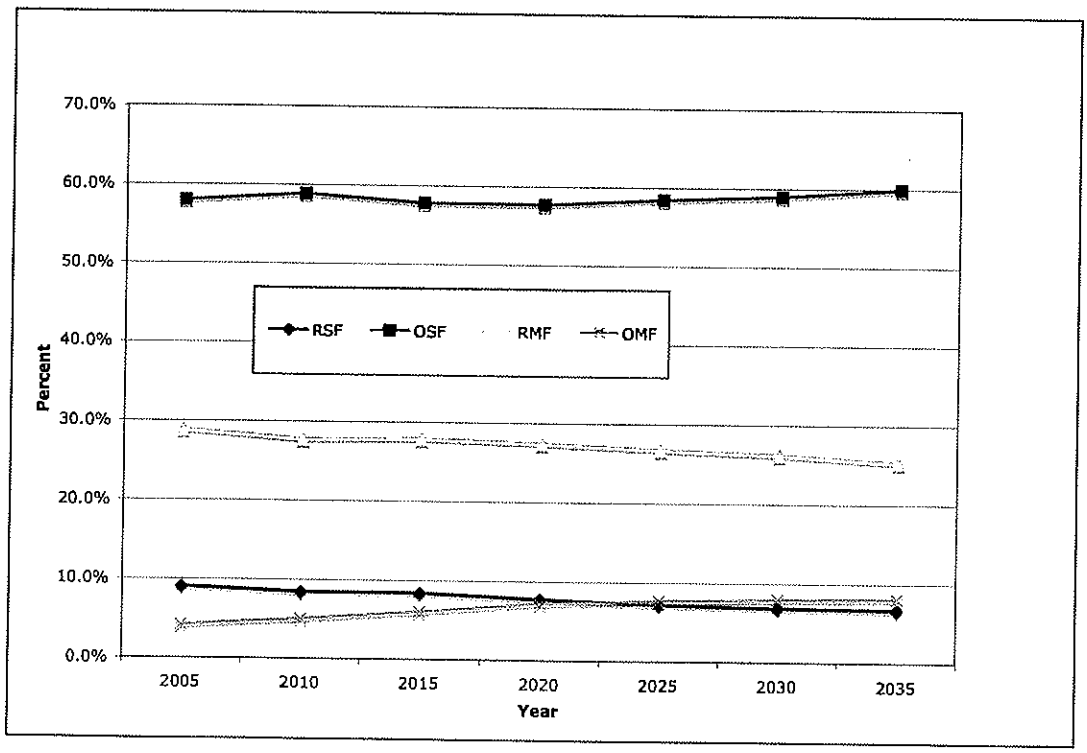
What kind of housing will they live in?

Table 3-2 shows the number of households by tenure and housing type, region-wide from 2005 to 2035. As a percentage of total households, the share for most housing types does not change much over this period. However, the owner-occupied multifamily units double both in raw numbers and in terms of their share of total units, rising from 4 percent of total households in 2005 to 8 percent in 2035. While this is a large percentage change, the total change, 53,901, is only about 15 percent of the total growth in households; the growth in owner single-family housing far outweighs this increase. Rental housing's share of total households declines by 5.9 percent as a greater share of renters become owners. Among the new units added, only 22 percent are rentals. This change in shares is illustrated in Figure 3-6.

Table 3-2: Households by Tenure/Housing type, Region wide, 2005 to 2035

Tenure/Type	2005	2010	2015	2020	2025	2030	2035	Change 2005-2035	Pct Change
Rental Single Family	56,453	57,734	62,678	62,354	62,398	63,629	66,400	9,948	17.6%
Owner Single-Family	362,098	402,944	430,846	465,182	507,829	543,564	595,823	233,725	64.5%
Rental Multifamily	180,170	189,817	207,731	220,799	232,044	241,755	251,734	71,565	39.7%
Owner Multifamily	26,028	34,114	44,523	57,607	66,402	72,794	79,929	53,901	207.1%
Total	624,749	684,609	745,778	805,941	868,673	921,742	993,887	369,138	59.1%
Pct Renters	37.9%	36.2%	36.3%	35.1%	33.9%	33.1%	32.0%	-5.9%	
Pct Owners	62.1%	63.8%	63.7%	64.9%	66.1%	66.9%	68.0%	+5.9%	

Figure 3-6. Percent of Households by Housing Type



Life-Cycle and the Demographics of Housing

The current analysis will focus on a life-cycle or life-stage approach to housing choice. The basic model is as follows: young householders begin their independent living as apartment renters; these young renters age into renting single-family houses, or purchasing starter homes; as age, family size, and income increase, these owners upgrade their housing conditions; finally, in the latter years, these householders have either aged-in-place, or transitioned to owning condominiums or renting apartments.

To accommodate this life-cycle model, the following analysis will differ from that provided in the previous section. This section will focus on housing choice as a joint decision between tenure (own, rent) and structure type (single- or multi-family). For each housing type, we examine demographic characteristics based on the shares represented by each of these four housing options. That is, for any given demographic group, the sum over the four housing choices will sum to one hundred percent.

Demographics of Rental Multifamily Units

We begin our discussion of the demographics of each housing type with the type of housing people typically move into when they are young and first independent: rental multifamily housing. Figure 3-7 shows the shares for rental multifamily units by age of householders. As we would expect, householders under age 25 occupy this housing type with most frequency; 60 percent of these youngest households rent multifamily units. The second most likely to occupy this housing type are the 24-44 year olds, followed by the elderly. These patterns of age and housing type are very stable over time.

Figure 3-7. Shares of Age of Householder 2005-2035: Rental Multifamily Units

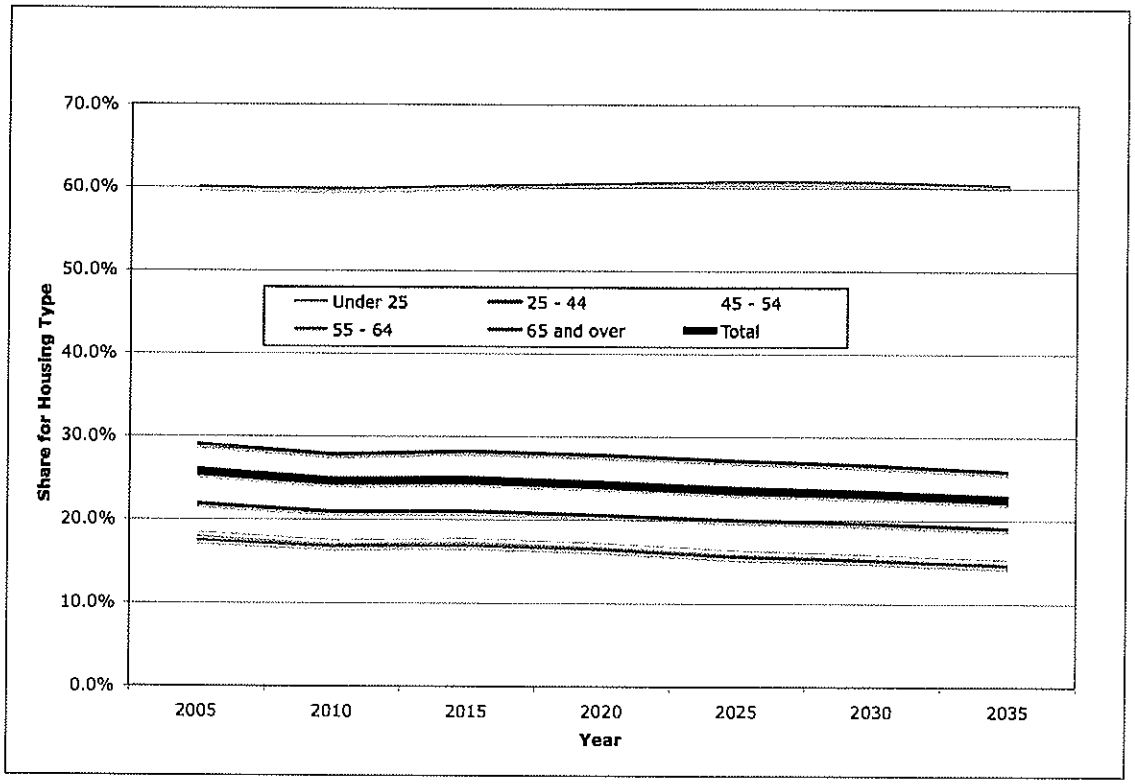


Figure 3-8 shows that the lowest income group is the most likely to choose this housing type, and that the share of the population renting multifamily units falls as income rises. While about 57 percent of the lowest income households chose this housing type in 2005, only about 5 percent of the highest income households did so. These relative shares are stable over time.

Just as young and low-income households are most likely to choose this housing type, so are single-person households. Figure 3-9 shows that about 49 percent of all single-person households choose rental multifamily housing. While this percentage will fall by 2035, these households will still be by far the most likely to choose this housing type. The largest households are least likely to choose this housing type.

The overall decline in the percentage of households choosing this housing type reflects the overall decrease in rental housing shown in Table 3-2.

Figure 3-8. Shares by Income Groups 2005-2035: Renter Multifamily Units

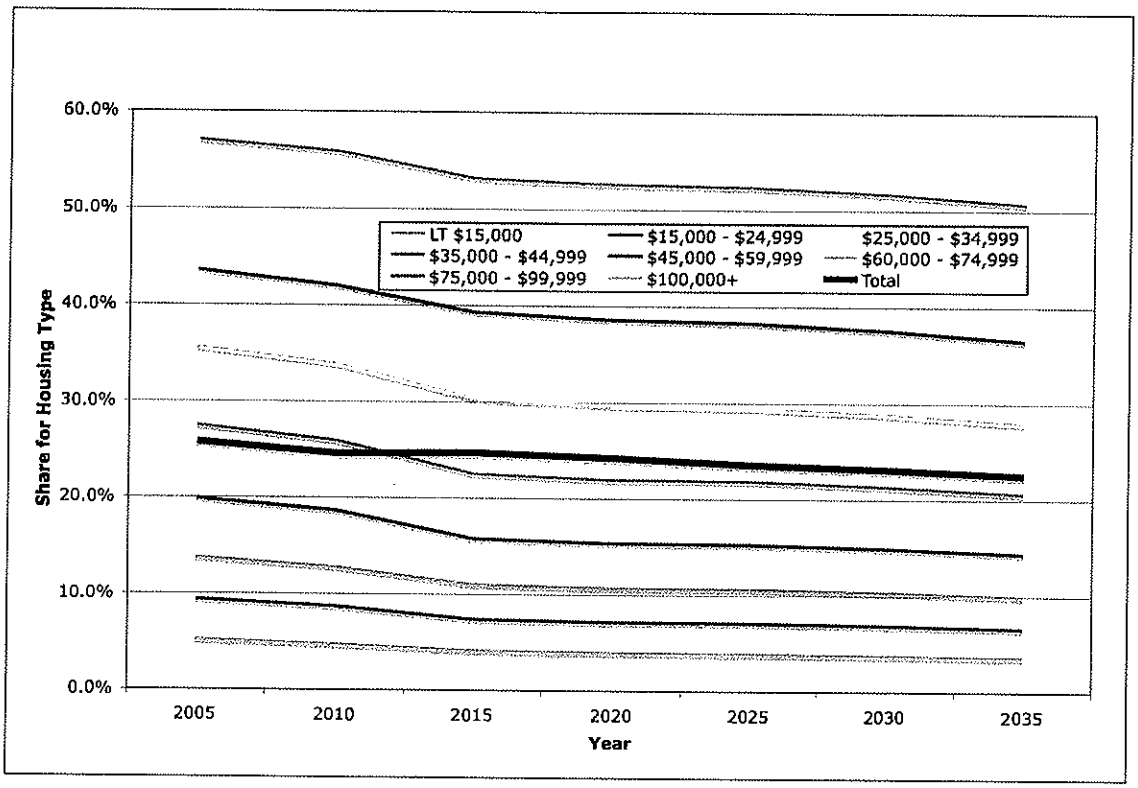
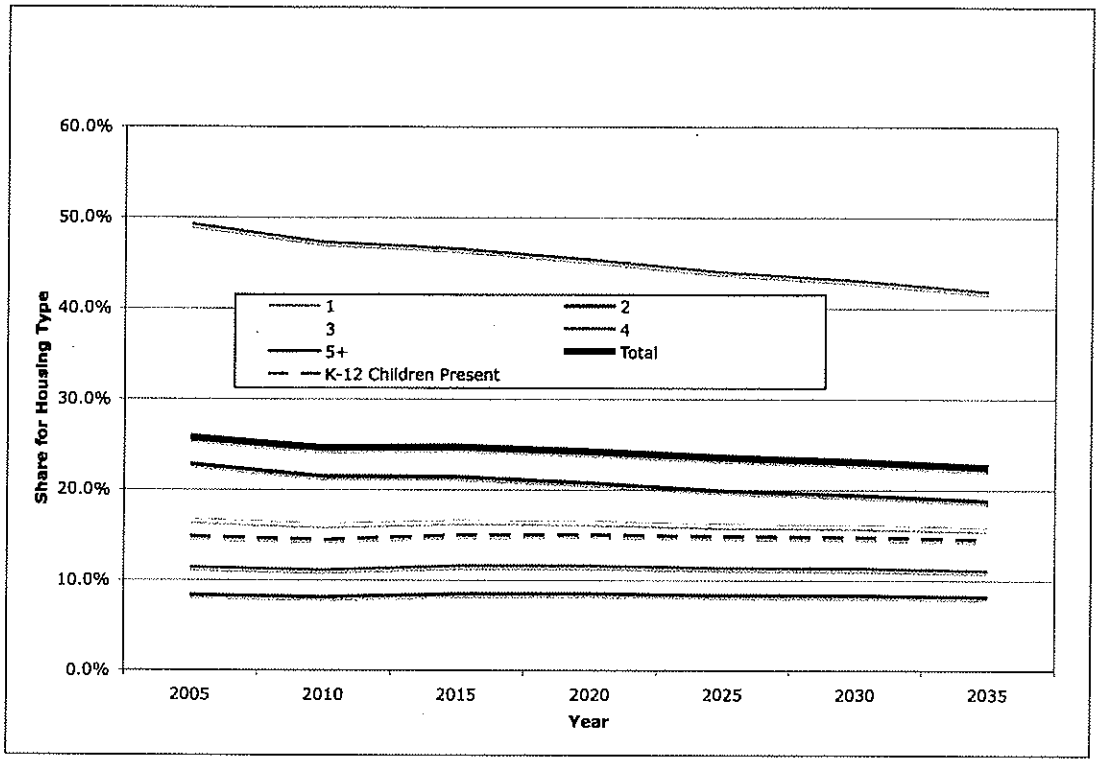


Figure 3-9. Shares by Household Size and Presence of Children 2005-2035: Rental Multifamily



Demographics of Rental Single-Family Units

For much of the 20th century, zoning in the Portland metropolitan area has mandated the development of large amounts of single-family housing and limited the development of rowhouse, townhouse, and apartment development that normally provides rental housing opportunities. And since the demand for rental units remained high, the Portland region has traditionally had significant amounts of its single family housing stock occupied by renters. In 2002, for example, the Portland OR-WA PMSA had 23.8% of its housing units in multi-family housing while 30.8% of its single-family housing stock as rental housing (Statistical Abstract of the United States, 2004-05, Table 946). Assuming a reasonable number of condominium-type complexes, which combine multi-family housing and ownership, this implies a significant share of rented single-family housing.

In more recent years, zoning and land use changes, typified by Metro's Metropolitan Housing Rule, have promoted higher density development and multi-family housing. Restrictions on the development of apartments and rowhouses have been lifted and cities have been required to allocate some of their jurisdiction for apartment construction.

This easing of the regulatory burden has been matched by changing economic pressures. As land prices in the region have risen significantly, higher-density, multi-family housing has become more economical for developers than building lower-density, single family housing. As a result, the percentage of single family housing in the region is expected to decline.

The declining amount of single-family housing in the region is likely to be occupied in greater numbers by owner-occupants. On the supply side, managing a dispersed collection of single-family homes is more expensive than managing a single apartment building. And on the demand side, because renter households have less income than owner households on average, they are more able to afford the smaller square footage that is typical in an apartment than a single-family house. For both of these reasons, the percentage of single-family rental stock is projected to decline.

As a result, in Figure 3-10, we find that the percentage of renter single-family units declining for all household age groups between 2005 and 2035. Householders under 25 most frequently choose this housing type. Younger households are more likely to choose rental housing. Their lower average incomes make the tax deduction of home ownership less attractive. Moreover, their greater likelihood of moving makes the transaction costs of buying and selling a home more of a deterrent.

As shown in Figure 3-11, income also correlates negatively with the shares for these housing units. The wealthiest are the least likely to rent these units, as their higher marginal tax rates promote the choice of homeownership. Figure 3-12 shows that about among households with children, 16 percent choose this housing type, considerably higher than non-family households. Families are more likely to live in single-family rental housing than non-families due to their needs for greater space for their children. However that percentage will fall over time, reflecting the overall decline in the availability of these units. The uniform decline in rental, single-family housing across the household size categories in 2005-2035 reflects the overall loss of rental single-family housing.

Figure 3-10. Shares by Age of Householder 2005-2035: Renter Single-Family Units

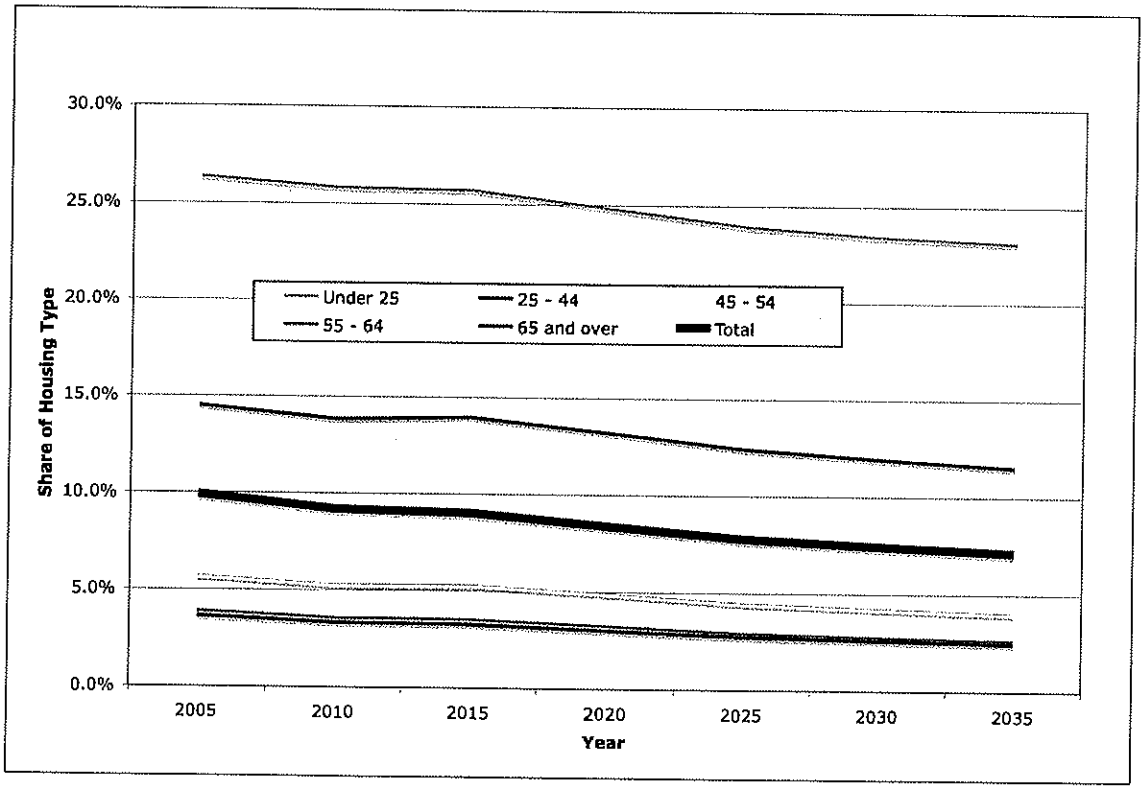


Figure 3-11. Shares by Income Groups, 2005-2035: Rental Single-Family Units

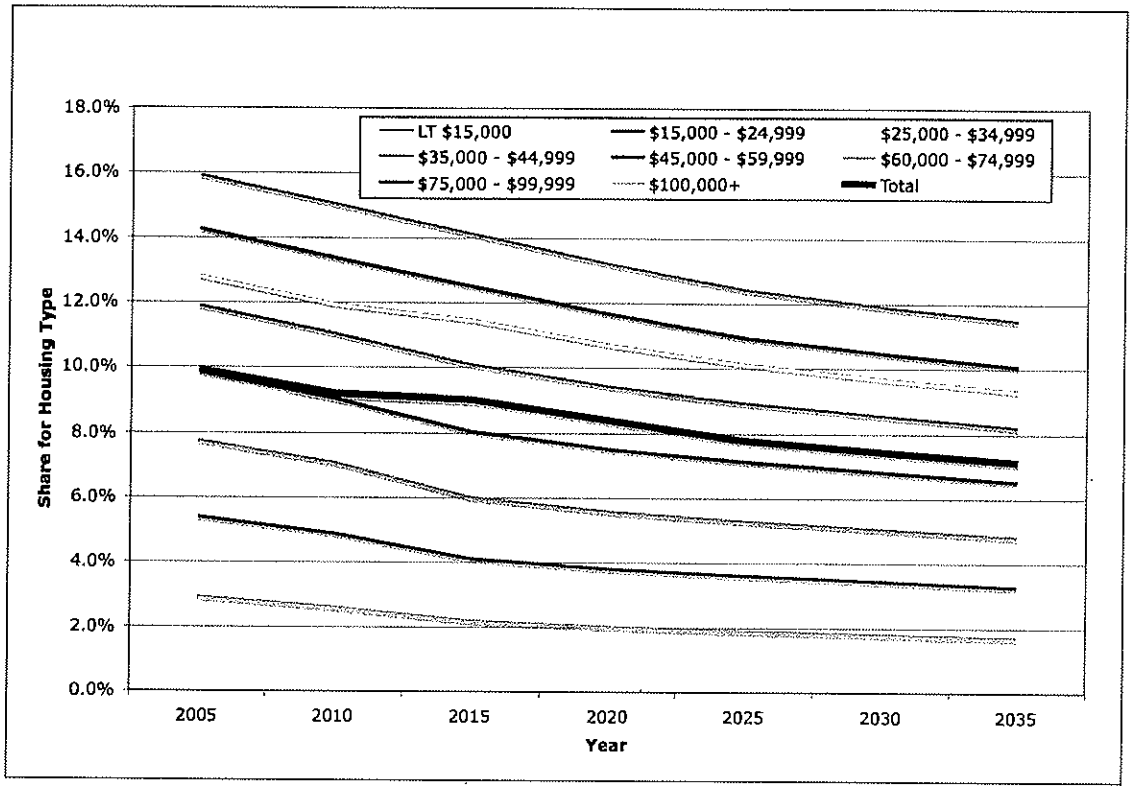
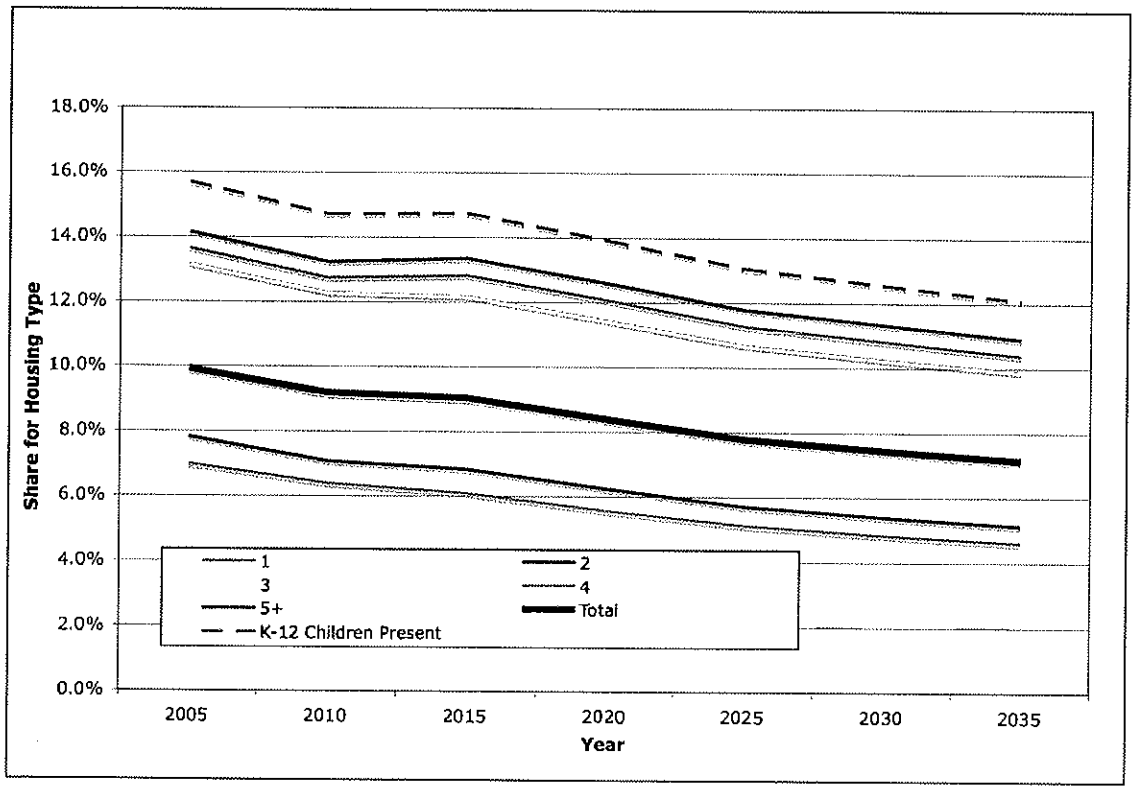


Figure 3-12. Shares by Household Size and Presence of Children, 2005-2035: Rental Single-Family Units



Demographics of Owner Single-Family Units

Older, higher-income households with children are most likely to own single-family units. Figure 3-13 shows the breakout by age. Only about 13 percent of householders under 25 own a single-family unit, and this percentage changes very little over time. All households over the age of 45 are more likely than the total population to choose single-family homes. In 2005, about 70 percent of the elderly chose a single-family home. This percentage will fall only slightly by 2035, to about 68 percent.

Figure 3-14 shows that income once again drives housing choice as the highest income households overwhelmingly choose to own single-family units. About 90 percent of the highest-income households choose single-family units and this remains essentially unchanged by 2035, falling by less than one percentage point. In 2005, only about 25 percent of the lowest income households choose a single-family home in 2005. This will rise to 32 percent by 2035.

Figure 3-15 shows that while a significant share (40 percent) of single-person households live in these units, larger households and households with children are most likely to choose this housing type. The shares for two-person households occupying these units jumps to 66 percent and the share for five or more persons is about 80 percent of these households. In addition, these larger household sizes are augmented by the presence of children, representing 70 percent of all housing units with children.

Figure 3-13. Shares by Age of Householder 2005-2035: Owner Single-Family Units

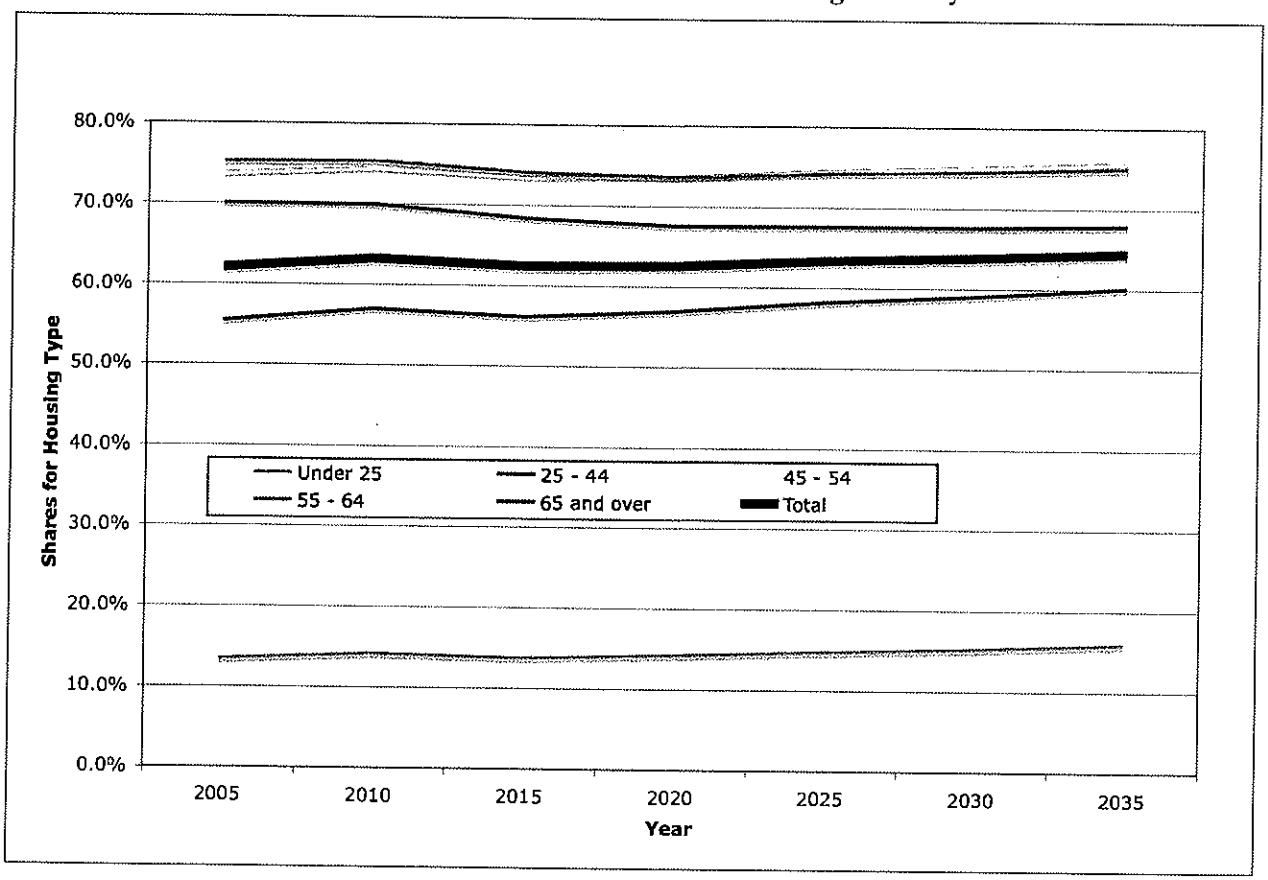


Figure 3-14. Shares by Income Groups 2005-2035: Owner Single-Family Units

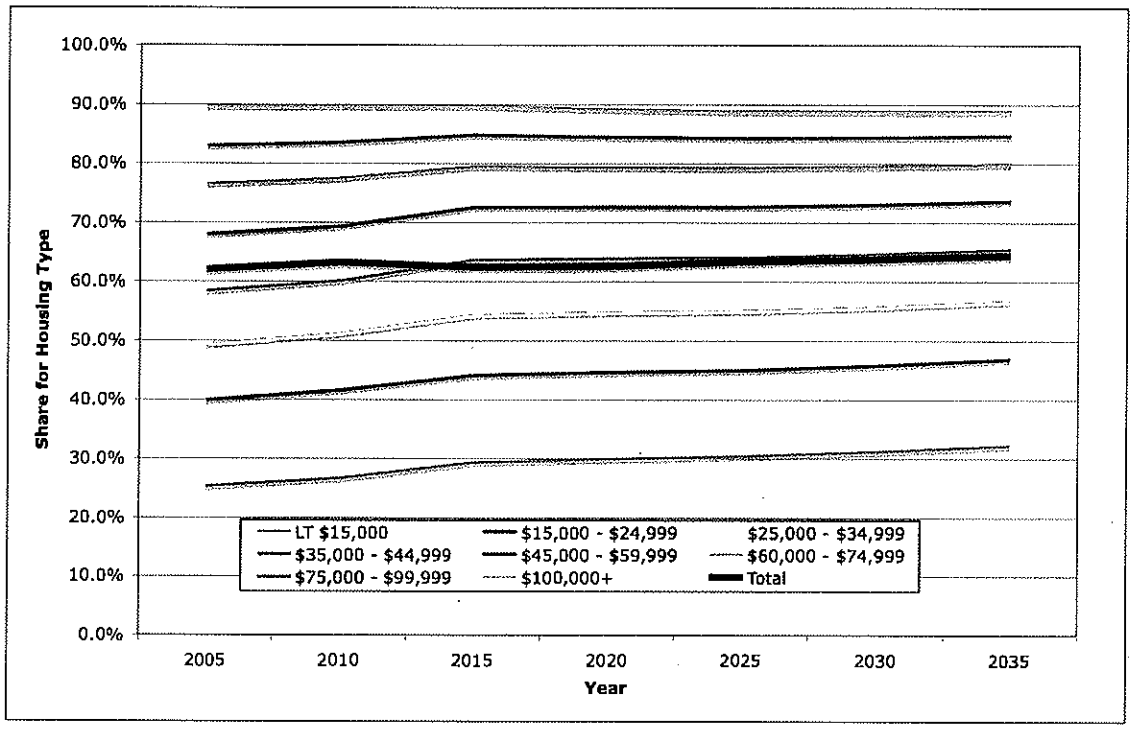
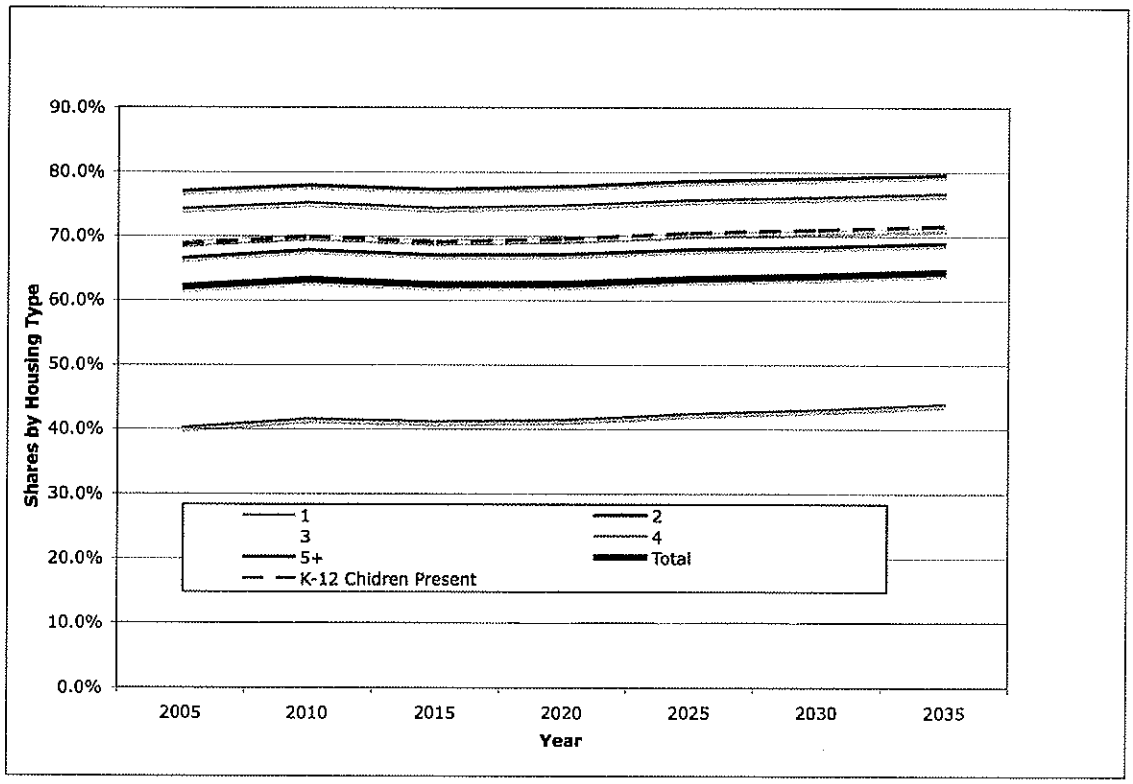


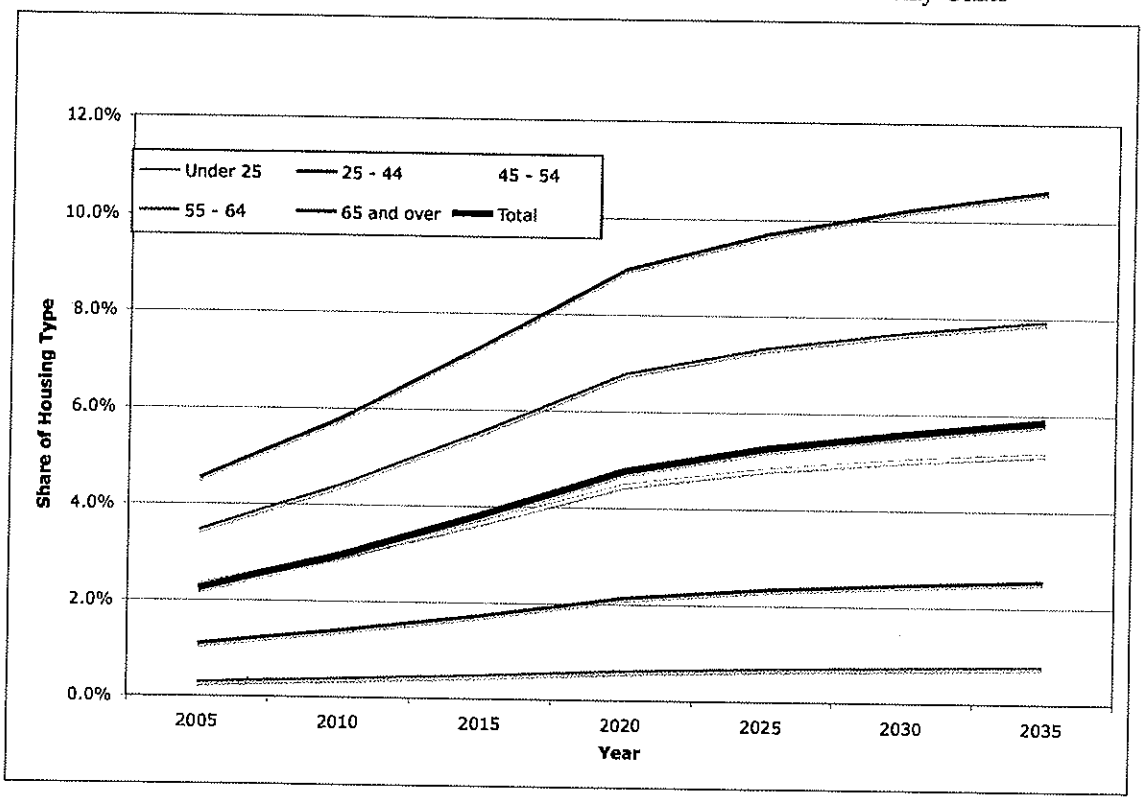
Figure 3-15. Shares by Household Size and Presence of Children, 2005-2035: Owner Single-Family Units



Demographics of Owner Multi-family Units

Our final housing type, owner multi-family units, is much more interesting because shares rise over time for all age groups, all income ranges, and all family sizes, reflecting the overall rise in shares for this housing type. But as shown in Figure 3-16, this housing type is dominated by the retired and those nearing retirement. Householders aged 65 and over are twice as likely to purchase this housing product as the overall population. By 2035, over 10 percent of those over 65 will live in multi-family owner-occupied housing. Similar growth will occur in the 55-64 year age group. In addition, householders 65 and over will represent almost 50 percent of these units.

Figure 3-16. Shares by Age of Householder 2005-2035: Owner Multifamily Units



Income does not appear to drive the choice of owner-occupied multifamily housing. Figure 3-17 shows that there is very little difference between income groups with respect to the probability of living in an owner-occupied multifamily housing unit. We expect that this is because the retired and near-retired bring assets from the sales of previous homes to their purchase of a multifamily unit. Thus, although their income may be low, they are still able to afford this housing product.

According to the 2002 American Housing Survey, about 29 percent of owner-occupied units in the Portland Metropolitan area were owned free and clear, with no mortgage. Among homeowners 65 and older, 71 percent owned their homes free and clear; among homeowners with incomes below the federal poverty level, 59 percent owned their homes free and clear (U.S. Census Bureau, 2002). This provides a strong indication that many individuals use assets to purchase homes, and that, especially among the elderly, income does not necessarily determine who can afford a home.

Figure 3-17. Shares by Income Groups 2005-2035: Owner Multi-Family Units

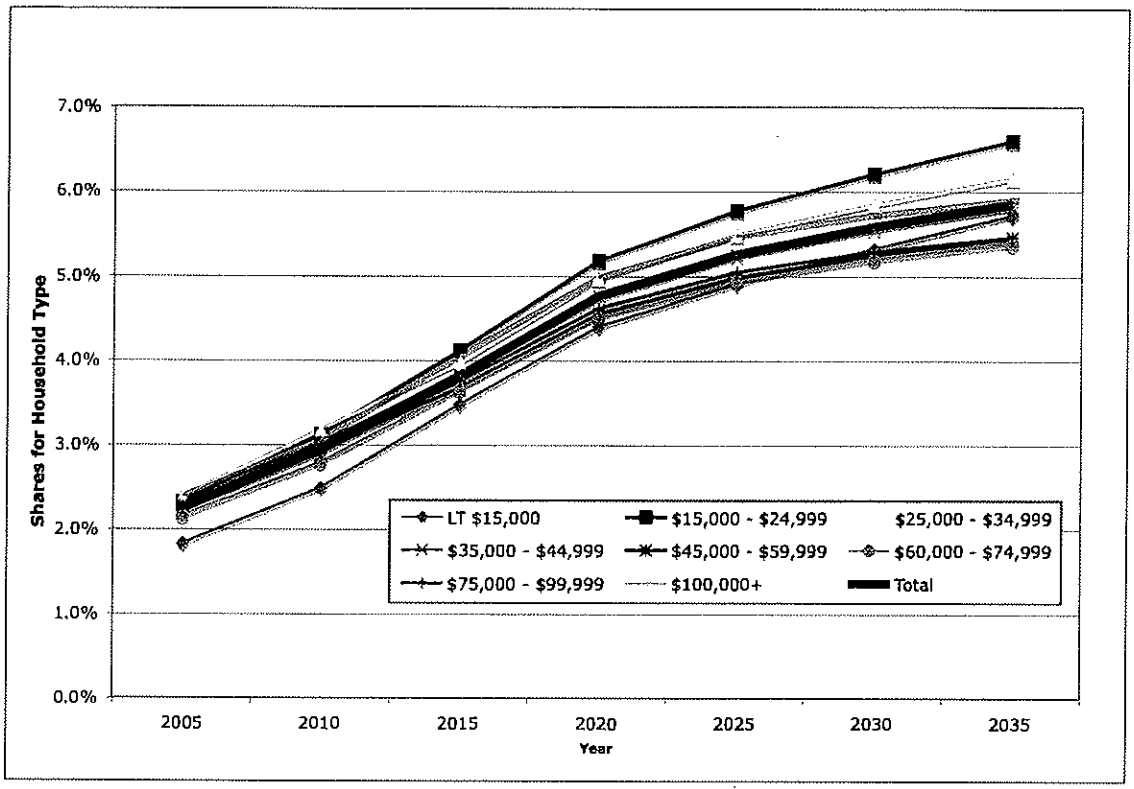
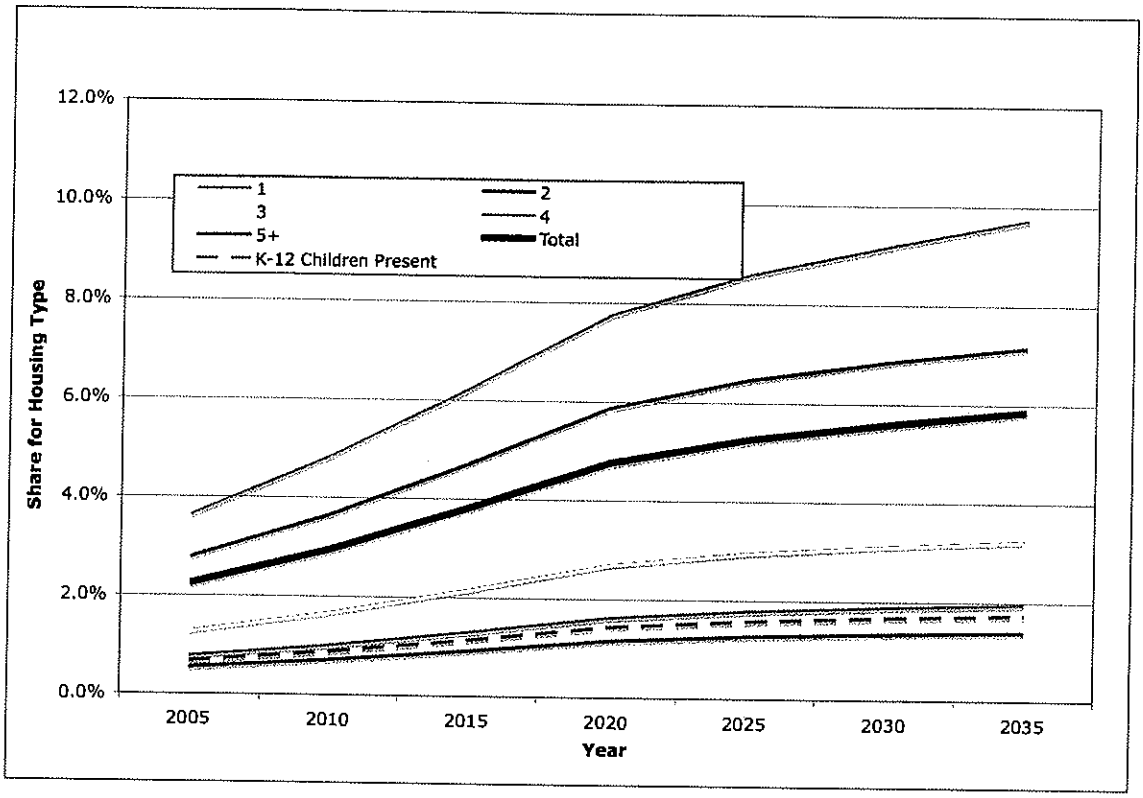


Figure 3-18 shows that most of those who currently live and will live in these units are single-person households and two-person households without children. Although the percentage of households with children in this housing segment will rise between 2005 and 2035, it will still comprise less than two percent of households with children.

Figure 3-18. Shares by Household Size and Presence of Children, 2005-2035: Owner Multifamily Units



What percentage of their income will they pay for housing?

As explained in Section 2, income in the *Metroscope* model is defined by the total personal income definition used by the Bureau of Economic Analysis (BEA). It includes wages & salary disbursements, dividends, interest, rent, other labor income, proprietor's income, and transfer payments less social insurance contributions. Personal income is then divided into sixteen income ranges based on Census 2000. *Metroscope* combines several of these categories and only operates with eight income categories.

Housing costs in the model include rent or mortgage payment (assuming a 20 percent down payment), utilities, property taxes, household operations, and housekeeping supplies. As discussed earlier, the *Metroscope* model does not include data on household wealth, the largest component of which is home equity. Since home equity doesn't create an income flow, these households appear to be poorer than they really are. Or from another perspective, having more home equity means lower mortgage payments than those estimated by *Metroscope.* As a result, some owner households that appear to be cost-burdened may instead have chosen to allocate a significant portion of their wealth to home ownership.

Noting this limitation, *Metroscope* finds that 43 percent of the region's renter and owner households in 2005 pay 30 percent or more of their income for housing. The model predicts that this percentage will rise to almost 50 percent by 2035. This trend is shown in Figure 3-19, along with the percentage of households that will pay 40, 50, and 60 percent of their income for housing. These are also trending upwards.

Figure 3-19. Percent of Income Spent on Housing 2005-2035: Total Households—Rental and Owner Housing

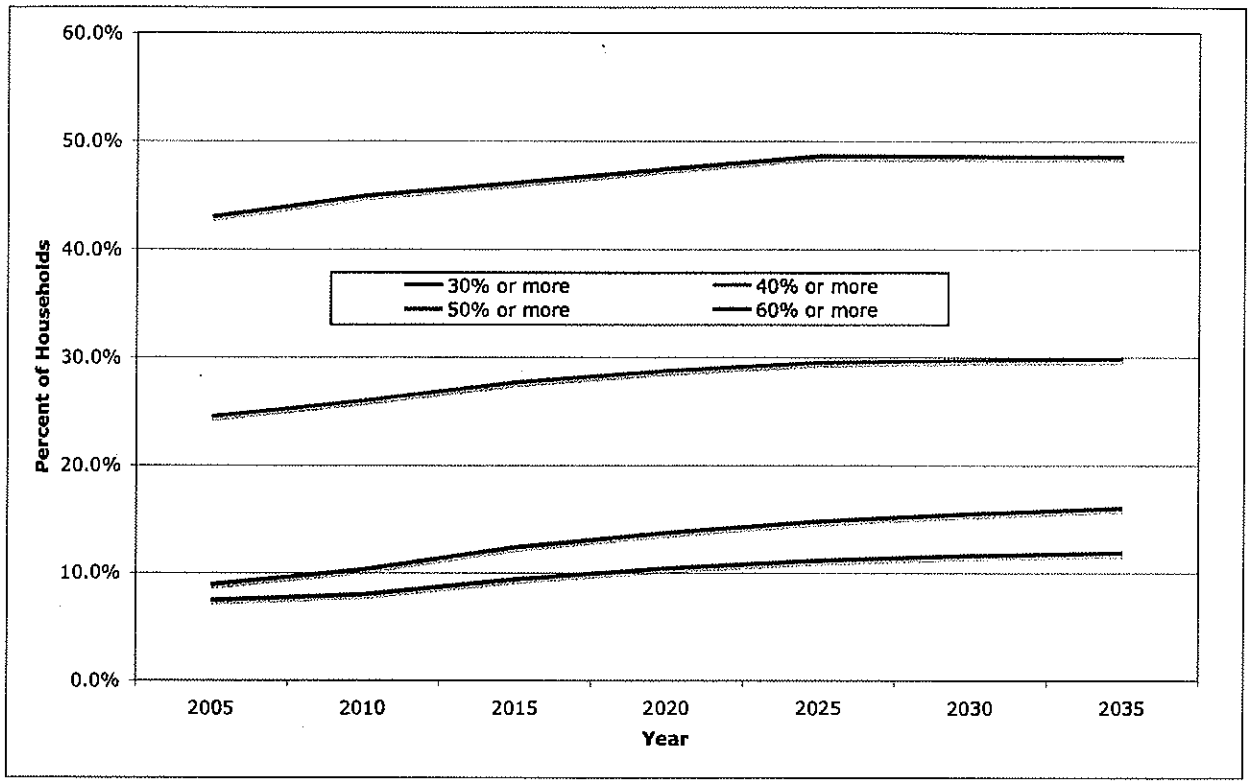
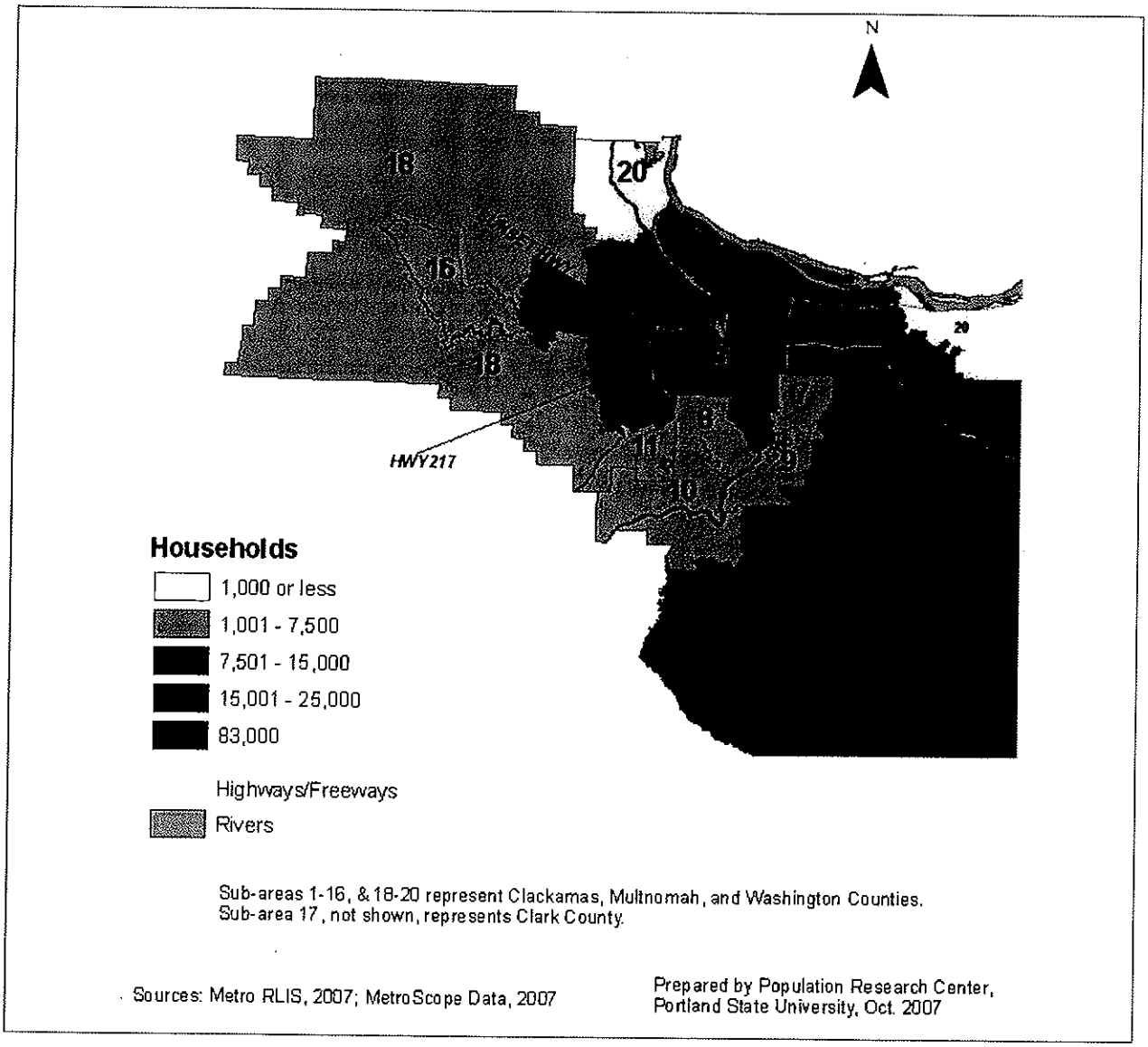


Figure 3-20 and Table 3-3 show the distribution across the region of households spending 30 percent or more of their income on housing in 2005. The largest number of cost-burdened households is in Subarea 2—north and east Portland—where 58 percent of the subarea's households pay more than 30 percent of their income for housing. By comparing each subarea's share of total households with its share of cost-burdened households, we see that some subareas have a greater share of these households than others. In 2005, Subarea 2 had 22.4 percent of the region's total units, but 30.6 percent of the cost burdened units. Subareas 1, 2, 4, 5, 6, and 16 all had a percentage of cost-burdened households larger than their share of total households.

Some of the high housing costs in Subarea 2 may be explained by the relatively low transportation costs experienced by living in such a central location. That is, a person living in north and east Portland is likely to find more frequent transit service and be able to reduce the expenses of car ownership. Unfortunately, *Metroscope* does not include data on transportation costs by households.

Evidence to support this argument shows up in national data from the US Bureau of Labor Statistic's Consumer Expenditure Survey. The poorest 20 percent of US households spent 39.4 percent of their expenditures on housing and 14.3 percent of their expenditures on transportation. In looking at progressively higher income household quintiles, the percentage of expenditures spent on housing falls to 35.2 percent, 33.9 percent, 31.0 percent, and 30.9 percent. At the same time, the percentage of expenditures on transportation rises to 18.4 percent, 19.0 percent, and 19.3 percent before falling to 17.3 percent for richest 20 percent of households. Consequently, the percentage of household expenditures spent on housing and transportation is more or less constant for household in lower 60 percent of income categories. Only at the highest income levels does this percentage drop.

Figure 3-20. Households Paying More than 30 percent of Income for Housing Costs by Metro Subarea, 2005



The result described above can also be demonstrated by looking at city residents versus suburbanites. The Consumer Expenditure Survey finds that while central city residents pay a greater percentage of their expenditures for housing, 34.1 percent vs. 32.6 percent, they spend less on transportation costs, 16.6 percent vs. 18.2 percent. The net percentage spent on housing and transportation is essentially the same. This result is largely driven by car ownership. The typical city household owns 1.5 cars and the typical suburban household owns 2.1 cars.

However, this analysis does not take into account the burden placed by greater commuting time. Transit commuting trips often take much longer, over 63% longer for Multnomah County commuters. The dollars saved from less car ownership may come at the expense of greater travel time. Hence, a more complete analysis of housing cost burdens might also account for the value of time.

Table 3-3. Cost Burdened Households by Metro Region Subarea, 2005: Renters and Owners

Subarea	Pct Households paying 30 % or more for Housing Costs	Subarea's Share of Total Region's Households	Subarea's Share of Total Region's Cost Burdened Households (30%)	Subarea's Median Household Income (Constant $)
1	61.7%	1.4%	2.0%	$20,860
2	58.8%	22.4%	30.6%	$36,720
3	41.1%	8.5%	8.1%	$61,950
4	54.9%	5.9%	7.6%	$37,370
5	46.3%	7.6%	8.2%	$42,720
6	47.3%	4.9%	5.4%	$43,080
7	26.6%	3.5%	2.2%	$64,970
8	24.9%	4.8%	2.8%	$87,560
9	37.6%	2.2%	1.9%	$50,770
10	24.2%	3.3%	1.9%	$72,780
11	28.0%	2.3%	1.5%	$59,240
12	35.1%	4.3%	3.5%	$54,270
13	38.1%	6.8%	6.1%	$48,590
14	32.0%	10.0%	7.4%	$56,290
15	41.0%	3.7%	3.5%	$49,090
16	55.0%	1.7%	2.2%	$38,930
18	32.0%	1.8%	1.3%	$71,540
19	34.2%	4.3%	3.4%	$63,490
20	31.8%	0.4%	0.3%	$76,180
3-County Area	43.0%	100.0%	100.0%	$48,990

Figure 3-21 shows the change in the number of cost-burdened households from 2005 to 2035 and Table 3-4 shows cost burdened households by subarea for 2035. The number of cost-burdened households rises everywhere and the rise is more or less uniform across the region. The largest increases occur in the places at the center of the region—east and west Portland. The only subareas in which the percentage of cost-burdened households falls are Subareas 8 and 10, which roughly corresponds to the cities of West Linn, Lake Oswego, and Wilsonville. In 2035, Subareas 1 through 6, 12, 15, and 16 will have a percentage of cost-burdened households larger than their share of total households.

Figure 3-21. Change in Households paying more than 30 Percent of Income for Housing Costs by Metro Subarea, 2005-2035

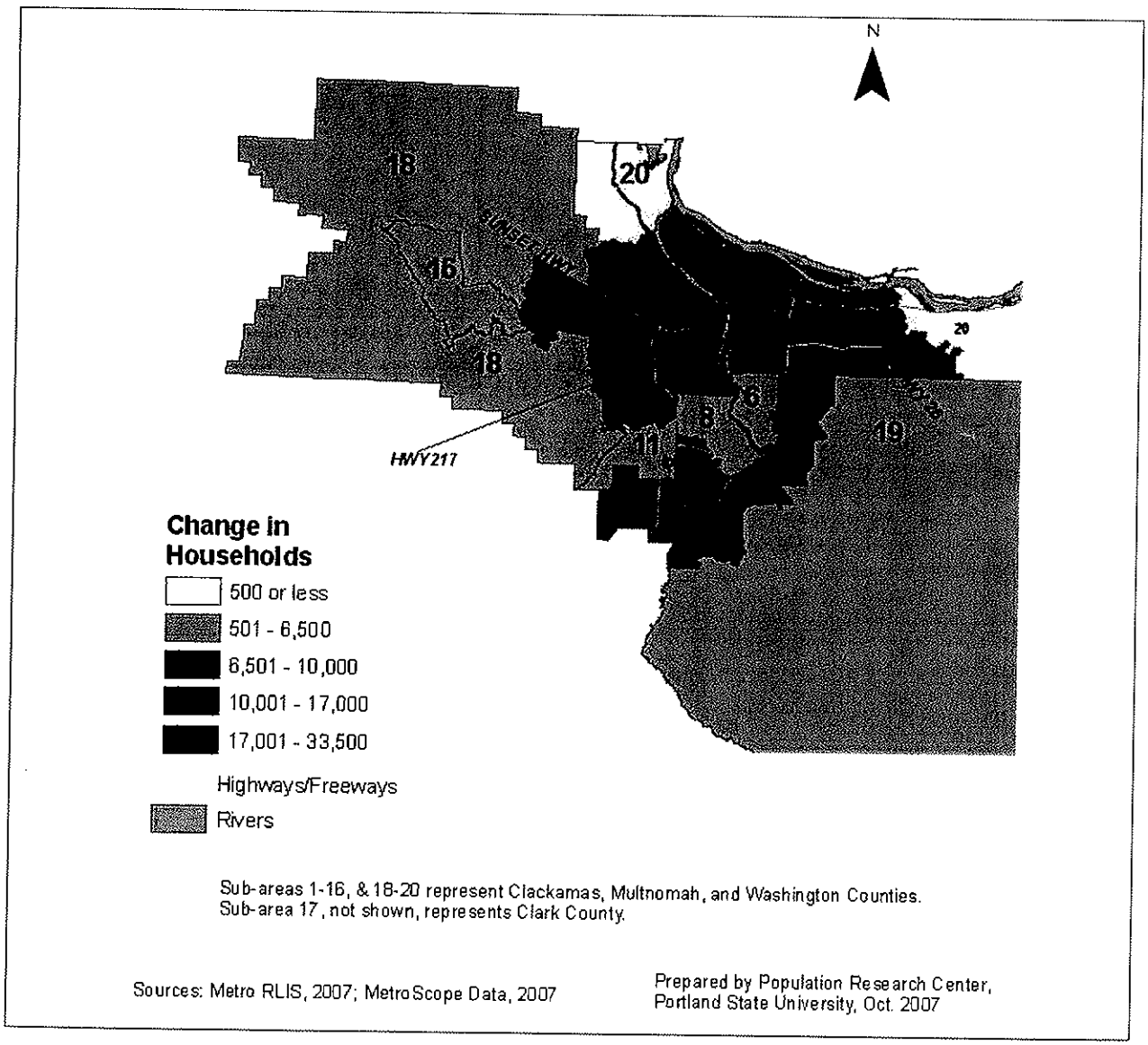


Table 3-4. Cost Burdened Households by Subarea, 2035: Renters and Owners

Subarea	Pct Households Paying 30 % or more for Housing Costs	Subarea's Share of Total Region's Households	Subarea's Share of Total Region's Cost Burdened Households (30%)	Subarea's Median Household Income (Constant $)
1	81.4%	2.6%	4.3%	$44,521
2	66.5%	17.5%	24.0%	$28,443
3	57.5%	9.1%	10.8%	$48,604
4	63.7%	5.0%	6.6%	$28,241
5	49.4%	7.8%	7.9%	$38,921
6	57.7%	3.6%	4.3%	$30,798
7	30.9%	7.2%	4.6%	$61,666
8	23.3%	4.3%	2.1%	$90,479
9	47.5%	3.1%	3.0%	$40,347
10	16.6%	7.3%	2.5%	$89,221
11	36.7%	2.8%	2.1%	$51,041
12	49.4%	3.8%	3.9%	$39,664
13	48.2%	5.9%	5.9%	$36,737
14	38.8%	9.2%	7.4%	$46,274
15	51.0%	3.4%	3.6%	$37,001
16	64.1%	1.8%	2.3%	$30,557
18	36.2%	1.9%	1.4%	$58,231
19	44.4%	3.4%	3.1%	$42,228
20	40.7%	0.3%	0.2%	$53,978
3-County Area	48.6%	100.0%	100.0%	$48,907

Tables 3-5 and 3-6 show the percentage of households spending 30 percent or more of their income on housing for renters only, for 2005 and 2035 respectively, by subarea. As you would expect, renters are more likely to be cost burdened than owners in both years. The percentage of renters that pay more than 30 percent of their income for housing rises from 51.5 percent in 2005 to 57.2 percent in 2035.

Table 3-5. Cost Burdened Households by Metro Region Subarea, 2005: RENTERS ONLY

Subarea	Pct Households Paying 30 % or more for Housing Costs	Subarea's Share of Total Region's Households	Subarea's Share of Total Region's Cost Burdened Households (30%)	Subarea's Median Household Income (Constant $)
1	68.2%	3.0%	4.0%	$17,040
2	60.5%	24.8%	29.2%	$25,160
3	59.6%	9.5%	11.0%	$24,560
4	55.8%	6.2%	6.8%	$26,040
5	48.4%	8.0%	7.6%	$29,040
6	51.5%	4.9%	4.9%	$28,600
7	43.0%	2.7%	2.2%	$32,410
8	37.8%	3.2%	2.4%	$46,310
9	45.6%	1.9%	1.7%	$31,170
10	42.0%	2.2%	1.8%	$36,250
11	40.2%	2.2%	1.7%	$36,200
12	46.9%	3.9%	3.6%	$31,050
13	47.2%	8.3%	7.6%	$30,830
14	37.3%	10.7%	7.8%	$38,660
15	39.0%	3.6%	2.7%	$37,870
16	57.6%	1.8%	2.0%	$23,980
18	52.1%	0.8%	0.8%	$34,970
19	56.0%	2.0%	2.2%	$28,210
20	63.4%	0.2%	0.2%	$36,490
3-County Area	51.5%	100.0%	100.0%	$29,520

Table 3-6. Cost Burdened Households by Subarea, 2035: RENTERS ONLY

Subarea	Pct Households Paying 30 % or more for Housing Costs	Subarea's Share of Total Region's Households	Subarea's Share of Total Region's Cost Burdened Households (30%)	Subarea's Median Household Income (Constant $)
1	80.2%	3.7%	5.2%	$15,550
2	66.0%	21.9%	25.3%	$20,770
3	71.8%	10.3%	13.0%	$19,900
4	62.4%	6.2%	6.8%	$21,510
5	52.2%	8.4%	7.6%	$25,320
6	56.6%	4.0%	3.9%	$22,460
7	47.5%	5.5%	4.6%	$29,720
8	39.8%	2.7%	1.9%	$39,840
9	50.1%	2.5%	2.2%	$25,200
10	50.4%	2.0%	1.7%	$29,920
11	46.1%	2.0%	1.6%	$28,830
12	53.4%	3.3%	3.1%	$24,300
13	53.7%	8.0%	7.5%	$24,900
14	43.3%	11.2%	8.5%	$30,240
15	42.0%	3.7%	2.7%	$29,430
16	64.1%	1.5%	1.7%	$18,020
18	45.1%	1.0%	0.8%	$33,820
19	51.7%	2.1%	1.9%	$25,240
20	61.4%	0.1%	0.1%	$32,930
3-County Area	57.2%	100.0%	100.0%	$24,410

Renters of Multi-Family Units

As shown in Figure 3-22, renters of multi-family units are more likely to spend greater than 30 percent of their income on housing, and they are also more likely to spend greater than 40 percent of their income on housing; but very few, compared to all households, spend 50 or 60 percent of their income on housing. Nevertheless, these percentages will grow by several percentage points between 2005 on 2035. The map shown in Figure 3-23 shows the current distribution of renters of multifamily units spending more than 30 percent of their income on housing. Figure 3-24 shows how the change in these households between 2005 and 2035 is distributed across the region by subarea. The greatest increases occur in Subareas 2 and 14.

Figure 3-22. Percent of Income Spent on Housing 2005-2035: Renter Multi-Family Units

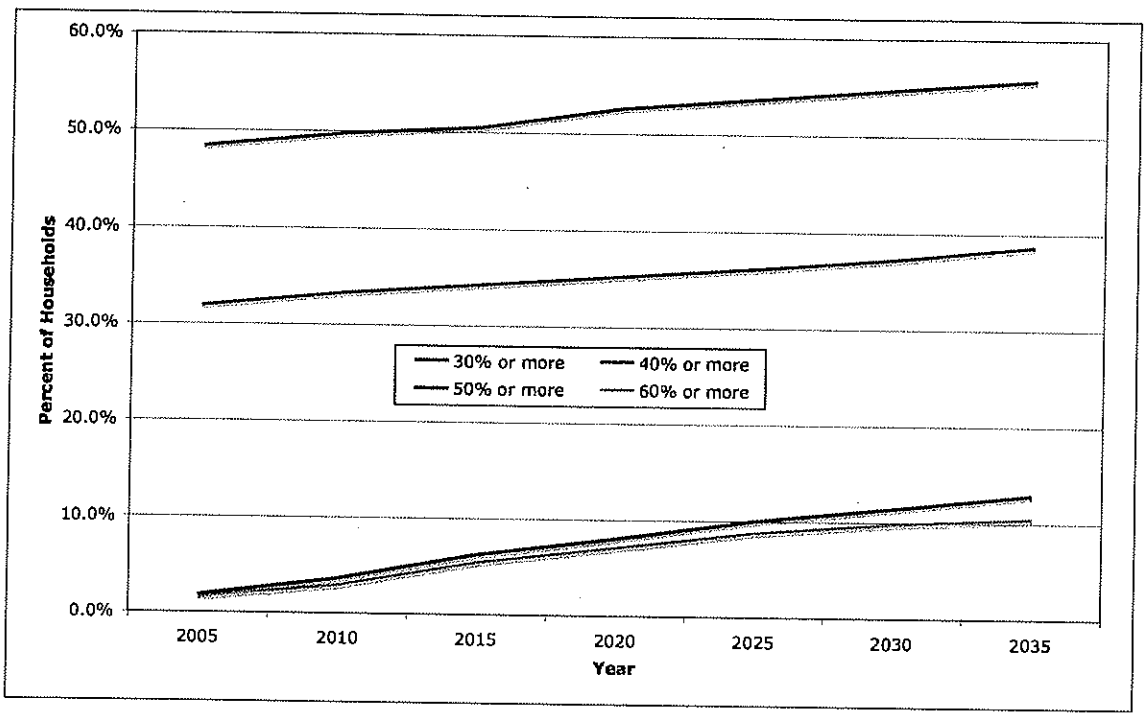


Figure 3-23. Renter Multi-Family Households Paying 30 percent or More of their Income for Housing, 2005, by Metro Region Subarea

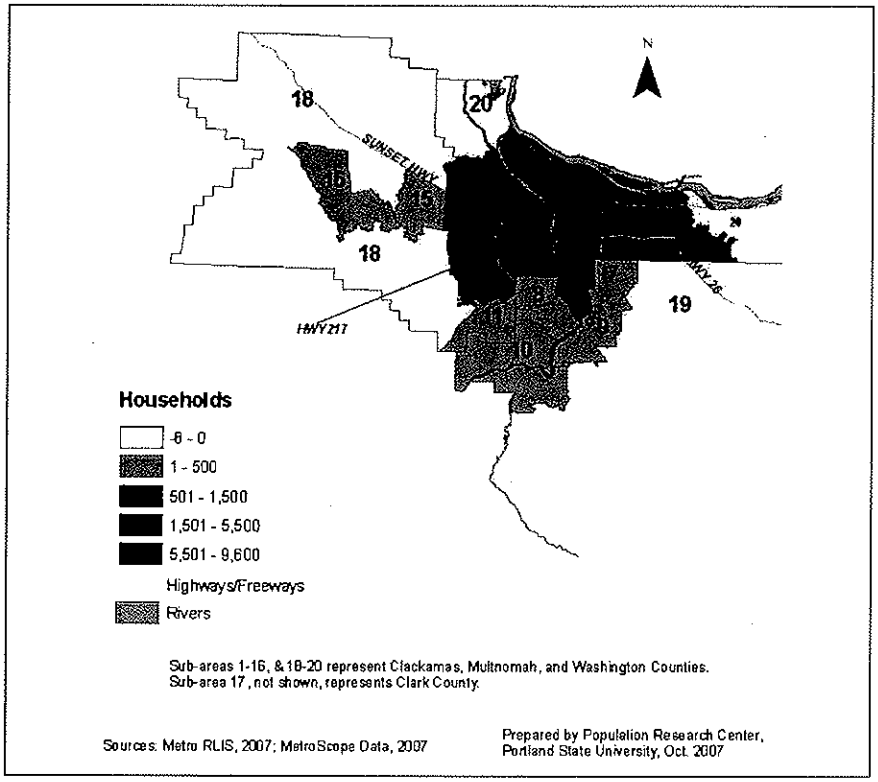
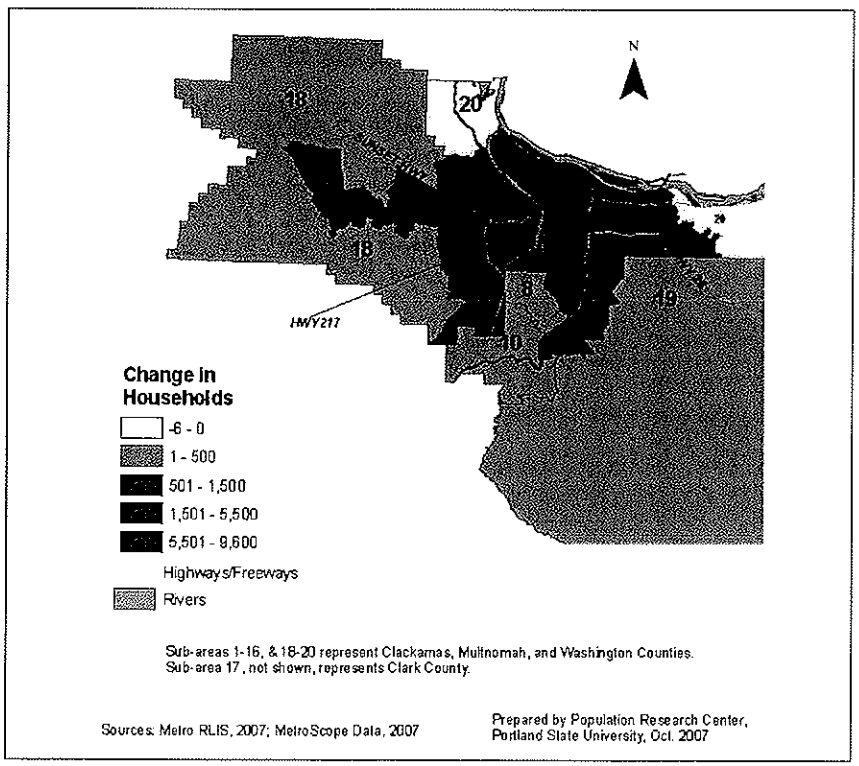


Figure 3-24. Change in Renter Multi-Family Households Paying 30 Percent or More of their Income for Housing, 2005 to 2035, by Metro Region Subarea



Renters of Single-Family Units

Figure 3-25 shows the percentage of households among renters of single-family units that spend greater than 30, 40, 50, and 60 percent of their income on housing. Over 60 percent of these renters are spending greater than 30 percent of their income on housing in 2005. These rates are fairly stable over time, although by 2035, about 10 percent of these households will be spending 50 percent or more of their income on housing.

Figure 3-26 shows how renters of single-family units spending greater than 30 percent of their income on housing these households are distributed across the region by subarea. Figure 3-27 shows the change by subarea from 2005 to 2035. The largest increase occurs in Subarea 2.

Figure 3-25. Percent of Income spent on Housing 2005-2035: Renter Single-Family Units

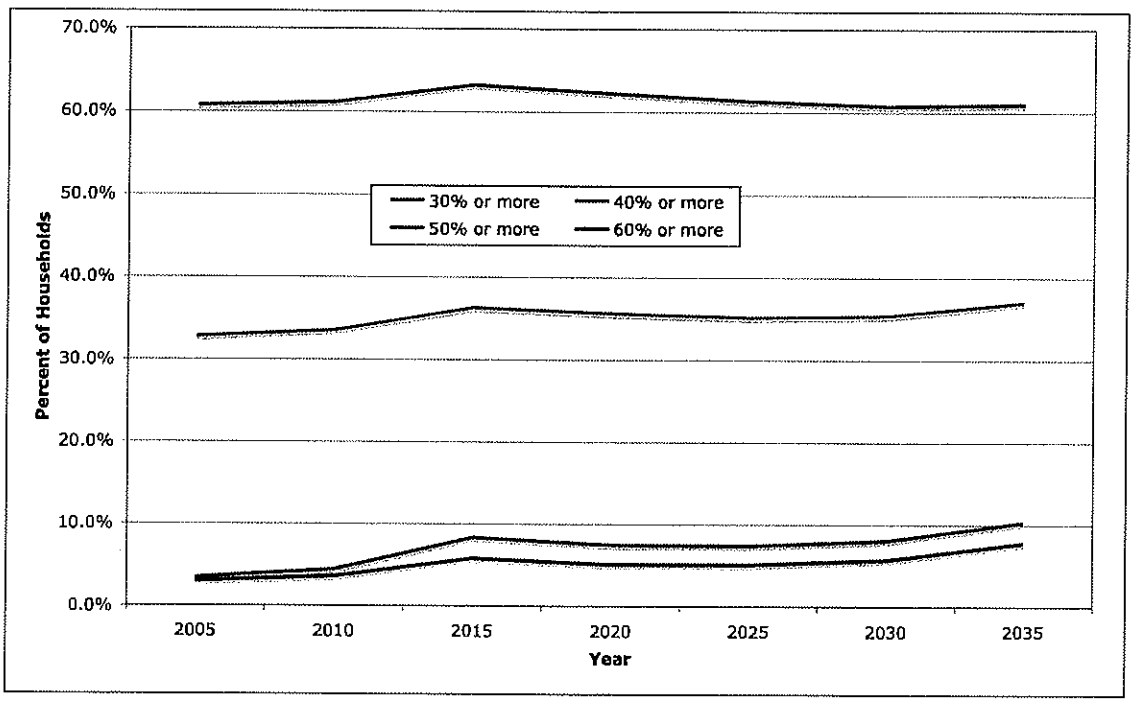


Figure 3-26. Renter Single-Family Households Paying 30 percent or more of their Income for Housing, 2005 by Metro Region Subarea

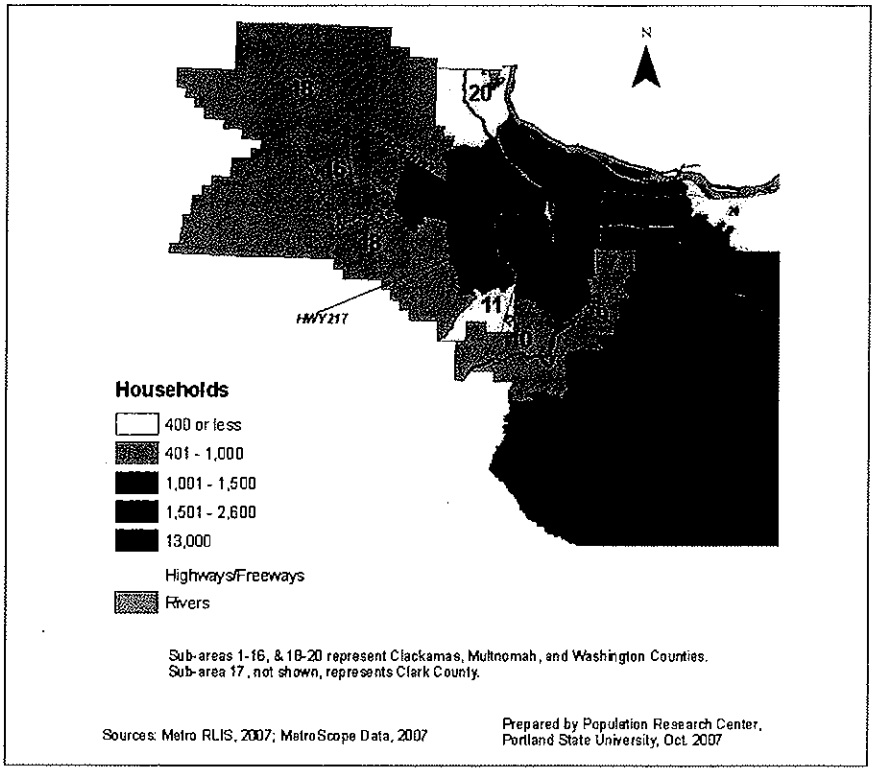
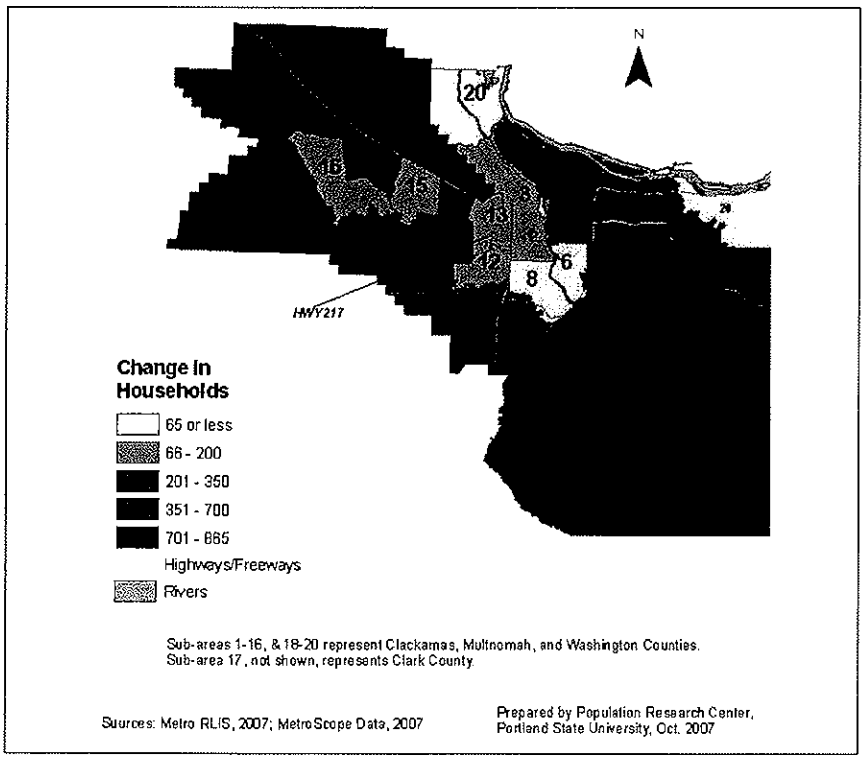


Figure 3-27. Change in Renter Single-Family Households Paying 30 percent or More of their Income for Housing, 2005 to 2035, by Metro Region Subarea



Owners of Single-Family Units

The owners of single-family units represent a very large part of the housing market. As Figure 3-28 shows, over 40 percent of these owners spend more than 30 percent of their income on housing. This is expected to grow to almost 50 percent by 2025 and then flatten out. Almost one-quarter of these owners will be spending 40 percent or more of their income on housing by 2025.

The map in Figure 3-29 shows the owners of single-family units spending greater than 30 percent of their income on housing by Metro region subarea; Figure 3-30 shows the change in the number of these households between 2005 and 2035 by subarea.

Figure 3-28. Percent of Income Spent on Housing 2005-2035: Owner Single–Family Units

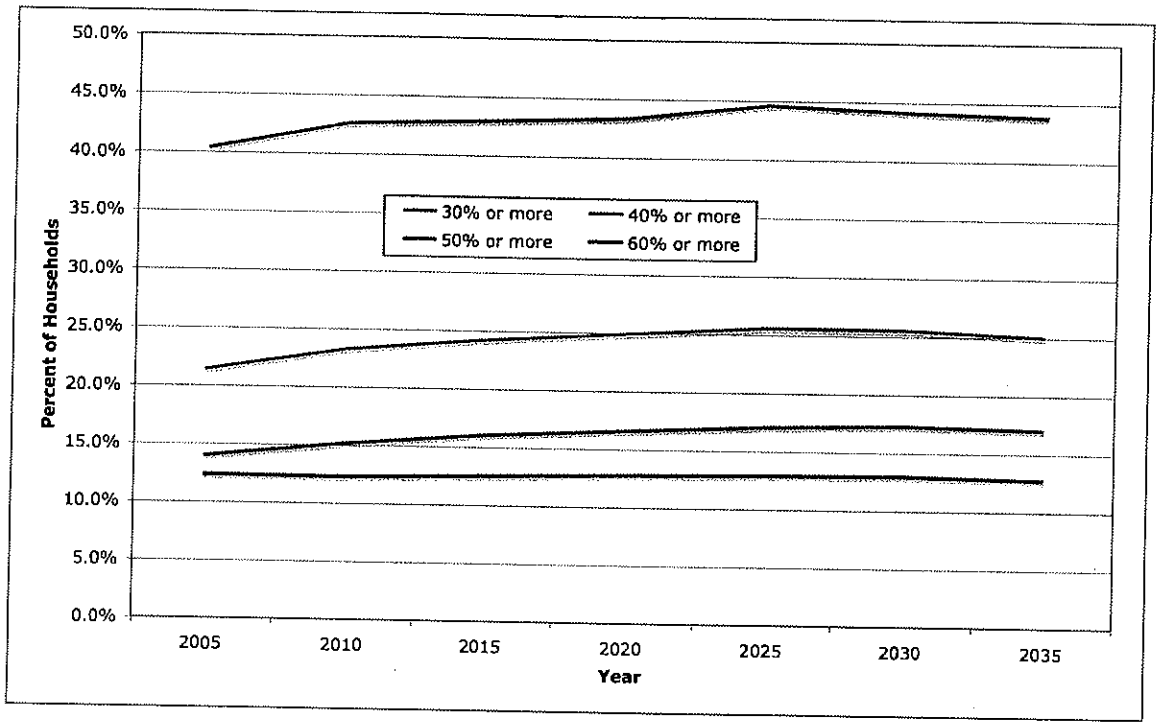


Figure 3-29. Owner Single-Family Households Paying 30 percent or more of their Income for Housing, by Metro Region Subarea

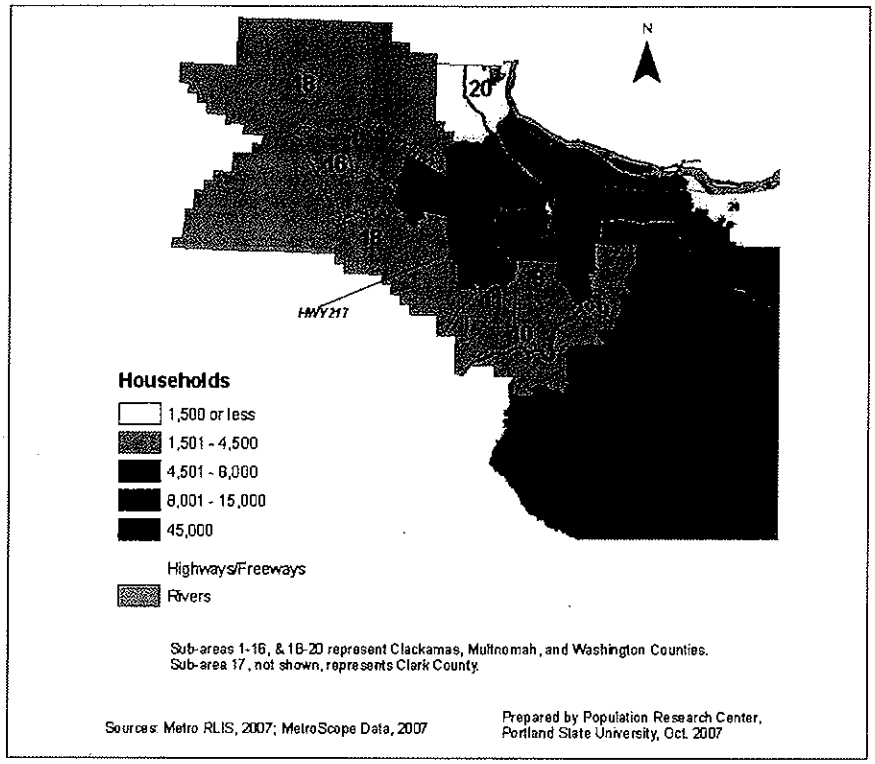
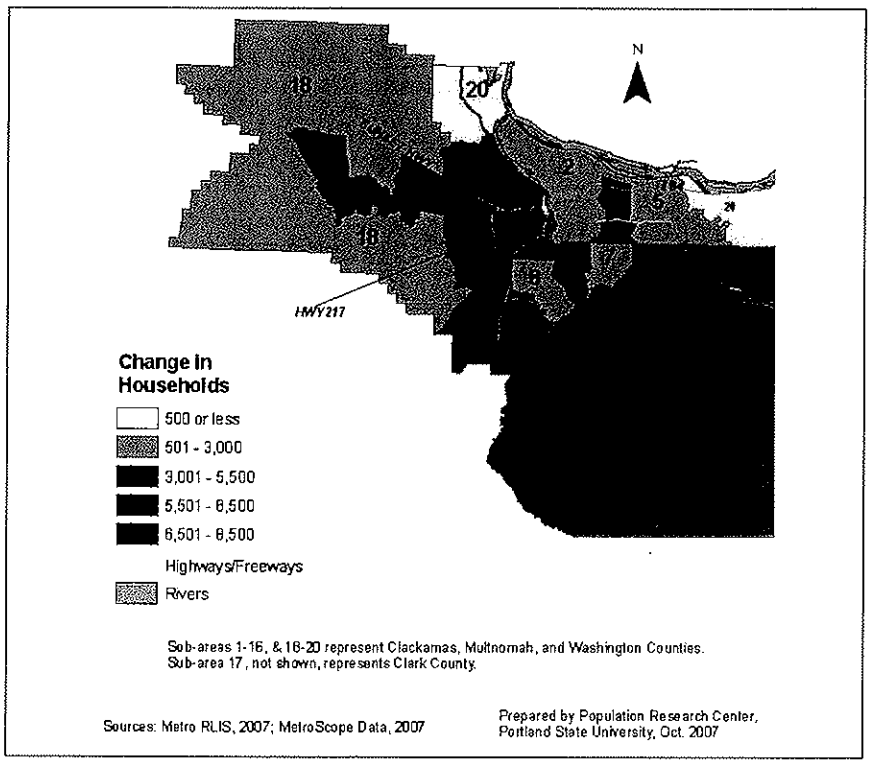


Figure 3-30. Change in Owner Single-Family Households Paying 30 percent or more of their Income for Housing 2005 to 2035, by Metro Region Subarea



Owners of Multifamily Units

Figure 3-31 shows a dramatic change over time for owners of multifamily units who are spending 30 percent or more of their income on housing. Currently at about 32 percent, these percentages will rise to over 60 percent by 2035. The model predicts similar rises in the households spending 40, 50, and 60 percent or more of their income on housing. The rise is steep from 2005 to 2020, and then flattens out. This is due to a number of trends. First, while the development of owner multifamily housing is currently concentrated in expensive locations, as the market matures, developers may turn to lower cost locations and lower quality products that command lower prices. Second, *Metroscope* assumes significant increase in available UGB land after 2020. This allows for the development of single family units, which reduces the demand and relative prices for owner multifamily housing.

The map in Figure 3-32 shows the distribution of owners of multifamily units spending greater than 30 percent of their income on housing. Figure 3-33 shows the change by Metro region subarea.

Figure 3-31. Percent of Income Spent on Housing 2005-2035: owner Multi-Family Units

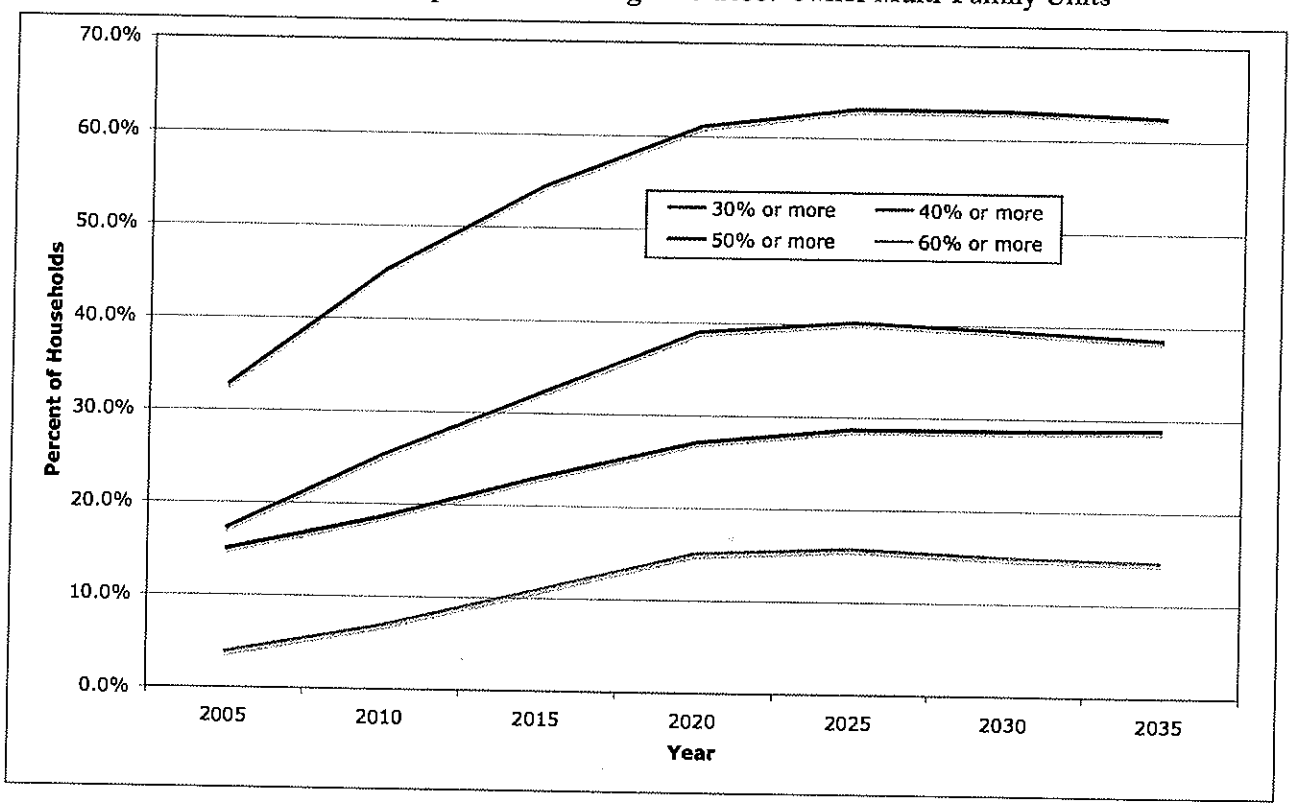


Figure 3-32. Owner Multifamily Households Paying 30 percent or more of their income for Housing 2005, by Metro Region Subarea

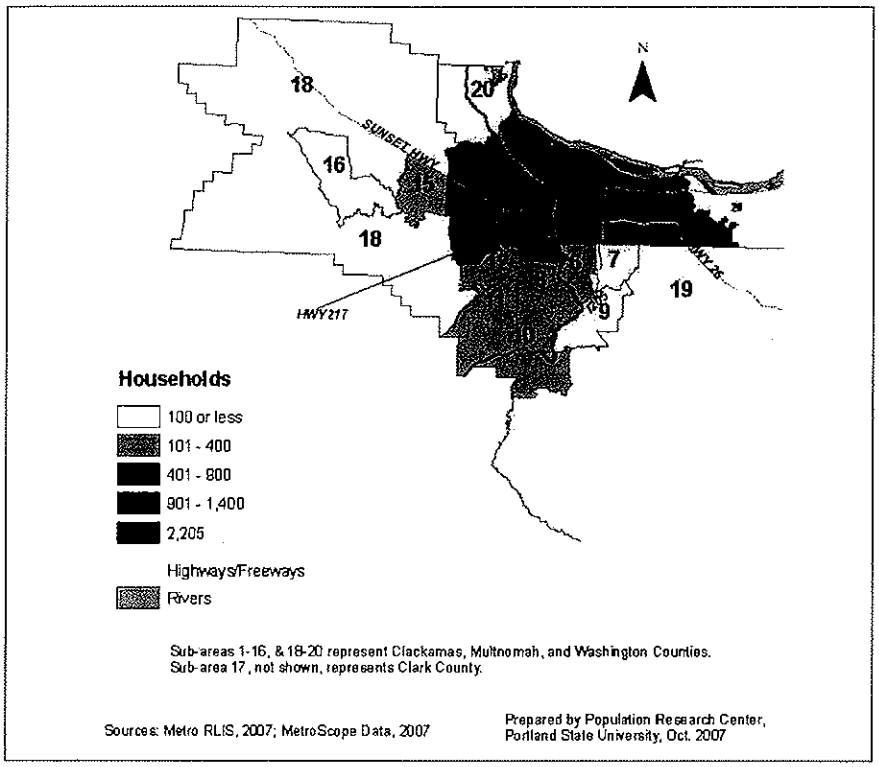
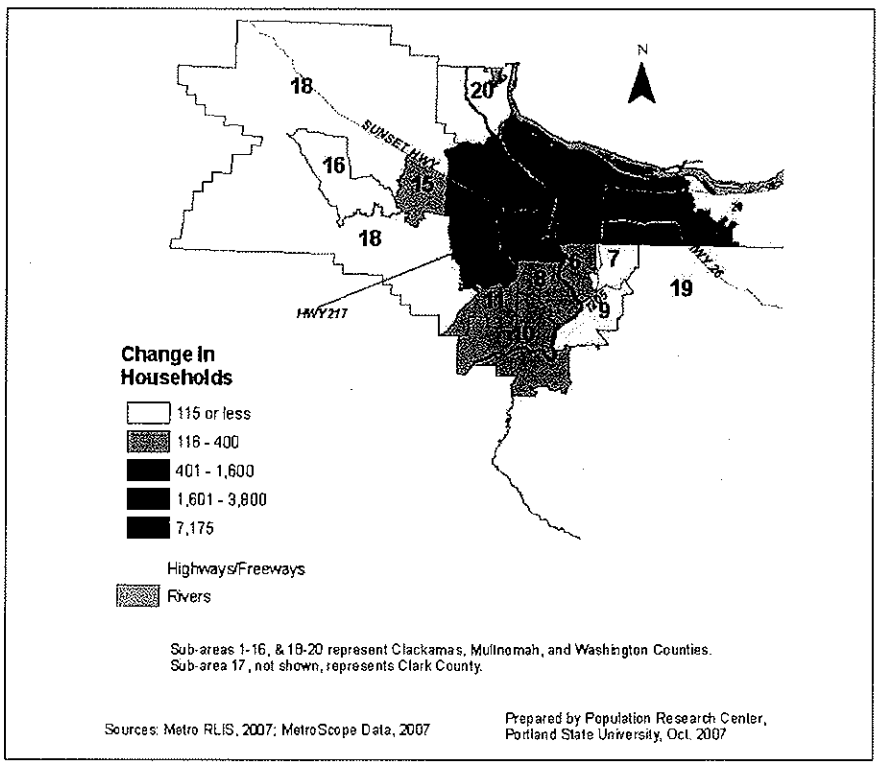


Figure 3-33 Change in Owners Multifamily Households Paying 30 percent or more of their Income for Housing 2005 to 2035, by Metro Region Subarea



What demographic groups are most cost burdened?

We can gain additional understanding of the demographics of cost-burdened households by analyzing them based on the consumption bins described in Figures 2-2 and 2-3. Recall that the eight consumption bins have progressively higher income and social status than lower-numbered groups, and that average age varies considerably among these groups. Also, these consumption bins vary somewhat between owners and renters; thus our analysis is a bit different for each type of housing.

For reference, Table 3-5 shows the information contained in Section 2 about the characteristics of Consumption bins for renters.

Figures 3-34 and 3-35 show how the lowest income consumption bins, bins 1 and 2, are distributed throughout the region, and how we expect that distribution to change from 2005 to 2035.

Table 3-5. Household Characteristics by Consumption Bin, Renters

Bin	1: Low-Income Singles	2: Working Class	3: Emerging Singles	4: Established Singles and Couples	5: Young Middle-Income Families	6: Fast-Track Families	7: Successful Middle-Aged	8: Movers & Shakers with Kids
Avg Hhold Income	$10,000	$10,000	$18,600	$25,300	$30,100	$38,600	$54,000	$87,500
Avg Hhold Age	65.7	43.1	51.2	54.2	50.3	47.7	49.7	46.4
Avg Hhold Size	1.0	1.9	1.5	1.6	2.3	2.6	2.6	3.4

Figure 3-34. Distribution of Bin 1 and Bin 2 Households by Metro Region Subarea, 2005

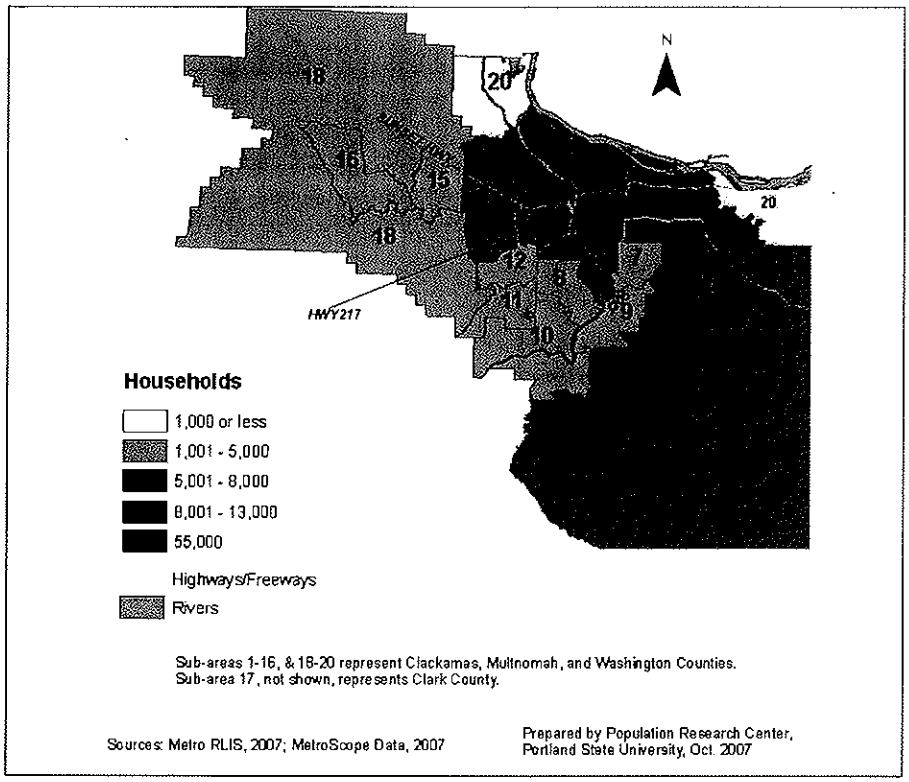
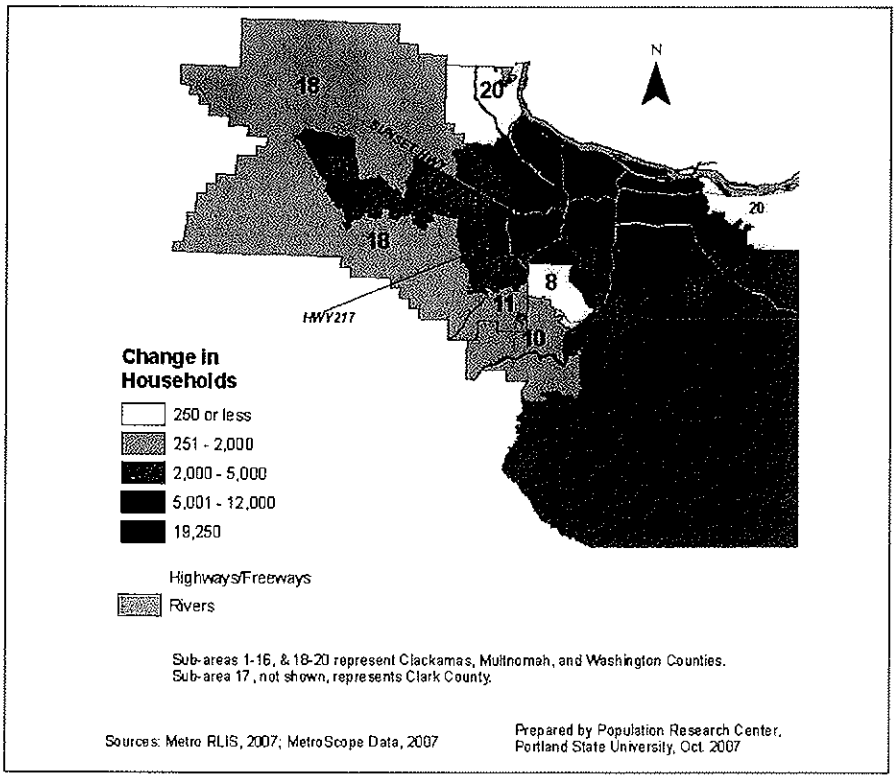


Figure 3-35. Change in Bin 1 and Bin 2 Households by Subarea 2005 to 2035



Rental Multifamily

Figures 3-36 and 3-37 show the percent of households in each bin that is spending at least 30 percent and at least 50 percent of their income on housing, respectively. Figure 3-36 shows that for consumption bins 1 and 2 (low-income singles and working class), virtually all households are spending at least 30 percent of their income on housing, and this will not change by 2035. Bins 1 and 2 will also experience large increases in the percentage of households paying at least 50 percent of their income for housing by 2035. Figures 3-38 and 3-39 show how Bin 1 and Bin 2 rental multifamily households are distributed across the region and how this changes over time.

Figure 3-36. Percent of Households Exceeding 30% of Income on Housing Costs by Consumption Bin: 2005 and 2035: Rental Multifamily Units

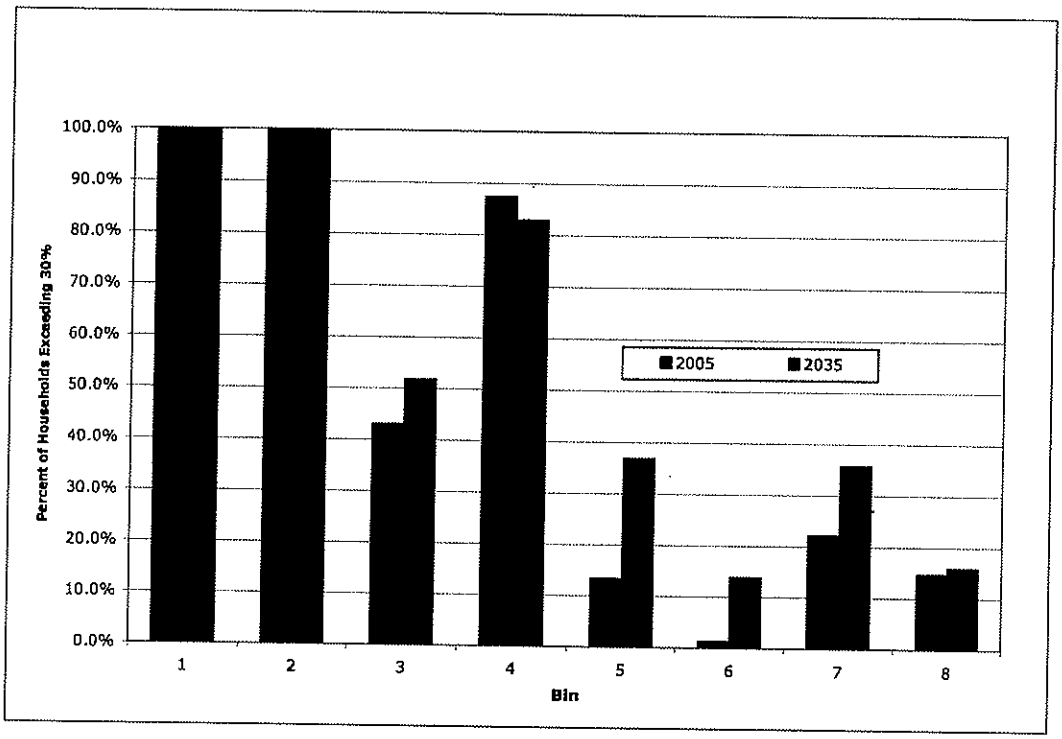


Figure 3-37. Percent of Households Exceeding 50% of Income on Housing Costs by Consumption Bin: 2005 and 2035: Rental Multifamily Units

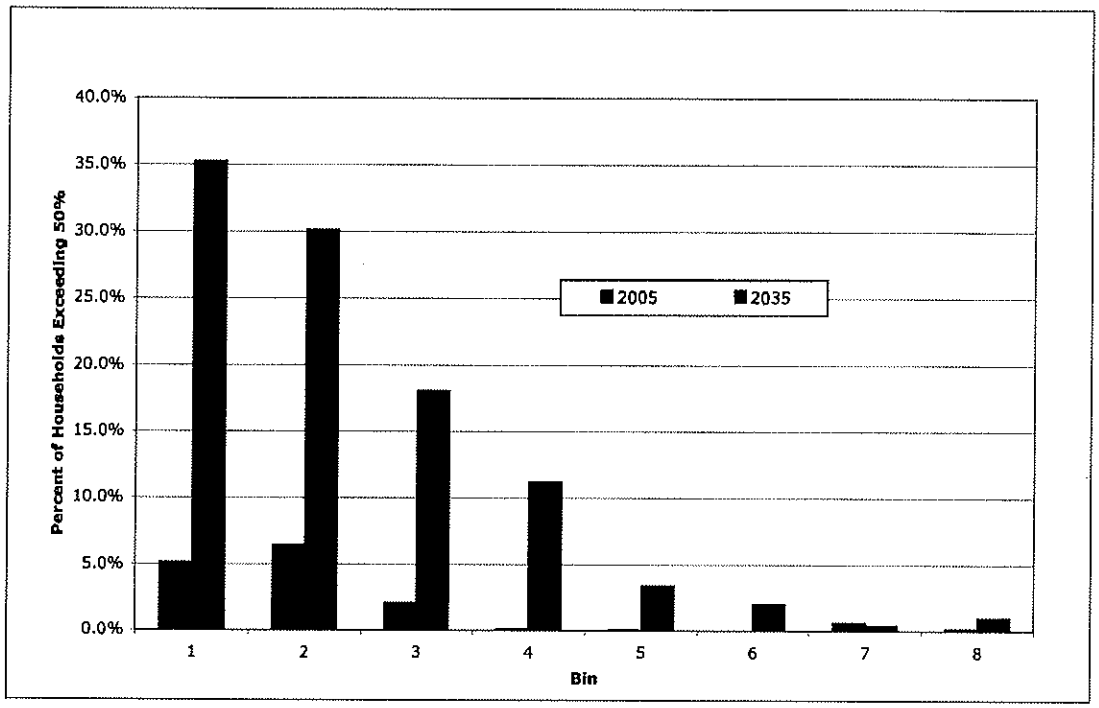


Figure 3-38. Bin 1 and Bin 2 Households by Subarea, 2005: Rental Multifamily Units

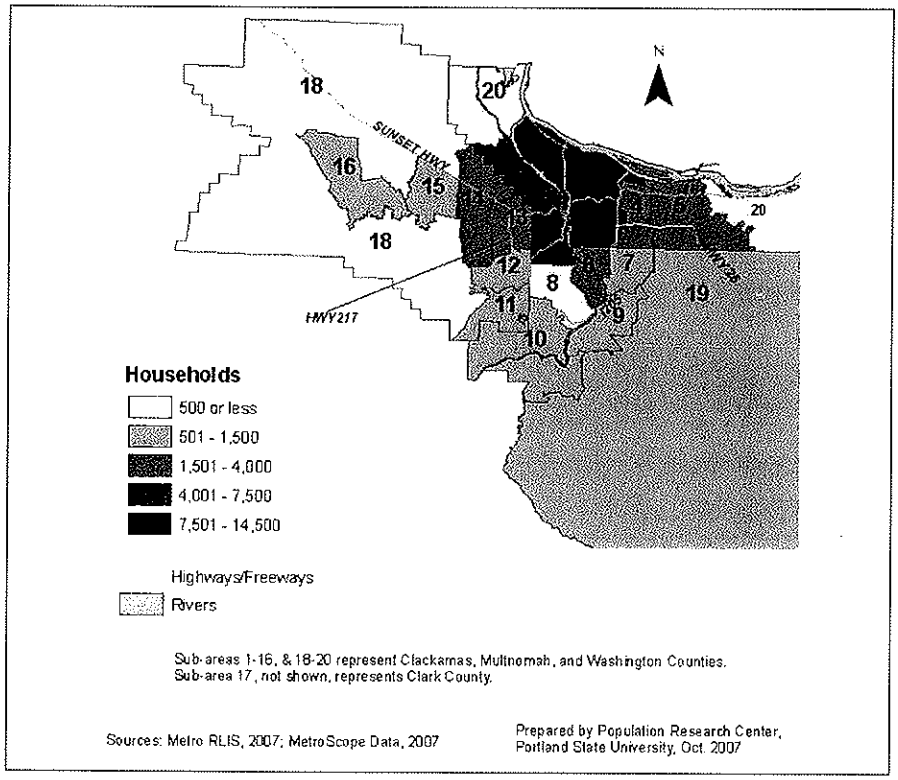
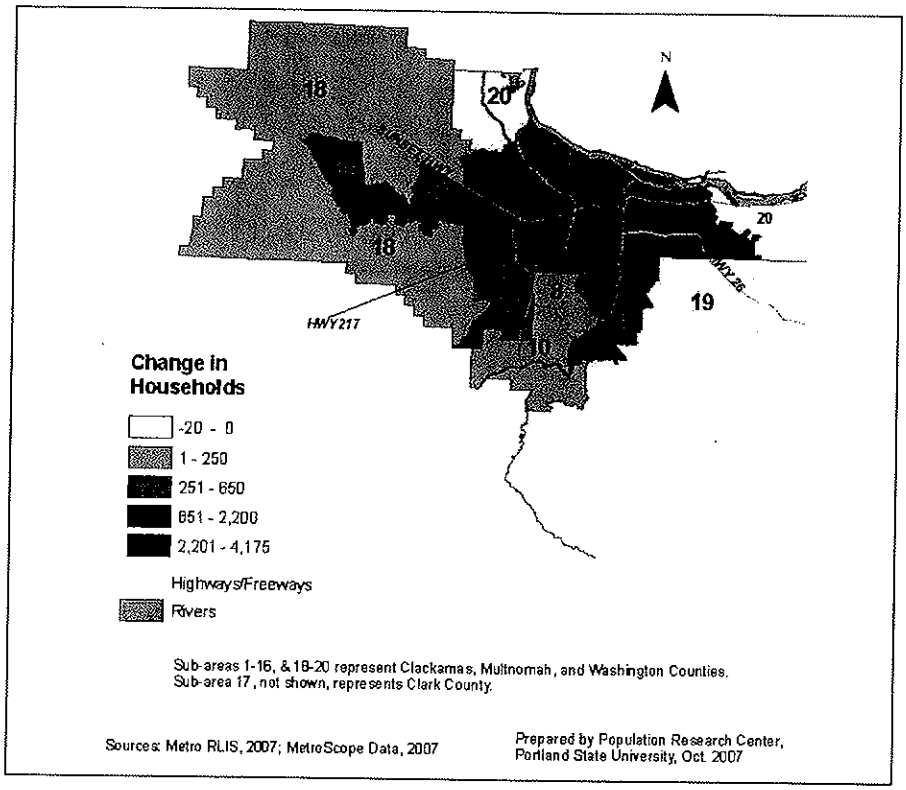


Figure 3-39. Change in Bins 1 and Bin 2 Households by Subarea, 2005 -2035: Rental Multifamily Units



Rental Single-Family

Rental single-family housing is a very small part of the market; however, it appear that many people choosing this housing type are spending a large percentage of their income on housing—even among the higher income consumption bins.

Figure 3-40 shows that once again, virtually all households in bins 1 and 2 (low income and working class) are exceeding 30 percent of their income in housing costs. Even in bins 4 and 6, (established singles and couples; young middle-income families) a significant share of these renters are spending over 30 percent of their income on housing; however, these percentages will decrease by 2035. Within this market segment bins 1, 3, and 5 will increase the shares of households spending greater than 50 percent of their income on housing as shown in Figure 3-41.

Figures 3-42 and 3-43 show how the Bin 1 and Bin 2 households in rental single family housing are distributed across the region, and how these numbers change from 2005 to 2035.

Figure 3-40. Percent of Households Exceeding 30% of Income on Housing Costs by Consumption Bin: 2005 and 2035: Rental Single-Family Units

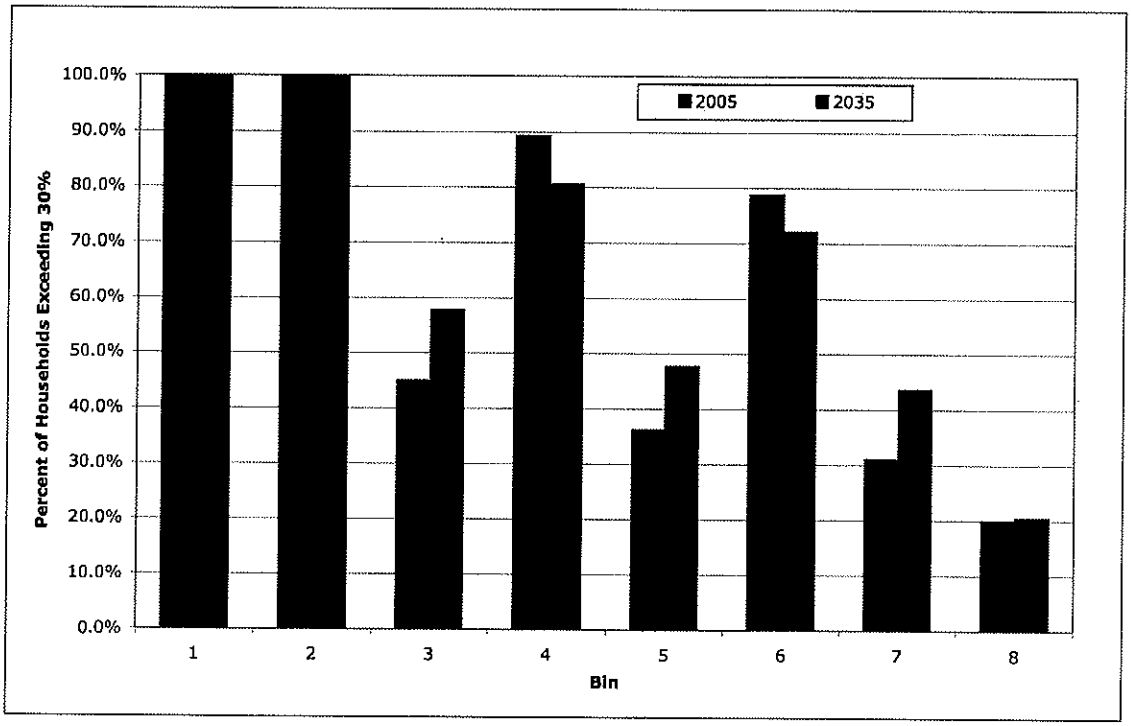


Figure 3-41. Percent of Households Exceeding 50% of Income on Housing Costs by Consumption Bin: 2005 and 2035: Rental Single-Family Units

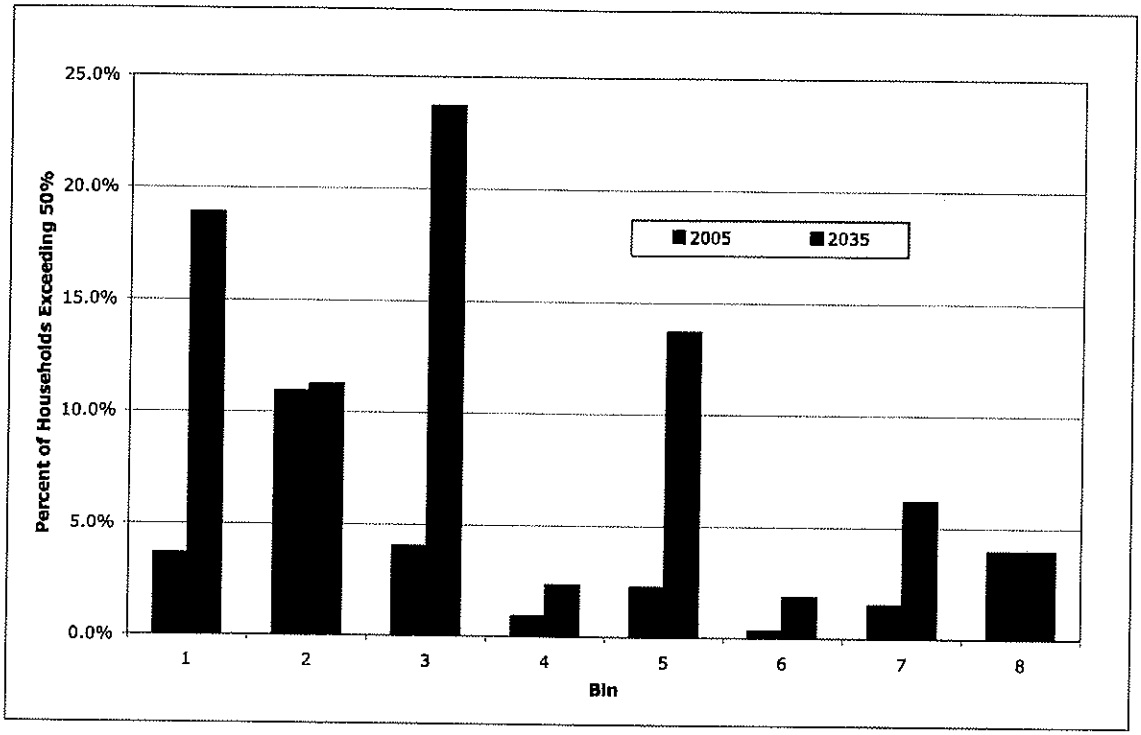


Figure 3-42. Bin and Bin 2 Households by Subarea, 2005: Rental Single-Family Units

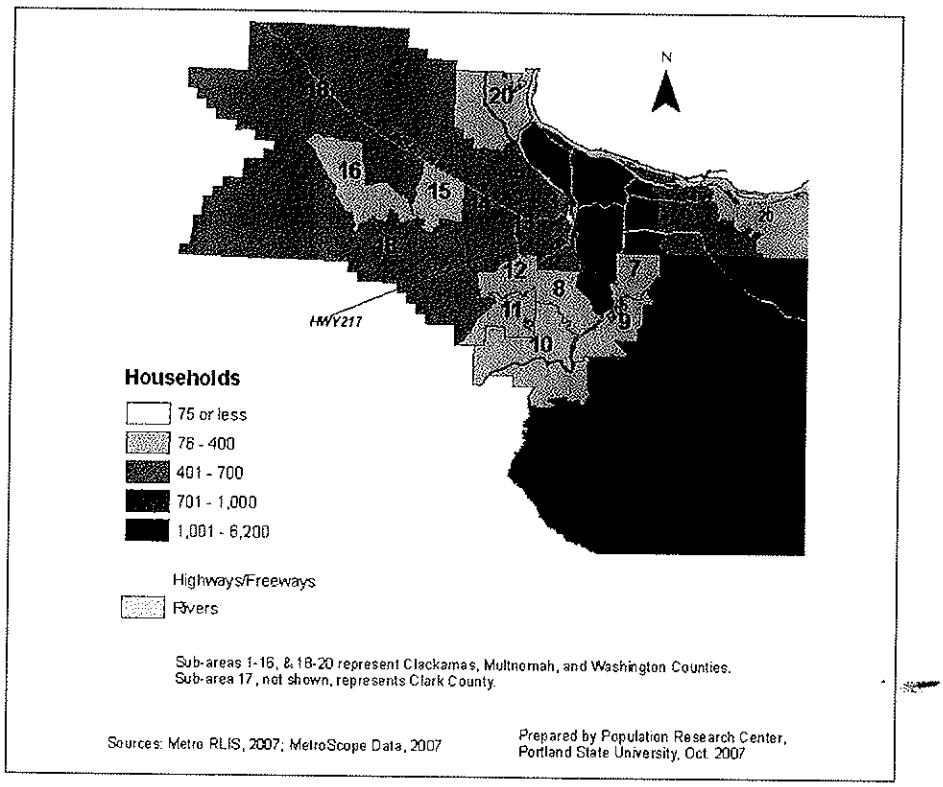
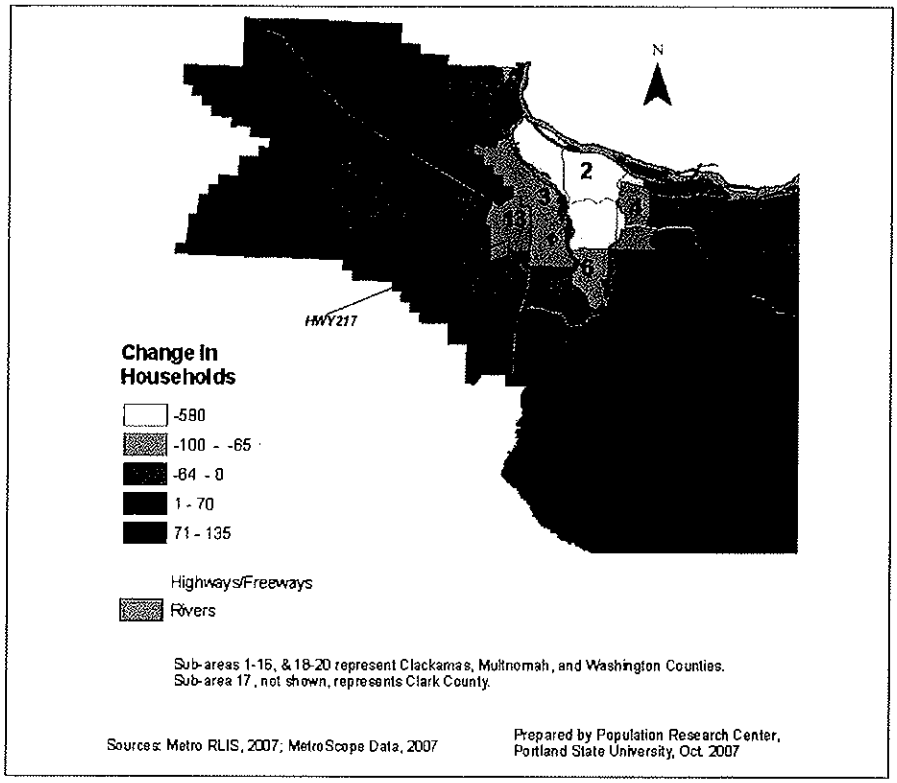


Figure 3-43. Change in Bin 1 and Bin 2 households by Subarea, 2005 to 2035: Rental Single-Family Units



Owner Single-Family

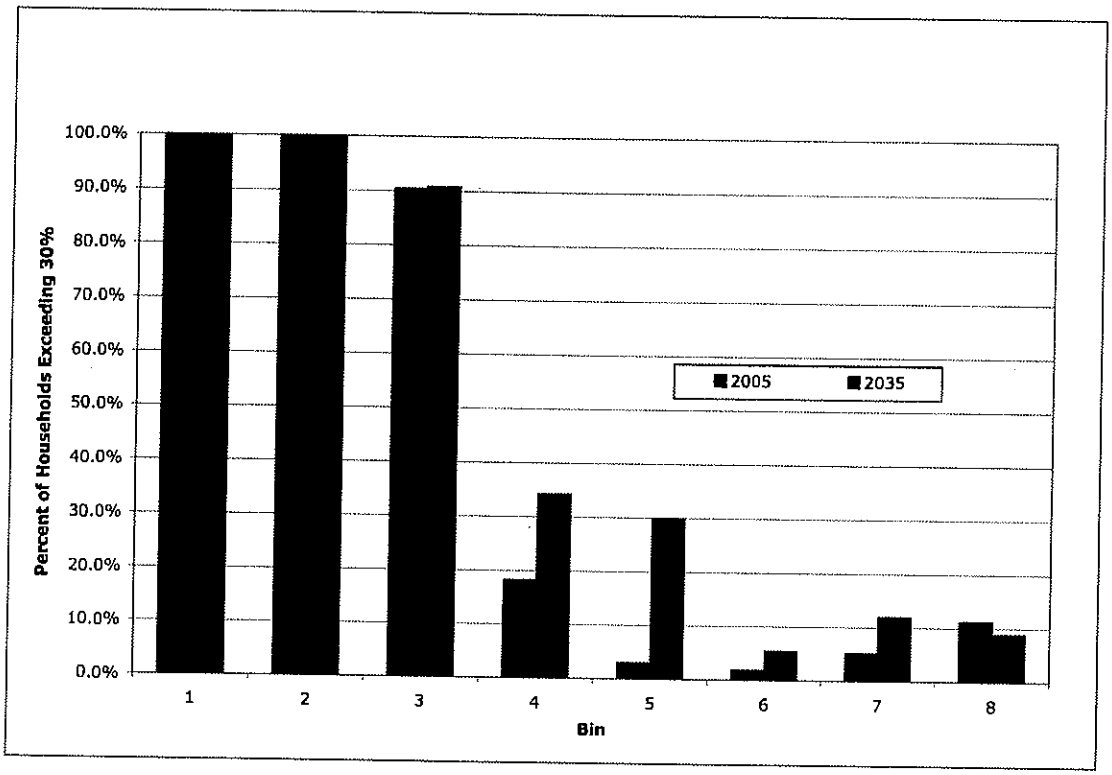
Recall that, as shown in Figures 2-2 and 2-3, consumption bins for owners have slightly different demographic characteristics than those of renters; these are summarized in Table 3-6. Income still rises with bin number, although average income is higher for owners than for renters in all bins. Age is much less variable for owners than for renters. Household size is larger for owners than renters for almost all bins.

Table 3-6. Household Characteristics by Consumption Bin, Owners

Bin	1: Low-Income Singles	2: Working Class	3: Emerging Singles	4: Established Singles and Couples	5: Young Middle-Income Families	6: Fast-Track Families	7: Successful Middle-Aged	8: Movers & Shakers with Kids
Avg Income	$13,200	$27,000	$37,400	$48,100	$58,800	$77,000	$101,300	$104,000
Avg Age	53.2	54.2	47.5	48.0	46.1	47.2	51.4	43.1
Avg Hhold Size	1.5	1.9	2.4	2.8	3.2	3.1	2.9	4.2

Households in owner single-family units in consumption bins 1, 2, and 3 (low-income singles; working class; and emerging singles) are almost universally spending more than 30 percent of their income on housing, as shown in Figure 3-44. These percentages change little between 2005 and 2035 (Figure 3-45). However, for bins 4 and 5, there are dramatic increases in the percentage of households spending 30 percent or more of their income on housing by 2035.

Figure 3-44. Percent of Households Exceeding 30% of Income on Housing Costs by Consumption Bin: 2005 and 2035: Owner Single-Family Units



Bin 1 households are universally spending more than 50 percent of their income for housing. Figure 3-45 shows that Bin 2 households spending 50 percent or more of their income on housing will double by 2035. The distribution of Bin 1 and Bin 2 households for owner single family housing in 2005 is shown in Figure 3-46; change from 2005-2035 is in Figure 3-47.

Figure 3-45. Percent of Households Exceeding 50% of Income on Housing Costs by Consumption Bin: 2005 and 2035: Owner Single-Family Units

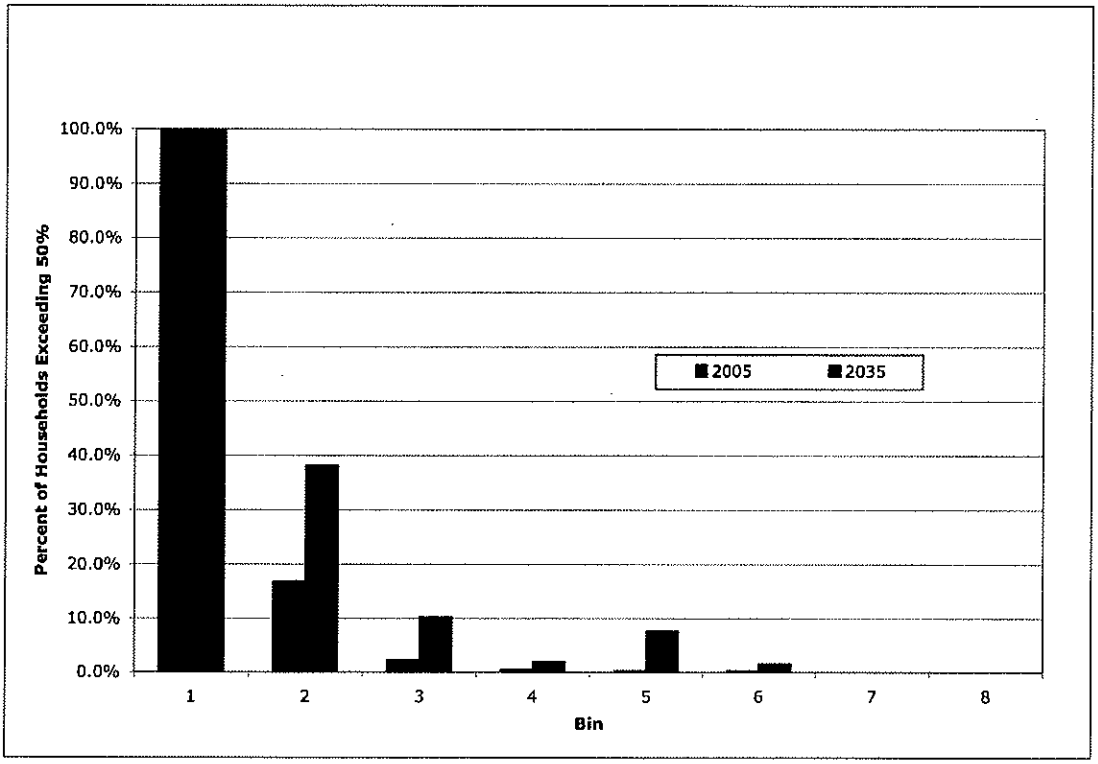


Figure 3-46. Bin 1 and Bin 2 Households by Subarea, 2005: Owner Single-Family Units

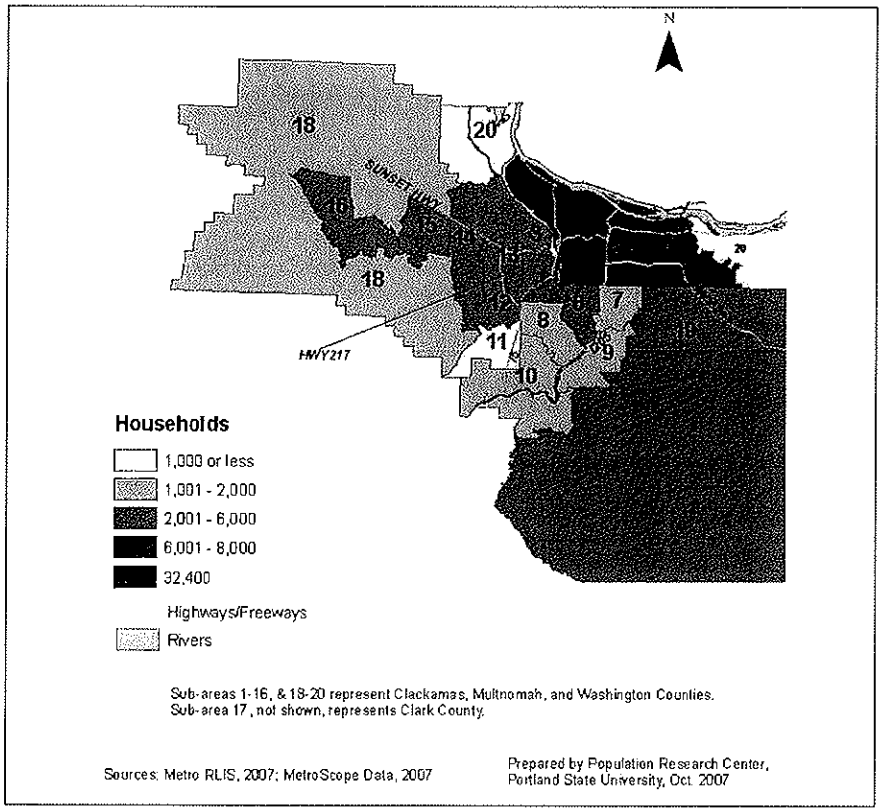
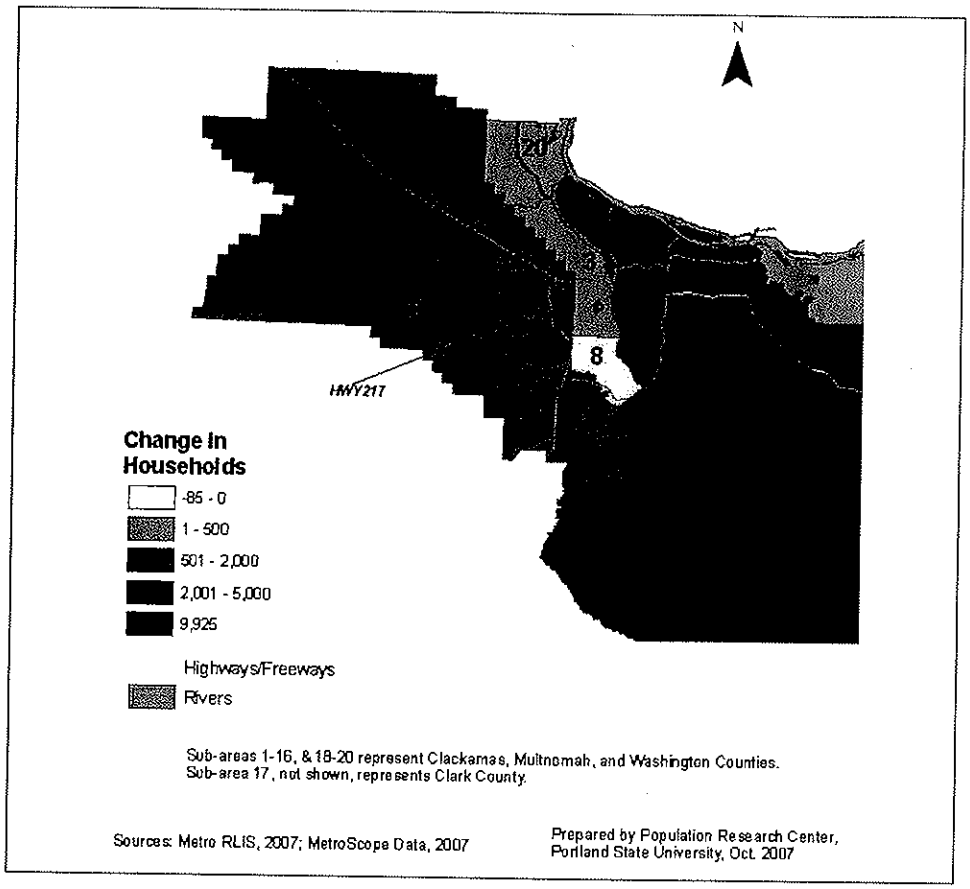


Figure 3-47. Change in Bin 1 and Bin 2 Households by Subarea, 2005 to 2035: Owner Single-Family Units



Owner Multi-Family

Among owners of multifamily housing, almost 70 percent of Bin 2 (working class) households pay 30 percent or more of their income for housing (Figure 3-48), and 100 percent of Bin 1 (low income singles) households pay 50 percent or more of their income (Figure 3-49). By 2035, Bins 2 through 7 will all experience significant gains in the percentage spending 30 percent or more on housing, while the percentage paying 50 percent or more also will increase for Bins 2 through 5.

Figures 3-50 and 3-51 show how Bin 1 and Bin 2 owners of multifamily housing are distributed through the region by subarea, and the change from 2005 to 2035.

Figure 3-48. Percent of Households Exceeding 30% of Income on Housing Costs by Consumption Bin: 2005 and 2035: Owner Multi-Family Units

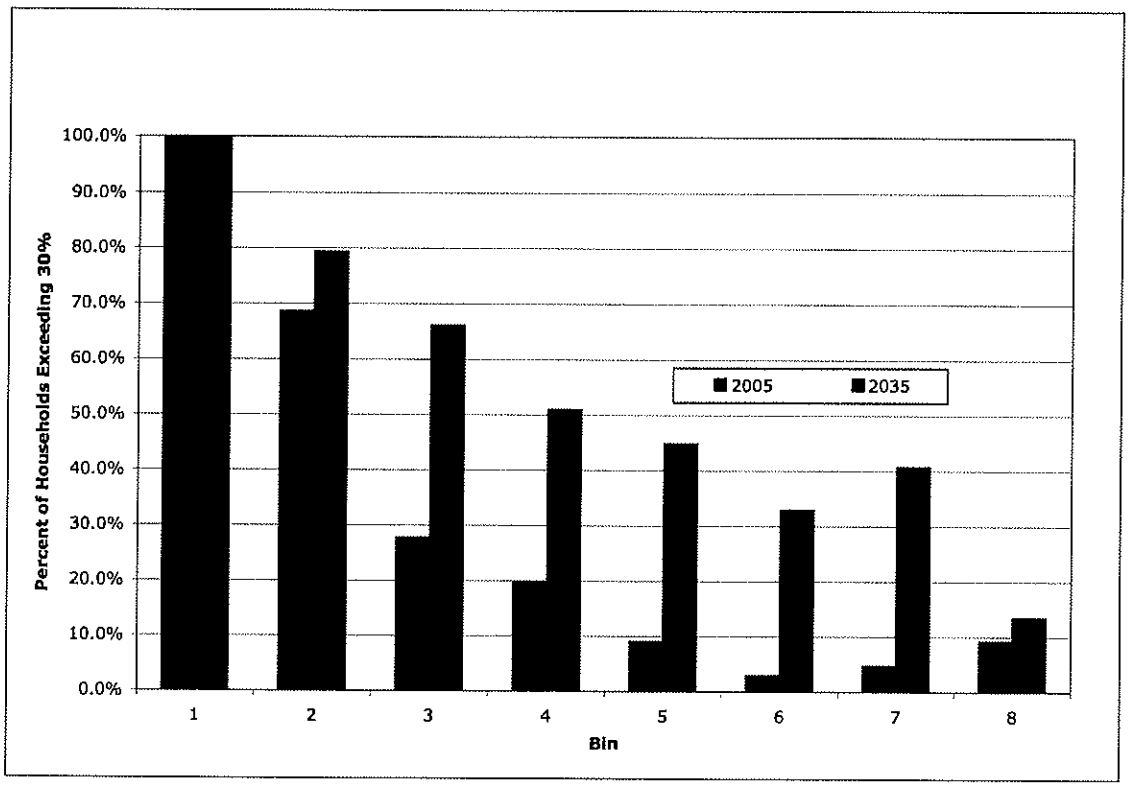


Figure 3-49. Percent of Households Exceeding 50% of Income on Housing Costs by Consumption Bin: 2005 and 2035: Owner Multi-Family Units

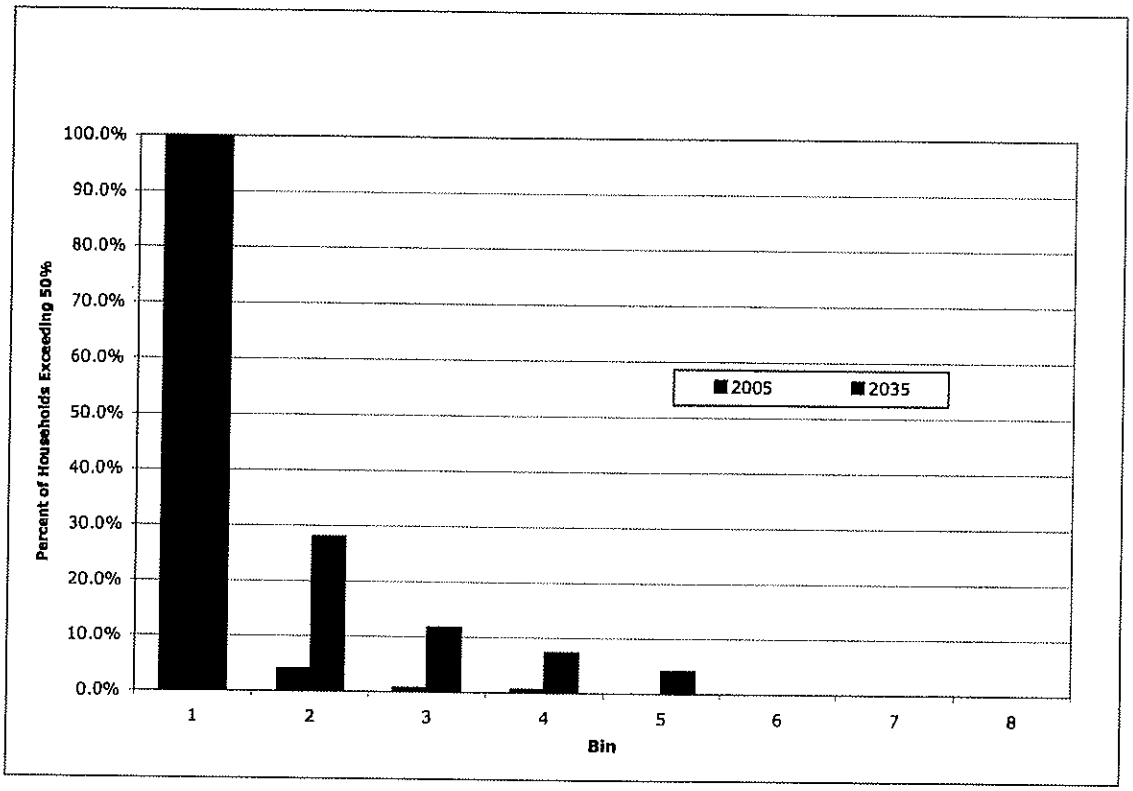


Figure 3-50. Bin 1 and Bin 2 Households by Subarea, 2005: Owner Multifamily Units

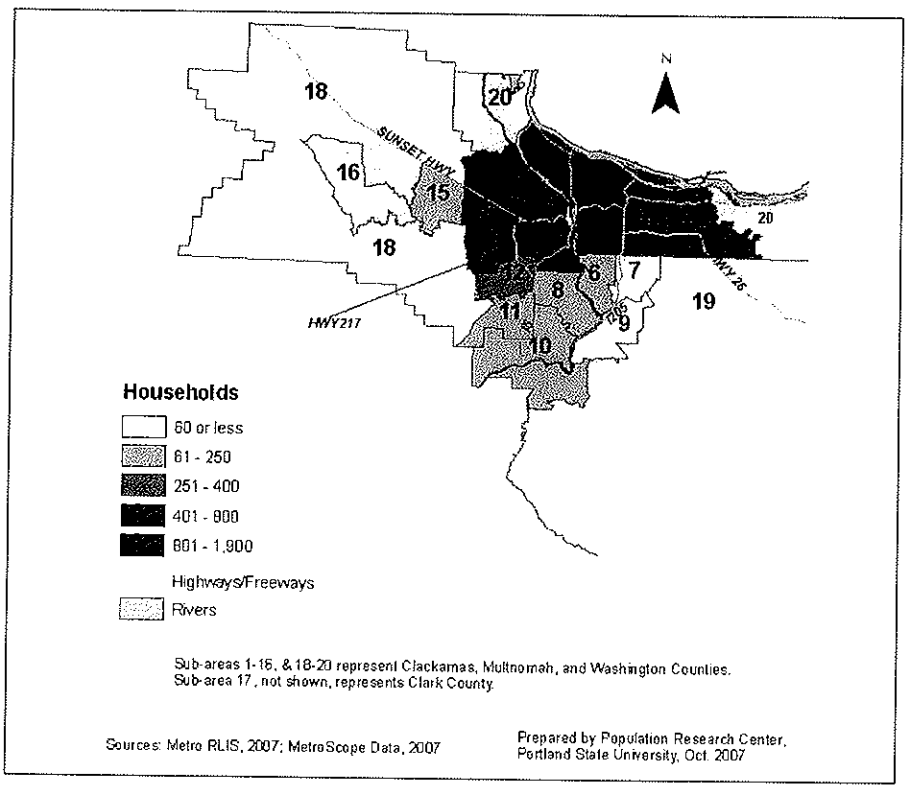
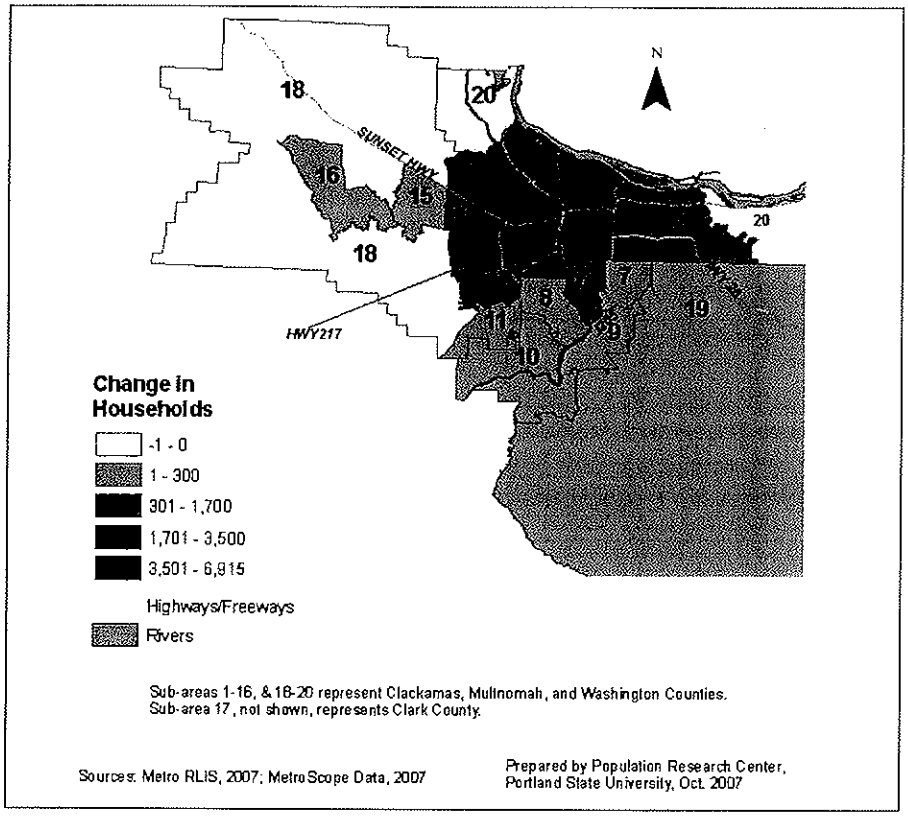


Figure 3-51: Change in Bin 1 and Bin 2 Households, 2005 to 2035: Owner Multifamily Units



4 Conclusions and Recommendations

Based on the analysis presented in Section 3, we offer several observations regarding the demographic groups and areas that will struggle to afford appropriate housing over the next 30 years. We also make some recommendations to Metro regarding improving the application of the *Metroscope* model to issues of affordable housing.

Model predictions

What demographic groups will struggle most with housing costs over the next 30 years?

Overall, the metro region's percentage of households paying 30 percent or more of their income on housing will rise from 43 percent in 2005 to 48.6 percent in 2035. These percentages are higher for renters, rising from 48.6 percent in 2005 to 51.5 percent in 2035.

The demographic groups occupying consumption bins 1 and 2 (low-income singles and working class) are most likely to struggle with housing costs, and this struggle will increase over the next 30 years. Based upon the number of units and reflecting the composition of income levels for bins 1 thru 3, renral multi-family units will pose the greatest housing hardship. This increasing cost burden will be felt region-wide, but the households mostly affected will be young and old (under 25 and 65 and over), small (a large majority living alone), with household income below $25,000 (many households under $15,000). In addition, many single-parent families with child(ren) will also comprise the most cost-burdened households, especially those in rental single-family households.

What are the key factors contributing to this struggle?

While median family income in the metropolitan region is predicted to remain about the same from 2005 to 2035, housing costs are expected to rise, increasing the percentage of income being used for housing.

Furthermore, rental single-family housing is becoming less available over time. Those groups that currently rely on this housing type (poor families with children) will need affordable alternatives. The challenge is to offer appropriate alternatives in rental multifamily housing market, which typically offers smaller living quarters.

The overwhelming majority of families with children choose owner single-family housing; yet those families purchasing single-family units, many of which occupy bins 3 and 5, are becoming more cost burdened themselves. By 2035, 90 percent of bin 3 and 30 percent of bin 5 owners will pay more than 30 percent of their income on housing; the largest jump occurs in bin 5 families. Almost ten percent of bin 3 and bin 5 families will pay more than 50 percent of their income for housing by 2035.

Although cost burden is rising for both owners and renters, this burden is felt more by renters than owners, as owners are able to build equity in their homes as housing values rise, while renters experience higher rent with no corresponding increase in wealth. Furthermore, the assets

of owners are unknown to the *Metroscope* model; thus, although many owners may appear to be paying a large percentage of their income on housing, we cannot know for certain whether owners are actually paying the mortgage costs assumed by the model.

We also observe that households experience a trade-off between transportation and housing costs. The percentage of household expenditures spent on housing and transportation is more or less constant for households in the lower 60% of income categories. Thus, while households may move away from high-cost central locations to reduce their housing cost burden, they find increasing transportation costs that offset the savings.

Where will cost burdened households be living?

Overall, the metro region's percentage of households paying 30 percent or more of their income on housing will rise from 43 percent in 2005 to 48.6 percent in 2035. Those subareas that will have a higher than average rate of cost-burdened households include subareas 1 through 6, 12, 13, 15, and 16. The only subareas in which the percentage of cost-burdened households falls are Subareas 8 and 10.

Housing affordability is clearly a continuing challenge in several districts. The district with the highest percentage of households paying 30 percent or more of their income on housing in 2005 is District 1, with 61.7; by 2035 it will still have the highest percentage with 81.4 percent. Its share of these households will double so that in 2035 its share will be 4.3 percent, compared with its 2.6 percent share of total households.

District 2, with a large percentage of total households (22.4 percent in 2005), will also experience an increase in cost-burdened households. But its share of the total will fall from 30.6 percent in 2005 to 24 percent in 2035. This is only about 40 percent higher than its share of total units in 2035 (17.5 percent).

District 3 (near west) increases its percentage of households paying 30 percent or more of their income on housing from 41.1 percent in 2005 to 57.5 percent in 2035. Their share of cost burdened households increases from 8.1 percent to 10.8 percent, as does its share of total households (8.5 percent to 9.1 percent).

District 16 (far west) will continue to struggle with affordability but its share of cost-burdened households will not significantly increase. In this district, the percentage of households paying 30 percent or more on housing will rise from 55 percent in 2005 to 64.1 percent in 2035. However, its share of these cost-burdened households will only increase from 2.2 percent to 2.3 percent.

As we consider the relative cost burden of different parts of the region, we must also consider the relative costs of transportation. Simply adding affordable housing in parts of the region that are not accessible to efficient public transportation may not reduce combined housing and transportation costs for households that find jobs and services farther away.

Metroscope Recommendations

The PSU team had several recommendations to Metro to improve the performance and usability of Metroscope.

Fragility of the Model

The Metroscope model relies upon the care, attention, and experience of a small team of researchers within Metro. We understand that they are trying to widen the pool of analysts who can work with this model, both by training and converting the software to an open source environment. This effort needs to be supported by Metro so that the performance of the model does not rely upon the presence of a few key individuals. Metro might create training programs

or scholarship programs to increase the familiarity with the Metroscope model of researchers at local universities, government agencies, and interest groups.

Transparency of the Model

Metroscope is a complex model, but that complexity is compounded by a heavy use of jargon that makes acceptance of the results of the model by policy makers more difficult. For example, analysts at Metro are comfortable describing the demographic "bins" in the model by their number, but those numbers (or the concepts of "bins") have no meaning to policy makers. For the purpose of this report, we have adopted name-tags for each bin that approximate the demographic group represented. We believe more use of ordinary English and less jargon in presentations will make the model more transparent to policy makers.

Policy Focus of the Model

Metroscope serves many purposes for Metro, including land use and transportation planning, where issues like the demographic nature of households or the wealth of households is less important than they are for formulation of housing policy. Metro staff needs to adapt the use of the model to match funding categories or demographic categories easily understood by policy makers. For example, Metro staff should be prepared to collapse data into demographic categories like "the elderly," for which specific housing programs and funds exist.

On the other hand, information on household wealth is hard to obtain. In that case, we would encourage staff and policy makers to focus on the needs of renter households, since they are likely to have less wealth and greater financial need than homeowner households of otherwise similar characteristics. For the longer term, Metro may want to consider new data collection techniques to learn more about the wealth of households.

Better information about the connection between housing and transportation costs would also provide richer information for planning affordable housing. Affordable housing that is remote from jobs and services and not well-served by public transportation may increases transportation costs and therefore not substantially change the amount of income used by households for both expenditure categories.

Usage of the Model

Metroscope is a powerful research tool that can answer many of the questions that policy makers have about housing needs and housing policy. However, staff and policy makers need to have ongoing conversations to learn from each other about the potential of the model (from the staff) and the sorts of questions that that are important (from the policy makers). This interaction might take the form of background reports or presentations by staff on housing topics as new data become available.

References

Metro Data Resource Center. 2004. *Metroscope: A Forecast Allocation model & Policy Assessment Tool: A Brief Model Description.* April.

Metro Data Resource Center. *Metroscope Documentation.*

Neil, Margaret B; Nacy Chapman, Jennifer Dill, Irina Sharkova, Alan DeLaTore, Kathleen Sullivan, Tomoko Kanai, and Sheila Martin. 2006. *Age-Related shifts in Housing and Transportation Demand: A Multidisciplinary Study Conducted for Metro by Portland State University's College of Urban and Public Affairs.* August.

U. S. Census Bureau, 2005. *Statistical Abstract of the United States: 2004-2005.* (125th Edition) Washington, DC.

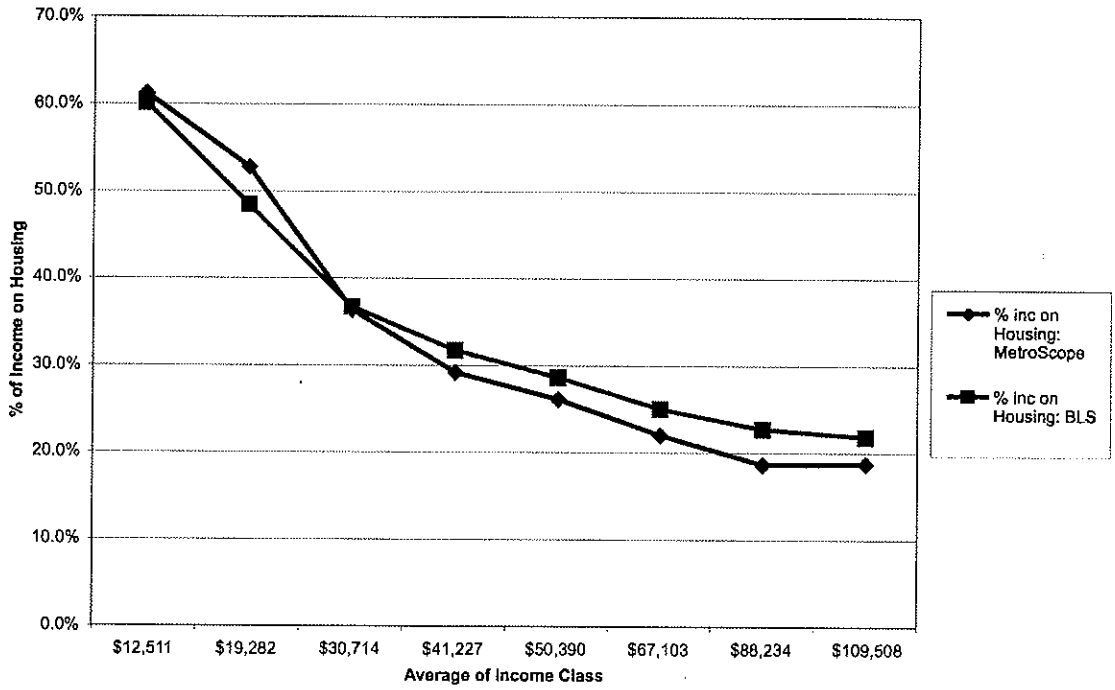
U.S. Census Bureau. 2003. American Housing Survey for the Portland Metropolitan Area: 2002. Table 3-15. June.

A Model Comparison

This appendix contains a memo dated August 29 describing PSU's comparison of the two models Metro asked us to consider for the Metro Affordable Housing Study.

Figure A-1 below demonstrates one of the reasons we chose the *Metroscope* model: its estimates of the percentage of income spent on housing approach estimates of the Bureau of Labor Statistics for 2005.

Figure A-1: MetroScope % of Income on Housing Compared to BLS Survey 2005



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MEMORANDUM

August 29, 2007

To: Gerry Uba, Metro

From: Sheila Martin
George Hough
Gerry Mildner
Risa Proehl

Re: Metro Affordable Housing Study, Model Comparison

Attached is a description of the two models that you have asked us to compare for the purposes of estimating the current and future affordable housing needs in the metropolitan region. The memo is divided into three five sections:

A. **Description of the Models and their assumptions**, summarizes the basic features and goals of each model.

B. **Model Inputs and Outputs,** compares the inputs required to run the two models and describes their outputs.

C. **Recommendations,** includes our recommendations regarding how to proceed with the analysis.

Metroscope and State Model Review

The purpose of the Metro Affordable Housing Need Study is to estimate current and future **affordable** housing **need**. Our initial task is to review two housing models that purport to forecast future housing need (the State Model and Metroscope), interpret how they run, and provide an easy to understand overview of how they each work. In addition, we are charged with recommending the use of either one of the models, or incorporating the use of both, in Metro's housing need study.

An overview and technical documentation of both models was provided to PSU staff to conduct the review. Note that neither model predicts the need for group quarters facilities or considers the homeless population.

A. Description of the Models and their Assumptions

State Model

The State Model was developed as a tool to use in planning for new affordable housing units in a specified area and has been adopted by a number of smaller communities within the state. The State Model forecasts the number of housing units that are needed at different price levels so that that no one in the forecasted population would be paying more than 30% of their income on housing costs. There are three models, one for each of type of study area: 1) urban, college or resort; 2) medium size rural; and 3) small rural. The State Model may be run for cities, counties, or larger regions for which data exist.

The State Model is comprised of a housing needs model and a land needs model. The two models are inter-related, but the housing needs model can be run without the land needs model. New housing is predicted from planned housing by density and zone. The number of affordable units needed by housing costs and tenure is predicted from the forecasted percentage of households by income and age of householder. The gap between the current supply and the future demand of affordable housing units is identified in the results. Land needs in the study area are also predicted based on the current inventory of housing and available buildable land in the area.

Future demand of housing units by price of housing and tenure, related to housing choice, in the State Model is influenced by household income, the age of the householder, tenure and the price of the home as reported in Census 2000, and by the propensity to reside in a home that has housing costs that are either higher or lower than what the household can afford (affordability factors called in and out factors). Other considerations that influence the demand for housing units in the State Model are assumed vacancy, demolitions of existing units, and subsidized housing.

There is no transportation component within the State Model, so that housing units could be located anywhere within the metropolitan area. As a result, the changing preferences of households as they age are met only by housing type, not the commuting pattern. There is also

no mechanism in the State Model for the housing stock to depreciate in value over time. And there is no mechanism within the State Model to forecast the production of housing by the private sector, based upon building costs, housing prices, and affordability. Instead, the housing that is produced is assumed to equal that allowed by zoning in the community. In that sense, the State Model is not really an economic model.

The State Model is a non-equilibrium model that might allow for significant housing shortages. The gap between housing prices and rents and production costs will not cause a spurt of housing development in the State Model.

Assumptions made when running the State Model include:

- Housing choice in the future is the same as in Census 2000.
- Housing choice is dependent on tenure and housing cost decisions made by households as reported in Census 2000 by age of householder, and household income.
- Price levels (housing costs of housing units) are calculated assuming that housing costs should take no more than 30% of the household's income.
- Ownership price levels are based on the following assumptions: 30 year mortgage at 80% of value, property taxes at $15 per thousand of value, homeowners insurance based on State Farm Insurance rates, and the Mortgage Bankers Association recommended 28% ratio of housing expenses-to-income excluding utilities. The average historical interest rate of 8.1% was used to arrive at a third ownership price range.
- Number of subsidized housing units which affect price levels is adjustable.
- Vacancy rate (to convert units in households) is adjustable.
- The definition of income is the Census 2000 definition of Household Income – usual annual income of all household members.
- Mortgage costs: different scenarios to choose from – high, low, historical – may be changed.

Metroscope

Metro's model was developed for land use and transportation policy evaluation for the Portland-Vancouver metropolitan region; it has other uses such as transportation planning and Urban Growth Boundary (UGB) analysis. The model's output provides a forecast of where and how much housing will exist in the future. The geographic level for which the output is generated is in Metro defined regions. The whole of the Portland-Vancouver metropolitan area consists of 20 Sub-county Area Districts (Clackamas, Multnomah, and Washington Counties, Oregon and

Clark County, Washington). Each District's boundaries follow census tract boundaries and each was designed to represent its fair share of specified population and housing composition in the Portland-Vancouver area.

Metroscope is comprised of 4 inter-related models:

economic (forecasts region-wide population and employment);

location (comprised of residential and non-residential sub-models) that predicts where and how much housing will exist in the future based on predictions of how much and where employment activity will occur, the price of housing (incorporates the costs of development, locational amenities, and depreciation in value), household income and other wealth factors, and the age of householder;

travel (estimates trip origins and destinations, and measures perceived cost of travel between regions which affects where people work and decide to reside); and

GIS/land tools and database (aka the Land Filter which monitors current residential development, and tracks where and how much land [parcels] will be available for development in the future, provides an inventory and accounting of developable land that is available, and its capacity for housing units and employment). All sub-models are interrelated, and they influence and provide inputs for one another.

For our purposes, the results of Metroscope are the future number of households by housing type (single-family, multi-family) and tenure, price levels, age of householder, income level, percent of income spent on housing costs, tenure, and household size reorganized into bin categories. The results are produced by location (district). Metroscope also produces non-residential results such as the location of commercial property and commuting patterns, which can be used for other planning purposes.

The housing supply/demand results of Metroscope is dependant on the region's forecast population, land capacity/amount of developable land available, housing choice (influenced by tenure, age of householder, household income, housing costs, household size), and location choice (influenced by availability of housing, neighborhood attraction, distance to available employment opportunities of householder, and the Census 2000 household, income, age structure).

Metroscope is an equilibrium type of model, that balances housing demand and housing supply by adjusting vacancy rates, prices, rents, and production. Because of this model structure, housing prices and rents are bounded by household incomes to some extent, and housing production is determined partly by land use and zoning policies and by the interaction of rents, prices, and construction costs.

Assumptions made when running the Metroscope model:

- Housing choice in the baseline estimate is dependent on tenure and housing cost decisions made by households as reported in Census 2000 by age of householder, size of household, and income – values of housing choice variables/measures may be adjusted.

- Housing costs for homeowners assumes a 30 year mortgage with a 20% down payment.

- Housing price is affected by depreciation and may be adjusted.

- There is a one-to-one relationship between households and housing units (assumes constant vacancy rate).

- Income is defined by the total personal income definition developed by the BEA. It includes wages & salary disbursements, dividends, interest, rent, other labor income, proprietor's income, and transfer payments less social insurance contributions Personal income is then divided into income ranges based on Census 2000 income categories, which there are 16. Metroscope combines several of these categories and only operates with 8 income categories.

- Income increases by 1% per year in inflation-adjusted terms and may be adjusted by the user.

- Age of householder has a certain amount of effect on wealth.

B. A summary of the Inputs and Outputs of both housing forecast models are presented in the tables below:

Current Supply of Housing (Current Housing Inventory)

	MetroScope	State Model
Model Inputs	Data from Land Filter, tax assessor data; vacant developable parcels, parcels for redevelopment, and parcels that can be sub-divided for infill (already in model).	Data from Census 2000 housing stock and inventory if 2000 is used as base year; if other year is used as a base, then tax assessor data and rental survey (to be conducted by user of model).
Initial Model Conditions	The number of Households by size, income, age, and tenure, as well as location within the metropolitan area.	The number of Households by income, age, and tenure

Current Demand for Housing

	MetroScope	State Model
Model Inputs	Current population and employment (already in model)	current total population, group quarters population, persons per household, number of housing demolitions, number of vacant units,
	Housing occupancy by tenure and cost by age of householder and income level (already in model)	Housing choice by tenure and cost by age of householder and income level (already in model)
		Percentage of households by age of householder and income.
Initial Model Conditions	The number of Households by tenure, income, age, price levels, as well as location within the metropolitan area.	The number of Households by tenure, income, age, price levels

Future Supply of Housing (Future Housing Inventory)

	MetroScope	State Model
Model Inputs	From Land Filter; known to model: amount of land and zoning; land filter acts as market supply	UGB Acreage, acres in use and acres constrained.
		Planned housing units; predicted percentage of household by age of householder and household income
Model Outputs	Where and how much land and which parcels will be made available for development in the future (from residential location model) Using the Land Filter model, housing is supplied as prices exceed production costs. Users of the model may influence housing production through development subsidies, zoning changes, or changes to land supply policy.	Buildable land inventory (without information on likely location within metropolitan area). Housing is assumed to be built as planned, rather than by market profitability.
	The number of Households by household size, tenure, income, age of householder, and price levels , distributed among census tracts or other geographic areas.	
	Price indices in residential location model are iterated and adusted until # of housing units in demand equals # of units in supply in each of several categories or "bins", which are distinguished by tenure, housing type, income, age, and the presence of children	Demand is an output

Future Demand for Housing

	MetroScope	State Model
Model Inputs	Population forecast from economic model input to residential location model.	Forecast of total population, forecast group quarters population, predicted PPH, predicted demolitions.
		Vacancy rate known to model
		Household distribution by age of Householder, and income
		In and out factors (built-in)
		# of Housing vouchers
Model Outputs	Number of households by type, tenure, price level and percent of income spent on housing costs. Households are modeled to change their housing demand between rental and ownership and between single and multi-family property as their income, age, and household composition changes. Overall housing supply and demand are equilibrated in the model, by adjusting the price of each housing type, as well as its vacancy rate.	Number of affordable units by price levels and tenure.

C. Recommendations

1. We recommend the Metroscope model for the affordable housing need analysis. We believe that Metroscope has a more realistic model of housing development that incorporates the impact of household choice, development economics, and commuting preferences. These features are absent from the State Model.
2. We recommend that Metro officials learn about the questions that they can pose before the economists and demographers at Metro who manage their model. Metroscope integrates the residential housing model with transportation, land use, and commercial location models, and therefore provides a fuller and more realistic understanding of what housing will be supplied in particular areas given transportation infrastructure investments, land supply restrictions, and household preferences for community and housing costs. For example, Metroscope can be used to determine the neighborhoods which can accommodate children or senior citizens or identify where housing is needed to accommodate those types of households. Since one of

Metro's goals is to influence land use policy to accommodate future population growth, Metroscope seems ideally suited for this kind of analysis.

3. We feel that the analysis of affordable housing needs should be focused on the rental housing market, rather than the ownership housing market. None of the data available has a good measure of the amount of household wealth available to purchase a home. For example, one households can find a $400,000 house affordable, whereas another household does not, based upon their accumulated wealth. And since we know that lower income households are more likely to be renters, focus should start there.

4. Since Metroscope equilibrates demand and supply, it does not define a "housing affordability gap" per se. However, the gap can be defined as households spending an unacceptable percentage of their income on housing. We plan to decompose this gap by different HIA groups to provide a more in-depth understanding of the need. This more in-depth analysis will provide Metro a more complete understanding of the impact of policy.

5. We suggest extensive sensitivity analysis on the variables that drive the results of the model. We will work with the Metroscope analysts to acquire the data runs necessary for this analysis.

6. We recommend that Metro invest additional resources to support the operation of the Metroscope model. Currently, there are a limited number of Metro staff who are capable of operating the model and interpreting its results. While we believe that Metro should use this model for housing analysis, land needs analysis, and transportation analysis, we are concerned that the limited number of trained staff makes that reliance fragile.

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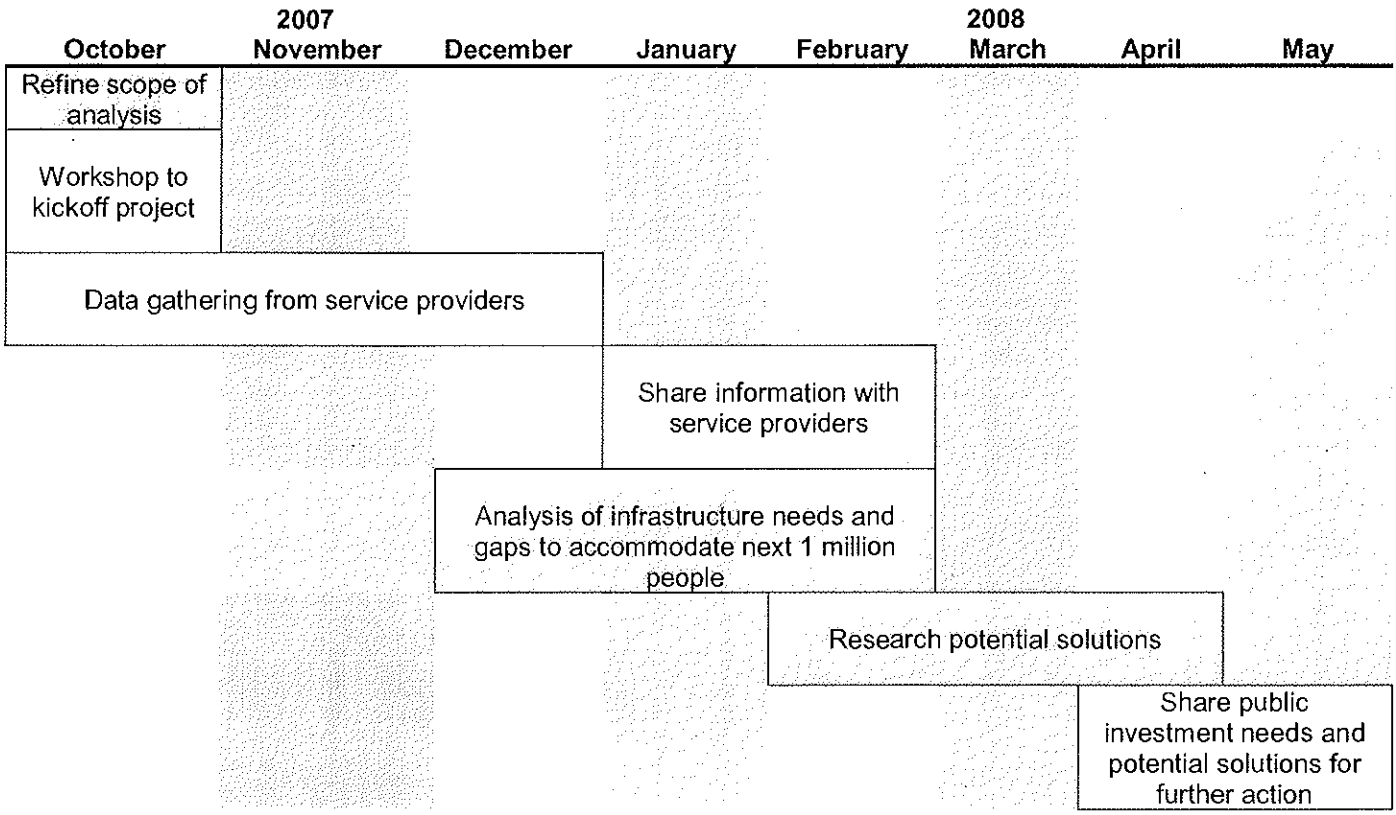
Regional Infrastructure and Public Investment Analysis

Goal:
Define issues, opportunities and potential strategies to align public investments with the region's goals as expressed in the 2040 Growth Concept.

Objectives:

- Identify issues and opportunities for infrastructure in the Portland metro region.
- Identify potential traditional and non-traditional infrastructure policy and financing strategies to provide infrastructure that is aligned with the objectives of the 2040 Growth Concept.
- Consider innovative approaches to service provision and demand management.
- Build a coalition of service providers willing to discuss and pursue solutions to regional infrastructure needs.
- Produce public investment action plan that describes solutions to address the region's infrastructure needs for Metro area to implement.

Schedule:



Infrastructure Advisory Committee Members

1. Alice Rouyer, City of Gresham
2. Cheryl Twete, PDC
3. Dean Funk, PGE
4. Lawrence Odell, Washington County
5. Lorna Stickel, Regional Water Providers Consortium, City of Portland Water Bureau, MTAC
6. Marion Haynes, PBA
7. Mike Wells, Wells Development
8. Ric Stephens, Alpha Community Development, Westside Economic Alliance, ULI, MTAC
9. Stephan Lashbrook, Lake Oswego, MTAC
10. Ted Kyle, Clackamas County Water Environmental Services
11. Pat Ribellia, Hillsboro

Infrastructure Atlas of the Portland Metro Region

FEBRUARY 2008 DISCUSSION DRAFT

Prepared by:

COGAN OWENS COGAN

METRO
PEOPLE PLACES
OPEN SPACES

INTRODUCTION

Metro is taking a look at the region's infrastructure needs to help define issues, opportunities and potential strategies to align public investments with the region's goals as expressed in the 2040 Growth Concept. The Metro Council identified the following infrastructure types as important to be included in this analysis: **roads, bridges, bike and pedestrian connections; sewer; water; stormwater; energy; transit; urban parks and greenspaces; parking facilities; schools; and civic buildings and facilities (including fire & police stations, libraries)**. The objectives of this effort are to:

- Identify issues and opportunities for infrastructure in the Portland metro region.
- Identify potential traditional and non-traditional infrastructure policy and financing strategies to provide infrastructure that is aligned with the objectives of the 2040 Growth Concept.
- Consider innovative approaches to service provision and demand management.
- Build a coalition of service providers willing to discuss and pursue solutions to regional infrastructure needs.
- Describe solutions to address the region's infrastructure needs.

Metro is working with infrastructure service providers to gather information on infrastructure needs, gaps to meet the needs, and possible options to close the gaps to ensure the infrastructure needed to support the 2040 goals is put in place.

Service Provider Questionnaire Data Summary and Analysis

Over the past few months, Metro has been collecting data from infrastructure service providers to help examine the region's long-term infrastructure needs and opportunities. The questionnaires were sent to all city and county managers as well as special districts and other infrastructure service providers in the Metro region (44 total). Respondents that provide multiple services were asked to complete a separate questionnaire for each infrastructure type. Thus far, we have received 59 completed questionnaires out of a potential 127. We will follow up with service providers we have not heard from and those who submitted incomplete information. In particular, we hope to get additional information about civic buildings and parks as well as energy. A parallel process is underway to gather data regarding school infrastructure needs.

The following preliminary data summary and analysis is intended to provide a basic understanding of infrastructure needs and opportunities and serve as the basis for further discussion of the issues. This information helps Metro assess the magnitude of the region's infrastructure needs to support the 2040 Growth Concept as we accommodate the next one million people.

Preliminary Findings

- There are commonalities, but challenges vary for different types of infrastructure
- Few responses focused on the need for civic buildings and parks, which play an important role in supporting great communities
- Funding challenges are especially significant for non-rate-paying infrastructure types (civic buildings, parks, transportation)
- Coordination is a significant challenge for water providers
- Most service providers coordinate with adjacent service providers and see potential benefits from increased cooperation
- The politics of raising adequate funds is a common issue for all types of infrastructure

This infrastructure atlas represents what we currently know about the region's needs for a variety of infrastructure types. The information is organized by type of infrastructure and includes a short narrative of what we have learned so far, the questionnaire results, and a map. Metro and Cogan Owens Cogan will be updating the atlas after the 2/22/2008 Infrastructure Workshop.

Civic Buildings

The cities of Cornelius, Gladstone, Tigard and Wood Village and Multnomah County completed questionnaires regarding civic building infrastructure. The City of Lake Oswego provided qualitative information on civic buildings. Multnomah County is in a different position than the cities as the County is currently divesting itself of a number of facilities. In Lake Oswego, the city hall building needs to be rebuilt because it does not meet seismic standards and has moisture damage. The city also is in need of a new maintenance shop. The library is a sound structure, but undersized to meet current demand. In Wood Village, the City Hall does not adequately accommodate existing staff and has no capacity for additional staff. The library in Cornelius is 67% below state standards and the general government building has no room for expansion. Together, the cities of Wood Village and Cornelius have approximately $9.5 million in planned capital improvements, for which less than 10% of necessary funds have been secured. More than 70% of these improvements are to accommodate future growth. The four cities identify a lack of funds as the top challenge to making capital improvements, whether it's due to a low per capita assessed value or the lack of a dedicated revenue source.

Questionnaire responses: CIVIC BUILDINGS

Provider Name	Existing Conditions		Planned Needs								
	Existing User Base (# of users)	Existing Excess Capacity (%)	Future Number of Users (total # of users)	Planning Horizon	Capital Improvements			Funding Status per project		
					Value (million $)	Upgrades	New Facilities	Fully	Partially	Unfunded
City of Cornelius	Current population estimate 10,895. Library service area 12,585	None	14,000-16,000	2020	$7.0	30%	70%			0%
City of Gladstone			Have not calculated	Close to buildout now			15%			
City of Tigard	46,715 population		57,000	2020	Recently working on a 20-year facilities plan.		15% Senior Center			
City of Wood Village	City population 3,100, city employees 13	None		2020	$2.5		100%		10%	
Multnomah County	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Energy

PGE completed a questionnaire regarding energy planning and infrastructure. PGE serves approximately 638,000 customers in the tri-county area and over 800,000 from Salem to the Columbia River. PGE serves about 85% of the region. Pacific Power serves about 25% of the City of Portland and smaller, publicly owned electric utilities in Canby and Forest Grove serve the rest of the region. PGE capital requirements are in the range of $180 to 250 million annually in transmission, generation, distribution and new customer connections through 2011. Growth for PGE occurs at approximately 2.1% annually. PGE and Pacific Power have an obligation to serve and rates are monitored by the state Public Utilities Commission, so questions about funding or funding gaps are not applicable. However, better coordination with other service providers as development occurs could result in cost savings for developers and ratepayers.

Community resistance to siting of new substations, power lines and other power system infrastructure is the greatest challenge for PGE. Another challenge is that increasing demand for access to the right-of-way and denser development make it difficult to locate/relocate facilities and increases costs for PGE and developers. City development code requirements aggravate the problem. Conservation, energy efficiency and sustainability efforts reduce revenues, but also reduce demand for electricity, helping to defer the need to build expensive new facilities. There is great potential to collaborate with governments at every level to enhance sustainability efforts.

Questionnaire responses: ENERGY

	Existing Conditions		Planned Needs							
					Capital Improvements			Funding Status per project		
Provider Name	Existing User Base (# of users)	Existing Excess Capacity (%)	Future Number of Users (total # of users)	Planning Horizon	Value (million $)	Upgrades	New Facilities	Fully	Partially	Unfunded
PGE	Approximately 638,000 customers in the tri-county area and over 800,000 in the northern Willamette Valley (Salem to Columbia River)	N/A	N/A. PGE grows at approximately 2.1% annually.	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Parks

The cities of Cornelius, Gresham, Hillsboro, Portland, Tigard and Wood Village returned questionnaires related to parks infrastructure. The City of Tigard alone has approximately $26 million in capital improvements over the next 12 years. The City of Hillsboro Parks Master Plan indicates a long-term cost of $50 million, which is thought to be low. Park acreage in the City of Gresham meets only 43% of the current need and will cost approximately $70 million to remedy. Parks and recreation service providers indicate that approximately 90% of the improvements are for new facilities. Eighty percent of those improvements are unfunded. In Portland, a lack of funding for facility operation and maintenance is listed as a major challenge to park infrastructure including an annual gap of $9.3 million. A lack of available land, the cost of land and insufficient funds from SDCs also are identified as challenges. Most respondents use intergovernmental agreements for park facilities and services and see the opportunity for additional efficiencies through coordination with other providers. One respondent emphasizes the need for investment in green infrastructure and design-with-nature (ecosystem services) concepts. Another service provider indicates that environmental regulations greatly increase the cost of providing amenities such as trails through natural areas.

Questionnaire responses: PARKS

	Existing Conditions		Planned Needs							
Provider Name	Existing User Base (# of users)	Existing Excess Capacity (%)	Future Number of Users (total # of users)	Planning Horizon	Capital Improvements: Value (million $)	Capital Improvements: Upgrades	Capital Improvements: New Facilities	Funding Status per project: Fully	Funding Status per project: Partially	Funding Status per project: Unfunded
City of Cornelius	Current population = 10,895 (7/1/07)	Minimal	10,970; almost exceeded already	2020	$1.6		100%		10%	90%
City of Gresham	As of February 1, 2008 Gresham's population is 100,000.	There is no excess capacity in the parks system. Gresham is lacking in most categories of parks service levels. Our community park acreage meets only 43% of the current need. The cost to remedy our existing deficiency is approximately $70 million.	Gresham's population is projected to reach 139,599 when the new communities of Pleasant Valley and Springwater are constructed.	Build out is somewhat difficult to define, but we expect most development within the current annexation areas to occur by 2040.		$40 million	$184 million	6%	1%	93%
City of Hillsboro	The existing user base is the resident population of the City of Hillsboro	As of now we are slightly deficient in some areas for park services, such as indoor facilities. However, our master plan plans for growth in an adequate manner to help serve additional population in the future.	Future population estimates are at approximately 120,000 residents.		The City is currently updating its parks and recreation master plan to better articulate this number. The current master plan shows a long-term cost of approximately $50 million. However, this number is known to be low, some features have been built since this estimate was completed, and our capital plan will be revised in the upcoming plan update.	10%	90%	10%	10%	80%. Funding operates on an approximately one to five year horizon. The funds used for capital development fluctuate with the rate of development. Annual projects are funded depending on the SDC funding stream.
City of Portland	COP population	Impossible to calculate at this time.	N/A	We are always adding capacity.						
City of Tigard	46,715 population		57,000	2020	$26.0		100%	10%	10%	80%
City of Wood Village	City population 3,100, park is used regionally not just by locals	Manages regional and local use.	Regional and local	2027	$0.5		100%	10%		

Sanitary Sewer

Thirteen service providers completed questionnaires about sanitary sewer infrastructure. The amount of excess capacity varies by location. Planned capital improvements for the next 10 to 40 years are nearly $1.8 billion. A significant percentage of funding is in place for short-term capital improvements. Sanitary sewer service providers indicate that more than 50% of capital improvement needs are for upgrades to existing facilities. The Kellogg Creek Water Pollution Control Plant serves approximately 85,000 customers with 800 – 1,000 new hookups each year. The plant is running at more than 100% of its hydraulic capacity and up to 150% of its organic load capacity on any given day. The affected jurisdictions are exploring several options and the potential solution may affect a number of communities, including Milwaukie, Happy Valley, Damascus, Lake Oswego, Oak Lodge Sanitary District, West Linn, Gladstone and Oregon City.

Service providers list a wide variety of challenges to implementing capital improvements, including:

- Complex state and federal regulations
- Reliable funding stream for construction and maintenance
- Increasing costs
- Planning and management

In addition, many respondents indicate a concern about their ability to serve urban growth boundary expansion areas. The majority of service providers participate in several intergovernmental agreements and see a definite benefit to expanding their cooperation and coordination with other service providers.

Questionnaire responses: SANITARY SEWER

	Existing Conditions		Planned Needs							
Provider Name	Existing User Base (# of users)	Existing Excess Capacity (%)	Future Number of Users (total # of users)	Planning Horizon	Capital Improvements			Funding Status per project		
					Value (million $)	Upgrades	New Facilities	Fully	Partially	Unfunded
Clackamas County Service District No. 1	42,500 EDUs as of July 1, 2007. 5,500 EDUs are served with rental capacity from Tri-City	36,000 Total. 28,000 Firm.	55,155 with Damascus. Damascus could be another 24,500 EDUs.	2025 without Damascus.	$110 Phase 1 Facilities for 20,000 EDUs (Estimates pending for buildout facilities needs. This capacity will be fully utilized in 2015.)	60% Replace existing capacity.	40% For growth.	100% to be funded by revenue bonds.		
Clean Water Services	258,141 EDUs as of 7/1/07	Clean Water Services has existing conveyance and treatment capacity (or is currently building capacity) to serve our service district through 2015. We also have facility plans to meet projected growth through 2025 as well as "buildout" numbers for current land use projections.	414,500 EDUs. West Basin (Rock Creek, Hillsboro and FG Wastewater Treatment Facilities): 258,000 EDUs; Durham Advanced Wastewater Treatment Facility: 156,500 EDUs	The limiting factor for sanitary sewer treatment is land availability for the existing treatment facilities. Given existing land use and treatment technology, Clean Water Services' West Basin wastewater treatment facilities will reach building in 2050 and Clean Water Services' Durham wastewater treatment facility will reach capacity in 2080.	The estimated value of treatment and conveyance capacity needs through 2050 will be around $500 million--$300 million for wastewater treatment facility upgrades and expansions; $100 million for pump station additions/replacements; and $100 million for regional sewer interceptor upgrades.			Short-term capital costs are funded with reserves; the District has bonding capacity to meet future needs at this time.		
Tri-City Service District	29,300 EDU as of July 1, 2007. 5,500 EDU in another service district are being served also.	38,000 Total. 32,000 Firm.	37,600 within UGB. 97,000 if UGB moves.	2023 at current growth rates if the UGB does not move.	$108 in 2007 dollars.	88%	11%	100% can be funded when existing authority is used. No grants are anticipated.		
City of Cornelius	4019 meter equivalents	minimal	7156	2024	$5.9	76%	24%		100% Rate study projects a mix of utility and SDC funding plus some grants and developer contributions	

	Existing Conditions		Planned Needs							
Provider Name	Existing User Base (# of users)	Existing Excess Capacity (%)	Future Number of Users (total # of users)	Planning Horizon	Capital Improvements			Funding Status per project		
					Value (million $)	Upgrades	New Facilities	Fully	Partially	Unfunded
City of Gladstone	4950 sewer EDUs;		Haven't really calculated	Close to buildout now	The city is very close to buildout now					
City of Gresham	111,000 (WWTP service population) 99,250 (collection system service population)	aprx. 40,000 additional (WWTP service population)	149,207 (WWTP service population)	2040	$79.9 million through 2024	60%	40%	19%	82%	
City of Hillsboro	Apprx 23,000				No Current Data			No current data		
City of Milwaukie	9815 EDUs	Critical limit of capacity is treatment facility. Milwaukie is a wholesale customer of CCSD#1.	Apprx 1800 EDUs in service area. Apprx 3500 EDUs as infill	2015	$15.5	90%	10%	5%		95%
City of Portland	175,000 Users (246,500 EDUs)	108 MGD capacity / 66 MGD existing flow) x 246,500 existing EDUs = 404,500 add'l EDUs to be served by existing treatment plants (ignores collection system's ability to convey flows to the plants.	205,000 Users; (289,000 EDUs) per 1999 PFP	2040 (ignores constraints to growth caused by current collection system deficiencies)	$781 (Represents only the significant facilities per 1999 PFP (excludes CSO Program))	95%	5%	5% (Budgeted amount = FY07/08 CIP less CSO Program Costs = $40M)		
City of Oregon City	Approximately 27,000 population	Depends on location in each system	2023, approx, 42,000 population	Each master plan addressed a 20-year planning horizon.	$153. Sewer=$16 (These dollar amounts do not include infrastructure needs in the UGB expansion areas. The concept plans are nearly complete but master plans and revised CIP's have not been finalized.)	2003 = 62%. Reimbursement SDC = 64%.	2003 = 38%. Improvement SDC = 36%.	Depends on system	Funding numbers not readily available.	Numbers assume bond sales & rate increases are approved.
City of Tigard	32,152		no answer	no answer	$5.0	100%		100%		
City of Troutdale	6,300 ERU	2,000 ERU	8,000 ERU	2016	$14.3			4%	0%	96%
City of Wood Village	628 # of users	151,120,86 GPD	849	2027	$3.2	37.6%	62.4%	50%		

Stormwater

Ten service providers provided information about stormwater infrastructure. Service providers indicate that their systems have little to no excess capacity. Eight of the service providers identified a total of more than $100 million in planned capital improvements, of which a small portion is fully funded. As with sanitary sewer, more than 50% of capital needs are for upgrades to existing facilities. The City of Cornelius estimates $6.1 million in needed capital improvements by 2024, 70% of which are for new facilities. None of these improvements are fully funded.

Stormwater service providers list the same challenges to implementing capital improvements as sanitary sewer providers:

- Complex state and federal regulations
- Reliable funding stream for construction and maintenance
- Increasing costs
- Planning and management

Lack of political will to raise funds for infrastructure is an additional concern. About half of the respondents indicate that they currently coordinate with other providers and see opportunities for additional coordination.

Questionnaire responses: STORMWATER

	Existing Conditions		Planned Needs							
Provider Name	Existing User Base (# of users)	Existing Excess Capacity (%)	Future Number of Users (total # of users)	Planning Horizon	Capital Improvements			Funding Status per project		
					Value (million $)	Upgrades	New Facilities	Fully	Partially	Unfunded
City of Cornelius	5431 ESU	minimal	9671	2024	$6.1	30%	70%		100%	
City of Gladstone			Haven't really calculated	Close to buildout now	The city is very close to buildout now					
City of Gresham	56,775	This analysis has not been performed throughout the city. Much of the existing stormwater conveyance system is at or over capacity, so an estimate of additional dwelling units that could be served without infrastructure upgrades would be less than 5,000.	56,775 existing + 10,000 additional in current city limits + 5,000 Pleasant Valley + 5,000 Springwater = 76,775.	Uncertain, 2040 estimate	$70.0	15%	85%	10%	0%	90%
City of Hillsboro	Apprx 23,000				No Current Data			No current data		
City of Milwaukie	NA	None	NA	N/A	$12.0	80%	20%	(within next 5 years) 7.5%		93%
City of Oregon City	Approximately 27, 000 population	Depends on location in each system	2023, approx, 42,000 population	Each master plan addressed a 20-year planning horizon.	Storm=$5	2008 = 60%. Reimbursement SDC = 77%.	2008 = 40%. Improvement SDC = 23%.	Depends on system	Funding numbers not readily available.	Numbers assume bond sales & rate increases are approved.
City of Portland	175,000 Users (246,500 EDUs)	108 MGD capacity / 66 MGD existing flow) x 246,500 existing EDUs = 404,500 add'l EDUs to be served by existing treatment plants (ignores collection system's ability to convey flows to the plants.	205,000 Users; (289,000 EDUs) per 1999 PFP	2040 (ignores constraints to growth caused by current collection system deficiencies)	$781 (Represents only the significant facilities per 1999 PFP (excludes CSO Program))	95%	5%	5% (Budgeted amount = FY07/08 CIP less CSO Program Costs = $40M)		
City of Tigard	32,152		n/a	no answer	$5.0	100%				100%
City of Troutdale	5,100 ERU	2,000 ERU	1,000 ERU	2016	$3.7 (City costs only)	0%	100%	35%	0%	65%
City of Wood Village	3,100 population; 121 businesses	no existing excess capacity	849 (Business count unknown)	2027	$1.1	79%	21%	20%		

Transportation/Transit

Service providers from eight cities and one county completed questionnaires regarding transportation infrastructure. Six of these service providers list planned capital improvements in excess of $420 million, with less than 10% of these improvements fully-funded. More than 75% of capital improvements are for upgrades to existing facilities. The City of Tigard reports a need for $225 million in transportation capital improvements by 2020. Eight percent of these improvements are for upgrades to the system. A vast majority of the improvements are currently unfunded.

Again, the biggest challenges to implementing capital improvements are:

- Complex state and federal regulations
- Reliable funding stream for construction and maintenance
- Increasing costs
- Planning and management
- Lack of public dialogue/political will

The majority of these jurisdictions coordinate with their respective county and see opportunities to increase efficiencies and raise funds by partnering with counties, the state and adjacent cities.

Several service providers indicate that rising fuel costs are a concern and that the yield on the gas tax will decrease as cars become more fuel-efficient. Opportunities exist to benefit from increased multi-modal services.

TriMet completed a questionnaire regarding transit planning and infrastructure. TriMet serves approximately 317,400 people daily (weekday). Capital improvements totaled $11 million in 2007. Three quarters (75%) of capital improvements are for accommodating future growth and the remainder (25%) is to serve existing customers. Approximately 94% of TriMet's planned capital improvements are unfunded. A lack of funding for operations and capital improvements is the biggest challenge to implementation. There is insufficient funding for transit infrastructure at the federal and state levels. Another challenge is developing local partnerships to provide complementary access to transit service (e.g., sidewalks). TriMet taxing authority falls under ORS 267 and includes the ability to tax payroll and issue bonds. It does not include sales or property tax, but may include the ability to collect SDCs. TriMet sees many potential benefits to partnering with local communities.

Questionnaire responses: TRANSPORTATION/TRANSIT

	Existing Conditions		Planned Needs							
Provider Name	Existing User Base (# of users)	Existing Excess Capacity (%)	Future Number of Users (total # of users)	Planning Horizon	Capital Improvements			Funding Status per project		
					Value (million $)	Upgrades	New Facilities	Fully	Partially	Unfunded
City of Cornelius				2025	$2.9	50%	50%	10%	40%	50%
City of Gladstone	40 centerline miles of streets		Haven't really calculated	Close to buildout now	The city is very close to buildout now					
City of Happy Valley	3100 EDU	TSP		2025						
City of Hillsboro	Approximately 50,000 jobs; Approximately 34,900 housing units	The shortfalls are the RTP facilities and in adding bike/ped and shoulder facilities to existing local and neighborhood route streets. Also shortfall in road maintenance funding. City is studying implementation of a Transportation Utility Fee to cover maintenance costs and provide some funding for bike/ped improvements on local streets and neighborhood routes in older neighborhood.	Capacity for 50,000 more jobs; capacity for 2,300 more housing units.	Housing: 5-8 years. Jobs: 20 years.	Not available					100%
City of Milwaukie	26,166 trips (2-hour pm peak)	N/A	28,530 trips (2-hour pm peak)	2030 (Note: not a buildout year, but planning horizon year)	$100+	95%	5%		5%	95%

	Existing Conditions		Planned Needs							
Provider Name	Existing User Base (# of users)	Existing Excess Capacity (%)	Future Number of Users (total # of users)	Planning Horizon	Capital Improvements			Funding Status per project		
					Value (million $)	Upgrades	New Facilities	Fully	Partially	Unfunded
City of Oregon City	Approximately 27, 000 population	Depends on location in each system	2023, approx, 42,000 population	Each master plan addressed a 20-year planning horizon.	Transp.=$88	Transp. - 2001 = 23%	Transp. - 2001 = 77%	Depends on system	Funding numbers not readily available.	Numbers assume bond sales & rate increases are approved.
City of Tigard	no answer	no answer	57,000	2020	$225.0	80%	20%	10%	5%	85%
City of Troutdale	NA	NA	NA	2016	$3.5 (City costs only)	100%		25%	0%	75%
Washington County	511,075 (2007 population) 2.61 persons/household	Excess capacity exists on lower classification streets (local and neighborhood routes) at nearly all times and on major street network (collectors and above) outside of the daily AM and PM peak travel periods. During the peak periods, excess capacity varies by roadway and is typically measured by volume to capacity (v/c) ratio. Metro keeps this information as part of the Regional Travel Model.	The 2020 Transportation Plan projects needs and population through the year 2020 (see Introduction & Background Section). Metro's updated RTP projects needs and population through the year 2035.	2020	The System Funding & Financing Element (Policy 18.0) of the 2020 Transportation Plan addresses the costs and funding questions for the transportation system needs that the Plan identifies through the year-2020 planning horizon.					
Trimet	317,400 daily (weekday)	Varies by route and time of day/week +/- 20% excess before MAX, for example would "hit the wall"		Moving target and resources are undetermined. We'd get close by 2050, but the needs will grow.	$11 mill in 2007 (capital)	25%	75%	1%	5%	94%

Water

Fourteen water service providers completed Metro's Regional Infrastructure Study Service Provider Questionnaire. Planned capital improvement costs for twelve of these service providers total approximately $850 million for the next five to twenty years. Funding for these capital improvements varies from one provider to the next. More than 50% of the capital needs are for new growth. However, the Oak Lodge Water District identifies $2 million in needed capital improvements, 100% of which is for upgrades to the existing system.

Although many water providers use intergovernmental agreements to provide service, intergovernmental coordination is listed as a major challenge in addition to those identified by providers of other infrastructure types (regulations, funding, costs and planning). However, there is a Regional Water Providers Consortium that "serves as a collaborative and coordinating organization to improve the planning and management of municipal water supplies in the Portland metropolitan region." The Consortium coordinates implementation of the Regional Water Supply Plan, provides a forum for study and discussion of water supply issues, and promotes cost-efficient use and stewardship of water resources. Water providers will need to work with stormwater and wastewater service providers to effectively build and manage a viable reclaimed water system. Service providers state that while water conservation efforts reduce demand, they also reduce revenue.

Questionnaire responses: WATER

	Existing Conditions		Planned Needs							
Provider Name	Existing User Base (# of users)	Existing Excess Capacity (%)	Future Number of Users (total # of users)	Planning Horizon	Capital Improvements			Funding Status per project		
					Value (million $)	Upgrades	New Facilities	Fully	Partially	Unfunded
Oak Lodge Water District	8,545 accounts, apprx 30,000 residents	4,00 more accounts	Apprx 9,000 accounts; population approx 32,000	Approx 2030	$2.0	100%		100%		
South Fork Water Board	51,260 population	33.8 mgd	75,090	2023	$17.0	20%	80%			
Sunrise Water Authority	17,500 ERUs	Current water right capacity can accommodate an additional 26,500 ERUs.	Approximately 90,000 ERUs.	Beyond 2028.	$300 in 2004 dollars.	10%	90%	0%	5%	95%
Tualatin Valley Water District	56,621 EDUs; 193,400 population	Current system excess capacity on a peak day is less than adequate in 2012, assuming population grows by appx 13,000 over that period	Buildout population of 474,500	Current projections are that buildout will not occur for the next 50 years.	$376 is estimated to be spent by 2026, which will handle supply needs until 2057	25%	75%	100%		
City of Cornelius	3899 meter equivalents	minimal	6943	2024	$10.8	50%	50%		100%	
City of Gladstone	3354 water meters		Haven't really calculated	Close to buildout now	The city is very close to buildout now					
City of Gresham	16,668	2.19 MGD or 4,994 EDU	103609	2030	$90.3	49.5%	50.5%	8%	12%	80%
City of Hillsboro	27,701 EDU	15,223 EDU	66,107 EDU	We will reach capacity of our current storage & planned supply expansion in the Tualatin Supply Project (Scoggins Dam Raise) between 2050-2057	$195.0	34% Capital improvements to serve existing customers.	66% Capital improvements to serve new customers	100% Funded through SDCs & water rates. SDC funding - CIP new customers. Water rates - CIP existing customers.		
City of Milwaukie	7000 Accounts (6000 residential, apprx 1000 commercial)	existing excess capacity	1500 users	2015	$6.0		100%			100%

	Existing Conditions		Planned Needs							
Provider Name	Existing User Base (# of users)	Existing Excess Capacity (%)	Future Number of Users (total # of users)	Planning Horizon	Capital Improvements			Funding Status per project		
					Value (million $)	Upgrades	New Facilities	Fully	Partially	Unfunded
City of Oregon City	Approximately 27, 000 population	Depends on location in each system	2023, approx, 42,000 population	Each master plan addressed a 20-year planning horizon.	Water=$44	2004 =57%. Reimbursement SDC = 26%.	2004 =43%. Improvement SDC = 74%.	Depends on system	Funding numbers not readily available.	Numbers assume bond sales & rate increases are approved.
City of Portland	Retail population 539,000; wholesale service area is 262,700. We have 178,000 services within the retail area (which comprises most of the City Limits of Portland minus about 30,000 people served by Rockwood PUD)	The Bureau has two water sources, Bull Run and the groudnwater system along Columbia River, which can serve the current retail/wholesale service area into at least the next 20 years. There is excess capacity in the Portland system when both sources are used conjunctively.	We utilize Metro's allocations for population to develop our retail system needs through studies such as the Distribution System Master Plan. We have identified no limitations for increased service within the retail service area. We have excess water groundwater rights as well as statutory rights to increase surface water source development in the Bull Run if needed.	From a water service perspective, we don't anticipate reaching capacity limitations any time in the next few decades. We have a 5 year CIP and are developing a Public Facilities Plan as a part of the City of Portland Comprehensive Plan update.	Not available			Not available		
City of Tigard	17,721 services (56,800 population)	5,000 services (68,043 population)	7,090 services (73,715 population)	2020 (+/- 5 years)	$70-100	25%	75%	25%	25%	50%
City of Troutdale	6,000 ERU	1,000 ERU	7,200 ERU	2016	$4.8 (City costs only)	25%	75%	10%	0%	90%
City of Wood Village	637 # of users	590,853,47 GPD	849	2027	$2.5	75%	25%	30%		

TOD IMPLEMENTATION PROGRAM

TOD Project Seven-Day Notice

Per the TOD Program Work Plan adopted by Council Resolution 98-2619, "as soon as practical upon approval by the Steering Committee, the Executive Officer will provide written notification to the Metro Council of potential TOD projects and the Council will have seven (7) days to notify the Executive of a request to review a potential project in executive session... "z

Project Name: The Crown Motel Affordable Housing (The Crown) – 2nd Action

Action Item: On December 13, 2007, the TOD Steering Committee authorized that TOD funding for the project be provided as a $365,000 long term loan with favorable terms instead of a grant, as had been previously approved on September 13, 2007. The Crown Motel Affordable Housing Project transaction will be a 50 year loan, secured by a trust deed, bearing 1% interest compounding annually on the anniversary date, no payments to principle or interest for the first 20 years, then amortizing on a 30-year schedule.

Project Background: Reach Community Development has requested that the transaction for the TOD easement for $365,000 be characterized as a loan. The Milwaukie North Main project was structured as a loan with 20 years at 1% with no payments, then the interest included in the revised principle and the loan made as a 30-year amortization loan with the new principle.

On September 13, 2007, the TOD Steering Committee authorized $365,000 in funding to purchase a TOD easement for a mixed-use affordable housing project located on Interstate Avenue in Portland with the following conditions: 1) Tri Met and PDC increase their funding commitment by $69,000 each; 2) 54 units of affordable housing; 3) 3,000 square feet of retail. The project is located 500 feet from the Interstate and Killingsworth Max stop. While the project is not within a focus center, we believe it is important for Metro TOD to support this development because it is an affordable housing project, and it is a Tri Met initiated project. The site was purchased by TriMet for its TOD program and is being developed by the non-profit, Reach Community Development, Inc with support from Tri Met and the Portland Development Commission.

Project Description: This project will be five stories, with 54 affordable housing units, 3082 square feet of ground floor retail. Cost premiums include added steel structure at ground floor for a five story building ($314,000), two additional stops for the elevator ($44,000), added fire systems for the attic ($17,000), and added plumbing ($19,000) for a total of $394,000. Using the TOD/Centers funding assumptions, the cost per induced transit ride would be $2.10. The project will generate 46 induced transit trips daily with a capitalized fare box value of $338,502.

Project Location: The project is located on Interstate Avenue between North Emerson Street and North Sumner Street, immediately south of Patton Square Park and approximately 500 feet south of the MAX light rail station on Killingsworth and Interstate.

Project Budget: Localized MTIP funding for the TOD Program will support this $365,000 project expense; funds are available in the 2006-07 Planning Department, TOD Program budget allocations. The loan terms include a 1% interest rate, gross loan amount of $365,000, and the loan has a net present value of $141,130.

Potential Issues: TOD funding was contingent upon the PDC and Tri Met providing an additional $69,000 each for the project, which they have done.

Michael Jordan, Chief Operating Officer — Date 2/20/08

The Crown


Metro's Transit Oriented Development Program
The Crown TOD Project
The Crown
200
Feet
N
EMERSON
SUMNER
WEBSTER
INTERSTATE
MARYLAND

TOD Project Seven-Day Notice

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Project Name: Project X

Action Item: On February 14th, 2008, the TOD Steering Committee authorized $150,000 the purchase of a TOD Easement for a work/live and active creative space project located on North Cook and North Borthwick, one block south of Fremont with the following conditions 1). 5-story building height; 2). Building elements, which allow for residential use 3). 68 work/live units 4). 4300 square foot of retail/flex space on the first floor; 5). Building constructed as per illustrated drawings submitted.

Project Background: This project proposes to introduce a new product type into the Portland market: Work-live space. The project developers include the principals of PATH Architects and Kaiser Group, a small redevelopment firm.

Project Description: The developers are proposing a five story building with 14 first floor commercial spaces and 68 micro work-live rental units above ranging from 200 to 400 sq. ft. in size, each with a sink, optional cook top, with 3 shared bathrooms per floor. The developers are working with Pacific Continental Bank for their project financing. The developers have been working with the City of Portland Bureau of Development Services over the past 2 years to work out applicable building codes as this project does not fit into any one use category.

Project Location: The site is located on North Cook and North Borthwick, one block south of Fremont and the 4 Frequent Bus line.

Project Budget: Localized MTIP funding for the TOD Program will support this $150,000 project expense; Most of the cost premiums are associated with the residential component of the building, they include: Structural steel system (steel frame instead of light gauge framing, fireproofing, concrete deck): $163,000, common area HVAC: $56,000, unit horn strobes: $17,000, kitchenettes: $144,500, individual hot water: $30,600, additional plumbing: $34,000 ADA showers/bathrooms: $90,940. The total induced transit ridership will be 40 trips assuming a 10% modal split for transit with a conservative estimate that half of the 68 units would be office, and the other half work/live. This results in capitalized farebox revenue of $148,443. Assuming the entire project is work/live the capitalized fare box revenue would be $244,000. The cost per induced transit ride for a $150,000 investment is $2.21 per ride, which is well within the range of $.31 - $3.85 that has been funded to date.

Potential Issues: The site is currently a scrap/junk facility, and is located in a difficult to develop area surrounded by industrial uses to the south and west, with Boise Elementary to the east. However the proposed use will serve as an appropriate land use transition to the neighborhood to the north and could catalyze additional investments in the area.

Michael Jordan, Chief Operating Officer — Date 2/25/08


Metro's Transit Oriented Development Program
Project X
Project X
MAX Stops
MAX Line
Frequent Bus Stops
Frequent Bus Lines
All Bus Lines
N
FREMONT
COOK
REVERE
UNNAMED
FARGO
KERBY AVE
MONROE
GREELEY AVE

T O D I M P L E M E N T A T I O N P R O G R A M

TOD Project Seven-Day Notice

Per the TOD Program Work Plan adopted by Council Resolution 98-2619, "as soon as practical upon approval by the Steering Committee, the Executive Officer will provide written notification to the Metro Council of potential TOD projects and the Council will have seven (7) days to notify the Executive of a request to review a potential project in executive session.."

Date Prepared: February 25,2008

CONFIDENTIAL

Project Name: Beranger Condominiums (formerly Gresham Central Point Phase II) - Amendment

Action: The TOD Steering Committee authorized Metro's existing 2nd mortgage loan of $300,000 for the Beranger to be increased by $100,000 subject to the following:

1. The developer shall secure a capable investor immediately;
2. The TOD loan will be increased by $100,000 with the money flowing over a five month period to be matched by an equal or greater amount of private investor capital;
3. The TOD loan will be subordinate to the bank trust deed and only apply to the housing;
4. The TOD loan will be repaid from the housing proceeds, after the bank has been repaid and after the private investor has received a priority return on his investment of funds.

Project Background: The Beranger in historic downtown Gresham is a 3 and 4-story project of 24 residential condominiums and 6,100 square feet of retail. The project is adjacent to Central Point at Third and Roberts and began conceptual design as market rate rental housing. After experience with the amount of public funding necessary for market rate rental housing such as The Crossings, there was a desire by the TOD program to attempt to reduce the amount of TOD investment in the Beranger by encouraging the development of housing condominiums (there were indications that condominium housing had a lower public funding requirement than rental housing). After some time, the developer agreed and modified the plans for the Beranger from a rental housing to a condominium housing project. There was also a desire by the TOD Program to establish higher comparables on future mixed-use housing projects in Gresham. The TOD Workplan was later amended to include, "Develop Developers" and " Establish Comparables" as program goals, so that higher density housing projects are more acceptable to lenders because comparables have been established.

Absorption of the Beranger condominiums units has been slower than anticipated. When the project was announced eleven of the 24 units were reserved, which showed strong interest. However, only four of these transferred to actual sales. This phenomenon of a huge drop off from reservations to sales occurred in other locations throughout the Portland area. This slow down was also being experienced nationwide and was due to the implosion of the mortgage market and the drop in housing sales. To date, seven of the 24 units have been sold with one of them occurring this past week. Slow absorption translates to longer "carry" time with potential profits on the project eroded by added interest, utilities, and other costs. On condominium projects such as the Beranger, if the units all sold out in an absorption period of 18 months or longer, the potential profit for the project will completely disappear.

This Steering Committee action is taken with the condition that a new investor is secured by the developer. The new investor and Metro loan will help "carry costs" of the project through December 31st, 2008. TOD funds will be phased over a five-month period with investor funds being equal or more.

Project Description: The project consists of 24 condominium units and 6,100 S.F. of retail in 3 and 4-story mixed-use buildings, and includes an eco-roof and other sustainable rain garden features.

Project Location: The Beranger is located at 3rd and Hood in downtown Gresham, immediately east of Central Point Phase I, which won a Governor's Livability Award.

Project Budget: The project budget in past actions includes $585,000 ($285,000 grant and $300,000 loan) for cost premiums, eco-roof and other sustainable rain garden features and a low interest loan to bridge the gap on the appraisal for the project as condominiums. This Steering Committee action increases the loan from$300,000 to $400,000.

Potential Issues: As the first higher density condominium housing project in Gresham, this project is testing the market and therefore poses risk to the developer. There is increased risk to the TOD Program loan if the units continue to sell slowly or not at all. Buyer interest in the project has picked up since the end of January, with six showings on a recent open house. None-the-less, the housing market in the Portland area is still very slow. Because of the slow market absorption of all condominiums in all locations it should be understood that, if the housing sales on the Beranger are not completed by December 31, 2008, the TOD Program loan will not likely be repaid. The Steering Committee fully recognized this possibility when it took this action. To eliminate the risk to the Metro general fund, the TOD Program has budgeted the full amount of the loan from TOD Program resources.

Michael Jordan
Chief Operating Officer

Date 2/25/08

Central Point Phase II

TOD IMPLEMENTATION PROGRAM

TOD Project Seven-Day Notice

Per the TOD Program Work Plan adopted by Council Resolution 98-2619, "as soon as practical upon approval by the Steering Committee, the Executive Officer will provide written notification to the Metro Council of potential TOD projects and the Council will have seven (7) days to notify the Executive of a request to review a potential project in executive session..."

Project Name: Interstate MAX – "Killingsworth Station" TOD – **Amend Prior Authorization**

Project Background: In 2003 the Portland Development Commission assembled a 32,000 square foot site located on the corner of North Interstate Avenue and North Killingsworth Street for the development of a mixed-use transit oriented housing project. In January 2004, KemperCo was selected as the project developer and received TOD Steering Committee Approval for a TOD Easement in the amount of $250,000 in March of 2004. The project approved by the TOD Steering Committee included a 3-6 story building height with 108 housing units (56 affordable rentals in a 5-story building, 45 loft condos in a 6-story building, 7 townhomes) 12,000 square feet of ground floor commercial/retail and a 2 level parking structure. At the time the 7-Day Notice was issued, the TOD Program identified potential issues relating to building height and skyrocketing construction costs. KemperCo withdrew from the project in November 2005, citing rising construction costs and market risks. In April of 2006, PDC issued a second RFP and selected Winkler Development Corporation (WDC) for the project.

Project Description: Killingswoth Station is a mixed-use project with a 4 story building height and will include 54 condominiums (33 @ 80% MFI, 21 market rate), 9,200 square feet of ground floor commercial condominium space, 16 1-car garages and 34 surface parking spaces.

Project Budget: The cost premiums for this project include -Firewall separation (Structural concrete package including columns and PT slab): $750,000, elevator: $66,000, plywood shear walls: $75,000, tuck under parking: $144,000, added A&E : $35,000. This project results in 44 induced transit rides with capitalized farebox in the amount of $302,000 with a cost per induced rider of $1.61.

Potential Issues: PDC has had to commit considerably more funding to this project to move it to construction. The developer indicated that the return on this project is very low combined with very high risk due to the affordability component and green features, which are required for PDC funds. There is concern if this project does not get built soon the opportunity will be lost. Additionally, neighbors have expressed a strong preference to include lower density housing at this site. PDC has explained that Metro and Tri-Met are financial partners and desire a transit-oriented development with more density at this location.

Michael Jordan
Chief Operating Officer

2/25/08
Date


Metro's Transit Oriented Development Program
Killingsworth Station
Killingsworth Station
MAX Stops
MAX Line
Frequent Bus Stops
Frequent Bus Lines
All Bus Lines
N
KILLINGSWORTH
WILLAMETTE
MARYLAND
MONTANA


INTERSTATE