

LINNTON HILLSIDE STUDY



**FINAL PLAN**



May 2006

# LINNTON HILLSIDE STUDY FINAL PLAN

Adopted by the Portland City Council on April 26, 2006

Effective May 26, 2006

Ordinance No.180095

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**Copies of the Linnton Hillside Study Final Plan are available at the Portland Bureau of Planning, 1900 SW 4<sup>th</sup> Avenue from the 4<sup>th</sup> floor receptionist. The Plan can also be viewed on the Bureau of Planning's website:**

**[www.portlandonline.com/planning](http://www.portlandonline.com/planning)**

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## SUMMARY OF ISSUES AND ACTIONS

The Linnton Hillside Study examines the Linnton neighborhood's request to reduce potential residential densities in light of inadequate public services and constraints posed by the natural environment.

The study area extends almost five miles along the west side of Highway 30, from NW Kittridge Road at the south end to the northern city limits. Harborton, Town of Linnton, Waldemere, Glen Harbor, and Whitwood Court are the small residential enclaves that make up the heart of the study area: Fairmont and Willbridge are located in the southern portion of the study area and are composed of a mix of residential, industrial, and commercial uses.

### Key Issues

#### Natural Environment

- The Linnton Hillside is an environmentally sensitive area adjacent to Forest Park. It is within the Potential Landslide Hazard Area, the Wildfire Hazard Area, and moderate to severe Earthquake Hazard Areas.
- Area slopes are extremely steep (20 percent or greater in most areas) and soils are shallow and poorly drained.
- The greatest concentration of natural, open streams in the city, originating in Forest Park, flow through the hillside area and eventually under Highway 30 to the Willamette River.

#### Public Services

- The public street and stormwater disposal systems are substandard throughout most of the study area. Fire and emergency access is constrained.
- The water system is limited in Harborton, Waldemere, Glen Harbor, and Whitwood Court.
- A public sanitary sewer system is not available in Harborton and Whitwood Court.

#### Potential Residential Densities

- Current Comprehensive Plan designations allow for the potential of high-density, single-dwelling residential (R5) development. In addition, there is a prevalence of underlying historical lots throughout the hillside area. Because historical lots are often smaller than the base zone requirements and may have development potential, the potential number of housing units likely exceeds what is anticipated by the existing zoning.
- A significant amount of residentially zoned land is within public ownership. This land was purchased by Metro and the City for inclusion into Forest Park.

#### Future of Fairmont and Willbridge

- The areas of Fairmont and Willbridge consist mainly of industrial sanctuary zoning (IH). They are adjacent to Highway 30 and the Guild's Lake Industrial Sanctuary.
- The neighborhood plan calls for medium density multidwelling residential zoning (R1) for Fairmont and central employment zoning (EX) for Willbridge.
- While parts of these areas are underutilized and constrained due to narrow lot depth, the land is impacted by the proximity of heavy industrial uses and the highway.

## **Key Actions**

- Reduce Comprehensive Plan densities to equal zoning densities in all areas;
- Add minimum lot areas for most hillside properties;
- Rezone from residential to open space all City- and Metro-owned properties that are to be part of Forest Park;

Maintain IH zoning in Fairmont and Willbridge. Residential development should be limited in these areas due to potential conflicts with the highway and established heavy industry.



# DOCUMENT ORGANIZATION

## **Introduction**

The introduction summarizes the purpose of the Linnton Village and Hillside Studies, explains the role of the Linnton Working Group and the Technical Advisory Committee and describes the community outreach for the studies. This section also contains a process and timeline table for the studies.

## **Section I: Background**

This section summarizes the following:

1. Linnton Hillside Existing Conditions Report;
2. Relevant policy parameters;
3. Linnton Neighborhood Plan as it relates to the hillside; and
4. Meetings of the Linnton Working Group and Technical Advisory Group.

## **Section II: Findings**

This section summarizes the central findings of the study for the hillside as a whole. It cites the significant issues raised throughout the process, identifies properties owned by governmental agencies, and provides an analysis of the housing unit capacity.

## **Section III: Implementation Actions**

This section provides implementation measures that were considered to address identified land hazard and service constraints. Significant issues are identified for each subarea. Zoning Map changes and Zoning Code regulations are presented and explained. In addition, nonregulatory actions are identified for future consideration.



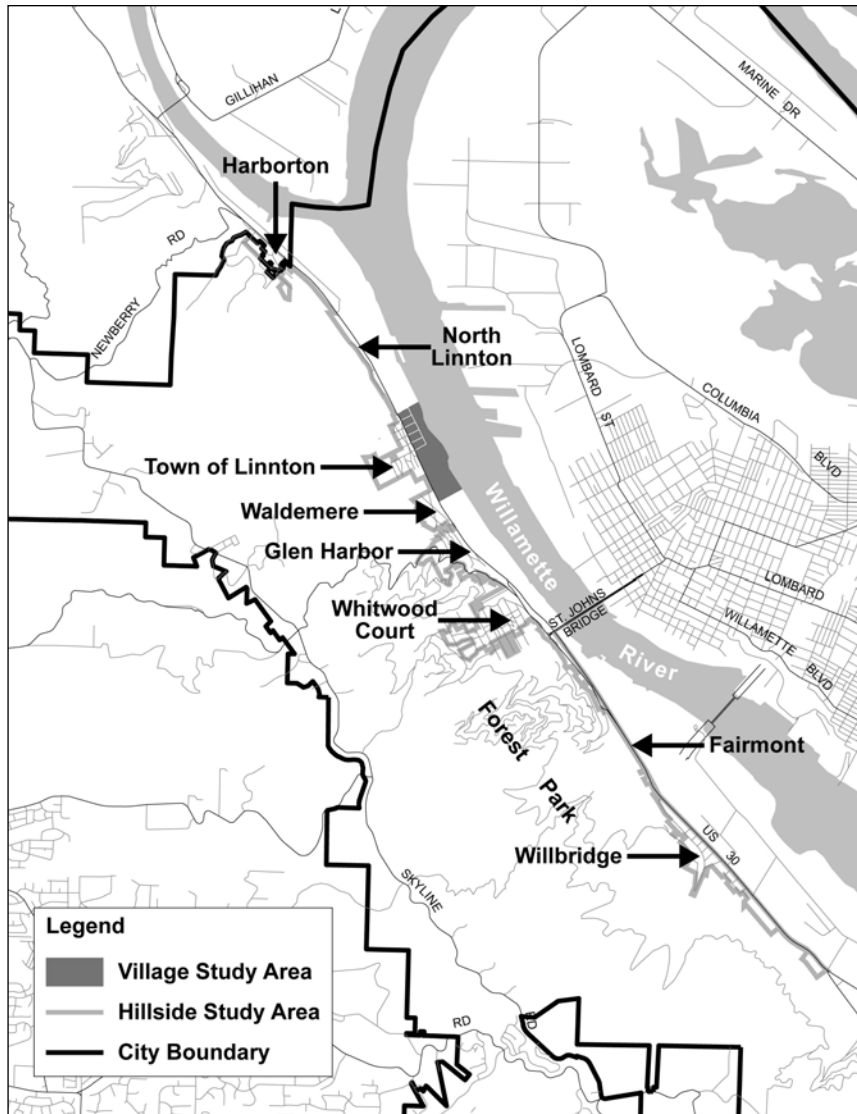
# INTRODUCTION

# SUMMARY OF LINNTON VILLAGE AND HILLSIDE STUDIES

The Linnton neighborhood is located in NW Portland and extends from the Willamette River into the hills of Forest Park, and from the Multnomah Channel to the Guild's Lake Industrial Sanctuary. Generally, Highway 30 separates the hillside enclaves with their roughly 525 residents from the industrial waterfront. There is a commercial district located on the east side of Highway 30 in the original 'downtown' of Linnton, between 107<sup>th</sup> and 112<sup>th</sup> Avenues.

The Linnton Neighborhood Association completed a proposed Linnton Neighborhood Plan in 2000 and requested that the City of Portland take the next steps to get the plan officially adopted by City Council. The Linnton Village and Hillside Studies address two of the major issues in the neighborhood plan: the creation of a waterfront 'Linnton Village' and the residential densities on the hillside. The Bureau of Planning began work on the Linnton Village and Hillside Studies in the spring of 2004. The two studies were developed through a single planning process, although separate reports have been published for each study.

## Study Boundaries



**The Village Study** responds to the proposals of the Linnton neighborhood's plan to create a mixed-use waterfront 'village' behind the Linnton commercial district between the BP and Kinder Morgan petroleum tank farms. This area is roughly 36.5 acres and includes the 25-acre Linnton Plywood site that is currently for sale. The study also addresses the River Renaissance Strategy, adopted by City Council in 2004, that identifies the Linnton Village area as a potential vibrant waterfront district.

The neighborhood's vision for this area is to create a central gathering place for the community in a new mixed-use area of light industry, commercial businesses, and residences. A 400 ft. buffer area of light industrial uses is recommended between both of the petroleum facilities and the proposed mixed-use development which could include residential uses. Recreational opportunities and increased public access to the riverfront are a vital part of the vision. (See *Linnton Village Study Appendix A: Excerpts from the Linnton Neighborhood Plan*, available from the Bureau of Planning.)

The Linnton neighborhood's plan calls for a Linnton Plan District located between the Willamette River and the railroad, between the two petroleum facilities – BP West Coast Products to the south and Kinder Morgan Energy Partners to the north. This area is approximately 36.5 acres in size. The Linnton Village study area goes beyond the neighborhood's proposed plan district boundaries to include the Linnton commercial district, for a total of roughly 50 acres.



**Linnton Village Study Area**

A series of land use scenarios was used to evaluate the capacity of the Linnton waterfront for development and to explore ways to implement Linnton's neighborhood plan for mixed-use development. There are six land use scenarios that range from industrial to housing with three options between that include a variety of industrial, employment, commercial, and housing components. (See *Linnton Village Study Appendix B: Land Use Scenario Analysis*, available from the Bureau of Planning.)

**The Hillside Study** examines the neighborhood's request to reduce potential residential densities in light of inadequate public services and constraints posed by the natural environment. The study area includes the Linnton neighborhood west of Highway 30, from the City limits south to NW Kittridge Road.

Existing public service capacity and adequacy is analyzed, given the potential for future residential development. Also considered are the hillside's natural conditions and land hazards.

## **Linnton Working Group/Technical Advisory Committee**

The Linnton Working Group (LWG) and a Technical Advisory Committee (TAC) of government agencies helped Bureau of Planning staff gather and review information used in the studies. (See *Linnton Village Study Appendix C: Summary of Linnton Working Group Discussions*, available from the Bureau of Planning.)

**Linnton Working Group** included members of a subcommittee of the Linnton Neighborhood Association, an industrial property owner, an industrial tenant, a real estate developer, a representative from the Port of Portland, and a state representative. Members from the River Renaissance economic and environmental subcommittees also participated, as well as City staff from the Portland Development Commission, the Bureau of Environmental Services, and the Bureau of Planning.

The LWG met from Oct 2004 through May 2005. The members represented a variety of strongly held opinions about the appropriate future land uses in Linnton. These disparate views made reaching a group consensus position impossible. However, the group was very valuable in identifying significant issues and engaging in dialogue that informed staff as they prepared the Bureau of Planning's recommendations.

The **Technical Advisory Committee** was responsible for reviewing the technical aspects of the studies. The TAC included representatives from City of Portland bureaus (Planning, Portland Development Commission, Parks, Transportation, Development Services, Water, Fire, and Environmental Services) as well as other governmental agencies that have an interest in the Linnton area (Port of Portland and Oregon Department of Transportation).

The TAC met once as a group on December 1, 2004, to comment on the draft land use scenarios for the Linnton Village Study and zoning options for the Hillside Study. TAC members have also been asked to review existing conditions reports. Bureau of Planning staff has also consulted with TAC members on an individual basis throughout the study process.

## Neighborhood Events and Outreach

### Initial Meetings with Linnton Neighborhood Leadership

At these meetings, neighborhood representatives presented their proposed neighborhood plan to staff and explained the plan's significant goals and elements. Staff described the approach of the studies and received input from neighborhood representatives about the composition, roles, and responsibilities of the Linnton Working Group.

### Community Open House

A community open house was held at the Linnton Community Center on August 12, 2004. A postcard invitation was sent to all property owners and the Bureau of Planning's project mailing list.

Staff from the Bureau of Planning, the Bureau of Environmental Services, the Bureau of Development Services, and the Portland Development Commission were available to review and discuss:

- The proposed Linnton Neighborhood Plan and its recommendation for the Hillside and Village study areas;
- The River Renaissance Strategies and Linnton's significance in this citywide initiative; and
- The draft Existing Conditions Reports for the Linnton Village and Hillside areas.

Fifty-one people signed the attendance list. Maps were available and staff encouraged attendees to fill out questionnaires. Community members strongly recommended that staff adopt the proposed Linnton Neighborhood Plan.

### Linnton Neighborhood Association Meetings

- May 2004: Bureau of Planning introduced the purpose, process and timeline for developing the Linnton Village and Hillside studies;
- February 2005: Bureau of Planning presented preliminary staff findings and recommendations for the Linnton Hillside study, and briefed the group on the status of the Linnton Village Study.

### Second Community Open House

A community open house was held on August 11, 2005 at the Linnton Community Center from 4:00 to 8:00 p.m. A postcard invitation was sent to all property owners and the project mailing list. Copies of the discussion draft for the Linnton Village and Hillside Studies were available and staff was on hand to talk about the recommendations in the discussion draft reports.

Fifty-two people signed the attendance list. Participants were asked to fill out comment forms (nine were submitted to staff). A majority of people in attendance supported the recommendations of the Linnton Hillside Study. However, several property owners voiced concern about decreasing the potential housing density on their property. (The properties are located within the Glen Harbor area, off NW Germantown Road.)

The Linnton Village Study comments included:

- concerns that there isn't a market for the type of uses in staff recommendations;
- requests that the City endorse the entire Linnton Neighborhood Plan;

- concerns that restricting the amount of housing to a small number of work/live units will not bring the amount of activity that will create a 'center' for their neighborhood; and
- belief that the waterfront is not prime industrial land that is in high demand.

### **Planning Commission Public Hearing**

A public hearing for both the Linnton Hillside and Village Studies was held on September 13, 2005. The Planning Commission received written and oral testimony from many interested parties. At a work session held October 11, 2005, the Planning Commission considered the issues that were raised in testimony, and voted to recommend approval of the Hillside Study. However, the Planning Commission deferred a decision on the Linnton Village Study, and directed the Planning Bureau and Portland Development Commission staff to gather more information and work toward a development strategy for the village area. After the Planning Commission makes its final recommendation, a City Council public hearing for the Linnton Village Study will be scheduled.

### **City Council Public Hearing for the Linnton Hillside Recommended Plan**

A City Council public hearing for the Linnton Hillside Study took place on March 15, 2006. Linnton Neighborhood residents voiced concern about inadequate public services and effects of building on steep slopes. They advocated for stronger regulations that do not allow development on small properties. Individual property owners voiced concern that they would not be able to build on their properties.

The City Council directed staff to hold a community meeting to discuss the recommendations and clarify areas of disagreement. They encouraged all parties to reach consensus. The community meeting was held on April 6, 2006, at the Linnton Community Center. About 40 to 50 community members participated. At the meeting, Bureau of Planning staff summarized the recommendations and proposed revisions, and the neighborhood was given the opportunity to comment and ask questions. Meeting participants voted unanimously (with one person abstaining) to support the proposal. On April 20, 2006, City Council voted to approve the amendments, and on April 26, 2006, the final plan was adopted.



## Process and Timeline for Linnton Village and Hillside Studies

<b>Start-Up</b>	Initial Meetings with Linnton Neighborhood Leaders	→	April-June 2004
	Establish Contract with Parson Brinkerhoff	→	May 2004
	Existing Conditions Reports Published	→	July 2004
	Community Workshop	→	August 12, 2004

<b>Research and Analysis</b>	Review Status of Studies & Approach to Land Use Scenarios w/ Linnton Working Group & Technical Advisory Committee	→	September/October 2004
	Develop and Present Scenarios for Linnton Village and Hillside Review w/ Linnton Working Group & Technical Advisory Committee	→	October-December 2004
	Develop Transportation and Market Analysis	→	January-April 2005
	Review Transportation and Market Analysis with Linnton Working Group, Tech. Advisory Committee	→	May 2005

<b>Results</b>	Prepare Discussion Draft Linnton Village and Hillside Reports	→	June-July 15 <sup>th</sup> 2005
	Publish Linnton Village and Hillside Studies	→	July 15 <sup>th</sup> , 2005
	Public Review of Discussion Draft	→	July 15 - August 19, 2005
	Publish Proposed Draft to Planning Commission	→	August 30, 2005
	Planning Commission Public Hearing Linnton Village and Hillside Studies	→	September 13, 2005
	Planning Commission Work Session The Planning Commission voted to recommend approval of the Linnton Hillside Study. As of May 2006, the Linnton Village Study is under review by the Planning Commission.	→	October 11, 2006
	City Council Public Hearing for Hillside Study City Council Adopts Linnton Hillside Study Final Plan	→	March 15, 2006 April 26, 2006



# SECTION I: BACKGROUND INFORMATION

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## **A. Existing Conditions Report Summary**

Following is a brief summary of the Linnton Hillside Existing Conditions Report (updated June 2005). Refer to the document (available through the Bureau of Planning) for detailed information and maps.

### **Zoning**

The Linnton hillside residential area is predominantly within single-dwelling residential zones, ranging from R2.5 to R20. Much of the area has Comprehensive Plan designations with a higher residential density than the underlying zoning. The Comprehensive Plan designations—considered the future or planned potential—may be approved through a zone map amendment (land use review) if it is shown that adequate services can be provided to serve the higher densities. Existing zoning is shown on Maps D1 through D6.

Environmental overlay zones are designated on parts of the hillside area, including the many streams that originate in Forest Park. The area is within the Forest Park subdistrict of the Northwest Hills Plan District; additional approval criteria apply for environmental reviews. Environmental overlay zones are shown on Maps A1 through A6.

### **Linnton Neighborhood Plan, June 5, 2000**

The Proposed Linnton Neighborhood Plan generally recommends reducing Comprehensive Plan designations to match existing zoning.

### **Lots and Development**

Underlying historical lot patterns exist throughout the hillside residential area. These lots, most often 25 feet by 100 feet in size, may have legal status for building if certain conditions are met, and may increase the potential number of housing units beyond the base zone limits.

Recent development in Linnton has been limited to a few houses per year. Cascade View Condominiums is a significant development (about 40 units) nearing completion. Located at NW Germantown Road and Highway 30, this development is the only multidwelling residential (R2) site on the hillside.

### **Services**

Most of the stormwater from existing development is directed to the many open tributaries or roadside ditches. There is a combined sanitary/storm system in the town of Linnton, and stormwater pipes in parts of Glen Harbor.

Harborton, Whitwood Court, and parts of Willbridge are not served by the public sanitary sewer system. There are no plans for sewer extensions to these areas. Proposals for private septic systems are reviewed by the Bureau of Development Services staff.

Water service is generally adequate to serve developed lots. Underdeveloped areas in Glen Harbor and Whitwood Court have inadequate supply and pressure. Fire flow deficiencies exist in parts of Waldemere and Glen Harbor.

Streets are not improved to city standards—most lack curbs, landscape strips and sidewalks. Road surfaces are paved or gravel. The streets are winding and narrow, no more than 12 feet wide, making passage by two vehicles difficult or impossible.

## Natural Land Hazards

The Linnton Hillside area topography is steeply sloping and within designated land hazard areas:

- **Potential Landside Hazard Area.** These areas are regulated by the City. Geotechnical information is required for land divisions and building permits in this area.
- **Preliminary Rapidly Moving Landslide Area.** Prepared by the Oregon Department of Geology and Mineral Industries (DOGAMI). Maps are provided to the public for informational purposes and show likely paths of debris flows and receiving sites in the event of a landslide.
- **Moderate to Severe Earthquake Hazard Area.** These areas are regulated by the City; the building code contains additional structural requirements.
- **Wildfire Hazard Area.** Regulated by the City through the Building Code; fire-retardant exterior materials are required for residential structures. The City has guidelines for maintaining property and structures in a fire-safe manner.

## **B. Policy Parameters**

Following is a summary of relevant objectives and policies from the City's Comprehensive Plan, the *Northwest Hills Natural Area Protection Plan*, and the *Northwest Hills Study*.

### **Comprehensive Plan, Revised July 2004**

#### **Housing**

##### **Policy 4.2 Maintain Housing Potential**

Retain housing potential by requiring no net loss of land reserved for, or committed to, residential, or mixed use. When considering requests for amendments to the Comprehensive Plan map, require that any loss of potential housing units be replaced.

#### **Transportation**

##### **Objective 6.4F Local Service Traffic Streets**

Function. Local Service Traffic Streets provide local circulation for traffic, pedestrians, and bicyclists and (except in special circumstances) should provide on-street parking. In some instances where vehicle speeds and volumes are very low (for example, woonerfs and accessways), Local Service Traffic Streets may accommodate both vehicles and pedestrians and bicyclists in a shared space.

#### **Environment**

##### **Objective 8.11E Northwest Hills**

Protect and preserve forest, wildlife and watershed resources through implementation of the Northwest Hills Natural Areas Protection Plan.

##### **Policy 8.13 Natural Hazards**

Control the density of development in areas of natural hazards consistent with the provisions of the City's Building Code, Chapter 70, the Floodplain Ordinance and the Subdivision Ordinance.

##### **Objective 8.16B Slope Protection and Drainage**

Protect slopes from erosion and landslides through the retention and use of vegetation, building code regulations, erosion control measures during construction, and other means.

#### **Public Facilities**

##### **Policy 11.2 Orderly Land Development**

Urban development should only occur where urban public facilities and services exist or can be reasonably made available.

##### **Policy 11.21 Sub-surface disposal**

Discourage the development of on-site, subsurface waste disposal systems on lots smaller than two acres in size.

##### **Policy 11.22 Sewer connections**

Require all new developments within the city limits to be connected to sanitary sewers except those that can be provided with acceptable sub-surface disposal, if a sewer is not available.

Policy 11.34 Fire Protection

Install and maintain public fire hydrants with adequate flow to serve the fire protection needs of all city residents and businesses.

Policy 11.40 Water Pressure

Provide water at standard pressures (40 to 110 lbs. per square inch) to all users whenever possible.

Policy 11.56 Emergency Access

Require streets to be of high structural quality, sufficient width, and keep maintained to insure access of emergency and service equipment.

**Northwest Hills Natural Areas Protection Plan, July 31, 1991**

**Development Policy**

Objective 1.4: Guide development away from sensitive natural resource areas such as wetlands, creeks and creek headwaters, steep slopes, wildlife habitat, and groundwater recharge areas.

**Natural Hazards Policy**

Objective 3.1 Thoroughly investigate proposed development sites for land suitability and limitations, including potential impacts of vegetation removal, site grading, road and building construction, and septic system and utility construction.

Objective 3.2 Limit development to portions of the site located away from sensitive slopes, soils and other conditions identified in soils, geology and/or hydrology investigations and reports.

Objective 3.3 Plan and orient development and roads so that ground- and vegetation-disturbing activities are minimized and steep slopes are avoided.

**Northwest Hills Study, April 27, 1985**

Recommendations relevant to the Linnton Hillside Study:

- In areas suitable for urban development but where landslide hazards are predominant or natural conditions are unique and sensitive, restrict potential development densities to be below what would otherwise be warranted.
- Expand low-density, single-dwelling designations to areas served by public and private facilities and services.
- Sites that have severe slope-hazard conditions or unique natural conditions should be developed at lower densities than sites without such conditions.



## C. Linnton Neighborhood Plan

Following is a summary of the proposed Linnton Neighborhood Plan objectives and zoning recommendations that are relevant to the hillside study.

### Objectives

#### Land Use

- Limit development in the hill area west of Highway 30 to those areas presently served by a full range of urban services (water, sewer, power, storm water runoff and streets).
- Maintain the single-dwelling detached residential area zoning in the hill area west of Highway 30 with the exception of the Fairmont area (current impound lot area).
- Remove existing Comprehensive Plan Designations.

#### Transportation and Neighborhood Streets

Support the development of an overlay to the street classification and appropriate policies and subsequent amendment to the Transportation element of the Comprehensive Plan that recognize the conditions of the street which do not meet current minimum conditions (i.e., unimprovable, substandard width, limited access, substandard grade, substandard curbing, aged condition, dead end, etc.)

#### Housing

- Apply low-density, single-dwelling residential designations and zones on environmentally sensitive and fragile hillsides west of St. Helens road which have limited access to urban public infrastructure and public services.
- Apply the “d” design overlay to vacant and redevelopment areas upzoned to medium density multi-dwelling Comprehensive Plan designation and R1, 1 unit per 1,000 square feet of site area where substantial new multi-dwelling development can be constructed.

#### Public Infrastructure

- Seek to have urban standard water pressure levels throughout the Linnton neighborhood through water system upgrades and on-site measures.
- Maintain and improve existing water storage, pumping and distribution needed to meet needs for existing and future service, water quality needs, and adequate water main sizes to ensure fire protection.
- Sewer and storm drainage systems should be developed and maintained at urban levels.
- Require City hook-ups for new construction within Linnton, with the cost being part of the development.
- Seek a stormwater runoff infrastructure capable of adequately dispersing the higher levels of rainfall and water runoff through the neighborhood.
- Encourage upgrading of the residential street grading, storm water runoff management and traction improvement where needed.

## **Linnton Neighborhood Plan Zoning Recommendations**

1. Reduce Comprehensive Plan designations to equal zoning.  
Exceptions:
  - Harborton lot to be rezoned from R10 to R7
  - Cascade View Condominium site (at NW Germantown Road)
  - Glen Harbor area northwest of Cascade View Condominium site to be rezoned from R10 to R5
2. Fairmont Impound Lot rezone from IH to R1; apply the Design Overlay Zone (d).
3. Willbridge area rezone from IH to EX.

## D. Linnton Working Group and Technical Advisory Group

### Linnton Working Group

Throughout the process, the Linnton Working Group was given information and updates about the Hillside Study. Following is a summary of meeting notes and comments. Complete meeting minutes are part of the public record for the Linnton Village Study, and available through the Bureau of Planning.

#### October 5, 2004

Staff described the purpose of the Hillside Study and reported on initial findings:

- Harborton and Whitwood Court are poorly served by a public sanitary sewer system. Most developed lots in this area have private septic systems, which are land-intensive, usually needing 12 to 20,000 square feet of land.
- All the hillside residential areas have substandard street systems, usually 12 feet of paving or gravel with no curb, drainage, or sidewalks. This existing situation is unlikely to improve with new development. Land division sites are responsible for improving the site's frontage only. Improvement requirements for individual building permits may be less.

Linnton Working Group members voiced concerned about the potential development of small lots. The hillside study is analyzing the potential for development on lots that are smaller than the zoned density, but may be built on because of grandfather rights. These lots, known as lot segregations, are historical lots that were created prior to the existing zoning.

Staff noted that the Willbridge area is mostly within the IH (heavy industrial) zone but there are pockets of housing, mostly single-dwelling residences. The housing was established before zoning (early 1900s). The zoning history for Willbridge has been consistently limited to commercial and industrial uses for properties adjacent to Highway 30. The Linnton Neighborhood Plan recommends that this area be zoned for general employment (EX). However, staff believes this area is not desirable for housing due to the proximity of industrial uses and Highway 30 traffic.

Linnton Working Group members suggested that a summary of the existing and potential hillside public services, such as streets, water and sanitary sewer, would reveal the problems with the Comprehensive Plan designations and the level of service.

Staff reported that the difference between the residential densities allowed under current zoning versus the Comprehensive Plan designation is about 200 units. Potential development of lot segregations boosts the density by about 20 percent. However, a number of residentially-zoned properties throughout the neighborhoods are owned by the City of Portland or Metro, for inclusion into Forest Park. These properties will not be developed, reducing the potential residential density by about 20 percent. Staff will likely recommend that these public properties be rezoned from residential to open space (OS).

Staff noted that the Parks Bureau is interested in vacating the right-of-ways in Forest Park that are not roads, trails, or access to 'in-holdings.' The Forest Park Natural Resources Management Plan identifies this as a priority.

## **November 15, 2004**

Staff briefed the group about meetings that were held with service bureaus to learn more about the hillside services and environmental issues. Staff asked bureau experts to look beyond the individual lots and look at the neighborhood as whole. What would happen if houses were proposed on all underdeveloped lots on the hillside? Staff handed out a summary identifying the area-wide context issues as well as findings and recommendations for the smaller subarea neighborhoods. An update of this information is included in Section II of this report.

Staff discussed the housing potential under several scenarios. The current zoning on the hillside allows for 820 units. There would be approximately 200 more units if the Comprehensive Plan designations were in place for a total of roughly 1,000 more units. As there is only one site with a multi-dwelling zone (R2) in the study area, most of these new units would be single-family houses.

There are a number of historically platted lots, smaller than currently allowed in the single-dwelling zones. Staff calculated that development of these lots could increase the density by about 20 percent. However, governmental entities (City, Metro) own about 20 percent of the study area and plan to keep it in Forest Park open space.

Linnton Working Group members asked questions about the housing capacity numbers. Linnton residents said they were told by the City that due to severe slopes, new road construction in Linnton would be difficult if not impossible. The zoning leads to false expectations because the services can't be provided to support development.

Staff said the numbers were rough and that they didn't want to focus on the exact counts, but rather wanted to look broadly at what is occurring in each of the areas. Working Group members said it should be clarified why the Hillside study is so important. Following is a list of the group's comments:

- Harborton has major drainage problems that lead to landslides. In past years there have been huge rock slides that have cut services and isolated neighbors for days at a time. Metro's landslide information includes landslide history and shows that Linnton has had lots of landslide activity over the years. Note: 1996 landslide sites are identified on Maps A1 through A-6.
- The pipes and water tank that serve Linnton are over 100 years old, and major problems occur in the waterlines.
- The hillside is covered with a substandard water system and there are no foreseeable upgrades in the future. The terracotta and tile pipes are not buried very deep and often crack. The Water Bureau often doesn't fix these breaks and they run down the hill as 'creeks.' Someone should keep a history of waterline breaks.
- The case for reducing Comprehensive Plan designations could go beyond just the infrastructure. The hillside residents' access to schools and parks is poor.
- The City should treat Linnton the same as other areas with similar environmental and service issues. The 'West Hills exemption' is a good example. There is interest in developing this area. However, when people inquire about land divisions the City (service bureaus) tell them that they can't divide because the services are not sufficient.

- Ballot Measure 37, approved this year, would allow anyone that has been down-zoned on the hillside to make a claim. Some members had concerns about the timing of this project and were not sure that now is the right time to propose down-zoning.

The group wanted to know how many lots that are buildable now would not be buildable if the Comprehensive Plan designations were reduced. (Note: This information is presented in the Housing Capacity paragraph within Section II of this report.) The group thinks that the City should upgrade the infrastructure first and then approve building permits.

Staff asked why the neighborhood plan proposes to change the impound lot in the Fairmont area from IH to R1. Is this a good site for multidwelling residential? Working group members responded that few Willbridge residents participated in the plan development and perhaps these units were proposed so that they could support the Linnton Village. This is not a significant issue with the Linnton neighborhood. Staff thought that the neighborhood and the Planning Bureau were trying to meet the 'no net housing loss' criteria if density potential was reduced on the hillside. Some did not think the impound lot was a good site for housing or industrial uses. Maybe it could be used to provide better access to Forest Park.

Staff also asked about the neighborhood plan's proposed zone change from IH to EXd on the west side of Highway 30 in portions of Willbridge. In 1959, much of this area changed from commercial to industrial. Working group members suggested that a high, sound-retaining wall could be built along Highway 30 to provide a better residential environment.

### **February 23, 2005**

Staff wants to keep the Linnton Village and Hillside studies on the same timeline and they plan to publish results this summer (July 2005). Staff discussed the Hillside study with Bureau of Planning management and City Attorneys. The City is concerned about potential Measure 37 claims if the current Comprehensive Plan designations are reduced. Management directed staff to explore further the public health and safety issues that lead us to recommend a reduction in potential density (potential wildfire, earthquake, and landslide hazards, and lack of public sanitary sewer). Is there a public health or safety reason to reduce potential residential density? Measure 37 does not apply to regulations that protect public health and safety.

The Bureau of Environmental Services watershed planning section has begun work on modeling the stormwater and sanitary sewer systems of the hillside. This is good news for Linnton since it is the first time they've done it on a large scale, and insights will be gained about the system's current functions and the impacts of future development.

The next steps in the Hillside study are to work with service bureau staff involved in issuing building permits and City attorneys to document potential public safety and health issues connected with development at the Comprehensive Plan designation densities. Solutions other than regulatory changes (i.e., zoning) will be looked at, especially through the permitting process, which could reduce the potential for landslide hazards as well as wildfire and earthquake threats. Some examples include:

- Roads: Of all the landslides mapped as a result of the 1996 floods, 50 percent were related to unreinforced upper cuts and cuts in lower parts of road. Road maintenance and construction methods should be reviewed.

- Homes: Landslides occurred as a result of unreinforced cuts that did not control stormwater. In addition, some landslides were simply the cause of faulty private stormwater facilities. This is referred to in the City of Portland's Natural Hazards Mitigation Plan, Short-Term Landslide #3: 'improve property owner awareness of the importance of proper maintenance of private drainage systems.'
- Water lines: Broken water lines can cause landslides. The Water Bureau should make the West Hills a priority if there is a problem in the system. This is referred to in the Natural Hazards Mitigation Plan, Short-Term Landslide #4 (p. 5): "mitigate Portland's water supply infrastructure from landslide hazards."

Members encouraged staff to talk with residents about the causes of landslides. They did not believe that the 1996 landslides were the result of private drainage systems.

### **May 4, 2005**

At this meeting, staff was in the process of forming options for the Hillside Study legislative process. Options included either a reduction in the Comprehensive Plan designations and/or additional approval criteria for land divisions and zone changes. The Linnton Hillside area is within the Forest Park subdistrict of the Northwest Hills Plan District, and additional approval criteria could be added to this section of the Zoning Code. The discussion draft and recommendation (July 2005) included an update to the existing conditions report and a recommendation for the hillside zoning.

### **Technical Advisory Group**

The Technical Advisory Group met in November and December of 2004. The group was provided an overview of the planning process and timeline, and given an update of the relevant issues.

Between November of 2004 and May of 2005, staff convened a series of meetings with key staff from the Bureau of Environmental Services, the Bureau of Development Review, the Bureau of Water Works, Office of Transportation, the Office of Emergency Management and the Bureau of Fire and Rescue. These meetings focused on understanding the current building permit approval process, the existing conditions of the Linnton Hillside, and the interrelationship of the service bureau's review of development proposals.

Staff also met with Dr. Scott Burns of Portland State University. Dr. Burns was involved with mapping of the 1996 landslides. He is working with the U. S. Geological Survey on comprehensive mapping of potential landslide hazard areas for the West Hills. Information provided by City staff and other professionals is documented in Section II of this document.

### **Property Owned by Government Agencies**

Staff met with representatives from the Bureau of Parks and Recreation and Metro. Both agencies have acquired residential hillside sites for inclusion into Forest Park and are agreeable to the rezoning of such sites from residential to open space. These sites are shown in Section II of this document on Maps C-1 through C-8. Note that some of these properties are outside the Hillside study area (Maps C-7 and C-8). Also shown on the maps are properties owned by the State of Oregon and Multnomah County. Refer to Section II of this document for a description of these properties.

## SECTION II: FINDINGS

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## A. Area-Wide Context

### Natural Features

- The Linnton Hillside is adjacent to Forest Park, an urban forested natural area and fish and wildlife habitat over 5,000 acres in size. Forest Park contains the largest area of old growth forest in the city (11 acres). This northerly section of Forest Park is remote and wild, since it is removed from the more populated areas of the city.
- Many species of plants and wildlife are unique to Forest Park because of its size and limited disturbance.
- Ten streams originate from Forest Park, including Miller, Doane, and Saltzman. This is the greatest concentration of natural, open streams in the Willamette watershed.
- Upper portions of the residential areas retain natural characteristics (underdeveloped forested residential lands).
- The Linnton Hillside is characterized by steep slopes compared to other residential areas in the West Hills. Almost half of Linnton residential hillside area has a slope greater than 20 percent.
- Soils are silt and gravel loams high in volcanic ash (basalt). Soil depth ranges from 14 to 24 inches. Lower soils are brittle with low permeability, causing a thin groundwater table and restricting root growth to 30 to 48 inches.

### Natural Hazard Lands

- Tualatin Hills range; shares geology with southwest Portland. Linnton is unique given its proximity to Forest Park, and steeper slopes.
- Within the potential landslide hazard and preliminary rapidly moving landslide hazard areas. Silt soils over shallow bedrock paired with steep slopes is prime area for debris flows.
- Potential earthquake hazards are of high and moderate levels.
- Wildfire hazard area, requires fire retardant roofing materials.

### Public Services

- Water system generally adequate for developed lots with deficiencies in areas with no or sparse development.
- Sanitary sewer system is generally an old system in fair to poor condition. Capacity appears to be adequate for the service area. Harborton, Whitwood Court, and Willbridge are not in service area.
- Stormwater disposal system – combination storm/sanitary sewer existing in Linnton and parts of Glen Harbor. Most stormwater is diverted to road ditches or tributaries.

Native soils (Cascade silt loam) on steep slopes and a high water table (12 to 18 inches from surface) make it difficult to retain stormwater on site since soils/slopes do not allow for on site infiltration of stormwater.

- Natural drainage is a limiting factor for development, many streams are open and un piped. Water quality treatment is required before discharge.
- NW Germantown Road (located in the Glen Harbor/Whitwood Court area) serves as the major connection for vehicles in Linnton through Forest Park (NW Newberry Road north of the City limits is the nearest connection). It is a narrow, winding roadway without curbs or sidewalks, and is subject to closure during winter storms or flooding. Many landslides (1996 event) were observed near this road, likely a result of unreinforced cuts in the hillside.
- Street system is not to City standards. Most streets are narrow paved or gravel surfaces, usually no more than 12 feet in width with no curb, drainage, or sidewalk. They allow for the passage of only one lane of vehicle traffic. The Office of Transportation does not maintain streets that are substandard. The main concern is existing narrow curving streets without an outlet, which hinders fire/emergency access; difficult to resolve or improve the existing street network deficiencies. Extension of existing streets is difficult to achieve, given the constraints of slopes, drainage, and cost. While land divisions (creation of lots) often require substantial street improvements, they are most often limited to a site's frontage. Individual building permits require minimal road improvements.

## Housing Unit Potential

- Residential capacity – Zoning: 790 units; Comprehensive Plan: 960 units. (These numbers were updated from previous numbers initially presented to the Linnton Working Group.)
- The area contains small lots and historical lots that may have grandfather rights. As a result, potential housing units may effectively increase by as much as 20 percent over the maximum allowed by the underlying zones. Exact numbers are difficult to determine because they are dependent on historical ownership information that is often difficult to obtain. Therefore, the potential of historical lots is not factored into the capacity numbers.
- There is a significant amount of land in public ownership. Metro and the City have purchased properties throughout the Hillside and Willbridge areas for inclusion in Forest Park (see Maps C1 through C-8). These lands are zoned for residential development but should not be considered in housing capacity analysis. Exclusion of these sites reduces potential zoning capacity to 640 units (786 units for the Comprehensive Plan).
- Cost of extending services should be factored into the feasibility of achieving planned capacity. For example, Whitwood Court is zoned for R7 (one house per 7,000 square feet of area) with a housing capacity of about 160 units, yet it does not have a public sanitary sewer system. Private systems in this area require between 12 and 20,000 square feet of land. The cost of a public system is estimated at \$2.5 million.

## B. Findings

This section contains the main body of information collected during the Hillside Study. It is composed of three parts: (a) a summary of city staff review and comment, (b) identification of property owned by governmental agencies; and (c) an analysis of housing capacity.

### 1. City Staff Review and Comment

During the planning process, staff contacted representatives from the Water, Environmental Services, Transportation, Fire and Rescue, and Development Services bureaus to discuss development issues. Dr. Scott Burns of Portland State University was also contacted, since he led the effort to map the landslides that occurred in 1996. Following are significant findings gathered from meetings and correspondence between October 2004 and May 2005. In addition, a series of maps is included (Maps A-1 through A-6) which show limits of current environmental overlay zones, undeveloped lots, and the location of the 1996 landslides.

#### **General**

The Bureau of Development Services staff responsible for reviewing building permits and land use reviews believes that the zoning density, and the potential for development on existing small and historical lots, may not be achievable due to land hazards and service constraints. The existing zoning leads to false expectations about potential development for land owners. The zoning should be consistent with the level of density that can reasonably be developed, given the potential for hazards and constraints of service provision.

Given the substandard street system, inadequate sanitary sewer and stormwater disposal, and potential for landslide hazard, the risks are too great here, potential density should be reduced where possible, to minimize risks to life and property. Specific services and issues are discussed in the following paragraphs.

#### **Landslide Potential and Slope Stability**

The two most common types of landslides that occur in the Portland area are rapidly moving debris flows (along valley bottoms) and earth flows (steep slopes – the majority of landslides).

The 1996 Flooding and Landslide Event:

- The mapped 1996 landslides are shown on Maps A-1 through A-6;
- 350 of the 710 mapped landslides were in the West Hills;
- Of all the landslides mapped as a result of the 1996 event, 50 percent were related to cut slopes – (unreinforced upper cuts and cuts in lower parts of roads) and around homes (unreinforced cuts that did not control stormwater). In addition, some landslides were caused by stormwater facilities (swales, trenches, gutter/downspouts) that were not working properly.

Dr. Scott Burns and the U.S. Geological Survey team are involved in a large-scale project that will map the landslide susceptibility of the West Hills using LIDAR (light detection and ranging) technology. Currently the State's preliminary data for rapidly moving landslides (debris flows) includes one type of landslide – debris flows. Dr. Burns' project will map all types of landslides, including earth flows. The project will take three to four years to complete.

Landslides are not an insurable event. Insurance may be obtained for earthquakes, fire, and floods, but not landslides.

Significant water leaks can cause landslides, and landslides can also break water mains. As such, system problems in the West Hills should be a maintenance priority for the Water Bureau.

During major weather events NW Germantown Road (major east/west access between Highway 30 and NW Skyline) is often closed since it is highly susceptible to landslides.

West Hills soils are uniform – silt rich soils that when saturated, will fail. They are sediment-generating soils.

### **Stormwater**

In most of the areas of Linnton, even in the area of combined sanitary/storm, most stormwater is directed into roadside ditches or tributaries and sometimes over private property when direct access to a ditch or tributary is not available.

The Site Development Section of the Bureau of Development Services suggests that under all circumstances for the West Hills, stormwater retention should be avoided due to shallow soils. Stormwater, while it should be directed off the site quickly, must be detained to avoid erosion. Water detention and water quality facilities are required, depending on site conditions. These facilities filter out sediments and contaminants and slow down the rate at which stormwater enters either a nearby tributary or roadside ditch.

Linnton modeling analysis by the Bureau of Environmental Services (available upon request from the Bureau of Planning), reviewed the area's sanitary and stormwater systems. For the stormwater system, an assessment was conducted to determine how new development within the study area would affect the receiving stream systems. The evaluation focuses on potential impacts at a sub-basin scale, but also reviews best management practices for stormwater control that should be followed when developing at a residential lot scale. Three potential stormwater related impacts were evaluated for each of the subareas.

The following three potential impacts are sub-basin scale impacts:

- 1) higher peak flows delivered to the receiving stream leading to degradation of the stream system;
- (2) water quality impairment related to increased impervious area; and
- (3) conveyance capacity issues with existing stormwater piping.

A fourth potential impact – groundwater seepage that leads to slope instability – is mainly a residential lot scale impact and is assessed with a review of stormwater control best management practices for an individual lot. Findings are summarized in Section III of this report.

Analysis of the combined sanitary/stormwater system in the town of Linnton shows the Linnton pump station at capacity. No new connections for stormwater flow into the combined system should occur.

Stormwater flows are substantially greater in quantity when compared to sewer effluent flows (150 to 200 gallons per day). In combined systems, most of the flow is stormwater, and therefore, most of the impact to the system is from stormwater flows. There is a similar effect regarding private septic systems, where the system needs 12,000 to 20,000 square feet of land,

but the effluent flows into the ground are minimal and are not considered to be a potential hazard to slope stability.

Bureau of Development staff is concerned about the cumulative impacts of approving development one house at a time, on existing lots. In some instances, building permits were approved with stormwater flow over private property (requires an easement on the affected property).

### **Sanitary Sewer and Private Septic Systems**

Private septic systems require a significant amount of land (12 to 20,000 square feet), especially on sloping sites with poor soils. Technologically advanced systems are efficient and environmentally sound (excellent water quality of discharge), but increase the need for maintenance (once a year) and only minimally reduce the required land area.

Construction of a public sanitary system is very expensive due to the hillside soil limitations. A cost estimate for sewer construction in Whitwood Court is \$175 per linear foot, or roughly \$2.5 million. This high cost is due to steep slopes, shallow bedrock, and landslide susceptibility. For more information, refer to the Linnton modeling analysis by the Bureau of Environmental Services (available from the Bureau of Planning).

### **Streets, Fire and Emergency Access**

Most existing streets do not comply with current City standards. Existing narrow and winding streets have created difficult access for fire engines and some are not possible to negotiate with a truck. Several turns or even backing up is often required to access some streets. Another potential access problem is one engine blocking another when using a hydrant. In this situation, only one engine will be able to access these remote areas even though more apparatus may be required. Ladder rescue is severely limited in these situations.

Another concern is the proximity to Forest Park. In the event of a house fire spreading to the forest cover, a sudden wind shift may require a retreat of residents and firefighters. The constraints of the road system make such a retreat difficult. The Fire Bureau is concerned about new homes that access the more difficult roads. Increased traffic poses a serious danger for residents. Significant reengineering of these roads is necessary to provide for fire protection.

Fire Bureau staff feel comfortable with their role in the land use review process, and routinely raise concerns about access during the land division or zone change process. However, building permits for individual homes, especially those that seek access to existing substandard street systems, are a concern.

The Fire Bureau provides guidelines for development in Wildfire Hazard Areas. Homeowners in these areas share a civic responsibility for maintaining their property in a fire-safe manner. In addition, the Fire Bureau may require homes to have a sprinkler system, and the Wildfire Hazard Area requires fire-retardant exterior materials. Recent changes to the Zoning Code allow for increased vegetation management in the wildfire prone areas.

The Fire Bureau has required automatic fire sprinkler systems, upgraded exterior fire resistance, and fire resistant landscaping practices, but only in new homes that are on pre-existing lots not served by local fire hydrants.

There is no mechanism available to the Fire Bureau to require upgrades to the existing roads. In fact, the Fire Bureau does not routinely comment on individual building permits unless the Office of Transportation raises a concern to them. Usually the result is to allow the addition of one more home, since the impacts of one more home are deemed minimal. But often, existing lots on the same street have potential for more houses, and the permit process does not consider this capacity. The Fire Bureau requests that building permit approval be tied to upgrades of existing roads.

The Fire Bureau has identified several locations where fire truck access is difficult. These locations are shown on Maps B-2, B-3, and B-4. Maps B-1 (Harborton), B-5 (Fairmont) and B-6 (Willbridge) are not included in this set because the Fire Bureau did not specifically identify constrained locations in these areas. However, the street system in these areas is substandard (refer to Linnton Hillside Existing Conditions Report Street System Maps, available through the Bureau of Planning).

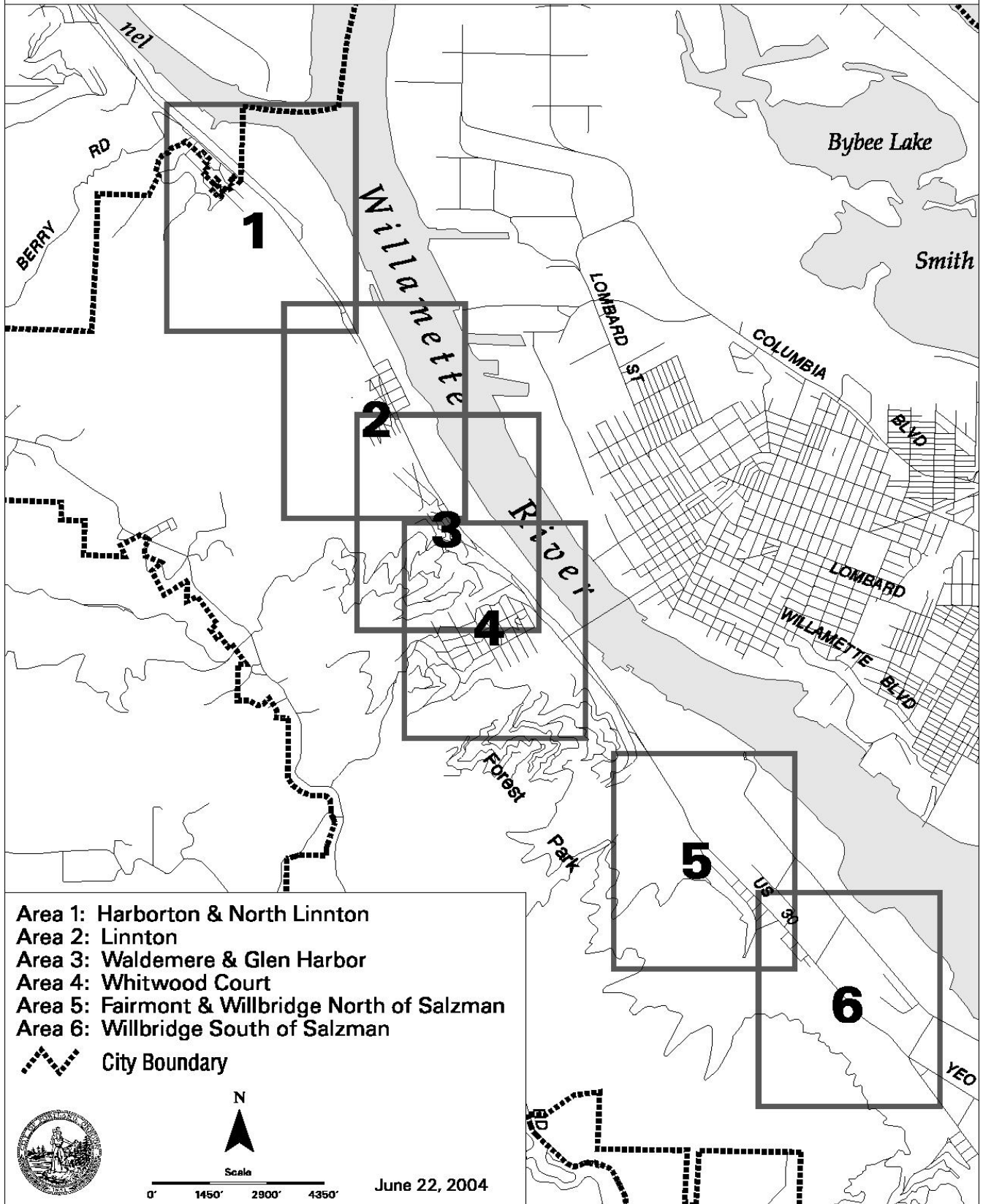
The Fire Bureau has mapped emergency response time around the city. The goal is to have the first responding fire unit on scene within five minutes and twenty seconds. The Linnton area in its entirety is over seven minutes in response time. The Fire Bureau states that this time can only be significantly improved with the addition of a new fire station (the current fire station is located in St. Johns). A new station is proposed near NW Skyline and Thompson which will, in part, improve access to Linnton.

### **Water System**

The Water Bureau notes that most of the water distribution mains in the study area are relatively new (less than 40 years old) and are made of ductile iron. The remaining 2- and 4-inch galvanized water mains are scheduled to be replaced in the next five to ten years. The Upper Linnton tank, located west of the town of Linnton, is 90 years old and is currently being evaluated for repair or replacement.

The Water Bureau is not aware of any leaks in the area.

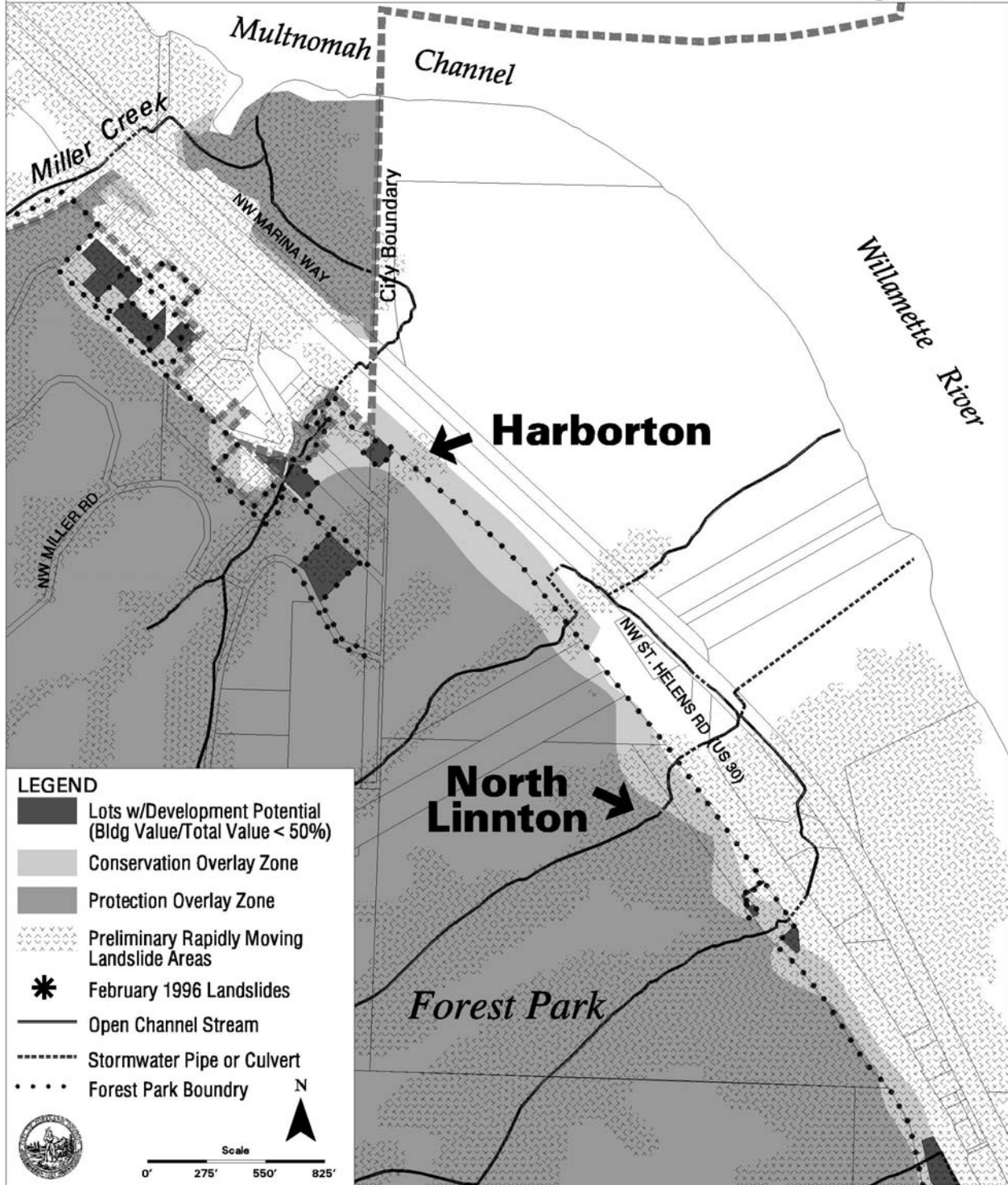
# Mapped Areas Index



# Map A-1: Harborton Potential Residential Development Sites

Data Source: Metro

August 25, 2005

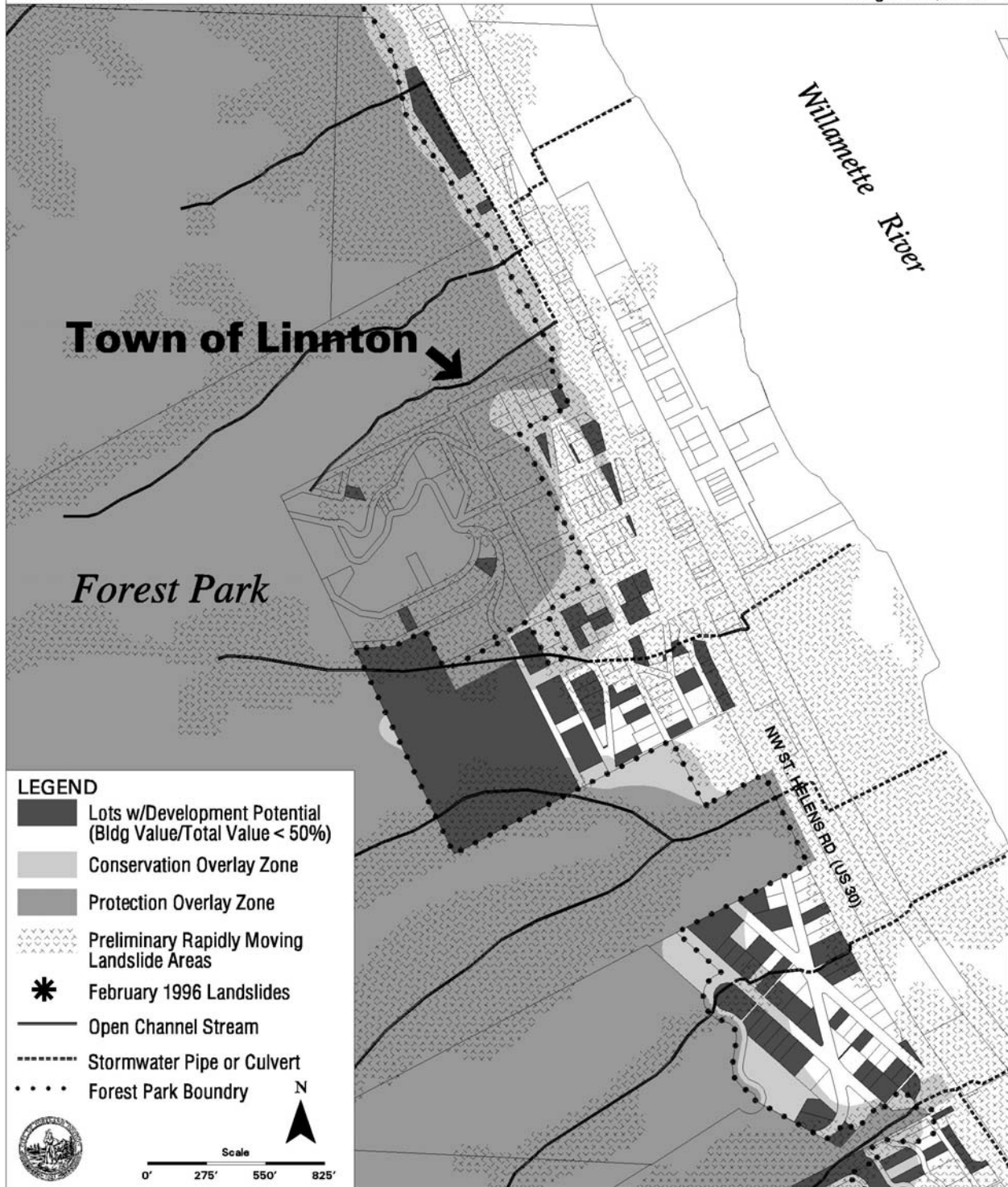




# Map A-2: Linnton & North Linnton Potential Residential Development Sites

Data Source: Metro

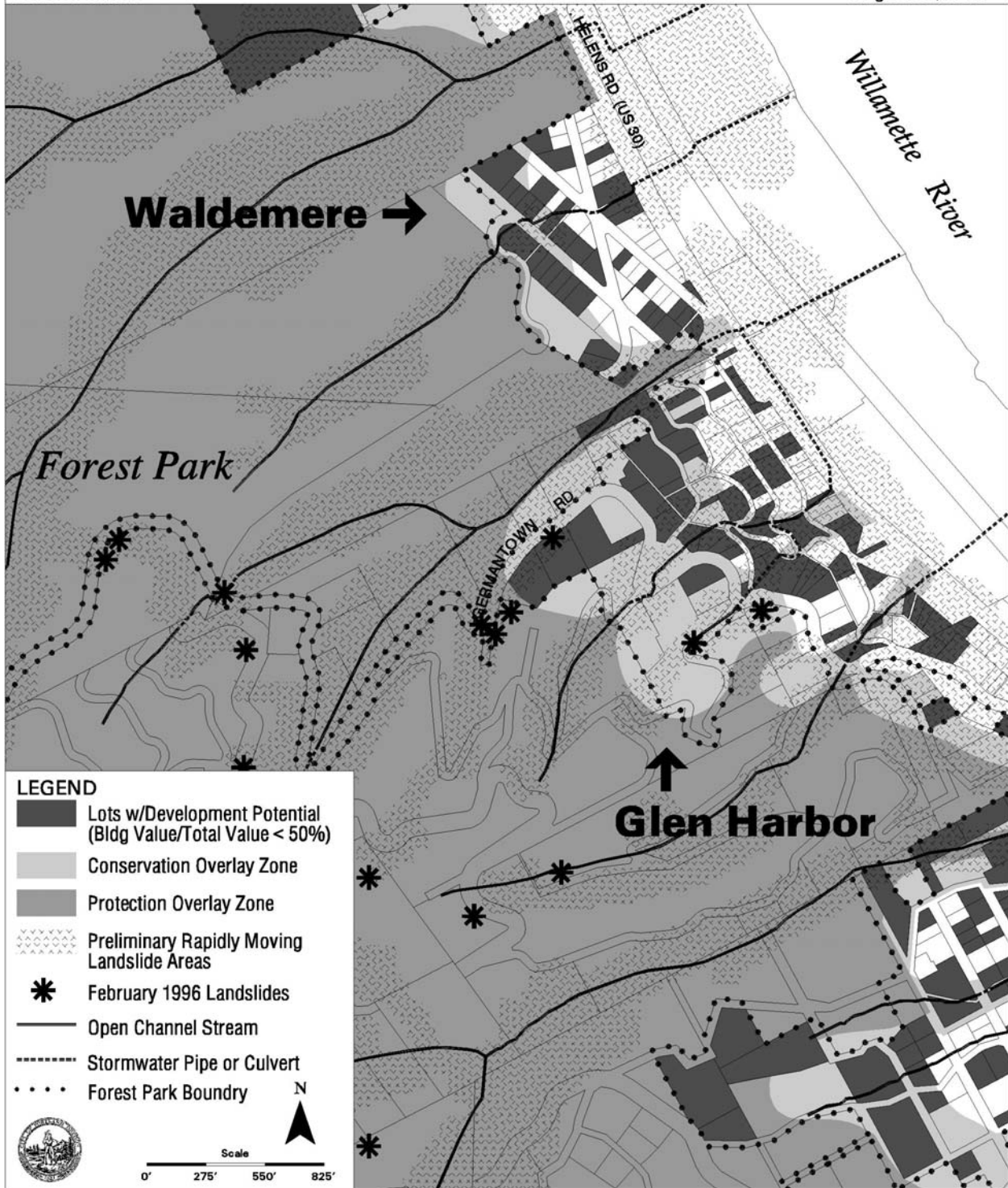
August 25, 2005



# Map A-3: Waldemere & Glen Harbor Potential Residential Development Sites

Data Source: Metro

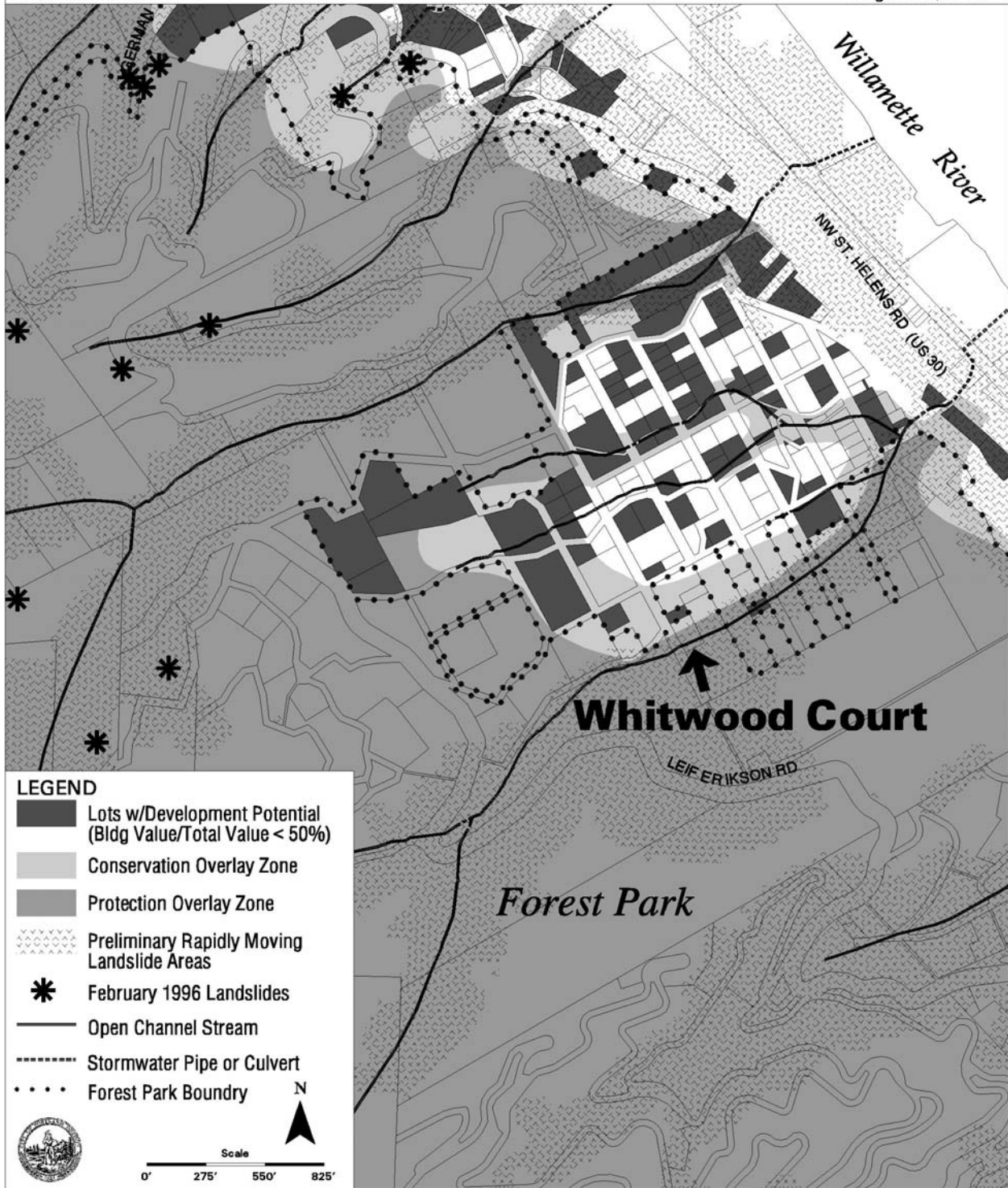
August 25, 2005



# Map A-4: Whitwood Court Potential Residential Development Sites

Data Source: Metro

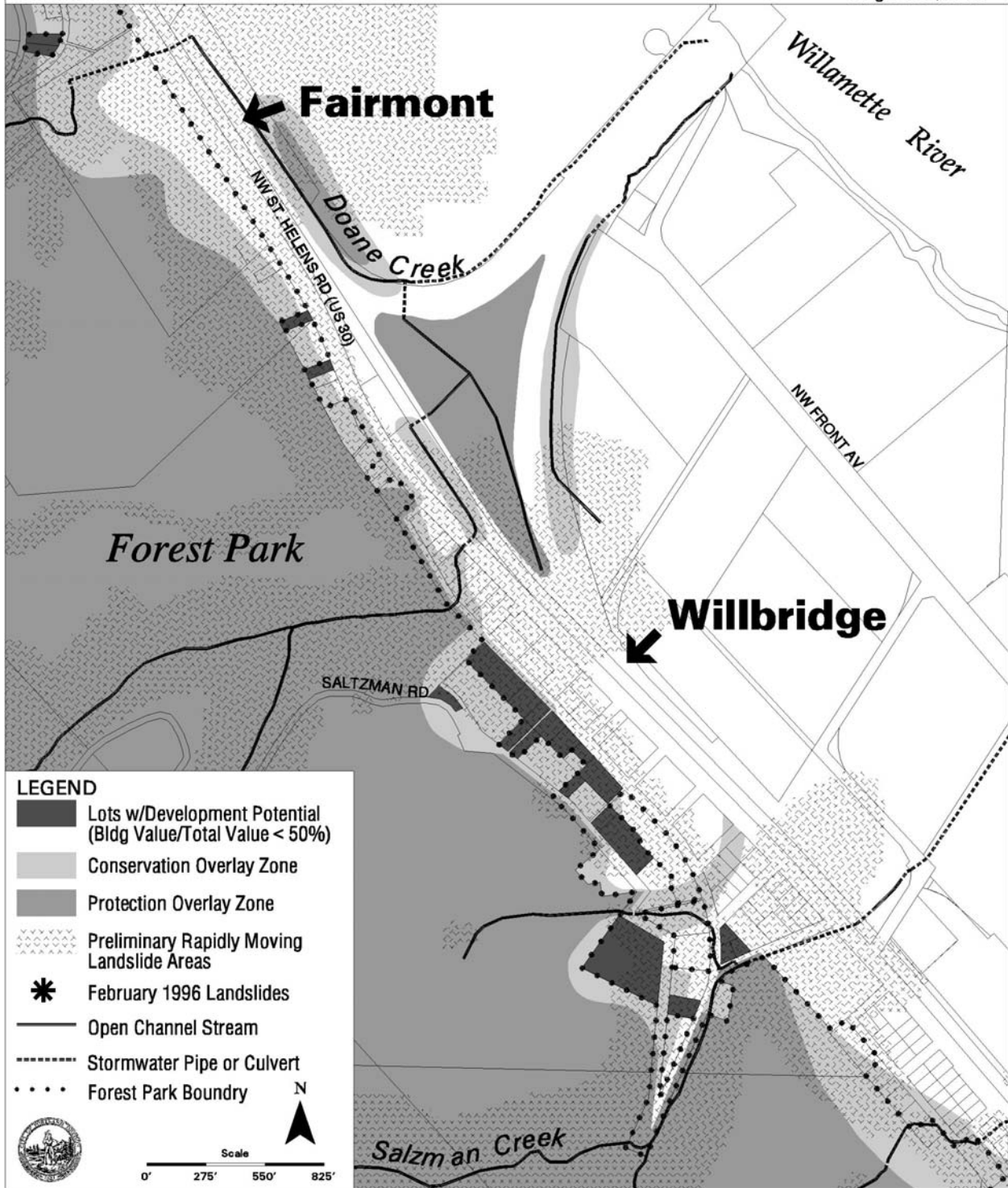
August 25, 2005



# Map A-5: Fairmont & Willbridge North of Saltzman Rd. Potential Residential Development Sites

Data Source: Metro

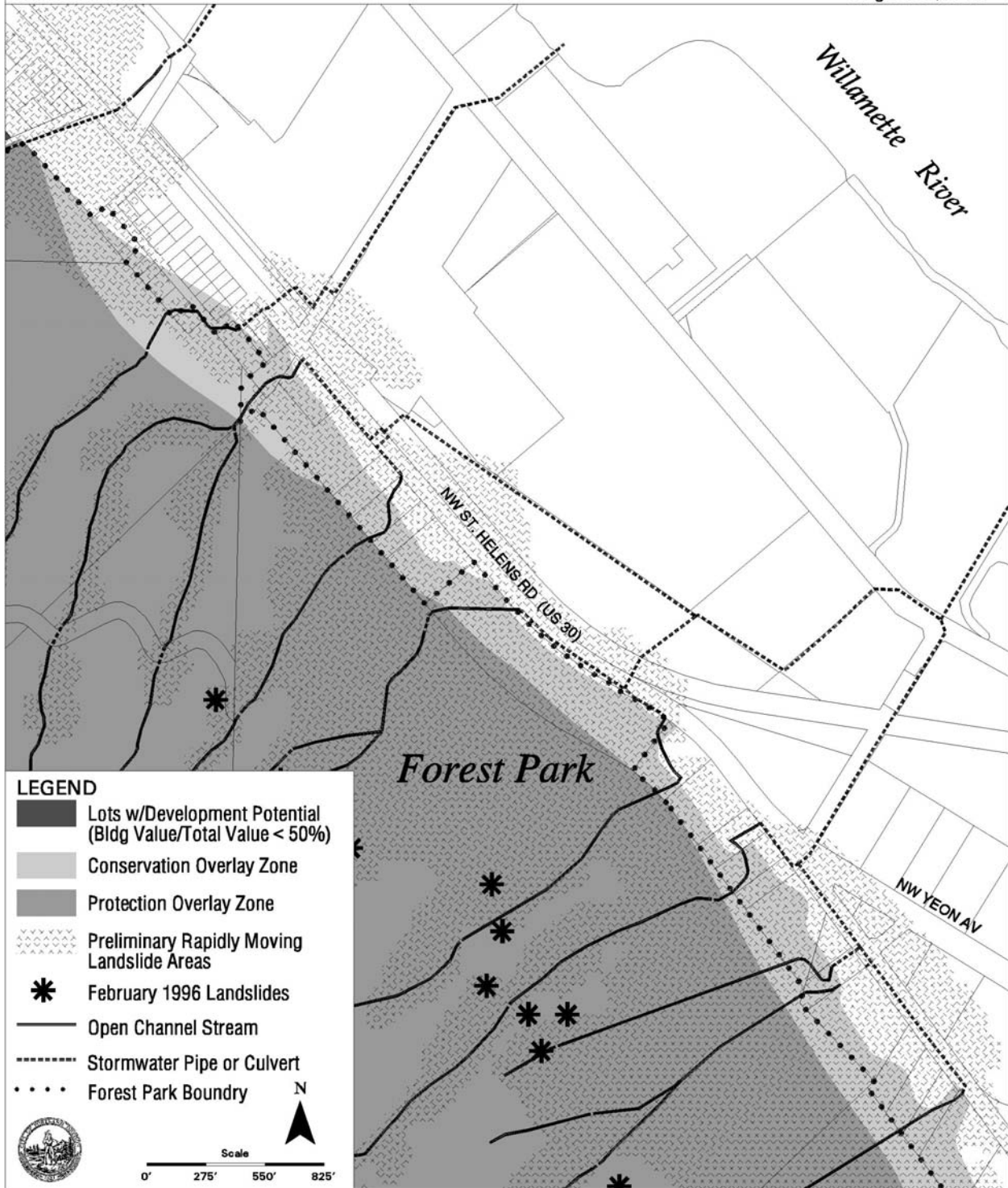
August 25, 2005



# Map A-6: Willbridge South of Saltzman Rd. Potential Residential Development Sites

Data Source: Metro

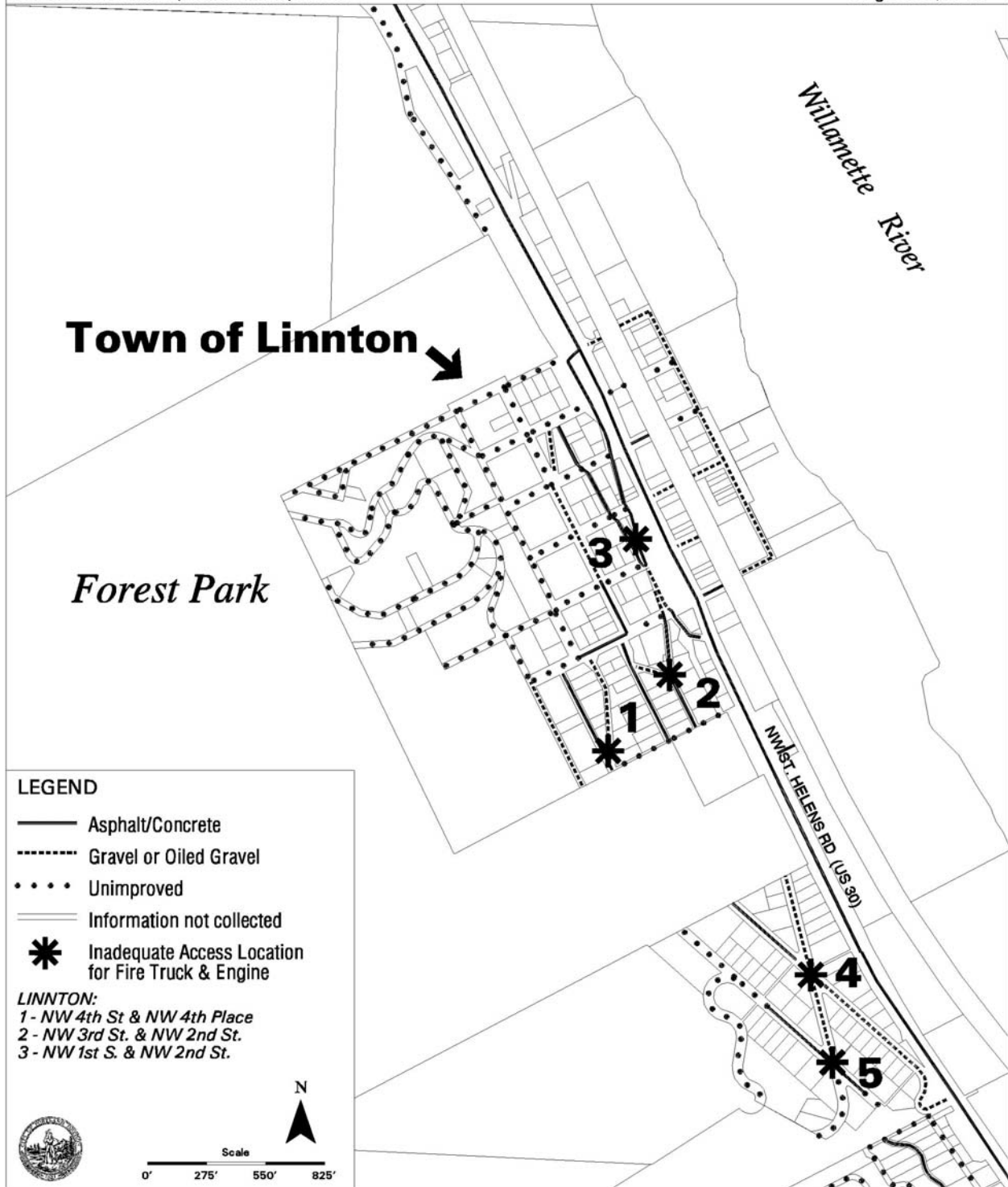
August 25, 2005



# Map B-2: Linnton & North Linnton Street System and Fire/Emergency Access

Data Source: Portland Department of Transportation

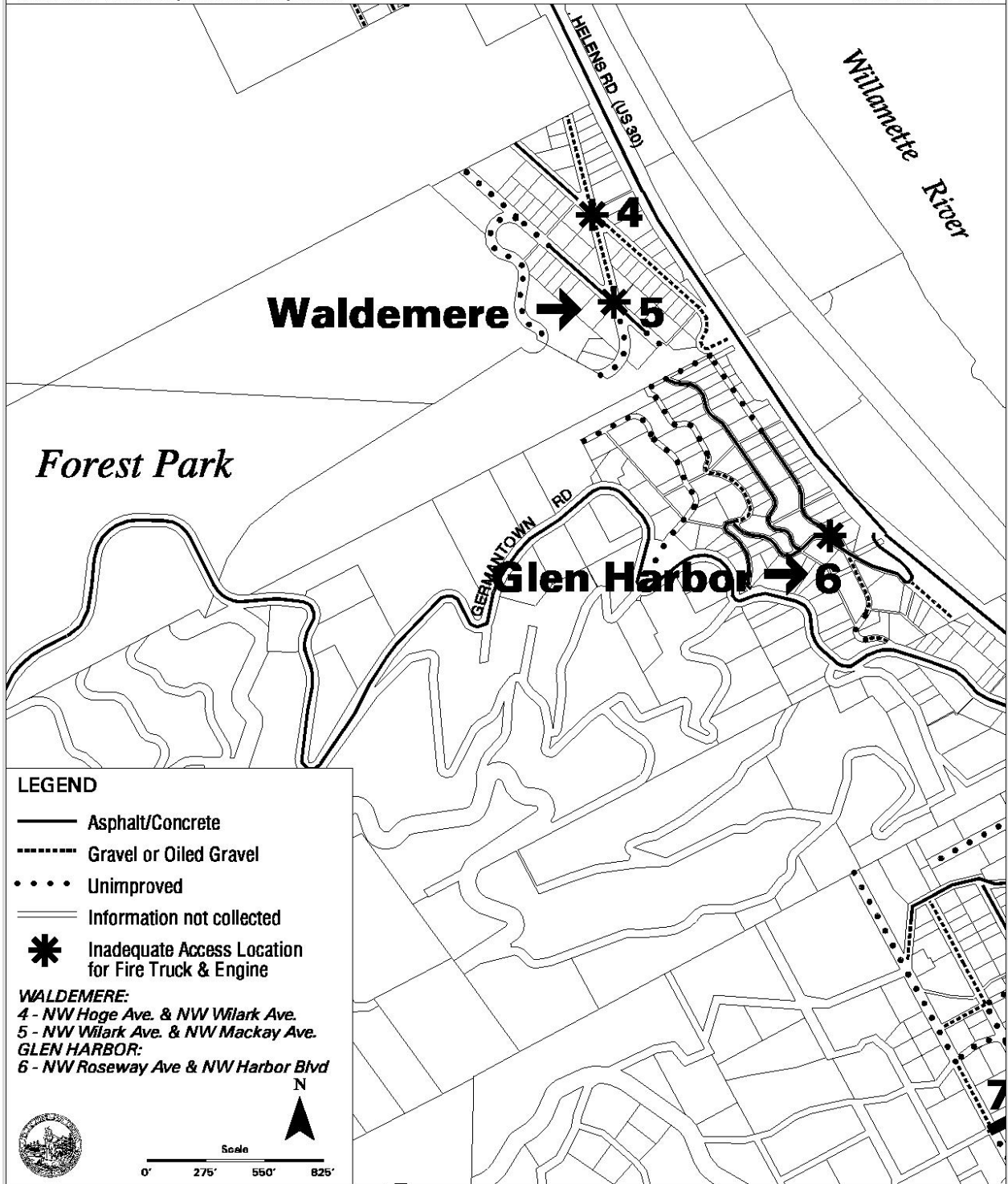
August 25, 2005



# Map B-3: Waldemere & Glen Harbor Street System and Fire/Emergency Access

Data Source: Portland Department of Transportation

October 04, 2005



## LEGEND

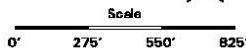
- Asphalt/Concrete
- - - - - Gravel or Oiled Gravel
- • • • • Unimproved
- Information not collected
- \* Inadequate Access Location for Fire Truck & Engine

### WALDEMERE:

- 4 - NW Hoge Ave. & NW Wilark Ave.
- 5 - NW Wilark Ave. & NW Mackay Ave.

### GLEN HARBOR:

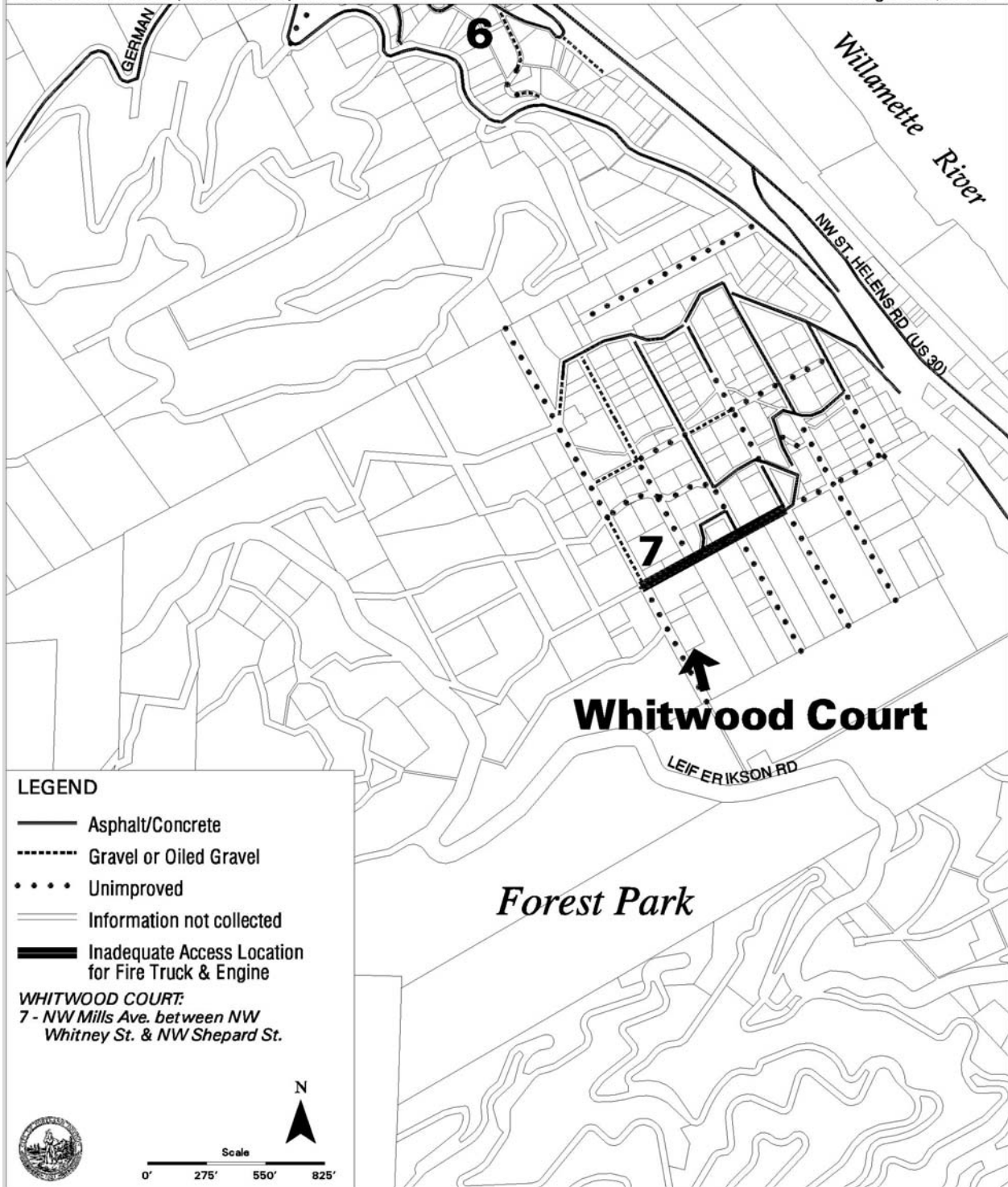
- 6 - NW Roseway Ave & NW Harbor Blvd



# Map B-4: Whitwood Court Street System and Fire/Emergency Access

Data Source: Portland Department of Transportation

August 25, 2005





## 2. City and Metro Properties

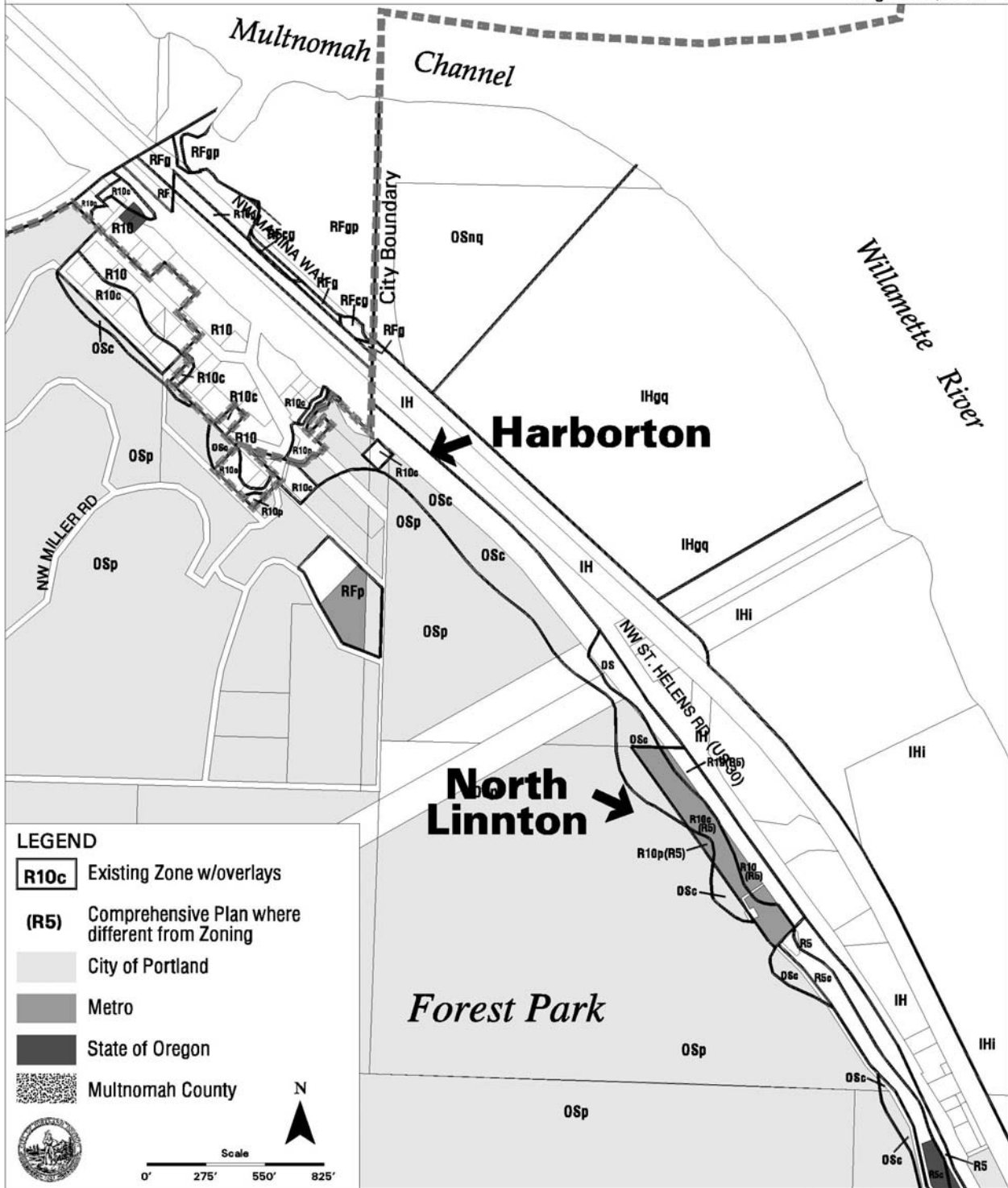
Staff met with representatives from the Bureau of Parks and Recreation and Metro. Both agencies have acquired residential hillside sites for inclusion into Forest Park and are agreeable to the rezoning of such sites from residential to open space. These sites are shown on the following Maps C-1 through C-6. Maps C-7 and C-8 show City or Metro properties that are outside the Hillside study area.

Staff contacted representatives from the Oregon Department of Transportation (ODOT) to find out about future plans for its land holdings in Linnton. ODOT owns multiple hillside sites (adjacent to Highway 30) that are zoned for residential development. At this time, ODOT plans to maintain ownership of the sites and treat them as operating rights-of-way under the authority of the District 2B Maintenance Office. However, ODOT did not commit that its plans would remain the same in the future. ODOT is not interested in considering a rezoning of these properties.

A few properties in the Hillside area are owned by Multnomah County, some of which may have been acquired as a result of foreclosure. Because of the relatively small land holding, staff did not contact the county about future plans. These sites are shown on Maps C-1 through C-6.

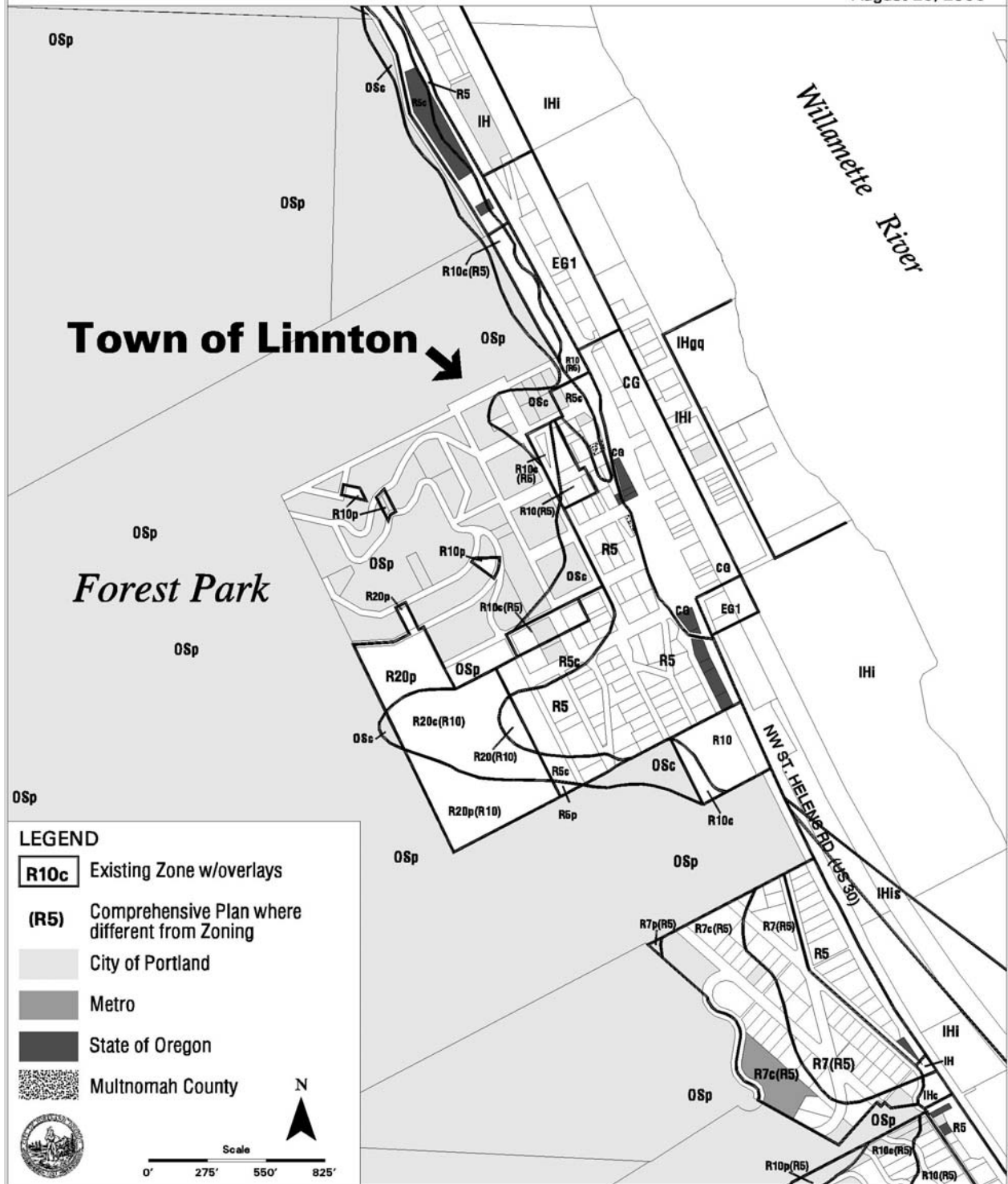
# Map C-1: Harborton Properties Owned by Public Agencies

August 25, 2005



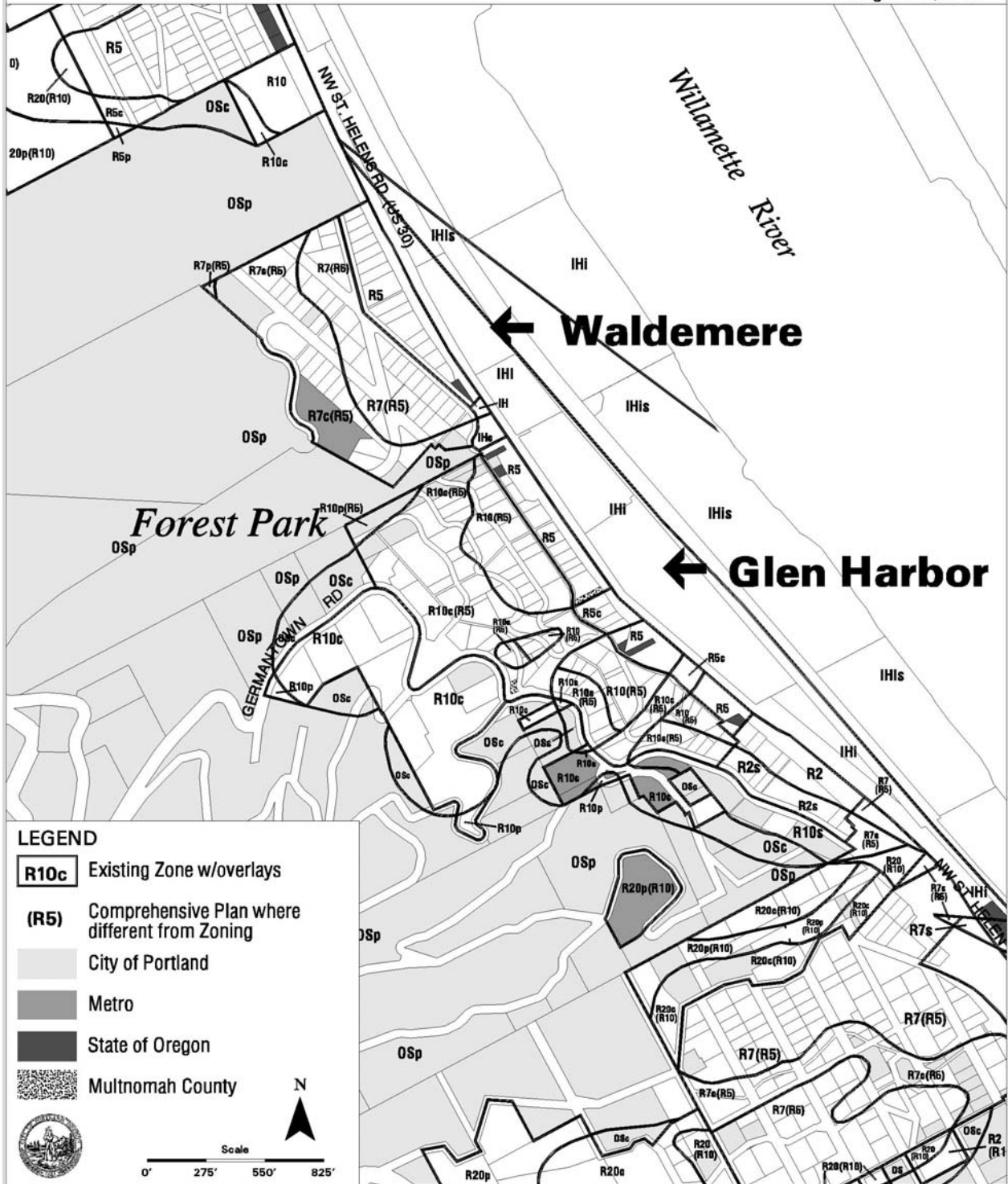
# Map C-2: Linnton & North Linnton Properties Owned by Public Agencies

August 25, 2005



# Map C-3: Waldemere & Glen Harbor Properties Owned by Public Agencies

August 25, 2005

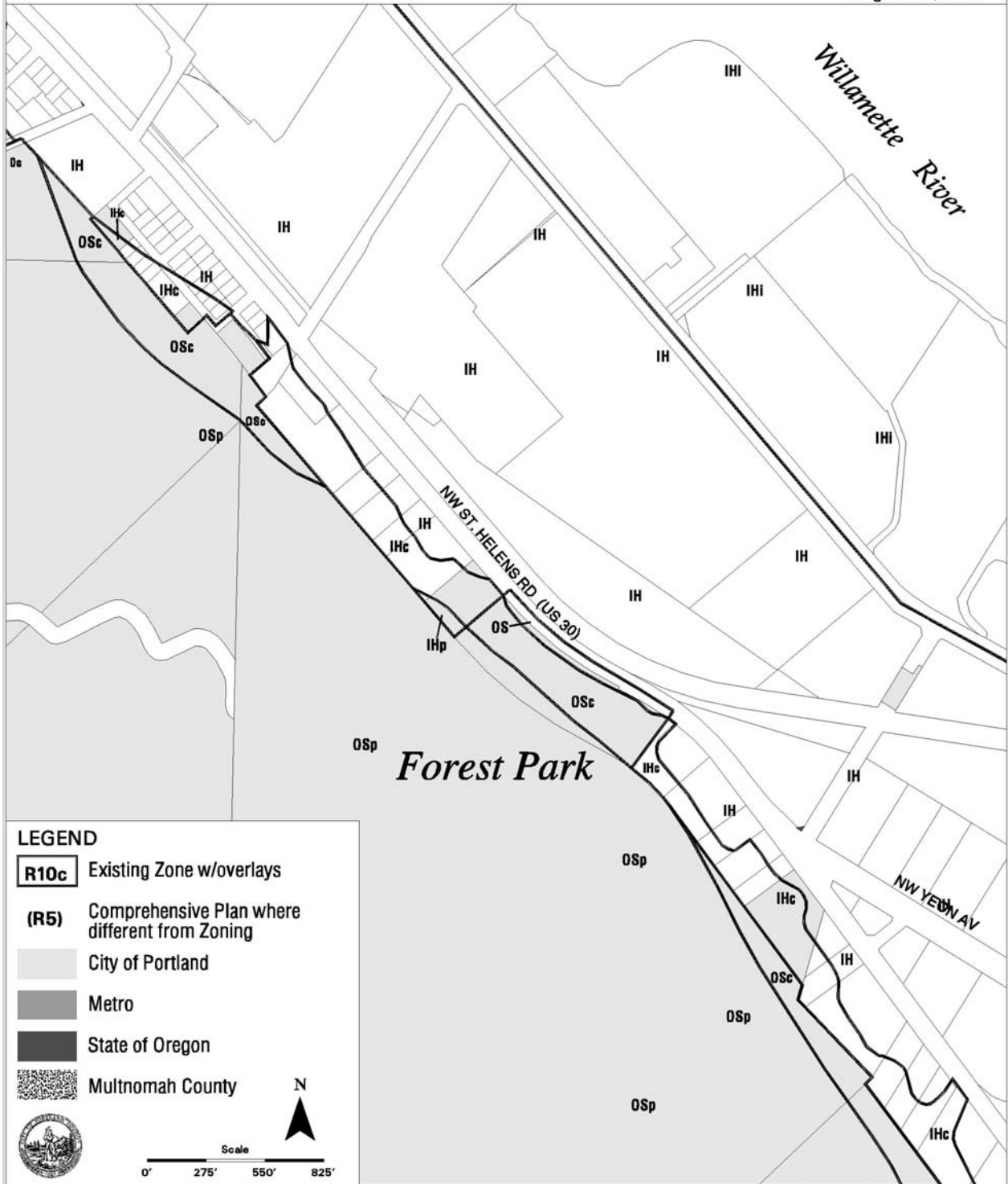






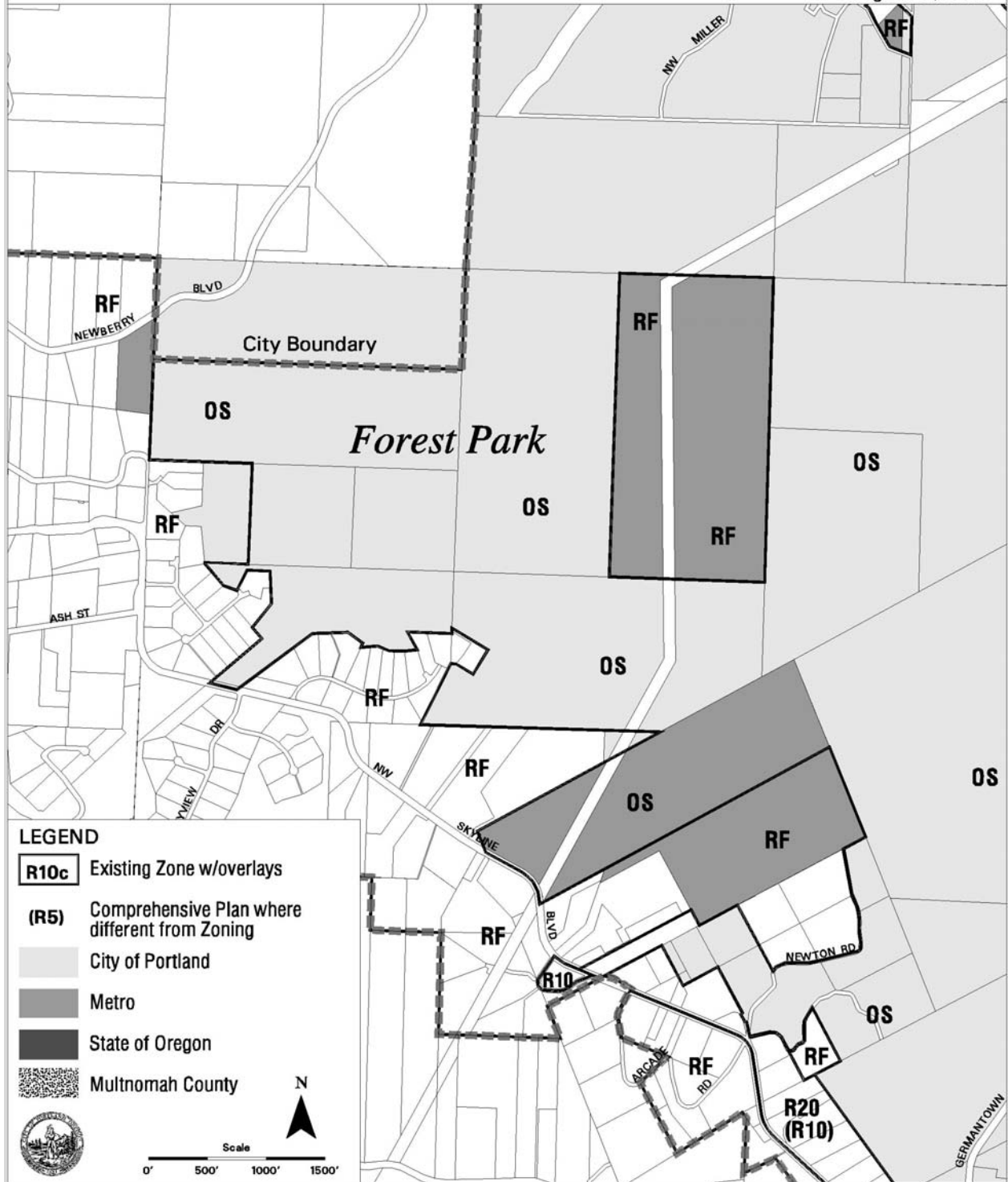
# Map C-6: Willbridge South of Saltzman Rd. Properties Owned by Public Agencies

August 25, 2005



# Map C-7: Forest Park - North Properties Owned by Public Agencies

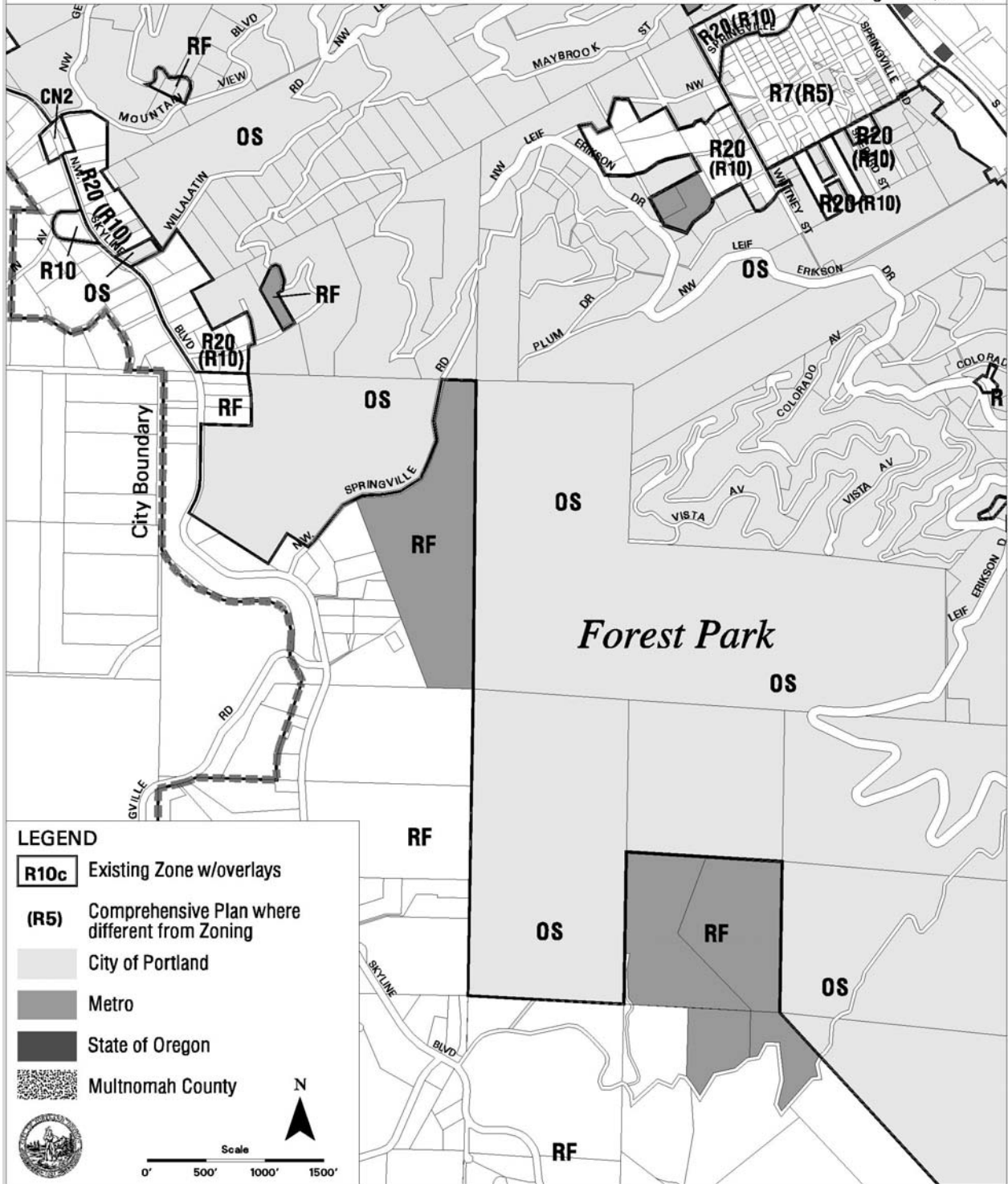
August 25, 2005





# Map C-8: Forest Park - South Properties Owned by Public Agencies

August 25, 2005



### 3. Housing Capacity

#### **Gross and Net Housing Capacity**

The chart on the next page shows the potential number of housing units for each subarea of the Linnton Hillside. The first part of the chart (gross capacity) shows the number of housing units of the existing zoning and the Comprehensive Plan designations. The Comprehensive Plan designations allow for 170 more housing units than the existing zoning.

As described in the previous section, a significant amount of residential properties are owned by Metro and the City of Portland. These properties were acquired for inclusion into Forest Park, and as such should not be part of the housing unit potential. Net capacity is the housing unit potential after subtracting these properties from the gross capacity. As a result, the Comprehensive Plan and zoning capacity is reduced by 174 and 150 units, respectively.

#### **Other Factors Affecting Housing Unit Potential**

The lower section of the chart shows the number of existing houses. These numbers are approximate, but provide a better understanding about how many additional housing units can be anticipated.

The Existing Conditions Report for the Hillside area identified current underlying historical lot patterns. These lots are smaller than what is allowed by the zoning and may have development potential. These lots may increase the housing unit capacity beyond what is expected by the zoning. Staff conducted a rough analysis of the lot patterns and sizes and found that overall, development of historical lots could increase housing units by about 20 percent. Most of these additional units are likely to occur in the Waldemere, Glen Harbor and Whitwood Court areas. Accurate capacity numbers reflecting the effects of the historical lots are not quantified here since it is difficult to assess the ownership information. (For more information about historical lots, see the Area-Wide Context section of this report, and refer to the Existing Conditions Report for the Linnton Hillside, available through the Bureau of Planning).

## Housing Unit Capacity for the Linnton Hillside

	Harborton	Linnton	Waldemere/ Glen Harbor	Whitwood Court	Fairmont/ Willbridge	TOTALS
<b>Gross Capacity</b>						
Gross Comprehensive Plan capacity (1)	48	128	330	238	216	960
Gross zoning capacity (1)	36	113	251	174	216	790
Difference between Comprehensive Plan and zoning	12	15	79	64	0	-170
<b>Net Capacity</b>						
Comp. Plan units of Metro and City properties (2)	-22	-4	-26	-22	-100	-174
Zoning units units of Metro and City properties (2)	-10	-3	-22	-15	-100	-150
Net Comp. Plan capacity (3)	26	124	304	216	116	786
Net zoning capacity (3)	26	110	229	159	116	640
Comp. Plan units lost by reducing Comp. Plan to equal zoning	0	-14	-75	-57	0	-146
Total Comp. Plan units lost	-22	-18	-101	-79	-100	-320
<b>Other conditions</b>						
Existing housing units	6	58	100	52	9	225

- (1) These calculations are based on the maximum density of the zoning or Comprehensive Plan designation only. Subtracted from the capacity is land area within the Environmental Protection Overlay Zone (p).
- (2) The City and Metro have acquired properties to be included in Forest Park. These properties are within single-dwelling zones but will not be developed as residential. The recommendation is to rezone these properties to OS (open space).
- (3) This is the remaining capacity after subtraction of Forest Park City and Metro properties.



## SECTION III: IMPLEMENTATION ACTIONS

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## A. Regulatory Options

In consideration of the substandard street system—particularly the limited fire and emergency access, inadequate public sanitary sewer system, and steep slopes with potential for landslides—the public safety risks of planned densities are significant. Residential density should be reduced where possible to minimize risks to life and property. In addition, potential development of historical lots pose a real safety risk in certain areas where existing fire and emergency access is severely restricted. Reducing the potential number of houses in these areas should be considered.

Four regulatory options that address the potential residential density were considered and are described in the chart on the next page. The first option reduces Comprehensive Plan densities; the second option adds approval criteria for zone changes and land divisions but keeps existing Comprehensive Plan densities; the third option addresses existing lots and ownership, and increases minimum lot sizes in the single-dwelling residential zones (see discussion on Housing Capacity, p. 39); and the fourth option considers the effects of no regulatory change to private property.

REGULATORY OPTIONS FOR DISCUSSION

Option	Concept	Effect
<p><b>1</b></p> <p><b>Reduce Comprehensive Plan densities</b> to equal zoning densities in all areas.</p>	<p>Comp Plan applied 25 years ago; development levels anticipated are not realistic and have not/cannot be achieved given existing constraints: steep slopes, shallow bedrock and high water table, inadequate fire/emergency access, wildfire hazards, potential landslide, inadequate stormwater system, inadequate public sewer in certain areas; and an inadequate road system.</p> <p>Note that other areas with similar constraints have Comp Plan and zoning densities of R20, R10 or R7 (see southwest hills—area of similar geologic conditions and constraints).</p>	<ul style="list-style-type: none"> <li>• Removes the potential for higher densities through zone change requests, thereby lowering the public safety risk by reducing the potential number of people and homes subject to landslide/wildfire hazard.</li> <li>• Makes Comprehensive Plan densities more in line with public service provision.</li> <li>• Takes away the false expectation of higher densities.</li> </ul>
<p><b>2</b></p> <p><b>Maintain Comp Plan densities and add approval criteria for zone changes and land divisions</b> for the Forest Park subdistrict</p>	<p>Concept Approval Criteria:</p> <p>Analyze and address the cumulative impact of proposed development on water bodies and vegetation (stormwater management, slope stability), and the risks to human safety and property.</p> <p>It must be shown that the proposed development:</p> <p>Reduces potential risks to human safety and property damage posed by existing conditions of limited infrastructure, public services, and land hazards (steep slopes, potential landslide hazard, wildfire hazards, inadequate stormwater system, inadequate road system, inadequate fire/emergency access)</p>	<ul style="list-style-type: none"> <li>• Maintains the map potential for higher densities. Raises the bar for zone map amendment and land division requests, requires consideration of cumulative impacts and adjacent properties.</li> <li>• Addresses sites that are zoned for higher densities than the existing public systems can handle.</li> </ul> <p>Downside: Complicates land use reviews and adds to staff workload. Probably not needed since land divisions/zone changes are required to show adequacy of services, and many hillside sites cannot meet this test.</p>



REGULATORY OPTIONS FOR DISCUSSION, continued

Option	Concept	Effect
<p><b>3</b></p> <p><b>Add minimum lot sizes</b> for all lots in Forest Park subdistrict</p>	<p>Development Standards (based on existing West Portland Park exemption):</p> <p>Primary structures are allowed in the Forest Park subdistrict as follows:</p> <ol style="list-style-type: none"> <li>1. On lots created on or after July 26, 1979.</li> <li>2. On lots created before July 26, 1979, that meet the following requirements and on lots of record or combinations of lots of record that meet the following minimum size requirements: <ul style="list-style-type: none"> <li>• 5,000 sf in R2.5 for single-dwelling detached and in R5</li> <li>• 7,000 sf in R7</li> <li>• 10,000 sf in R10</li> <li>• 20,000 sf in R20 <b>OR</b></li> </ul> </li> </ol> <p>On July 26, 1979, or any time since that date, the lot, lot of record, or combination of lots or lots of record that did not abut any lot or lot of record owned by the same family or business.</p>	<ul style="list-style-type: none"> <li>• Requires larger lot sizes over current zoning for lots not created by the City’s subdivision rules and for multiple adjacent lots in common ownership.</li> <li>• Maintains current status of lots that were created through the City’s subdivision rules.</li> <li>• Maintains current status for lots that are “isolated” or not part of a common ownership.</li> </ul> <p>Downside: Increases code complexity; does not allow flexibility for creative site development (mandates large minimum lot sizes).</p>
<p><b>4</b></p> <p><b>No change to private land.</b> Maintain existing zoning densities and development standards.</p>	<p>No regulations or zone changes proposed on private land.</p>	<ul style="list-style-type: none"> <li>• Allows potential for over 700 additional houses.</li> <li>• Significant density of new development for an area with multiple natural constraints and hazards and public service inadequacies.</li> <li>• Cumulative impact of full development potential puts strain on existing infrastructure and natural conditions, creating unacceptable level of risk to public safety and health.</li> </ul>

## **Conclusion**

Option 1 is preferred over Option 2 since it is more straightforward and effective. Option 1 is implemented through the Adopted Zoning, shown on Maps D-1 through D-8 in Part 2 of this section.

Option 3 is chosen in addition to Option 1 since it addresses the potential density of the underlying small lot and historical lot pattern. Option 3 is implemented through Zoning Code regulations, contained within Part 3 of this section.

Option 4 is the “no change” option and is not an acceptable option since the current zoning and lot pattern allows for a significant number of additional housing units. The cumulative impact of this full development potential puts excessive strain on existing infrastructure and natural resources, creating unacceptable level of risk to public safety and health.

In addition to the actions above, public properties acquired for inclusion into Forest Park (identified on Maps C-1 through C-8 and Maps D-1 through D-8) are rezoned from Residential to Open Space (OS).

**B. Subarea Context and Zoning Map Changes**

## 1. Harborton

### Significant Findings

- Water provided by Burlington Water District – Service line in Mt. View; limited on NW Creston; existing houses have individual water pumps. New facilities need to fully develop – water storage, pump station, and backflow device.
- Sanitary sewer – not available. Private systems need 12 to 20,000 square feet of land area.
- Streets – paved and gravel, not to City standards.
- Most of residential land within rapidly moving landslide hazard area.
- Public land holdings zoned residential (5 acres) – significantly reduces potential capacity.
- Stormwater system—no significant impacts to peak flow or conveyance capacity because of relatively small increase in impervious area.
- Development potential of historical lots may result in additional units over zoning potential.

### Zoning Map and Comprehensive Plan Map Changes

- Maintain R10 zoning for Harborton.
- Replace R5 Comprehensive Plan designation with R10 in North Linnton.
- Rezone Metro- and City-owned land to OS (open space).
- Establish minimum lot sizes for existing lots (Zoning Code regulations, see Part C of this section), to address existing small lot pattern.



## 2. Town of Linnton

### Significant Findings

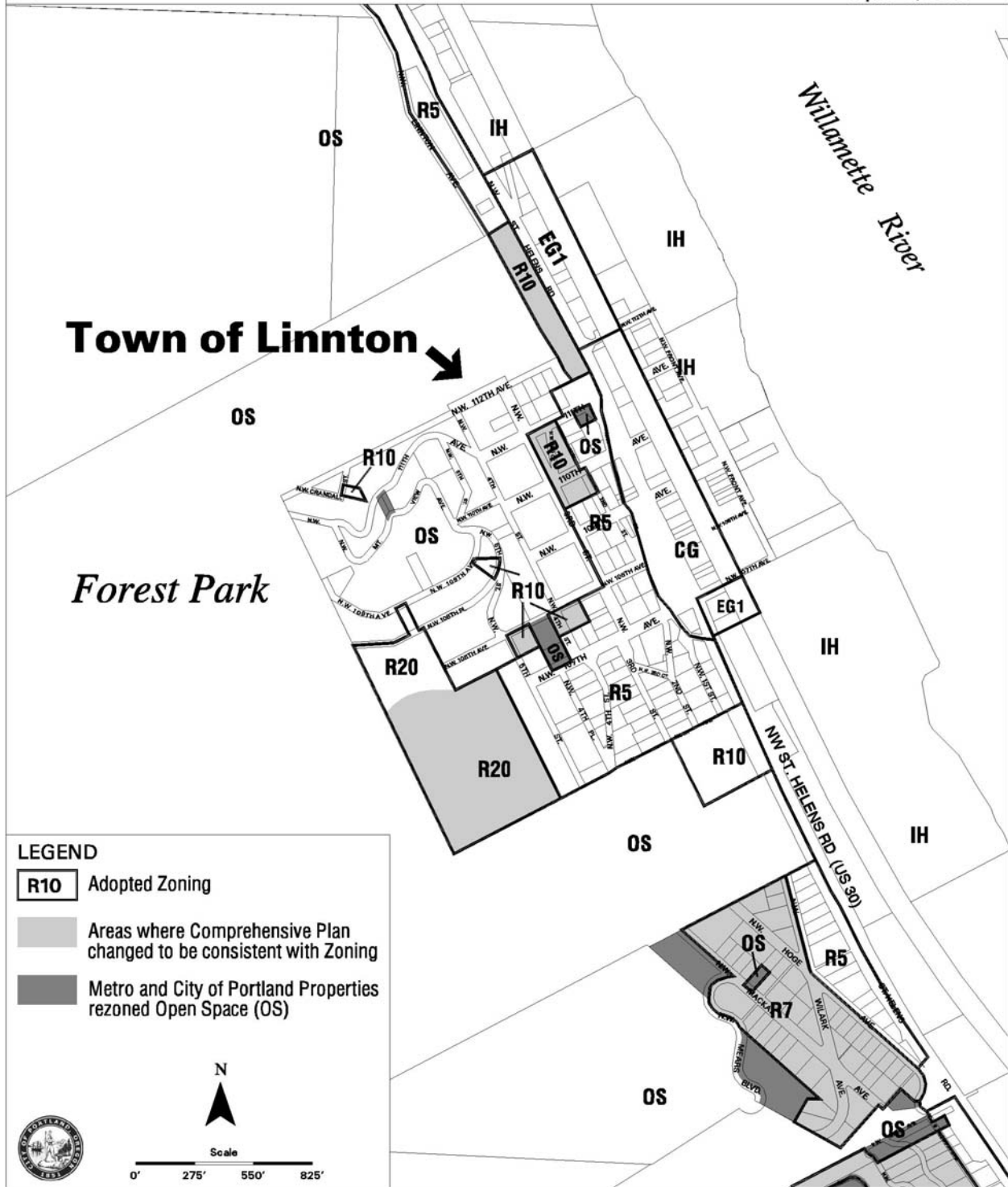
- Mostly developed with R5 zoning/Comprehensive Plan designations.
- A few large undeveloped land holdings near Forest Park with environmental zoning and service constraints.
- Water system generally adequate; extensions of systems may be required to serve some lots.
- Combined sanitary sewer system is old and substandard for pipe size and depth. Six-inch pipes are shallow (2 to 7 feet below surface); potential for cracks, groundwater infiltration; stormwater connections for new development not allowed since Linnton pump station is at capacity.
- Stormwater system substandard as noted above; system is separated in southern area of Linnton.  
Increases in peak flows related to increased impervious area could degrade stream system if stormwater is discharged directly into the stream system. Water quality impairment is possible, related to an increase in automobile traffic and increased peak flows in roadside ditches.
- Street system is substandard; fire and emergency access is constrained.
- Most of residential area within Rapidly Moving Landslide Hazard Area.
- Development potential of historical lots may result in additional units over zoning potential.

### Zoning Map and Comprehensive Plan Map Changes

- Change the Comprehensive Plan designations to be consistent with the zoning designations, R5 to R10; and R10 to R20.
- Rezone Metro- and City-owned land to OS (open space).
- Establish minimum lot sizes for existing lots (Zoning Code regulations, see Part C of this section), to address existing small lot pattern.

# Map D-2: Linnton & North Linnton Adopted Zoning

April 26, 2006



### 3. Waldemere/Glen Harbor

#### Significant Findings

- Water system in Waldemere:  
Inadequate open space fire flow in area bounded by Forest Park, NW Mackay, Mears, and Willark. The three dead-end mains have the potential for water quality problems.
- Water system in Glen Harbor:  
Inadequate water supply/pressure for residential service in area bounded by Forest Park and Germantown Road (roughly the 400-foot contour). Extension to main in Germantown Road is needed to serve undeveloped lots.
- Concentration of 1996 landslides, mainly around NW Germantown Road. One home destroyed by landslide.
- Sanitary sewer system is adequate but needs extension to serve some existing lots; parts are combined with stormwater.
- Stormwater disposal system mainly road ditches, tributaries. Some areas are not served adequately. Increases in peak flows related to increased impervious area have the potential to degrade stream systems in certain areas. There is the potential for water quality impairment related to an increase in automobile traffic and increased peak flows in roadside ditches.
- Street system substandard – Paved and gravel streets are not to City standards; most are narrow (12 feet in width or less), wide enough for one vehicle only. City has received inquiries about dividing lots for development; however, few sites can pass service adequacy test of the Comprehensive Plan and road cost is prohibitive. Fire and emergency access is constrained.
- NW Germantown Road provides connection between Highway 30 and NW Skyline. Although this road is not built to City standards, fire and emergency access is generally adequate.
- Rapidly moving landslide hazards – approximately 1/3 land area in Waldemere and over half land area in Glen Harbor.
- Significant amount of public land holdings, 5-1/2 acres. Even with public land subtracted from the development potential, historical lots increase the potential number of units.

#### Zoning Map and Comprehensive Plan Map Changes

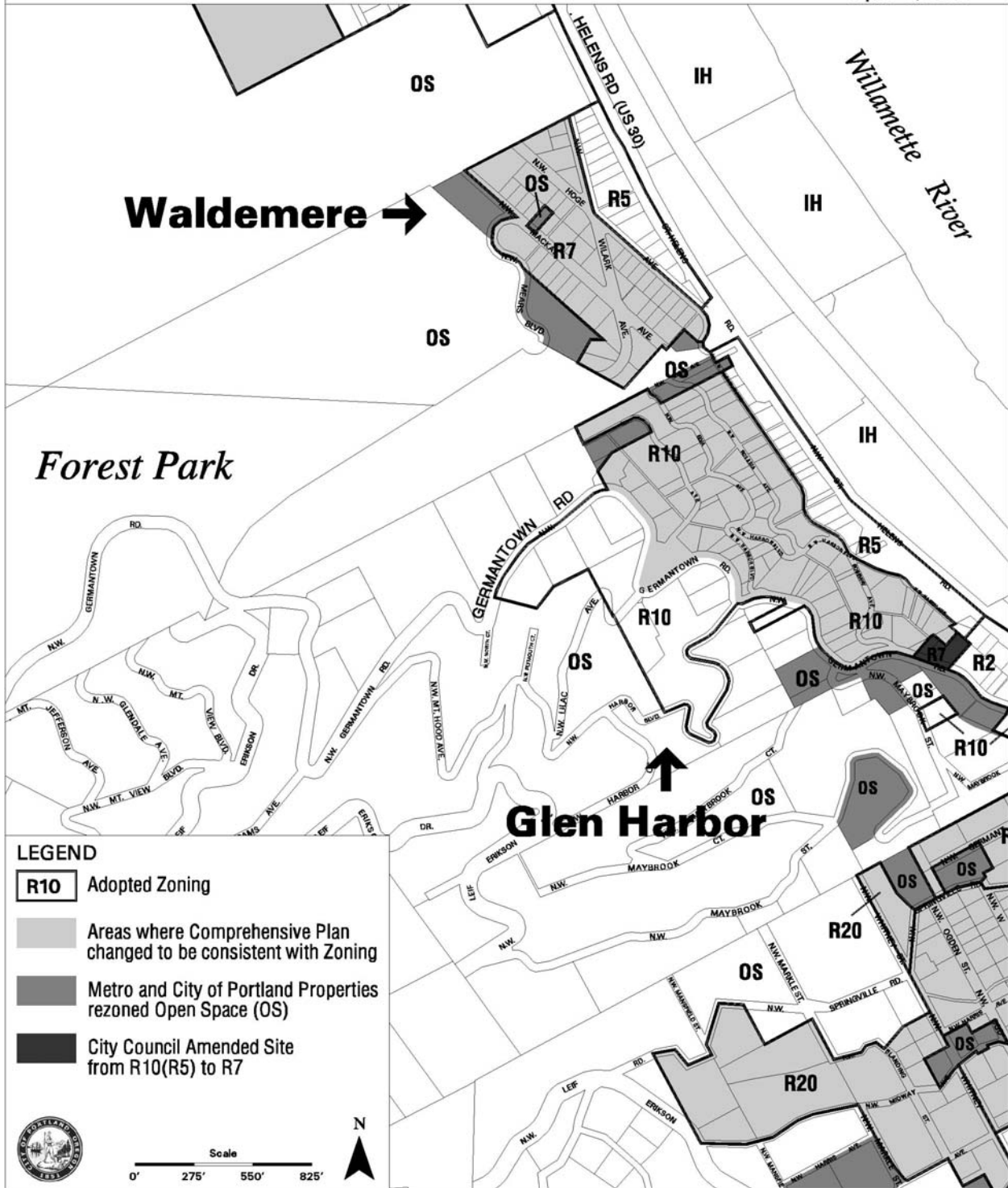
- Change the Comprehensive Plan designations to be consistent with the zoning designations, R5 to R7; R5 to R10; except
  - Rezone lots adjacent to north side of Cascade View condominiums (R2 site), from R10 to R7.
- Rezone Metro- and City-owned land to OS (open space).
- Establish minimum lot sizes for existing lots (Zoning Code regulations, see Part 3 of this section), to address existing small lot pattern.

Note: Maintaining the R5 Comprehensive Plan designations for properties adjacent to NW Germantown Road was considered. These properties have better street access than other properties along dead-end streets. This option was not implemented because other significant constraints are present: stormwater disposal/erosion concerns, previously documented landslides, and the potential for future landslides.



# Map D-3: Waldemere & Glen Harbor Adopted Zoning

April 26, 2006



## 4. Whitwood Court

### Significant Findings

- Inadequate water supply/pressure for residential service in area bounded by Forest Park, NW Springville, and Whitney (roughly the 480-foot contour). The elevation is too high to provide adequate service pressures from the Whitwood tank.
- NW Ogden contains a substandard 2-inch line. The Water Bureau plans an upgrade (to date, not scheduled).
- Sanitary sewer not available to most lots, no extensions are planned. Private septic systems need at least 12,000 and up to 20,000 square feet of land area, depending on slope and soils.
- Area within potential landslide hazard area but most lots are outside rapidly moving landslide hazard area.
- Road system substandard; fire and emergency access are constrained.
- Stormwater system: higher peak flows may cause a degraded stream system – The receiving stream is a ditch along the highway that drains to a small water body west of the Guild's Lake pump station. Higher peak flows in the ditch would contribute greater sediment to this receiving water.
- There is a relatively high potential that the water quality of the receiving water (some type of small lake or pond) could be degraded by increased peak flows in the roadside ditch.
- The 14-inch stormwater pipe that conveys flow under the highway would have capacity conveyance issues if all residential lots and industrial properties were developed.
- Significant amount of public land in residential zones: over 9-1/2 acres, effectively reducing potential development capacity.
- Significant development potential of historical lots but unlikely to be realized given service and land constraints.

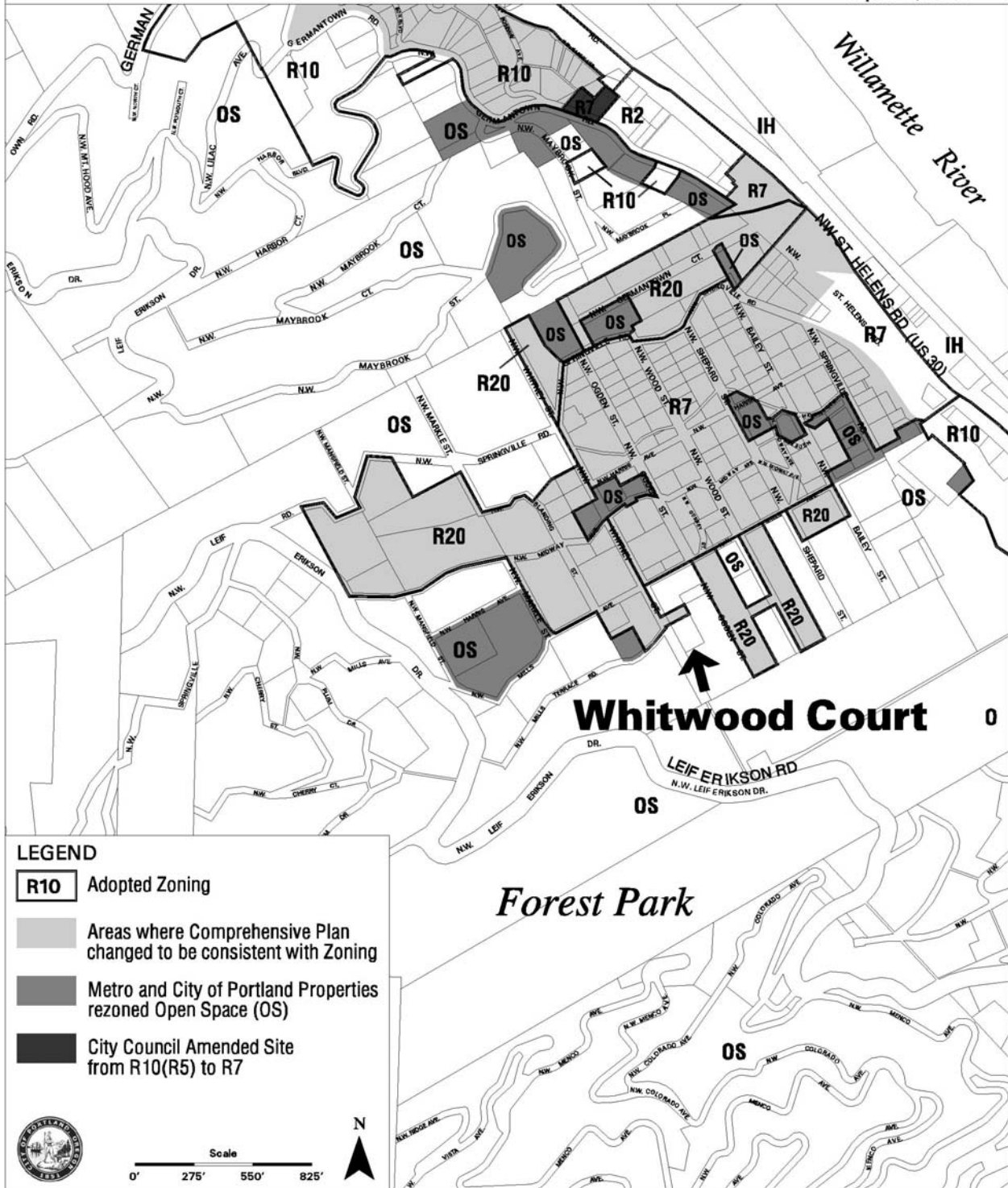
### Zoning Map and Comprehensive Plan Map Changes

- Change the Comprehensive Plan designations to be consistent with the zoning designations, R5 to R7, R10 to R20.
- Rezone Metro- and City-owned land to OS (open space).
- Establish minimum lot sizes for existing lots (Zoning Code regulations, see Part 3 of this section), to address existing small lot pattern.

Note: A change of base zoning from R7 to R10 was considered as an option for Whitwood Court due to the lack of public sanitary sewer service (private septic systems generally need at least 10,000 square feet of site area). This option was not chosen since the lack of sanitary sewer service does not present a substantial public health or safety threat. Installation of private septic systems are required and regulated by the City and State.

# Map D-4: Whitwood Court Adopted Zoning

April 26, 2006



## 5. Fairmont and 6. Willbridge

### Significant Findings

- Water service: The Saltzman tank at the end of NW Saltzman Road has recently been replaced with a new pneumatic tank (uses system of compressed air). Less than minimum fire flow is available in the upper portion of NW Saltzman Road. The 2-inch galvanized water main will be replaced within 5 to 10 years.
- Sanitary sewer service only in portion of NW Saltzman Road. No service in Willbridge (unimproved road) or upper Saltzman Road. No plans for extensions to existing system.
- Stormwater pipe at Doane Creek filled with sediment and requires routine maintenance at high cost to City.
- Stormwater pipe in lower Saltzman only.
- Residential areas within rapidly moving landslide hazard area.
- Significant public land holdings in residential of 5-1/2 acres. Reduces density potential by over 100 units.
- Current resident provided comments about issues affecting residents in this area: Close proximity of existing homes to highway and industry presents significant concerns. Trucks frequently block road access (lower Saltzman Road). Residents are impacted by noise, air, and litter pollution.
- Narrow corridor of IH (heavy industrial) zoning between Highway 30 and Forest Park. Existing development is a mix of industrial, commercial and residential uses. Many properties are underutilized or vacant. A pocket of early 20<sup>th</sup> century houses is located on NW Willbridge (parallel to Highway 30), between NW 55<sup>th</sup> and 57<sup>th</sup> Avenues. Zoning of this area has historically been commercial and industrial.
- The residentially-zoned area (off NW Saltzman Road) consists mainly of R2.5 with pockets of R10. Historical lot patterns do not affect this area significantly. The smallest existing lot is around 5,000 square feet, which is not substandard for R2.5

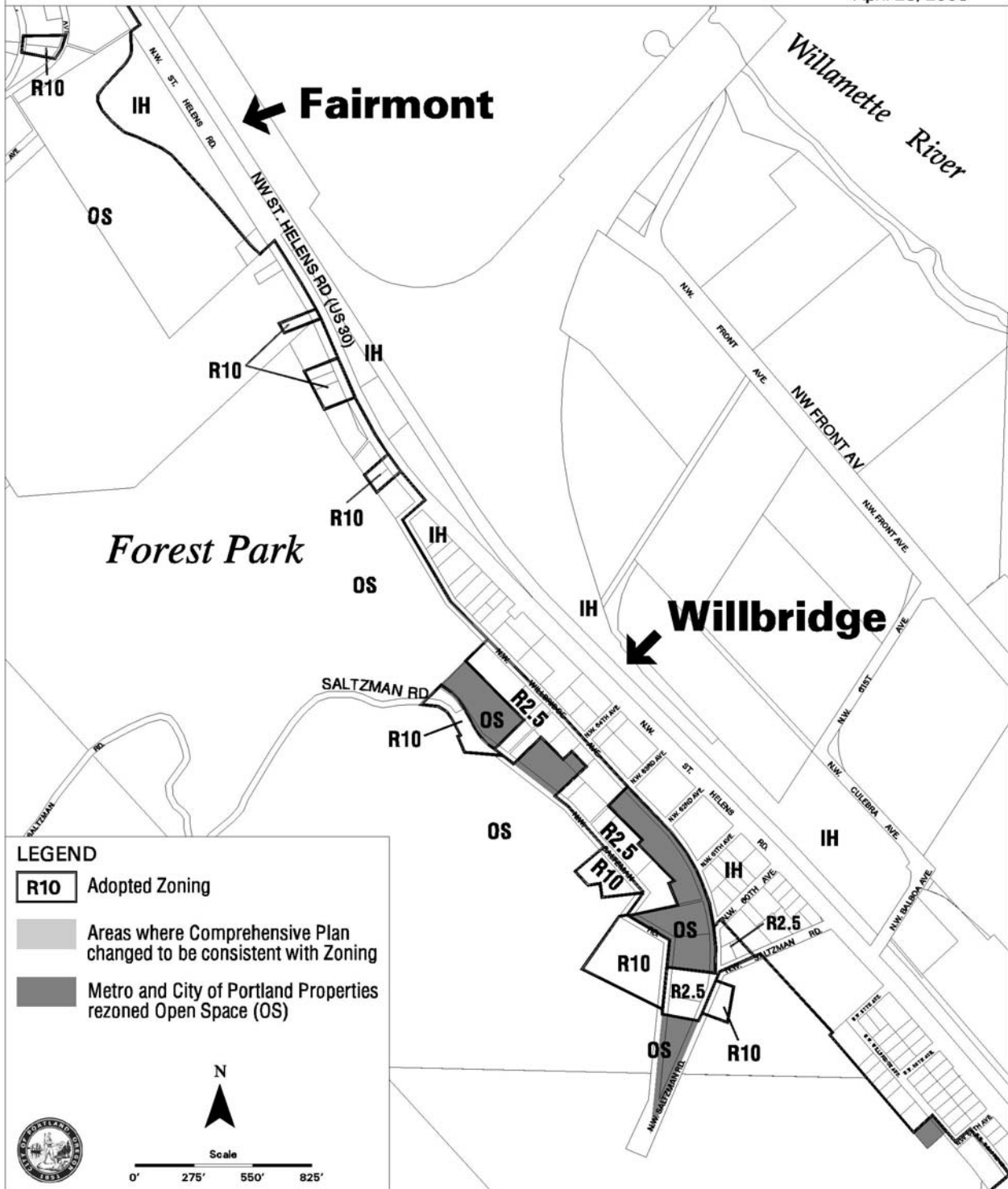
### Zoning Map and Comprehensive Plan Map Changes

- No change to residential R2.5, R10 zoning designations.
- Maintain IH zoning. Residential development should be limited in this area due to conflicts of truck traffic, noise, and industrial sanctuary to the east (Chevron petroleum tanks and old Attofina site).
- Rezone Metro- and City-owned land to OS (open space).
- Establish minimum lot sizes for R10 existing lots (Zoning Code regulations, see Part 3 of this section), to address existing small lot pattern.

Note: A change of base zoning from R2.5 to R10 was considered as an option due to the lack of public sanitary sewer service (private septic systems generally need at least 10,000 square feet of site area). This option was not chosen since the lack of sanitary sewer service does not present a substantial public health or safety threat. Installation of private septic systems are required and regulated by the City and State. In addition, this is a relatively small area with few lots, and much of the R2.5 property is owned by Portland General Electric.

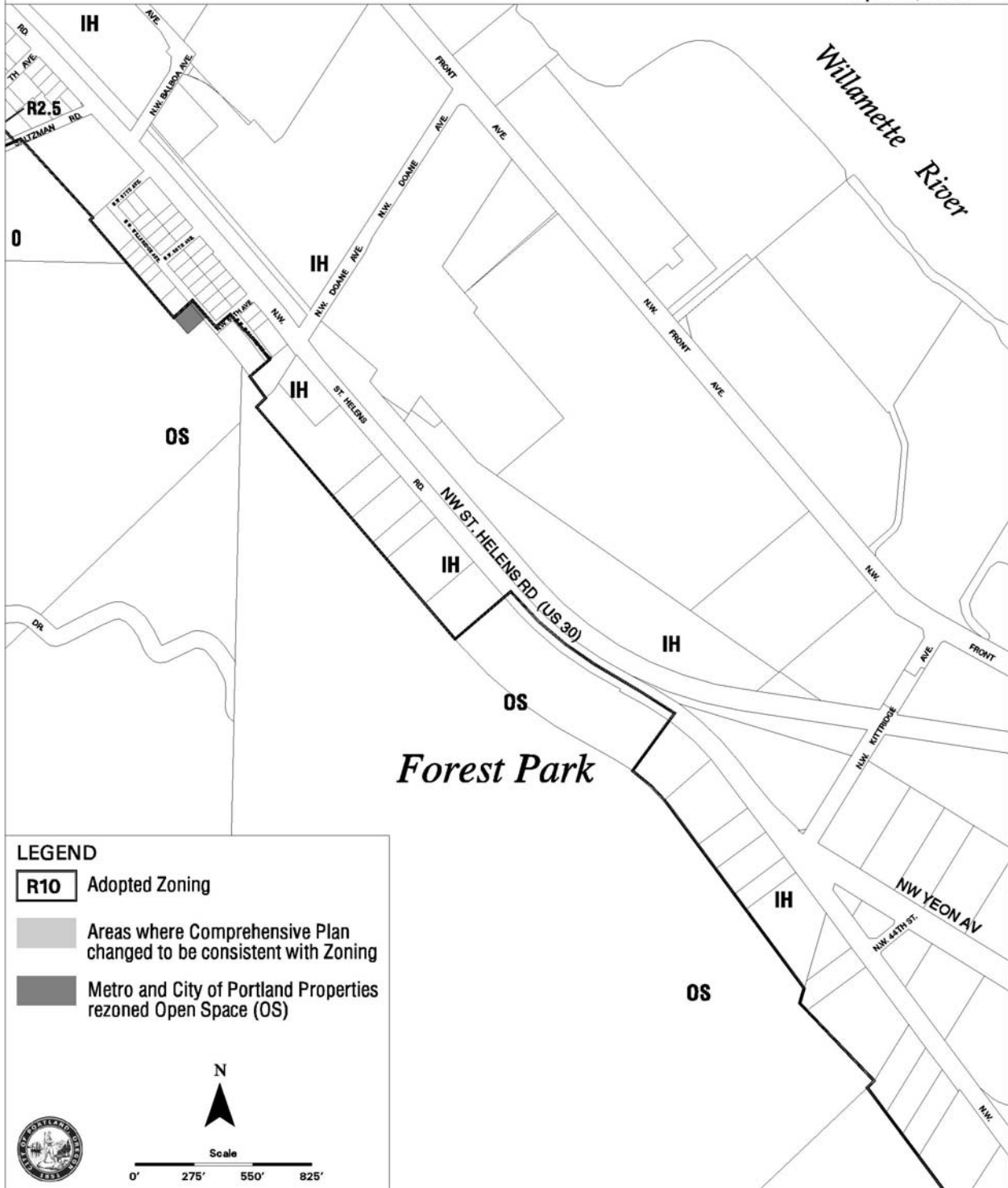
# Map D-5: Fairmont & Willbridge North of Saltzman Rd. Adopted Zoning

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# Map D-6: Willbridge South of Saltzman Rd. Adopted Zoning

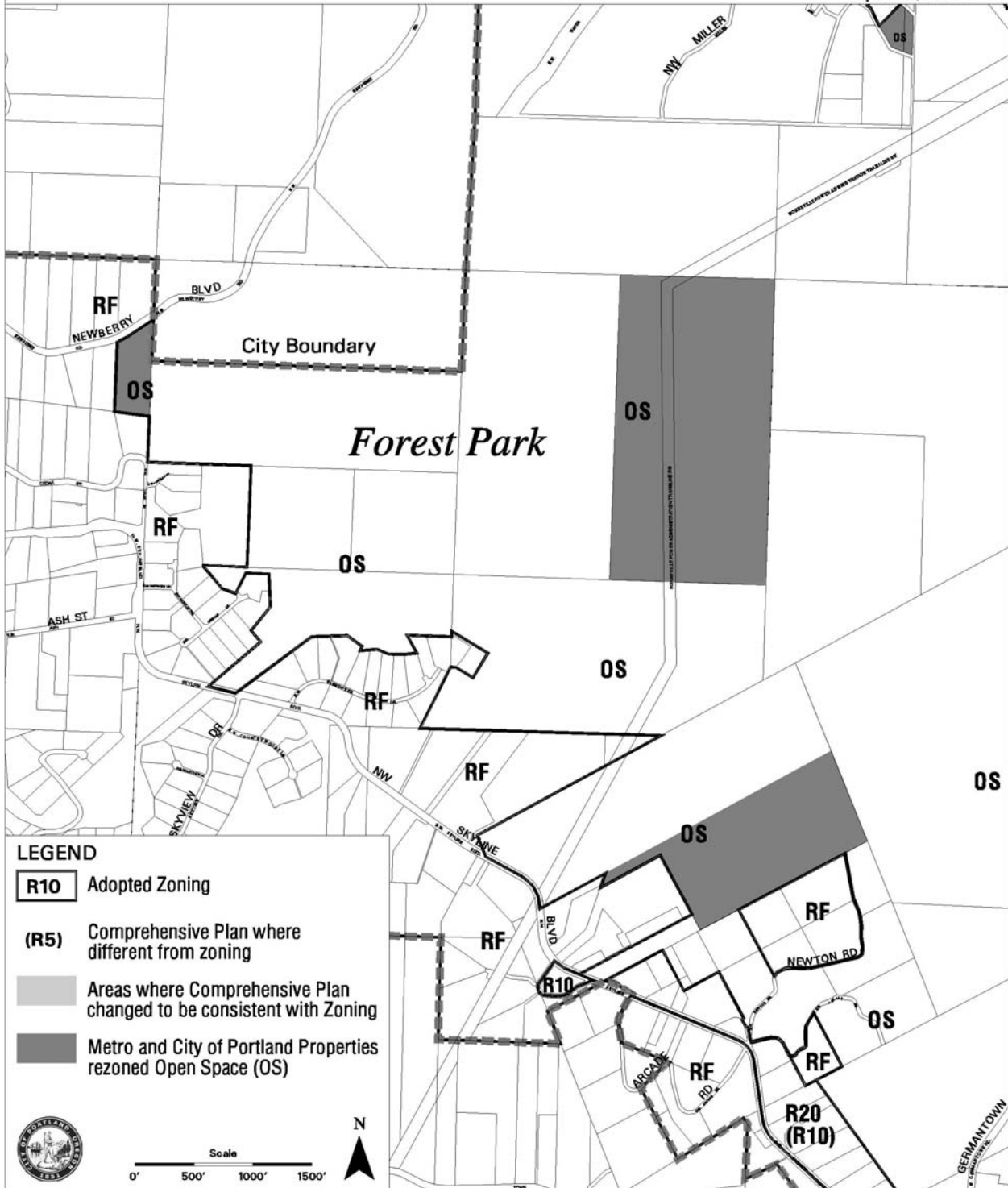
April 26, 2006



Maps D-7 and D-8 on the next pages show the City and Metro properties proposed for OS (open space) zoning that are within the shared boundary of Forest Heights and Linnton neighborhoods.

# Map D-7: Forest Park - North Adopted Zoning

April 26, 2006









## C. Regulations and Commentary

The following adopted regulations apply to the Linnton Hillside subarea of the Forest Park subdistrict, Northwest Hills Plan District (Chapter 33.563). ~~Strikethrough~~ indicates existing language that has been deleted. Underline indicates the new adopted regulations.

The purpose of the adopted regulations is to reduce the potential number of houses within the Linnton Hillside subarea, while maintaining the potential for one house on stand-alone lots (individual small lots in separate ownership from adjacent lots). The code commentary on the facing pages explains the intent of each regulation.

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## Commentary

### Northwest Hills Plan District

The new Linnton Hillside subarea, within the Forest Park subdistrict, includes the Linnton neighborhood boundary west of Highway 30. The purpose for the subarea is to limit the amount of new development in order to reduce the public health and safety risks associated with development on a steep slope with natural constraints and public service limitations.

**Prevalence of small lots and historical lots with common ownership.** The *Linnton Hillside Study Existing Conditions* report identified the historical lot patterns on the hillside. Under certain conditions, these lots have the potential for development even though they may contain less area than required by the zoning. Staff review has determined that safeguards are necessary in order to reduce risks to public health and safety that may result with development of all existing small and historical residential lots. The presence of multiple constraints, including steep slopes, wild fire hazards, a history of landslides and potential for future landslides, a substandard street system and inadequate fire/emergency access lead to the conclusion that housing unit potential should be reduced from the current state in order to reduce risk to life and property. Section 2 of this report provides detailed information about the Linnton Hillside's natural conditions and hazards and availability of public services. Because there is often one property owner of two or more adjacent lots, it is possible to require larger lot areas for development, thereby reducing potential density. Note that flexibility in site development and lot configuration is achievable through a Planned Development review. This allows for variation in lot size but not an increase in housing density.

A version of existing regulations known as the "West Portland Park exemption" is used for the Linnton Hillside Subarea. These regulations (found in Chapter 33.110 of the Zoning Code) reduce the potential number of housing units by requiring larger lot areas for lots in common ownership. A potential drawback of these regulations is that flexibility for site development is reduced. However, the option of requesting a Planned Development is available. (The purpose of planned developments, Chapter 33.665, is to encourage innovative and creative development that is well designed and integrated into the existing neighborhood.)

**Large lots.** There are lots on the hillside, most often located adjacent to Forest Park, that are large enough to be divided under existing zoning. Staff review has determined that the existing approval criteria for land divisions address the primary issues of potential development because they require that public services, including the transportation system, sanitary sewer, water, stormwater disposal, fire and emergency access, are available and adequate. Additional regulation of these large lots is not necessary.

**CHAPTER 33.563**  
**NORTHWEST HILLS PLAN DISTRICT**

(Added by Ord. No. 164517, effective 7/31/91. Amended by: Ord. No. 168698, effective 4/17/95; Ord. No. 174263, effective 4/15/00; Ord. No. 175837, effective 9/7/01; Ord. Nos. 175965 and 176333, effective 7/1/02; Ord. No. 177422, effective 6/7/03.)

Sections:

General

- 33.563.010 Purpose
- 33.563.020 Where the Regulations Apply
- 33.563.030 Transfer of Development Rights

Balch Creek Subdistrict

- 33.563.100 Prohibitions
- 33.563.110 Additional Development Standards
- 33.563.120 Additional Approval Criterion

Forest Park Subdistrict

- 33.563.200 Prohibition
- 33.563.210 Additional Approval Criteria
- 33.563.220 When Primary Structures Are Allowed in the Linnton Hillside Subarea
- 33.563.225 Duplexes and Attached Houses in the Linnton Hillside Subarea

Skyline Subdistrict

- 33.563.400 Zoning Map Amendments
- 33.563.410 Land Divisions and Planned Developments

Map 563-1 Northwest Hills Plan District

**33.563.010 Purpose**

The Northwest Hills plan district protects sites with sensitive and highly valued resources and functional values. The portions of the plan district that include the Balch Creek Watershed and the Forest Park Subdistrict contain unique, high quality resources and functional values that require additional protection beyond that of the Environmental overlay zone. The Linnton Hillside subarea within the Forest Park subdistrict contains a residential area that is constrained by natural conditions and limited existing infrastructure. The development standards for this subarea are intended to protect the public health and safety by limiting the potential number of new housing units consistent with these constraints. The plan district also promotes the orderly development of the Skyline subdistrict while assuring that adequate services are available to support development. These regulations provide the higher level of protection necessary for the plan district area. The transfer of development rights option reduces development pressure on protected sites while containing safeguards to protect receiving sites.

**33.563.020 Where the Regulations Apply**

The regulations of this chapter apply to the Northwest Hills plan district and subdistricts as shown on Map 563-1 at the end of this chapter, and on the Official Zoning Maps. The regulations of section 33.563.030 apply to the entire plan district. The regulations of Sections 33.563.100 through .120 apply only to the Balch Creek subdistrict. The regulations of Sections 33.563.200 through .210 apply only to the Forest Park subdistrict. The regulations of Sections 33.563.220 and .225 apply only to the Linnton Hillside subarea of the Forest Park subdistrict. The regulations of Sections 33.563.400 through .410 apply only to the Skyline subdistrict.

## Code Commentary

Forest Park Subdistrict. The Linnton Hillside area is within the Forest Park subdistrict. This subdistrict includes approval criteria for proposed development undergoing environmental review.

Linnton Hillside subarea. The Linnton Hillside subarea, within the Forest Park subdistrict, was created as part of the Linnton Hillside Study. The purpose of the subarea is to reduce potential density on existing lots and ensure that unbuildable lots are not created.

**33.563.210** Clarification to an existing name is necessary, as a result of adding the Linnton Hillside subarea. The Miller Creek watershed is renamed Miller Creek subarea, to be consistent with map changes (see Map 563-1 on page 70).

### **33.563.220 When Primary Structures Are Allowed in the Linnton Hillside Subarea.**

The purpose of these regulations is to reduce potential density where possible while ensuring that small lots in single ownership remain buildable.

The proposed code is loosely based on existing regulations that apply in the West Portland Park subdivision in Southwest Portland (33.110.212.D). These regulations require larger lot areas, and thus lower density, than the base zone in certain circumstances. Natural conditions and physical infrastructure limits of West Portland Park are similar to those of the Linnton Hillside.

There is compelling evidence that limitations on potential density should be applied to the Linnton Hillside subarea. Specifically, topography in this subarea is steeper and fire/emergency access is more constrained than in other residential areas with development potential. Most striking is the presence of multiple development constraints and land hazards that, taken together, present a significant risk to human safety and health. These constraints are described in Section II of this document and the *Linnton Hillside Study Existing Conditions* report.

This section replaces the regulations of Section 33.110.212, When Primary Structures are Allowed. The regulations are organized by how much area is under a single ownership, regardless of lot lines.

**Subsection A** sets out the regulations for ownerships that are at least as large as the minimum areas set out in Table 563-1. For example, in the R10 zone, the minimum area is 10,000 square feet.

**Subsection B** sets out the regulations for ownerships that are not as large as the minimum areas set out in Table 563-1 but are at least as large as the size required for new lots created through a land division. Those sizes are set out in Table 610-2, shown below. For example, in the R10 zone, the minimum area is 6,000 square feet. These ownerships will be buildable only if they have been "stand alone" ownerships since the effective date of these regulations. In other words, the size of the ownership hasn't been reduced since that date.

	RF	R20	R10	R7	R5
Minimum Lot Area	52,000 sq. ft.	12,000 sq. ft.	6,000 sq. ft.	4,200 sq. ft.	3,000 sq. ft.
Maximum Lot Area	151,000 sq. ft.	34,500 sq. ft.	17,000 sq. ft.	12,000 sq. ft.	8,500 sq. ft.
Minimum Lot Width	60 ft.[1]	60 ft.[1]	50 ft.[1]	40 ft.[1]	36 ft.[1]
Minimum Front Lot Line	30 ft.	30 ft.	30 ft.	30 ft.	30 ft.
Minimum Lot Depth	60 ft.	60 ft.	60 ft.	55 ft.	50 ft.

## Forest Park Subdistrict

### 33.563.200 Prohibition

In the Forest Park subdistrict, activities which expose soil to direct contact with stormwater between October 1 and April 30 are prohibited. An exception to this prohibition is planting of native plants with hand-held equipment, and emergency repair of existing structures.

**33.563.210 Additional Approval Criteria.** In addition to the applicable approval criteria of Section 33.430.250, an environmental review application will be approved if the review body finds that all of the following approval criteria are met:

- A. Wildlife.** The location, quantity, quality and structural characteristics of forest vegetation will be sufficient to provide habitat and maintain travel corridors for the following indicator species: pileated woodpecker, sharp-shinned hawk, Roosevelt elk, white-footed vole, and red-legged frog. Standards to meet ~~the~~ these criteria are in the applicable Habitat Evaluation Procedure developed by the United States Fish and Wildlife Service;
- B. Parks and Open Space.** Overall scenic, recreational, educational and open space values of Forest Park will not be diminished as a result of development activities; and
- C. Miller Creek Watershed Subarea.** Within the Miller Creek ~~Watershed Subarea~~, shown on Map 563-1, development activities will not degrade natural water quality, quantity, and seasonal flow conditions, and will not increase water temperatures above 68°F. In addition, development activities will not decrease opportunities for fish and amphibian passage.

### **33.563.220 When Primary Structures Are Allowed in the Linnton Hillside Subarea.**

The regulations of Section 33.110.212 do not apply in the Linnton Hillside Subarea. In this subarea, primary structures are allowed in residential zones as specified in this section. Adjustments to the standards of this section are prohibited. Primary structures are allowed on lots or combinations of lots that meet the requirements of this section, and on lots of record or combinations of lots of record that meet the requirements of this Section. The requirements are:

- A. The lots or combinations of lots, or lots of record or combinations of lots of record:**
  - 1. Are at least 36 feet wide, measured at the front setback line; and
  - 2. Meet the minimum area standard of Subsection G;
- B. The lots or combinations of lots, or lots of record or combinations of lots of record:**
  - 1. Are at least 36 feet wide, measured at the front setback line;
  - 2. Meet the minimum area standard of Table 610-2 or Chapter 33.611, but do not meet the minimum area standard of Subsection G; and
  - 3. Have not abutted any lot or lot of record owned by the same family or business on March 15, 2006, or any time since that date;

## Code Commentary (Continued)

### 33.563.220 When Primary Structures Are Allowed (Continued)

**Subsection C** applies to ownerships that do not even meet the minimum for new lots. Again, in the R10 zone, that would be ownerships less than 6,000 square feet in area. These ownerships will be buildable only if they have been "stand alone" ownerships since July 26, 1979. In other words, the size of the ownership hasn't been reduced since that date.

**Subsection D** repeats a provision from the base zones that allows development on sites that met requirements but were reduced because of a government requirement for right-of-way.

**Subsection E** ensures that lots created through a land division after these regulations take effect will be buildable regardless of size—the land division that creates them will ensure that the density is no more than allowed by the zoning.

**Subsection F** ensures that ownerships are not reduced in a way that is contrary to the intent of these regulations.

### 33.563.225 Duplexes and Attached Houses in the Linnton Hillside Subarea.

This provision eliminates an existing development option that allows an additional housing unit on corner lots in the Linnton Hillside Subarea (Chapter 33.110.240.E, Alternative Development Options). This existing option is intended to allow increased density where the appearance and impact will be compatible with surrounding houses, and is permitted in single dwelling residential zones (R2.5, R5, R7, R10, and R20). It is recommended that this option not be available in the Linnton Hillside Subarea due to the development constraints.



**C. The lots or combinations of lots, or lots of record or combinations of lots of record:**

1. Do not meet the minimum area standard of Table 610-2 or Chapter 33.611; and
2. Have not abutted any lot or lot of record owned by the same family or business on July 26, 1979 or any time since that date;

**D. On lots, lots of record, and combinations of lots or lots of record that did meet the requirements of Subsections A, B, or C, above, in the past but were reduced below those requirements solely because of condemnation or required dedication by a public agency for right-of-way;**

**E. On lots created after [the effective date of these regulations].**

**F. Additional regulations.**

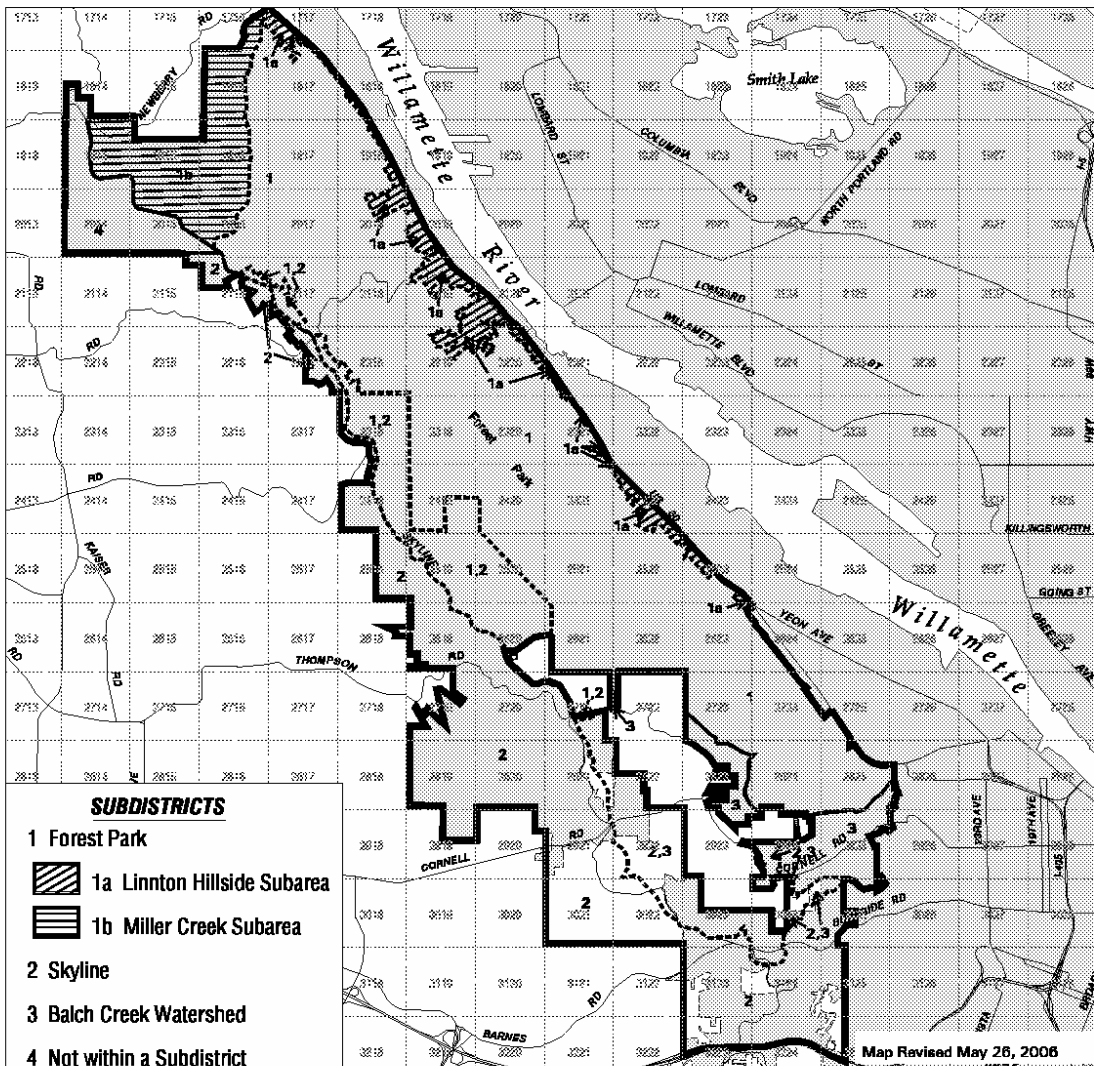
1. The lots or combinations of lots, or lots of record or combinations of lots of record described in Subsection A may not be reduced in area below the standards of Table 563-1;
2. The lots or combinations of lots, or lots of record or combinations of lots of record described in Subsections B and C may not be reduced in area;
3. There are no minimum lot area or width standards for the lots or combinations of lots, or lots of record or combinations of lots of record described in Subsection C;

**G. Minimum area standards. The minimum area standards are in Table 563-1. These minimum area standards apply only as specified in Subsections A and B, above. New lots proposed through a land division are subject to the regulations of Chapters 33.610 and 33.611, not the regulations of this subsection.**

<b><u>Table 563-1</u></b> <b><u>Minimum Area Standards</u></b>	
<b><u>Zone</u></b>	<b><u>Minimum Area</u></b>
<u>RF</u>	<u>2 acres</u>
<u>R20</u>	<u>20,000 square feet</u>
<u>R10</u>	<u>10,000 square feet</u>
<u>R7</u>	<u>7,000 square feet</u>
<u>R5</u>	<u>5,000 square feet</u>
<u>R2.5</u>	<u>2,500 square feet</u>

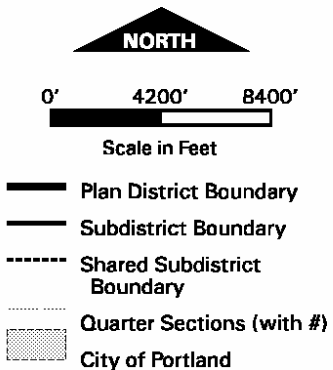
**33.563.225 Duplexes and Attached Houses in the Linnton Hillside Subarea.**

In the Linnton Hillside subarea, duplexes and attached houses on corners as allowed by 33.110.240.E. are prohibited.

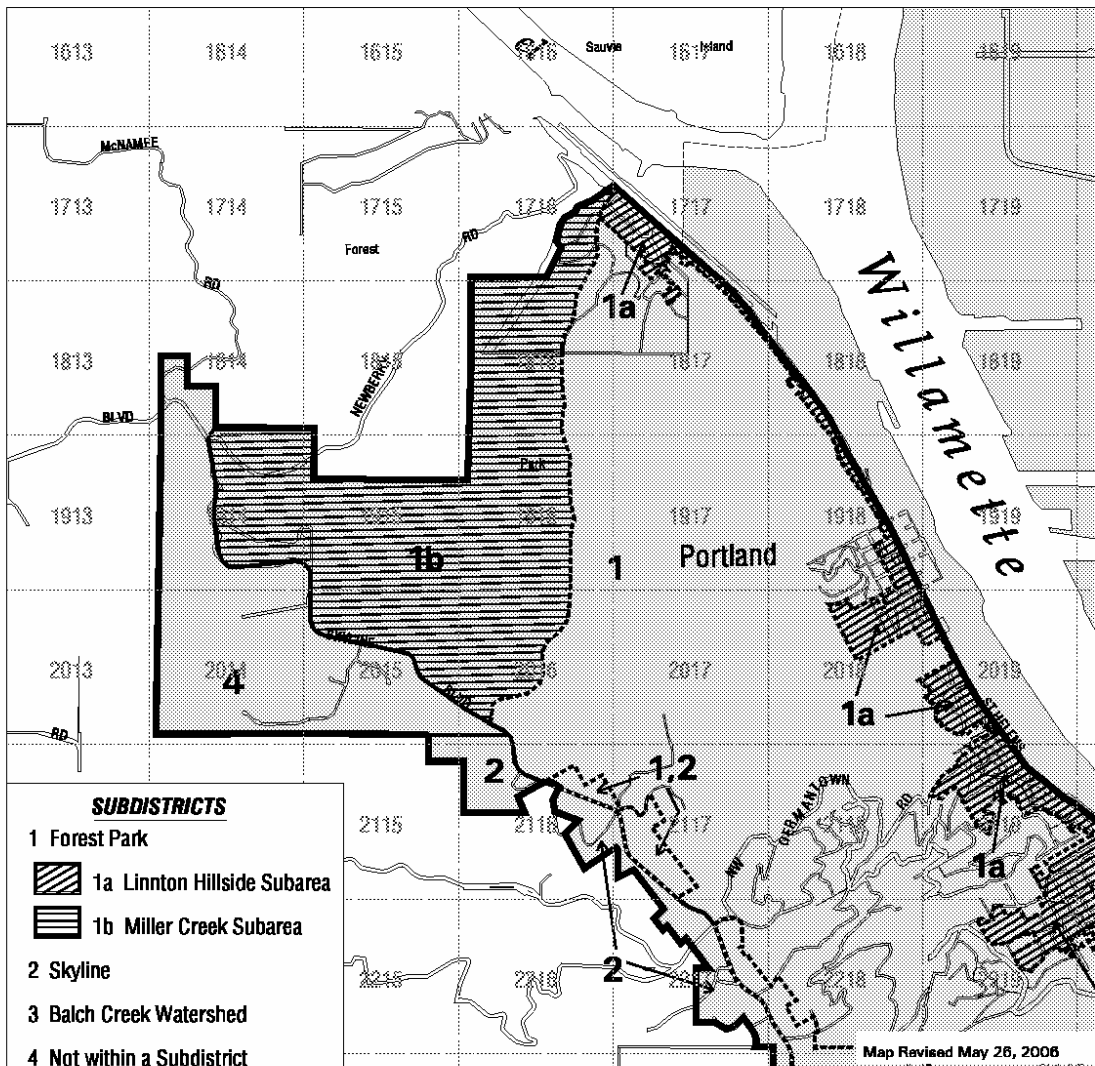


**Map 563-1**

**Northwest Hills Plan District  
Subdistricts and Subareas  
Map 1 of 5 (Index)**

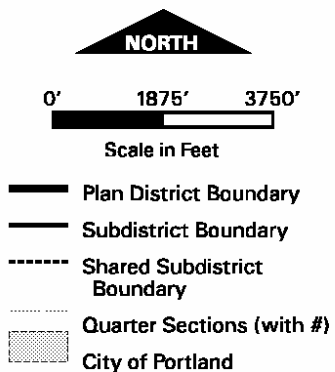


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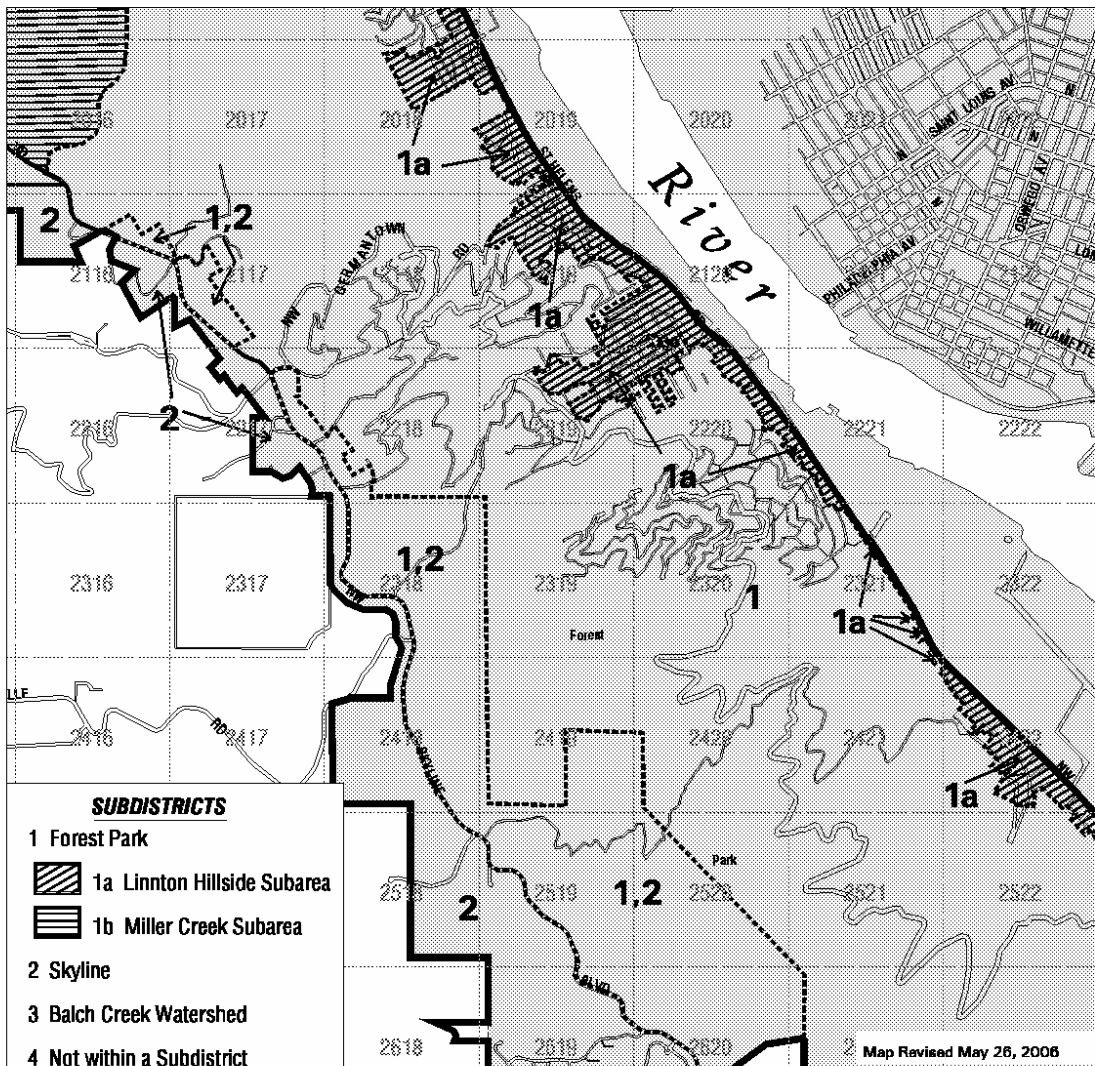


**Map 563-1**

**Northwest Hills Plan District  
Subdistricts and Subareas  
Map 2 of 5 (Detail)**

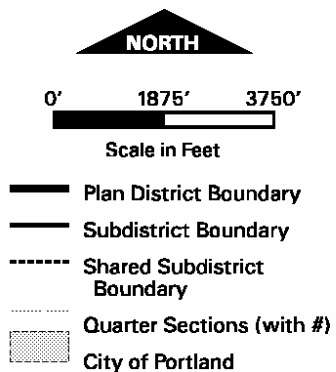


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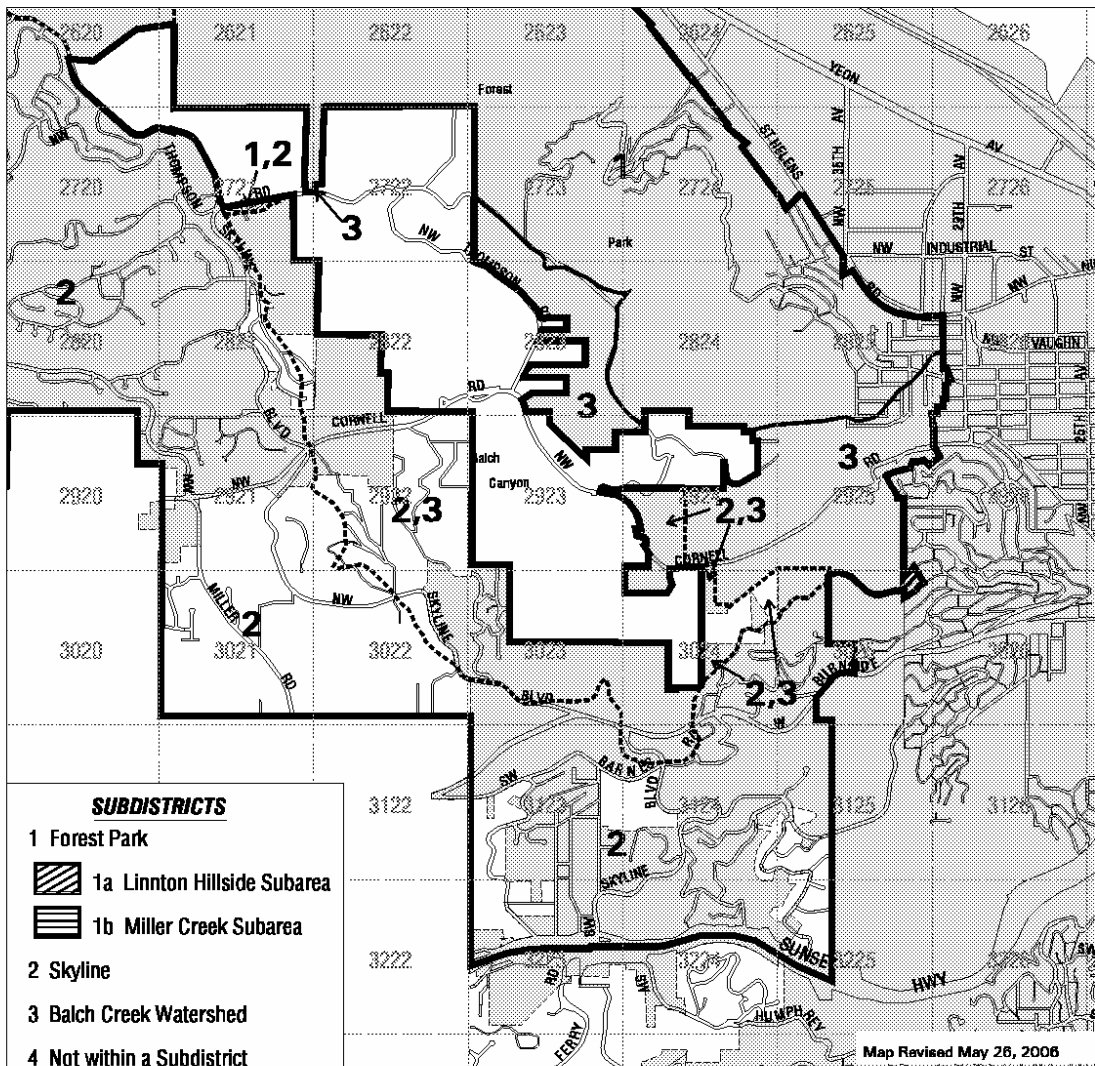
**Map 563-1**

**Northwest Hills Plan District  
Subdistricts and Subareas  
Map 3 of 5 (Detail)**



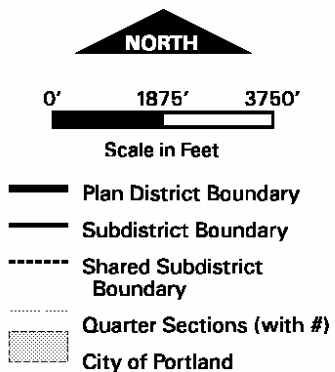
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**Map 563-1**

**Northwest Hills Plan District  
Subdistricts and Subareas  
Map 5 of 5 (Detail)**



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## **D. Nonregulatory Options**

### **Building Permit Process**

Currently, the Fire Bureau does not review building permits unless there is a concern raised by Transportation staff. To facilitate early discussion, problem-solving, and address building permit requests that may be a concern for fire and emergency access, it is recommended that an administrative process be set up that provides for routine notification of all building permit applications within areas that may have inadequate fire/emergency access.

### **Street Maintenance**

The Office of Transportation does not maintain substandard streets. Maintenance of these streets is the responsibility of adjacent property owners. The City offers “expanded maintenance options” which provides guidance to property owners about how to maintain the street adjacent to their property. The City does oversee maintenance conducted by property owners.

Because all the Linnton Hillside area streets are substandard, consideration should be given to establishing a road maintenance district. Such a district would be established by the City, and result in improved road surface conditions, since it provides for consistent and adequate maintenance. Maintenance funds are obtained from annual special assessments on the properties within the district. Road maintenance could be performed by the City or by contract.

### **Natural Hazards Mitigation Plan**

In December 2004, the City developed the Natural Hazards Mitigation Plan (Office of Emergency Management, in collaboration with all City bureaus) in an effort to reduce future loss of life and property resulting from natural disasters. The Plan includes action items that address hazard mitigation. Each action item identifies the coordinating organization, internal and external partners, and timeline.

Below are the recommended programs and initiatives from the plan that are most relevant to the Linnton Hillside area.

#### **Earthquake**

Develop emergency evacuation plans for residential areas that are near significant hazardous materials storage facilities and heavy industrial areas.

Conduct a vulnerability analysis of the sewer system to identify elements with the potential for failure.

#### **Landslide**

Improve property owner awareness of the importance of proper maintenance of private drainage systems.

Acquire land or apply conservation easement for long-term and permanent mitigation of risk.

Complete a study of the West Hills drainage system that addresses the cumulative effects of development in the area.

Review the effectiveness of regulations related to development in identified landslide hazard areas.

Mitigate Portland's water supply infrastructure from landslide hazards. (Water Bureau to respond to West Hills water system breaks as priority, since there is a heightened risk of landslides)

**Wildfire**

Procure funding for management of vegetated natural areas with high wildfire danger, including public and private properties.

Identify conditions of approval and mitigation strategies that could be applied to new development or redevelopment in high fire risk areas.

Improve the system for identifying new construction in areas subject to wildfires and communicating this information to affected land owners.

Implement a neighborhood wild land interface disaster planning program.

Complete an assessment to characterize high priority wildfire risk areas and recommend specific mitigation strategies.

Review feasibility of adopting portions of nationally recognized wildfire interface codes to strengthen building standards in wildfire risk areas.





