David Hill Urban Reserve Concept Plan

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1 Introduction

The City of Forest Grove sits in northwestern Oregon in Washington County, approximately 25 miles west of the City of Portland. Forest Grove, which covers a land area of approximately 5 square miles, is on the western edge of the Portland metropolitan area and is within the metropolitan urban growth boundary (UGB). The city is linked to Hillsboro and Beaverton to the east along Highway 8, and to the City of Banks and Yamhill County along the north-south corridor of Highway 47.

Native tribes of the Kalapuya Indians lived in the area around Forest Grove prior to the first permanent white settlers who arrived in the early 1840s. In 1849, the Oregon Territorial Legislature granted a charter to Tualatin Academy (which later became Pacific University) a full decade before Oregon became a state. In 1859, the Tualatin Academy Board of Trustees adopted the name Forest Grove for the area around the school, likely referring to the grove of oak trees on and around the campus (City of Forest Grove, 2010b).

In the early 1850s, nearly three-quarters of the population was employed in agriculture, though the university brought some diversity to the local economy, but by 1870 only one-third of Forest Grove’s 396 people made their living through farming. Forest Grove was formally incorporated in 1872, the same year its first newspaper, The Independent, was established. Electric power arrived in 1892 and a year later the City passed an ordinance requiring brick construction of all downtown buildings to reduce the risk of fire. Several of these buildings are still in service today, and fifteen buildings in the downtown and adjacent historic neighborhoods are listed in the National Register of Historic Places.

Through the turn of the century, the city continued to grow as electric streetcar service connected Forest Grove to Portland. The Great Depression and immense fires in the Tillamook Forest affected the local economy and population growth waned, reaching a mere 2,450 in 1940. Forest Grove experienced significant growth after World War II and by 1947 the number of building permits issued was three times the number issued in 1938. From 1940 to 1970, the population more than tripled to 8,275 and from 1970 to 2000 more than doubled to 17,078.

As of 2010, the population of Forest Grove is estimated at 21,130 (PRC, 2011), and the city is home to a diverse economic base including high tech, food and beverage processing, wood products, metalworking, education, and healthcare. Businesses in Forest Grove provide approximately 9,100 jobs (City of Forest Grove, 2010e).

Forest Grove is characterized by several significant natural features including floodplains, Council Creek, and David Hill. In addition, the urban forest is a defining element for the Forest Grove community.

1.1 Project Background

Over the next 30 years, the City of Forest Grove is projected to experience an approximate 47 percent population increase (City of Forest Grove, 2010d). Based upon future population projections, the city will need to add 15,260 dwelling units over the next 50 years to accommodate future growth. The City of Forest Grove’s buildable lands inventory shows that 784 acres of land within the city limits could support development of an additional 4,700 dwelling units (City of Forest Grove, 2011a). Therefore, 10,560 dwelling units in new residential zones are needed over the next 50 years.
A UGB separating rural lands from urban communities surrounds the Portland metropolitan area. Every 5 years, the regional government, Metro, evaluates the acreage needed to maintain a 20-year supply of land to accommodate projected urban growth, and may adjust the UGB in response to that need. In 2007, the Oregon Legislature approved Senate Bill 1011 which enabled Metro and the three metropolitan counties (Clackamas, Multnomah, and Washington) to designate areas outside the current UGB best suited for accommodating urban development as “urban reserves.” The reserve designations remain in effect for 50 years.

In February 2010, the David Hill Urban Reserve (DHUR) was deemed an area best suited to accommodate future growth in Forest Grove and was designated an urban reserve by the City of Forest Grove, Washington County, and Metro.

As the City of Forest Grove continues to grow, the DHUR presents opportunities to accommodate development needs for the next 20 to 50 years. While this type of growth is not expected to occur for many years, a concept plan for the area is required by Metro to guide how the area should develop.

1.2 Purpose

A concept plan is required by Metro for areas designated as urban reserves before development can occur. These concept plans must generally show the locations of proposed land uses, transportation systems, and natural areas that are consistent with local and regional needs and goals. Concept plans must also be developed consistent with the requirements of Title 11: Planning for New Urban Areas of Metro’s Urban Growth Management Functional Plan (described further in Chapter 2).

The Concept Plan for the DHUR begins to create a framework for accommodating future development in an efficient manner, sensitive to natural features, topography, and views. This plan is not intended to be a complete “concept plan” under Metro’s definition and does not meet all elements of Title 11. Additional work in certain areas must be completed before a final concept plan can be developed that is consistent with Title 11 requirements. A concept plan is not a legally binding document.

The vision for the Concept Plan was developed with input from the community, City of Forest Grove staff, a Technical Advisory Committee, and relevant regulations.

The project approach included researching local goals, regulations and community needs; identifying land constrained from development by topography or other natural constraints; and a public involvement process to ensure the plan includes community values and shared interests. The full process is shown in the Work Breakdown Structure in Appendix A. Natural constraining factors along with other contextual information is captured in the base maps in Appendix B.

Site visits informed the DHUR Concept Plan.
1.3 Site Location

The DHUR is 317 acres immediately outside the city limits of Forest Grove. It appears as Urban Reserve Area 7A in Metro and City of Forest Grove documents. Located at the northwestern corner of Forest Grove, the urban reserve extends along the northwestern edge of the UGB north and south of David Hill Road. The northeastern edge of the DHUR extends to Thatcher Road and the southwestern boundary extends to Gales Creek Road. Developments, which are within both the Forest Grove city limits and the UGB, border the DHUR along its southeastern border. The reserve is shown in Figure 1.

The urban reserve is sparsely populated, with 16 housing units, and minimal built environment.

1.4 Existing Conditions

Existing conditions in and around the DHUR were identified through a geographic information system (GIS), evaluations of existing plans and reports, and a public involvement process.

Less than half the reserve (150 acres) is suitable for development. Over half the urban reserve (167 acres) contains natural constraints, or features that are less desirable for development such as slopes of 25 percent or more, existing forest or woodlands, wetlands, and water quality management areas. Buildable land and natural constraints are shown on Figure 2.

See the technical memoranda in Appendix C for more information on the subjects in this section.

1.4.1 Existing Land Uses

The DHUR is currently zoned for agriculture or forestry as are the areas to the immediate north, west, and south of the urban reserve. Several small-scale tree farms operate within the reserve.

1.4.2 Floodplains

The DHUR contains no 100-year Federal Emergency Management Agency (FEMA) floodplains. However, the Gales Creek 100-year floodplain abuts the DHUR’s southern border along Gales Creek Road (see Figure 3).

1.4.3 Habitat Conservation Areas

Habitat conservation areas were mapped by Metro and generally correspond to water quality management areas and locations with larger trees. Trees with a diameter breast height (DBH) greater than or equal to 6 inches (which corresponds to a tree height of approximately
48 feet) (see the technical memorandum on natural resource areas in Appendix C for more information). Habitat conservation areas were mapped by Metro and adopted by the City of Forest Grove into its Development Code.

Water quality management areas are shown on Figure 3 (see Section 1.4.10 for more information).

1.4.4 Housing

The urban reserve is sparsely populated, with 16 housing units, and minimal built environment.

1.4.5 Impervious Areas

Minimal impervious areas exist with the DHUR. These areas consist of the paved section of David Hill Road, buildings such as homes and barns, and the David Hill Reservoir. Unimproved private rural roads (mostly gravel or dirt) exist throughout the DHUR and serve as access roads and driveways for the residents.

1.4.6 Parks, Trails, and Open Space

No parks currently exist within the DHUR. Thatcher Park, a 25-acre community park at the corner of David Hill Road and Thatcher Road, is approximately 1 mile from the DHUR.

The City of Forest Grove currently possesses 357 acres of parkland and open space within the city limits. Approximately 85 acres are active park space and the remainder is open space, natural areas, or greenways. Residents have access to 14 parks, an aquatic center, and a skateboard park.

No trails currently exist within the DHUR, though a regional footpath, the Western Connection, is planned and will follow approximately along the western edge of the current UGB – the eastern edge of the DHUR. The City of Forest Grove maintains 6 to 7 miles of paved trails and approximately 2 miles of natural surface trails.
FIGURE 2
Natural Constraints
Note that areas shown in black are not suitable for development

FIGURE 3
Streams, Wetlands, and Water Quality Management Areas
1.4.7 Sanitation/Sewer

Sanitation needs are served in the DHUR by individual septic tanks. The Natural Resources Conservation Service (NRCS) rates the soils types in the DHUR as having very limited septic tank absorption ability based on evaluations between 24 and 60 inches deep. True absorption ability may vary based on the underlying soils. Owners are responsible for needs associated with the septic tanks including maintenance, pumps, and pipes. The closest existing sewer lines are in the residential developments along the southeastern border of the DHUR. However, these developments are separated from the DHUR by a stream corridor, Metro Title 3 water quality management areas, and a small ravine with slopes of greater than 25 percent. These constraints would likely limit the extension of these sewer lines into the DHUR.

1.4.8 Soils

Eight major soil types are in the DHUR (USDA, 2010). The primary soil unit is Laurelwood silt loam which underlies approximately 75 percent of the total urban reserve.

1.4.9 Steep Slopes, Topography, and Landslide Prone Areas

The DHUR is composed of eastern and southern facing moderate to steep sloping hills with an elevation range from 200 feet to 760 feet above sea level. The steepest slopes are in the ravines along the stream corridors and to the north and east along David Hill Road. Metro and Clean Water Services’ policies define steep slopes as those greater than or equal to 25 percent. Approximately 97.5 acres, or 31 percent, of the study area contains steep slopes where development could be a risk for landslide or debris flows (see Figure 4).

Based on previous modeling analysis by the Department of Geological and Mineral Industries, only two [potential] landslide hazard areas were identified with the DHUR - an area just off Gales Creek Road in the south and another in the northern portion. However, one property owner identified two small landslides in the ravine near the tributary to Gales Creek.

1.4.10 Streams, Water Quality Management Areas, and Vegetated Riparian Corridors

The DHUR is located in Tualatin River Subbasin and the Gales Creek and Dairy Creek Watersheds. Two unnamed and intermittent, but mapped, streams originate from the reserve (see Figure 3). The south flowing stream begins near the center of David Hill Road and flows to the southern urban reserve boundary at Gales Creek Road. The north flowing stream originates near the center of the far northeastern section of the reserve and flows to the northwestern urban reserve boundary near Thatcher Road.

A total of 33.5 acres, approximately 11 percent of the DHUR, were identified as water quality management areas (see Figure 3). The widths of the buffers vary depending upon the slope of the adjacent area. Because many of the slopes around the streams in the DHUR are greater than or equal to 25 percent, most vegetated corridor buffers around the streams are 200 feet (see Figure 3).
1.4.11 Transportation

A single, two-lane public road, David Hill Road, bisects the DHUR. David Hill Road is classified as a collector, providing access and circulation, and traverses diagonally across the reserve from the southeast to the northwest. This section of the road is only partially paved and lacks urban standards such as curbs, gutters, and sidewalks. Figure 5 shows the existing road network in the DHUR.

Unimproved private rural roads (mostly gravel or dirt) exist throughout the DHUR and serve as access roads and driveways for the residents.

No transit lines exist within the DHUR. However, TriMet’s 57 bus line serves the City of Forest Grove. A crude network analysis shows the nearest bus stop is approximately 2.8 miles east of the DHUR.

1.4.12 Vegetation

Existing vegetation within the DHUR primarily consists of young mixed conifer/hardwood forests, tree farms, shrub, and grass/field. A majority of the DHUR is grass/field at 53 percent, followed by trees with a DBH greater than or equal to 6 inches (a tree height of approximately 48 feet) at 22 percent. The most prevalent conifer species is Douglas-fir. Figure 6 shows existing vegetation.

Trees with a DBH greater than or equal to 6 inches require a tree removal permit and with some exceptions, cannot be removed. For the concept planning process, these trees might require a tree removal permit. Provided none of these trees are harvested for timber before annexation into Forest Grove, approximately 68 acres, or 22 percent, of the urban reserve would be considered for protection.
Data on this map is sourced from Metro’s RLIS database, City of Forest Grove, and the State of Oregon. The data was developed at multiple scales and accuracies. No warranty is made on the location accuracy of the features shown in this map.

Diameter at breast height (DBH) was calculated from tree height using equations developed by Wang and Hann (1988).
1.4.13 Water Infrastructure

Residents of the DHUR currently obtain their water from wells. Well owners are responsible for needs associated with the wells including maintenance, pumps, and pipes.

Because of issues with pressure due to elevations in the DHUR, water cannot be supplied to the areas above 440 feet through the City’s current system.

The closest existing water lines are a mainline along David Hill Road that ends just before the DHUR and smaller lines in the developments along the southeastern border of the DHUR. However, these developments are separated from the DHUR by a stream corridor, Metro Title 3 water quality management areas, and a small ravine with slopes of greater than 25 percent. These constraints would likely limit the extension of these water lines into the DHUR.

1.4.14 Wetlands

There are no documented wetlands in the DHUR, although a local landowner noted a seasonal wet spot (vernal pool) near the headwaters of the tributary to Dairy Creek.

Existing water pump on the DHUR.

Existing well on the DHUR.
2 Title 11 Requirements

Title 11: Planning for New Urban Areas of Metro’s Urban Growth Management Functional Plan (Metro, 2011) provides long-range planning guidance and requirements for areas brought into the UGB to ensure that they are “urbanized efficiently” and attempt to contribute to mixed-use, walkable, transit-friendly communities. Title 11 has two distinct requirements for planning for urban reserves: (1) a concept plan must be developed and cover particular elements, and (2) a concept plan must achieve certain outcomes.

The DHUR Concept Plan represents the first step toward meeting Title 11 requirements. However, it does not fulfill all obligations listed within Title 11. Generally, any requirements related to provision of preliminary cost estimates, methods for funding, housing market analysis, intergovernmental agreements, and provisions for school coordination are not covered. Hence, the Concept Plan for the DHUR is not intended to be a complete concept plan under Metro’s definition.

2.1 Title 11 Elements

The elements of Title 11 covered under this plan are shown below. Title 11 references are in italics.

1. Show the general locations of any residential, commercial, industrial, institutional and public uses...proposed sewer, park and trail, water and stormwater systems...any proposed...arterial facilities, regional transit and trail facilities...proposed connections of these systems and facilities, if any, to existing systems. (3.07.1110(C)(1) and3.07.1110(C)(2)(a)(b)(c))

Proposed land uses and systems are discussed and shown in Section 5, Preferred Alternative. General recommendations for these items are found in Section 6 and the technical memoranda in Appendix C.

2. Show water quality resource areas, flood management areas and habitat conservation areas that will be subject to performance standards under Titles 3 and 13 [of the Urban Growth Management Functional Plan]. (3.07.1110(C)(5))

All water quality resource areas, flood management areas, and habitat conservation areas subject to state, regional, and local regulation within the DHUR are protected and deemed less desirable for development in this Concept Plan (see Figure 2).

3. Be coordinated with the comprehensive plans and land use regulations that apply to nearby lands already within the UGB. (3.07.1110(C)(6))

The City of Forest Grove is currently updating its comprehensive plan; therefore it was not fully available for review and thorough coordination. However, research on a broad range of regulatory issues, from the state level to local Forest Grove planning documents, provided a foundation of regulatory outcomes to be met by the Concept Plan. All regulatory guidance is documented within each technical memorandum in Appendix C. As Oregon’s state planning rule mandates that all planning documents be coordinated and consistent with each other, it is assumed that a concept plan in line with all of these documents will be consistent, not only with state and regional guidance, but also the City’s comprehensive plans and land use regulations.

4. Provisions that ensure zoned capacity for the number and types of housing units, if any, specified by the Metro Council pursuant to Section 3.07.1455B(2). (3.07.1120(C)(3))

Title 11 does not currently include specific density requirements for concept planning areas. Section 3.07.1455B(2) of the Functional Plan

Title 11 Elements

The elements of Title 11 covered under this plan are shown below. Title 11 references are in italics.

1. Show the general locations of any residential, commercial, industrial, institutional and public uses...proposed sewer, park and trail, water and stormwater systems...any proposed...arterial facilities, regional transit and trail facilities...proposed connections of these systems and facilities, if any, to existing systems. (3.07.1110(C)(1) and3.07.1110(C)(2)(a)(b)(c))

Proposed land uses and systems are discussed and shown in Section 5, Preferred Alternative. General recommendations for these items are found in Section 6 and the technical memoranda in Appendix C.
specifically states, “If the design type designation authorizes housing, the Council shall designate an appropriate average density per net developable acre consistent with the need for which the UGB is expanded” (Metro, 2011).

In August 2010, Metro released Making a Great Place: Growth Management Assessment that included a recommendation on urban and rural reserves. It assumed that UGB expansions will develop with a more compact efficient form in response to market demands and policy and investment choices over the 50-year reserve timeframe (Metro, 2010a). The Metro document includes an assumed average density of 15 units per net buildable acre while allowing for variations over time and across different geographies. This assumption was based on the fact that urban reserve areas were originally sized using 15 units per net buildable acre.

5. A conceptual street plan that identifies internal street connections and connections to adjacent urban areas to improve local access and improve the integrity of the regional street system. For areas that allow residential or mixed-use development, the plan shall meet the standards for street connections in the Regional Transportation Functional Plan. (3.07.1120(C)(7))

The DHUR is bordered by two county arterials: Thatcher Road on the northeast and Gales Creek Road on the south. A single collector road, David Hill Road, which is only partially paved and lacks urban standards, bisects the urban reserve. The transportation system proposed within the urban reserve will feature new walkable, bikeable, paved neighborhood collector roads and local residential streets. The transportation system was designed to provide multi-modal access and circulation to existing, adjacent neighborhoods as well as consider connectivity to other future employment and industrial areas outside of the urban reserve and within Forest Grove.

2.2 Title 11 Outcomes

Concept Plan outcomes required by Title 11 contributed to the development of the concept plan alternatives and the evaluation criteria used to determine a preferred alternative. These are discussed in further detail in Section 5. The outcomes covered by the Concept Plan are listed below, with Title 11 references in italics.

1. ... a mix and intensity of uses that will make efficient use... (3.07.1110(B)(1)(a))

The preferred alternative proposes a “clustered” pattern of development along David Hill Road and in the northeastern section near Thatcher Road. Clustering development around David Hill Road aligns with existing City of Forest Grove plans for the siting of future public services.

2. ... a development pattern that supports pedestrian and bicycle travel... (3.07.1110(B)(1)(b))

The preferred alternative proposes a “clustered” pattern of development with higher density in areas near mixed-use development. This development pattern is conducive to pedestrian and bicycle travel within the urban reserve.
3. ... a range of housing of different types ... (3.07.1110 (B)(1)(c))

The preferred alternative provides a range of housing densities which allows for a variety of types.

4. ... sufficient employment opportunities ... (3.07.1110 (B)(1)(d))

Provisions for mixed-use areas in the preferred alternative partially contribute to employment opportunities within the urban reserve.

5. ... well-connected systems of streets, bikeways, parks, recreational trails and public transit... (3.07.1110 (B)(1)(e))

Transportation within the urban reserve will be interconnected and provide for multiple modes. Trails, bikeways, and pedestrian paths will link housing to key destinations where appropriate, and consider connections to public transit service as densities and population allow.

6. ... well-connected system of parks, natural areas and other public open spaces (3.07.1110(B)(1)(f))

Over half of the urban reserve is preserved for natural areas and open spaces because of the restrictive topography and existing ecological systems. The preferred alternative proposes trails throughout the DHUR that are connected to existing and planned trails and parks.

7. ... protection of natural ecological systems and important natural landscape features (3.07.1110(B)(1)(g))

Natural ecological systems and important natural landscape features are protected and deemed not suitable for development in this Concept Plan (see Figure 2 and Section 2, Existing Conditions).

8. ... avoidance or minimization of adverse effects on farm and forest practices ... (3.07.1110(B)(1)(h))

The Concept Plan does not specifically address adverse effects on farm and forest practices. Land use patterns were strategically located to ensure appropriate buffers between land uses proposed for development and rural or agricultural land uses.
3 Public Involvement

Community values and priorities for the DHUR were integral to the development of the DHUR Concept Plan and will continue to be a crucial element throughout the remaining phases of the concept plan planning process. At the beginning of this project, a Public Involvement Plan was created that identified key stakeholder groups and a public involvement strategy. Public participation efforts were crafted to provide two-way information sharing that:

- Provided access to a broad range of stakeholder groups
- Informed Vista Planning about community concerns, values, and priorities for the DHUR
- Offered a variety of ways to keep the community informed and engaged in the concept plan planning process

Public involvement consisted of outreach and activities. Written materials were developed to educate about the planning process and keep the community up-to-date with ways to get involved. In addition, numerous avenues were established for the community to contact the project team via electronic communication including a project-specific website, email, and phone number. Participatory activities were designed to engage the community and identify shared interests for the DHUR among a range of stakeholder groups.

In total, 119 DHUR stakeholders were engaged in the planning process, several on multiple occasions.

Table 1 provides an overview of the project public involvement outreach and activities. More detailed information is included in the Public Involvement Report in Appendix D.

Findings from the public involvement outreach and activities revealed values and priorities for the DHUR among a range of stakeholder groups. Based on common themes, the following 10 categories were revealed:

1. Don’t develop in areas with natural constraints and along Creekwood Place
2. Develop along and north of David Hill Road
3. Protect native trees, habitats, ecosystems, and greenspaces
4. Maintain views
5. Balance the character of Forest Grove with the essence of David Hill
6. Provide a variety of housing types
7. Incorporate sustainability
8. Provide safe and connected transportation
9. Respect property rights
10. Provide transparency in the planning process

These findings informed the creation of the project’s guiding principles and evaluation criteria, which were integral to the process of identifying the preferred alternative.
### OUTREACH

#### Written Materials
- A letter with project information was mailed to all DHUR property owners.
- An invitation to attend the Community Workshop was included in all Forest Grove resident utility bills.
- 15 posters advertising the Community Workshop were hung in storefront windows and community boards around Forest Grove.
- 100 Save-the-date fliers announcing the Community Workshop were left at Forest Grove restaurants and community gathering spaces.
- 1 notice and 1 article advertising the Community Workshop were printed in the Forest Grove newspaper, the *News-Times*, 2 weeks and 1 week prior to the Community Workshop, respectively.
- 100 DHUR concept plan fact sheets were created and disseminated during community events.
- 50 Urban Reserve Frequently Asked Questions (FAQs) were disseminated during community events.
- A letter announcing the posting of draft alternatives and opportunities for comment were sent to DHUR public involvement participants and DHUR property owners.
- An invitation to attend the draft alternative open house was sent to DHUR public involvement participants and DHUR property owners.

#### Electronic Communications
- 66 unique visits were made to the project website.
- 15 incoming and 22 outgoing emails were exchanged via the project email address.
- 10 incoming phone calls were received and 20 outgoing calls were made via the project phone line.

### ACTIVITIES

#### Meetings and Activities
- 14 formal and informal interviews were conducted with 10 stakeholders.
- 2 table talks were executed prior to the Community Workshop. An estimated 75 people approached Vista Planning at the table talks where fact sheets, FAQs and save-the-date fliers were distributed.
- 22 people attended the Property Owner Coffee Klatch, including landowners and landowner families. 11 properties within the DHUR were represented.
- 20 people attended the 3-hour Community Workshop. Attendees represented DHUR landowners, residents of neighborhoods adjacent to the urban reserve, residents of the broader Forest Grove community, and a representative of the Forest Grove Citizen Involvement Committee.
- 22 people responded to the DHUR survey.
- 1 DHUR property owner attended the Draft Alternative Open House.
- 14 individuals commented on the DHUR draft alternatives.

### TABLE 1

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<tr>
<th>Public Involvement Outreach and Activities</th>
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14 David Hill Urban Reserve Concept Plan
4 Guiding Principles

4.1 Purpose

Guiding principles were developed to reflect the vision and values underlying the Concept Plan. They informed the development of the concept plan alternatives and guided the development of the evaluation criteria which was used to determine the preferred Concept Plan alternative.

4.2 Development

The guiding principles are largely underpinned by Metro’s Title 11 and community input.

- Integrates David Hill with greater Forest Grove – The David Hill Urban Reserve will be well integrated with existing and surrounding areas, while maintaining the small town character of Forest Grove. It will contribute to Forest Grove’s vision of being a “balanced community” while preserving the community’s rich farming and forest identity.
- Preserves and protects natural resource areas – Natural resource areas will be protected, thus resulting in a well-coordinated system that is integrated with both the urban and rural landscapes.
- Supplies diverse housing options – Long-term livability of the surrounding area, including consideration for future population growth and housing needs (including housing type, price range, lot size, and tenure) are encouraged.
- Provides safe, connected transportation choices that support surrounding land uses – Multi-modal transportation choices that encourage walking, biking, and public transit use, in addition to driving, are included. The transportation system will be connected and integrated with the existing City of Forest Grove and larger regional land use pattern and transportation system.
- Provides public services efficiently – New infrastructure is equitably distributed and cost-effective.

Community input informed guiding principles.

Site visits with property owners informed guiding principles.
5 Preferred Alternative

5.1 Development

With direction from the guiding principles, five concept plan alternatives were developed. These were modified based on community input, comments from the Forest Grove Planning Commission, and feedback from City of Forest Grove staff. The resulting alternatives were then scored according to evaluation criteria to ultimately select a preferred alternative. The four alternatives not selected as preferred are shown in Appendix E.

5.2 Evaluation Criteria

The five concept plan alternatives were evaluated based on how well they reflected the five guiding principles. The guiding principles are a reflection of regulatory outcomes and community values and represent overarching goals which the preferred concept plan alternative should achieve. Goals tend to be broad and subjective, and create the potential for introducing biases into an evaluation process. To help mitigate such biases and provide transparency in the selection process, evaluation criteria were developed for each goal to provide specific, less subjective parameters for assessing the concept plan alternatives.

A matrix was developed to evaluate and score each alternative. In this matrix, each guiding principle contains several evaluation criteria. To ensure no guiding principle was given undue importance, the guiding principles were weighted evenly. The evaluation criteria either came directly from Title 11: Planning for New Urban Areas of Metro's Urban Growth Management Functional Plan, or were developed based on client direction, citizen sentiment, or best practices. To assess how well each concept plan alternative met the guiding principles, metrics were created for each evaluation criteria. The concept plan alternatives were awarded points based on how well they performed against the metrics. The alternative which received the highest points was determined to be the preferred alternative.

It is assumed that any development which occurs on the DHUR will be in compliance with the Forest Grove Development Code; therefore, criteria related to specific local development are not included. Criteria related to cost estimation, funding analysis, housing market analysis, intergovernmental agreements, and school coordination are also not accounted for in this evaluation process. Similar to the overall Concept Plan, the preferred alternative represents the beginning process for considering land use patterns on the urban reserve. As it does not meet all elements of Title 11, it will require further analysis and evaluation before being considered a complete concept plan.

The evaluation criteria matrix is shown in Table 2. The scoring matrix is included as Appendix F.
Table 2

<table>
<thead>
<tr>
<th>Guiding Principles</th>
<th>Weight</th>
<th>Evaluation Criteria</th>
<th>Points</th>
<th>Metric</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Integrates David Hill with greater Forest Grove – The David Hill Urban Reserve will be well integrated with existing and surrounding areas, while maintaining the small town character of Forest Grove. It will contribute to Forest Grove’s vision of being a “balanced community” while preserving the community’s rich farming identity.</td>
<td>20%</td>
<td>1.1. Maintains small town rural character with a development pattern that is well integrated and compatible with existing development in Forest Grove.</td>
<td>0</td>
<td>Development pattern does not currently exist in greater Forest Grove.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.2. Select viewsheds to and from the David Hill Urban Reserve are protected by preserving existing trees and allowing provisions for future trees to be planted as additional buffers.</td>
<td>0</td>
<td>Viewshed is affected with no opportunity to plant future buffers.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.3. Sufficient employment opportunities to support a healthy economy, including, for proposed employment areas, lands with characteristics such as proximity to transportation facilities, needed by employers. Title 11, 3.07.1110(B)(1)(d).</td>
<td>0</td>
<td>No employment opportunities exist and contributes only to a Bedroom Community.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.4. A well-connected system of parks, natural areas and other public open spaces. Title 11, 3.07.1110(B)(1)(e).</td>
<td>0</td>
<td>Parks, natural areas, or public open spaces are not connected.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.5. Avoidance or minimization of adverse effects on farm and forest practices and important natural landscape features on nearby rural lands. Title 11, 3.07.1110(B)(1)(h).</td>
<td>0</td>
<td>Farm/forest practices on nearby lands is eliminated or adversely impacted.</td>
</tr>
<tr>
<td>2. Preserves and protects natural resource areas – Natural resource areas will be protected, thus resulting in a well-coordinated system that is integrated with both the urban and rural landscapes.</td>
<td>20%</td>
<td>2.1. Protection of natural ecological systems and important natural landscape features. Title 11, 3.07.1110(B)(1)(g).</td>
<td>0</td>
<td>Ecological systems and natural landscape features are adversely impacted.</td>
</tr>
<tr>
<td>3. Supplies diverse housing options – Long-term livability of the surrounding area, including consideration for future population growth and housing needs (including housing type, price range, lot size, and tenure) are encouraged.</td>
<td>20%</td>
<td>3.1. A range of housing of different types, tenure and prices addressing the housing needs in the prospective UGB expansion area in the context of the housing needs of the governing city, the county, and the region if data on regional housing needs are available, in order to help create economically and socially vital and complete neighborhoods and cities and avoiding the concentration of poverty and the isolation of families and people of modest means. Title 11, 3.07.1110(B)(1)(c).</td>
<td>0</td>
<td>Only one housing type present.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3.2. Addresses Forest Grove’s projected need for additional housing of 10,600 housing units needed by 2060.</td>
<td>0</td>
<td>Meets less than 5% of projected 2060 housing need for City of Forest Grove.</td>
</tr>
</tbody>
</table>
4. Provides safe, connected transportation choices that support surrounding land uses – Multi-modal transportation choices that encourage walking, biking, and public transit use, in addition to driving, are included. The transportation system will be connected and integrated with the existing City of Forest Grove and larger regional land use pattern and transportation system.

<table>
<thead>
<tr>
<th>Guiding Principles</th>
<th>Weight</th>
<th>Evaluation Criteria</th>
<th>Points</th>
<th>Metric</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1. Supports expanded trail network throughout the David Hill Urban Reserve.</td>
<td>20%</td>
<td>Development pattern is disconnected with no viable trip generators, such as retail, professional and civic services, exist within 1/4 mile for pedestrians and/or 3 miles for bicyclists.</td>
<td>0</td>
<td>No additional trails beyond what is already planned for the David Hill Urban Reserve are proposed</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Development pattern is connected. Viable trip generators exist either within 1/4 mile for pedestrians or 3 miles for bicyclists, but not both.</td>
<td>1</td>
<td>Short connector trails only link to existing planned trail network</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Development pattern is connected and viable trip generators exist within 1/4 mile for pedestrians AND 3 miles for bicyclists.</td>
<td>2</td>
<td>Contains additional trails beyond what is already planned for the David Hill Urban Reserve</td>
</tr>
<tr>
<td>4.2. A development pattern that supports pedestrian and bicycle travel to retail, professional and civic services. Title 11, 3.07.1110(B)(1)(b).</td>
<td>20%</td>
<td>Density of 4 to 5 dwelling units per acre or less for local bus service (1 bus per hour)</td>
<td>0</td>
<td>Density of 4 to 5 dwelling units per acre or less for local bus service (1 bus per hour)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Density of at least 7 dwelling units per acre for intermediate bus service (1 bus per 30 minutes)</td>
<td>1</td>
<td>Density of at least 7 dwelling units per acre for intermediate bus service (1 bus per 30 minutes)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Density of at least 15 dwelling units per acre for frequent bus service (1 bus every 10 minutes)</td>
<td>2</td>
<td>Density of at least 15 dwelling units per acre for frequent bus service (1 bus every 10 minutes)</td>
</tr>
<tr>
<td>4.3. A mix of land uses that provide localized density levels which support the provision of economically viable public transit options (based on general guidelines issued by the Institute of Transportation Engineers).</td>
<td></td>
<td>Multi-modal transportation options do not exist for residential land uses</td>
<td>0</td>
<td>Transportation options for some modes exist for residential land uses, but not all (such as either biking or walking, but not intermediate transit service)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Transportation options for all modes exist for residential land uses, above and beyond what will be required per the local development code</td>
<td>1</td>
<td>Transportation options for all modes exist for residential land uses, above and beyond what will be required per the local development code</td>
</tr>
<tr>
<td>4.4. Well connected systems of streets, bikeways, parks, recreational trails and public transit that link to needed housing so as to reduce the combined cost of housing and transportation. Title 11, 3.07.1110(B)(1)(e).</td>
<td></td>
<td>Alignment with existing City of Forest Grove plans that propose siting for future public services (such as the Water Master Plan, Sanitary Sewer Master Plan, Transportation System Plan, and Economic Opportunities Analysis).</td>
<td>0</td>
<td>Development pattern conflicts with existing City plans</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Development pattern aligns with only some existing City plans</td>
<td>1</td>
<td>Development pattern aligns with existing City plans</td>
</tr>
<tr>
<td>5. Provides public services efficiently – New infrastructure is equitably distributed and cost-effective.</td>
<td>20%</td>
<td>A mix and intensity of uses that will make efficient use of the public systems and facilities described in subsection C. Title 11, 3.07.1110(B)(1)(e).</td>
<td>0</td>
<td>Lower density, spread development</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Higher density, mix of spread and clustered development</td>
<td>1</td>
<td>Higher density, mix of spread and clustered development</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Higher density, clustered development</td>
<td>2</td>
<td>Higher density, clustered development</td>
</tr>
</tbody>
</table>

Notes
1. A Bedroom Community is one where residents commute outside of the city for work due to lack of major employment centers. Typically, these communities have little commercial, industrial, or retail activity. The term suggests that residents sleep in the city, but work elsewhere. The results of Forest Grove’s 2010 Annual Town Meeting suggested that the city of Forest Grove does not want to be a bedroom community.
2. A Balanced Community is one that offers relative balance of jobs, housing, services, and recreational amenities at a scale that is appropriate for a City’s size. The results of Forest Grove’s 2010 Annual Town Meeting showed that the citizens wanted to be a balanced community that retained small town character. (City of Forest Grove, 2010b).
5.3 Preferred Alternative

The five alternatives were scored and ranked according to the evaluation criteria and metrics described above. The alternative with the most overall points was deemed the preferred alternative. Concept D scored 89.5 out of a possible 100 points. It is important to note that Concept B scored 88.5, a single point less than Concept D. Concept B, however, does not achieve sufficient average density to assure approval by Metro. Implementing Concept B in conjunction with a program to transfer density from the DHUR to another location (whether in Forest Grove or another city) could satisfy Metro. However, investigating the legal and market conditions necessary to implement such a strategy adds a level of coordination and complexity that falls outside the scope of this concept plan. For these reasons, Concept D is the preferred alternative.

The preferred alternative outperformed the other alternatives by aligning 100 percent (and scoring the maximum 20 points) with Guiding Principles 2, 3, and 5 – and scored nearly as well on Guiding Principle 4 with 17.5 out of 20 points.

Concept D (the preferred alternative):

Integrates David Hill with greater Forest Grove by proposing a development pattern which preserves much of the rural character of the DHUR. Opportunities for mixed-use development in a neighborhood town center contribute to Forest Grove’s vision of being a balanced community, by providing an opportunity for employment and local services. A neighborhood town center encourages social interaction, thus contributing to the desired small town feel. Parks and open spaces are connected through enhanced trail systems that offer safe, scenic routes and connect to key destinations such as the neighborhood town center and possible public transit routes. Development is strategically located along and north of David Hill Road such that buffers can protect and minimize impacts to nearby farm and forest practices.

Preserves and protects natural resource areas by restricting development in water quality management areas, areas with slopes greater than or equal to 25 percent, and areas identified as forest/woodland vegetation. The preferred alternative protects 160.7 acres — 51 percent of the entire urban reserve — as open space and natural area. These areas protect stream water quality, provide for wildlife habitat, minimize landslide hazard, and provide community benefits such as buffering noise and maintaining natural character. In addition, the clustered development pattern encourages creative site planning sensitive to natural features.

Supplies diverse housing options by clustering residential development around a park and neighborhood center north of David Hill Road and including high-density residential (with some mixed-use) and medium/high-density residential development. Extending outward from the neighborhood center are areas of medium-density and low-density residential, which provide additional housing choices and serve to smoothly transition more intense uses into the existing low-density development pattern. The higher densities of the neighborhood center allow a larger area in the southwest of the reserve to be preserved as rural. Establishing this development pattern provides the opportunity for a diversity of lot sizes, owner-occupied and rental units, single-family homes, and multi-family units. It also addresses more than 10 percent of the projected 10,560 housing units needed for Forest Grove by 2060. Specific details include the following:

- Approximate total buildable acres: 126.1
- Approximate total dwelling units: 1,323
- Approximate population at build-out: 3,546
- Average density: 10.5 dwelling units per acre

Provides safe, connected transportation choices that support surrounding land uses by focusing development around a neighborhood center with sufficient residential density and opportunities for mixed-use, thus creating a vibrant environment.
conducive to walking, biking, and transit. Bicycle and pedestrian paths through natural areas and proposed parks align with existing regional trail plans and offer safe, scenic routes. They also serve a functional purpose by connecting residential areas to key destinations or future transit. Quality pedestrian and bicycle amenities are a partial solution to encourage alternate travel modes; a nearby destination worth walking or bicycling to fulfill the rest.

Two additional neighborhood collector roads north of David Hill Road improve connectivity between the neighborhood center and Thatcher Road. These new roads also ensure greater connectivity between the residential areas of the DHUR, the area of unincorporated Washington County currently designated as “future urban,” and the potential industrial and employment developments of Urban Reserve 7B. The preferred alternative provides approximately 8.3 acres of multi-modal paved roads and 2.5 miles of trails.

In addition, localized density levels help support public transit provision which is dependent upon a certain level of ridership.

Provides public services efficiently by clustering development around David Hill Road, thus aligning with existing City of Forest Grove plans for siting future public services. Per Title 11, the preferred alternative provides a mix and intensity of uses that make efficient use of public systems and facilities through their higher local densities clustered toward the north of the DHUR.

The clustered development pattern minimizes road, driveway construction, and paving which contribute to impervious surfaces, subsequently minimizing surface- and stormwater runoff and possibly reducing the need for built infrastructure to address these issues. Though not explicitly evaluated, clustered development patterns can encourage infrastructure and maintenance cost savings through decreased paved areas and reduced utilities service areas. The preferred alternative is shown in Figure 7.
6 Recommendations

The latest planning innovations and best practices of today may likely become standard practice by the time a concept plan for the DHUR is implemented. The proactive approach of incorporating best practices early and often in the planning process and implementation will promote high quality and efficient development of the DHUR. The following list of recommendations is drawn from research on best practices, evaluation of recently implemented concept plans in the region, and assessment of conditions in the DHUR and the City of Forest Grove. They represent the beginning framework for ensuring successful planning and development of the DHUR.

6.1 Creating a Vision

Creating a concept plan for the DHUR is an opportunity for the community to articulate a coherent vision for the future and implementation strategies to achieve it, such as being a “balanced community.” The Concept Plan planning process thus far represents the initial stages for reinforcing such a vision; it incorporates the City’s desire to maintain its small town charm while allowing land uses which promote social interaction and some degree of economic activity. The following recommendations attempt to continue the vision refining process for DHUR and ensure its contribution to the larger vision for greater Forest Grove.

- Implement an inclusive and rigorous public participation strategy to maintain accountability and inform the vision for the planning process
- Provide transparency in the planning process by maintaining accessible, clear, and open lines of communication with stakeholders and the broader community

6.2 Next Steps

The development of the DHUR will occur as the City of Forest Grove grows in the next 20 – 50 years. The following items can help facilitate that development.

- Further urbanize the unincorporated area of Washington County in between the DHUR and Urban Reserve 7B
- Introduce main street commercial along Thatcher Road east of the DHUR
- Develop the DHUR and surrounding areas with a phased approach beginning with (1) the area of unincorporated Washington County bordering the northeastern portion of the DHUR, (2) the northern section of the DHUR above David Hill Road and the area immediately south of David Hill Road, and (3) the remaining area of the DHUR
- Conduct a financial analysis estimating the cost of providing public services and infrastructure to DHUR
- Conduct a market feasibility analysis for potential development within the DHUR
- Conduct transportation modeling to ensure land use and transportation are mutually supportive
- Coordinate with Forest Grove School District to ensure they have the capacity to accommodate new school-aged residents
6.3 Housing

The DHUR is most suitable for residential development largely because of topography. Viewsheds to and from the DHUR and meeting Metro’s density recommendations are critical. Therefore, the following items are recommended:

- Provide the opportunity for a range of needed housing types, including single-family, multi-family, attached, and detached
- Locate development considering the limits of the topography
- Locate development to protect viewsheds to and from the DHUR
- Utilize density in a way that supports walking, bicycling, and using public transit
- Achieve an average net density of at least 10 to 12 dwelling units per acre based on Metro recommendations and previously approved concept plans in Washington County

Existing housing adjacent to the DHUR.

6.4 Infrastructure

The primary issues for providing water and sewer service to the DHUR concern topography (especially steep slopes), site elevation, the cost of developing infrastructure, and the existence of, and plan for, infrastructure. In light of these, the following items are recommended:

- Plan in accordance with the Water and Sanitary Sewer Master Plans, City of Forest Grove Comprehensive Plan, and land uses on nearby lands within the UGB.
- Develop the proposed reservoir and associated infrastructure
- Consider the siting and size of the proposed reservoir to ensure water supply and distribution to the DHUR
- Use existing and planned infrastructure along David Hill and Thatcher Roads as much as possible

6.5 Natural Resource Areas

To protect natural ecological systems and important natural landscape features, the following actions are recommended:

- Minimize development in areas identified as forest/woodland vegetation with DBH greater than or equal to 6 inches
- Restrict development in water quality management areas
- Minimize landslide hazards by restricting development in areas with slopes greater than or equal to 25 percent
- Place development, roads, and utility infrastructure in such a way as to minimize tree removal
- Revise the Forest Grove Development Code to require geotechnical analysis of potential development sites in the DHUR with slopes of 10 percent or greater to understand landslide hazard and maintain consistency with Forest Grove’s current Comprehensive Plan
6.6 Parks and Open Space

- Meet or exceed Forest Grove Parks, Recreation & Open Space Master Plan (2002) standards of service based on population projections within the DHUR
- Establish a neighborhood park in the DHUR
- Implement plans for the regional trail system where they abut or penetrate the DHUR
- Incorporate potential DHUR parks into future Parks Master Plan updates to ensure funding through System Development Charges (SDCs)

6.7 Stormwater

Much of the topography of the DHUR consists of steep slopes. In addition, the high clay content in the soil presents issues with infiltration or water percolating through the soil. The Low Impact Development Approaches (LIDA) facilities (such as infiltration planters and bioswales) require ongoing maintenance to ensure they are functioning as designed. To best manage storm and surface water to protect natural ecological systems and important natural landscape features, the following items are recommended:

- Create a maintenance plan with a regular maintenance routine
- Use LIDA in conjunction with conventional water quality facilities throughout the urban reserve to manage runoff on individual sites and the street ROW. LIDA should be designed and constructed according to Clean Water Services Design and Construction Standards and the LIDA Handbook
- Limit impervious development/infrastructure wherever possible
- Explore the possibility of incorporating storm and surface water management with parks and open spaces
- Explore the possibility of using porous surfaces for roadways and sidewalks to reduce runoff and environmental impacts
- Conduct a site evaluation to validate soil ratings developed by the NRCS

6.8 Transportation

The transportation system within the DHUR should allow for safe, connected, multi-modal travel opportunities. It is important to recognize the long-term impacts of a transportation system and to ensure that any proposed transportation system through the DHUR allows the opportunity to make transportation choices. Based on the existing conditions and regulatory framework, the following items should be considered when planning a transportation system for the DHUR:

- Establish road networks with no higher than a neighborhood collector functional classification to offer adequate mobility through the DHUR and access to other destinations
- Incorporate street calming measures to maintain slower traffic speeds
- Design neighborhood collector ROWs in accordance with City of Forest Grove Development Codes to allow for comfortable travel of all modes
- Conduct traffic impact analysis and capacity-based needs studies to determine road alignment
- Evaluate the viability of extending public transit into the DHUR
- Involve emergency response personnel in the transportation planning process for the DHUR
- Incorporate best management practices for transportation planning as much as possible
7 References


City of Forest Grove. 2011b. *Growth Capacity Analysis*.


City of Forest Grove. 2010d. *Forest Grove Transportation Plan*. August.


City of Forest Grove. 2009a. *Buildable Lands Analysis*.


City of Forest Grove. 2007. *Community Trails Master Plan*. October.


About Vista Planning

Vista Planning is composed of six graduate students in the final stages of the Master of Urban and Regional Planning program at Portland State University. They specialize in land use, environment, transportation, and community development planning. In January 2011, the City of Forest Grove’s Community Development Department approached Vista Planning to develop a concept plan for the David Hill Urban Reserve. The David Hill Urban Reserve Concept Plan is Vista Planning’s capstone project.

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Misty Schymtzik, Publications, Stormwater, and Water and Sewer Infrastructure
Lisa Peffer, Public Involvement
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