



Site Plan and Design Review Staff Report and Recommendation

Community Development Department, Planning Division

REPORT DATE: January 25, 2019

HEARING DATE: February 4, 2019

LAND USE REQUEST: Site plan approval and design review of a proposed 9-unit apartment building

FILE NUMBER: 311-18-000035-PLNG

PROPERTY LOCATION: 2838 19th Avenue

LEGAL DESCRIPTION: Washington County Tax Lot 1S306AA06500

OWNER/APPLICANT(S): Applicant: David Green Construction
161 NW Adams Avenue, Hillsboro, Oregon 97124
Property Owner: Same

**COMPREHENSIVE PLAN
MAP AND ZONING MAP
DESIGNATIONS:** Community Commercial (CC)
Community Commercial (CC)

**APPLICABLE
STANDARDS
AND CRITERIA:** City of Forest Grove Development Code
§10.3.300 - .340 *Commercial and Mixed Use Zones*
§10.7.200 et. seq. *Solid Waste and Recycling*
§10.8.000 et. seq. *General Development Standards*

City of Forest Grove Design Guideline Handbook
Focus Area III *Multi-Unit Residential Focus Area*

REVIEWING STAFF: James Reitz (AICP), Senior Planner

RECOMMENDATION: Staff recommends approval with conditions

I. LAND USE HISTORY

The project site is a vacant lot. It had been previously occupied by a single-family home, which was demolished in 2005.

DC §10.2.300 et. seq. *Design Review* requires review of new multi-family housing (defined as three or more units). That same section also requires that the Planning Commission review all projects with more than five units. The Commission can act on a request for design review after holding a public hearing pursuant to DC §10.1.600 et. seq. Type III Process.

The application was submitted on November 13, 2018. Public notice for this application was mailed to property owners and residents within 300 feet of the site on January 14, 2019 as required by DC §10.1.610. Notice of this request was also provided to the Plans Review Board, and published in the *News Times*.

Comments received from the Plans Review Board pertain to complying with various standard building and fire code requirements that will be addressed through the building permit review process. Additional comments will be discussed later in this report, along with staff's recommendations for conditions of approval.

As of the writing of this report, no comments have been received from the public.

Note: This report addresses two concurrent review processes: site review and design review. Staff has examined the proposed site plan for compliance with the standards and specifications of Development Code Article 3 *Zoning Districts* and Article 8 *General Development Standards*. While the Commission's primary responsibility is to review the building and determine how well it complies with the provisions of Design Guideline Handbook *Multi-Unit Residential Focus Area*, it will also need to approve the site plan. Staff's analysis of how the application addresses the design guidelines is below, in Section II(13)(G).

II. PROJECT DESCRIPTION AND ANALYSIS

1. Description of Proposal: The proposal would result in the construction of 9 apartment units in a single building. All would be two-bedroom units. Each unit would have a dedicated carport space, and 9 surface parking stalls are also proposed, for a total of 18 spaces. The site would be completely built-out with this project.

The building would be 2 stories tall with a gabled roof running the length of the building. It would be sided with Hardie-Plank; trim would also be a Hardie product. The bedroom windows would be 6 x 4 feet, while the living room windows would be 6 x 5 feet. The sliding glass doors would be 6 x 7 feet.

The exterior colors would be earth tones. Roofing would be 30-year fiberglass laminate shingles.

2. Site Examination: The project site is somewhat "L" - shaped and is vacant. The site slopes away (south) from 19th Avenue. A public sanitary sewer line and a public storm sewer line are located in an easement that abuts the east property line. Further discussion of the site's utilities follows in Public Services section below.

Existing Comprehensive Plan Designation and Zoning of Site and Area

LOCATION	COMPREHENSIVE PLAN DESIGNATION	ZONE DISTRICT	LAND USE
Site	Community Commercial (CC)	Community Commercial (CC)	Vacant
North	Community Commercial (CC)	Community Commercial (CC)	Shopping Center
South	Low Density Residential – Standard (LDR-B)	R-7 Single-Family Residential	Single-Family Residential
East	Community Commercial (CC)	Community Commercial (CC)	Single-Family Residential
West	Community Commercial (CC)	Community Commercial (CC)	Apartments

3. Site Design: The site plan consists of a single apartment building with carports, a two-way driveway, and surface parking located south of the building. The building would be sited near the west side of the property; this is the only viable location because of an existing public utility easement running along the entire length of the east property line. A walkway would run parallel to the building and would connect the car park with all the units and the 19th Avenue sidewalk. Each unit would have a patio. The trash/recycling enclosure would be located in the southeast corner of the lot.

4. Building Setbacks and Height Requirements:

- The site is located in the Community Commercial (CC) zone district. No front, side, or rear setbacks apply. The building would be located about 10 feet from the 19th Avenue right-of-way (north property line), 10 feet from the west property line, 75 feet from the south property line, and 35 feet from the east property line. The trash enclosure is proposed to be located about 5 feet from the east and 10 feet from the south property lines.
- The height limit in the CC zone district is 45 feet. The height of the proposed apartment building would be about 26 feet at the roof peak.

As there are no setbacks required in the CC zone district, and the building height would be less than the maximum allowed, staff concludes that these provisions have been met.

5. Density: Site area is 0.53 acres. In the CC zone district, the minimum and maximum density is 16.22 to 30.00 DUA respectively. With 0.53 acres, the allowable density would be between 9 units (rounded up from 8.60) and 16 units (rounded up from 15.90). This application proposes 9 units. This criterion is satisfied.
6. Compatibility: The site abuts properties in various residential uses (see below for a vicinity and address map) -
- 2828 19th Avenue (to the west) is developed with apartments. They appear to be located about 5 feet off the common property line.
 - 2902 19th Avenue (to the east) is developed with a single-family home. Because this site is also located in the CC zoning district, its redevelopment with more intensive uses seems likely.
 - 2837 18th Avenue (to the south) is developed with a single-family home. It is located in the R-7 zoning district; no further development is likely.

- 2907 18th Avenue (to the southeast) is developed with two duplexes. The area closest to the common property line is developed with a driveway and surface parking. The site is located in the R-7 zoning district; no further development would be permitted under current Development Code standards.



Vicinity Map

- The boundary between the CC and R-7 zoning districts abuts the south property line and the southerly segments of the east and west property lines. DC §10.8.425 et. seq. *Buffering and Screening Standards* thus requires additional landscaping to minimize impacts on the adjacent single-family zone. Staff is recommending a **condition** to require buffering along the south property line in compliance with Table 8-3(D)(3) i.e. a 6-foot-tall wall and a 10-foot-wide landscape area. Staff is not recommending buffering along the east property line since the adjoining use is a driveway and parking. Staff is not recommending buffering along the west property line because the length of the segment would be incidental.
- Development of a vacant site with an apartment complex might result in off-site noise impacts. If noise issues do arise, FGC §91.030 et. seq. *Noise Regulations* regulates the intensity of allowable noise in both daytime and evening hours. FGC §91.034 *Maximum Permissible Sound Levels* caps the allowable volume in Noise Sensitive Areas (i.e., areas within residential and institutional zones) at 60 db during the daytime (7 a.m. to 10 p.m.) and 50 db at night (10 p.m. to 7 a.m.) Because the City has an existing ordinance in place to respond to potential noise complaints, staff concludes that there should be no significant neighborhood noise compatibility issues.

- On-building lights are proposed, along with a yard light near the center of the property. Staff has proposed a **condition** that lighting complies with the provisions of DC §10.8.755(C) *Luminous Standards* and DC §10.8.755(D) *Lighting Standards for Multi-Unit Development*.

Summary and conclusion: With the conditions noted above, the new apartment building would be compatible with the surrounding development.

7. Traffic and Circulation: The site would be served by a single driveway, taking access from 19th Avenue. DC §10.8.120(C) regulates minimum driveway width for multi-family dwellings; for two-way traffic the minimum width required is 20 feet. The proposed driveway would be 20 feet wide, in compliance with the requirement.

According to the ITE *Trip Generation Report 8th Edition*, each apartment unit would generate 6.65 Average Daily Trips (ADT). With 9 units, 59.85 trips per day would be expected. This number might be reduced because the site abuts 19th Avenue, which means the residents would have access to regularly-scheduled transit service and thus might be driving less than the ITE report forecasts. In addition, because the site is located across the street from a shopping center anchored by a large grocery store, vehicular shopping trips for groceries may also be reduced. Because the site has access to transit, is located on an Arterial street, and the anticipated traffic generation has already been accounted for in the TSP, no approval conditions appear necessary.

8. Sidewalks and Pedestrian Walkways:

- The existing 5-foot-wide curb-tight sidewalk along 19th Avenue is in disrepair and needs to be replaced. Current City standards stipulate a minimum 6-foot width for curb-tight sidewalks. Staff has included a **condition** to require the installation of a City-standard sidewalk.
- A concrete pedestrian walkway is proposed along the east side of the building. It would connect the car park south of the building to the 19th Avenue sidewalk on the north. DC §10.8.115(4) requires a minimum walkway width of four feet; the proposed walkway would be five feet wide.
- Staff has included a condition to require a minimum 6 ½-foot-width for walkways adjacent to the parking stalls. The additional width would allow for vehicle overhang, and would eliminate the need for wheel stops, which can be a tripping hazard and a barrier to mechanized parking area cleaning equipment. As the parking stalls as proposed would be 19 feet long, shortening them by 1 ½ feet would not compromise their functionality. In fact, the curb/wheel stop could be at the 16 ½-foot mark, and still function as a full-sized space.

Summary and conclusion: With the conditions noted above, pedestrian access requirements would be met.

9. Parking: DC §10.8.515 Table 8-5 *Parking Requirements* regulates the minimum number of parking stalls required (there are no maximums for residential uses). For multi-family housing, 1.50 spaces are required for each 2-bedroom unit. With nine 2-bedroom units, 14 parking spaces would be required.

There are 18 parking spaces proposed on-site: 9 car ports and 9 surface stalls (including one ADA accessible space). With 75 feet of frontage onto 19th Avenue, less the 20-foot-wide driveway area, 2 on-street spaces would also be available adjacent to the site. DC §10.8.510(H) states that "Parking spaces available along the

public street frontage or alleys are eligible in fulfilling parking requirements, except for single family dwellings and duplexes.” Including the on-street spaces, 20 parking stalls would be available overall, which would exceed the minimum number of spaces required.

10. Environmental Quality: There is no City record of any prominent environmental conditions. Runoff from new impervious surfaces would be treated in the on-site water quality facility. Additional landscaping is proposed to be installed (see below) that may improve air quality and reduce glare and heat.
11. Open Space and Landscaping: DC §10.8.205 requires that all multi-family dwellings with 20 or more units provide a children's play area, surrounded by a fence at least 30 inches high. Because this complex would have only 9 units, these provisions would not apply.

Proposed landscaping would be grass and native bushes. Staff is recommending a **condition** to require compliance with DC §10.8.415 *Landscaping General Standards* and DC §10.8.420(B) *Landscaping Required in the Community Commercial Zone*, in addition to the landscaping required in the buffer area as stipulated by DC §10.8.425 et. seq. *Buffering and Screening Standards* Table 8-3(D)(3) noted above.

12. Public Services: The application has been reviewed by the Engineering, Fire, Light and Power, Police, and Public Works departments. Specific comments included:
 - a. Sanitary Sewer: A sanitary sewer line is located in an easement running the entire length of the east property line. Capacity is adequate to serve this project.
 - b. Storm Drainage: A storm sewer line is located in an easement running the entire length of the east property line. Capacity is adequate to serve this project.

The applicant shall be conditioned to provide to the City a signed *Private Water Quality Facility Maintenance Agreement* for the private water quality facility. Clean Water Services and its member Cities have initiated a program to regularly inspect and support maintenance of privately owned water quality facilities. Staff has proposed a **condition** to ensure this document is submitted.

- c. Light and Power: A 10-foot-wide public utility easement will be required along 19th Avenue to provide for the installation of electrical facilities. Staff has included this in the recommended **conditions** of approval.
- d. Fire Department Review: The department noted these approval conditions -
 - Provide a fire hydrant on 19th Avenue as close as possible to the building's fire department connection (FDC).
 - The building address shall be at least 6 inches in height, while individual unit numbers shall be at least 4 inches in height. All digits shall contrast with their background.
 - The drive aisle shall be posted as a “No Parking – Fire Lane”.

These conditions will be attached to the building permit.

- e. Parks: Joe Gale Park at 3014 18th Avenue is located closest to the site. It is only a few hundred feet from the site's southern boundary, but because there is no direct access from the site to 18th Avenue, residents will have to walk or drive to

Maple Street and then 18th Avenue to reach it. The park has been improved with a play structure, picnic tables, ball fields, a restroom, horseshoe pits, a walking path, lawn and trees.

- f. Other Public Services: Police services are available and are adequate to serve the proposed use.

13. Site Development Approval Criteria: DC §10.2.450 *Site Development Review Criteria* are as follows:

The Planning Commission shall review and approve, conditionally approve, or deny the site development plan based on the following criteria:

- A. The site development plan complies with all applicable standards of the base zoning district, any overlay district, and the applicable general development standards of Article 8.

Finding: The site is located in the Community Commercial (CC) zone district. No front, side, or rear setbacks apply. The building would be located about 10 feet from the 19th Avenue right-of-way (north property line), 10 feet from the west property line, 75 feet from the south property line, and 35 feet from the east property line. The trash enclosure is proposed to be located about 5 feet from the east and about 10 feet from the south property lines.

Finding: The height limit in the CC zone district is 45 feet. The height of the proposed apartment building would be about 26 feet at the roof peak.

Finding: Site area is 0.53 acres. In the CC zone district, the minimum and maximum density is 16.22 to 30.00 DUA respectively. With 0.53 acres, the allowable density would be between 9 units (rounded up from 8.60) and 16 units (rounded up from 15.90). This application proposes 9 units.

Finding: The site would be served by a single driveway, taking access from 19th Avenue. DC §10.8.120(C) regulates minimum driveway width for multi-family dwellings; for two-way traffic the minimum width required is 20 feet. The proposed driveway would be 20 feet wide, in compliance with both the minimum and maximum driveway width requirements.

Finding: DC §10.8.515 Table 8-5 *Parking Requirements* regulates the minimum number of parking stalls required (there are no maximums for residential uses). For multi-family housing, 1.50 spaces are required for each 2-bedroom unit. With nine 2-bedroom units, 14 parking spaces would be required.

There are 18 parking spaces proposed on-site: 9 car ports and 9 surface stalls (including one ADA accessible space). With 75 feet of frontage onto 19th Avenue, less the 20-foot-wide driveway area, 2 on-street spaces would also be available adjacent to the site. DC §10.8.510(H) states that "Parking spaces available along the public street frontage or alleys are eligible in fulfilling parking requirements, except for single family dwellings and duplexes." Including the on-street spaces, 20 parking stalls would be available overall, which would exceed the minimum number of spaces required.

Summary and Conclusion: As the proposed density, setbacks, building heights, access and parking would meet or exceed Development Code standards, staff concludes that these provisions have been met.

- B. The site development plan ensures reasonable compatibility with surrounding uses as it relates to the following factors:

1. Building mass and scale do not result in substantial visual and privacy impacts to nearby residential properties; and

Finding: The site is located in the Community Commercial (CC) zoning district; no front, side, or rear setbacks apply except along the boundary between the CC and R-7 zoning districts. To comply with the provisions of DC §10.8.425 Table 8-3(D)(3), the applicant will be required to install a buffer along the site's south property line, including a 6-foot-tall wall and a landscape area at least 10 feet wide.

Finding: The height limit in the CC zone district is 45 feet. The height of the proposed apartment buildings would be about 26 feet at the roof peak.

Finding: The design of the trash enclosure will have to comply with the provisions of DC §10.7.205 et. seq. *Solid Waste Recycling and Storage*. In addition, to minimize views into the enclosure from the second floor of adjacent buildings, a roof over the enclosure will be required.

Summary and Conclusion: With the conditions noted above, there should not be any substantial visual or privacy impacts on nearby residential properties.

2. Proposed structures, parking lots, outdoor use areas or other site improvements that could cause substantial off-site impacts such as noise, glare and odors are oriented away from nearby residential uses and/or adequately mitigated through other design techniques.

Finding: As a residential project, off-site noise impacts are not anticipated. However, should noise become a complaint issue, the City does have in place a noise control ordinance that could be used to abate the nuisance.

Finding: The trash and recycling enclosure would be located at least 25 feet from the nearest house (located at 2837 18th Avenue). It would be further separated from this house by a 6-foot-tall wall and landscaping.

Finding: Lights are proposed on all units with dawn-to-dusk sensors on them. At least one addition light will be located on the south end of the building to light the carpark. To ensure adequate lighting is provided, staff is proposing a condition that lighting comply with the provisions of DC §10.8.750(C) and (D).

Summary and Conclusion: With the conditions described above, no visual, privacy, noise, glare or odor impacts are anticipated as a result of this project.

- C. The site development plan preserves or adequately mitigates impacts to unique or distinctive natural features including, but not limited to:

1. Significant on-site vegetation and trees;
2. Prominent topographic features; and

3. Sensitive natural resource areas such as wetlands, creek corridors and riparian areas.

Finding: No sensitive natural resource areas or prominent topographic features exist on the site. This criterion does not apply.

- D. The site development plan preserves or adequately mitigates impacts to designated historic resources.

Finding: No designated historic resources are present on or adjacent to the site. This criterion does not apply.

- E. The site development plan provides adequate right-of-way and improvements to abutting streets to meet the street standards of the City. This may include, but not be limited to, improvements to the right-of-way, sidewalks, bikeways, and other facilities needed because of anticipated vehicular and pedestrian traffic generation.

Finding: The existing 5-foot-wide curb-tight sidewalk along 19th Avenue is in disrepair and needs to be replaced. Current City standards stipulate a minimum 6-foot width for curb-tight sidewalks. Staff has included a **condition** to require the installation of a City-standard sidewalk.

Finding: According to the *ITE Trip Generation Report 8th Edition*, each apartment unit would generate 6.65 Average Daily Trips (ADT). With 9 units, 59.85 trips per day would be expected. This number might be reduced because the site abuts 19th Avenue, which means the residents would have access to regularly-scheduled transit service and thus might be driving less than the ITE report forecasts. In addition, because the site is located across the street from a shopping center anchored by a large grocery store, vehicular shopping trips for groceries may also be reduced. Because the site has access to transit, is located on an Arterial street, and the anticipated traffic generation has already been accounted for in the TSP, no approval conditions appear necessary.

- F. The site development plan promotes safe, attractive and usable pedestrian facilities that connect building entrances, public sidewalks, bicycle and auto parking spaces, transit facilities, and other parts of a site or abutting properties that may attract pedestrians.

Finding: DC §10.8.115(4) requires a minimum walkway width of 4 feet. A 5-foot-wide concrete pedestrian walkway would connect each unit to the car park and to the public sidewalk. With the condition to extend this walkway along the north side of the car park, this criterion is met.

- G. Design Review Criteria: Projects subject to design review by the Director (Type II) or the Design Review Commission (Type III) shall be evaluated based on the following:

- A. The development standards of the applicable zoning district and any overlay district;
- B. The general development standards of Article 8.
- C. Departures from code requirements may be permitted as part of a Track 2 Design Review Process, when the following criteria are met:

1. The design guidelines contained in the applicable section of the "Design Guideline Handbook" are adequately addressed.
2. The applicant demonstrates that the overall development would result in a development that better meets the intent of the design guidelines than a design that simply meets the Code.

The Design Guideline Handbook Section III *Multi-Unit Residential Design Guidelines* has two options for design review: Track 1 *Development Standards* and Track 2 *Design Guidelines*. The following analyzes the application compared to Track 1 standards unless otherwise noted.

Site – Circulation

- *Continuous pedestrian connections required* – Complies. A pathway is proposed that would connect the building and car park with the public sidewalk.
- *Pathways at least 10 feet from dwellings* – Does not comply, due to the narrow width of the lot, and the necessity to install a two-way driveway and perimeter landscaping.
- *The minimum pathway width of 5 feet* – Complies. The pathway would be 5 feet in width.

Site – Parking

- *Include 18-foot-wide landscape planter bays in parking areas > 10,000 square feet* – The proposed car park and aisles would not exceed 10,000 square feet in area, therefore, this provision does not apply.
- *Sidewalk system shall connect all front doors to the car park* – Complies. A walkway would be provided to connect all front doors to the car park.

Site – Pedestrian Environment

- *Residential front doors shall be setback at least 2 feet from the public sidewalk* – Complies. The building would not front a public sidewalk; this provision does not apply.
- *Primary entrance doors shall not be sliding glass, or solid metal without glazing* – Complies. Entry doors will be standard doors.
- *Residential porch height < 4 feet* – Complies, as no porches are proposed.
- *Residences with entry porches: porches shall be not be less than 40 square feet.* Complies, as no entry porches are proposed.
- *Residences shall not be < 4 feet below grade* – Complies, as the new building will be erected at grade.

Site – Screening / Service Areas

- *All mechanical equipment shall be screened* – Complies. The apartment units will have standard residential-sized appliances located inside. Additional mechanical equipment will also be located within the building.
- *Service / refuse collection areas shall be not < 20 feet from the right-of-way* – Complies. The refuse collection area is proposed to be located more than 200 feet from the 19th Avenue right-of-way.
- *Refuse collection area to be screened from above* – Complies, because a roofed enclosure will be a condition of approval.
- *All rooftop mechanical equipment shall be screened* – None proposed; not applicable.

Site – Landscaping

At least 75% of required landscaped areas shall be planted; at most 25% of required landscaped areas shall be hardscaped – Complies. The site totals 0.53

acres, or 23,132 square feet. DC §10.8.205(D)(1) requires that 20% of the lot – excluding the car park and driveways – be maintained as open space. The non-car park area totals 11,722 square feet. The applicant proposes to set aside 4,805 square feet (approximately 41%) as yard and open space. Additional area will be set aside to comply with Buffering and Screening standards. Landscaping would include trees, shrubs, groundcover, and turf.

Site – Crime Prevention Through Environmental Design

- *Plant materials by entries shall be < 5 feet in height by the entry* – Complies, because only short shrubs are proposed near the building entries.
- *Window areas facing common spaces, paths, and parking areas shall be at least 25 square feet each* – Individual window units would be 4 by 6 feet, for a total area of 24 square feet each. They would not face the common space and car park located south of the building, nor would they face the street. Staff has proposed a **condition** to require windows in both the north and south building elevations; with that condition, the intent of this criterion would be satisfied.
- *Entries shall be lighted* – Complies; all entries would be illuminated with one or more wall lights on photo sensors.
- *Gated residential areas are prohibited* – None proposed; complies.
- *Motion-activated lighting by the street is prohibited* – None proposed; complies.

Site – Open Space

- *At least 25% of the lot (excluding parking areas) shall be landscaped* – Complies. The site totals 0.53 acres, or 23,132 square feet. The non-car park area totals 11,722 square feet. The applicant proposes to set aside 4,805 square feet (approximately 41%) as yard and open space. Additional area will be set aside to comply with Buffering and Screening standards. Landscaping would include trees, shrubs, groundcover, and turf.
- *Apartment complexes with six units or more shall provide 100 square feet of recreation space per unit* – No specific Development Code section includes this provision, nor is what constitutes “recreation space” defined. With 9 units, 900 square feet of recreation space would be necessary. As noted above, the site will have about 4,800 square feet of yard and open space. Each unit will also have a back patio.
- *Apartment complexes with 21 or more units shall have a children’s play area* – Not applicable, as this building would have only 9 units.
- *At least 50 square feet of private open space shall be provided per unit* – Complies; each unit would have a patio or deck of at least 50 square feet.
- *Private open space shall be separated from common open space with landscaping, fencing, or grade changes (including balconies)* – Complies. The patios on the west side of the building would be separated from the common area on the south side of the building.

Building – Massing and Form

- *Building dimensions > 150 feet shall have a minimum 3-foot off-set* – Complies. The building would be about 230 feet in length. The second floor would extend over the first floor entries and carports by about 4 feet.
- *Every two dwelling units shall be off-set from the next by at least 4 feet* – Does not comply, due to the narrow lot width and space taken for the public utility easements, required two-way driveway and walkway, and the required perimeter landscaping. Because the lot is so narrow and constrained, staff is not proposing any mitigation conditions.
- *All habitable rooms shall have a window facing the car park and common areas* – Does not comply. Three habitable rooms face the car park and common area (2

bedrooms and a living room). That unit will be required to have windows, as a condition of approval. Staff is recommending that the north unit facing 19th Avenue be similarly conditioned.

Building – Compatibility

- *All buildings shall have a defined entry space of at least 16 square feet –* Complies. Entry spaces would be at least 30 square feet.

Building – Safety

- *Line-of-sight shall be maintained between the building entries and the sidewalk or car park –* Complies.

Building – Privacy

- *Building entries shall be at least 3 feet from sidewalks and walkways –* Complies. The distance from all entries to the walkway would be at least 10 feet.
- *Bedroom and bathroom windows shall be off-set at least 4 feet from windows on adjacent buildings (unless privacy glazing is used) –* Complies, as there are no adjacent buildings.

Site – Lighting

- *All unit entries and walkways shall be lighted –* Complies; all entry areas will be lit with wall lights on photo sensors.
- *Light poles shall not exceed 18 feet in height –* required by DC §10.8.750(D) *Lighting Standards for Multi-Unit Development*. One new light pole is proposed near the center of the property along the driveway. To ensure compliance with this section, site lighting must comply with the provisions of DC §10.8.750(C) and (D).
- *Concrete bases shall not exceed 8 inches in height –* required by DC §10.8.750(D). One new light pole is proposed. As above, staff is proposing a condition to require compliance with this section.
- *Cut-off shields shall be installed –* required by DC §10.8.750(D). One new light pole is proposed. As above, staff is proposing a condition to require compliance with this section.
- *Plastic interior-lighted signs are prohibited –* Complies, as none are proposed.

Signs –

- *Residential nameplates allowed –* None proposed.

Conclusion: staff concludes that the overall intent of this section has been met.

III. ALTERNATIVES

The Planning Commission may approve as submitted, approve with conditions, continue deliberations to a date certain, or deny this request.

IV. RECOMMENDATION

Based on the information provided in the application and the findings above, staff recommends approval of the application for site design and design review for the proposed apartment building at 2838 19th Avenue, with the following conditions:

GENERAL

1. The applicant is bound to the project description and all representations made by the applicant during the application and decision-making proceeding.
2. The applicant must comply with all applicable City building and development standards, including all dimensional standards and public works specifications.
3. All utility connections shall be underground (DC §10.8.645(A) *Underground Utilities*).
4. Provide a 10-foot-wide public utility easement along 19th Avenue for the installation of electrical facilities (DC §10.8.615(A) *Easements*).

LANDSCAPING AND TREES

5. Submit a landscape plan demonstrating compliance with DC §10.8.415 *Landscaping General Standards* and DC §10.8.420(B) *Landscaping Required in the Community Commercial Zone*. The landscape plan shall include a buffer along the south property line in compliance with DC Table 8-3(D)(3), and shall include a 6-foot-tall wall and a landscape area at least 10 feet wide.
6. A tree protection plan for off-site trees near common property lines shall be submitted and shall include the precise location and specifications of protective fencing. No compaction equipment or material storage shall be permitted within tree protection areas. This plan shall be approved by the Community Development Director prior to building permit issuance (DC §10.5.115 *Tree Protection Plan and Protection Requirements*).

SIDEWALKS AND WALKWAYS

7. Construct a 6-foot-wide curb-tight sidewalk along 19th Avenue, keyed or dowelled into the curb to prevent settlement (FGC §151.001 et. seq.)
8. Install a walkway along the north side of the car park, adjacent to the building (DC §10.8.510).
9. Walkways adjacent to the car park shall be at least 6 ½ feet wide, to allow for vehicle overhang. No additional curb stops shall be required (DC §10.8.525(G)).

LIGHTING

10. The lighting plan shall comply with the provisions of DC §10.8.755(C) *Pedestrian Lighting Standards* and §10.8.755(D) *Lighting Standards for Multi-Unit Development*.

STORM DRAINAGE / WATER QUALITY

11. The applicant shall submit a storm water drainage plan to satisfy the provisions of the City's *Storm Water Master Plan* and Clean Water Services' *Design and Construction Standards for Sanitary Sewer and Surface Water Management*. This plan shall be reviewed and approved by the City's Engineering Department prior to building permit approval (DC §10.8.005 and §10.8.635).
12. The applicant shall provide to the City of Forest Grove a signed *Private Water Quality Facility Maintenance Agreement* for the private water quality facility (DC §10.8.005 and §10.8.635).

BUILDING DESIGN

13. The trash enclosure shall be roofed.
14. All habitable rooms facing the car park or the street shall have a window.

V. LIST OF EXHIBITS

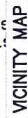
The following exhibits were received, marked, and entered into the record as evidence for this application at the time this staff report was written. Exhibits received after the date of this report will be marked beginning with the next consecutive letter and will be entered into the record at the time the public hearing is opened, prior to oral testimony.

Exhibit A Site Plan and Design Review application materials, submitted by the applicant

EXHIBIT A

Site Plan and Design Review Application Materials

City of Forest Grove, Oregon



PROJECT INFORMATION:

OWNER/DEVELOPER:
161 GREEN CONSTRUCTION
161 NW ADAMS AVE.
HILLSBORO, OREGON 97124

CONTACT: JAMES GREEN
PH: 503-201-5837
jgreen.dgc@gmail.com

CIVIL ENGINEER:
MAI CIVIL ENGINEERING, PC
5290 NW 164TH AVE.
PORTLAND, OR 97229

CONTACT: THU D. MAI, P.E.
TEL: 971-235-4656
FAX: 503-334-4326
tmai@yahoo.com



CONTRACTOR IS RESPONSIBLE FOR VERIFYING ELEVATION AND LOCATION OF EXISTING UTILITIES AND CURB PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY PROJECT ENGINEER IMMEDIATELY IF ANY DISCREPANCIES ARE FOUND. CONTRACTOR HEREBY AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING THE SAFETY OF PERSONS AND PROPERTIES; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY, AND HOLD HARMLESS THE OWNER AND ENGINEER FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT.

LINE CALL SYSTEM: (503) 246-6699
TELEPHONE, NORTHWEST NATURAL GAS, AND PGE)

BENCHMARK
ELEVATIONS ARE BASED ON WASHINGTON COUNTY BENCHMARK NUMBER 47. THE
BENCHMARK IS A BRONZE DISK STAMPED U 669 1976 AT THE EAST END OF 17TH
AVENUE WHERE IT INTERSECTS HIGHWAY 47. IT HAS AN ELEVATION OF 170.92 FEET
ON THE NGVD 1929 DATUM.

GEOTECHNICAL ENGINEER:
GEOPACIFIC ENGINEERING,
14835 SW 72ND AVENUE
PORTLAND, OR 97224

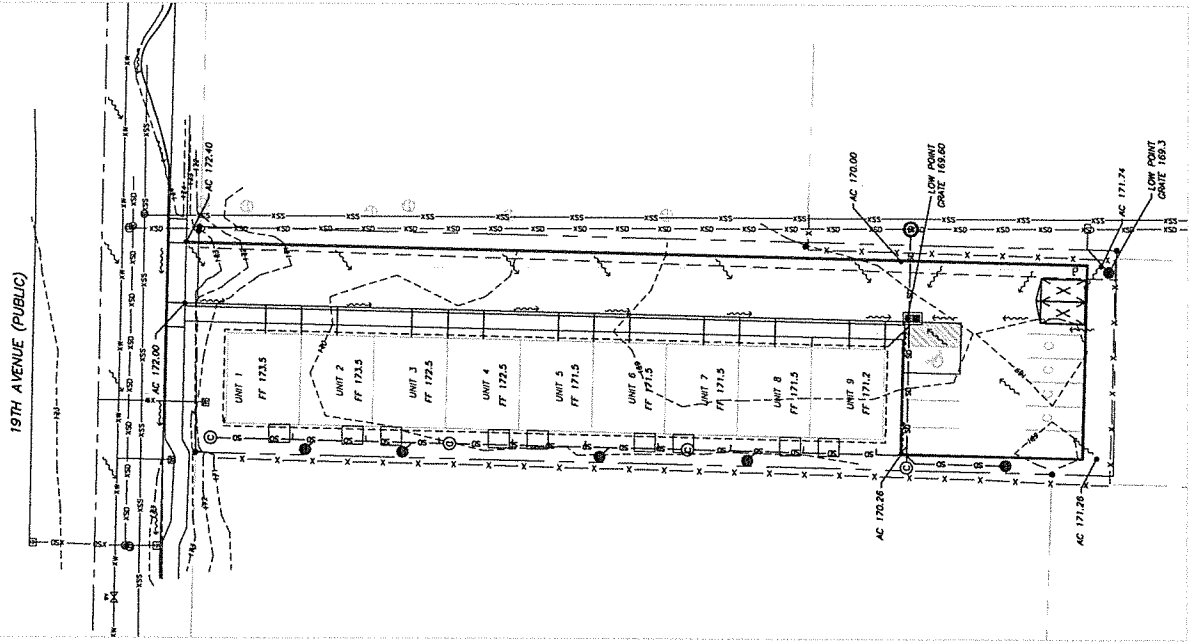
CONTACT: JIM IMBRIE, PE
TEL: 503-625-4455
jimbrie@geopacificeng.com

SHEET INDEX	
C0.0	COVER SHEET
C0.1	CONSTRUCTION NOTES
C1.0	EXISTING CONDITIONS PLAN
C2.0	ROUGH GRADING PLAN
C3.0	COMPOSITE UTILITY PLAN

COVER SHEET

Green Apartment

PRELIMINARY NOT
FOR CONSTRUCTION



ROUGH GRADING PLAN
SCALE: 1" = 20'

SCALE: 1 = 20

19TH AVENUE (PUBLIC)

ROUGH GRADING PLAN

Green Apartment

CITY OF FOREST GROVE, OREGON

PRELIMINARY NOT
FOR CONSTRUCTION

MAIL ROOM
CIVIL
ENGINEERING, PC
5290 NW 154th Ave.
PORTLAND, OR 97229
TEL: 971-235-4656
FAX: 503-334-4326
dnm@yahood.com

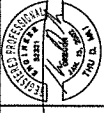
TEL: 971-235-4656
FAX: 503-334-4326
tma@yahoo.com

5290 NW 164th Ave.
PORTLAND, OR 97229

CIVIL ENGINEER

100% **U.S.** **MADE**

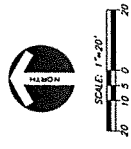
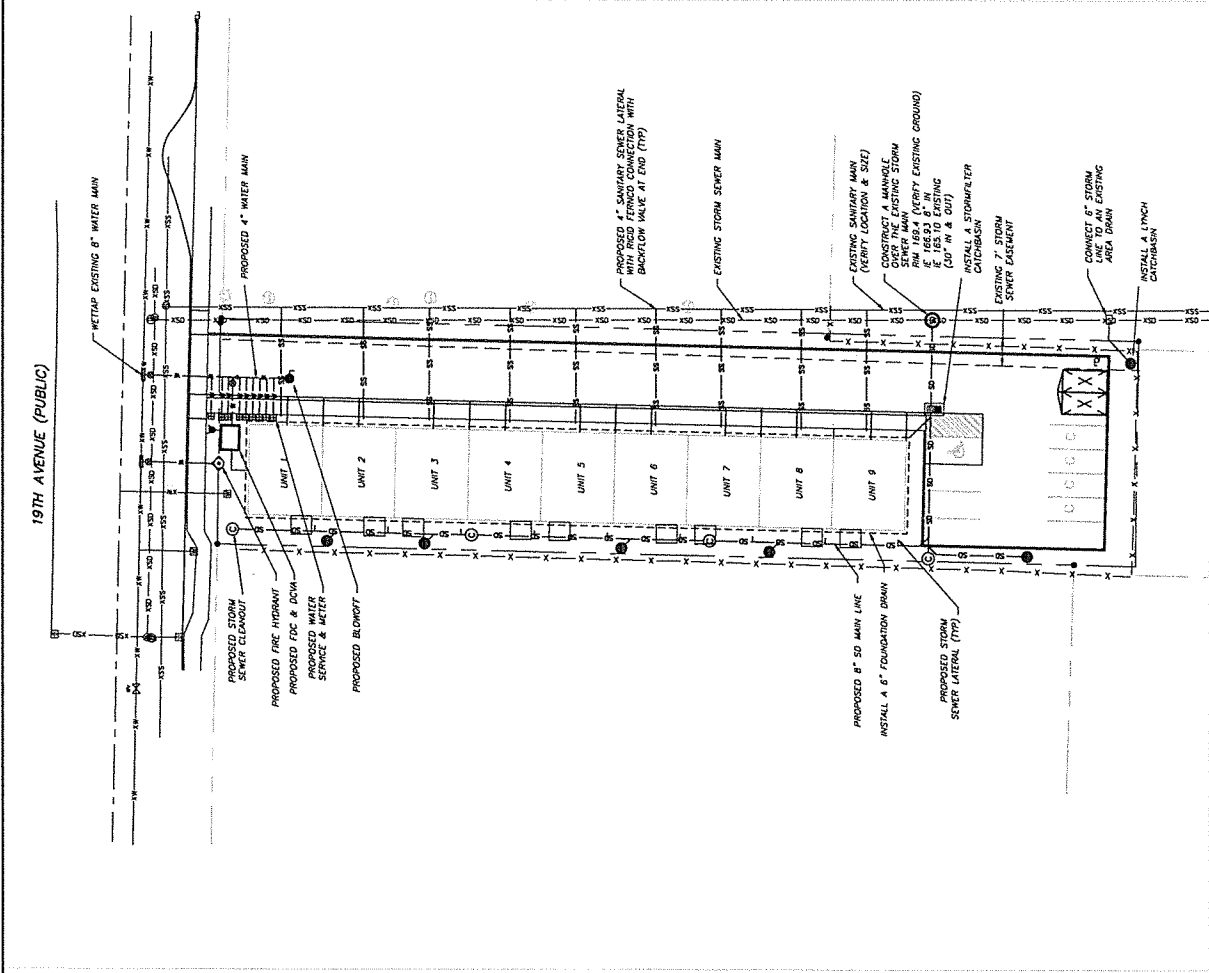
CAPM'S 12-31-2020



06-01 2103

30472: 1 = 20

Segment	Value
1	20
2	10
3	5
4	0
5	20



COMPOSITE UTILITY PLAN

Green Apartment

CITY OF FOREST GROVE, OREGON

PRELIMINARY NOT FOR CONSTRUCTION

DATE: 12-31-2020

DESIGNED BY: TDM

CHECKED BY: TDM

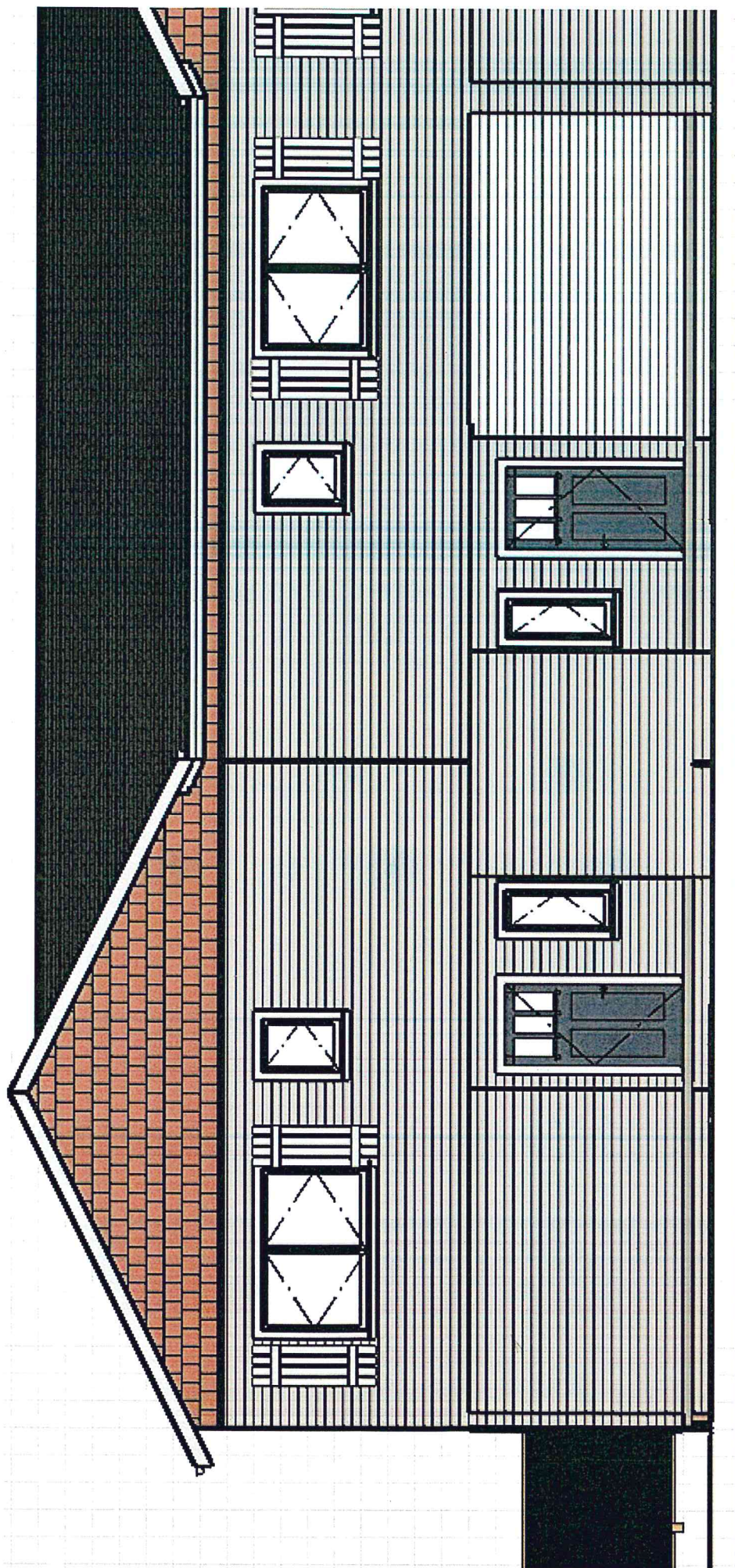
SCALE: AS SHOWN

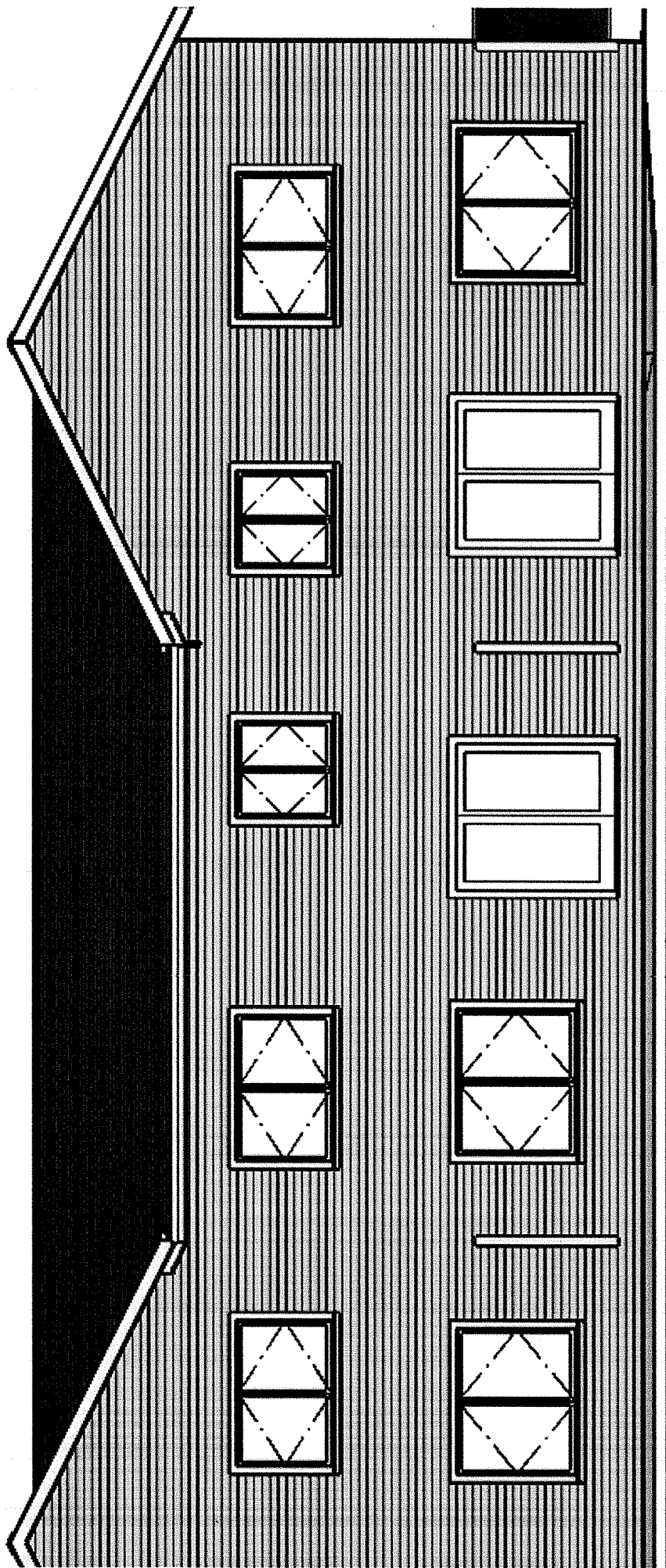
PROJECT NO: 19-0001

C3.0

5500 NW 14th Ave
PORTLAND, OR 97228
TEL: 971-235-4656
FAX: 503-334-4326
mailto:info@jrhob.com

JRHOB ENGINEERING, PC





PLANNING COMMISSION STAFF REPORT

TO: *Planning Commission*

FROM: *Dan Riordan, Senior Planner,
Bryan Pohl, CFM, Community Development Director*

MEETING DATE: *February 4, 2019*

SUBJECT TITLE: *Planning Commission Recommendation to City Council
Accepting the Proposed Update to the City's 2009 Economic
Opportunities Analysis and Amending the Forest Grove
Comprehensive Plan (City File No. 311-18-000044-PLNG)*

ISSUE STATEMENT: The City's Economic Opportunities Analysis (EOA) was last updated in 2009 to support periodic review of the Forest Grove Comprehensive Plan. Under Oregon Administrative Rules, an EOA is a required element of the Comprehensive Plan necessary to satisfy Statewide Planning Goal 9 (Economic Development). Goal 9 stipulates that local comprehensive plans be updated to ensure adequate opportunities for a variety of economic activities taking into account national, state and regional trends and local economic advantages.

The EOA was updated to ensure ongoing compliance with Goal 9 and to support local decision making pertaining to the type and amount of land designated for employment use on the Forest Grove Comprehensive Plan map.

This report outlines:

- Goal 9 requirements for EOA's;
- Contents of the EOA; and
- Key findings of fact.

BACKGROUND: The 2009 EOA is out-of-date and no longer reflects national, state and regional trends affecting the economy. The 2009 EOA was adopted prior to the last economic downturn and does not reflect data contained the 2010 decennial census. As such, the EOA no longer provides a sound basis for City long-range planning activities pertaining to the amount and type of land designated on the Comprehensive Plan map for all uses including industrial, retail, office and institutional uses.

Statewide Planning Goal 9 (Economic Development) Requirements

Goal 9 is implemented by Oregon Administrative Rules (OAR) chapter 660-009. OAR subsection 660-009-0015 describes minimum requirements for an EOA. These requirements include:

- (1) Description of national, state, regional, county and local trends affecting the economy;
- (2) Identification of the type of land/sites needed for local economic development needs;
- (3) Inventory of land industrial, retail, office and employment land supply;
- (4) Assessment of local economic development potential and the planning area's economic advantages and disadvantages; and
- (5) Projection of short-term (5-year) and long-term (20-year) employment land demand.

The updated EOA addresses each of these requirements.

Economic Opportunities Analysis (EOA) Overview

The updated EOA (Attachment A) contains the following sections:

- Executive Summary (page 3).
- Economic Trends (page 9) - Overview of national, state, regional and local trends affecting Forest Grove. This section includes population, employment growth, retail trends and local demographic profile.
- Local Employment and Target Industries (page 24) – Description of industries the City should consider targeting over the twenty-year planning period.
- Forecast Employment and Land Needs (page 34) - Projected demand for industrial and commercial land based on anticipated employment growth rates by sector.
- Buildable Land Inventory / Capacity (page 46) – Inventory of vacant and redevelopment lands for industrial and commercial activities within the City's planning area.
- Reconciliation of Land Need and Supply (page 50) – Comparison of short- and long-term demand for employment land to existing land inventory to determine

adequacy and appropriateness of land capacity over a five- and twenty-year horizon.

Review and Comment

The EOA update was presented the Economic Development Commission on November 1, 2018. The EDC unanimously adopted a motion endorsing the EOA.

The EOA update was sent to the Oregon Department of Land Conservation and Development (DLCD), Washington County Department of Land Use and Transportation and Metro for review on November 15, 2018. DLCD provided comments on December 6, 2018. DLCD's comments and the City's response is attached (Attachment B)

No comments were received from Washington County or Metro in response to the City's request for review.

Adoption Findings

Findings of Fact demonstrating how the EOA update complies with the requirements of Goal 9 are attached for Commission review and adoption (Attachment C).

STAFF RECOMMENDATION: Staff recommends the Planning Commission:

1. Accept the update to the 2009 Economic Opportunities Analysis;
2. Adopt findings of fact demonstrating compliance with Statewide Planning Goal 9; and
3. Forward a recommendation to City Council to adopt an ordinance amending the 2014 Forest Grove Comprehensive Plan to incorporate the EOA update.

ATTACHMENT(s):

- A. Economic Opportunities Analysis Update (December 21, 2018)
- B. Comments from DLCD and City Response
- C. Draft Findings of Fact

ATTACHMENT A



**CITY OF FOREST GROVE
ECONOMIC OPPORTUNITIES ANALYSIS
(OREGON STATEWIDE PLANNING GOAL 9)**



**EDITED
DECEMBER 21, 2018
PUBLIC HEARING DRAFT**

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I. INTRODUCTION

This report introduces analytical research presenting an Economic Opportunities Analysis (EOA) for the City of Forest Grove, Oregon.

Cities are required to reconcile estimates of future employment land demand with existing inventories of vacant and redevelopable employment land within the UGB. The principal purpose of the analysis is to provide an adequate land supply for economic development and employment growth. This is intended to be conducted through a linkage of planning for an adequate land supply to infrastructure planning, community involvement and coordination among local governments and the state.

To this end, this report is organized into six primary sections:

- **Economic Trends:** Provides an overview of national, state and local economic trends affecting Forest Grove, including population projections, employment growth, retail trends and a demographic profile.
- **Target Industries:** Analysis of key industry typologies the City should consider targeting as economic opportunities over the planning period.
- **Employment Land Needs:** Examines projected demand for industrial and commercial land based on anticipated employment growth rates by sector.
- **Capacity:** Summarizes the City's inventory of vacant and redevelopable industrial and commercial land (employment land) within the City of Forest Grove's boundary.
- **Reconciliation:** Compares short- and long-term demand for employment land to the existing land inventory to determine the adequacy and appropriateness of capacity over a five and twenty-year horizon.
- **Conclusions:** Summary of findings and policy implications.

The prior Economic Opportunities Analysis for the City of Forest Grove was adopted in 2009. This updated analysis reflects changes in employment, land supply, and macro-economic trends since that time. In 2014, the City has experienced large expansions of the Urban Growth Boundary adjacent to the City, including new employment land. In addition, Urban and Rural Reserves have been established outside of the UGB. This includes 320 acres of urban reserves at the western end of the city. These changes are reflected in the following analysis and inventory of buildable lands.

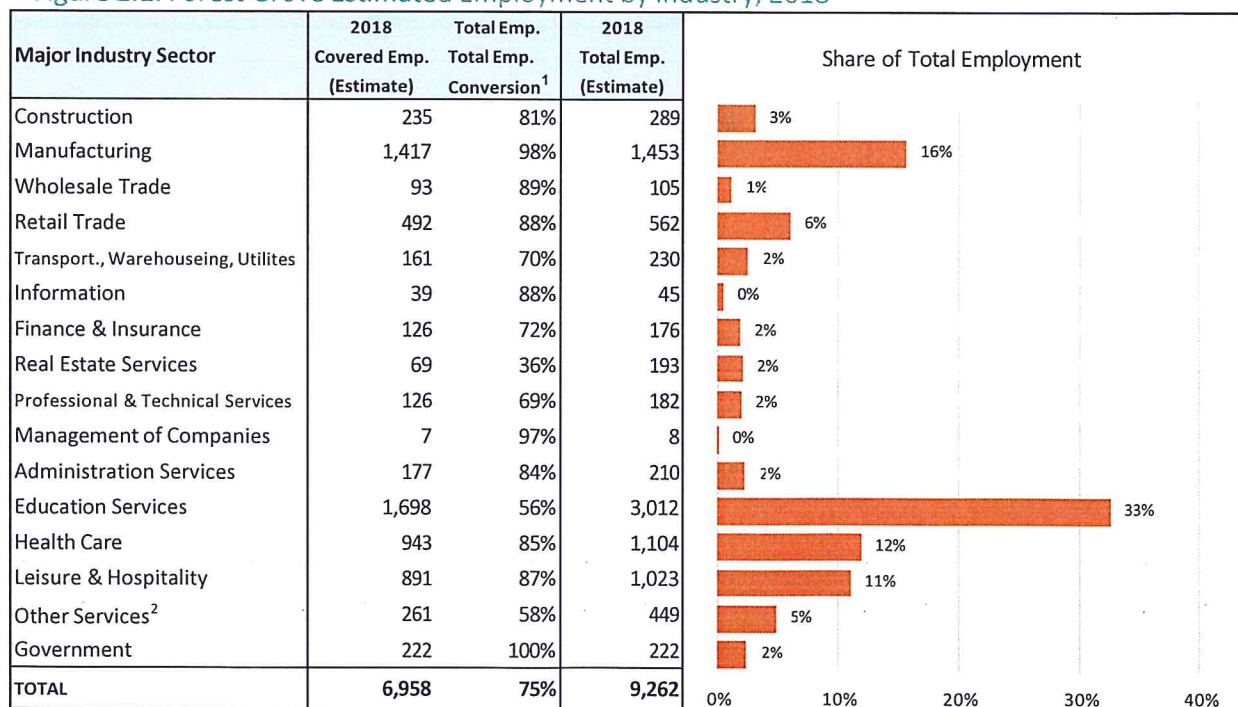
Prepared by:
Johnson Economics LLC
621 SW Alder Avenue, Suite 605
Portland, OR 97205
(503) 295-7832

II. EXECUTIVE SUMMARY

This section presents an overview of key themes and findings presented in this report. More detail on all of these subjects can be found in the following sections.

- The City of Forest Grove is an attractive and growing community, with excellent livability, and a diverse local economy and employment base for a city of its size. Located in western Washington County on the edge of the Portland Metro area, Forest Grove also enjoys inter-relationships with the region, and access to larger markets.
- Since 2000, the annual growth rate in employment in Washington County has exceeded the rate seen in both the state, and the rest of the Metro region. The county has added an estimated 71,500 jobs since 2000, growth of 29%. In Forest Grove, where job growth has been slow but positive, employment grew only 5% since 2000.
- The county accounts for roughly 25% of the total employment in the Portland Metro region, and 16% of the employment in Oregon. The local unemployment rate is consistently lower than the state or national rate.
- In 2018, Forest Grove has an estimated 9,250 local jobs across a range of industries. This data includes “covered employment”, subject to unemployment insurance benefits, as well as an estimate of the “non-covered employment” which includes self-employed people, many small business owners, LLC partners, and other cases. The largest sectors in Forest Grove by employment share are private education services, manufacturing, health care, and leisure and hospitality (food service and tourism).

Figure 2.1: Forest Grove Estimated Employment by Industry, 2018



¹ Bureau of Economic Analysis. Calculated as a five-year average between 2012 and 2016

² "Other Services" includes most personal services not considered retail activity, such as beauty and hair care, repairs, dry cleaning religious services, advocacy, and others.

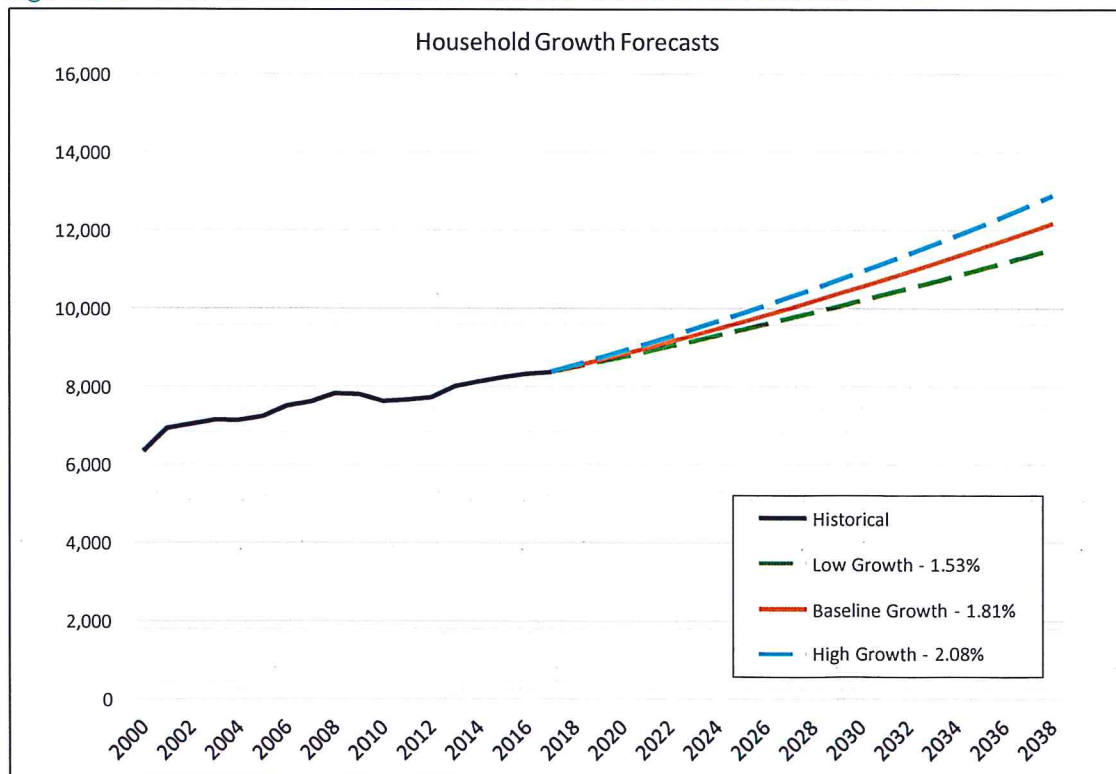
Source: Oregon Employment Department, Johnson Economics

- “Location Quotient” analysis indicates that Forest Grove currently enjoys a greater share of employment in

manufacturing and education and health, in comparison to the county, metro, or national level. Employment in these sectors are 2.5 times higher than the national average. Forest Grove also experiences a higher share of jobs in leisure and hospitality, at 1.25 times the national average.

- Oregon's largest export industries are categories that are largely favorable to Forest Grove and Washington County in general. These include the products of skilled manufacturing, such as semiconductors and electronic components, as well as agricultural and process food products. Asian countries, led by China have grown rapidly as trade partners since the turn of the century.
- Based on Forest Grove's current competitive advantages, clustering and locational attributes a number of potential target industries have been identified. These industries are opportunities to grow existing businesses, attract new ones, and encourage new start-ups:
 - Agriculture, Food and Farm Products
 - Tourism and Winery Development
 - Education
 - Retirement Services
 - High Tech
- Since 2000, Forest Grove has grown by nearly 6,000 people (33%), to just under 24,000 people in 2018. Forest Grove is home to an estimated 8,500 households. The growth rate has largely matched that seen in the county. The following figure presents historical growth in households from 2000, and projected growth based on the Metro 2040 forecast. In addition to the forecasted growth rate of 1.81%, the figures presents a range of potential growth scenarios. These forecasts arrive at a range of 11,500 to 12,900 households by 2038.

Figure 2.2: Forest Grove Forecasted Household Growth: 2000 and 2038



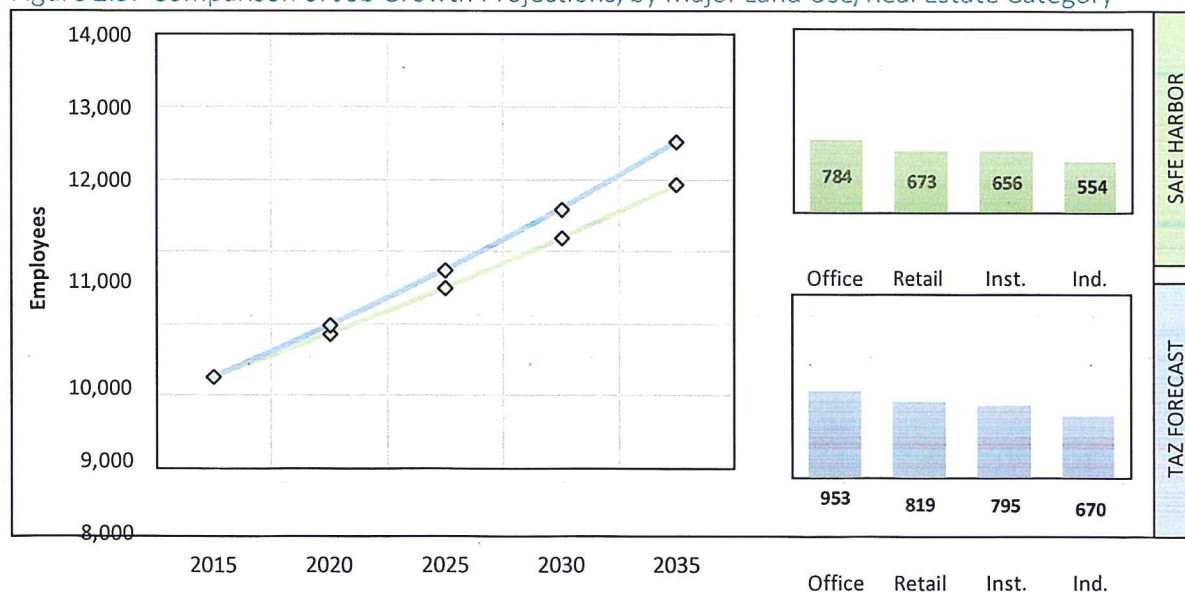
Source: Metro 2040 Distributed Forecast, Johnson Economics

- In the most recent migration data available from the IRS (2015-2016), Washington County saw a net population gain from Multnomah County, and a net population loss to Clackamas, Clark and Yamhill Counties. In fact, more people move out of Washington County to other places in Oregon and Washington State, than migrate from those areas. Net positive migration in recent years is attributable to migrants from other states and abroad.

Projected Land Need (Demand)

- This analysis presents to potential growth scenarios for employment, which impact the projected demand for employment land over the 20-year planning period.
- The first forecast uses the “Safe Harbor” methodology allowed by State Goal 9 statute and associated implementing rules. This approach relies on the most recent regional forecast published by the Oregon Employment Department (OED). The most recent OED forecasts for the Portland Metro area cover the period of 2014 to 2024. This analysis calculates the average annual growth rate for each industry sector from this forecast, and then applies this annual growth rate to the 20-year planning period.
- The second forecast uses a slightly higher projected growth rate derived from Metro’s coordinated urban growth planning. Forest Grove and other metro-area jurisdictions work with Metro to update long-range forecasts of employment and housing by Transportation Area Zone (TAZ). The latest estimates were finalized in mid-2016, in the Metro 2040 Distributed Forecast. This forecast projected an average annual job growth of 1.51% in Forest Grove over the 2015 to 2040 period.
- The two forecast scenarios in this analysis range from 1.3% average annual growth (Safe Harbor) to 1.5% (Metro 2040). 20-year job growth estimates range from 2,665 to 3,237 jobs respectively.

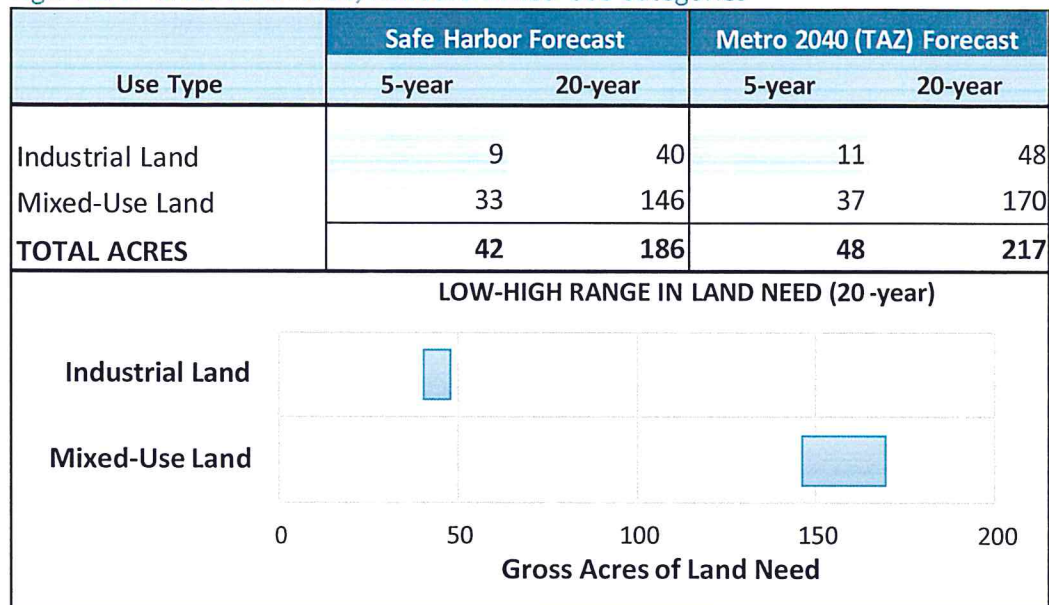
Figure 2.3: Comparison of Job Growth Projections, by Major Land Use/Real Estate Category



Source: Oregon Employment Department, Metro, Johnson Economics

- The projections of future employment are translated into demand for appropriate real estate space, which is then converted into a forecast of demand for employment lands. (See Section V of this report.)
- The employment projections translate to an estimated 20-year need for 186 to 217 acres of employment land to accommodate the job growth. This land need is distributed across major land use categories, but the greatest need is in general commercial land suitable for office or retail uses.

Figure 2.4: Gross Land Need, Reduced Mixed-Use Categories



Source: Johnson Economics

Buildable Land Inventory (Supply)

- The Buildable Land Inventory (BLI) used in this model is based on the most current Metro draft BLI dating to March, 2018. This BLI has been reviewed and refined by Johnson Economics to better reflect the realities on the ground, missed by Metro's more formulaic approach. This local-level review is an anticipated part of Metro's process. (See Section VI for more discussion of BLI methodology).
- There is an estimated total of 292 acres of buildable, or redevelopable land located in the city. A majority of these buildable acres (275 ac.) are located within the current City boundary. Two large parcels (36.8 ac. & 17 ac.) are located outside of the City boundary, but within the UGB.
- Most available acreage is in areas with Industrial zoning (74%). There is a smaller amount of buildable acreage in Mixed Use¹ zoning.

¹ Metro identifies most of commercial zoning in Forest Grove as having a general classification of "Mixed Use" because it also allows for some amount of residential use in addition to commercial uses. Therefore none of the parcels counted in this land inventory are considered to be "commercial" land, despite many being located in the Community Commercial zone.

Figure 2.5: Summary of Buildable Land Inventory

Land Use	Vacant		Redevelopment		TOTALS	
	Parcels	Acres	Parcels	Acres	Parcels	Acres
Industrial	29	173.2	7	63.9	36	237.1
Mixed Use	6	22.6	5	23.8	396	55.0
TOTALS:	35	195.8	12	87.7	432	292.1
w/i City:	33	178.8	12	87.7	430	275.1
w/i UGB:	2	53.8	0	0.0	2	53.8

Source: Metro, City of Forest Grove, Johnson Economics

Reconciliation of Supply and Demand

- Current buildable land supply is estimated to be sufficient to meet short term needs, but not long term needs.
- Over the 20-year period, the buildable supply does exceed the long term demand. However, this analysis finds that the classification of available land (mostly industrial) is a poorly matched to future employment needs.
- The demand for Mixed Use and/or Commercial lands will exceed the supply of these land categories over the planning period.
- Many of the same types of uses (office and retail) can be suitable to either Commercial or Mixed Use land, so the balance between these two zoning types are somewhat fungible. In other words, some of the estimated demand for new land could be accommodated by new commercial or mixed use land, or a mix.
- This analysis indicates that there may be a significant oversupply of designated industrial land in Forest Grove, and that some of this might be repurposed for other employment uses.

Figure 2.6: Reconciliation of 20-Year Demand and Supply

SAFE HARBOR FORECAST

LAND USE	DEMAND		SUPPLY	Surplus or Deficit	
	Safe Harbor Forecast		Buildable		
	5-year	20-year	Acres	5-year	20-year
Industrial Land	9	40	237.1	228	196.75
Mixed-Use Land	33	146	55.0	22	(91.15)
TOTAL:	42	186	292.1	250	105.60

METRO 2040 (TAZ) FORECAST

LAND USE	DEMAND		SUPPLY	Surplus or Deficit	
	Metro 2040 Forecast		Buildable		
	5-year	20-year	Acres	5-year	20-year
Industrial Land	11	48	237.1	226	189.16
Mixed-Use Land	37	170	55.0	18	(114.55)
TOTAL:	48	217	292.1	244	74.60

Source: Metro, City of Forest Grove, Johnson Economics

(All subjects are discussed in greater detail in the following report.)

III. ECONOMIC TRENDS

This report section summarizes long and intermediate-term trends at the national, state, and local level that will influence economic conditions in Forest Grove over the 20-year planning period. This section is intended to provide an economic context for growth projections and establish a socioeconomic profile of the community.

Regional Context

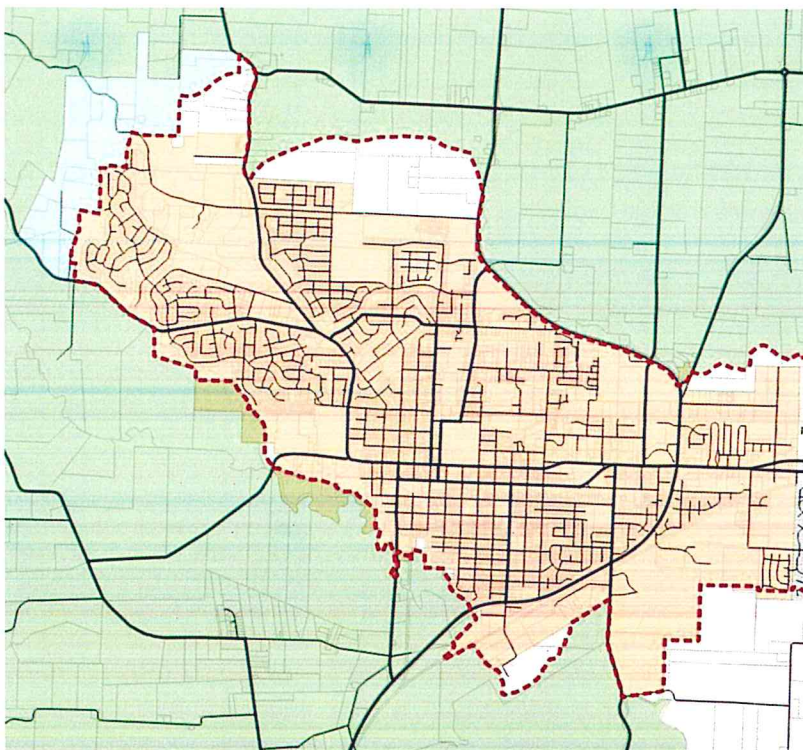
The City of Forest Grove functions in a regional economy that is influenced by broader economic trends and conditions in the Portland Metropolitan area and the nation. This section summarizes anticipated and observed national, state, and local trends and their likely influence on the Forest Grove economy.

Short-Term Trends (0 - 5 Years)

An Economic Opportunities Analysis (EOA) is primarily focused on long-term structural cycles. However, the Portland Metropolitan area is currently exhibiting trends across many metrics that are clearly indicative of structural changes in the regional status quo. Short term trends are easier to discern, as well as more relevant to current economic development needs.

Long-Term Trends (0 - 20 Years)

Economic growth in Forest Grove over the twenty-year planning period will occur in the context of long-term economic and demographic conditions.



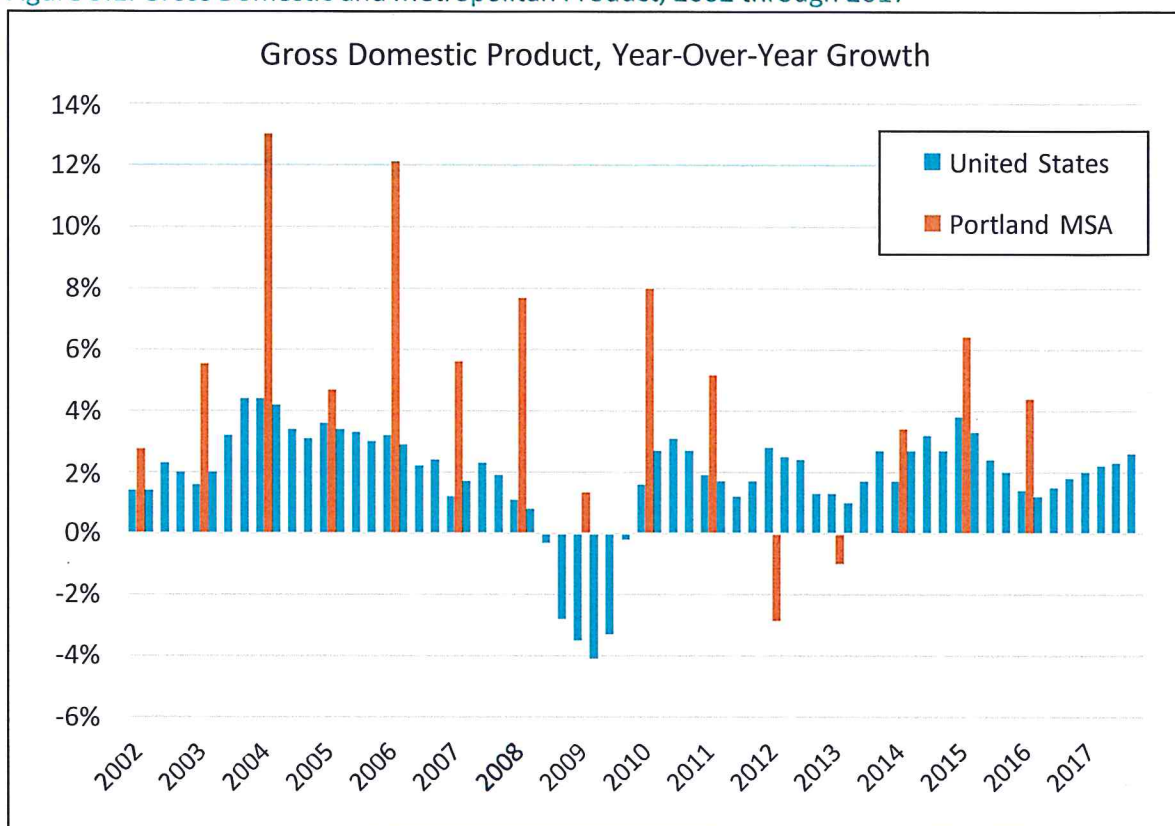
OAR-660-009-0015

The economic opportunities analysis must identify the major categories of industrial or other employment uses that could reasonably be expected to locate or expand in the planning area. This determination is based on local economic development aspirations, grounded in observed national, state, regional, county or local trends. This review of trends is the principal basis for estimating future industrial and other employment uses.

Economic Growth

Nationally, the Great Recession which began at the end of 2007 officially brought six consecutive quarters of negative economic growth in 2008 and early 2009. The depth of and duration of this downturn was the most pronounced since World War II. The recovery and current expansion cycle has been healthy but somewhat modest to date, with credit markets remaining more stringent, businesses and consumers more cautious, and housing construction more muted than prior to the recession. This is despite a recovery that has now lasted nearly a decade.

Figure 3.1: Gross Domestic and Metropolitan Product, 2002 through 2017



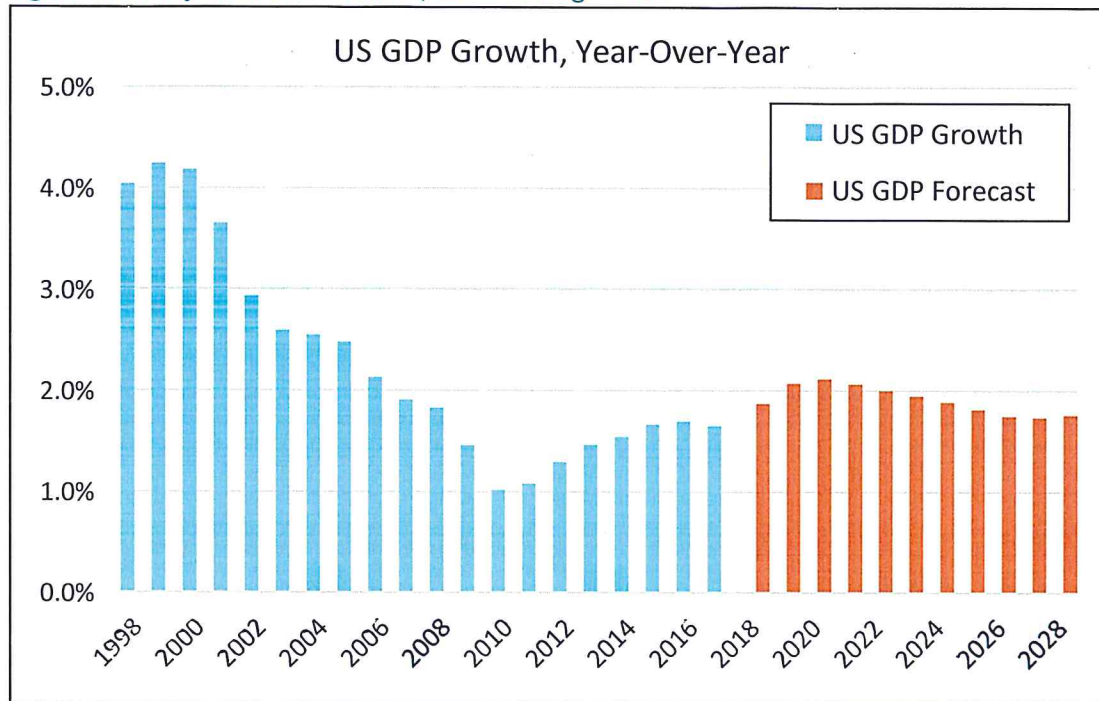
Source: US Bureau of Economic Analysis (BEA)

Recession era declines in output growth were less severe locally, a likely product of a high share of traded sector² industries. Similar to previous cycles, inflection points in economic cycles continue to lag national trends by several years. For example, local negative output occurred in 2012-2013, not 2008-2009. Portland Metro GDP growth tends to outpace the national growth rate, both before and after the recession.

² Traded sector industries are those which sell their products or services outside of the local region, state or country. These industries can grow the local economy by bringing in external wealth, rather than recirculating internal wealth. Also, they may be better buffered from local economic events, but more vulnerable to external economic events.

The Congressional Budget Office (CBO) forecasts that US growth will remain moderate in the 2% range over the near- and long-term, which would be lower growth than experienced in past expansion cycles³. These modest growth levels complicate Federal Reserve decisions on when to raise interest rates and to what degree, and will also tend to slow wage growth.

Figure 3.2: Projected GDP Growth, 1998 through 2028



Source: US Bureau of Economic Analysis (BEA), Congressional Budget Office

Monetary Policy Outlook: The Federal Reserve (The Fed) uses monetary policy to influence business cycles to meet targets for employment and inflation. During the great recession The Fed employed unprecedented measures to stave off a financial crisis and repair economic conditions. The Federal Funds Rate remained near 0% between 2010 and 2015. In the last few years, the Fed has raised the Funds Rate slowly and incrementally but it remains very low by historical standards.

With the current business cycle now in its eighth year, another downturn has become increasingly likely, leaving some economists concerned that very low rates will limit the Fed's ability to combat another recession by cutting rates.

³ Congressional Budget Office, The 2018 Long-Term Budget Outlook (April 2018)

Impact on Forest Grove:

In the near-term, borrowing costs for local companies will increase over the next several years, as interest rates continue to trend upwards. However, this should occur in the context of continued economic growth. With economic performance in the region typically lagging national trends, Forest Grove should see positive economic growth exceeding national levels through 2020. Continued housing construction and business investment in capacity expansion will lead growth in coming years.

The region will continue to experience the “costs of success” that come with strong growth, including escalating housing costs and tight housing supply, as well as escalating labor costs among shortages of qualified workers. Policies that allow for continued growth in both commercial uses and housing can relieve some of these pressures by ensuring sufficient land supply.

Employment Trends

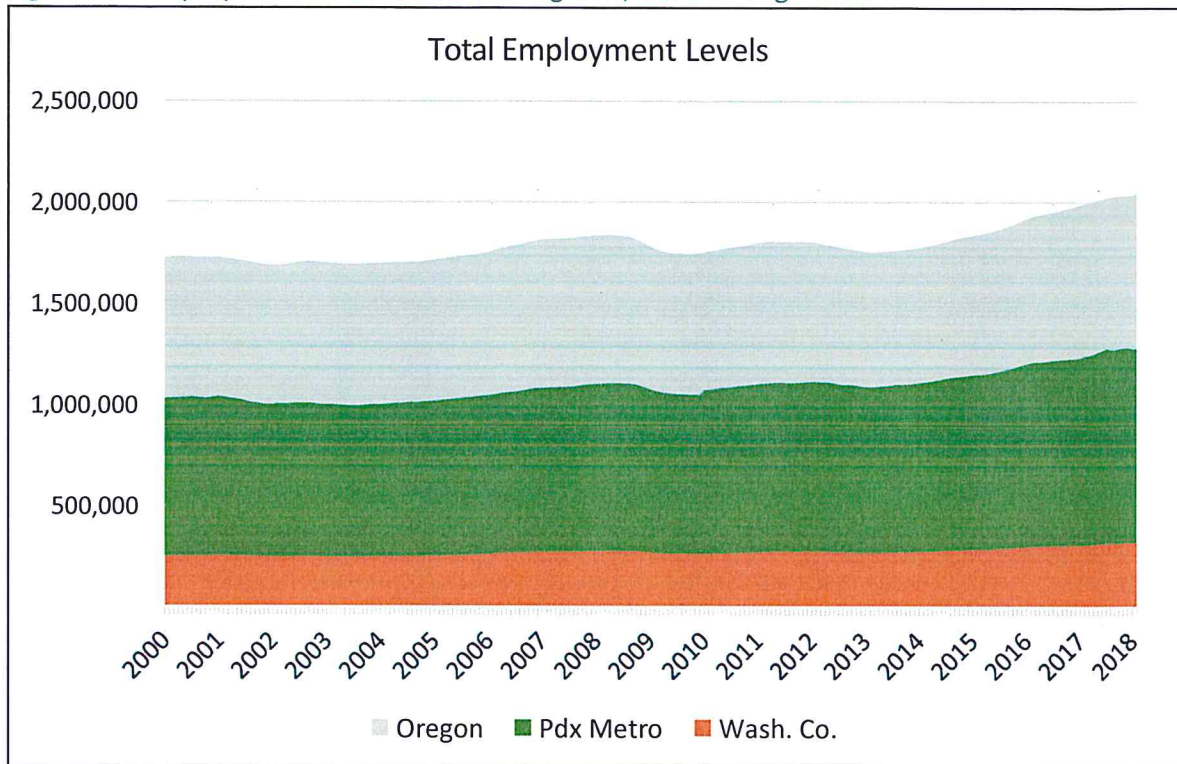
Oregon employment trends since 2000 reflect the general national economic trends including a tech-driven recession early in the century, followed by a period of robust growth led by the housing market, and development. Employment peaked in early 2008 before leveling, and then fell sharply through 2009 as a result of the recession and financial crisis.

Statewide, employment did not surpass the previous high mark until 2015, however growth in the Portland Metro area was faster. The Metro area has led the state out of the recession, with the region regaining its lost employment by 2013, and continuing strong growth since then.

Washington County has added an estimated 43,000 jobs in the last ten years, and 71,500 jobs since 2000 (growth of 16% and 29% respectively). The annual growth rate in employment in Washington County has exceeded the rate seen in both the state, and the rest of the Metro region.

Washington County accounts for roughly 25% of the total employment in the Portland Metro region, and 16% of the employment in Oregon. As discussed more in the following section, Forest Grove accounts for roughly 3% of Washington County’s employment.

Figure 3.3: Employment Levels: State and Regional, 2000 through 2018



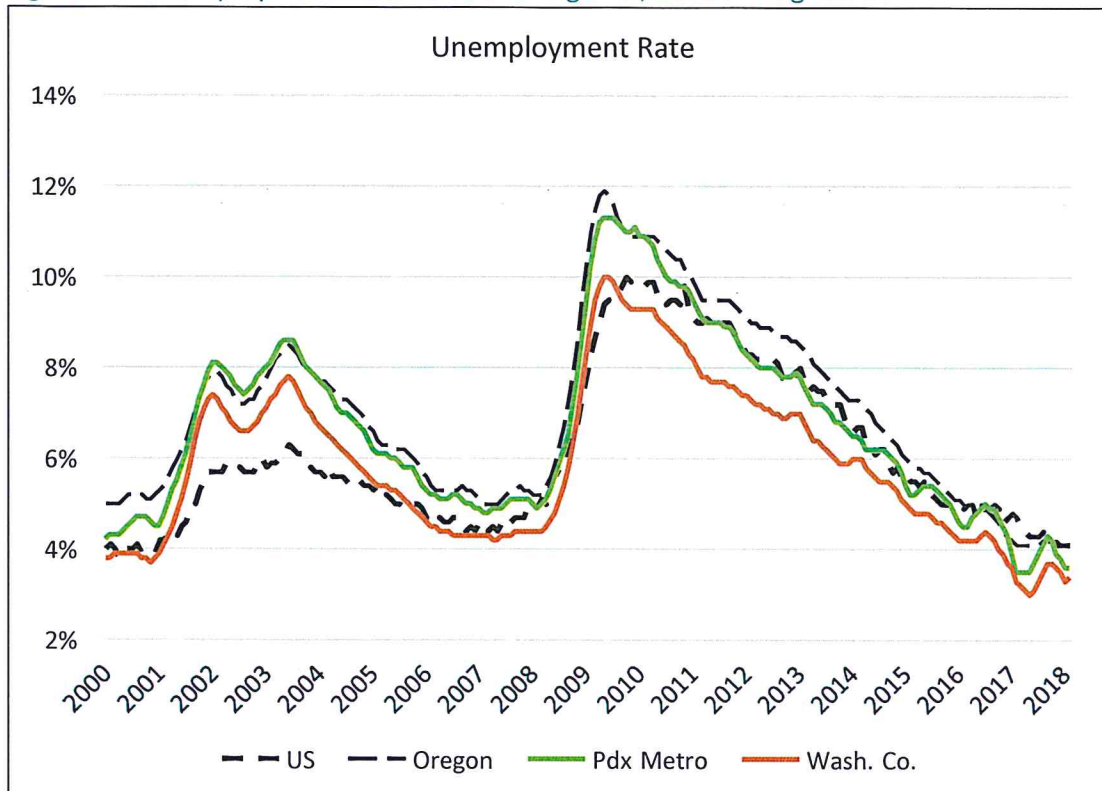
Source: Oregon Employment Department

As expected, the unemployment rate reflects these trends. After a period of elevated unemployment following the recession of the early 2000's, the rate fell until 2008 when it spiked dramatically (see following figure).

Unemployment in Oregon and the Portland Metro region generally, both spiked roughly two percentage points higher than the national average by 2009. However, the Washington County rate remained lower, peaking at roughly 10%.

Since 2009, the unemployment has fallen steadily for nearly a decade. The unemployment rate in Washington County has remained below that of the Metro, state, or nation. While the exact definition of "full employment" and what constitutes a healthy unemployment rate differs, at its current rate of 3.4% it is near historic lows and reflects a very tight labor market.

Figure 3.4: Unemployment Rate: State and Regional, 2000 through 2018



Source: Oregon Employment Department

Impact on Forest Grove:

In the near-term, employment is expected to continue to grow and the labor market is expected to remain very tight, with growing competition for qualified labor for nearly all categories of employers. The duration of this situation will depend on the timing of the next cyclical downturn.

Over the mid- to long-term, such a downturn will surely occur, which would be expected to cause employment levels to stagnate or drop, and unemployment to rise. The positive news is that with current tight conditions, a modest drop-off might serve to return the labor market to more sustainable levels. Over a full 20-year period, multiple up and down economic cycles are to be expected.

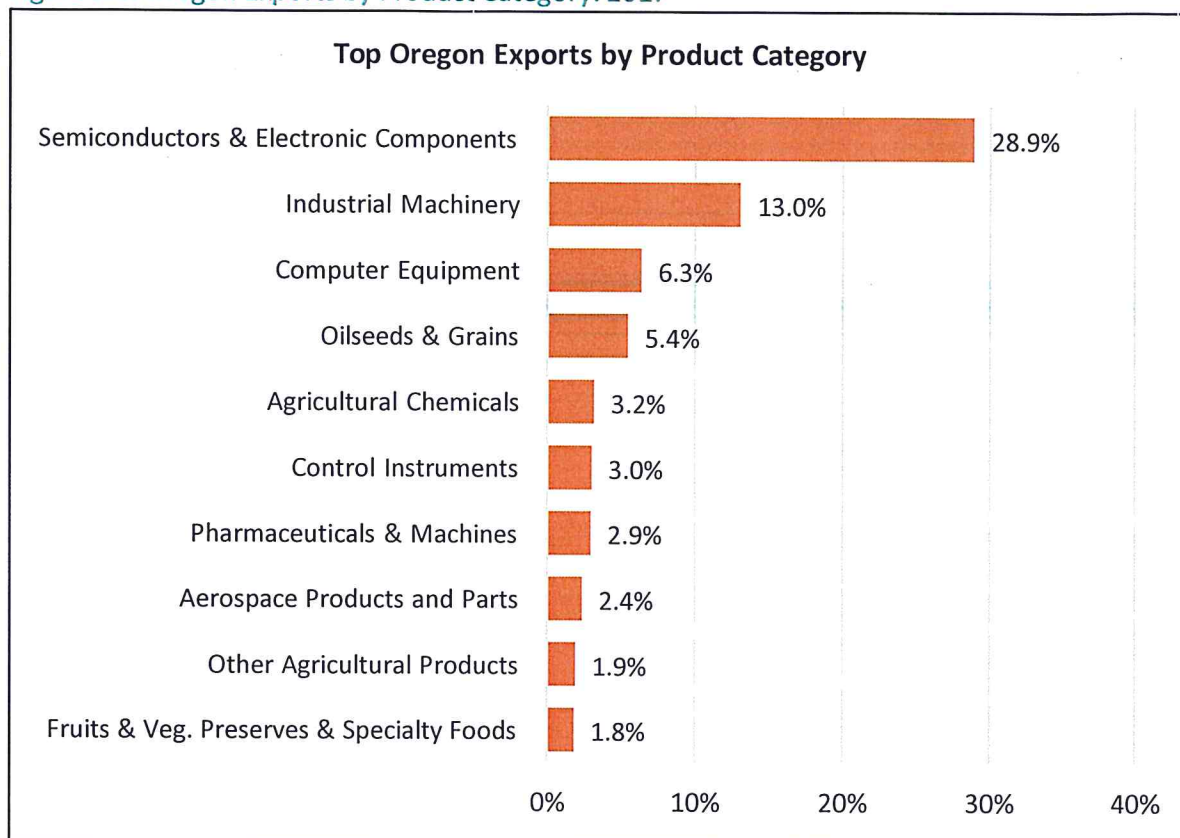
(The local employment cross-section is discussed in more detail in a following section.)

Export Trends

Oregon's Economic health is largely connected to growth in the export market. This is especially true in Washington County, which accounts for a considerable share of Oregon's traded-sector output. In 2017, Oregon's total export value reached over \$21.9 billion, growing 19% over the prior five years.

Nearly 29% of state exports (by value) is in semiconductors and electronic components, an industry in which Washington County leads the state. Other technical products as well as agricultural products are also prominent components of state exports.

Figure 3.5: Oregon Exports by Product Category: 2017



Source: US Department of Commerce

China receives most Oregon imports by value (\$3.9 billion) followed by Canada, and a number of Asian countries. Over the last decade export growth has been most robust with China (+175%), Malaysia (+114%), and Vietnam (+1,500%). Oregon's exports to Canada have actually decreased somewhat over the decade (-17%). (See following figure.)

Figure 3.6: Oregon Exports by Destination: 2017



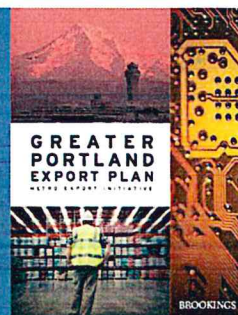
Source: US Department of Commerce

Economic development leaders in the region are confident that there is more room for growth. Increasing exports has become a central component of regional economic development strategies. The connection of export growth to job creation is clear; the Oregon Office of Economic Analysis estimates that 90,000 jobs are directly supported by Oregon exports. A key element in the Greater Portland Export Plan is catalyzing under exporting firms, emphasizing creation of global opportunities for small and medium sized firms.

Negotiations were recently concluded for a new Trans-Pacific Partnership, a free-trade agreement with twelve Pacific Rim countries, including seven of Oregon's top fifteen trading partners. As of 2018, the United States participation in this pact has been shelved or at least delayed by the current administration. Still strong support remains for rejoining the partnership, so this remains a good prospect for the future. Over 31 percent of all Oregon exports are currently with existing FTA partners, an increase of over one-third in ten years. If eventually approved, the TPP agreement could expand Oregon's export potential markedly.

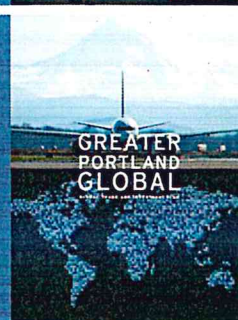
Greater Portland Export Plan (Four Strategies):

- Leverage Primary Exporters
- Catalyze Under Exporters
- Build a Healthy Export Pipeline
- Branding



Greater Portland Global

A joint project between the Brookings Institute and JP Morgan Chase. The plan's focus is on the interaction of exports and Foreign Direct Investment (FDI). A key finding was that excluding Japan; the region lacks FDI out of Pacific Rim partners.



While many structural conditions are in place to facilitate strong export expansion, prospects for growth are not without risks. Most notably, on-going and reoccurring labor disputes at the Port threaten to undermine certainty for exporting firms in the Oregon market. A long-term resolution and return of shipping business will be necessary for the region to meet its export goals.

The current US political climate has grown more hostile to trade agreements and more favorable to measures such as tariffs which have the potential to trigger reprisals from other countries and significantly impact world trade. This political climate has created significant uncertainty over whether these measures will actually be put in effect, and if so how long they might remain in place. Changes in the strength of the U.S. dollar also impact exports positively or negatively.

Impact on Forest Grove:

The manufacturing economy in Washington County has been, and will continue to be highly reliant on trends across a global marketplace. On the positive side, expanded wealth and purchasing power in emerging markets on the Pacific Rim and Latin America should continue to drive demand for products and services made in the area. However, this reliance goes hand-in-hand with exposure to global instability and volatility.

In the near-term, a stronger dollar will temper export growth, as U.S. products are more expensive to foreign buyers. Political uncertainty over the country's favorability to trade deals has the potential to create major disruptions in the short to mid-term, but may not materialize. In the long-term, structural conditions and economic development initiatives are in place for continued export growth.

The region continues to grow robustly on measures positive for the export economy including a modern, educated workforce, and continued preservation of agricultural lands, which support agricultural exports and food processing industries.

Demographic Trends

In terms of absolute numbers, the Portland Metro area has been the center of growth in population and households for decades. The region has seen the earliest and strongest economic recovery from the recent recession, and offers the greatest diversity of new opportunity for potential new arrivals. Since 2000, the four-county Portland Metro region (including Clark County) has grown by nearly 500,000 people, to 2.28 million people. This is over 27% growth since 2000 and over 60% growth since 1990.

Washington County represents 26% of region's population, at 596,000 people. It has added over 150,000 people, or 34% of its population since 2000. It was the fastest growing of the three Oregon counties during that period, and lagged just behind Clark County in growth rate.

Since 2000, Forest Grove has grown by nearly 6,000 people (33%), to 23,500 people in 2017. The City represents 4% of the county's population, and 1% of the Metro area.

(All figures courtesy of Portland State University Population Research Center.)

Figure 3.7: Forest Grove Household Trends & Short-Term Projections: 2000 - 2023

POPULATION, HOUSEHOLDS, FAMILIES, AND YEAR-ROUND HOUSING UNITS						
	2000 (Census)	2010 (Census)	2018 (Est.)	Growth Rate 10-18	2023 (Proj.)	Growth Rate 18-23
Population	17,830	21,130	23,980	1.6%	26,225	1.8%
Households	6,336	7,628	8,514	1.4%	9,311	1.8%
Families	4,128	4,909	5,479	1.4%	5,992	1.8%
Housing Units	6,702	7,845	8,920	1.6%	9,755	1.8%
Household Size	2.64	2.77	2.82	0.2%	2.82	0.0%
PER CAPITA AND AVERAGE HOUSEHOLD INCOME						
	2000 (Census)	2010 (ACS)	2018 (Est.)	Growth Rate 10-18	2023 (Proj.)	Growth Rate 18-23
Median HH (\$)	\$40,296	\$47,296	\$54,437	1.8%	\$59,438	1.8%
Average HH (\$)	\$48,231	\$60,310	\$70,142	1.9%	\$77,084	1.9%

Source: US Census, PSU Population Research Center, Metro, Johnson Economics

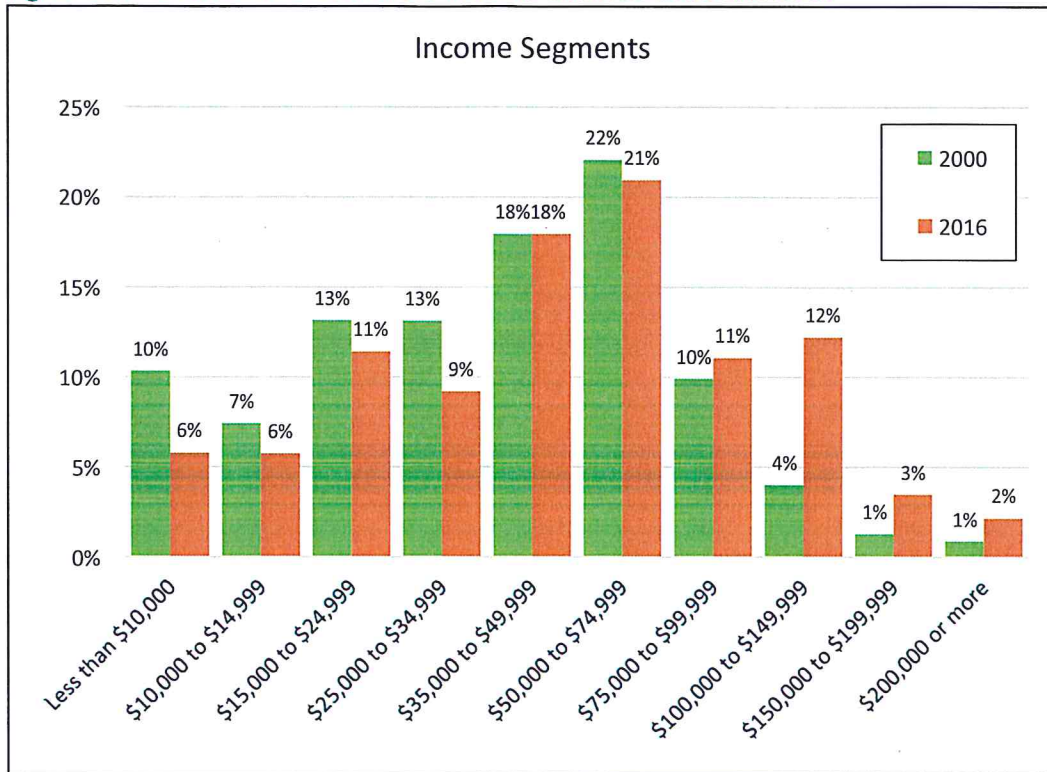
Population and Households

- As of 2018, Forest Grove is estimated to approach 24,000 people, making it the 24th largest city in Oregon.
- Forest Grove is home to an estimated 8,500 households in 2018. The percentage of families declined slightly since 2000 from 65% to 64% of all households. This is lower than the Washington County figure of 67% family households, and higher than the state's 63%.
- The Census estimates that Forest Grove's average household size has actually increased since 2000, from 2.6 to 2.8. This is smaller than the county average of 3.1 but larger than the statewide average of 2.5.

Income Levels

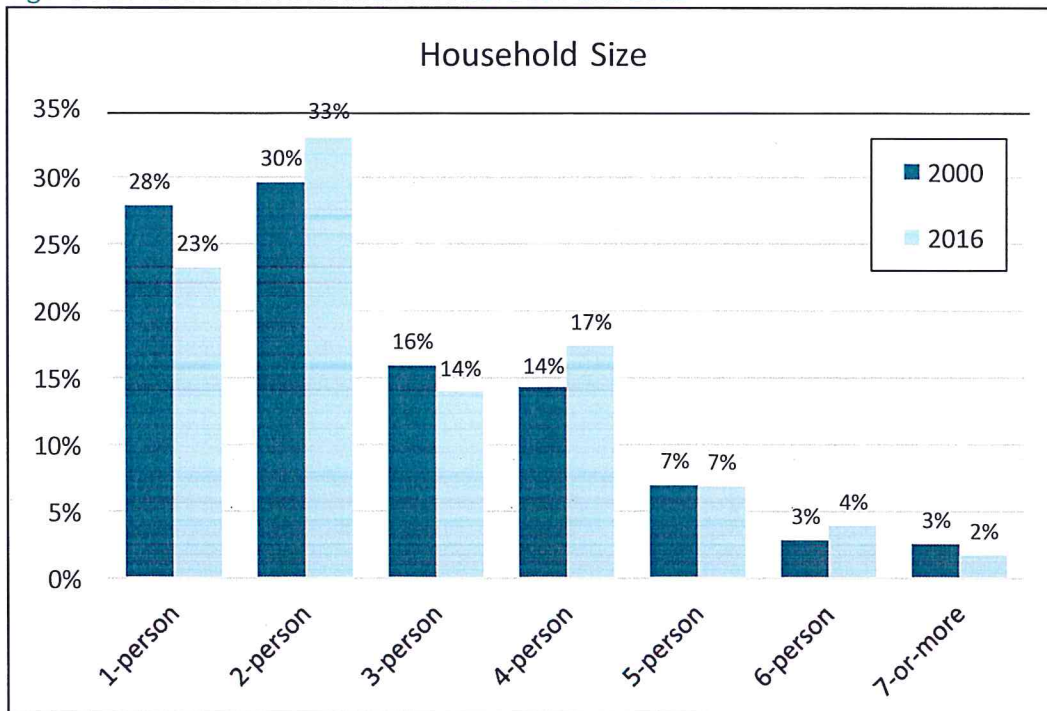
- Forest Grove's median household income was \$47,300 in 2010. This was 32% lower than the median income found in the county (\$62,500).
- Median income has grown an estimated 35% between 2000 and 2018.
- Figure 2 shows the distribution of households by income in 2000 and 2016 according to the US Census' American Community Survey. The largest single income cohort is those households earning between \$50k and \$75k, at 21% of households. 50% of households earn less than this, while 29% of households earn \$75k or more per year.
- 23% of households earn \$25k or less, down from 31% of households in 2000.

Figure 3.8: Forest Grove Household Income Cohorts: 2000 and 2016



Source: US Census, American Community Survey, Johnson Economics

Figure 3.9: Forest Grove Household Size: 2000 and 2016



Source: US Census, American Community Survey, Johnson Economics

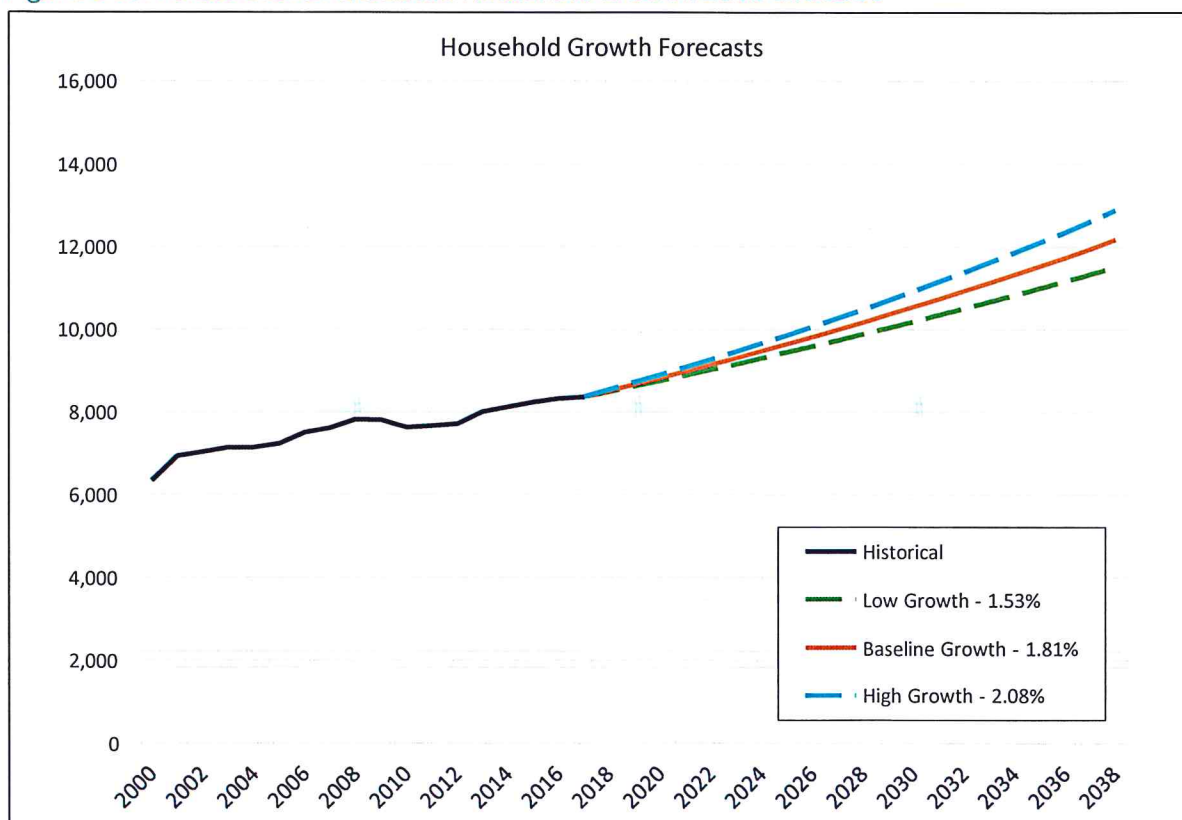
Household Growth Projections

Metro regional government periodically prepares household growth forecasts for the member jurisdictions across the region, including Forest Grove. The latest forecast dates to 2016, and is the Metro 2040 Distributed Forecast.

- The Metro 2040 forecast projected Forest Grove growing from an estimated 8,432 households in 2015 to an estimated 13,190 households by 2040. This is a growth rate of 1.81% over that period.

The following figure presents historical growth in households from 2000, and projected growth based on the Metro 2040 forecast. The forecast extends over the 20-year period of this analysis, to 2038. In addition to the forecasted growth rate of 1.81%, the figures presents a range of potential growth scenarios, assuming that the annual growth rate may end up being 15% higher or lower than the forecast. These forecasts arrive at a range of 11,515 to 12,876 households by 2038.

Figure 3.10: Forest Grove Forecasted Household Growth: 2000 and 2038



Source: Metro 2040 Distributed Forecast, Johnson Economics

Impact on Forest Grove:

The forecasted growth rate of 1.81% would represent an acceleration of the growth rate over recent years. Household growth is an important driver of economic activity including in the construction, services and shopping sectors. Forest Grove can anticipate continued growth and the need to serve more of the needs of households locally, rather than traveling for daily needs.

Anticipated Demographic Shifts

Aging of the Workforce: The aging of the Baby Boomers into their retirement years will perhaps be the greatest challenge to the U.S. economy over the planning period. By 2035 the share of the population age 65 and older will balloon to 21 percent, up from 14.5 percent today. The effects of this condition will be a decline in labor force participation, an increase in federal liability for health care services, and an increased need for replacement workers.

Millennial Generation: Millennials are now the largest demographic segment in the United States, comprising 27% of all residents and an even greater share of net-migrants. Leading into and during the Great Recession, this cohort faced a woeful labor market. Many opted to enter or continue post-secondary education, at which point the college enrollment rate for 18-24 year olds rose from 37 to 42 percent. The younger cohorts moving to the Portland Metro area tend to have higher educational attainment on average than existing residents, supporting a high-skilled workforce.

Labor Force Participation: The aging of the labor force as well as generational preferences are putting downward pressure on the labor force participation (LFP) rate. This rate measures the share of the working age population that is employed or is actively seeking work. In 2016 Oregon's rate of 63% was rebounding somewhat after hitting the lowest level on record in 2015. The "participation gap" is the difference between actual LFP and where LFP should be given underlying demographics. Currently this gap remains large despite the economic recovery, structurally reducing potential employment in the economy.

Immigrant Labor: Currently, the national political climate is shifting to the detriment of immigration of both low- and high-skilled workers from foreign countries. Increased enforcement and unwelcoming rhetoric has reduced migration from Latin America over the past year, and created trepidation and uncertainty among some current residents about their status in this country. In addition, there is currently discussion of reducing or restricting visa programs for highly skilled workers of the type used in many high tech industries.

Impact on Forest Grove:

Companies in Forest Grove may have increasing difficulty finding trained labor due to the aging of the workforce and falling labor force participation. Good migration will be necessary to meet future needs of local industries. Difficulty finding labor may accelerate investments in capital to replace labor. The economy overall is at greater risk of performing below potential.

Reduced migration may have an outsized impact on Washington County due to the importance of both agriculture and the high tech sector. The scale and impacts of measures to reduce immigration have yet to be determined, and may prove temporary, if reversed by future administrations.

Washington County, including Forest Grove has the benefit of attracting younger households, and offering high tech industries that offer good jobs to high skilled workers and those with the most up-to-date education. For these reasons, the county should remain an attractive destination for younger workers who can help counteract these trends. Forest Grove also has the benefit of a local university that provides a steady stream of young educated workers who can be recruited to remain in the community.

Household Migration

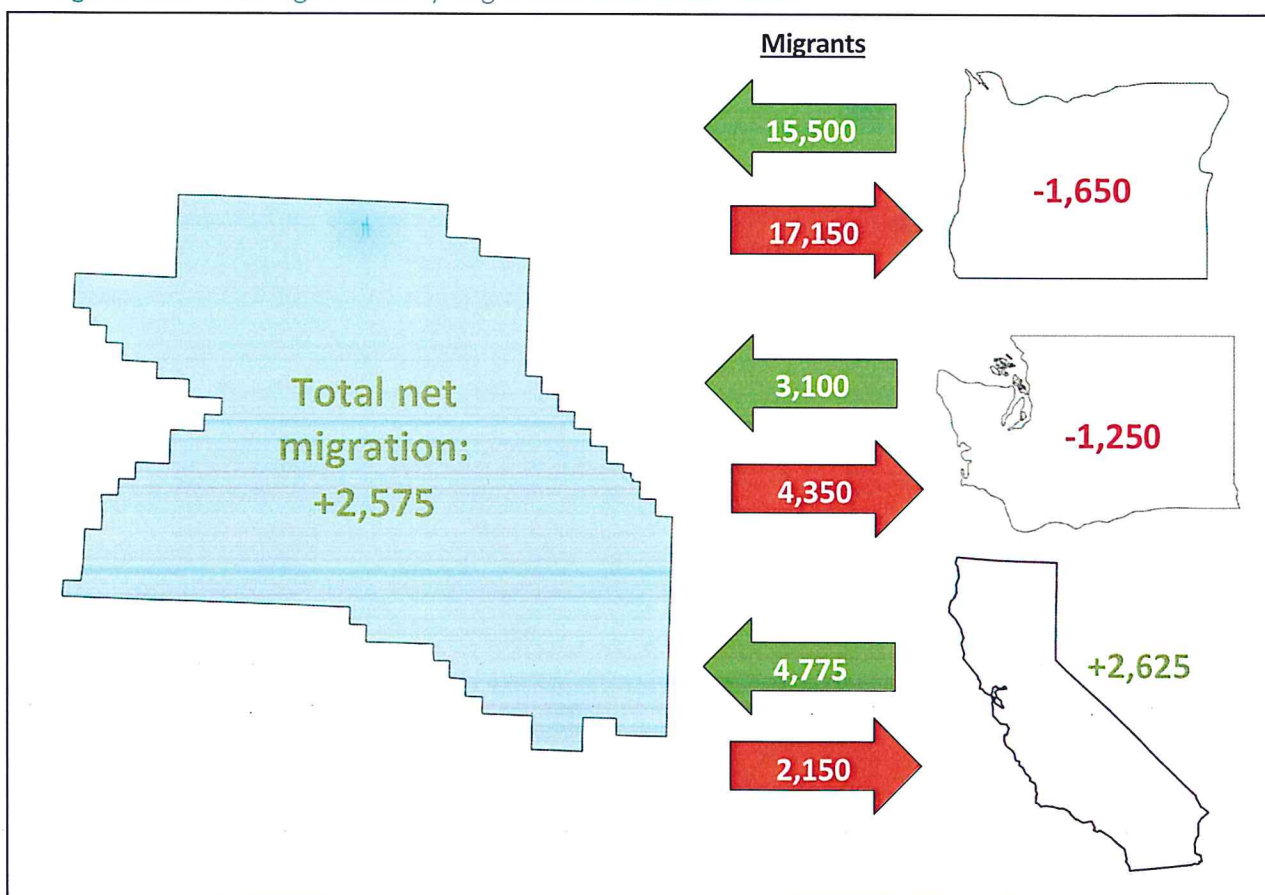
The Portland Metro area is a magnet for migrants from other major markets and abroad, with most new residents landing in Multnomah or Washington Counties to begin their new lives. However, many residents eventually transition to outlying cities.

Since 2010, Washington County has accounted for 35 percent of new migrants to the region and over 17 percent of all net-new migrants to the state of Oregon.

In the most recent migration data available from the IRS (2015-2016), Washington County saw a net population gain from Multnomah County, but a net population loss to Clackamas, Clark and Yamhill Counties. In fact, more people move out of Washington County to other places in Oregon and Washington State, than migrate from those areas (see following figure). The county does however see a strong influx of migrants from Benton and Lane Counties, likely driven by graduating students of the major state universities.

Net positive migration in recent years is attributable to migrants from other states and abroad. California is the largest contributor of new residents, followed by Arizona, Texas, and Nevada.

Figure 3.11: Washington County Migration Flows: 2015 - 2016

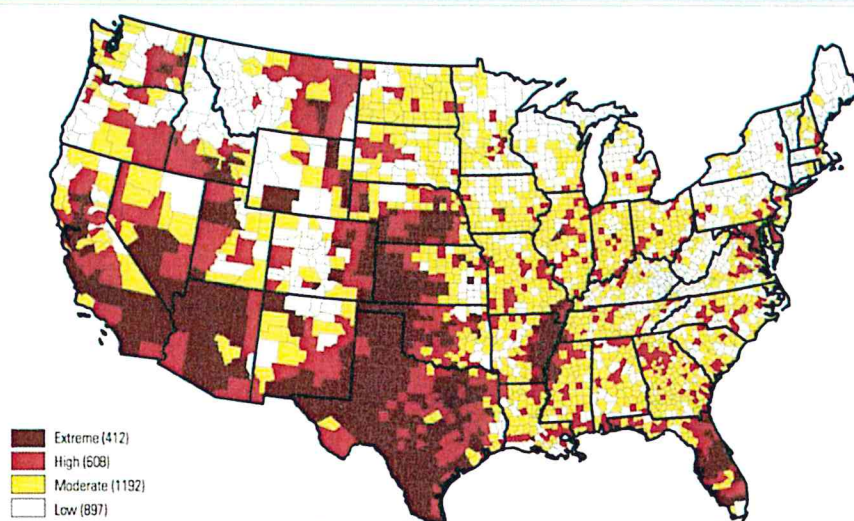


Source: Internal Revenue Service, Johnson Economics

The Pacific Northwest: A Climate Refuge?

Continued in-migration from other states will maintain sustained growth in population and labor force locally. Long-term, an acceleration of net-migration rates is increasingly likely in the context of water resource constraints in the U.S South and Southwest. The Pacific Northwest, and more specifically the Willamette Valley is among the only regions in the United States with an overall low risk of future water resource constraints. The ability of population centers in the South and Southwest to accommodate projected population growth and maintain livability standards is questionable, with proximate high resource areas like Oregon being a likely outlet to accommodate future growth.

Water Supply Sustainability Risk, 2010 through 2050



Source: Natural Resource Defense Council (2010)

Impact on Forest Grove:

A history of strong net-migration coupled with a rosy outlook is indicative that migration-driven population growth is likely to continue throughout the planning period. This is a positive sign for industries that derive a significant share of their support from the local population base. This includes health care, retail, food services, education, financial services, housing construction, and most of the other services sector.

Multnomah County has also exhibited a doubling of its migration rate in recent years. Given the systematic relationship of flows from Multnomah to Washington County, Forest Grove may be due for a stronger influx of inter-region migrants over the next five years.

IV. LOCAL EMPLOYMENT & TARGET INDUSTRIES

Sound economies are often organized around a healthy set of industry clusters—similar and related businesses and industries that are mutually supportive, regionally competitive, attract capital investment, and encourage entrepreneurship. In his pioneering book “The Competitive Advantage of Nations”, Harvard Professor Michael Porter defines clusters as “geographic concentrations of inter-connected companies and institutions working in a common industry”. As an economic development strategy, specific clusters are targeted, and emerge, when a particular geography holds an innate competitive advantage in that industry—whether it is natural resources, human capital, political policies, or geography. For example, Oregon’s oldest industries—namely forestry and agriculture, emerged from physical and environmental attributes and access to shipping and distribution networks. In turn, these industries spawned interrelated clusters that include Food Processing & Manufacturing, Wood Product Manufacturing, Wholesale & Distribution, Machinery Manufacturing, and host of other industries.

With shared ideas, concepts, and competition, knowledge spill-over within clusters encourages secondary effects—innovation, the creation of start-ups and spin-off industries, and opportunities for suppliers, manufacturers, and customers. In turn, effects from job creation and wages support tertiary effects such as retail, services, construction, housing and institutional industries.

In light of the baseline economic analysis above, Johnson Economics reviewed Oregon Employment Department ES-202 employment data for the City of Forest Grove to determine industries and industry clusters in which the local economy is both regionally competitive and/or has growth potential. We have identified industry clusters with an existing competitive presence in Forest Grove and potentially emerging clusters. Identified targeted industries are evaluated in greater detail below.

Local Employment Trends

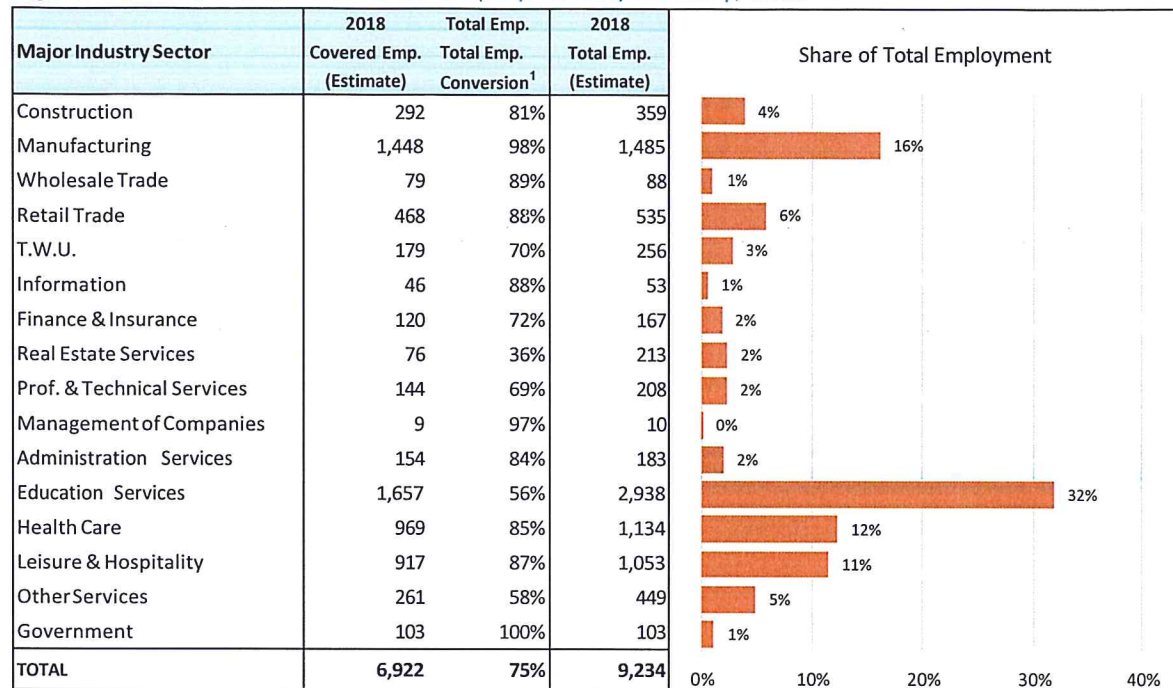
In 2018, Forest Grove has an estimated 9,250 local jobs across a range of industries. Employment is estimated based on 2016 QCEW data from the State of Oregon. This data includes “covered employment”, or jobs with covered wages, subject to unemployment insurance benefits. This is combined with an estimate of the “non-covered employment” which includes self-employed people, many small business owners, LLC partners, and other cases. (Methodology is further discussed in Section V of this report.) Forest Grove represent 3% of employment in Washington County, which is close but slightly less than the 4% share of the county population who live in the community.

Employment Growth: Employment levels in Forest Grove have been remarkably stable since 2000, according to US Census and BEA data. While the specific firms, and employment by industry have shifted, the overall number of jobs grew just 5% over the period from 2002 – 2015 (the largest span available from this Census data set). This is an annual growth rate of 0.4% in jobs, compared to a population growth rate of roughly 1.5% over this period. This average rate was greatly impacted by the recession and economic downturn in the 2008-2010 period.

Since peaking previously in 2007, employment fell sharply during the recession in keeping with national trends. After bottoming in 2010, local employment has rebounded by an estimated 11%, and surpassed the previous peak in 2015.

Figure 4.1 presents the estimated employment profile in Forest Grove by industry sector. The largest sectors by employment share are private education services, manufacturing, health care, and leisure and hospitality (food service and tourism).

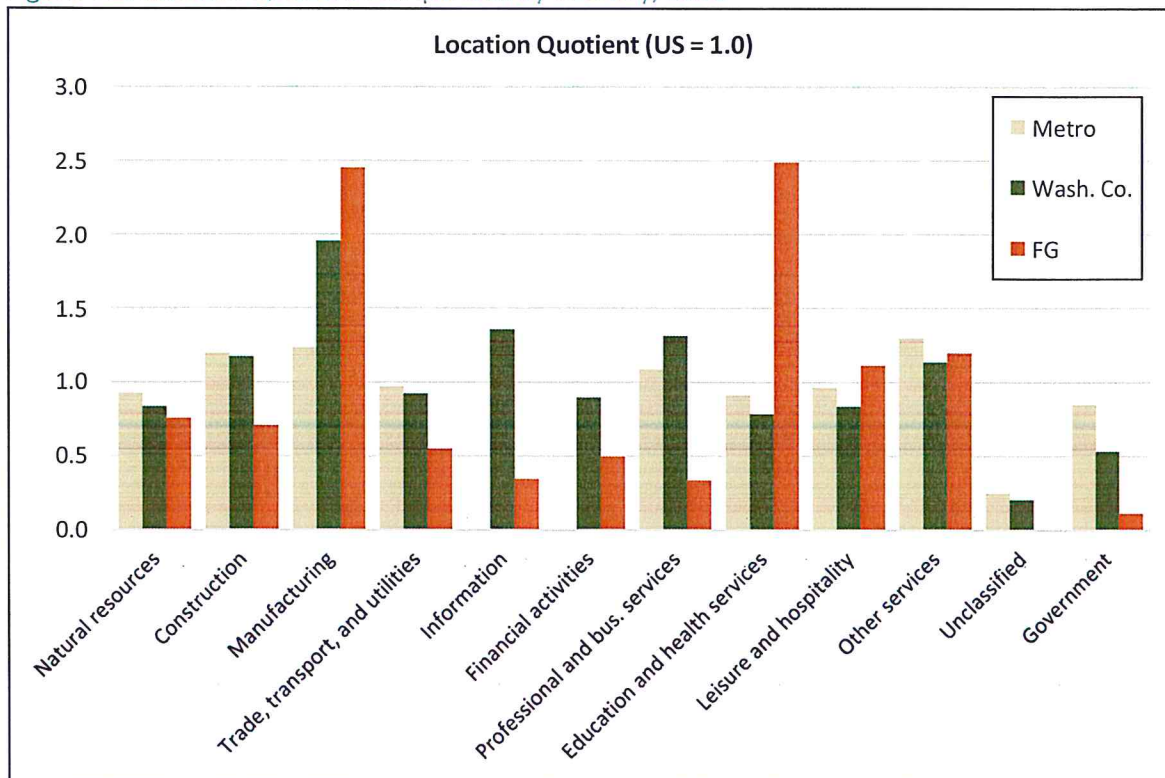
Figure 4.1: Forest Grove Estimated Employment by Industry, 2018



¹ Bureau of Economic Analysis. Calculated as a five-year average between 2012 and 2016

Source: Oregon Employment Department, Johnson Economics

Figure 4.2: Location Quotient Comparison by Industry, 2018



Source: Bureau of Labor Statistics, Oregon Employment Department, Johnson Economics

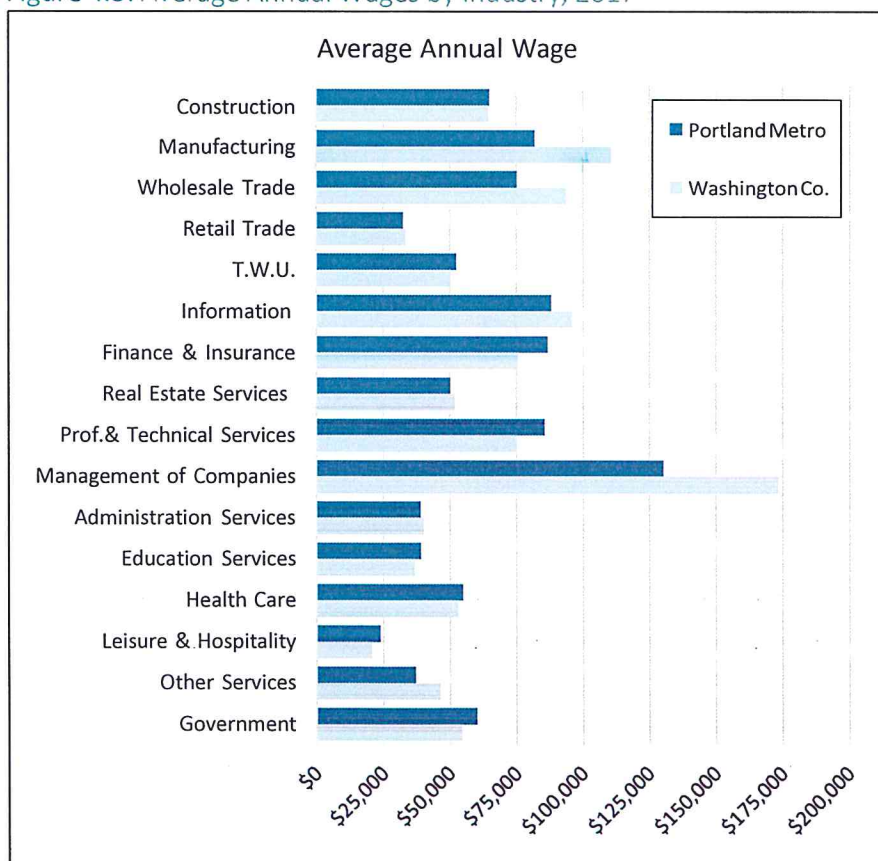
Location Quotient: Figure 4.2 (previous page) presents a comparison of “location quotient” (LQ) of various industry categories. LQ presents a measure of the prevalence of a given industry in a smaller geography, in comparison to how prevalent that industry is nationally. LQ is an indicator of what sectors may be particularly strong or weak in a given locality.

All industry categories are assumed to have a quotient of 1.0 on the national level, and a locality’s quotient indicates if the local share of employment in a given industry is greater or less than the share seen nationwide. For instance, a quotient of 2.0 indicates that locally, that industry represents twice the share of total employment as seen nationwide. A quotient of 0.5 indicates that the local industry has half the expected employment.

As Figure 4.2 shows, Forest Grove currently enjoys a greater share of employment in manufacturing and education and health, in comparison to the county, metro, or national level. Employment in these sectors are 2.5 times higher than the national average. Forest Grove also experiences a higher share of jobs in leisure and hospitality, with an LQ of 1.25. In most other categories, Forest Grove has a lower share of employment than the comparisons.

Average Wages: Figure 4.3 shows the average wages in the Portland Metro area and Washington County by industry sector.

Figure 4.3: Average Annual Wages by Industry, 2017

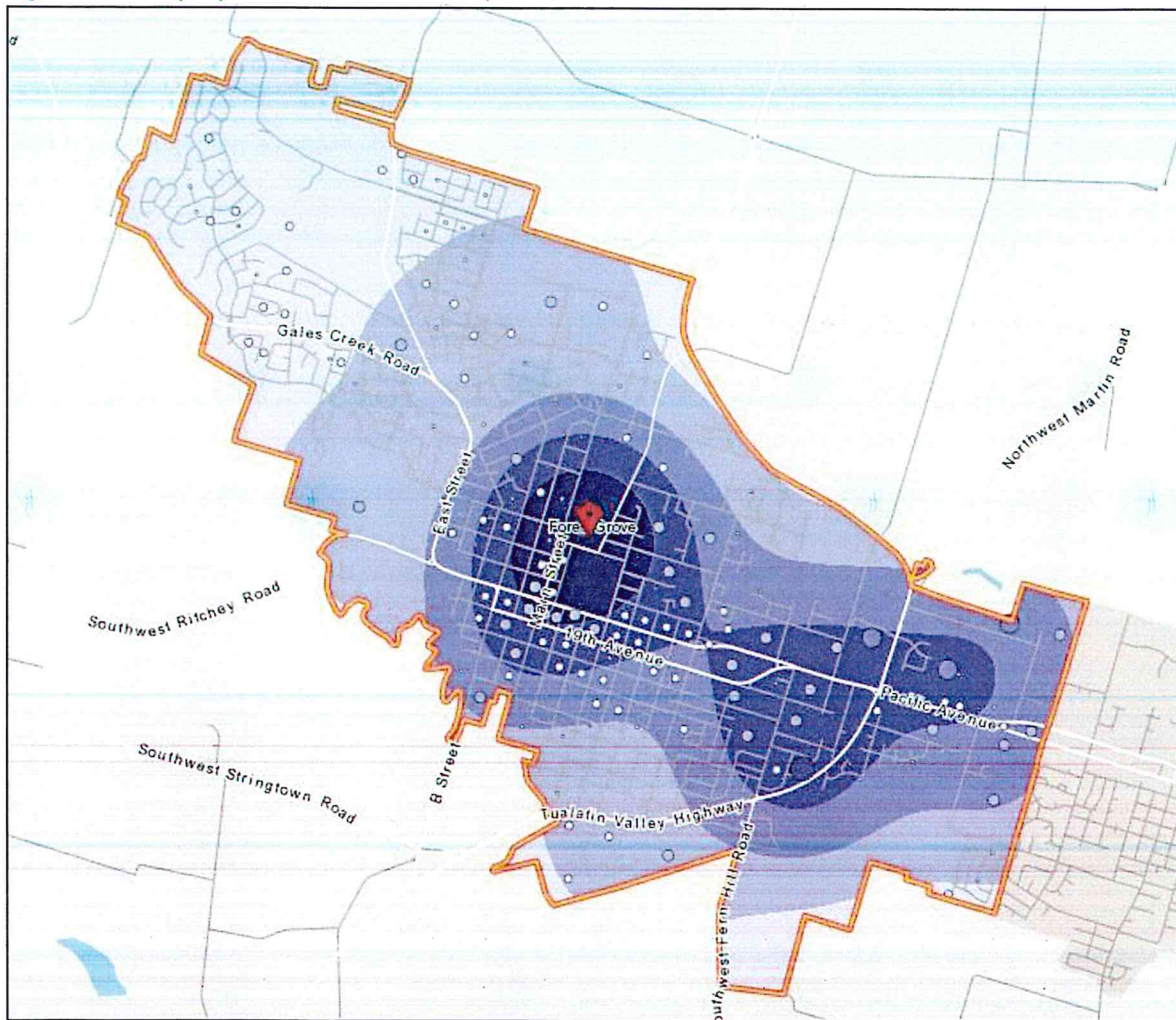


Source: Oregon Employment Department, Johnson Economics

The manufacturing sector which is prominent in Forest Grove enjoys some of the higher average wages among industries, and particularly in Washington County. It should be noted that some of the Washington County averages are likely higher due to the presence of major companies such as Intel and Nike in other parts of the county. Other prevalent industries such as education, health care, and tourism tend to support lower average wages.

Employment Concentrations: Figure 4.4 shows the general concentration of employment in Forest Grove. Most is located between the eastern City boundary, and the Downtown/Pacific University area to the west. Employment tends to be concentrated along the Pacific Avenue axis.

Figure 4.4: Employment Concentrations, 2015



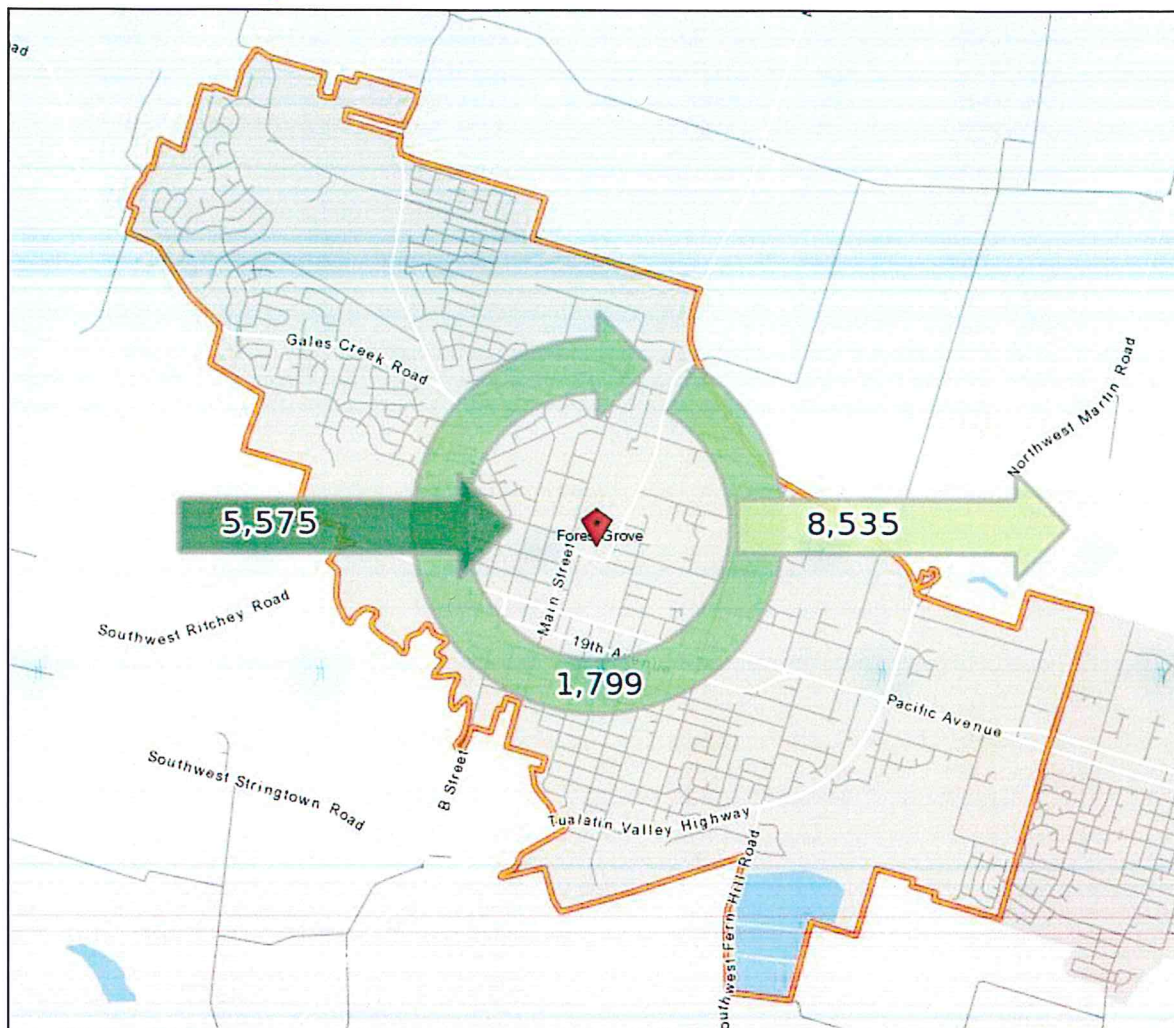
Source: US Census, Johnson Economics

Commuting Patterns: Most employed residents commute out of Forest Grove for employment. This is a pattern that is common to many communities, particularly in an interconnected metropolitan area. Of local jobs, an estimated 24% are held by local residents, while 76% are held by others who commute into

the area. An estimated 83% of local residents who are employed, commute elsewhere.

(The employment totals shown in Figure 4.5 are from a different data set and do not match the employment estimates presented in Figure 4.1. They are presented here to demonstrate the overall pattern.)

Figure 4.5: Commuting Patterns, 2015



Source: US Census, Johnson Economics

* * *

Target Industry Clusters

This section discusses potential target industries for Forest Grove based on the community's historical strengths and advantages, as well as its established economic development goals. These are industries where Forest Grove might focus efforts to grow local business and attract new businesses.

Agriculture/Value-Add Food Products

The proximity of Forest Grove to high quality farmland and the City's quality water supply has created opportunities for growth in food processing and specialty agriculture products. The city already has an existing economic base in food processing (Lieb Foods, Chaucer Foods, Old Trapper, New Seasons Foods), nursery & tree products (Hines Nursery, EF Nursery), and specialty beverages (Sake One, McMenamins, wineries). The agriculture and food processing cluster in Forest Grove has continued to experience solid growth over the last few years, with most major companies adding to their workforce. State employment data indicate that the sector has added roughly 150 employees locally since the recovery took hold in 2013, job growth of nearly 75%. Moreover the nature of Forest Grove's specialty products—breweries, wineries, distilleries, etc. is closely related with leisure & tourism in the region.



Cluster Strengths

- Proximity to high-quality farmland and water supply.
- Existing food processing industry with workforce expertise.
- Has the ability to support a growing tourism industry.
- Geographic access to export markets.
- Certainty of long-term agricultural land supply with designation of rural reserves near Forest Grove.

Cluster Challenges

- Over time, the continued urbanization of Washington County will reduce agricultural growth on the margin.
- Declining food prices and rising input costs.
- Potential restrictions on immigrant labor workforce.

Tourism & Winery Development

The wine industry in Oregon is expected to continue its accelerated growth trend exhibited in recent decades. Since 2000, the number of vineyards in Oregon has more than doubled from under 500, to nearly 1,100. Meanwhile, the number of wineries has quadrupled from roughly 140 to over 700.

Oregon's wine industry growth is largely attributed to growing worldwide popularity and increased market share of Pinot Noir. Oregon's climate is ideal for cultivating the Pinot Noir grape, which began in the Forest Grove area. Pinot grapes account for 65% of Oregon production. Forest Grove has the opportunity to become the center for wine based tourism in North Willamette Valley wine country, and enjoys better accessibility from much of the metro region, in comparison to Yamhill County.



The City of Forest Grove has undertaken efforts to “brand” the city, giving it a regional identity. The concept of Forest Grove as a “Gateway to Wine Country” is a popular option, facilitated both by Forest Grove’s proximity to the metro area and by abundant outdoor recreation activities. The Washington County Visitors Association (WCVA) actively promotes the local wine industry. In the past, Forest Grove has been discussed as the location for a “North Willamette Valley Wine Center”, which could feature tasting facilities for regional wine makers, lodging, and convention center, perhaps in partnership with the McMenamins Grand Lodge or winery property.

The development of a winery based tourism industry is supportive to other industries as well. For example, agri-tourism typically attracts a relatively affluent patronage that is likely to support higher-end restaurants and shops, enhancing the urban amenities and livability of the community.

Cluster Strengths

- Geographic position near the Chehalem Mountain and Ribbon Ridge American Viticulture Areas, and outdoor recreation opportunities.
- An attractive downtown core, including Pacific University.
- Regionally drawing amenities such as Grand Lodge, Fern Hill Wetlands, Scoggins Valley Park/Henry Hagg Lake.
- Cluster development would provide tertiary benefits to other industries.
- Local wineries are currently small in scale, leaving high growth potential.

Cluster Challenges

- Limited connectedness between winery locations and downtown.
- Need to continue to build awareness as a wine country gateway.
- Regional competitiveness with other Willamette Valley wine districts.
- Wineries have noted that the permitting process in Washington County is difficult and convoluted, a competitive disadvantage relative to other wine counties.

Education

In addition to an attractive sense of community, Forest Grove's livability is accentuated by its quality public school system. Increasingly considered a livable bedroom community, Pacific University and the public schools form one of the largest employment sectors in Forest Grove.



While employment in public education can be expected to grow commensurately with family households in the region, broader growth in the education sector will be born out of Pacific University. Over the last decade, the school has been in an expansionary phase. In 2005 the school complete an \$11 million LEED certified library, and new residence halls were completed in 2006 and 2008. In spring 2008, the University completed Berglund Hall, which now houses the School of Education. As of 2016, the Forest Grove campus had 2,400 undergraduate and graduate students on site, along with 720 faculty and staff. The university plans to grow enrollment at the local campus to 2,800 students and 900 employees by 2030. Pacific University will continue to be a key cornerstone of the community in terms of residents, employment, and cultural activities and land use.

Cluster Strengths

- Population and enrollment growth on the horizon.
- Pacific University is an attractive asset to the Downtown Core.
- Potential to foster greater connections and partnerships with the university.

Cluster Challenges

- Perceptions within the community of limited partnerships between Pacific University and Forest Grove at large.
- Volatility in public school funding.

Retirement Services

Largely the result of the general livability of the area and small-town community atmosphere, Forest Grove has an existing retirement aged population base far exceeding most jurisdictions in Washington County. According to the Census, the percent of the population age 65 and older is higher in Forest Grove than in Washington County as a whole (12.5% vs. 10%). Moreover, four of the City's top 25 employers are



nursing care or elderly home facilities. Forest Grove's composition of employment in Nursing and Residential Care Facilities is nearly three times the national average.

In addition to direct retirement care services, roughly 23% of the City's population is aged 55 and older. These households provide broad support for leisure and financial activities in the local economy. Over the next five years, the retirement age household population is expected to continue to grow in Forest Grove as the large Baby Boomer

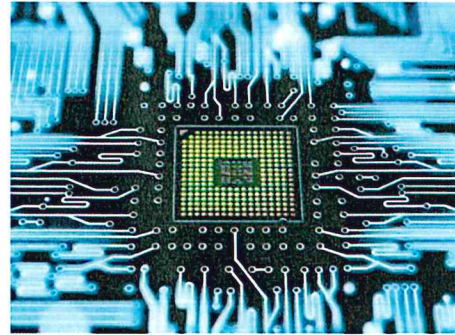
generation continues to reach retirement. The city's pastoral setting, approachable size, local university, tourism attractions all within access of the larger Metro area will continue to make it attractive to retirees.

Cluster Strengths

- Livability and leisure activities
- Favorable demographics
- National growth in retirement segments, met by insufficient facilities

High-Tech

In 1980, Tektronix moved its circuit board manufacturing plant to a site in Forest Grove and high-tech has played a major role in the local economy ever since. The Tektronix operation, later becoming Merix and now TTM Technologies, has grown to become among the top three circuit board manufacturers in the United States and remains the largest employer in Forest Grove by a sizable margin. Additionally, Westak of Oregon is another circuit board manufacturer in the top ten list of employers in Forest Grove. The concentration of employment in High-Tech in Forest Grove is better than 15 times the national average.



While circuit board manufacturing is a significant part of the existing economy, its share of growth on the margin is not likely to be high. Rather, marginal high-tech growth is likely to be derived out of the firms that are connected to the cluster of high-tech industries centered in Hillsboro. Forest Grove's livability in addition to utility rates makes it an attractive location to capture economic spillover from Hillsboro's ongoing development and economic growth in semiconductor and solar component manufacturing.

Cluster Strengths

- Proximity to Oregon's largest High-Tech manufacturing center.
- Existing major High-Tech employers in Forest Grove.

Cluster Challenges

- Forest Grove's workforce composition does not match the needs of High-Tech firms.
- Uncertainty with respect to the future cost of utilities have limited industrial marketability of Forest Grove.
- Lack of direct transportation connections to the north Hillsboro employment area.

Comparison of Target Industries

The target industries presented here offer different advantages and challenges in terms of overall job growth, average wages and competitive advantages. The following table shows the relative performance of these industry categories between 2010 and 2016 based on QCEW data from the city of Forest Grove.

- In terms of total job creation, the tourism "accommodation and food service" category gained the most employment during this time and is forecasted to continue growing in our region. Tourism-

related jobs are generally fairly low-paying, but provide an important base of opportunity for part-time workers, low-skilled and first-time workers.

- Manufacturing of food and agricultural products also experienced rapid growth and offers solid middle-class wages. Employment in this category grew by a very strong 80% between 2010 and 2016.
- Durable goods manufacturing including high-tech and electronics manufacturing is estimated to have lost some employment during this period, but remains a source of well-paying jobs. This industry is expected to continue to grow and Forest Grove maintains the ability to attract these firms as part of the greater Washington County high-tech area.
- Educational services added a strong number of jobs, though it was lower in terms of percentage growth. Average wages in this category are high, and this is forecasted to remain a solid source of good local jobs.
- Health care and social services, including retirement services, saw modest relative growth in jobs. Wages in this category are lower than in manufacturing, but higher than tourism-related jobs. Given the aging of the population, it is forecasted that health care and retirement communities will continue to be a growth industry for many decades.

Figure 4.6: Recent Performance of Target Industry Sectors (2010 – 2016)

Naics Code (2 Digits)	Industry Sector	Job Growth 2010 - 2016 ¹		Average Annual Wage	Forecasted Growth Rate ²
<u>Manufacturing Categories</u>					
31	Food Product, Textiles, Leather, Apparel	152	80%	\$43,097	2.1%
32	Wood, Paper, Packaging, Chemicals, Plastics	49	29%	\$46,580	-0.7%
33	Metal, Machinery, Electronics, Equipment Misc.	-194	-19%	\$47,506	0.7%
61	Educational Services	119	8%	\$54,488	1.5%
62	Health Care and Social Assistance	20	2%	\$31,952	1.8%
71	Arts, Entertainment, and Recreation	-31	-48%	\$16,357	1.5%
72	Accommodation and Food Services	181	32%	\$18,668	1.8%

¹ Estimates of Covered Employment based on QCEW data from 2010 and 2016.

² Employment forecasts are from Oregon Employment Department, for Wash. & Mult. Counties, 2014-2024

Source: Oregon Employment Department, Johnson Economics

Each of the industries presented here are a compelling target for future employment and economic development activity, either because Forest Grove already enjoys a competitive advantage, or because the quality of jobs (as in high tech) make it an attractive target for continued focus.

V. FORECAST OF EMPLOYMENT & LAND NEED

Introduction

Goal 9 requires that jurisdictions plan for a 20-year supply of commercial and industrial capacity. Because employment capacity is the physical space necessary to accommodate new workers in the production of goods and services, employment need forecasts typical begin with a forecast of employment growth in the community. The previous analysis of economic trends and targeted industries set the context for these estimates.

This analysis produces estimates of employment growth by broad industry sector. Forecasts are produced at the sector or subsector level (depending on available information), and subsequently aggregated to two-digit NAICS sectors. Estimates in this analysis are intended for long-range land planning purposes, and are not designed to predict or respond to business cycle fluctuation. OAR 660-024-0040(1) specifically acknowledges the less certain nature of long-range planning forecasts:

“The 20-year need determinations are estimates which, although based on the best available information and methodologies, should not be held to an unreasonably high level of precision.”

The projections in this analysis are built on an estimate of employment in 2018, the commencement year for the planning period. Employment growth will come as the result of net-expansion of businesses in the community, new business formation, or the relocation/recruitment of new firms. Forecast scenarios consider a range of factors influencing growth, as well as consideration of third-party estimates from both public and private sources.

Long-range forecasts typically rely on a macroeconomic context for growth. Inflections in business cycles or the impact of a major shift in employment (i.e. a major unknown recruitment) are not considered.

Overview of Methodology

Updating the Base Year

The first analytical step of the analysis is to update covered employment to the 2018 base year. Our foundational Forest Grove specific QCEW dataset provides covered employment by industry through 2016. To update these estimates, we use observed industry growth rates for Washington County between 2015 and 2017 (summary level county employment data is released on more timely basis than place level detailed data).

Conversion to Total Employment

The second step in the analysis is to convert “covered”⁴ employment to “total” employment. Covered employment only accounts for a share of overall employment in the economy. Specifically, it does not consider sole proprietors or commissioned workers. In Washington County, non-covered workers have averaged 16% of the employment base over the last five years. The differential is obviously most common

⁴ The Department of Labor’s Quarterly Census of Employment and Wages (QCEW) tracks employment data through state employment departments. Employment in the QCEW survey is limited to firms with employees that are “covered” by unemployment insurance.

in real estate, where commissioned workers comprise an unusually large share of jobs. Taken together, the assumed 2018 total employment base for Forest Grove is 9,262 jobs.

Figure 5.1: Conversion of Covered to Total Employment

Major Industry Sector	2016 Employment ¹	'15-'17 Annual County Δ ²	2018 Update	Total Emp. Conversion ³	2018 Estimate
Construction	184	13.0%	235	81%	289
Manufacturing	1,392	0.9%	1,417	98%	1,453
Wholesale Trade	75	11.6%	93	89%	105
Retail Trade	453	4.2%	492	88%	562
Transport., Warehouseing, Utilities	148	4.2%	161	70%	230
Information	28	18.7%	39	88%	45
Finance & Insurance	119	3.0%	126	72%	176
Real Estate Services	65	3.3%	69	36%	193
Professional & Technical Services	131	-2.0%	126	69%	182
Management of Companies	8	-4.0%	7	97%	8
Administration Services	168	2.5%	177	84%	210
Education Services	1,593	3.3%	1,698	56%	3,012
Health Care	925	1.0%	943	85%	1,104
Leisure & Hospitality	779	6.9%	891	87%	1,023
Other Services	241	4.1%	261	58%	449
Government	217	1.1%	222	100%	222
TOTAL	6,526	3.3%	6,958	75%	9,262

1 2016 Quarterly Census of Employment and Wages (QCEW), Oregon Employment Department

2 Oregon Employment Department, Washington County. Inputed at lowest NAICS and aggregated to sectors

3 Bureau of Economic Analysis. Calculated as a five-year average between 2012 and 2016

Source: Oregon Employment Department, Johnson Economics

Scenario 1: Safe Harbor Forecast

The Goal 9 statute does not have a required method for employment forecasting. However, OAR 660-024-0040(9)(a) outlines several safe harbor methods. The most applicable for Forest Grove is 660-024-0040(9)(a)(A), which recommends reliance on the most recent regional forecast published by the Oregon Employment Department (OED). This method applies industry specific growth rates for the Portland Metro Workforce Region (Washington and Multnomah County) to the 2018 Forest Grove base.

The most recent OED forecasts for the Portland Metro area cover the period of 2014 to 2024. This analysis calculates the average annual growth rate for each industry sector from this forecast, and then applies this annual growth rate to the 20-year planning period. This method results in an average annual growth rate of 1.3%, with total job growth of 2,665 jobs. This results in nearly 12,000 local jobs by 2038.

(The alternative Safe Harbor option [660-024-0040(9)(a)(B)] would utilize the population growth rate the City's most recent 20-year coordinated population forecast, and apply this rate to employment as well. The forecasted population growth rate from the Metro 2040 population forecast is a higher 1.7% per year. Because this method is less precise than applying industry-by-industry growth rates, for first method is used here.)

Figure 5.2: Summary of Safe Harbor Forecast

Industry	20-Year Forecast					2018 - 2038	
	2018	2023	2028	2033	2038	#	AAGR
Construction	289	321	356	396	440	151	2.1%
Manufacturing	1,453	1,507	1,563	1,621	1,681	228	0.7%
Wholesale Trade	105	112	119	126	134	29	1.2%
Retail Trade	562	601	642	686	733	171	1.3%
Transport., Warehouseing, Utilites	230	242	254	267	281	51	1.0%
Information	45	47	50	53	57	12	1.2%
Finance & Insurance	176	182	188	195	202	26	0.7%
Real Estate	193	197	201	206	210	17	0.4%
Professional & Technical Services	182	206	232	262	296	114	2.4%
Management of Companies	8	9	10	11	12	5	2.5%
Administration Services	210	229	251	274	299	89	1.8%
Education	3,012	3,179	3,356	3,542	3,739	727	1.1%
Health Care	1,104	1,209	1,324	1,450	1,588	484	1.8%
Leisure & Hospitality	1,023	1,116	1,218	1,330	1,451	429	1.8%
Other Services	449	477	507	538	571	122	1.2%
Government	222	225	227	230	233	12	0.3%
TOTAL	9,262	9,858	10,499	11,187	11,928	2,665	1.3%

Source: Oregon Employment Department, Johnson Economics

In the years after the recession of 2007-2009, it has been customary for employment forecasts in Economic Opportunities Analyses to consider refill rates of the vacant real estate, left by job losses and economic decline. However, in the current environment, employment levels have returned to their pre-recession levels and real estate vacancies are below market equilibrium. Therefore, refill was not considered in all scenarios presented in this analysis.

Scenario 2: Transportation Area Zone Forecast (Metro)

Forest Grove and other metro-area jurisdictions work with Metro to update long-range forecasts of employment and housing by Transportation Area Zone (TAZ). The latest estimates were finalized in mid-2016, in the Metro 2040 Distributed Forecast. This forecast projected an average annual job growth of 1.51% in Forest Grove over the 2015 to 2040 period.

Beginning with the allocation of employment growth by industry specified in the Safe Harbor Forecast, Johnson Economics developed a TAZ-based forecast scenario reflecting Metro's projected rate of job growth in Forest Grove.

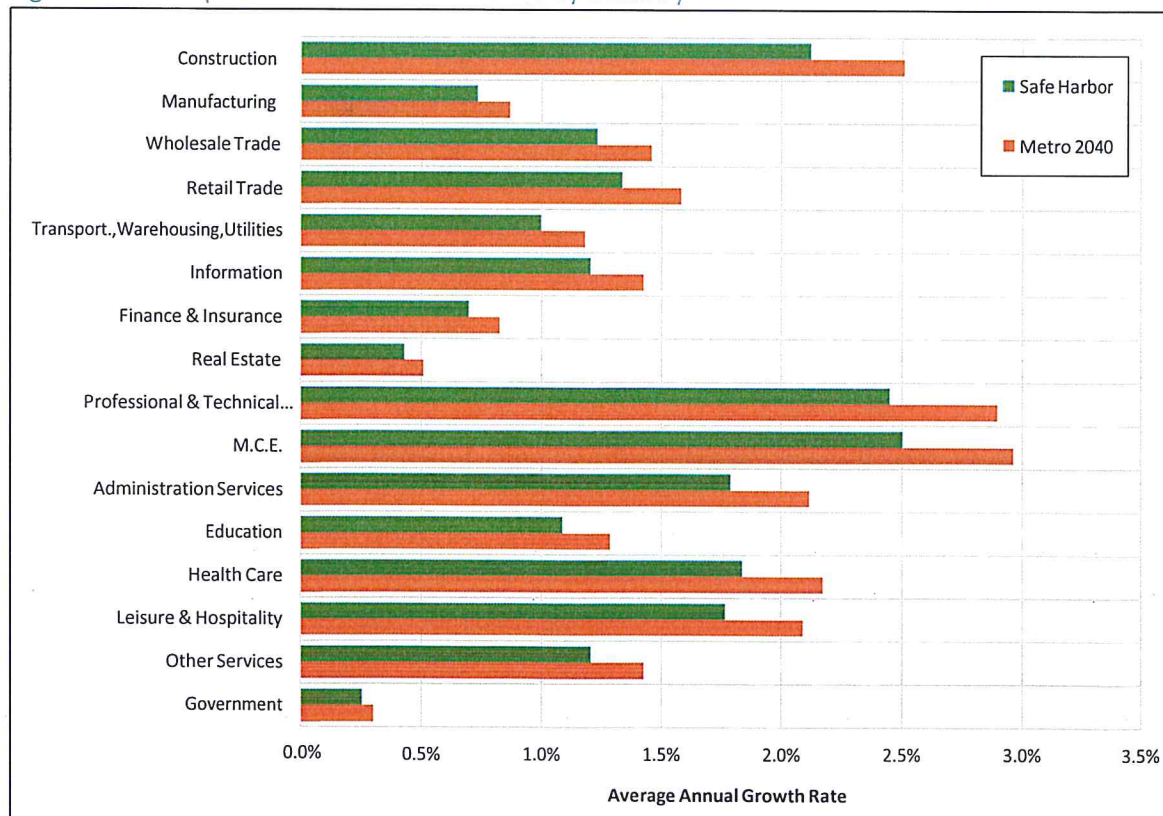
This approach yields average annual growth of 1.5% over the planning period and the creation of 3,237 jobs. Strong growth in education, health care and tourist sectors is forecasted. Manufacturing, construction, and retail are secondary growth sectors.

Figure 5.3: Summary of TAZ Based Forecast

Industry	20-Year Forecast					2018 - 2038	
	2018	2023	2028	2033	2038	#	AAGR
Construction	289	327	370	419	474	185	2.5%
Manufacturing	1,453	1,517	1,584	1,654	1,727	274	0.9%
Wholesale Trade	105	113	122	131	140	35	1.5%
Retail Trade	562	608	658	711	769	207	1.6%
Transport., Warehousing, Utilities	230	244	259	274	291	61	1.2%
Information	45	48	51	55	59	15	1.4%
Finance & Insurance	176	183	191	199	207	31	0.8%
Real Estate	193	198	203	208	214	21	0.5%
Professional & Technical Services	182	210	243	280	323	140	2.9%
Management of Companies	8	9	10	12	14	6	3.0%
Administration Services	210	233	259	287	319	109	2.1%
Education	3,012	3,211	3,422	3,648	3,888	876	1.3%
Health Care	1,104	1,229	1,368	1,523	1,696	592	2.2%
Leisure & Hospitality	1,023	1,134	1,257	1,394	1,546	523	2.1%
Other Services	449	482	518	556	596	147	1.4%
Government	222	225	229	232	236	14	0.3%
TOTAL	9,262	9,971	10,743	11,583	12,499	3,237	1.5%

Source: Metro, Johnson Economics

Figure 5.4: Comparison of Growth Scenarios by Industry



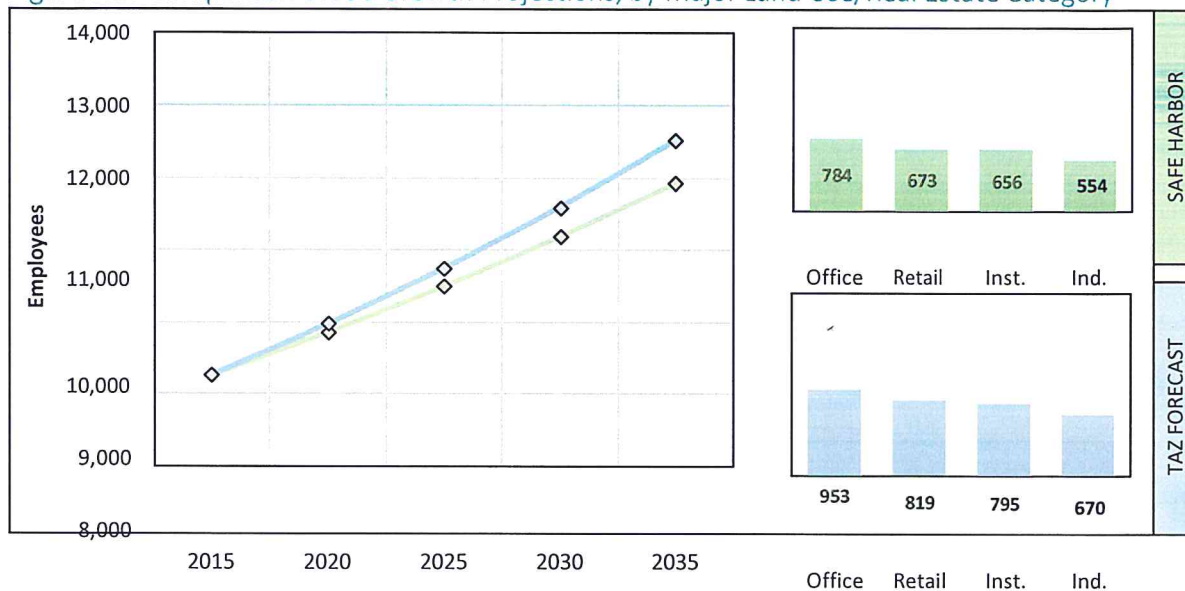
Source: Oregon Employment Department, Metro, Johnson Economics

Summary of Employment Growth Scenarios

The two forecast scenarios in this analysis range from 1.3% average annual growth to 1.5%. 20-year job growth estimates range from 2,665 to 3,237 jobs.

Figure 5.5 presents the job growth projections considering the rates at which different sectors utilize varying space/land typologies (Office, Retail, Institutional, & Industrial). This aggregation was developed consistent with methods outlined in the 2014 Urban Growth Report. The results show the greatest number of new jobs in office-using industries, followed by retail, institutional, and industrial. These projections are converted into the need for specific real estate categories and land use categories in the following section.

Figure 5.5: Comparison of Job Growth Projections, by Major Land Use/Real Estate Category



Source: Oregon Employment Department, Metro, Johnson Economics

Figure 5.6 below, shows how the projected job growth sectors relate to the City's industry clusters.

Figure 5.6: Comparison of Job Growth Sector with Forest Grove's Industry Clusters

Job Growth Sectors	Industry Clusters
Office	Health Care, Education, Retirement Services (Financial Services)
Retail	Tourism, Retirement Services (Leisure & Hospitality)
Institutional	Education, Health Care
Industrial	Manufacturing, Value Added Farm Products, High Tech

The estimates in the preceding analysis are useful in creating a baseline understanding of macroeconomic growth prospects. They are common and broadly accepted approaches when looking at large geographic regions. This approach is similar to the methodology used to produce the employment forecasts in Metro's Urban Growth Report and estimates for state budgeting purposes.

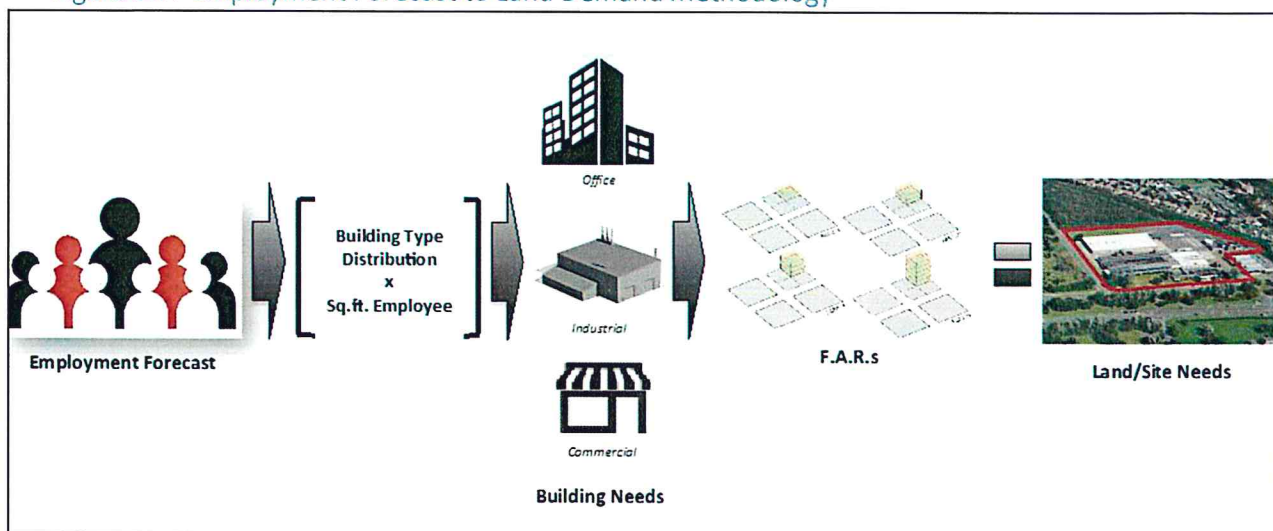
Forecasts grounded in broad-based economic variables cannot account for all of the realities of local businesses and trends among evolving industries. Industries continually evolve and new products and businesses arise, with changing real estate and land use needs. There is always uncertainty inherent in long-range growth forecasts.

Employment Land Forecast

This analytical step in the EOA process translates estimates of employment growth into forecasts of land need over the planning period. With slight modifications based on best available information for Forest Grove, our approach closely follows the generally accepted methodology used in Metro's 2014 Urban Growth Report.

This approach is a three-step process; beginning with a conversion of employment forecasts by industry into the building typologies in which those economic activities typically locate. As an example, insurance agents typically locate in traditional office space. However, a percentage of these firms also locate in commercial retail space adjacent to retail anchors. Cross-tabulating this distribution provides an estimate of employment in each typology.

Figure 5.7: Employment Forecast to Land Demand Methodology



The next step converts employment into space using estimates of the typical square footage exhibited within each typology. Adjusting for an acceptable level of standard structural vacancy the analysis arrive at an estimate of total space demand for each building type.

Finally, it considers the physical characteristics of individual building types and the amount of land they typically require for development. The site utilization metric commonly used is referred to as a “floor area ratio” or FAR. For example, assume a 25,000 square foot general industrial building requires roughly two acres to accommodate its structure setbacks, parking, and necessary yard/storage space. This building would have an FAR of roughly 0.29.

The approach in this analysis deviates from the Metro approach in that retail trade and food services are treated separately. Demand for these services is more closely correlated to households, and more specifically household spending growth. Net space and acreage demand originating from the retail trade and food services sectors are determined by a separate methodology documented in Appendix A of this report.

OAR 660-009-0015(2) does not specify a methodology for conducting land need analysis. However, it does specify that, “the economic opportunities analysis must identify the number of sites by type reasonably

expected to be needed to accommodate the expected employment growth based on the site characteristics typical of expected uses.... Industrial or other employment uses with compatible site characteristics may be grouped together into common site categories". Consistent with the administrative rule, this analysis will end with a determination of land need in broad land use categories (Commercial, Industrial, Mixed-Use).

Baseline Land Demand Analysis

To demonstrate the process used and underlying assumptions, this report will develop land need estimates in a step-by-step process, clearly presenting underlying assumptions. For brevity, this process will be presented for the Safe Harbor Forecast scenario only. Final results will show alternative forecast outcomes.

In this analytical step we allocate employment growth into standard building typologies. The building typology matrix was developed for the 2014 Urban Growth Report, and represents the share of sectoral employment that locates across various building types. Johnson Economics added a category for Data Centers, which varies broadly from any category in the Metro matrix. Further, household-driven demand for retail trade and food services have been removed from this step, to be added later. However, demand for retail space driven by other sectors still exists in this analysis because firms outside of retail trade utilize retail space (beauty salons, banking, couriers, day care, insurance, real estate, etc.).

Figure 5.8: Conversion of Employment Forecast to Building Typology

Industry	'18-'38 Growth	Building Typology Matrix						
		Office	Institutional	Flex/BP	Gen. Ind.	Warehouse	Data Center	Retail
Construction	151	14%	0%	18%	40%	18%	0%	10%
Manufacturing	228	8%	0%	24%	60%	8%	0%	0%
Wholesale Trade	29	8%	0%	22%	20%	40%	0%	10%
Retail	NA							
Transport., Warehousing, Utilities	51	15%	0%	12%	13%	55%	0%	5%
Information	12	20%	0%	20%	30%	0%	20%	10%
Finance & Insurance	26	72%	1%	5%	1%	1%	0%	20%
Real Estate	17	72%	1%	5%	1%	1%	0%	20%
Professional & Technical Services	114	72%	1%	5%	1%	1%	0%	20%
Management of Companies	5	79%	5%	8%	0%	0%	0%	8%
Administration Services	89	72%	1%	5%	1%	1%	0%	20%
Education	727	30%	53%	5%	1%	1%	0%	10%
Health Care	484	30%	53%	2%	0%	0%	0%	15%
Leisure & Hospitality	429	20%	1%	7%	1%	1%	0%	70%
Other Services	122	72%	1%	5%	1%	1%	0%	20%
Government	12	43%	35%	5%	1%	1%	0%	15%
TOTAL	2,495							



Employment Growth by Typology						
Office	Institutional	Flex/BP	Gen. Ind.	Warehouse	Data Center	Retail
774	654	192	229	100	2	543

Source: Oregon Employment Department, Metro, Johnson Economics

Under the Safe Harbor scenario, employment in office space represents the greatest share of growth, followed by institutional uses (hospitals, schools, government facilities) and industrial.

Employment growth estimates by building type are then converted to demand for physical space. This conversion assumes the typical space needed per employee on average. This step also assumes a market clearing vacancy rate, acknowledging that equilibrium in real estate markets is not 0% vacancy. We assume a 10% vacancy rate for office, retail, and flex uses, as these forms have high rates of speculative

multi-tenant usage. A 5% rate is used for general industrial and warehouse—these uses have higher rates of owner occupancy that lead to lower overall vacancy. Other uses assume 0% vacancy.

Demand for space is then converted to net acres using a standard floor area ratio (FAR) for each development form. Higher ratios for retail and office uses indicate an expectation that these uses will locate in the town center or mixed-use space at a higher rate on the margin. These calculations indicate a 20-year need of 124 net-developable acres across all development forms for the Safe Harbor forecast.

The combined space and FAR assumptions further provide estimates indicated of job densities, determined on a per net-developable acre basis.

Figure 5.9: Conversion of Building Typology to Land Need

	General Use Typology							Total
	Office	Institutional	Flex/BP	Gen. Ind.	Warehouse	Data Center	Retail	
Employment Growth (Non-Retail):	774	654	192	229	100	2	543	2,495
Average sq. ft. per Employee:	350	600	990	600	1,850	5,000	500	585
Floor Area Ratio (F.A.R.):	0.40	0.25	0.25	0.25	0.25	0.35	0.35	
Market Vacancy:	10%	0%	10%	5%	5%	0%	10%	
Implied Job Density (jobs/net acre):	49.8	18.2	11.0	18.2	5.9	3.0	30.5	20.1



	Net Acres by Building Typology							Total
	Office	Institutional	Flex/BP	Gen. Ind.	Warehouse	Data Center	Retail	
Net Acres Required:	17.1	36.0	19.2	13.2	17.9	0.8	19.6	123.8

Source: Metro, Johnson Economics

Commercial office and retail densities are 50 and 30 jobs per acre, respectively. Industrial uses range from 18 for general industrial to six jobs per acre for warehouse space.

Retail Demand: The methodology in this report treats retail and food service driven demand differently than other uses. These uses are more directly correlated with growth in households, consumer spending power, and established non-resident spending patterns. This methodology is detailed in Appendix A with critical steps summarized here:

- Household growth estimates are coordinated with the Metro 2040 projection of household growth in Forest Grove.
- Due to coordination with a single adopted growth forecast, there is no variance in household spending-driven retail support across scenarios.
- Estimates of the average spending per household by retail sector is provided by a third party data service (EnvironicsAnalytics).
- The existing rate of non-resident retail support is assumed to remain constant at 13%.
- Net calculated retail acres are allocated to building typologies consistent with the non-retail methodology.

Combined growth in household and non-resident spending is expected to support an additional 35 net acres. The majority of support will go to commercial retail building typologies.

Combining retail need with all other industries, this analysis finds a **total 20-year need for 160 net developable acres of employment land.**

Figure 5.10: Forecast of Land Need by Building Type, Including Retail Need

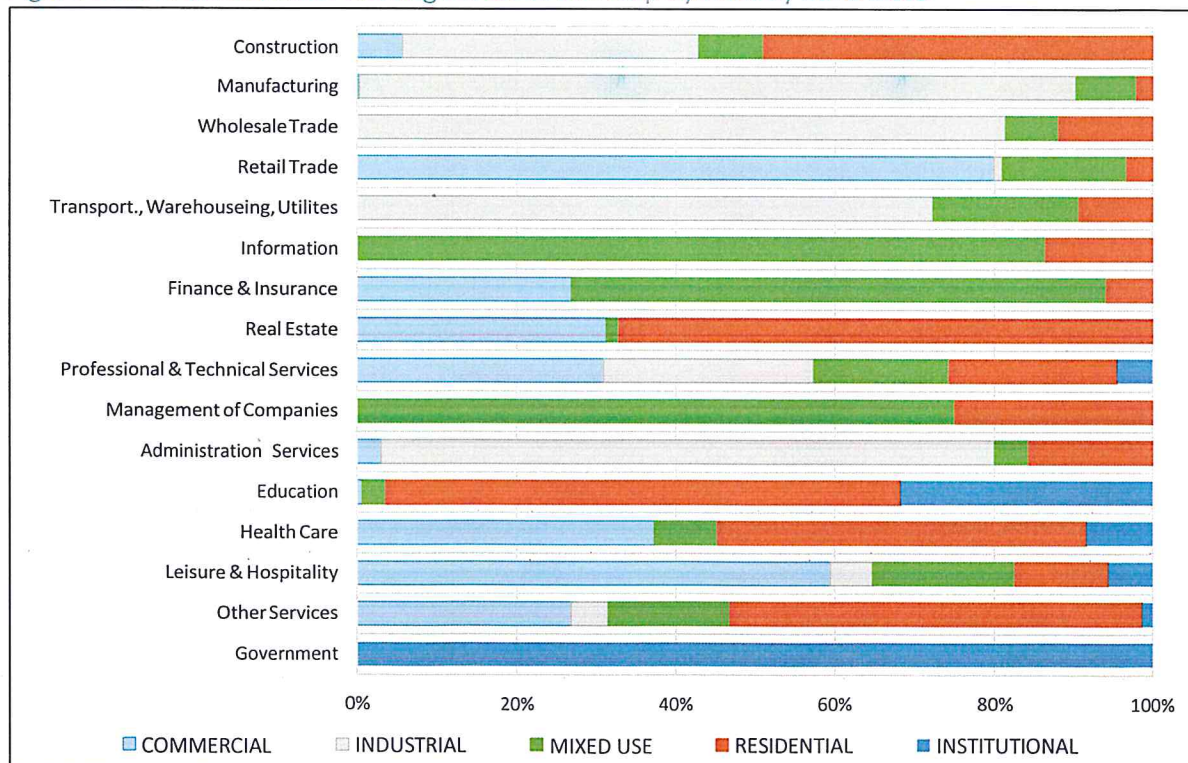
	Net Acres by Building Typology							Total
	Office	Institutional	Flex/BP	Gen. Ind.	Warehouse	Data Center	Retail	
Non-Retail Demand	17	36	19	13	18	1	20	124
Allocation of Retail by Type	15%	1%	7%	1%	5%	0%	72%	100%
Retail Demand	5	0	2	0	2	0	26	35
Total Net Acres Required	22	36	22	13	20	1	46	160

Source: Envirionics Analytics, Johnson Economics

Converting Land Demand by Building Typologies into Land Use Categories

The Buildable Lands Inventory in the Economic Opportunities Analysis inventories vacant, partially vacant, and potentially redevelopable land by broad land use category. To facilitate a direct comparison, the demand is aggregated into similar land use categories (as allowed under OAR 660-009-0015(2)). To make this determination, Johnson Economics used G.I.S. analysis of 2016 QCEW data to determine the share of employment by industry that is located in each broad zoning class (Figure 5.10).

Figure 5.11: Distribution of Existing Forest Grove Employment by Zone Class



Source: Oregon Employment Department, Metro RLIS, Johnson Economics

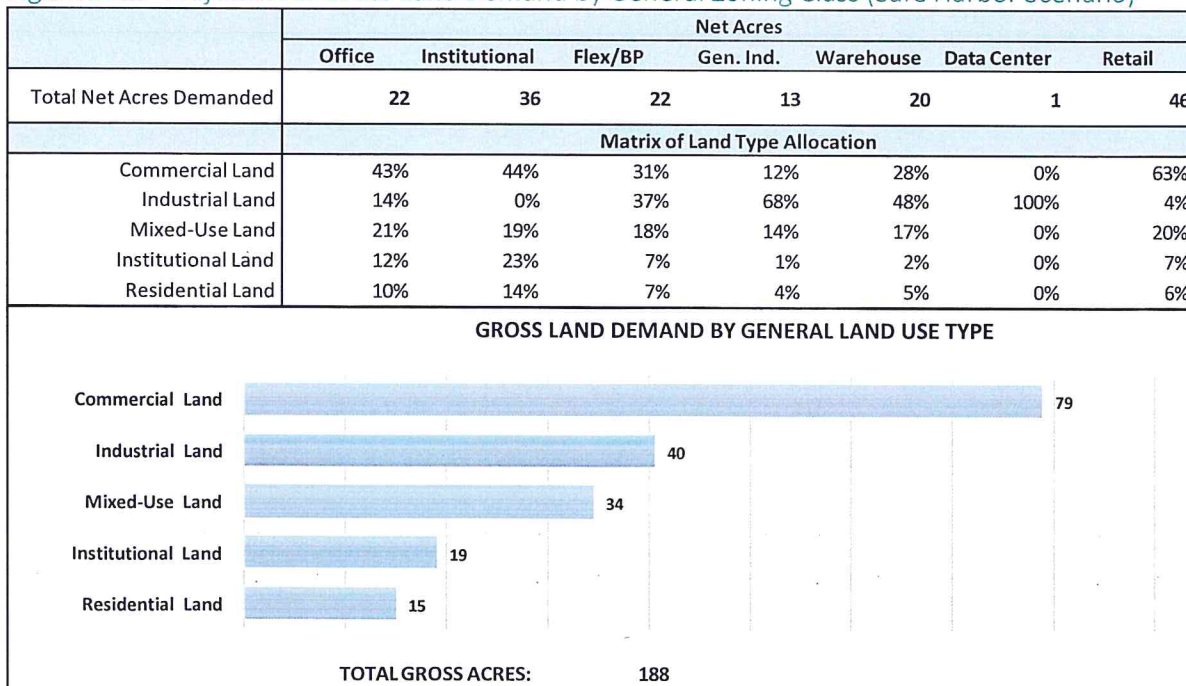
As Figure 5.11 shows, there is a lot of current employment in Forest Grove that is located (at least by address) in zoning classes that are considered to be primarily residential. However, industrial and commercial zones are also well-represented. (For this analysis the Community Commercial zone is classified as “commercial”, while the Town Center Transition, and Town Center Core zones are classified as “mixed use.”)

Because the purpose of this Goal 9 analysis is to determine the supply and demand for proper employment land, it is assumed that a much smaller share of future employment growth will be accommodated in residential zoning classes.

The final analytical step of this analysis is to adjust demand estimates to account for future infrastructure. The state defines net buildable acres as being absent future right-of way, indicating that gross land need is greater than net-buildable. For this analysis, we assume a 15% gross-to-net ratio for commercial, institutional and mixed-use areas. Industrial areas assume a 25% ratio because Forest Grove’s new industrial areas have a higher likelihood of requiring additional right-of-way, open space and public services.

Figure 5.12 shows the conversion of estimated need by building type, to need for gross acreage of land for the Safe Harbor scenario. The analysis results in a finding of total need for 188 gross acres of employment land, including some employment (mostly self-employment) that will take place in residential zones. Roughly half of the land need is found for commercial land (80 acres), followed by industrial land, and mixed-use land.

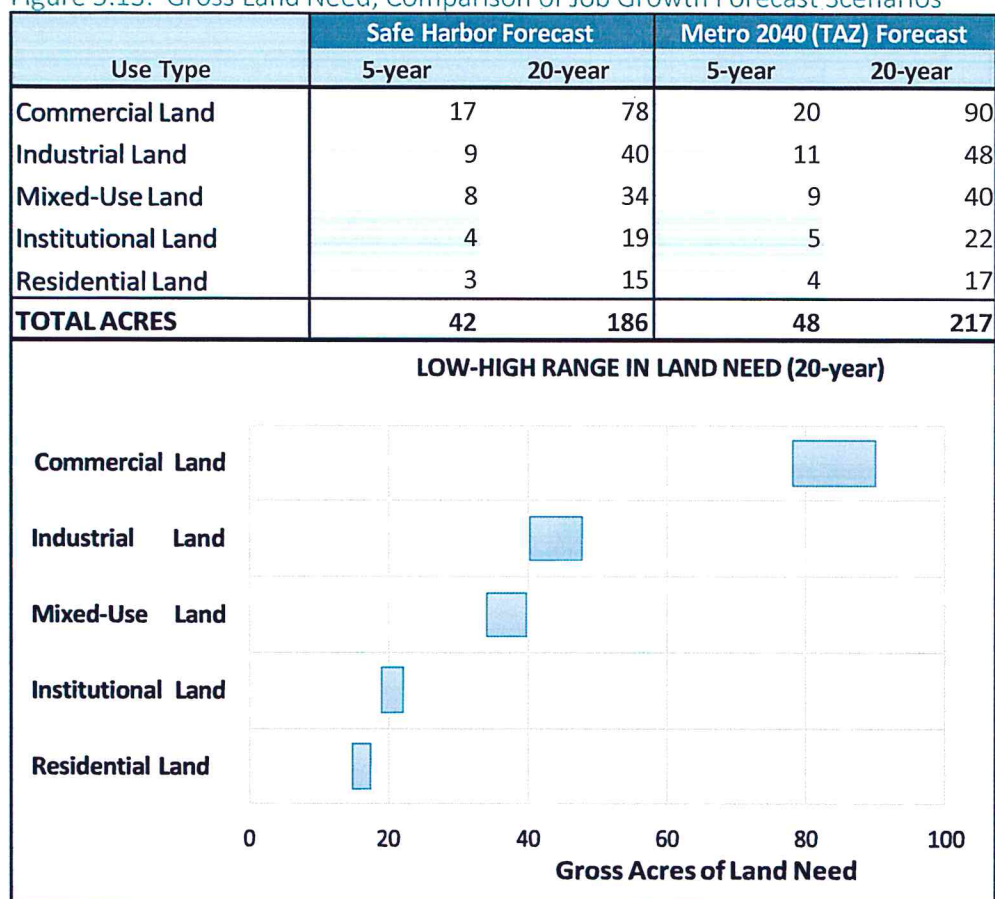
Figure 5.12: Projection of Gross Land Demand by General Zoning Class (Safe Harbor Scenario)



Source: Johnson Economics

Replicating the previously established methodology for the second employment forecast scenario (Metro 2040), we calculate a range of short and long-term land need by use type. The following figure presents estimates of short-term (5-year) and long-term (20-year) land need by category for the two scenarios. Total need estimate ranges from 186 gross acres to 217 gross acres, with a similar range found for each land use category. *While a range in need forecasts are presented here, the City of Forest Grove is required by statute to adopt a single forecast scenario.*

Figure 5.13: Gross Land Need, Comparison of Job Growth Forecast Scenarios



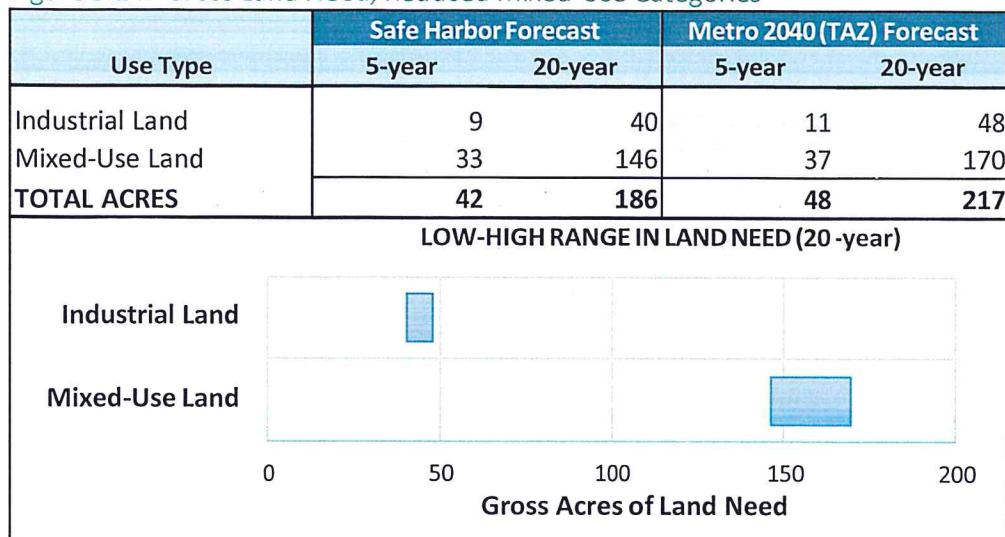
Source: Johnson Economics

Figure 5.14 shows the land use categories presented above consolidated to two major categories: Industrial and Mixed Use. This is because most commercial land found in Forest Grove is in mixed-used zoning designations. The consolidated categories fold the demand for commercial, institutional and residential land into the demand for mixed use land. This also reflects two assumptions:

- Institutional uses of the future are likely to be located within a different zoning designation, until they are developed, at which time that land may be rezoned to Institutional.
- In the future, the policy goal will be to locate as much marginal new employment as possible in appropriate employment zones, and not residential zones.

With these points in mind, the following figure consolidates these zones, resulting in a greater need for mixed use land (146 acres in the Safe Harbor scenario, and 170 in the Metro 2040 scenario.)

Figure 5.14: Gross Land Need, Reduced Mixed-Use Categories



Source: Johnson Economics

Additional Considerations in Land Demand

Beyond a consideration of gross acreage, there is a significantly broader range of site characteristics that industries require to accommodate future growth. We summarize some key findings here:

- Industrial buildings are generally more susceptible to slope constraints due to larger building footprints. For a site to be competitive for most industrial uses, a 5% slope is the maximum for development sites. Office and commercial uses are generally smaller and more vertical, allowing for slopes up to 15%.
- Most industries require some direct access to a major transportation route, particularly manufacturing and distribution industries that move goods throughout the region and beyond. A distance of 10 to 20 miles to a major interstate is generally acceptable for most manufacturing activities, but distribution activities require 5 miles or less and generally prefer a direct interstate linkage. Visibility is highly important to most commercial activities and site location along a major commercial arterial is commonly required.
- Railroad access is preferred for most manufacturing activities, with the exception of high-tech. Some users require direct on-site access while others generally make use of a local or regional hub.
- Access and capacity for water, power, gas, and sewer infrastructure is more important to industrial than commercial operations. Water/sewer lines of up to 10" are commonly required for large manufacturers. Appendix A details utility infrastructure requirements by typology. Fiber telecommunications networks are likely to be increasingly required in site selection criteria for many commercial office and manufacturing industries. Medical, high-tech, creative office, research & development, and most professional service industries will prefer or require strong fiber access in the coming business cycles.

VI. BUILDABLE LAND INVENTORY

A Buildable Lands Inventory (BLI) was conducted to determine the amount of buildable land in the major land use categories that is currently available in Forest Grove. The buildable land currently available may accommodate some or all of the 20-year need for gross land need determined through the analysis outlined above. If the current BLI within the city is insufficient to accommodate the projected need, the need for additional land or efficiency measures may be considered.

Metro Draft Buildable Land Inventory

This analysis takes as its foundation the on-going BLI analysis conducted by the Metro regional government as part of its Urban Growth review process. The latest Metro draft BLI dates to March 2018. It uses a formulaic approach that applies a general methodology to tax lots across the Metro jurisdictions, including Forest Grove. It relies on the local jurisdictions to review the findings and point out errors.

Johnson Economics took the Metro draft BLI as its basis for this analysis, but a number of misidentified parcels were identified making further revisions necessary. This analysis presents a revised tally and BLI map based on the Metro draft that better represents market-driven development capacity and the actual disposition of some misidentified parcels. The revised BLI is designed to address the requirements of Statewide Planning Goal 9 (OAR 660-009-0015).

Revisions to Metro Draft BLI

Because the Metro BLI is applied across the region formulaically some errors are expected that local review is meant to catch. Some major issues with the draft are:

- *It appears to use old tax lot GIS layer.*
- *Identifies some heavily developed lots as re-developable.*
- *Includes a few small fragmented parcels that are poorly configured for future development.*

Regression Method

The Metro BLI uses a regression analysis to estimate the likelihood of redevelopment over a 20-year period. This results in an estimation of “re-developable acreage” that is actually a fraction of the total acreage of the included parcels (for instance, if a 50 acre parcel has a 20% change of redevelopment, then it counts as 10 re-developable acres.) This approach attempts to give an estimate of the infill and redevelopment activity that could happen averaged across all parcels whether they do or don’t redevelop. This methodology has some flaws, but when the results are summed up, the total re-developable acreage does not add up to a large total amount. Therefore the estimated re-developable acreage calculated through this method was preserved here (shown in yellow on the map.)

Re-developable (Strike Price vs. Regression)

Metro also provided an estimate using a “strike price” method that was used previously (shown in orange on the map). This method tends to identify larger and more prominent parcels of employment land that might redevelop over time. Because these parcels are more prominent, they have been reviewed separately here, and are distinguished from the “regression” parcels in the summary tables and the following maps.

In reviewing these major parcels, some of those identified by Metro are now developed and therefore removed from this count. Two large parcels were identified as “redevelopable” were reclassified as “vacant” as they do not appear to have any significant development on them.

“Mixed Use” land classification

Metro identifies most of commercial zoning in Forest Grove as having a general classification of “Mixed Use.” For this review, this classification has remained in place, meaning that none of the parcels counted in this BLI are considered to be “commercial” land, despite many being located in the Community Commercial zone.

Buildable Land Inventory Results

The following table summarizes the findings of buildable lands within Forest Grove’s current Urban Growth Boundary. There is an estimated total of 292 acres of buildable, or redevelopable land located in the city.

A majority of these buildable acres (275 ac.) are located within the current City boundary. Two large parcels (36.8 ac. & 17 ac.) are located outside of the City boundary, but within the UGB. The 36.8 acre parcel is currently planned for employment use, with “Business Industrial Park” zoning. This acreage is included here as industrial land. The 17 acre site is pre-certified as a general industrial site.

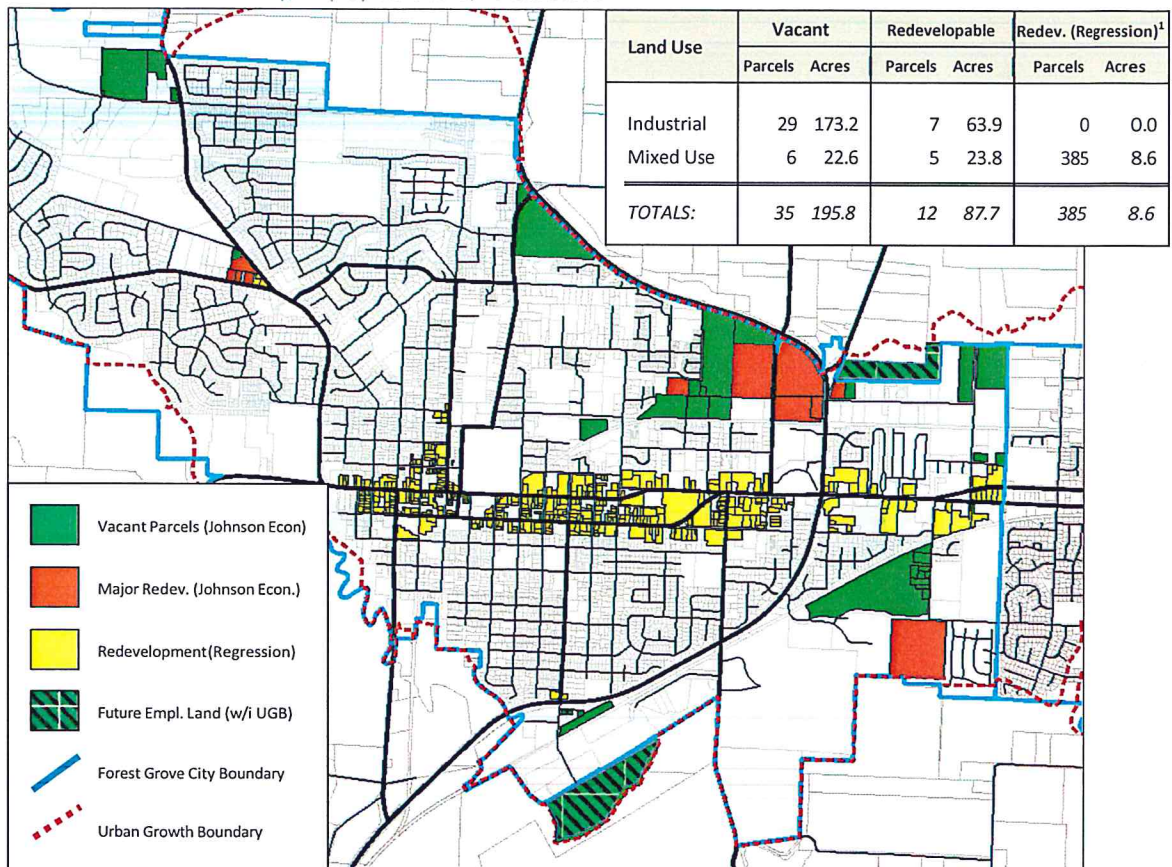
Figure 6.1: Summary of Buildable Land Inventory

Land Use	Vacant		Redevelopable		Redev. (Regression) ¹		TOTALS		
	Parcels	Acres	Parcels	Acres	Parcels	Acres	Parcels	Acres	Share
Industrial	29	173.2	7	63.9	0	0.0	36	237.1	74%
Mixed Use	6	22.6	5	23.8	385	8.6	396	55.0	17%
TOTALS:	35	195.8	12	87.7	385	8.6	432	292.1	92%
<i>w/i City:</i>	33	178.8	12	87.7	385	8.6	430	275.1	86%
<i>w/i UGB:</i>	2	53.8	0	0.0	0	0.0	2	53.8	17%

Source: Metro, City of Forest Grove, Johnson Economics

- Most available acreage is in areas with Industrial zoning (74%).
- There is a much smaller amount of buildable acreage in Mixed Use zoning. (Forest Grove’s main commercial zones are counted as having a general Mixed Use classification under the regional land use methodology, because they allow for some housing.) This Mixed Use acreage includes what has been identified as “redevelopable” under Metro’s regression methodology. While it looks like a large amount of land on the following map (in yellow), the regression analysis of likely redevelopment amounts to a relatively small amount of acreage (8.6 ac.)
- While significant current employment is found in the city’s residential zones, it is assumed that the public policy goal is to house future employment growth outside of residential zones to the greatest extent possible. Therefore, no residential acreage is included in the Buildable Lands Inventory for employment.

Figure 6.2: Buildable Land Inventory, Employment Land, Forest Grove



Source: Metro, City of Forest Grove, Johnson Economics

Figure 6.3: Buildable Land Inventory, Summary of Parcels by Size
(Vacant and Major Redevelopment Parcels)

		# OF TAXLOTS, by PARCEL SIZE									
Parcel Size (ac.):		<.25	.25 - .50	.50 - 1	1 - 2	2 - 5	5 - 10	10 - 20	20 - 50	>50	TOTAL
LAND USE	Industrial	2	5	5	6	6	4	5	3	0	36
	Mixed Use	5	1	0	2	0	0	1	1	0	10
STATUS	Vacant	3	6	5	7	4	3	3	3	0	34
	Redevelopment	4	0	0	1	2	1	3	1	0	12
Total		7	6	5	8	6	4	6	4	0	46

		POTENTIAL GROSS BUILDABLE ACRES, by PARCEL SIZE									
Parcel Size (ac.):		<.25	.25 - .50	.50 - 1	1 - 2	2 - 5	5 - 10	10 - 20	20 - 50	>50	TOTAL
LAND USE	Industrial	0.4	1.9	3.7	8.5	20.6	27.5	79.8	94.7	0.0	237.1
	Mixed Use	0.4	0.4	0.8	2.8	0.0	0.0	18.5	23.5	0.0	46.4
STATUS	Vacant	0.5	2.3	4.5	9.4	15.5	19.9	49.1	94.7	0.0	195.8
	Redevelopment	0.3	0.0	0.0	2.0	5.2	7.6	49.2	23.5	0.0	87.7
Total		0.8	2.3	4.5	11.3	20.6	27.5	98.3	118.2	0.0	283.5

Source: Metro, City of Forest Grove, Johnson Economics

* Does not include parcels identified as potential redevelopment sites through regression analysis (8.6 acres total, all of Mixed Use zoning.) These are not included because they total nearly 400 parcels all with different probabilities of redeveloping in the plan period.

Figure 6.3 presents a summary of parcels identified in the Buildable Lands Inventory by size (other than those identified as potentially re-developable through Metro's regression analysis.) The identified vacant or major redevelopment parcels total 46 sites.

- Most sites identified are industrial. These are well-distributed across a range of sizes, including 8 parcels over 10 acres and 3 over 20 acres. This includes one 36.8-acre site and one 17-acre site located outside the city boundary, but inside the UGB.
- The mixed use parcels are generally small, other than large Neighborhood Mixed Use parcels at the northern boundary of the city.

VII. RECONCILIATION OF LAND NEED AND SUPPLY

Figure 7.1 presents the reconciliation of the findings of 20-year employment land need (Section V) with the estimated supply of buildable lands (Section VI).

Figure 7.1: Reconciliation of 20-Year Demand and Supply

SAFE HARBOR FORECAST

LAND USE	DEMAND		SUPPLY	Surplus or Deficit	
	Safe Harbor Forecast		Buildable		
	5-year	20-year	Acres	5-year	20-year
Industrial Land	9	40	237.1	228	196.75
Mixed-Use Land	33	146	55.0	22	(91.15)
TOTAL:	42	186	292.1	250	105.60

METRO 2040 (TAZ) FORECAST

LAND USE	DEMAND		SUPPLY	Surplus or Deficit	
	Metro 2040 Forecast		Buildable		
	5-year	20-year	Acres	5-year	20-year
Industrial Land	11	48	237.1	226	189.16
Mixed-Use Land	37	170	55.0	18	(114.55)
TOTAL:	48	217	292.1	244	74.60

Source: Metro, City of Forest Grove, Johnson Economics

Major Findings

- Current buildable land supply is estimated to be sufficient to meet short term needs, but not long term needs.
- Over the 20-year period, the buildable supply does exceed the long term demand. However, this analysis finds that the classification of available land (mostly industrial) is a poorly matched to future employment needs.
- The demand for Mixed Use lands to accommodate commercial uses will exceed the supply of these land categories over the planning period.
- Many of the same types of uses (office and retail) can be suitable to either Commercial or Mixed Use land, so the balance between these two zoning types are somewhat fungible. In other words, some of the estimated demand for new land could be accommodated by new commercial or mixed use land, or a mix.
- This analysis indicates that there may be a significant oversupply of designated industrial land in Forest Grove, and that some of this might be repurposed for other employment uses.

ATTACHMENT B

From: [Debbaut, Anne](#)
To: [Daniel Riordan](#)
Subject: RE: Draft EOA
Date: Tuesday, December 11, 2018 4:39:22 PM

Hi Dan, thank you for your comments, much appreciated by both Kirstin and i. I think the addition of your suggested table is a great idea!

Anne



Anne Debbaut

Metro Regional Representative | Regional Solutions Team
Direct: 503-725-2182 | Cell: 503-804-0902
anne.debbaut@state.or.us | www.oregon.gov/LCD

From: Daniel Riordan [<mailto:driordan@forestgrove-or.gov>]
Sent: Tuesday, December 11, 2018 9:27 AM
To: Debbaut, Anne <adebbaut@dlcd.state.or.us>
Subject: RE: Draft EOA

Hi Anne, please see my comments below. Thanks for reviewing. I'll be submitting the 35-day notice of proposed amendment to adopt the EOA update into the Comp. Plan soon. Please let me know if you wish to discuss any of my comments.

Best Regards,
Dan

From: Debbaut, Anne [<mailto:anne.debbaut@state.or.us>]
Sent: Thursday, December 6, 2018 12:40 PM
To: Daniel Riordan <driordan@forestgrove-or.gov>
Subject: FW: Draft EOA

Hi Dan,

Thank you very much for the opportunity to review your Draft EOA. We have a couple of general observations/suggestions, and a few questions associated with specific page numbers. I'll start with the general observations:

1. Suggest the General Commercial and Mixed Use designations be clearly defined and used consistently throughout the document, including in charts and tables. And when using "mixed use" terminology, what portion of mixed use is anticipated to be commercial and what portion is expected to be residential or possibly other types of activities? What does 91 acres of mixed use "look like" in terms of uses? **Good suggestion about making sure terminology is used consistently. As for what mixed-use looks like, the City's Community Commercial, two Town Center and Neighborhood Mixed Use zones are classified as "mixed**

use.” The Town Center zones allow for residential development at a target density of 40 units per acre. Other uses allowed in the Community Commercial zone include retail , office on upper floors in the Town Center Core, civic and institutional uses as conditional uses, and some, very limited, light industrial. The Community Commercial zones allows residential development at 30 units per acre (50 units per acre for affordable housing), retail, office, and limited civic and institutional uses. The Metro Urban Growth Report assumes a mix of 35% residential and 65% commercial in the Community Commercial zone. The Neighborhood Mixed use allows commercial and office uses in a “village center” limited to three acres. The target residential density in the Neighborhood Mixed Use zone is between 8.71 to 12 units per acre depending on zone location. A 91-acre mixed use area could look something like 750 dwelling units at 30 units per net acre and about 500,000 square feet of retail/office space at a 0.2 FAR.

2. How does your Business Development staff respond to the conclusion that there is a 197 acre surplus of industrial land? It is stated in the findings that land supply does not meet the long term needs of the city. What is the city trying to accomplish and is there city policy to support your conclusions? How is this conclusion reconciled with Population growth and business expansion in the metro region? There was considerable discussion with the Business Development staff and City Economic Development Commission about the finding of 197 acres of surplus industrial land. This finding is generally consistent with the outcome from the 2009 EOA. The issue is the City’s industrial zone land is positioned properly. There is less of a need for traditional industrial land and a greater need for employment lands that allow for flex space. The finding of over-supply provides a basis to look at industrial lands, especially in the Oak Street area, and determine whether the land should be banked for needs beyond the 20-year planning period or re-designated for other uses. With respect to regional needs, my understanding is the recently updated Metro Urban Growth Report also shows less of a need for industrial land. I know this is a concern for the Portland of Portland and Westside Economic Alliance.

And the more specific comments:

p. 5: Reference to Goal 9 statute may want to also include Planning Goal 9 and associated implementing rules. Good suggestion. We’ll make the change.

p. 30: Wonder why the process for permitting wineries in WA County is considered difficult? My understanding is, compared to other counties getting approval for uses ancillary to the winery itself is difficult in Washington County. This includes approval for gift shops, event space, etc.

p.32: What is the narrative to support the statement under “Cluster Strengths” that there is a limited supply of industrial land, specifically large shovel-ready parcels? Seems to contradict the conclusion of the EOA. This is a carry-over from the 2009 EOA and should be deleted from the update for consistency.

p. 38: How do job projections (Figure 5.5 Office, Retail, Institutional, and Industrial) align with the city’s strengths? i.e. Manufacturing, Professional, Health Care, and Educational? Do you think something like the table below might be worthwhile to add?

Employment Sector	Cluster Strength
Office	Health Care
	Education
	Retirement Services (Financial Services)
Retail	Tourism
	Retirement Services (Leisure & Hospitality)
Institutional	Education
	Health Care
Industrial	Manufacturing
	Value Added Farm Products
	High Tech

p. 43: Very interesting the proportion of residential land employment. Yes, the residential land employment includes mostly home construction in the residential zones. There might be some home occupations in there as well.

Thanks again – and call if you have questions.

Anne



Anne Debbaut

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From: Daniel Riordan [<mailto:driordan@forestgrove-or.gov>]

Sent: Thursday, November 15, 2018 12:00 PM

To: Debbaut, Anne <adebbaut@dlcd.state.or.us>

Subject: RE: Draft EOA

Hi Anne. Sure thing. The digital version is attached.

Thanks,

Dan

From: Debbaut, Anne [<mailto:anne.debbaut@state.or.us>]

Sent: Thursday, November 15, 2018 11:12 AM

To: Daniel Riordan <driordan@forestgrove-or.gov>

Subject: Draft EOA

Hi Dan,

I just received your draft EOA and will look it over as soon as possible. Would you be able to send a digital copy so I can forward it to our economic development specialist?

Thanks,

Anne



Anne Debbaut

Oregon Department of Land Conservation and Development

Metro Regional Representative | Regional Solutions Team

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ATTACHMENT C

Planning Commission Findings Recommend Adoption of Economic Opportunities Analysis Update File Number 311-18-000044-PLNG

WHEREAS, Statewide Planning Goal 9 (Oregon Administrative Rules Section 660-009 et. seq.) implements direction from Oregon legislature that local comprehensive plans and land use regulations are updated and provide adequate opportunities for a variety of economic activities throughout the state; and

WHEREAS, Oregon Administrative Rules Section 660-009-0015 requires that cities review, and as necessary, amend their comprehensive plans to provide economic opportunities analyses describing national, state, regional, and local economic trends and comparing the demand for industrial and other employment uses to the existing supply of such land; and

WHEREAS, The City's Economic Opportunities Analysis was last updated on August 27, 2009; and

WHEREAS, the 2009 EOA, no longer reflects national, state, regional and local economic trends; and

WHEREAS, City updated the EOA to assure compliance with Statewide Planning Goal 9 and provide a sound basis for local land use decisions affecting industrial and other employment lands; and

WHEREAS, the EOA update was presented to Forest Grove Economic Development Commission on November 1, 2018 for review and comment; and

WHEREAS, the Economic Development Commission on November 1, 2018, adopted a motion supporting the findings contained in the EOA update and recommended City Council acceptance; and

WHEREAS, The Oregon Department of Land Conservation and Development (DLCD) reviewed the EOA and provided comments to the City on December 6, 2018; and

WHEREAS, the City revised the EOA update to address DLCD comments; and

WHEREAS, notice of the Planning Commission's public hearing on the EOA update was published in the *Forest Grove News-Times* on January 30, 2019; and

WHEREAS, the Planning Commission held a duly-noticed public hearing on February 4, 2019, to accept public comment on the EOA update and to consider recommending City Council adoption of the EOA update.

NOW THEREFORE, the Planning Commission does hereby recommend City Council adopt an ordinance amending the 2014 Forest Grove Comprehensive Plan to incorporate the EOA update, making the following specific findings in support of this decision:

- 1) The EOA update complies with Oregon Administrative Rules (OAR) Section 660-009-0015 (Economic Opportunities Analysis) for the following reasons:

- A. OAR Section 660-009-0015(1) requires a review of the national, state, regional, county and local economic trends including identification of major categories of industrial or other employment uses that could reasonably be expected to locate or expand in the planning area based on the economic trends.

Finding: Section III of the EOA update summarizes long and intermediate economic trends at the national, state and local level that will influence economic conditions in Forest Grove during the 20-year planning period. Economic trends summarized in the EOA update include demographic trends, socio-economic trends, employment trends and household growth projections including household migration trends. Demographic trends identified in the EOA include aging of the workforce, potential impacts of the millennial generation, labor force participation rates, and prospects for immigrant labor.

Finding: Based on these trends the EOA update the following major categories of industrial and other employment uses reasonably expected to locate or expand in the Forest Grove planning area:

- Agriculture / Value Added Food Products;
- Tourism and Winery Development;
- Education Services;
- Retirement Services; and
- High-Technology Manufacturing.

- B. OAR Section 660-009-0015(2) stipulates that the economic opportunities analysis must identify the number of sites by type reasonably expected to be needed to accommodate expected employment growth.

Finding: EOA Figure 6.3 identifies the number of sites (tax lots) by parcel size for industrial and other (mixed-use) employment uses. Based on the inventory

there are a total of 46 sites suitable for accommodating expected employment growth.

Finding: Most sites identified in the inventory are zoned industrial. These sites are distributed across a range of sizes, including 8 parcels over 10 acres, and 3 parcels over 20 acres.

- C. OAR Section 660-009-0015(3) stipulates that comprehensive plans for all areas within urban growth boundaries must include an inventory of vacant and developed lands within the planning area designated for industrial or other employment use.

Finding: EOA Section VI summarizes the buildable land inventory (BLI) used to determine the amount of buildable land in major land use categories currently available in Forest Grove. The BLI describes site characteristics including site size and whether the site is vacant or has potential for redevelopment. The BLI identifies approximately 237 buildable acres land for industrial uses in the City's planning area. The BLI also identifies approximately 55 acres of buildable land for mixed-use/commercial development.

Finding: The EOA update shows a short-term (5-year) demand for 9 acres of industrial land and long-term (20-year) demand for 40 acres.

Finding: The EOA update shows a short-term (5-year) surplus of industrial land is approximately 228 and the long-term (20-year) surplus of industrial land is approximately 197 acres.

Finding: The EOA Update shows a short-term (5-year) surplus of approximately 22 acres for mixed-use/commercial development.

Finding: The EOA update shows a long-term (20-year) deficit of approximately 91 acres for mixed-use/commercial development.

- D. OAR 660-009-0015(4) stipulates that economic opportunities analysis must estimate the types and amounts of industrial or other uses likely to occur in the planning area. The estimate must be based on information generated above and must consider the planning area's economic advantages and disadvantages.

Finding: The EOA update summarizes strengths and challenges for target industries having potential to locate in Forest Grove. Strengths include proximity to high-quality farmland and water supply, an existing food

processing industry with workforce expertise and access to export markets. Economic disadvantages include regional competitiveness with certain industry clusters such as winery development, Forest Grove's workforce composition does not match the needs of some high-technology firms, uncertainty with respect to the future cost of utilities and lack of direct connections to the north Hillsboro employment area.

Conclusion: based on the findings identified above and those contained in the EOA update, the Planning Commission determines the EOA update satisfies the requirements of Statewide Planning Goal 9 and OAR 660-009-0015 pertaining to economic opportunity analyses.

Tom Beck, Chair

Date



A place where families and businesses thrive.

Date: February 4, 2019

To: Planning Commission

From: James Reitz (AICP), Senior Planner
Bryan Pohl, Community Development Director

Re: Development Code Update Work Session

The purpose of this work session is to review possible amendments to the Development Code (DC). They are being drafted to comply with recent changes in State statute (e.g. the ADU code), as responses to citizen requests, and to address code omissions.

Following the work session, draft amendments will be prepared as per the Commission's direction, and scheduled for public hearing.

ACCESSORY DWELLING UNITS – The Accessory Dwelling Unit (ADU) regulations of DC §10.7.005 et. seq. needs to be revised to comply with SB 1051, which was adopted by the 2017 Legislature. It requires that cities allow ADUs, and stipulates what development standards can and cannot be imposed (see Exhibit A).

Forest Grove adopted an ADU code in 1992. The existing code requires a few revisions to become compliant with state law. The revisions would eliminate the ownership requirement, allow an entire existing floor (e.g. a basement) to be converted to an ADU regardless of floor area, eliminate the requirement for an additional parking space, and eliminate the requirement for siding and roofing materials similar to that of the primary structure (because words like “similar” are considered subjective, the intent is to minimize interpretations that could be used to limit ADU development). The draft ordinance language (Exhibit B) would bring the Development Code into compliance with state statute.

On a related matter, staff has been approached with the concept of allowing manufactured dwellings as ADUs. At present, the Development Code mirrors state statute: manufactured dwellings are allowed on residential lots so long as the floor area is at least 1,000 square feet. The DC limits new detached ADUs to 720 square feet (that area was selected in 1992 to match the requirement for all accessory structures in residential zones). Since the minimum floor area for manufactured dwellings is greater than the maximum floor area permitted for new detached ADUs, manufactured dwellings are not permitted as ADUs.

Small manufactured dwellings are available. Attached in Exhibit C are photos of several models ranging in floor area from 388 to 800 square feet.

Question: *should small manufactured dwellings be allowed as ADUs?*

On still another related matter, staff has been approached about allowing small manufactured dwellings as a housing type in the Town Center Transition zoning district. Several properties in the TCT are developed with single-family homes; the owner of one such property has inquired as to whether additional units could be developed, and whether those units could be manufactured dwellings. “In the TCT Zone, new dwellings are permitted as “stand-alone” developments or as part of mixed-use developments, but must meet density

requirements.” DC Table 3-12 Footnote #1. In the TCT, the minimum density is 16.22 DUA, or about 2,685 square feet per unit. That would be sufficient area for a manufactured dwelling. Further discussion of this topic follows in the Housing Types Allowed section below.

Question: *should manufactured homes be a permitted housing type in the TCT zoning district?*

HOUSING TYPES ALLOWED – The Development Code does not explicitly identify the types of housing permitted in non-residential zones. As noted in the ADU section above, this lack of specificity could result in the siting of manufactured dwellings in the TCT zoning district. In addition, under the current code, it's possible that another manufactured dwelling park could be developed in the CC zoning district. To add clarity to the Development Code, Housing Types could be added to the commercial and town center zoning districts, as follows (potential new text in **bold**):

TABLE 3-10: Commercial and Mixed Use Zones Use Table

USE CATEGORY	NC	CC	NMU
RESIDENTIAL			
Household Living	L ^[1]	L ^[2]	P/L ^[15]
Group Living	N	P	N
Transitional Housing	N	C	N
Home Occupation	L ^[3]	L ^[3]	L ^[3]
Bed and Breakfast	L ^[4]	P	L ^[4]
HOUSING TYPES			
Single Units, Detached	N	N	N
Single Units, Attached	N	P	P
Accessory Units	N	N	N
Duplexes	N	P	P
Manufactured Dwellings	N	N	N
Manufactured Dwelling Park	N	N	N
Multi-Family Units	P	P	P

TABLE 3-12: Town Center Zones Use Table

USE CATEGORY	TC - Core	TC - Transition
RESIDENTIAL		
Household Living	L ^[1]	L ^[1]
Group Living	P ^[1]	P
Transitional Housing	N	C
Home Occupation	L ^[2]	L ^[2]
Bed and Breakfast	C ^[2]	P
HOUSING TYPES		
Single Units, Detached	N	N
Single Units, Attached	N	P
Accessory Units	N	N
Duplexes	N	P
Manufactured Dwellings	N	N
Manufactured Dwelling Park	N	N
Multi-Family Units	P	P

Question: *should manufactured dwellings and/or manufactured dwelling parks be permitted housing types in the CC and TCT zoning districts?*

SIGNS – The sign code was adopted in 2009; it has not been reviewed since. The City Attorney has reviewed the sign code to ensure that it remains constitutionally compliant. For the most part the code remains compliant; only a few revisions will be necessary (see the City Attorney's comments, attached as Exhibit D). In addition, there are edits recommended that would not change the content or intent, but are intended to add clarity. (Note that several comments pertain to definitions; the omissions cited are in fact located in Development Code Article 12.)

Since the sign code was adopted in 2009, at least two new sign styles have been developed: the feather banner and the air-blown device (see Exhibit E). Several examples of both types are now used in Forest Grove. They are not presently regulated.

Another question to consider is whether to allow monument signs in either or both of the Town Center zoning districts. While both districts have no minimum building setbacks, not all buildings are presently built out to the front property line, especially east of Cedar Street. Businesses in the TCC and TCT are allowed wall and projecting signs, but those offer limited visibility when the building is setback from the street. Allowing monument signs would provide those businesses additional visibility.

Lastly, the Development Code is silent about permitted signage in the Neighborhood Mixed Use (NMU) zoning district. Staff would suggest adding NMU to the same sign code that is applicable in the CC and CN zoning districts (DC §10.8.830(D)). This code allows monument signs, wall signs, and canopy or hanging signs. It does not allow pylon (a.k.a. pole) signs.

Question: *should feather banners and air-blown devices be added to the sign code?*

Question: *should monument signs be allowed in the TCC and TCT zoning districts?*

Question: *should signs permitted in the NMU zoning district be the same as those permitted in the CC and CN zoning districts?*

BED AND BREAKFAST – The B&B code (DC §10.7.025 et. seq.) was adopted in 1989. It has not been reviewed since. It has been suggested to staff that a number of revisions should be considered, including:

- Allowing more rooms to be rented. At present, in the single-family and RML zoning districts, up to 3 rooms can be rented. In the RMH zoning district, up to 27 rooms may be rented, while there is no cap in the commercial zoning districts where motels and hotels are permitted. Some homes – particularly in the “Old Town” area, may have a greater number of bedrooms that could be rented.
- Eliminating the owner-occupied requirement.
- Eliminating or reducing the off-street parking requirement.

Question: *should the DC be amended with any of the above proposals? Are there other proposals that should be considered?*

RESIDENTIAL INCENTIVE DENSITY – Councilor Valfre has suggested that the City consider alternatives to DC TABLE 7-3: (Residential) AMENITY CATEGORIES AND VALUES in terms of the programs used for green building certification (see Exhibit F for potential amendments; new text in **bold**). At present, only LEED certification is listed. His comments are as follows:

"I would suggest that you replace "LEED Certification" with "Green Building Certification" or similar term. As you know, LEED certification is just one of several green building certifications, but one of the more expensive. As a result, many of the non-profits have chosen alternatives to LEED certifications, and I think it is appropriate in the interests of promoting affordable housing to allow flexibility that is acceptable to the funder/lender. The State Housing Department (OHCS) has thus chosen to allow Earth Advantage Certification or OHCS Green Building. Here are the guidelines:

- One of the following Green Building Standards of construction must be included in the development of any low-income housing funded by the Department with the exception of Projects funded exclusively with bond and/or 4% tax credits:*
- Enterprise Green Communities,*
- Earth Advantage Homes,*
- LEED for New Construction; or*
- OHCS Department Green Building Program.*

In the effort to create "innovative and creative development", it does appear that by omission or commission we are facilitating the developer's market-rate preference by offering a path through use of points to avoid affordable housing.

Under other amenities: Perhaps Visitability: Oregon policy, as enacted by ORS 456.510, "encourages the design and construction of dwellings that enable easy access by individuals with mobility impairments and allow continued use by aging occupants". "Visitable" means able to be approached, entered and used by individuals with mobility impairments including, but not limited to, individuals using wheelchairs."

Question: should Table 7-3 be amended to include any or all of the suggested additions?

NEIGHBORHOOD MIXED USE ZONING DISTRICT – In the NMU zoning district, "all housing types are permitted" (DC §10.4.315(E)). The question is whether manufactured dwellings and/or manufactured dwelling parks should be included or excluded.

This same Development Code section also stipulates that multi-unit buildings comply with the design standards of the Multi-Unit Residential Focus Area (Design Guidelines Section III). The code is silent about design standards for single-family and duplex homes. Staff would suggest amending this section so that they would have to comply with DC §10.8.880 Single-Family and Duplex development review standards.

Question: should manufactured dwellings and/or manufactured dwelling parks be permitted in the NMU zoning district?

Question: should single-family and duplex homes be required to comply with the design standards of DC §10.8.880?

- Exhibit A** SB 1051 – ADU Guidance Booklet by Oregon DLCD
- Exhibit B** Draft ADU Code
- Exhibit C** Photos of Small Manufactured Homes
- Exhibit D** Sign Code with City Attorney Comments
- Exhibit E** Feather Banners and Air-Blown Devices – Example Code
- Exhibit F** Table 7-3 with Potential Additions

EXHIBIT A

SB 1051 – ADU Guidance Booklet by Oregon DLCD

**GUIDANCE ON IMPLEMENTING
THE ACCESSORY DWELLING UNITS (ADU) REQUIREMENT
UNDER OREGON SENATE BILL 1051**



*M. Klepinger's backyard detached ADU, Richmond neighborhood, Portland, OR.
(Photo courtesy of Ellen Bassett and accessorydwellings.org.)*

OREGON DEPARTMENT OF LAND CONSERVATION AND DEVELOPMENT

MARCH 2018



Oregon Department of
Land Conservation
and Development

Introduction

As housing prices in Oregon go up, outpacing employment and wage growth, the availability of affordable housing is decreasing in cities throughout the state. While Oregon's population continues to expand, the supply of housing, already impacted by less building during the recession, has not kept up. To address the lack of housing supply, House Speaker Tina Kotek introduced House Bill 2007 during the 2017 legislative session to, as she stated, "remove barriers to development." Through the legislative process, legislators placed much of the content of House Bill 2007 into Senate Bill 1051, which then passed, and was signed into law by Governor Brown on August 15, 2017. In addition, a scrivener's error¹ was corrected through the passage of HB 4031 in 2018.

Among the provisions of SB 1051 and HB 4031 is the requirement that cities and counties of a certain population allow accessory dwelling units (ADUs) as described below:

- a) A city with a population greater than 2,500 or a county with a population greater than 15,000 shall allow in areas within the urban growth boundary that are zoned for detached single-family dwellings the development of at least one accessory dwelling unit for each detached single-family dwelling, subject to reasonable local regulations relating to siting and design.*
- b) As used in this subsection, "accessory dwelling unit" means an interior, attached or detached residential structure that is used in connection with or that is accessory to a single-family dwelling.*

This new requirement becomes effective on July 1, 2018 and subject cities and counties must accept applications for ADUs inside urban growth boundaries (UGBs) starting July 1, 2018. Many local governments in Oregon already have ADU regulations that meet the requirements of SB 1051, however, some do not. Still others have regulations that, given the overall legislative direction to encourage the construction of ADUs to meet the housing needs of Oregon's cities, are not "reasonable." The Oregon Department of Land Conservation and Development (DLCD) is issuing this guidance and model code language to help local governments comply with the legislation. The model code language is included on its own page at the end of this document.

¹ The scrivener's error in SB 1051 removed the words "within the urban growth boundary." HB 4031 added the words into statute and thus limited the siting of ADUs to within UGBs.

Guidance by Topic

The purpose of the following guidance is to help cities and counties implement the ADU requirement in a manner that meets the letter and spirit of the law: to create more housing in Oregon by removing barriers to development.

Number of Units

The law requires subject cities and counties to allow “at least one accessory dwelling unit for each detached single-family dwelling.” While local governments must allow one ADU where required, DLCD encourages them to consider allowing two units. For example, a city or county could allow one detached ADU and allow another as an attached or interior unit (such as a basement conversion). Because ADUs blend in well with single-family neighborhoods, allowing two units can help increase housing supply while not having a significant visual impact. Vancouver, BC is a successful example of such an approach.

Siting Standards

In order to simplify standards and not create barriers to development of ADUs, DLCD recommends applying the same or less restrictive development standards to ADUs as those for other accessory buildings. Typically that would mean that an ADU could be developed on any legal lot or parcel as long as it met the required setbacks and lot coverage limits; local governments should not mandate a minimum lot size for ADUs. So that lot coverage requirements do not preclude ADUs from being built on smaller lots, local governments should review their lot coverage standards to make sure they don’t create a barrier to development. To address storm water concerns, consider limits to impermeable surfaces rather than simply coverage by structures.

In addition, any legal nonconforming structure (such as a house or outbuilding that doesn’t meet current setback requirements) should be allowed to contain, or be converted to, an ADU as long as the development does not increase the nonconformity.

Design Standards

Any design standards required of ADUs must be clear and objective (ORS 197.307[4]). Clear and objective standards do not contain words like “compatible” or “character.” With the exception of ADUs that are in historic districts and must follow the historic district regulations, DLCD does not recommend any special design standards for ADUs. Requirements that ADUs match the materials, roof pitch, windows, etc. of the primary dwelling can create additional barriers to development and sometimes backfire if the design and materials of the proposed

ADU would have been of superior quality to those of the primary dwelling, had they been allowed.

Parking

Requiring off-street parking is one of the biggest barriers to developing ADUs and it is recommended that jurisdictions not include an off-street parking requirement in their ADU standards. Adding off-street parking on many properties, especially in older centrally-located areas where more housing should be encouraged, is often either very expensive or physically impossible. In addition, when adding an additional off-street parking space requires a new or widened curb cut, it removes existing on-street parking, resulting in no net gain of parking supply. As an alternative to requiring off-street parking for ADUs, local governments can implement a residential parking district if there is an on-street parking supply shortage. For more help on parking issues, visit www.oregon.gov/lcd/tgm/pages/parking.aspx or contact DLCD.

Owner Occupancy

Owner-occupancy requirements, in which the property owner is required to live on the property in either the primary or accessory dwelling unit, are difficult to enforce and not recommended. They may be a barrier to property owners constructing ADUs, but will more likely simply be ignored and constitute an on-going enforcement headache for local governments.

Public Utilities

Development codes that require ADUs to have separate sewer and water connections create barriers to building ADUs. In some cases, a property owner may want to provide separate connections, but in other cases doing so may be prohibitively expensive.

System Development Charges (SDCs)

While SDCs are not part of the development code and SB 1051 does not require them to be updated, local governments should consider revising their SDCs to match the true impact of ADUs in order to remove barriers to their development. ADUs are generally able to house fewer people than average single-family dwellings, so their fiscal impact would be expected to be less than a single-family dwelling. Accordingly, it makes sense that they should be charged lower SDCs than primary detached single-family dwellings.

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Accessory Dwellings (model code)

Note: ORS 197.312 requires that at least one accessory dwelling be allowed per detached single-family dwelling in every zone within an urban growth boundary that allows detached single-family dwellings. Accessory dwellings are an economical way to provide additional housing choices, particularly in communities with high land prices or a lack of investment in affordable housing. They provide an opportunity to increase housing supply in developed neighborhoods and can blend in well with single-family detached dwellings. Accessory dwelling regulations can be difficult to enforce when local codes specify who can own or occupy the homes. Requirements that accessory dwellings have separate connections to and pay system development charges for water and sewer services can pose barriers to development. Concerns about neighborhood compatibility, parking, and other factors should be considered and balanced against the need to address Oregon's housing shortage by removing barriers to development.

The model development code language below provides recommended language for accessory dwellings. The italicized sections in brackets indicate options to be selected or suggested numerical standards that communities can adjust to meet their needs. Local housing providers should be consulted when drafting standards for accessory dwellings, and the following standards should be tailored to fit the needs of your community.

Accessory dwellings, where allowed, are subject to review and approval through a Type I procedure[, pursuant to Section _____.] and shall conform to all of the following standards:

- [A. One Unit.** *A maximum of one Accessory Dwelling is allowed per legal single-family dwelling. The unit may be a detached building, in a portion of a detached accessory building (e.g., above a garage or workshop), or a unit attached or interior to the primary dwelling (e.g., an addition or the conversion of an existing floor).*
- /
- A. Two Units.** *A maximum of two Accessory Dwellings are allowed per legal single-family dwelling. One unit must be a detached Accessory Dwelling, or in a portion of a detached accessory building (e.g., above a garage or workshop), and one unit must be attached or interior to the primary dwelling (e.g., an addition or the conversion of an existing floor).]*

B. Floor Area.

1. A detached Accessory Dwelling shall not exceed [800-900] square feet of floor area, or [75] percent of the primary dwelling's floor area, whichever is smaller.
2. An attached or interior Accessory Dwelling shall not exceed [800-900] square feet of floor area, or [75] percent of the primary dwelling's floor area, whichever is smaller. However, Accessory Dwellings that result from the conversion of a level or floor (e.g., basement, attic, or second story) of the primary dwelling may occupy the entire level or floor, even if the floor area of the Accessory Dwelling would be more than [800-900] square feet.

C. Other Development Standards. Accessory Dwellings shall meet all other development standards (e.g., height, setbacks, lot coverage, etc.) for buildings in the zoning district, except that:

1. Conversion of an existing legal non-conforming structure to an Accessory Dwelling is allowed, provided that the conversion does not increase the non-conformity; and

2. No off-street parking is required for an Accessory Dwelling.

Definition (This should be included in the “definitions” section of the zoning ordinance. It matches the definition for Accessory Dwelling found in ORS 197.312)

Accessory Dwelling – An interior, attached, or detached residential structure that is used in connection with, or that is accessory to, a single-family dwelling.

EXHIBIT B

Draft ADU Code

ACCESSORY DWELLING UNITS

10.7.005 PURPOSE

The purpose of this section is to allow for establishment of an accessory dwelling unit in conjunction with a single-family dwelling in any zone that allows residential uses. An accessory dwelling unit may be permitted as a means to provide more affordable housing opportunities for young families and the elderly; encourage additional density at minimal cost and disruption to surrounding neighborhoods; allow individuals and smaller households to retain large houses as residences; and allow more energy efficient use of large, older homes.

10.7.010 PROCEDURE

An application for an accessory dwelling unit shall be reviewed by the Director under the Type I procedure.

10.7.015 STANDARDS

One (1) accessory dwelling unit may be allowed in conjunction with a single-family dwelling by conversion of an existing space, by means of an addition, or as an accessory structure on the same lot with an existing dwelling, subject to the following standards and limitations:

- A. ~~The owner(s) of the primary dwelling shall occupy at least one (1) of the units;~~
- B. Any addition shall not increase the gross floor area of the original dwelling by more than 10%;
- C. The gross floor area of the accessory dwelling unit shall not exceed 30% of the primary dwelling's gross floor area, or 720 square feet, whichever is less; **However, accessory dwellings that result from the conversion of a level or floor (e.g., basement, attic, or second story) of the primary dwelling may occupy the entire level or floor, even if the floor area of the accessory dwelling would exceed 720 square feet.**
- D. ~~One (1) additional off-street parking space shall be provided in addition to the required parking for the primary dwelling;~~
- E. ~~The accessory dwelling unit shall have exterior siding and roofing similar in color, material and appearance to that used on the primary dwelling; and~~
- G. The accessory dwelling unit shall comply with applicable fire and life safety codes.

10.12.210 MEANING OF SPECIFIC WORDS AND TERMS

(D13)(b) Accessory Dwelling Unit – ~~One (1) or more rooms with private bath and kitchen facilities comprising an independent, self-contained dwelling unit within or attached to a single-family dwelling. An interior, attached, or detached residential structure that is used in connection with, or that is accessory to, a single-family dwelling.~~

EXHIBIT C

Photos of Small Manufactured Homes



Palm Harbor 580 square feet



Palm Harbor 500 square feet



Palm Harbor 386 square feet



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Palm Harbor 386 square feet



Fleetwood 559 square feet



Fleetwood 378 square feet



Greenfab 800 square feet



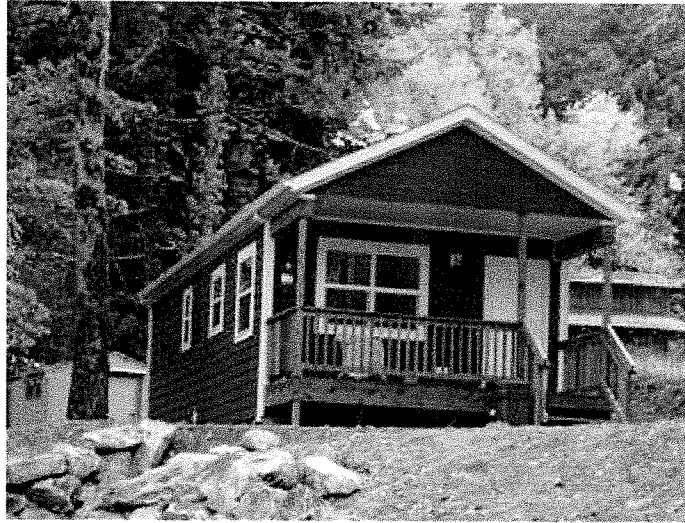
Greenfab 800 square feet



Palm Harbor 384 square feet



Express Modular 720 square feet



Express Modular 448 square feet



Springfield 437 square feet

EXHIBIT D

Sign Code with City Attorney Comments

SIGNS

10.8.800 PURPOSE

A. The purposes of §§10.8.800 through 10.8.870 (the “Sign Code”) are:

- 1A. To promote the neat, clean, orderly and attractive appearance of the community;
- B2. To accommodate the need of sign users while avoiding nuisances to nearby properties;
- 3C. To ensure safe construction, location, erection and maintenance of signs; and
- 4D. To minimize distractions for motorists on public highways and streets.

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B. The Sign Code is not intended to allow the construction, erection or maintenance of any sign in a place or manner that is unlawful under any state or federal law or City ordinance.

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10.8.805 GENERAL PROVISIONS

A. Compliance with Sign CodeOther Laws and Regulations. All signs erected, constructed or maintained in the City must comply with this Sign Code (Sections 10.8.800 through 10.8.870). A sign that is erected, constructed or maintained in violation of the Sign Code is declared to be a nuisance and may be abated as such. It is not the purpose of this section to permit the erection or maintenance of any sign at any place or in any manner unlawful under any other City ordinance, or state or federal law.

B. Oregon Motorist Information Act. This section adopts by reference the provisions of the Oregon Motorist Information Act, ORS Chapter 377 (2017) is adopted by reference and incorporated into Sections 10.8.800 to 10.8.870 as if fully set forth herein.

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10.8.810 EXEMPTED SIGNS

The following signs shall do not require planning approval, for their use although some may require a building permit to ensure compliance with structural requirements. Use of these signs does not affect the amount or type of signage otherwise allowed by this Sign Codeordinance. All signs listed in this section are subject to all other applicable provision(s) of this Chapter the Sign Code.

- A. Official signs placed or authorized by the city, county, state, or federal government in the publicly owned right-of-way as well as official signs required by city, state, or federal government located on private property.
- B. Flags adopted or endorsed by a governmental agency.
- C. Tablets, cornerstones, or commemorative plaques.
- D. Signs intended to be viewed from within a building.
- E. Seasonal decorations on private property.
- F. Signs erected by a recognized neighborhood watch group.
- G. Handheld signs.
- H. Accessory signs.
- I. Landmark signs.
- J. Signs for hospital or emergency services and railroads.

Comment [CC1]: No way to know if it is “official.” Instead, this provision relies solely on the identity of the person that placed the sign (“city, county, state or federal government”).

Comment [CC2]: What is “endorsed” by?

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Comment [CC3]: What is an “accessory” sign? The CDC defines an “accessory use” but not an “accessory” sign. Same for “landmark” and “incidental” signs.

- K. Incidental Signs, provided the signs do not exceed one and a half (1.5) square feet in area for each sign, with no more than three (3) signs allowed for each permitted structure.
- L. An exterior sign erected next to an entrance, exit, rest room, office door, or telephone, provided the sign is no more than four square feet in area. This type of sign is typically used to identify and locate a property feature.
- M. Any sign ~~which that~~ is not visible to motorists or pedestrians ~~on from any~~ public highway, sidewalk, street, alley, or other area open to public travel.
- N. One indirectly illuminated or non-illuminated wall sign not exceeding one-and-one-half (1.5) square feet in area placed on any residential building. This type of sign is typically used as a name or address plate.
- O. Signs placed in or attached to a motor vehicle, bus, railroad car, or light rail car that is regularly used for purposes other than the display of signs.
- P. Signs, up to four (4) square feet and no taller than two (2) feet, constructed or placed within a parking lot. These signs are typically used to direct traffic and parking.
- Q. A sign that does not exceed four (4) square feet in area and four (4) feet in height, and is erected where there is a danger to the public or to which public access is prohibited.
- R. Signs located within a sports stadium or athletic field, or other outdoor assembly area which are intended and oriented for viewing by persons within the facility.
- S. Covered flier boxes under one (1) square foot in area when attached to a temporary or permanent sign.
- T. Banner signs placed or authorized by the City in the publicly owned right-of-way.

10.8.815 PROHIBITED SIGNS

Notwithstanding Section 10.8.810 above, the following signs are prohibited:

- A. Signs or sign structures ~~which that~~ may pose a hazard to pedestrian or vehicular traffic, including but not limited to signs which obstruct clear vision areas as defined in §10.8.155 *Clear Vision Areas*.
- B. Signs ~~that are~~ not in compliance with applicable setback requirements.
- C. Signs within or which overhang the public right-of-way except signs installed or authorized by a governmental agency or public utility as permitted under the provision(s) of §90.01 et. seq. *Permitted Uses of the Public Way*.
- D. Portable signs in the following categories:
 - 1. Signs on a parked vehicle unless the vehicle is being used for transport in the normal day-to-day operations of a business.
 - 2. Signs propped up by or leaning against a motor vehicle when such vehicle is parked in the public right-of-way.
- E. Billboards.
- F. Moving signs.
- G. Festoons.
- H. Balloon signs.
- I. Hazardous signs.
- J. Flashing signs.
- K. Roof signs.
- L. ~~Off-premise signs~~.
- M. Signs that appear similar to traffic control devices.
- N. Signs not in compliance with this Chapter.

Comment [CC4]: This is why I added the "notwithstanding" clause above. 10.8.810.0 would allow these signs.

Comment [CC5]: Here again, many of these terms would benefit from a definition.

Comment [CC6]: This one is illegal. The only way to distinguish an on-premise sign from an off-premise sign is to read it. As a general rule, if you have to reread the sign to determine if it complies with the regulation, the regulation is probably illegal.

10.8.820 TEMPORARY SIGNS

General ~~temporary sign~~ provisions.

A. Temporary signs may be erected and maintained only in compliance with the following provisions. ~~They~~ A temporary sign shall:

1. contain no moving parts and shall not be lighted.
2. be affixed to a permanent structure.
3. be placed no higher than the building's eave, top of wall, or parapet.

B. Permitted temporary signs ~~age~~. Temporary signs ~~age shall be are~~ allowed ~~for on~~ each lot ~~in the following zones as follows~~:

1. Residential (R-5, R-7, R-10, SR, RML, RMH) Zones (~~no a permit shall be is not~~ required for such signs):
 - i. One temporary sign per frontage, not exceeding four (4) square feet in area, per side, which is erected for a maximum of eight (8) days in any calendar year and is removed by sunset on any day it is erected. Such signs are typically used for garage sales and other domestic purposes. ~~No permit shall be required for such signs.~~
 - ii. Two temporary signs not exceeding 24 (twenty-four) square feet in a area allowed per subdivision during the build-out of the residences in the subdivision. These types of signs are typically used for subdivision and model home identification. ~~No A~~ sign may not be erected for an inhabited residence.
 - iii. One temporary sign per lot, not exceeding six (6) square feet in area and 30 (thirty) inches in height.
 - iv. One temporary sign per frontage, not exceeding six (6) square feet in area, during the time of sale, lease or rental of the lot/structure provided that the sign is removed within 30 (thirty) days of the sale, lease or rental of the lot/structure.

Comment [CC7]: For how long? This is the only one that does not have a durational requirement.

2. Commercial (CC, CN, TC) and Industrial (LI, GI) Zones:

- i. Up to two temporary signs not exceeding 100 square feet each (such as banner signs).
- ii. Temporary signs shall be erected for no more than 30 consecutive days and for no more than sixty (60) days per calendar year.
- iii. One temporary sign per frontage, not exceeding thirty-two (32) square feet in area, during the time of sale, lease or rental of the lot/structure provided that the sign is removed within 30 (thirty) days of the sale, lease or rental of the lot/structure.

3. Institutional Zone:

- i. Up to two temporary signs not exceeding 100 square feet each (such as banner signs).
- ii. Temporary signs shall be erected for no more than 120 days per calendar year.
- iii. One temporary sign per frontage, not exceeding thirty-two (32) square feet in area, during the time of sale, lease or rental of the lot/structure provided that the sign is removed within 30 (thirty) days of the sale, lease or rental of the lot/structure.

C. All Zones:

1. Signs not exceeding six (6) square feet each in area during the period from six (6) weeks prior to a public election or the time the election is called, whichever is earlier, to 14 (fourteen) days after the public election. ~~No A permit shall be~~ is not required for such signs.
2. One temporary sign per frontage, not exceeding six (6) square feet in area, during the time of construction, landscaping, or remodeling of the property, provided that the sign is removed within 30 (thirty) days of the completion of any construction, landscaping, or remodeling.

Comment [CC8]: Is a permit required?

10.8.825 PORTABLE SIGNS

General ~~portable sign~~ provisions. Portable signs may be erected and maintained only in compliance with the following provisions:

- A. Portable signs ~~are allowed only shall be permitted in the~~ Commercial (CN, CC, TC), Industrial (LI, GI), and Institutional zones ~~only~~.
- B. Portable signs shall be professionally prepared, contain no moving parts and shall not be lighted.
- C. Each property ~~shall be~~ is permitted one portable sign, not exceeding six (6) square feet in area. The sign shall be located on private property directly adjacent to the business or institution ~~that is responsible for the sign to which the sign pertains~~, unless permitted to be in the public right-of-way under the provision(s) of §90.01 et. seq. *Permitted Uses of the Public Way*.
- D. Portable signs shall be removed at the close of the business day.

Comment [CC9]: How do we know? Prepared to enforce?

Comment [CC10]: This is intended to get away from the "pertains" requirement, which would require you to analyze the content of the sign.

10.8.830 PERMANENT SIGN REGULATIONS

General provisions. Permanent signs may be erected and maintained only in compliance with the following ~~specific~~ provisions:

A. General permanent sign provisions.

1. ~~No s~~Signs are not permitted within a public right-of-way unless authorized by a public agency.
2. Signs shall be erected in an upright position and placed perpendicular to a horizontal surface conforming to the line from horizon to horizon.
3. Maximum square footage restrictions include changeable copy and exclude accessory and incidental signs.
4. Minimum clearance for projecting, canopy, blade and hanging signs when over a walkway or access area is eight (8) feet. ~~A S~~Signs shall not project beyond the canopy.
5. Projecting and hanging signs may extend no more than six (6) feet from a building's façade. No projecting or hanging sign may be over 24 (twenty-four) square feet in area on each side.
6. Sign setbacks are measured from the nearest property line to the nearest portion of the sign. In addition to the specific setbacks noted above, all signs ~~shall~~ must meet the clear-vision provision(s) of §10.8.155 *Clear Vision Areas*.

Comment [CC11]: Here again, definitions of "accessory" and "incidental" would be useful.

B. Residential (R-5, R-7, R-10, SR, RML, RMH) Zones.

1. ~~Each~~ A subdivision, manufactured home park, or multi-family complex is permitted one (1) permanent monument sign not to exceed eight (8) feet in height and 40 (forty) square feet in area. The sign shall be non-illuminated or indirectly illuminated.
2. ~~Each~~ A church or public school is permitted one (1) permanent monument sign not to exceed eight (8) feet in height and 40 (forty) square feet in area. Each sign may include changeable copy (manual or electronic). Any electronic changeable copy sign ~~shall~~ must have all illumination turned off between the hours of 9 p.m. and 7 a.m. Each sign ~~shall~~ must meet the setbacks applicable to the residential zone in which it is located.
3. Home occupation signs, not exceeding six (6) square feet in area, non-illuminated and professionally prepared.

C. Institutional Zone.

1. ~~Each~~ An institution is permitted one (1) permanent monument sign not to exceed eight (8) feet in height and 40 (forty) square feet in area. ~~Each~~ The sign may include changeable copy (manual or electronic). Any electronic changeable copy sign ~~shall~~ must have all illumination turned off between the hours of 9 p.m. and 7 a.m. ~~Each~~ The sign ~~shall~~ must meet the setback provision(s) of §10.3.220(C) *Setbacks*.
2. In lieu of a monument sign, ~~each~~ an institution is permitted a wall sign of up to 40 (forty) square feet in area.

D. Commercial (CC, CN) and Industrial (LI, GI) Zones. Signs in the commercial and industrial zones may be directly or indirectly lit and shall meet all setback provision(s) of its zone.

1. Monument Signs: Each site or multi-tenant complex is allowed one (1) permanent monument sign not to exceed 40 (forty) square feet in area and eight (8) feet in height per 400 feet of frontage, not to exceed three (3) per site or multi-tenant complex.
2. Wall signsage (including window signsage) ~~shall~~ shall not have a gross area ~~not~~ greater than 15% of the face of the building to which the sign is attached or painted.
3. ~~A~~ Canopy or hanging signs shall not exceed 15% of each wall face of the building to which the sign is attached.
4. No more than two (2) lighted signs ~~shall be~~ are permitted in the windows of ~~each~~ business.

E. Commercial (CC) Zone:

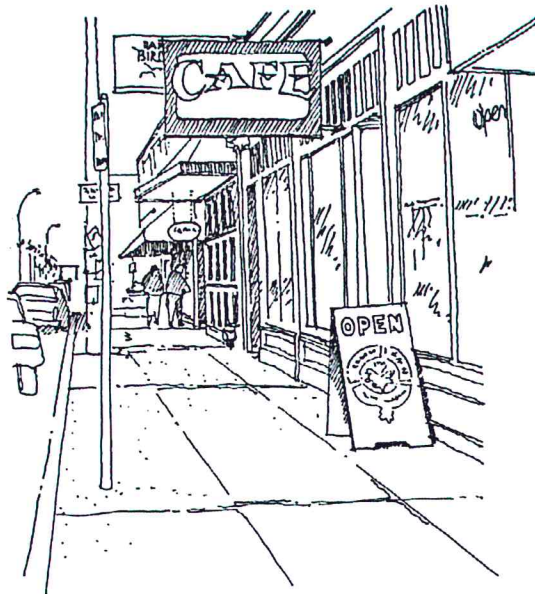
1. In lieu of a monument sign, no more than one (1) pylon sign ~~shall be~~ is allowed per street frontage. Multiple-tenant developments may be allowed additional pylon signs as provided in section (D)(1) above.
2. All pylon signs shall have a minimum clearance of ten (10) feet below the sign and shall have a maximum, overall height of twenty (20) feet above grade. ~~No~~ A pylon sign ~~shall~~ may not have a total area of more than forty (40) square feet per face, except as provided in section (3) below.
3. Pylon signs for properties with three or more businesses may have up to seventy (70) square feet per face.

F. Commercial (TC) Zones:

1. ~~A~~ canopy or hanging signs shall not exceed 15% of each wall face of the building to which the sign is attached.
2. ~~A~~ wall signsage (including window signsage) ~~shall~~ may have a gross area not greater than 15% of the face of the building to which the sign is attached or painted.
3. ~~No~~ A wall sign ~~shall~~ may not project more than 18 inches from the wall to which it is attached.
4. ~~A~~ B businesses with a ground-floor entrances ~~which have~~ where the front building line is within five (5) feet of the public right-of-way ~~shall be~~ is permitted one (1) projecting sign on the front building face, side, or corner in lieu of a wall sign. ~~A~~ Projecting signs shall project no more than six (6) feet, have a maximum vertical dimension of six (6) feet, and ~~is~~ be limited to a maximum of 24 (twenty-four) square feet of area per face.

5. Lighting for signs in the TC zones ~~shall be~~ is limited to internal lighting, where the light source is inside the sign, or to indirect lighting screened from view, where the light source is located below the sign, and is part of an ornamental feature of the sign structure. Braces and struts ~~which that~~ support indirect lighting from the top or sides of the sign are prohibited. This Section ~~shall not be applicable for~~ does not apply to signs and lighting approved through Town Center Track 2 *Design Guidelines*.
6. No more than two (2) lighted signs ~~shall be~~ are permitted in the windows of each business.
7. A lighted sign visible to and located within 100 feet of a residential zone ~~shall~~ must be turned off from 10:00 p.m. to sunrise.

Figure 8-16: Signs in the Town Center



G. Video display and changeable copy signs (manual and electronic) are subject to the following standards:

1. Video display signs ~~shall only be~~ are allowed only as part of a permanent monument or wall sign.
2. Manual changeable copy signs ~~shall be~~ are allowed as part of a permanent monument, wall, or pylon sign.
3. The video display and changeable copy portion of a sign may not exceed 24 (twenty-four) square feet in area.
4. Electronic display background color tones, lettering, logos, pictures, illustrations, symbols, and any other electronic graphic or video display shall not change at intervals of less than seven (7) seconds.

5. Video display and electronic changeable copy signs shall not exceed a maximum illumination of 5000 nits (candelas per square meter) during daylight hours and a maximum illumination of 500 nits between dusk and dawn as measured from the sign's face at maximum brightness.
6. Video display and electronic changeable copy signs shall have an automatic dimmer control to produce a distinct illumination change from a higher illumination level to a lower level for the time period between one half-hour (1-1/2 hour) before sunset and one half-hour (1-1/2 hour) after sunrise.

10.8.835 SIGN PERMITS

~~No~~ A sign ~~which that~~ is not specifically listed as exempt from the provisions of this [Sign Code ordinance](#) ~~may not shall~~ be erected, constructed, attached, relocated, or structurally altered without obtaining City approval. ~~Such approvals are~~ [Approval is](#) not required for signs listed as exempt or for routine sign maintenance.

- A. ~~A Permit for to~~ [modifications of an](#) existing signs, or to legalize [a signs](#) for which a permit was not obtained when it was constructed, will be processed by ~~means of~~ a Type 1 procedure.
- B. A permit for new signs will be processed by means of a Type 1 procedure, using the [applicable](#) standards of this [Sign Code chapter](#) as approval criteria.

10.8.840 PERMIT REQUIREMENTS

An applicant for a sign permit shall supply the following information on forms provided by City:

- A. Size, height, location, description, and material of the sign;
- B. Name of the manufacturer, contractor, owner, and business advertised;
- C. Scaled drawing(s) and description of copy, structure, and lighting;
- D. Photo(s) or drawing(s) of the proposed sign location(s); and
- E. Signature of property owner or designee.
- F. Other information [required as the City determines necessary](#) to demonstrate compliance with this [Sign Code chapter](#).

10.8.845 LANDMARK AND ~~ABANDONED~~ SIGNS

Landmark signs and abandoned signs are subject to the following provisions:

- A. Landmark Signs may be exempted from the provisions of this ~~chapter~~ [Sign Code](#) upon the recommendation of the Historic Landmarks Board.
- B. Abandoned signs shall be removed or made conforming within 45 (forty-five) days of the date they become classified as abandoned.

Comment [CC12]: "Abandoned" is clear but what is a "landmark" sign?

10.8.850 CONSTRUCTION AND MAINTENANCE STANDARDS

The following standards apply to the construction and maintenance of signs in the City:

- A. All permanent signs shall be constructed and erected in accordance with the design and construction requirements of the most recent edition of the State of Oregon Structural Specialty Code.
- B. All illuminated signs ~~shall be~~ [are](#) subject to the provisions of the State Electrical Specialty

- | Code. It ~~is shall~~ be the applicant's responsibility to demonstrate compliance with that code by supplying the City with a copy of an approved State Electrical Permit.
- | C. All signs shall be maintained at all times in a state of good repair. ~~No~~ A person shall not maintain or permit to be maintained on their premises any sign which is in a sagging, leaning, fallen, decayed, deteriorated, or other dilapidated or unsafe condition.

10.8.855 NONCONFORMING SIGNS

- A. Non-conforming signs shall be brought into compliance with this Sign Code when:
1. The sign is physically modified to the extent that a building permit is required; or
 2. The use of the building or tenant space to which the sign pertains changes (e.g., office to retail); or
 3. The site is subject to conditional use permit review, or design review as defined in §10.2.310.
- B. All temporary or portable signs not in compliance with the provisions of this Sign Code shall be removed or made compliant immediately following adoption of this code ordinance.

10.8.860 VARIANCES

- A. Signs that does not consistent-comply with the provision(s) of this Sign Ceode may be approved pursuant to §10.2.720 *Variance Review Criteria*.

10.8.865 ENFORCEMENT

- The Community Development Director or designee shall have the authority to order or effect the removal of any sign which does not conform to the provision(s) of this Sign Code ordinance.

10.8.870 PENALTY IMPOSED

- A person responsible for a violation of who violates any provision(s) of this ordinance-Sign Code shall may be subject to a civil penalty in an amount of not less than \$100 for the first violation, \$500 for the second violation, and \$1,000 for any subsequent violation occurring in a two-year period starting from the issuance of the first notice of violation. In the event of a violation. The Community Development Director or person designated by the Director designee may cite the violator into Municipal Court for said violations.

10.8.875 PERMIT FEE

The fee for a sign permit described above shall be set by City Council by resolution.

EXHIBIT E

Feather Banners and Air-Blown Devices – Example Code

SIGN CODE - POSSIBLE AMENDMENTS

Add Fin Sign (aka shark fin sign, shark fin banner, feather banner, feather flag)

Feather Banner: A vertical portable sign, made of lightweight material that is prone to move in the wind, and that contains a harpoon-style pole or staff driven into the ground for support or supported by means of an individual stand. This definition includes such signs of any shape including flutter, bow, teardrop, rectangular, shark, feather, and U-shaped. For purposes of this Article, a feather banner is an advertising device and sign.

Flag, Feather: Flags used to bring attention to, or advertising displays including but not limited to blade, feather, shark fin, swooper, teardrop, triangular and wind flag.

Feather Flag Sign. A free standing temporary sign typically constructed of a single plastic or metal shaft driven in the ground with an attached pennant that is vertically elongated and attached to the shaft.

(1) *Maximum size*. Each feather flag sign shall not exceed thirty two (32) square feet in total area.

(2) *Location*. Feather flag signs must be located outside of the public right of way and any clear vision triangle. The number of feather flag signs is limited to one (1) per every forty (40) linear feet of road frontage along the roadway where the primary business sign is installed.



Flag: A device made of cloth, plastic, or natural or synthetic fabric, with or without characters, letters, illustrations, or ornamentation applied to such surface, and which is designed to move in the wind. For purposes of this Article, except as specifically authorized, a “flag” is an advertising device and “sign.” It is defined separately from wind-blown device.

Air-blown Device (aka air-blown dancer): Any device not otherwise specifically defined in this Article that is designed to inform or attract, whether or not such device carries a message, and which all or part of the device is set in motion by mechanically forced air. This definition

specifically includes but is not limited to those devices referred to commercially as “air puppets” and “air dancers.” For purposes of this Article, air-blown devices are advertising devices.



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Inflatable Sign: Any sign, advertising device, or balloon that is or can be filled with air or gas. This includes any three-dimensional ambient air-filled in the shape of a container, figure, or product. For purposes of this Article, inflatable signs and balloons are considered advertising devices.

Mural: A picture or image (including but not limited to painted art) which is painted, constructed, or affixed directly onto a building wall, which may or may not contain text, logos, and/ or symbols.

Wind-blown Device: Any device, whether or not specifically defined in this Article, that is designed to inform or attract, whether or not such device carries a message, and which all or part of the device is set in motion by wind. Such devices include banners (except as may be specifically authorized), pennants, streamers, ribbons, or long narrow strips of fabric, plastic, or other pliable material designed to move in the wind. A “flag” is defined separately and is not considered a “windblown device” for purposes of this Article. See also “air-blown device,” which is defined separately.

Sign, Walker (Human Directional Sign): A person, visible from the public R.O.W., which is holding, twirling, or wearing a sign or costume to draw attention to a business, project, place, or event.

EXHIBIT F

Table 7-3 with Potential Additions

TABLE 7-3: AMENITY CATEGORIES AND VALUES

Amenity Category	Value	Description
Bicycle Amenities	1 point	Provide residents with enhanced bicycle amenities (parking and repair area). The area dedicated to long-term bicycle parking shall be sized to accommodate 0.5 bicycles per unit and must be covered and secure. The area dedicated to bicycle repair shall be a minimum of 50 square feet in area and designed and equipped to facilitate bicycle maintenance.
Energy Efficiency	2 points	Energy efficiency improvements compliant with Energy Trust of Oregon. Projects must enroll in the Energy Trust's Design Assistance program during schematic design or earlier and commit to exceeding Oregon code requirements by a minimum of 5%.
	2 points	Achieve an Energy Star score of 7 or better, as calculated by the EPA online tool.
	3 points	Project designed to Net Zero Energy Certification.
"Green" Materials	2 points	Use environmentally sensitive ("Green") materials on at least 50% of the building's interior surfaces including: • Wall and Ceiling Latex Paint: Low VOC • Paint with recycled content: minimum 50% post-consumer • Countertop with recycled content: 25% Post-consumer content • Carpet with post-consumer recycled content (+50%) • Renewable flooring materials: Linoleum, cork, bamboo, or wool • Forest Stewardship Council-certified Reclaimed Wood
	3 points	Use of "Green Material" on at least 75% of the building's interior.
Low Impact Design	1 point	Manage all storm water from the site using low impact design techniques from <i>Clean Water Services Low Impact Development Handbook for the Tualatin Basin</i> .
Ground Floor Retail	3 points	Provide at least 5,000 square feet of retail or space which is designed to be convertible to ground level retail. A density bonus for this amenity is available in the TCT zone only.
Residential Gardening	2 points	Provide a community garden for use by residents. The garden must include raised beds (minimum size 3' by 5') with improved soil and a water source for irrigation. The garden may be at grade or rooftop, but must be located in an area with adequate sunlight (minimum 6 hours/day). The area dedicated to the community garden shall be sized to accommodate 0.3 raised beds per unit plus walkways.
Rooftop Garden or Eco-Roof	2 points	Provide a rooftop garden or an eco-roof. The rooftop garden or eco-roof must cover at least 50% of the roof area of the building. Rooftop gardens must be accessible to residents and at least 30% of the garden area must contain plants. The remaining area must include seating areas and other amenities. Eco-roofs must be designed to reduce storm water and be entirely covered with vegetation.
• Public Plaza • Outdoor Patio • Seating Area	2 points	Where ground floor retail is planned, provide a patio area for outdoor seating between the retail and the primary public street frontage which is designed to activate the street frontage. The patio and seating area must extend along at least 20 feet of the frontage and be at least 10 feet deep.
	3 points	Provide a public plaza with a minimum area of 2,000 square feet. Seating areas and landscape plantings are required amenities. Water features are encouraged. To promote a sense of openness and safety, public plazas shall be completely visible from an adjacent street frontage.

Structured Parking	10 points	At least 80% of the required parking is provided in a parking structure. Structures may be at- or below-grade.
LEED Certification	Silver: 8 points Gold: 10 points Platinum: 12 points	Project designed to achieve LEED Silver, Gold, or Platinum certification. Project features required to qualify for LEED certification cannot be used to qualify for points in other amenity categories.
Enterprise Green Communities		Projects must be designed to achieve compliance with the mandatory EGC Criteria measures applicable to that construction type and must achieve 35 optional EGC points. Project features required to qualify for EGC certification cannot be used to qualify for points in other amenity categories.
Earth Advantage Homes	Silver: 8 points Gold: 10 points Platinum: 12 points	Projects must be designed to achieve Earth Advantage Silver, Gold, or Platinum certification. Project features required to qualify for EA certification cannot be used to qualify for points in other amenity categories.
OHCS Green Building Program		
Visitability		At least 00% of the units must have at least one zero-step entrance, doors with 32 inches of clear passage space, and at least one bathroom on the main floor that is wheelchair accessible.
Other	TBD	Other amenity approved by Planning Commission