

# **City of Tigard**

## **2011 Economic Opportunities Analysis**

*Adopted by Tigard City Council on May 24, 2011*

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# **ACKNOWLEDGEMENTS**

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## **Executive Summary**

The City of Tigard has conducted an Economic Opportunities Analysis (EOA) as required by its Periodic Review work program to update its Comprehensive Plan. The City received grant funds from the Department of Land Conservation and Development (DLCD) for technical consultant assistance to complete this task. The EOA was developed in compliance with OAR 660 Division 9 (Statewide Planning Goal 9: Economic Development). The EOA is in-part a technically-based study that compares projected demand for land for industrial and other employment uses to the existing supply of such land. At the same time, it provides economic development policies and actions consistent with emerging economic opportunities, market trends, and local vision

### **Vision and Goals**

In March 2008, as part of a robust public process, the City of Tigard updated the Economic Development chapter of its Comprehensive Plan. The chapter included the City's vision and goals for economic development to read:

#### Vision

The City shall have a strong and resilient local economy with a diverse portfolio of economic activity: retail, professional service and industrial jobs.

#### Goals

1. Develop and maintain a strong, diversified and sustainable local economy.
2. Make Tigard a center and incubator for innovative businesses including those that focus on environmental sustainability.
3. Make Tigard a prosperous and desirable place to live and do business.

### **Demographic and Employment Trends**

Tigard has been increasing in population at a slower rate (1.3%) than Washington County, but above Oregon and national growth rates. Tigard population is estimated to be 47,460 as of 2009, up from 42,260 residents in 2000. Tigard currently is relatively "jobs rich" with a positive ratio of 2.3 jobs per household, which is well above the tri-county Metro regional average of 1.5 jobs per household. This is understandable given Tigard's concentration of regional employment centers, including Washington Square Mall, the "Tigard Triangle" employment area near the confluence of I-5/Hwy. 217, and pockets of industrial uses along the Hwy. 217 corridor.

Tigard also is home to a number of large retail employers at Washington Square Mall as well as several large high-tech manufacturing, construction contractors, professional, business operations, and state and local government operations. Regional commercial and industrial real estate brokers see Tigard as a well-defined submarket within the suburban Metro region. Tigard's office market is especially competitive within the inner southwest portion of the region. Additionally, various efforts are underway to make the Downtown Tigard area a more viable place to live and work.

### **Target Industries**

In line with Tigard's vision and goals, and in consultation with the City Planning Commission, the consultant team and City staff recommend that the City focus on retaining and attracting a mix of existing and emerging business clusters that pay above average wages. This includes existing, established clusters such as:

- Durable goods manufacturing (includes metals and machinery)
- Education (private and non-profits)

- Financial services
- Information (including software development)
- Professional and technical services
- Wholesale trade

They also recommend that the City focus on emerging clusters, including health care and advanced technology (i.e., green energy) manufacturing and research operations.

### **Tigard’s Land Demand and Supply**

The consulting team prepared a range of land need forecasts including: efficient, medium, and high land needs scenarios. These scenarios all take into account the Metro employment forecasts, but assume varying levels of industrial development and redevelopment.

As summarized in the table below, the land efficient need scenario assumes 48 acres of net new industrial vacant land demand, which is just below the estimated vacant industrial land supply of 50 acres. If the City chooses to pursue a more aggressive economic growth strategy that is consistent with the moderate or high land need scenario, the City would need to identify another 14 to 30 acres of vacant industrial land area to meet the level of industrial demand associated with adding another 1,059 to 1,324 industrial jobs.

### **20-Year Industrial Demand Forecast and Vacant Land Supply, Tigard USB**

<b>Land Demand and Supply</b>	<b>Efficient Land Need Scenario</b>	<b>Moderate Land Need Scenario</b>	<b>High Land Need Scenario</b>
Demand for Vacant Industrial Land	48	64	80
Supply of Vacant Industrial Land	50	50	50
Land Surplus or (Deficit)	2	(14)	(30)

<b>Preliminary Parcel Distribution, Efficient Land Need Forecast <sup>1</sup></b>	<b>Existing Unconstrained Supply (tax lots)</b>	<b>Forecast of Parcel Size Demand (tax lots) <sup>1/</sup></b>	<b>Surplus (tax lots)</b>
Less than 1 acre	12	10	2
1 to 5 acres	5	5	0
5 to 10 acres	0	0	0
10 to 20 acres	2	2	0
20+ acres	0	0	0
<b>Total</b>	<b>19</b>	<b>17</b>	<b>2</b>

Notes: <sup>1</sup> Tax lot demand forecast expected to meet or exceed supply in 20 years.

Source: Based on findings included in demand and supply analysis.

As shown in the table below, the land efficient needs scenario assumes 78 acres of net new commercial and mixed-use vacant land demand, which is just below the estimated vacant land supply of 86 acres. As with the industrial land needs, an economic growth strategy that is consistent with the moderate or

high land needs scenario would require the City to identify an additional 19 to 45 acres of vacant commercial and mixed-use land to meet the demand.

**Reconciliation of Long-term Land Demand and Supply Commercial and Mixed Use 20-Year Land Use Forecast (gross buildable acres), Tigard USB**

<b>Land Demand and Supply</b>	<b>Efficient Land Need Scenario</b>	<b>Medium Land Need Scenario</b>	<b>High Land Need Scenario</b>
Demand for Vacant Commercial Land	78	105	131
<i>Commercial Demand</i>	51	68	85
<i>Mixed-Use Demand</i>	27	36	45
Supply of Vacant Commercial Land	86	86	86
<i>Commercial Zoned Supply</i>	46	46	46
<i>Mixed-Use Zoned Supply</i>	40	40	40
Land Surplus or (Deficit)	8	(19)	(45)
<b>Preliminary Parcel Distribution, Efficient Need Forecast</b>	<b>Existing Supply (tax lots)</b>	<b>Forecast of Demand (tax lots)</b>	<b>Surplus (tax lots)</b>
Less Than 1 acre	89	30	59
1 to 5 acres	14	14	0
5 to 10 acres	3	3	0
10 to 20 acres	0	0	0
20+ acres	0	0	0
<b>Total</b>	<b>106</b>	<b>47</b>	<b>59</b>

Source: FCS GROUP, based on findings included in demand and supply analysis.

**Recommendations**

In accordance with the proposed vision and goals, the consulting team and City staff recommends the City pursue the “efficient land need scenario”. The implications of this recommendation are that the City will focus a significant portion of future employment growth and high-density housing development in its Metro-designated Town Center (Downtown); Regional Center (Washington Square); High Capacity Transit Corridor (Hwy 99W); and the Tigard Triangle.

More detailed information on employment trends and projections, and land needs and supply is found throughout the remainder of the document.

## **INTRODUCTION**

The City of Tigard has conducted an Economic Opportunities Analysis (EOA) as required by its Periodic Review work program. The City received grant funds from the Department of Land Conservation and Development (DLCD) for technical consultant assistance to complete this task. The EOA was developed in compliance with OAR 660 Division 9 (Statewide Planning Goal 9: Economic Development) and is a technical study that compares projected demand for land for industrial and other employment uses to the existing supply of such land.

The purpose of the EOA is to improve opportunities for Tigard to attract and maintain the type and quality of employment desired by its citizens, grow its economy, and maintain its quality of life. Goal 9 emphasizes the preservation and protection of vacant land for industrial and employment uses. This will happen by adopting policies that ensure an adequate supply of industrial and other employment lands within the City of Tigard.

The Tigard Planning Commission acted as the advisory committee for the project, reviewing each task during the process to complete the EOA. The anticipated outcomes of the project are:

1. An understanding of the characteristics of Tigard's employment lands and their adequacy to accommodate future economic activity;
2. Updated economic development policies and action measures as a basis to plan for a supply of appropriately zoned land necessary for existing businesses to expand and to accommodate future economic activities.

The six tasks reviewed by the Planning Commission included:

1. Economic Development Vision and Goals
2. Economic Trends Analysis
3. Site Suitability Analysis (Land Demand)
4. Inventory of Suitable Sites (Land Supply)
5. Assessment of Potential (Reconciliation of Demand and Supply)
6. Implementation Policies and Action Measures

The process and findings of these tasks are outlined in detail throughout the remainder of the EOA. This includes examining key demographic and employment opportunities and trends to assess Tigard's economic development potential, projecting employment growth, and determining short- and long-term demand for employment land. This demand is compared to an inventory of suitable commercial and industrial properties (supply) to assess the sufficiency of immediate and longer term (20-year) supply of commercial and industrial employment land in the City's Urban Planning Area (UPA). Finally, economic development policies and action measures are recommended for inclusion in the Tigard Comprehensive Plan.

## **ECONOMIC DEVELOPMENT VISION AND GOALS**

In March 2008, as part of a robust public process, the City of Tigard updated the Economic Development chapter of its Comprehensive Plan. The chapter included the City's vision and goals for economic development:

## **Vision**

The City shall have a strong and resilient local economy with a diverse portfolio of economic activity: retail, professional service and industrial jobs.

## **Goals**

1. Develop and maintain a strong, diversified and sustainable local economy.
2. Make Tigard a center and incubator for innovative businesses including those that focus on environmental sustainability.
3. Make Tigard a prosperous and desirable place to live and do business.

## **Community Economic Development Objectives**

Community Economic Development Objectives were developed through interviews with City staff and a review of Tigard's economic development vision, goals and recommended action measures. These objectives were refined based on comments from the Planning Commission and the results of interviews with key stakeholders, including state and regional agencies, the Chamber of Commerce, Tigard Central Business District Association, and local employers and developers.

- Encourage businesses that provide family-wage jobs to start-up, expand, or locate in Tigard.
- Develop industry clusters, and preserve jobs, through the retention, expansion, and recruitment of industries that already have a presence in Tigard.
- Promote well-designed and efficient development and redevelopment of vacant and underutilized industrial and commercial lands.
- Ensure the City's land use and other regulatory practices are flexible and adaptive and that adequate public facilities and infrastructure exist to support a diverse and stable economic base.
- Focus significant employment growth in Tigard's designated centers and corridors and support the development of efficient regional multi-modal transportation systems.
- Limit the development of retail and service uses in Tigard's designated industrial areas to preserve the potential of these lands for industrial jobs. Support neighborhood commercial uses to meet smart growth goals.
- Encourage businesses that are environmentally and economically sustainable.

## **ECONOMIC TRENDS ANALYSIS**

The consultant team conducted an economic overview for the City of Tigard, including a review of national, state, regional, county, and local economic trend data and real estate market analysis of office, commercial retail, industrial, and public government space development for the Tigard Urban Service Boundary. The analysis focuses on the expected level of demand for new commercial, industrial, and public development and related gross buildable land needs over the next 20 years (2011-2031).

Both the U.S. and Oregon economies are currently mired in the aftermath of a national economic recession that began in December 2007. The current economic slowdown is now the longest on record since the Great Depression; however, some economic expansion is beginning to occur. According to the U.S. Bureau of Economic Analysis, real Gross Domestic Product (GDP is the measure of value of all goods and services in the U.S.) increased at an annual rate of 3.7 percent during the first quarter of 2010, and increased by 2.4 percent during the second quarter of 2010.

Consumers are still very cautious as unemployment rates remain high and high levels of home foreclosures continue. Oregon posted a year-over-year overall job loss of 16,000 jobs between June 2009 and June 2010. At the same time, the state’s unemployment rate decreased to 10.5 percent in June 2010, compared to 11.6 percent in June 2009. It should be noted that Oregon’s employment levels have declined over the past year in spite of the drop in unemployment rate. This trend likely reflects a decline in the number of people who are actively seeking employment.

The U.S. and Oregon economies are now poised for a slow economic recovery. The July 2010 survey of the National Association of Business Economists reported expectations of slow growth in GDP during the second half of 2010 in the U.S. as industry demand, profit margins, employment, capital spending and credit conditions improve.

Despite job losses, population levels continue to increase in both Oregon and Tigard due to population migration patterns, increases in immigrant population levels and natural population increases. As indicated in **Table 1**, according to the Portland State University Population Research Center, the population in Tigard increased to 47,460 residents in 2009, up from 42,260 residents in 2000. The average annual growth rate (AAGR) for population in Tigard was 1.3% between 2000 and 2009, which was below the level of population growth recorded for Washington County, but above the Oregon and national growth rates.

**Table 1. Population Trends, 2000 to 2009**

	2000	2009	Annual % Change 2000-2009
Tigard	42,260	47,460	1.3%
Washington County	449,250	527,140	1.8%
Oregon	3,421,399	3,823,465	1.2%
USA	282,171,957	307,006,550	0.9%

Source: Portland State University, Population Research Center.

Metro (the regional government) has prepared forecasts for households and employment for all local jurisdictions in the Metro Urban Growth Planning Area. The most recently adopted Metro growth forecasts are referred to as the Metroscope Generation 2.3 model, and include a forecast period from 2005 to 2030. FCS GROUP extrapolated the Metro forecasts to year 2035 using Metro’s forecasted growth rate from the 2005-2030. While Metro is currently in the process of preparing updated growth forecasts for the region, the Metroscope Generation 2.3 forecasts are being used for this EOA since they are the only set of officially adopted forecasts at this time. As indicated in **Table 2**, the 2005 to 2035 forecasts anticipate that Tigard will add approximately 3,185 households and 24,167 jobs over the 25-year period. The extrapolated 2035 Metro job forecasts shown in **Table 2** are provided for informational purpose only. In light of the recent national economic recession that caused severe declines in Oregon employment (from 2007 through 2010), Metro's 2030 job forecast for Tigard is assumed to be achieved by year 2035 under the "medium forecast" scenario used in the Tigard EOA.

As noted in **Table 2**, the Metro job growth forecasts reflect the fact that Tigard currently is relatively “jobs rich” with a positive ratio of 2.3 jobs per household, which is well above the tri-county Metro regional average of 1.5 jobs per household. This is no surprise given Tigard’s concentration of regional employment centers, including Washington Square Mall, the “Tigard Triangle” employment area near the confluence of I-5/Hwy. 217, and pockets of industrial uses along the Hwy. 217 corridor.

**Table 2. Metro Growth Forecasts for Households and Employment, 2005 to 2035**

	Households			Projected Change 2005-2035	Projected. Avg. Annual Change (%)
	2005	2030	2035		
Tigard	17,724	20,341	20,909	3,185	0.6%
Clackamas County	140,415	241,821	269,594	129,179	2.2%
Multnomah County	288,926	372,913	392,439	103,513	1.0%
Washington County	189,925	272,998	293,545	103,620	1.5%
<i>Total 3 County Region</i>	<i>619,266</i>	<i>887,732</i>	<i>955,578</i>	<i>336,312</i>	<i>1.5%</i>
	Employment*			Projected. Change 2005-2035	Avg. Annual Change (%)
	2005	2030	2035		
Tigard	41,308	60,637	65,475	24,167	1.5%
Clackamas County	145,581	251,286	280,273	134,692	2.2%
Multnomah County	493,671	705,721	758,005	264,334	1.4%
Washington County	269,660	450,970	499,820	230,160	2.1%
<i>Total 3 County Region</i>	<i>908,912</i>	<i>1,407,977</i>	<i>1,538,098</i>	<i>629,186</i>	<i>1.8%</i>
	Jobs Per Household Ratio			Projected. Tigard Capture of Region HHs	Projected Tigard Capture of Region Jobs
	2005	2030	2035		
Tigard	2.3	3.0	3.1	0.9%	3.8%
Clackamas County	1.0	1.0	1.0	N/A	N/A
Multnomah County	1.7	1.9	1.9	N/A	N/A
Washington County	1.4	1.7	1.7	N/A	N/A
<i>Total 3 County Region</i>	<i>1.5</i>	<i>1.6</i>	<i>1.6</i>	<i>N/A</i>	<i>N/A</i>

Source: Metro adopted housing and employment growth forecasts, 2007; Metroscope Gen. 2.3; extrapolated to 2035 by FCS GROUP.

\*The extrapolated 2035 Metro job forecasts shown in Table 2 are provided for informational purpose only. In light of the recent national economic recession that caused severe declines in Oregon employment (from 2007 through 2010), Metro's 2030 job forecast for Tigard is assumed to be achieved by year 2035 under the "medium forecast" scenario used in the Tigard EOA.

Washington Square Mall already functions as a regional commercial center that draws shoppers and patrons from over a 30-mile radius. With 1,458,734 square feet (sf) of retail and entertainment space, the mall has five anchor stores including JC Penny, Macy's, Nordstrom, Sears, and Dick's Sporting Goods and 170 specialty stores. The mall added 28 new stores and restaurants in 2005, along with a new multi-level parking structure.

In addition to large retail employers, Tigard is also home to several large high-tech manufacturing, construction contractors, professional, business operations and state and local government operations. **Table 3** provides a list of Tigard employers with more than 250 jobs per establishment.

**Table 3. Large Employers in Tigard with More Than 250 Employees, 2008**

<b>Firm Name</b>	<b>Specialty</b>	<b>Employment Range</b>
Nordstrom	Retail/Gen. Merchandise	500 – 999
Tigard-Tualatin School District	Local Government	500 – 999
AEROTEK, Inc.	Temp. Emp. Agency	250 – 499
City of Tigard	Local Government	250 – 499
COSTCO Corp.	Retail. Merchandise	250 – 499
Health Net Health Plan of Oregon	Health Insurance Carrier	250 – 499
JC Penny	Retail Merchandise	250 – 499
MACYS	Retail Merchandise	250 – 499
Performance Contracting, Inc.	Industrial Contractors	250 – 499
PERS Headquarters	Pension Fund Mgmt.	250 – 499
Remedy Intelligent Staffing, Inc.	Temp. Emp. Agency	250 – 499
Rockwell Collins Aerospace	Aero. & Tech. Part Mfg.	250 – 499
STARPLEX Corp.	Temp. Emp. Agency	250 – 499
Western Patricians, Inc.	Bldg. Interior Contractors	250 – 499

Source: Oregon Employment Department.

According to regional commercial and industrial real estate brokers, Tigard is a well-defined submarket within the suburban Metro region. Tigard’s office market is especially competitive within the inner southwest portion of the region, with businesses considering locations among several areas including Tigard; 217 Corridor/Beaverton; Kruse Way; Barbur Blvd/Capitol Hwy; Tualatin and Wilsonville.

Recent office leasing market statistics indicate that office vacancy rates in the Metro region have been increasing since 2008 as many businesses have shed jobs and scaled back on required space needs. As indicated in **Appendix A**, negative absorption levels have been occurring during the first six months of the year, particularly in Class A Office space, where Tigard experienced a net loss of 13,097 sf during the first half of this year. As of July 1, 2010 Tigard had total Class A vacancy rates of 151,900 sf and another 66,000 sf in vacant Class B and C space.

Tigard’s Class B inventory has experienced positive absorption this year, with 12,800 sf of net absorption. Since July 2010, Tigard has recorded several positive lease transactions, which rank among the largest in the region, such as Bridgewell Resources (32,088 gsf); Comsys into the Lincoln Center; State Farm Mutual Insurance (23,712 gsf) into Fanno Creek Place; and CAN Insurance (17,843 gsf) into the Pacific Parkway Center.

Industrial leasing activity and vacancy rates were also significantly impacted by the recent economic recession. As indicated in **Appendix B**, Tigard had approximately 170,000 sf of vacant flex space (13.4% vacancy rate), and 339,000 sf of vacant warehouse space (7.7% vacancy rate) as of July 1, 2010.

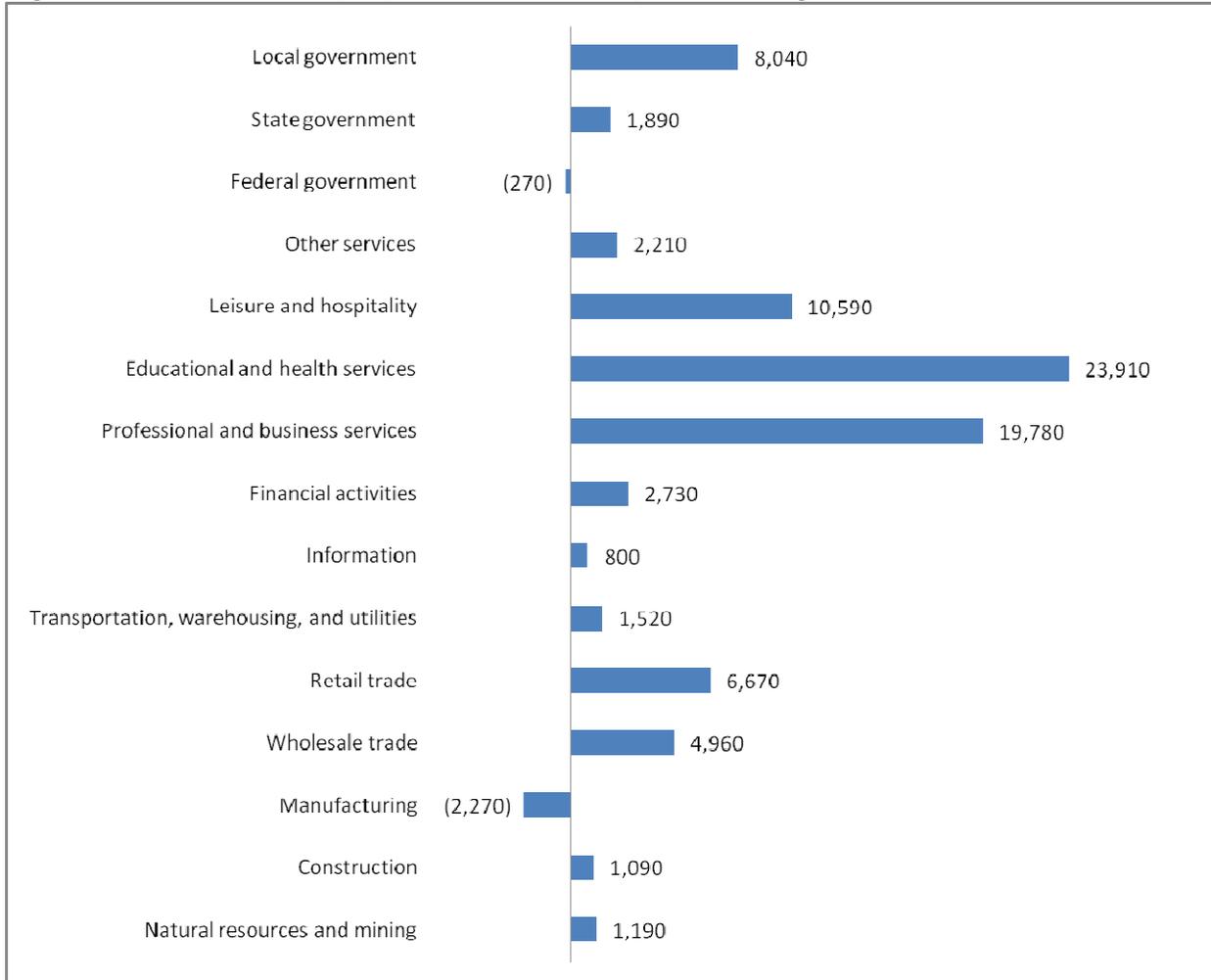
Overall industrial lease rates in the Tigard submarket averaged \$7.68 per sf/year, and were among the highest in the Metro suburbs.

The City of Tigard and the Oregon Department of Transportation (ODOT) are taking steps to enhance the Downtown Tigard area to make it a more viable place to live and work. At a cost of \$12 million, intersection improvements along Pacific Highway at Hall Blvd. and Greenburg Rd. are being paid for by ODOT, Washington County and the City of Tigard. This project is slated for completion by Spring 2011 and will include a third through-lane on the highway, turn lanes on side streets, an extended median, wider sidewalks, new bike lanes, improved pedestrian crossings, and wider corners for truck turning movements. This effort will also enhance access into and from Downtown Tigard.

Tigard's recently completed Downtown Plan is setting the regulatory stage and establishing a new vision for renovating downtown. The vision is intended to be a 50-year look at how the downtown could change into a "mixed-use urban village" with a wide range of housing and commercial opportunities that optimize natural features, such as Fanno Creek and Fanno Creek Park, transportation facilities, such as Pacific Hwy. and the Westside Express Commuter Rail system, and even light rail or bus rapid transit service to/from Portland.

To estimate future development potential for Tigard employment, FCS GROUP evaluated the 10-year employment growth forecasts prepared by the Oregon Employment Department for the Metro Tri-County region, and Metro growth forecasts for Tigard. As shown in **Figure 1**, the 10-year job growth forecasts for the Metro Tri-County Region portend a positive trend towards job growth for all industry sectors, except federal government and the manufacturing sector. The sectors that are expected to grow the fastest in the Tri-County Metro Region include: educational and health services; professional and business services; leisure and hospitality; local government; retail; and wholesale trade.

**Figure 1 Non-Farm Employment, Tri-County Metro Region, 2008-2018 Forecast**



Source: Oregon Employment Department includes Multnomah, Washington and Clackamas Counties.

To estimate future development potential for Tigard, FCS GROUP evaluated the 10-year employment growth forecasts prepared by the Oregon Employment Department as well as the extrapolated employment growth forecasts from Metro. In light of the recent national economic recession that caused severe declines in Oregon employment (from 2007 through 2010), Metro's 2030 job forecast for Tigard is assumed to be achieved by year 2035 under the "medium forecast" scenario.

As indicated in **Appendix C**, the 20-year job growth forecasts for Tigard indicate a more positive trend towards job growth for all industry sectors. According to Metro (and FCS GROUP interpretation of Metro data), the general sectors that are expected to grow the fastest in Tigard over the next 20 years include: services (+10,092 jobs); retail (+3,810 jobs), industrial/other (+1,324 jobs), and government (+882 jobs).

The job growth projections indicate that Tigard should expect to experience significant redevelopment opportunities over the next 20-years. A range in employment forecasts is provided to take into account current weak market conditions and national economic expectations that expect lower-rates of job growth over the next several years. As indicated in **Table 4**, there is a great level of uncertainty

regarding potential job growth for Tigard in light of weak regional and national employment growth predictions.

**Table 4. Forecasted 20-Year Employment Growth and Building Space Needs in Tigard**

<b>Employment Growth Forecast</b>	<b>Slow</b>	<b>Moderate</b>	<b>High</b>
Retail Trades	2,286	3,048	3,810
Services	6,055	8,073	10,092
Industrial/Other*	794	1,059	1,324
Government*	529	706	882
<b>Total</b>	<b>9,665</b>	<b>12,886</b>	<b>16,108</b>

Notes: See supporting analysis in Appendix C.

\*Metro employment growth forecasts for "Other" were allocated to 60% industrial/other and 40% government by FCS GROUP based on local observations and assumptions.

Tigard is expected to add between 9,665 and 16,108 new jobs over the next 20 years. As indicated in **Table 5**, this amount of employment growth translates into approximately 4.2 to 7.1 million of new or renovated building square footage (floor area).

**Table 5. Forecasted 20-Year Total Building Space Needs in Tigard for Employment**

<b>Employment Type</b>	<b>Slow</b>	<b>Moderate</b>	<b>High</b>
Office	1,499,000	1,998,000	2,497,000
Institutional	170,000	227,000	285,000
Flex/Business Park	451,000	602,000	752,000
General Industrial	257,000	342,000	428,000
Warehouse	374,000	499,000	624,000
Retail	1,498,000	1,997,000	2,497,000
<b>Total</b>	<b>4,249,000</b>	<b>5,665,000</b>	<b>7,083,000</b>

Notes: See supporting analysis in Appendix C.

Source: FCS GROUP.

A large portion of this demand will need to be met by redevelopment and utilization of vacant buildings since large vacant undeveloped tracts of land are becoming increasingly scarce. It is estimated that redevelopment and utilization of vacant buildings is expected to accommodate 70% of the retail space demand, 50% of the service/office demand, 40% of the industrial demand, and 40% of the government facilities demand.

**Table 6** shows the expected level of redevelopment and refill in the Tigard USB over the next 20 years. As the existing vacant land supply in Tigard gets developed, the level of redevelopment activity is expected to rise. Prime redevelopment locations in Tigard include Downtown and the Tigard Triangle, and future planned high capacity transit stations along Pacific Hwy. The City's Downtown Plan envisions 2,500 dwelling units and over one million square feet of commercial office and retail space being added over the next few decades.

**Table 6. Redevelopment and Refill Assumptions (2011 to 2031) Tigard USB**

<b>Employment Type</b>	<b>Slow</b>	<b>Moderate</b>	<b>High</b>
Office	1,004,000	1,339,000	1,673,000
Institutional	114,000	152,000	191,000
Flex/Business Park	203,000	271,000	338,000
General Industrial	116,000	154,000	193,000
Warehouse	168,000	225,000	281,000
Retail	899,000	1,198,000	1,498,000
<b>Total</b>	<b>2,504,000</b>	<b>3,339,000</b>	<b>4,174,000</b>

Source: FCS GROUP; derived from Appendix C, based primarily on Metro 2009-2035 Urban Growth Report (December 2009 draft) and local assumptions.

After accounting for the levels of redevelopment activity identified in **Table 6**, the amount of vacant land demand in Tigard for employment uses over the next 20-years is expected to range from 126 to 210 acres. Preliminary estimates for vacant lands needs in Tigard by general building type are provided in **Table 7**, and supporting assumptions are reflected in **Appendix D** and **Appendix E**.

**Table 7. Vacant Land Needs by General Land Use Zoning Classification (2011 to 2031)****Tigard USB (gross buildable acres)**

<b>Land Use Zoning Classification</b>	<b>Slow</b>	<b>Moderate</b>	<b>High</b>
Commercial	51	68	85
Mixed Use	27	36	45
Industrial	48	64	80
<b>Total</b>	<b>126</b>	<b>168</b>	<b>210</b>

Source: FCS GROUP; derived from Appendix C, based primarily on Metro 2009-2035 Urban Growth Report (December 2009 draft) and local assumptions.

To help validate these assumptions, FCS GROUP conducted an additional analysis of retail sales inflow/outflow within Tigard. The retail analysis provided in **Appendix D** indicates that the amount of local retail trade in Tigard over the next 20 years could support an additional 1.4 million square feet of redevelopment or new development activity, even if current levels of retail sales inflow were cut by 50%. Hence, it appears that the “slow” or “land efficient” vacant land demand scenario is the best match with respect to the retail market potential for the Tigard USB.

The actual amount and timing of new development will vary from year to year. The wide range in development forecasts reflects current uncertainty regarding the region’s ability to retain and attract major employers, the City’s desire to stimulate redevelopment in downtown, and limited ability to accommodate new commercial and industrial development on vacant lands.

## Business Clusters Analysis

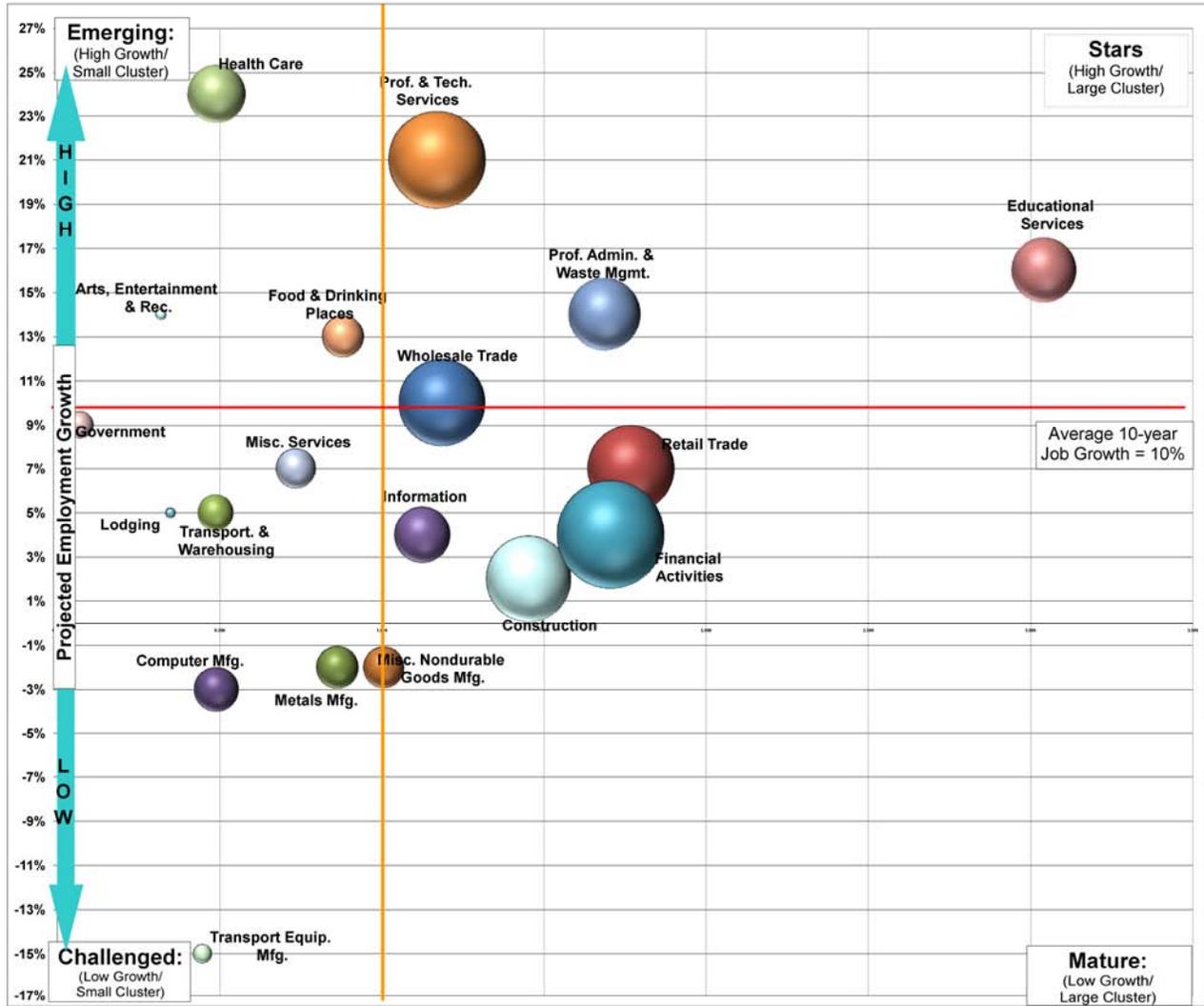
It is a widely accepted theory among economic development professionals that “business clusters” are the primary force driving local economic currents and business location decisions. Clusters of business activity go well beyond mere concentrations of industry or employment types. They represent unique competitive market advantages with regard to employment, work force, creativity, entrepreneurship, business costs, and supporting natural resources.

The clusters analysis prepared by FCS Group is intended to identify potential employment sectors that are most compatible with local economic policy objectives. The process entailed:

1. Obtaining Employment Security (ES202) wage and salary employment data from the Oregon Employment Department (OED) for the Tigard Urban Service Boundary (USB), Washington County, Multnomah County and Clackamas County (tri-county region) for the year 2008.
2. Conducting a location-quotient (LQ) analysis to evaluate business and industrial clusters in the Tigard UGB relative to the tri-county region.
3. Evaluating business clusters within the Tigard UGB with regard to the LQ, projected growth rates, economic size of each cluster, and average wage rates.
4. Classifying each business cluster with regard to one of four classifications, including:
  - I. STARS: Businesses with large LQ (propensity to locate in the Tigard USB) and higher than average projected growth rate compared to the tri-county region.
  - II. EMERGING: Businesses with small LQ and high average growth rate (possible pent up demand or competitive market disadvantage relative to other locations).
  - III. MATURE: Businesses with large LQ but lower than average growth rate.
  - IV. CHALLENGED: Businesses with small LQ and lower than average growth rate.

The business cluster analysis summarized in **Figure 2** identifies the business sectors within the Tigard USB by their LQ, size and growth potential. Each sector has been analyzed by their North American Industrial Classification System (NAICS) code. This code is used by the federal government to classify types of businesses for tax accounting and economic research purposes. The data was derived from the OED ES202 wage and salary employment statistics for the year ending in 2008.

**Figure 2**  
**Existing Business Clusters in Tigard USB, 2008**



Note: X-axis denotes the Location Quotient (LQ) average set at 1. All sectors to right of the yellow line have an LQ greater than 1; all sectors to the left of the yellow line have an LQ less than 1.  
 Source: Oregon Employment Department; data compiled by FCS GROUP.

The clusters analysis classifies the existing business sectors in the Tigard USB into four general categories:

**Industry Sectors with Large LQ/High Growth Potential (“Stars”)**

- Educational Services (private or non-profit)
- Professional and Technical Services
- Professional Administration and Waste Management Services
- Wholesale Trade

### **Industry Sectors with Small LQ/High Growth Potential (“Emerging”)**

- Health Care and Social Services
- Food Service and Drinking Places
- Arts, Entertainment and Recreation

### **Industry Sectors with Large LQ/Low Growth Potential (“Mature”)**

- Retail Trade
- Information Services
- Financial Activities and Services
- Construction
- Nondurable Goods Manufacturing

### **Industry Sectors with Small LQ/Low Growth Potential (“Challenged”)**

- Transportation, and Warehousing
- Miscellaneous Services
- Metals Manufacturing
- Computer Parts and Equipment Manufacturing
- Lodging
- Transportation Equipment Manufacturing
- Government

In addition to evaluating existing *local* business clusters, the City may also consider the expected *regional* growth in business sectors and emerging clusters. According to the Oregon Employment Department, the job sectors with the highest potential for new growth in the greater Portland metropolitan region include:

- Business administration and waste management
- Finance and insurance
- Health care
- Hotel/motel accommodations and food services
- Professional
- Retail trade
- Scientific and technical service (computer science, engineering)
- State and local government
- Transportation and utilities (warehousing, distribution and energy research, private utilities)
- Wholesale trade<sup>1</sup>

While manufacturing of durable goods does not make the list of the top growth sectors, there are certain subsectors within manufacturing that are growing faster than others. The manufacturing sectors with the greatest net new job growth potential in the greater Portland metropolitan region include: computer-related parts manufacturing, transportation equipment, other miscellaneous durable goods (such as solar panels), and miscellaneous non-durable goods (such as apparel research and design).

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<sup>1</sup> These emerging business clusters are documented in the Regional Wired Workforce Innovation and Regional Economic Development, Global Development Strategy, prepared by FCS GROUP et al, 2008.

The greater Portland metropolitan region is now considered an epicenter within the United States for sustainable technology. According to Global Insight, the greater Portland metropolitan region employs 6,700 people in “green jobs” which is more than Denver, Austin, Seattle and San Jose. The number of workers in green jobs (such as solar panel manufacturing, wind energy, bio energy research and manufacturing) is expected to increase to 53,000 over the next two decades. Portland General Electric and Pacific Power are ranked in the top three among the nation’s top utility companies for Green Energy sales, and the greater Portland region has more LEED-certified buildings than any other U.S. metropolitan area.

With the Portland metropolitan region, recent federal and state tax policies have helped spur major investments in green technology and energy by firms such as: SolarWorld, SunEdison, Vestas and Portland General Electric—creating a major new industrial cluster in clean technology. Additional investments in advanced manufacturing are being made by Intel, Flir Systems (producer of night vision and thermal imaging systems), Precision Castparts (maker of parts used in Vestas wind turbines, Boeing aircraft and other products), Genentech, and other firms. These are examples of manufacturing companies that are finding success within the greater Portland metropolitan region, even in challenging economic times.

Focused marketing and business recruitment efforts are being made by the State of Oregon and regional economic development stakeholders to attract certain established and emerging business clusters. The business and industry clusters that are currently being targeted by the Oregon Business Development Department, Portland Business Alliance and the Portland Development Commission include advanced manufacturing, clean technology (with sustainability sub-clusters in green building, solar & wind power), active wear/outdoor gear, and software.

## Targeted Business Clusters

According to its Community Economic Development Objectives, the City of Tigard may target businesses that generally offer above average wages and provide health care and retirement benefits that support families. According to the U.S. Bureau of Labor Statistics, the occupations that had the fastest growth and highest pay over the past 10 years nationally included: computer systems analysts, registered nurses, computer support specialists, teachers, social workers, college faculty, computer programmers, engineering sciences, police officers, securities and financial services, physicians, advertising, marketing, management analysts, electrical engineers, paralegals, writers/editors, commercial artists, medical and health service managers. It is interesting to note that almost two-thirds of the jobs filled in these fast growing occupations required some level of on-the-job training in addition to high school and a college degree.<sup>2</sup>

In light of these findings, the consultant team and City staff recommend that Tigard focus on retaining and attracting a mix of existing and emerging business clusters that pay above average wages. This includes existing, established clusters, such as durable goods manufacturing (includes metals and machinery), education (private and non-profits), financial services, information (including software development), professional and technical services, and wholesale trade. They also recommend that the City focus on emerging clusters, including health care and advanced technology (i.e., green energy) manufacturing and research operations. As indicated in **Table 8**, these recommended business clusters (with the exception of educational services) pay above average wage rates.

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<sup>2</sup> Based on findings contained in publications provided by JIST Works, including the Occupational Outlook Handbook, 2008-2009; and America's Fastest Growing Jobs by Michael Farr.

**Table 8. Summary of Existing Businesses in Tigard USB, 2008**

	Number of Entities	Average Employment	Average Annual Pay
Total Private	2,914	41,032	\$43,542
Natural resources and mining	6	21	\$38,742
Construction	272	3,329	\$56,080
Manufacturing	117	2,743	\$54,300
Durable goods	53	1,814	\$58,229
Metals and machinery manufacturing	36	897	\$51,425
Computer and electronic product mfg.	15	774	\$65,308
Transportation equipment manufacturing	2	143	\$62,594
Nondurable goods	64	929	\$46,628
Trade, transportation, and utilities	704	11,375	\$36,742
Wholesale trade	333	2,987	\$64,284
Retail trade	329	7,621	\$25,407
Transportation, warehousing, and utilities	42	767	\$42,114
Information	69	1,206	\$66,469
Financial services	405	5,037	\$58,459
Professional and business services	638	8,146	\$45,971
Professional and technical services	449	3,858	\$62,851
Administrative and waste services	189	4,288	\$30,784
Educational and health services	269	5,037	\$38,133
Educational services	55	2,912	\$36,384
Health care and social assistance	214	2,125	\$40,531
Leisure and hospitality	204	3,018	\$16,579
Arts, entertainment, and recreation	23	184	\$16,241
Accommodations and food services	181	2,834	\$16,601
Accommodations	10	131	\$20,072
Food services and drinking places	171	2,703	\$16,433
Other services	230	1,120	\$36,618
Government	5	390	\$49,275
Total	2,919	41,422	\$43,596

Notes: Shading indicates targeted business cluster.

Source: Oregon Employment Department, 2008. Average payroll reflects Washington and Multnomah counties.

## SITE SUITABILITY ANALYSIS (LAND DEMAND)

The majority of the targeted businesses that consider expanding or relocating into Tigard will consist of small business operations (less than 50 employees) that can locate within existing professional office or

industrial buildings, or within new office or flex/industrial buildings that are developed on vacant sites of less than five acres in size.

It is also likely that there will be larger potential business and high-tech industrial operations that consider Tigard as a potential location for new campus-style developments. Certain opportunities may emerge as regional businesses expand and desire to remain within the tri-county region. Other opportunities may occur as global and national businesses desire to establish a presence in the Pacific Northwest. In any event, it is likely that Tigard could attract three to four large professional service, health care, education, and/or high tech industrial businesses over the next 20 years.

As indicated in **Table 9**, Tigard is already home to 41 large private business operations (with between 70-250 employees). Tigard could continue to retain and attract large businesses if adequate sites are available. These types of large private operations usually require surplus adjacent land areas to accommodate future business expansion.

**Table 9. Existing Private Businesses by Size Class, Tigard USB, 2008**

Sector	Total Establishments		Large Establishments		Small/Medium Establishments	
	Number	Jobs	Number	Jobs	Number	Jobs
Natural resources and mining	6	21	--	--	6	21
Construction	272	3,329	4	571	268	2,758
Manufacturing	117	2,743	10	1,300	107	1,443
Durable goods	53	1,814	10	1,300	43	514
Nondurable goods	64	929	--	--	64	929
Trade, transport., utilities & communications	704	11,375	20	3,997	684	7,378
Wholesale trade	333	2,987	1	125	332	2,862
Retail trade	329	7,621	16	3,517	313	4,104
Transport., warehousing and communications	42	767	3	355	39	412
Information	69	1,206	2	376	67	830
Financial, professional & tech. services	1,043	13,183	4	1,426	1,039	11,757
Educational and health services	269	5,037	--	--	269	5,037
Educational services	55	2,912	--	--	55	2,912
Health care and social assistance	214	2,125	--	--	214	2,125
Leisure and hospitality	204	3,018	--	--	204	3,018
Arts, entertainment, and recreation	23	184	--	--	23	184
Accommodations and food services	181	2,834	--	--	181	2,834
Other services	230	1,120	1	99	229	1,021
<b>Total</b>	<b>2,914</b>	<b>41,032</b>	<b>41</b>	<b>7,769</b>	<b>2,873</b>	<b>33,263</b>

Notes: green shading indicates targeted business cluster.

Source: Oregon Employment Department, 2008. Note: large establishments are those with at least 70 employees.

The consultant/staff team recommends that Tigard provide a variety of small, medium and large vacant sites that meet the targeted business and industrial requirements. As indicated in **Table 10**, the existing businesses within Tigard can generally be grouped into three general land use categories: industrial, commercial and office.

**Table 10. Existing Private Businesses by Size Class and General Land Use or Building Type, Tigard USB, 2008**

Primary Land Use/Building Type	Total Entities		Large Entities <sup>4</sup>		Small/Medium Entities	
	Firms	Jobs	Firms	Jobs	Firms	Jobs
Industrial <sup>1</sup>	770	9,847	18	2,351	752	7,496
Commercial <sup>2</sup>	763	11,759	17	3,616	746	8,143
Office <sup>3</sup>	1,381	19,426	6	1,802	1,375	17,624
<b>Total</b>	<b>2,914</b>	<b>41,032</b>	<b>41</b>	<b>7,769</b>	<b>2,873</b>	<b>33,263</b>

Notes: <sup>1</sup> Reflects natural resources, construction, manufacturing, wholesale trade, transportation, warehousing, utilities, and communications sectors.

<sup>2</sup> Reflects retail trades, lodging, accommodations, and misc. service sectors.

<sup>3</sup> Reflects information, financial, professional and technical service, health care and educational service sectors.

<sup>4</sup> Large establishments reflect establishments with at least 70 employees.

Source: Oregon Employment Department, 2008. Compiled by FCS GROUP.

Most small and medium business establishments prefer to lease space in office or commercial buildings, and/or could locate into redevelopment sites in downtown or in selected redevelopment locations (e.g., near planned high capacity transit stations or within the Tigard Triangle). No special vacant land requirements are identified for future small or medium businesses. However, the City should pursue more proactive redevelopment strategies to accommodate small and medium sized businesses.

Larger business establishments that are included within the targeted business clusters will likely have minimum site size and infrastructure service requirements. Typical site requirements for the larger targeted business sectors are described in **Table 11** and described in more detail in **Appendix F**. Based on the site requirements described in **Table 11** and **Appendix F**, the recommended targeted business clusters will need sites ranging from one to twenty-five acres, with a majority of the need falling in the five to ten-acre range.

**Table 11. Typical Site Size Requirements for Targeted Business Types**

	<b>Small Users</b>	<b>Medium Users</b>	<b>Large Users</b>
	<b>Less than 50 jobs per business</b>	<b>50 to 70 jobs per business</b>	<b>70 to 200+ jobs per business</b>
Industrial <ul style="list-style-type: none"> <li>Advanced Technology Manufacturing</li> <li>Metals/Machinery Manufacturing</li> <li>Wholesale Trade</li> </ul>	Building tenants or infill redevelopment sites in established industrial locations	4 to 6 acres per user  Prefers industrial or business park settings	6 to 20 acres per user  Prefers industrial or business park campus settings
Office <ul style="list-style-type: none"> <li>Education</li> <li>Professional and Technology Services</li> <li>Information</li> <li>Financial Services</li> <li>Health Care*</li> </ul>	Building tenants or infill redevelopment sites in town center, regional center, or transit station areas	1 to 2 acres per user  Prefers town center, corridors or transit station areas	2 to 4 acres per user*  Prefers business park campus setting with transit service
Retail	Not in Targeted Clusters		

Notes: Assumes site development requirements shown in Appendix F.

\*Larger medical facility campus could require 15 to 30 acres.

## INVENTORY OF SUITABLE SITES (LAND SUPPLY)

Consistent with the employment land demand forecast, the buildable land inventory (BLI) for the Tigard EOA documents industrial and commercial inventory that currently exists within the Tigard Urban Planning Area (UPA). This analysis documents existing land use inventories and compares industrial and commercial land use needs required for addressing the slow, moderate and high growth forecast scenarios.

### Employment Land Inventory

The Tigard EOA includes a recent buildable land inventory completed by the City of Tigard Planning staff using Geographic Information Systems (GIS) data that is consistent with the current Draft 2009-2035 Urban Growth Report (accepted by Metro Council in December 2009).

The City's BLI included an analysis of existing vacant and partially vacant (sub-dividable) tax lots by current zoning classification and deducted all significant environmental constraints to estimate buildable land area within the Tigard USB. The land supply analysis focused on the land use classifications that support employment uses, including commercial, mixed-use, and industrial zones. The City has 10 commercial zones to account for a wide variety of uses ranging from retail to medical centers to mixed use centers. Tigard has three zones which accommodate industrial uses. Please refer to **Appendix E** for a detailed description of the allowed, conditional, and permitted uses within each of the City's zone classifications.

The buildable land area for each tax lot was derived by analyzing GIS data pertaining to environmental features that would constrain the amount of potential site development on vacant and partially vacant areas. For purposes of this analysis, the environmental constraints were calculated for each site using

estimates for land area that is constrained by the following: Metro Title 3 designation (waterways, wetlands, riparian buffers, 100 year floodplain).

The vacant and partially vacant land inventory for the Tigard UPA includes 125 tax lots with a total buildable land area of 136.1 acres, as indicated in **Table 12**. Tigard’s vacant land supply primarily consists of small (less than one acre) tax lots and tax lots between one and five acres in size. As indicated in **Table 12**, the tax lots of less than five acres in size comprise 79.3 acres or nearly sixty percent of the total vacant land supply. The larger tax lots include three lots of five to ten acres (22.1 acres total), and two contiguous tax lots more than ten acres in size (34.7 acres total). Please refer to **Appendix G** for additional detail.

**Table 12. Distribution of Vacant and Part Vacant Lands by General Land Use Zone Classification, Tigard USB**

	Vacant and Partially Vacant Property									
	< 1 acre		1 to 5 acres		5 to 10 acres		> 10 acres		Total	
	Lots	Acres	Lots	Acres	Lots	Acres	Lots	Acres	Lots	Acres
Commercial	26	9.5	8	20.2	2	16.4	0	0	36	46.1
Mixed Use	63	25.3	6	8.9	1	5.7	0	0.0	70	39.9
Industrial	12	4.2	5	11.2	0	0.0	2	34.7	19	50.1
Total	101	39.0	19	40.3	3	22.1	2	34.7	125	136.1

Source: City of Tigard.

As mentioned in the Site Suitability Analysis, the recommended targeted business clusters will need sites ranging from one to twenty-five acres to expand or locate within the Tigard UPA, with a majority of the need falling in the five to ten-acre range. The City appears to have a range of sites available to accommodate the targeted business clusters. However redevelopment sites may be needed to accommodate development needing five to ten-acre parcels.

In light of the importance of redevelopment to the City’s ability to grow and diversify its economic base, the City and consultant team also evaluated the relative level of high, medium and low redevelopment potential for each developed tax lot in the Tigard UPA. While this is not a stated requirement within OAR 660, Division 9, it is considered an important factor in deciding which land use growth scenario to target.

The analysis of redevelopment opportunities is based on the ratio of assessed improvement value to land value for each tax lot using 2010 Washington County Assessor data. The results provided in **Table 13** indicate that there are significant amounts of high and moderate redevelopment potential within the Tigard USB. The redevelopment analysis identifies 169 tax lots with a total of 115.6 acres as having “high” redevelopment potential, and 180 tax lots with 166.6 acres as having “moderate” redevelopment potential.

**Table 13. Analysis of Redevelopment Tax Lots by General Land Use Zone Classification, Tigard USB**

City of Tigard Redevelopable Potential (Improvement to Land Value)*						
	High (< 0.33)		Moderate (0.33 to 1.00)		Low (> 1.00)	
	Lots	Acres	Lots	Acres	Lots	Acres
Commercial	19	7.2	31	17.8	199	299.8
Mixed Use	132	81.4	124	89.9	232	344.3
Industrial	18	27.0	25	58.8	146	437.9
Total	169	115.6	180	166.6	577	1,082.0

Notes: <sup>1</sup> Improvement to Land Value calculated from Washington County Tax Assessor data (Sept 2010).

<sup>2</sup> 196 Properties contained a zero Improvement or Land Value and are not represented here.

Source: City of Tigard.

### Short-Term Land Supply Determination

In addition to the long-term land supply, OAR 660-009-0005 also requires the identification of a short-term supply of land meaning “suitable land that is ready for construction within one year of an application of a building permit or request for a service extension.” OAR 660-009-0025 also requires that cities must provide “at least 25 percent of the total land supply within the urban growth boundary designated for industrial and other employment uses as short-term supply.”

In Tigard’s case, all of the land supply currently included within the Tigard UPA is deemed by the City to be within the short-term supply category. Hence, there are existing roads, water, sewer, and other infrastructure facilities that are sized appropriately to handle some level of new development on the remaining vacant tax lots.

One issue the City has been dealing with is that of highway capacity. This will continue to be an issue until a regional solution is found. This constraint was the cause of a maximum floor-to-area ratio of 0.4 being applied to the Tigard Triangle when a portion of it was rezoned to mixed-use employment. This severely limits the ability to maximize the development potential of available sites. It also causes proposed developments to provide mitigating measures when it is determined the increased vehicle trips will not meet ODOT performance measures. This can be financially constraining to a project if additional lanes, medians, or intersection improvements are required to be paid for by the development.

Additionally, the Transportation Planning Rule (OAR 660-12-0600) and related ODOT performance standards for the state highways have presented a barrier to Tigard achieving its aspirations. This includes amending existing zoning to allow higher density developments that are consistent with the Region 2040 land use designations. The TPR requires an amendment to an adopted plan not cause an affected roadway to fail to meet performance standards, or if the forecast roadway operations are already failing to meet performance standards, the plan amendment must not further degrade performance. This is a known issue in Downtown, Washington Square Regional Center, along Pacific Highway, and in the Tigard Triangle, and may also arise in other areas near state highways or freeway interchanges.

These issues are being addressed at the state and regional levels and could be somewhat mitigated as the City, Metro, and ODOT work to develop alternative performance standards through a corridor

refinement plan for Pacific Highway. The Pacific Highway corridor is also being studied for potential high-capacity transit service in the future. The presence of high-capacity transit could also alleviate some of the issues associated with ODOT performance measures by allowing new development to allocate additional trips to transit and reduce automobile trip demand. Strategies to promote transit-oriented development and address ODOT capacity issues are recommended as part of the implementation plan policies for the Tigard EOA.

## **ASSESSMENT OF POTENTIAL (RECONCILIATION OF DEMAND AND SUPPLY)**

### **Short-Term Land Need Determination**

Commercial and industrial properties appear to clearly meet the statutory requirements for short-term land supply, as all of the long-term land supply can be classified as short-term as well as long-term supply. Industrial and commercial properties appear to be well served with adequate infrastructure, and there is an abundant supply of vacant industrial, office and retail building floor area being actively marketed in the Tigard USB today.

### **Long-Term Land Need Determination**

Consistent with EOA documentation requirements, the economic trends analysis of land needs scenarios and the business clusters analysis indicates that the Tigard UPA can add approximately 794 net new industrial jobs without needing to add additional industrial-zoned land over the next 20 years. In light of current downward trends in industrial business activity, the land efficient need scenario appears to be most consistent with regional growth forecasts and anticipated market realities.

### **Industrial Land Need and Parcel Requirements**

As indicated in **Table 13**, the land efficient need scenario assumes 48 acres of net new industrial vacant land demand, which is just below the estimated vacant industrial land supply of 50 acres. If the City opts to pursue a more aggressive economic growth strategy that is consistent with the moderate or high land need scenario, the City would need to identify another 14 to 30 acres of vacant industrial land area to meet the level of industrial demand associated with adding another 1,059 to 1,324 industrial jobs.

In light of the City's rather limited remaining vacant industrial land supply of tax lots in excess of five acres, the consultant/staff team recommends that the City adopt economic goals and objectives that preserve the remaining large contiguous industrial sites for large industrial employment users. A preliminary expected forecast of demand by parcel size is also provided in **Table 14**, and assumes that virtually all of the remaining vacant industrial land supply within the Tigard UPA will be absorbed over the next 20 years.

**Table 14. 20-Year Industrial Demand Forecast and Vacant Land Supply, Tigard USB**

Land Demand and Supply	Efficient Land Need Scenario	Moderate Land Need Scenario	High Land Need Scenario
Demand for Vacant Industrial Land	48	64	80
Supply of Vacant Industrial Land	50	50	50
Land Surplus or (Deficit)	2	(14)	(30)
Preliminary Parcel Distribution, Efficient Land Need Forecast <sup>1</sup>	Existing Unconstrained Supply (tax lots)	Forecast of Parcel Size Demand (tax lots) <sup>1/</sup>	Surplus (tax lots)
Less than 1 acre	12	10	2
1 to 5 acres	5	5	0
5 to 10 acres	0	0	0
10 to 20 acres	2	2	0
20+ acres	0	0	0
Total	19	17	2

Notes: <sup>1</sup> Tax lot demand forecast expected to meet or exceed supply in 20 years.

Source: Based on findings included in demand and supply analysis.

### Commercial Land Need and Parcel Requirements

As indicated in **Table 15**, the land efficient needs scenario assumes 78 acres of net new commercial and mixed-use vacant land demand, which is just below the estimated vacant land supply of 86 acres. As with the industrial land needs, an economic growth strategy that is consistent with the moderate or high land needs scenario would require the City to identify an additional 19 to 45 acres of vacant commercial and mixed-use land to meet the demand. .

In light of the City’s rather limited remaining vacant commercial and mixed-use land supply of lots in excess of five acres, the consultant/staff team recommends that the City adopt economic goals and objectives that preserve the remaining large contiguous commercial sites for strategic commercial retail and office employment users, and allow housing in these areas, only as part of a mixed-use development. A preliminary expected forecast of demand by parcel size is also provided in **Table 15**, and assumes that virtually all of the remaining vacant commercial land supply over one acre in size within the Tigard UPA will be absorbed over the next 20 years.

The City also anticipates the development of high-capacity transit along the Pacific Highway corridor. The region has made a commitment to high-capacity transit and this corridor is the next to be studied. Any development of high-capacity transit would trigger the City to identify station areas to accept higher, transit supportive mixed-use densities. The logical locations for station areas would more than likely result in the rezoning of general commercial lands to mixed-use zoning. As both commercial and mixed-use zoned lands are included in this analysis, any rezoning would not decrease the amount of vacant or partially vacant land available. The range of allowed uses, from retail to multi-story office buildings, would not be affected.

**Table 15. Reconciliation of Long-term Land Demand and Supply Commercial and Mixed Use 20-Year Land Use Forecast (gross buildable acres), Tigard USB**

Land Demand and Supply	Low Land Need Scenario	Medium Land Need Scenario	High Land Need Scenario
Demand for Vacant Commercial Land	78	105	131
<i>Commercial Demand</i>	51	68	85
<i>Mixed-Use Demand</i>	27	36	45
Supply of Vacant Commercial Land	86	86	86
<i>Commercial Zoned Supply</i>	46	46	46
<i>Mixed-Use Zoned Supply</i>	40	40	40
Land Surplus or (Deficit)	8	(19)	(45)
Preliminary Parcel Distribution, Efficient Need Forecast	Existing Supply (tax lots)	Forecast of Demand (tax lots)	Surplus (tax lots)
Less Than 1 acre	89	30	59
1 to 5 acres	14	14	0
5 to 10 acres	3	3	0
10 to 20 acres	0	0	0
20+ acres	0	0	0
Total	106	47	59

Source: FCS GROUP, based on findings included in demand and supply analysis.

### Planning, Market, Cost and Risk Factors

Consistent with EOA documentation requirements, the economic trends analysis, stakeholder interviews and business clusters analyses indicate that the Tigard USB is uniquely positioned within the greater Portland metropolitan region to experience continued success in retaining and attracting businesses and economic development.

#### Risk of Losing Large Commercial and Industrial Sites

As Tigard’s vacant land supply of large parcels (more than five acres) becomes diminished, the City could risk losing economic growth potential if remaining larger industrial and commercial sites allow non-employment uses that displace prospective business opportunities. While the current short-term employment market is sluggish at best, the future long-term job growth trends bode well for Tigard if it preserves large commercial and industrial zoned parcels for intended business activity. These risks can be mitigated in part by adopting new economic development objectives that preserve large commercial and industrial areas for desired commercial and industrial business activities.

#### Risk of Not Adequately Preparing for Targeted Area Redevelopment

As Tigard’s population and employment levels increase with time, and vacant land diminishes, the City will need to rely more upon redevelopment areas, and productivity increases from existing developed lands and businesses to achieve long-term economic strength and diversity. New economic

development objectives should be formulated to enable the City to leverage desired redevelopment in targeted locations such as downtown, and within planned transit-station communities.

### **Risk of Expanding the USB in the Future**

Beyond the 20-year forecast time horizon the City should consider the need to grow into urban reserve locations, if the City's investment in infrastructure extensions yields a favorable return to its residents and businesses. An Urban Planning Area expansion is not necessary at this time to accommodate industrial and other employment land needs for the next 20 years, unless the City opts to pursue the moderate or high land needs scenario to accommodate additional commercial and industrial job growth.

### **Planning and Permitting Risks**

The City should review its land use development code to ensure that it preserves sites for their intended use, yet is flexible enough to accommodate a full diversity of commercial and light industrial uses consistent with public safety, public facilities, and positive urban design characteristics. The ability to provide a streamlined and predictable permitting process can be a challenge as the City relies more on smaller infill and redevelopment sites to accommodate business growth.

### **Non-Local Regulatory Risks**

The City is dependent upon ODOT to achieve higher trip caps in targeted redevelopment areas. As the City and Metro pursue high capacity transit facilities and assessed service levels, these regulatory risks may be addressed by assuming higher non-vehicle mode shares that result in reduced traffic impacts from new development.

Most of the risk factors described above may be addressed by the City of Tigard. Others will require partnerships with regional and state regulatory agencies, such as Metro, Washington County and ODOT. The City can take a leadership position by providing a local planning and permitting environment that is favorable to business investment and more proactive economic marketing to raise awareness of Tigard's strengths as a preferred location for over 2,900 existing business establishments.

## **IMPLEMENTATION POLICIES AND ACTION MEASURES**

OAR 660-009-0020 stipulates that comprehensive plans must provide community economic development objectives, a commitment to providing a competitive short-term land supply, and identification and provision of adequate sites and public facilities to serve economic development demand.

Since the City of Tigard updated the economic development chapter of its Comprehensive Plan in 2008, the document contains a fairly complete set of economic development goals, policies and action measures. The following is a list of topics and recommended policy updates to comply with state statutes and/or implement the City's economic goals.

### **Policies**

#### Community Economic Development Objectives (CEDOs)

The majority of these objectives are already embedded in existing policies. Two new policies are recommended:

*"The City shall encourage neighborhood commercial uses that support economic opportunities, multi-modal transportation options, neighborhood vitality, and the goals of efficient land use patterns."*

*“The City shall encourage businesses that are environmentally and economically sustainable.”*

#### Commitment to Provide Adequate Sites and Facilities and Commitment to Provide a Short-Term Land Supply of Land

The commitment to provide adequate public facilities is embedded in existing Policy 9.1.4 of the Comprehensive Plan. One new policy is recommended to describe the commitment to provide adequate sites and a short-term land supply:

*“The City shall monitor and update its Buildable Lands Inventory to ensure adequate short and long-term supplies of buildable employment land.”*

#### Provide for Prime Industrial Land Development on Large Lots

Existing Policy 9.1.7 addresses the need to protect prime industrial land but does not address the need for large lots. It is recommended the policy be revised as follows:

*“The City shall limit the development of retail and service land uses in Metro-designated industrial areas, and especially on lots of 10 or more acres, to preserve the potential of these lands for industrial jobs.”*

#### Promote Targeted Redevelopment in Downtown and other areas

This issue is addressed by several existing policies and recommended action measures, but most directly by Policy 9.3.1: “The City shall focus a significant portion of future employment growth and high-density housing development in its Metro-designated Town Center (Downtown); Regional Center (Washington Square); High Capacity Transit Corridor (Hwy 99W); and the Tigard Triangle.” No new language is proposed.

### **Recommended Action Measures**

#### Assist property owners with the Oregon Industrial Site Certification Process

A new recommended action measure is suggested:

*“Assist property owners with the Oregon Industrial Site Certification Process to help preserve and market the City’s inventory of industrial lands.”*

#### Economic Development Marketing and Incentives Directed Towards Strategic Clusters

This issue is addressed indirectly by several recommended action measures, but could benefit from more concise language. A new recommended action measure is suggested:

*“Explore an economic development marketing and incentives program targeting strategic business clusters.”*

#### Work with ODOT to address mobility standards

Capacity issues on state highways (particularly Pacific Highway, Hwy. 217, and Interstate 5) impact economic development opportunities through trip caps, limited floor-to-area ratios, and required road improvements that are expensive. The conversation is just getting started at the regional level. A new recommended action measure is suggested:

*“Work with state and regional partners to develop alternative mobility standards that will benefit the community and its economic development efforts.”*

### Monitor Local and Regional Economic Development Initiatives

This request from the Planning Commission led to a suggested new recommended action measure:

*“Monitor local and regional economic development initiatives to assess their effectiveness related to cost and outcome.”*

### Metro Designated Centers and Corridors

Based on a resolution passed by the Tigard City Council, Metro recently amended its Growth Concept Map expanding the Tigard Town Center Boundary to include the entire Tigard Urban Renewal District and the Tigard Triangle. The City is required to adopt this change into its Comprehensive Plan. Staff recommends adopting a definition that will refer to the Metro Growth Concept Map, thus eliminating the need to amend the Tigard Comprehensive Plan each time the Metro Growth Concept Map is amended.

## APPENDIX A – OFFICE LEASING ACTIVITY SUMMARY, MID-YEAR REPORT

OFFICE Leasing Activity, Mid-Year 2010 (as of June 30, 2010)								
<b>Class A Market Statistics</b>								Mid-Year 2010
Market	Existing Inventory		Vacancy		YTD Net	YTD	Under Const	Quoted
	# Builds	Total RBA	Total SF	Vac %	Absorbption	Deliveries	SF	Rates
Central Business District	41	11,389,435	1,412,066	12.4%	(135,590)	368,800	62,200	\$24.42
Suburban	141	17,234,745	2,225,626	12.9%	(130,126)	-	-	\$23.74
Tigard	6	509,087	151,931	29.8%	(13,097)	-	-	\$23.93
217 Corridor/Beaverton	12	1,142,430	303,750	26.6%	(15,550)	-	-	\$21.77
Kruse Way	19	1,961,855	495,615	25.3%	(26,228)	-	-	\$26.05
Barbur Blvd/Capitol Hwy	-	-	-	-	-	-	-	\$0.00
Tulalatin	4	361,270	154,503	42.8%	5,604	-	-	\$24.31
Wilsonville	4	325,501	55,071	16.9%	-	-	-	\$24.77
<b>Total</b>	<b>182</b>	<b>28,624,180</b>	<b>3,637,692</b>	<b>12.7%</b>	<b>(265,716)</b>	<b>368,800</b>	<b>62,200</b>	<b>\$24.01</b>
<b>Class B Market Statistics</b>								Mid-Year 2010
Market	Existing Inventory		Vacancy		YTD Net	YTD	Under Const	Quoted
	# Builds	Total RBA	Total SF	Vac %	Absorbption	Deliveries	SF	Rates
Central Business District	130	9,423,902	927,523	9.8%	61,787	-	-	\$20.18
Suburban	1,155	30,095,314	4,345,461	14.4%	(62,639)	14,000	268,854	\$17.82
Tigard	83	1,979,955	277,469	14.0%	12,806	-	-	\$20.88
217 Corridor/Beaverton	72	1,719,571	314,759	18.3%	5,148	-	-	\$16.40
Kruse Way	26	728,262	93,241	12.8%	(14,059)	-	-	\$20.76
Barbur Blvd/Capitol Hwy	42	890,672	121,398	13.6%	2,337	-	-	\$16.79
Tulalatin	30	704,815	105,798	15.0%	(7,289)	-	-	\$19.36
Wilsonville	17	622,051	30,169	4.8%	(10,369)	-	-	\$16.71
<b>Total</b>	<b>1,285</b>	<b>39,519,216</b>	<b>5,272,984</b>	<b>13.3%</b>	<b>(852)</b>	<b>14,000</b>	<b>268,854</b>	<b>\$18.38</b>
<b>Class C Market Statistics</b>								Mid-Year 2010
Market	Existing Inventory		Vacancy		YTD Net	YTD	Under Const	Quoted
	# Builds	Total RBA	Total SF	Vac %	Absorbption	Deliveries	SF	Rates
Central Business District	177	4,093,913	489,486	12.0%	11,201	-	-	\$17.49
Suburban	2,815	18,283,763	129,081	0.7%	68,665	-	-	\$14.36
Tigard	97	662,182	66,493	10.0%	(3,199)	-	-	\$15.60
217 Corridor/Beaverton	82	609,431	70,635	11.6%	1,202	-	-	\$14.50
Kruse Way	19	133,044	2,452	1.8%	-	-	-	\$18.00
Barbur Blvd/Capitol Hwy	120	846,865	99,822	11.8%	(5,090)	-	-	\$15.60
Tulalatin	20	119,561	29,278	24.5%	(5,598)	-	-	\$14.73
Wilsonville	21	103,496	2,681	2.6%	5,609	-	-	\$17.21
<b>Total</b>	<b>2,992</b>	<b>22,377,676</b>	<b>618,567</b>	<b>2.8%</b>	<b>79,866</b>	<b>-</b>	<b>-</b>	<b>\$14.93</b>
<b>Class B and C Market Statistics</b>								Mid-Year 2010
Market	Existing Inventory		Vacancy		YTD Net	YTD	Under Const	Quoted
	# Builds	Total RBA	Total SF	Vac %	Absorbption	Deliveries	SF	Rates
Central Business District	307	13,517,815	1,417,009	10.5%	72,988	-	-	\$19.37
Suburban	3,970	48,379,077	4,474,542	9.2%	6,026	14,000	268,854	\$16.51
Tigard	180	2,642,137	343,962	13.0%	9,607	-	-	\$19.56
217 Corridor/Beaverton	154	2,329,002	385,394	16.5%	6,350	-	-	\$15.90
Kruse Way	45	861,306	95,693	11.1%	(14,059)	-	-	\$20.33
Barbur Blvd/Capitol Hwy	162	1,737,537	221,220	12.7%	(2,753)	-	-	\$16.21
Tulalatin	50	824,376	135,076	16.4%	(12,887)	-	-	\$18.69
Wilsonville	38	725,547	32,850	4.5%	(4,760)	-	-	\$16.78
<b>Total</b>	<b>4,277</b>	<b>61,896,892</b>	<b>5,891,551</b>	<b>9.5%</b>	<b>79,014</b>	<b>14,000</b>	<b>268,854</b>	<b>\$17.14</b>
<i>Quoted Rates for Class B and C table are weighted average of individual B and C markets according to the total RBA inventory</i>								
<i>Source: CoStar Office Report Mid-Year 2010; Capacity Commercial Group.</i>								

## APPENDIX B: INDUSTRIAL LEASING ACTIVITY, MID-YEAR 2010 REPORT

Flex Building Market Statistics								Mid-Year 2010	
Market	Existing Inventory		Vacancy		YTD Net Absorbtion	YTD Deliveries	Under Const SF	Quoted Rates	
	# Builds	Total RBA	Total SF	Vac %					
Central Business District	3	45,000	10,000	22.2%	-	-	-	\$16.50	
Suburban	741	18,956,577	2,268,793	12.0%	(336,814)	70,020	-	\$10.23	
Tigard	50	1,277,751	170,855	13.4%	(12,799)	-	-	\$12.30	
217 Corridor/Beaverton	87	2,204,502	419,258	19.0%	(69,237)	-	-	\$11.77	
Kruse Way	2	88,928	-	0.0%	-	-	-	\$0.00	
Barbur Blvd/Capitol Hwy	7	53,681	6,771	12.6%	5,100	-	-	\$10.35	
Tulalatin	14	430,840	23,229	5.4%	(2,531)	-	-	\$7.54	
Wilsonville	29	1,661,734	201,334	12.1%	(18,316)	7,020	-	\$9.31	
<b>Total</b>	<b>744</b>	<b>19,001,577</b>	<b>2,278,793</b>	<b>12.0%</b>	<b>(336,814)</b>	<b>70,020</b>	<b>-</b>	<b>\$10.24</b>	
Warehouse Building Market Statistics								Mid-Year 2010	
Market	Existing Inventory		Vacancy		YTD Net Absorbtion	YTD Deliveries	Under Const SF	Quoted Rates	
	# Builds	Total RBA	Total SF	Vac %					
Central Business District	41	1,616,833	141,090	8.7%	(1,843)	-	-	\$5.78	
Suburban	4,694	167,214,476	13,813,643	8.3%	91,337	119,723	415,000	\$5.55	
Tigard	119	4,394,617	339,683	7.7%	57,333	-	-	\$6.38	
217 Corridor/Beaverton	75	3,332,391	471,805	14.2%	31,770	-	-	\$6.30	
Kruse Way	13	301,069	3,378	1.1%	10,240	-	-	\$7.20	
Barbur Blvd/Capitol Hwy	17	209,963	5,000	2.4%	8,000	-	-	\$6.16	
Tulalatin	221	8,453,141	675,494	8.0%	(39,805)	-	-	\$5.20	
Wilsonville	83	6,155,906	1,268,475	20.6%	47,351	-	-	\$5.95	
<b>Total</b>	<b>4,735</b>	<b>168,831,309</b>	<b>13,954,733</b>	<b>8.3%</b>	<b>89,494</b>	<b>119,723</b>	<b>415,000</b>	<b>\$5.55</b>	
Total Industrial Market Statistics								Mid-Year 2010	
Market	Existing Inventory		Vacancy		YTD Net Absorbtion	YTD Deliveries	Under Const SF	Quoted Rates	
	# Builds	Total RBA	Total SF	Vac %					
Central Business District	44	1,661,833	151,090	9.1%	(1,843)	-	-	\$7.16	
Suburban	5,435	186,171,053	16,082,436	8.6%	(245,477)	189,743	415,000	\$6.19	
Tigard	169	5,672,368	510,538	9.0%	44,534	-	-	\$7.68	
217 Corridor/Beaverton	162	5,536,893	891,063	16.1%	(37,467)	-	-	\$8.07	
Kruse Way	15	389,997	3,378	0.9%	10,240	-	-	\$7.20	
Barbur Blvd/Capitol Hwy	24	263,644	11,771	4.5%	13,100	-	-	\$8.01	
Tulalatin	235	8,883,981	698,723	7.9%	(42,336)	-	-	\$5.29	
Wilsonville	112	7,817,640	1,469,809	18.8%	29,035	7,020	-	\$6.72	
<b>Total</b>	<b>5,479</b>	<b>187,832,886</b>	<b>16,233,526</b>	<b>8.6%</b>	<b>(247,320)</b>	<b>189,743</b>	<b>415,000</b>	<b>\$6.20</b>	
Source: CoStar Office Report Mid-Year 2010; Capacity Commercial Group.									

## APPENDIX C: ANALYSIS OF EMPLOYMENT AND SPACE NEEDS

### Projected Tigard Employment, Medium Forecast Scenario, 2005-2035

	2005	Proj. 2035	Change	
			Jobs	%
Retail Trades	9,854	14,426	4,572	46%
Services	11,372	23,482	12,110	106%
Industrial/Other*	12,049	13,637	1,588	13%
Government*	8,033	9,092	1,059	13%
<b>Total</b>	<b>41,308</b>	<b>60,637</b>	<b>19,329</b>	<b>47%</b>

Source: Metro adopted housing and employment growth forecasts, 2007; MetroScope Gen. 2.3. Assumes allocation of "Other" jobs at 60% industrial, and 40% government. In light of the recent national economic recession that caused severe declines in Oregon employment from 2007 through 2010, Metro's 2030 job forecast for Tigard is assumed to be achieved by year 2035 under the "medium forecast" scenario.

### Projected Tigard Net New Average Annual Employment Forecast (1 Year Forecast)

	Low	Medium	High
Retail Trades	114	152	191
Services	303	404	505
Industrial/Other*	40	53	66
Government*	26	35	44
<b>Total</b>	<b>483</b>	<b>644</b>	<b>805</b>

### Projected Tigard Net New 20-Year Employment Forecast

	Low	Medium	High
Retail Trades	2,286	3,048	3,810
Services	6,055	8,073	10,092
Industrial/Other*	794	1,059	1,324
Government*	529	706	882
<b>Total</b>	<b>9,665</b>	<b>12,886</b>	<b>16,108</b>

## APPENDIX C: ANALYSIS OF EMPLOYMENT AND SPACE NEEDS (CONTINUED)

Job Sectors and Building Type Assumptions							
Employment Sectors	Office	Institutional	Flex/Bus. Park	Gen. Industrial	Warehouse	Retail	Total
Retail Trades	5%	1%	6%	0%	12%	76%	100%
Services	72%	1%	5%	1%	1%	20%	100%
Industrial/Other	8%	0%	50%	40%	2%	0%	100%
Government	43%	37%	5%	0%	0%	15%	100%

Source: Metro Draft 2009-2030 Urban Growth Report; modified to reflect local observations.

### Proj. Tigard Net New 20-Year Employment Forecast by Building Type, Low

	Office	Institutional	Flex/Bus. Park	Gen. Industrial	Warehouse	Retail	Total
Retail Trades	114	23	137	-	274	1,737	2,286
Services	4,360	61	303	61	61	1,211	6,055
Industrial/Other*	64	-	397	318	16	-	794
Government*	228	196	26	-	-	79	529
<b>Total</b>	<b>4,765</b>	<b>279</b>	<b>863</b>	<b>378</b>	<b>351</b>	<b>3,028</b>	<b>9,665</b>

### Proj. Tigard Net New 20-Year Employment Forecast by Building Type, Medium

	Office	Institutional	Flex/Bus. Park	Gen. Industrial	Warehouse	Retail	Total
Retail Trades	152	30	183	-	366	2,316	3,048
Services	5,813	81	404	81	81	1,615	8,073
Industrial/Other*	85	-	529	424	21	-	1,059
Government*	304	261	35	-	-	106	706
<b>Total</b>	<b>6,353</b>	<b>372</b>	<b>1,151</b>	<b>504</b>	<b>468</b>	<b>4,037</b>	<b>12,886</b>

### Proj. Tigard Net New 20-Year Employment Forecast by Building Type, High

	Office	Institutional	Flex/Bus. Park	Gen. Industrial	Warehouse	Retail	Total
Retail Trades	191	38	229	-	457	2,896	3,810
Services	7,266	101	505	101	101	2,018	10,092
Industrial/Other*	106	-	662	529	26	-	1,324
Government*	379	326	44	-	-	132	882
<b>Total</b>	<b>7,942</b>	<b>465</b>	<b>1,439</b>	<b>630</b>	<b>585</b>	<b>5,046</b>	<b>16,108</b>

Source: FCS GROUP based on Metro Draft 2009-2030 Urban Growth Report; modified to reflect local observations.

## APPENDIX C: ANALYSIS OF EMPLOYMENT AND SPACE NEEDS (CONTINUED)

Building Type to Land Needs Assumptions*							
	Office	Institutional	Flex/Bus. Park	Gen. Industrial	Warehouse	Retail	
Refill/Redevelopment Rate <sup>1</sup>	67%	67%	45%	45%	45%	60%	
Jobs Needing Vacant Land Rate <sup>2</sup>	33%	33%	55%	55%	55%	40%	
Building SF Per Job <sup>2</sup>	370	630	550	700	1,100	510	
Floor-Area-Ratio <sup>2</sup>	0.50	0.50	0.31	0.30	0.30	0.30	
Public Facility Net:Gross Adjustment <sup>3</sup>	1.10	1.05	1.10	1.05	1.05	1.10	
Work at Home Adjustment <sup>4</sup>	0.15	0.03	0.05	0.03	0.03	0.03	
* assumptions are intended to reflect a long-term average over 20 years, some "ramp up" is expected to attain these density levels.							
1/ Adjusts for building refill & vacancy allowances.							
2/ Building density derived from Metro UGR assumptions.							
3/ Allowances take into account land dedicated to public/utility easements.							
4/ Allowance based on national statistics by US Dept. of Labor, Bureau of of Labor Statistics, Technical information: "Work at Home i							
Source: assumptions are generally consistent with the Metro Draft 2009-2030 Urban Growth Report; modified to reflect local observatio							
Proj. Tigard Net New 20-Year Redevelopment Building Space Needs (Floor Area)							
	Office	Institutional	Flex/Bus. Park	Gen. Industrial	Warehouse	Retail	Total
Low	1,004,000	114,000	203,000	116,000	168,000	899,000	2,504,000
Medium	1,339,000	152,000	271,000	154,000	225,000	1,198,000	3,339,000
High	1,673,000	191,000	338,000	193,000	281,000	1,498,000	4,174,000
Proj. Tigard Net New 20-Year Building Floor Area on Vacant Lands (Floor Area)							
	Office	Institutional	Flex/Bus. Park	Gen. Industrial	Warehouse	Retail	Total
Low	495,000	56,000	248,000	141,000	206,000	599,000	1,745,000
Medium	659,000	75,000	331,000	188,000	274,000	799,000	2,326,000
High	824,000	94,000	414,000	235,000	343,000	999,000	2,909,000
Proj. Tigard 20-Year Vacant Lands (gross buildable acres)							
	Office	Institutional	Flex/Bus. Park	Gen. Industrial	Warehouse	Retail	Total
Low	25	3	20	11	17	50	126
Medium	33	4	27	15	22	67	168
High	42	5	34	19	28	84	210

## APPENDIX C: ANALYSIS OF EMPLOYMENT AND SPACE NEEDS (CONTINUED)

Land Use Assignment Assumptions							
Local Zoning Classification	Office	Institutional	Flex/Bus. Park	Gen. Industrial	Warehouse	Retail	
Commercial	50%	60%	20%	10%	10%	60%	
Mixed Use	40%	20%	5%	5%	0%	30%	
Industrial	10%	20%	75%	85%	90%	10%	
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	
<i>Assumptions by FCS GROUP and Tigard based on local observations.</i>							
<b>Proj. Tigard 20-Year Vacant Land Needs Forecast by Zoning Classification, Low</b>							
Land Use Classification	Office	Institutional	Flex/Bus. Park	Gen. Industrial	Warehouse	Retail	Total
Commercial	13	2	4	1	2	30	51
Mixed Use	10	1	1	1	-	15	27
Industrial	3	1	15	10	15	5	48
<b>Total</b>	<b>25</b>	<b>3</b>	<b>20</b>	<b>11</b>	<b>17</b>	<b>50</b>	<b>126</b>
<b>Proj. Tigard 20-Year Vacant Land Needs Forecast by Zoning Classification, Medium</b>							
Land Use Classification	Office	Institutional	Flex/Bus. Park	Gen. Industrial	Warehouse	Retail	Total
Commercial	17	2	5	2	2	40	68
Mixed Use	13	1	1	1	-	20	36
Industrial	3	1	20	13	20	7	64
<b>Total</b>	<b>33</b>	<b>4</b>	<b>27</b>	<b>15</b>	<b>22</b>	<b>67</b>	<b>168</b>
<b>Proj. Tigard 20-Year Vacant Land Needs Forecast by Zoning Classification, High</b>							
Land Use Classification	Office	Institutional	Flex/Bus. Park	Gen. Industrial	Warehouse	Retail	Total
Commercial	21	3	7	2	3	50	85
Mixed Use	17	1	2	1	-	25	45
Industrial	4	1	25	16	25	8	80
<b>Total</b>	<b>42</b>	<b>5</b>	<b>34</b>	<b>19</b>	<b>28</b>	<b>84</b>	<b>210</b>
<b>Summary of 20-Year Vacant Land Demand Forecast by Zoning Classification, Tigard USB (with current zoning regulations)</b>							
Land Use Classification	Low	Medium	High				
Commercial	51	68	85				
Mixed Use	27	36	45				
Industrial	48	64	80				
<b>Total</b>	<b>126</b>	<b>168</b>	<b>210</b>				
<i>Assumptions by FCS GROUP based on Dec. 2009 Metro 2009-2035 Urban Growth Report assumptions and local observations.</i>							

## APPENDIX D: ANALYSIS OF RETAIL INFLOW/OUTFLOW

Analysis of Retail Development Potential								
Tigard Area								
2010 to 2030								
Est. 2010 Population in City	48,100							
Proj. 2030 Population in City	62,278							
<b>Analysis of Effective Buying Income (EBI)</b>								
Est. 2010 Per Capita Income 1/	\$33,000							
Proj. 2030 Per Capita Income 1/	\$36,462							
Est. 2010 Aggregate EBI (000)	\$1,587,300							
Proj. 2030 Aggregate EBI (000)	\$2,270,749							
Change in Aggregate EBI (000)	<b>\$683,449</b>							
Store Group	Analysis of Existing & Future Retail Sales				Future 2030 Supportable Retail Development Potential			
	Distribution of Local Income by Store Group 2/	2010 Retail Buying Power from Local Residents (000) 2/	2030 Retail Buying Power from Local Residents (000) 2/	Change in Retail Buying Power (000)	Sales Attributed to Local Residents (000)	Sales Attributed to Retail Inflow (000) 4/	Total Supportable Retail Sales (000)	Supportable Sq.Ft. of New Retail Development 5/
Food Stores	8.3%	\$131,746	\$188,472	\$56,726	\$51,054	\$12,763	\$63,817	<b>236,000</b>
Eating & Drinking	5.0%	\$79,365	\$113,537	\$34,172	\$30,755	\$13,181	\$43,936	<b>162,000</b>
Gen. Merchandise	5.5%	\$87,302	\$124,891	\$37,590	\$33,831	\$27,680	\$61,510	<b>227,000</b>
Furniture, Fixtures & Appliances	2.2%	\$34,921	\$49,956	\$15,036	\$13,532	\$11,072	\$24,604	<b>91,000</b>
Automotive Services	9.6%	\$152,381	\$217,992	\$65,611	\$52,489	\$42,945	\$95,434	<b>352,000</b>
Other/Misc.	11.3%	\$179,365	\$256,595	\$77,230	\$54,061	\$23,169	\$77,230	<b>285,000</b>
Total	41.9%	\$665,079	\$951,444	\$286,365	\$235,722	\$130,810	\$366,532	<b>1,353,000</b>
Notes:								
1/ Derived from US Census estimates; assumes .05% annual real income growth.								
2/ Store group sales allocations from U.S. Bureau of Economic Analysis, Consumer Expenditure Survey, Western United States.								
3/ Based upon employment estimates: assumes 500 sq.ft. per job, 5% vacancy allowance, and avg. sales of \$275/sq.ft.								
4/ Future retail inflow assumed to account for 30% to 45% of total retail sales.								
5/ Building area assumes \$285/per sq. ft. annual sales, and 5% vacancy allowance.								
Source: analysis by FCS GROUP.								

## **APPENDIX E: SUMMARY OF TIGARD EMPLOYMENT ZONES AND REGULATIONS**

The following is an overview of regulations related employment lands and zones for the City of Tigard. A general description of each zone is provided along with common and specific development standards when applicable. A summary table highlights specific regulations, such as building height, lot size, setbacks, landscaping and lot coverage.

### **COMMERCIAL ZONES**

#### ***Neighborhood Commercial District (C-N)***

Provide convenience goods and services (those purchased frequently) within a small cluster of stores adjacent to residential neighborhoods. A limited number of other uses such as restaurants, gas stations and medical centers are permitted conditionally.

#### ***Community Commercial District (C-C)***

Provide convenience shopping facilities to meet regular needs of nearby (1.5 miles) residential neighborhoods. Typically range in size from 30,000-100,000 sf on 2 to 8-acre sites. Separated from other commercial zones by at least one half-mile. Housing is permitted on the second floor at densities not to exceed 12 units/net acre. Limited other uses are allowed conditionally. Mandatory site development review.

#### ***General Commercial District (C-G)***

Accommodate a full range of retail, office and civic uses with a City-wide and even regional trade area. Residential uses limited to single family residences on same site as permitted use. A wide range of uses are permitted conditionally.

#### ***Professional Administrative Commercial District (C-P)***

Accommodate civic and business/professional services and compatible support services in close proximity to residential areas and major transportation facilities. Within the Tigard Triangle and Bull Mountain Road District, residential uses at a minimum density of 32 units/net acre are permitted in conjunction with commercial development. Heliports, medical centers, religious institutions and utilities are permitted conditionally. Developments are intended to serve as a buffer between residential areas and more intensive commercial and industrial areas.

#### ***Mixed Use-Central Business District (MU-CBD)***

Provide a pedestrian friendly urban village in Downtown Tigard. A wide variety of commercial, civic, employment, mixed-use, multi-family and attached single family residences are permitted. All uses are allowed in all areas.

#### **Specific Development Standards (18.610):**

Four sub-areas (see MU-CBD Development Standards Matrix) have different setback and height limits in order to create a feeling of distinct districts within the larger zone.

- Pacific Hwy. and Hall Boulevard Corridor: designed to create a “pulse-point” along the Pacific Hwy. corridor. Regional retail draw and potential future high capacity transit.
- Main Street – Center Street: pedestrian-oriented with smaller scale development.
- Scoffins Street – Commercial Street: higher density residential and employment base of civic, office and commercial uses.

- Fanno – Burnham Street: medium scale residential or mixed use development.

### **Mixed Use Employment (MUE)**

Designed to apply to a majority of land within the Tigard Triangle, it permits a wide range of uses including major retail goods and services, business/professional offices, civic uses and housing (multi-family at a max density of 25 units/acre. A wide range of uses are permitted conditionally. Acknowledges a majority of trips by automobile, but supports alternative modes of transportation to the greatest extent possible and encourages a mix of uses. Includes special design standards for Tigard Triangle (18.620).

### **Mixed Use Employment Districts (MUE-1 and MUE-2)**

Apply to areas where employment uses such as office, research and development and light manufacturing are concentrated. Commercial and retail support uses are allowed but limited, and residential uses are permitted when compatible with employment character of the area. MUE-1 example is Lincoln Center (high density). MUE-2 example is Nimbus area (more moderate densities).

### **Mixed Use Commercial District (MUC)**

Includes land around Washington Square Mall and immediately west of Highway 217. Primary uses include office buildings, retail, and service areas. Also permits mixed use developments and housing at 50 units/acre. Large buildings encouraged with parking under behind or to sides. Includes special design standards for Washington Square Regional Center (18.630).

### **Mixed Use Commercial (MUC-1)**

Applies to portion of the Durham Quarry site. Subject to IGA agreement between Tigard and Tualatin. Permits a wide range of uses including commercial lodging, general retail, offices and housing at min density of 25 units/acre and max of 50 units/acre. Includes special design standards for Durham Quarry (18.640).

### **Mixed Use Residential Districts (MUR)**

Applies to predominantly residential areas where mixed-uses are permitted when compatible with residential use.

## **INDUSTRIAL/INSTITUTIONAL ZONES**

### **Industrial Park District (I-P)**

Provides appropriate locations for combining light manufacturing, office and small-scale commercial uses (restaurants, personal services and fitness centers) in a campus-like setting. Only those uses with no off-site impacts are permitted. Mandatory site development review and specific design standards (18.530).

### **Light Industrial District (I-L)**

Provides appropriate locations for general industrial uses, including manufacturing and production, research and development, warehousing and freight movement and wholesale sales activities with few, if any, nuisance characteristics.

**Heavy Industrial District (I-H)**

Provides appropriate locations for intensive industrial uses including I-L uses as well as railroad yards and waste-related activities. Uses include those which involve the use of raw materials, require significant outdoor storage and generate heavy truck and/or rail traffic. Properties are carefully located to minimize impacts on established residential, commercial and light industrial areas.

**COMMERCIAL DEVELOPMENT STANDARDS**

STANDARD	MUE												
	C-N	C-C <sup>[9]</sup>	C-G	C-P	MU-CBD**	C-G	R-25	MUC -1	MUC <sup>[17][18]</sup>	MUE 1 <sup>[17][18]</sup>	MUE 2 <sup>[17][18]</sup>	MUR 1 <sup>[17][18]</sup>	MUR 2 <sup>[17][18]</sup>
Minimum Lot Size	5,000 sq ft	5,000 sq ft	None	6,000 sq ft	None	None	-	None	None	None	None	None	None
- Detached unit	-	-	-	-	-	-	1,480 sq ft	-	-	-	-	-	-
- Boarding, lodging, rooming house	-	-	-	-	-	-	6,100 sq ft	-	-	-	-	-	-
Minimum Lot Width	50 ft	50 ft	50 ft	50 ft	None	50 ft	None	None	None	None	None	None	None
Minimum Setbacks													
- Front yard	20 ft	0/20 ft <sup>[10]</sup>	0 ft <sup>[11]</sup>	0 ft <sup>[11]</sup>	□	0 ft <sup>[11]</sup>	20 ft	▽	0 ft <sup>[19]</sup>	0 ft <sup>[21]</sup>	0 ft <sup>[21]</sup>	0 ft <sup>[21]</sup>	10 ft <sup>[21]</sup>
- Side facing street on corner & through lots <sup>[1]</sup>	20 ft	-	-	-	□	-	20 ft	▽	0 ft <sup>[19]</sup>	0 ft <sup>[21]</sup>	0 ft <sup>[21]</sup>	5 ft <sup>[21]</sup>	10 ft <sup>[21]</sup>
- Side yard	0/20 ft <sup>[8]</sup>	0/20 ft <sup>[8]</sup>	0/20 ft <sup>[8]</sup>	0/20 ft <sup>[8]</sup>	□	0/20 ft <sup>[8]</sup>	10 ft	▽	0 ft <sup>[19][20]</sup>	0 ft <sup>[20]</sup>	0 ft <sup>[20]</sup>	0 ft <sup>[20]</sup>	0 ft <sup>[20]</sup>
- Side or rear yard abutting more restrictive zoning district	-	-	-	-	-	-	30 ft	▽	-	-	-	-	-
- Rear yard	0/20 ft <sup>[8]</sup>	0/20 ft <sup>[8]</sup>	0/20 ft <sup>[8]</sup>	0/20 ft <sup>[8]</sup>	□	-	20 ft	▽	-	0 ft <sup>[20]</sup>	0 ft <sup>[20]</sup>	0	0
- Distance between front of garage & property line abutting a public or private street.	-	-	-	-	-	0/20 ft <sup>[8]</sup>	20 ft	▽	0 ft <sup>[19][20]</sup>	N/A	N/A	0 ft <sup>[20][22]</sup>	0 ft <sup>[20][22]</sup>
Minimum Building Height	N/A	N/A	N/A	N/A	□	N/A	N/A	N/A	2 stories	2 stories	None	2 stories	None
Maximum Building Height	35 ft	35 ft	45 ft	45 ft	□	45 ft	45 ft	70 ft	200 ft	200 ft	60 ft	75 ft	45 ft
Maximum Site Coverage <sup>[2]</sup>	85 %	80 %	85 %	85 %	□	85 %	80 % <sup>[16]</sup>	90%	85%	85%	85%	80%	80%
Minimum Landscape Requirement	15 %	20 %	15 %	15 %	□	15 %	20 %	10%	15%	15%	15%	20%	20%
Minimum FAR <sup>[3]</sup>	N/A	N/A	N/A	N/A	□	N/A	N/A	N/A	1.25	1.25	0.6	0.6	0.3
Minimum Residential Density <sup>[4][5][6]</sup>	N/A	N/A	N/A	N/A	□	N/A	N/A	N/A	50 unit/acre	50 unit/acre	25 unit/acre	50 unit/acre	25 unit/acre
Maximum Residential Density <sup>[4][5][6][7]</sup>	N/A	N/A	N/A	N/A	□	N/A	N/A	N/A	None	None	50 unit/acre	None	50 unit/acre

\*\* Multiple-family dwelling unit.

\*\*\* See Table 18.610.1 and Map 18.610.A for development standards.

▽ = See 18.640.050.B.

□ = See Table 18.610.1 and Map 18.610.A for development standards.

- [1] The provisions of Chapter 18.795 (Vision Clearance) must be satisfied.
- [2] Includes all buildings and impervious surfaces.
- [3] Applies to all nonresidential building development and mixed use development which includes a residential component. In mixed use development, residential floor area is included in the calculations of floor area ratio to determine conformance with minimum FAR.
- [4] Notwithstanding the requirements of Section 18.715.020, minimum and maximum density shall be determined for residential only projects using the number of residential units per acre shown in the above table. The provisions for density transfer described in Section 18.715.030.B apply, using the minimum and maximum density shown in the above table. Any mixed-use or commercial only development does not have a minimum density requirement.
- [5] For purposes of determining floor area ratio and residential densities, the net development area shall be used to establish the lot area, determined per Section 18.715.020.A.
- [6] Adjustments to minimum density in the Washington Square Regional center area subject to the standards set forth in Section 18.630.020.E.
- [7] The maximum density requirements for developments that include or abut designated Water Resources Overlay district Riparian setbacks per Chapter 18.797 are described in Section 18.630.020.D.
- [8] No setback shall be required except 20 feet shall be required where the zone abuts a residential zoning district.
- [9] See Section 18.520.050.B for site and building design standards.
- [10] No front yard setback shall be required, except a 20-foot front yard setback shall apply within 50 feet of a residential district.
- [11] There shall be no minimum front yard setback requirement; however, conditions in Chapters 18.745 and 18.795 must be met.
- [12] There are no setback requirements, except 30 feet where a commercial use within a district abuts a residential zoning district.
- [13] The maximum height of any building in the CBD zone within 100 feet of any residential zoning district shall not exceed 40 feet.
- [14] Where the side or rear yard of attached or multiple-family dwellings abut a more restrictive zoning district, such setbacks shall not be less than 35 feet.
- [15] Landscaped areas on existing developed property in the CBD shall be retained. Buffering and screening requirements set forth in Chapter 18.745 shall be met for existing and new development.
- [16] Lot coverage includes all buildings and impervious surfaces.
- [17] Modifications to dimensional and minimum density requirements for developments that include or abut designated Water Resources Overlay District Riparian setbacks per Chapter 18.797 are described in Section 18.630.040.F.
- [18] The requirements contained in the Buffer Matrices in Tables 18.745.1 and 18.745.2 shall be used in calculating widths of buffering/screening and required improvements to be installed between proposed uses in the MUC, MUE and MUR zones within the Washington Square Regional Center (WSRC) and abutting zoning districts not included within the WSRC, or zoning districts within the WSRC which are not mixed-use. For MUC and MUE zones, the requirements for Commercial Zones apply. For MUR zones, the requirements for the Neighborhood Commercial Zone apply.
- [19] For Commercial and Mixed-use developments, the maximum front and street side yard setback is 10 feet. For Residential only developments, the maximum front and street side yard setback is 20 feet.
- [20] Side and rear yard setbacks shall be 20 feet when the zone abuts residential districts shown in Section 18.510.020 except R-25 and R-40.
- [21] The maximum setback is 20 feet.
- [22] The maximum setback is 10 feet.

C-N - Neighborhood Commercial District	MUC 1 - Mixed Use Commercial
C-C - Community Commercial District	MUC - Mixed Use Commercial
C-G - General Commercial District	MUE 1 - Mixed Use Employment/High Density
C-P - Professional/Administrative Office Commercial	MUE 2 - Mixed Use Employment/Medium Density
MU-CBD - Mixed Use Central Business District	MUR 1 - Mixed Use Residential/High Density
	MUR 2 - Mixed Use Residential/Medium Density

**MU-CBD Development Standards Matrix** <sup>1, 2, 3</sup>

STANDARD	SUB-AREAS			
	Main Street (MS)	99W/Hall Corridor (99H)	Scoffins/Commercial (SC)	Fanno/Burnham (FB)
Front setback				
Minimum	0 ft.	0/5 ft. (5 ft. for frontage on 99W)	0 ft.	0 ft.
Maximum	10 ft.	25 ft.	20 ft.	20 ft.
Side facing street on corner and through lots				
Minimum	0 ft.	0 ft.	0 ft.	0 ft.
Maximum	10 ft.	N/A	N/A	N/A
Sideyard				
Minimum/maximum	N/A	N/A	N/A	N/A
Rear setback				
Minimum	0 ft.	5 ft.	5 ft.	5 ft.
Maximum	N/A	N/A	N/A	N/A
Building height				
Minimum	20 ft.	20 ft.	20 ft.	20 ft.
Maximum (stories/feet)	3 stories (45 ft.)	3 stories (45 ft.)	6 stories (80 ft.)	6 stories (80 ft.) <sup>7</sup>
Ground floor height minimum	15 ft.	15 ft.	None	None
Site coverage maximum	100%	90%	90%	80%
Minimum landscaping <sup>4</sup>	0% <sup>5</sup>	10%	10%	20%
Minimum building frontage	50%	50%	50%	50%
Residential density (units per acre)				
Minimum <sup>8</sup>	25	25	25	15
Maximum	50	50	50 <sup>6</sup>	50 <sup>6</sup>

<sup>1</sup> This table does not apply to existing development. All new buildings in the district must meet these development standards, including projects using the Track 3 approval process.

<sup>2</sup> For standards for development surrounding the future public plaza see Section 18.610.040, Special Requirements for Development Bordering Urban Plaza.

<sup>3</sup> See also Section 18.610.045, Exceptions to Standards in the MU-CBD zone.

<sup>4</sup> In the MU-CBD zone, required landscaping can be provided on roofs.

<sup>5</sup> Landscaping/screening requirements for parking lots must be met.

<sup>6</sup> Station Area Overlay permits a maximum of 80 units per acre (see Map 18.610A).

<sup>7</sup> 3 stories/45 feet within 200 feet of Fanno Creek Park boundary (see Map 610.A) or within 50 feet of low or medium density residential district.

<sup>8</sup> Minimum density applies to residential-only development (not mixed use).

**DEVELOPMENT STANDARDS IN INDUSTRIAL ZONES**

<b>STANDARD</b>	<b>I-P</b>	<b>I-L</b>	<b>I-H</b>
Minimum Lot Size	None	None	None
Minimum Lot Width	50 ft.	50 ft.	50 ft.
Minimum Setbacks			
- Front yard	35 ft.	30 ft.	30 ft.
- Side facing street on corner & through lots [1]	20 ft.	20 ft.	20 ft.
- Side yard	0/50 ft. [3]	0/50 ft. [3]	0/50 ft. [3]
- Rear yard	0/50 ft. [3][4]	0/50 ft. [3]	0/50 ft. [3]
- Distance between front of garage & property line abutting a public or private street	--	--	--
Maximum Height	45 ft.	45 ft.	45 ft.
Maximum Site Coverage [2]	75 % [5]	85 %	85 %
Minimum Landscape Requirement	25 % [6]	15 %	15%

[1] The provisions of Chapter 18.795 (Vision Clearance) must be satisfied.

[2] Includes all buildings and impervious surfaces.

[3] No setback shall be required except 50 feet shall be required where the zone abuts a residential zoning district.

[4] Development in industrial zones abutting the Rolling Hills neighborhood shall comply with Policy 11.5.1.

[5] Maximum site coverage may be increased to 80% if the provisions of Section 18.530.050.B are satisfied.

[6] Except that a reduction to 20% of the site may be approved through the site development review process.

I-P - Industrial Park District I-L - Light Industrial I-H - Heavy Industrial
--

## APPENDIX F: TYPICAL SITE REQUIREMENTS FOR DEVELOPMENT TYPES

### Typical Criteria For Specific Development Sites

Development Type	Heavy Industrial/ Manufacturing	General Manufacturing	Food Processing	Hi-Tech Manufacturing & Processing	Campus Industrial/ Electronic and Computer Assembly	Warehouse/ Distribution	Call Center/ Business Services	Office (Class A)	Commercial Shopping Center	Hotel
Typical Size (NCDA)	5 to 25	5 to 10	5 to 10	10 to 25	5 to 25	10 to 25	3 to 5	1 to 5	5 to 10	3 to 5
Location Preference	Interstate, state highway or principle arterial within 1-10 miles	Interstate, state highway or principle arterial within 1-20 miles	Interstate, state highway or principle arterial within 1-30 miles	Interstate, state highway or principle arterial within 1-15 miles	Interstate, state highway or principle arterial within 1-10 miles	Interstate or limited access four-lane highway within 1-15 miles	Along arterial or streets	Along arterial or streets or in down town centers and transit areas	Arterial street visibility, prefers transit areas	Arterial or interstate visibility or downtown centers
Typical Infrastructure	<ul style="list-style-type: none"> <li>• Water flow <math>\geq</math> 36,100 GPD</li> <li>• Sewer flow <math>\geq</math> 32,500 GPD</li> <li>• 1.0 MW Electricity</li> </ul>	<ul style="list-style-type: none"> <li>• Water flow <math>\geq</math> 17,000 GPD</li> <li>• Sewer flow <math>\geq</math> 15,300 GPD</li> <li>• 0.5 MW Electricity</li> </ul>	<ul style="list-style-type: none"> <li>• Water flow <math>\geq</math> 24,900 GPD</li> <li>• Sewer flow <math>\geq</math> 22,400 GPD</li> <li>• 1.0 MW Electricity</li> </ul>	<ul style="list-style-type: none"> <li>• Water flow <math>\geq</math> 65,300 GPD</li> <li>• Sewer flow <math>\geq</math> 58,800 GPD</li> <li>• 2.0 MW Electricity</li> <li>• Fiber-telecom and route diversity</li> </ul>	<ul style="list-style-type: none"> <li>• Water flow <math>\geq</math> 74,300 GPD</li> <li>• Sewer flow <math>\geq</math> 74,300 GPD</li> <li>• 0.5 MW Electricity</li> <li>• Fiber-telecom</li> </ul>	<ul style="list-style-type: none"> <li>• Water flow <math>\geq</math> 11,700 GPD</li> <li>• Sewer flow <math>\geq</math> 11,700 GPD</li> <li>• 0.5 MW Electricity</li> </ul>	<ul style="list-style-type: none"> <li>• Water flow <math>\geq</math> 4,600 GPD</li> <li>• Sewer flow <math>\geq</math> 4,600 GPD</li> <li>• 0.5 MW Electricity</li> <li>• Broadband Internet access</li> </ul>	<ul style="list-style-type: none"> <li>• Water flow <math>\geq</math> 3,500 GPD</li> <li>• Sewer flow <math>\geq</math> 3,500 GPD</li> <li>• 0.5 MW Electricity</li> <li>• Broadband Internet access</li> </ul>	<ul style="list-style-type: none"> <li>• Water flow <math>\geq</math> 4,000 GPD</li> <li>• Sewer flow <math>\geq</math> 4,000 GPD</li> <li>• 0.5 MW Electricity</li> <li>• Broadband Internet access</li> </ul>	<ul style="list-style-type: none"> <li>• Water flow <math>\geq</math> 10,000 GPD</li> <li>• Sewer flow <math>\geq</math> 10,000 GPD</li> <li>• 0.5 MW Electricity</li> <li>• Broadband Internet access</li> </ul>

NCDA - Net Contiguous Developable Acres

Source: Compiled by FCS Group based on Business Oregon Industrial Site Certification requirements and industry standards.

## APPENDIX G: BUILDABLE LAND INVENTORY

### City of Tigard Buildable Lands Inventory (as of January 1, 2010)

Vacant and Part-Vacant Property										
	< 1 acre		1 to 5 acres		5 to 10 acres		> 10 acres		Total	
	Lots	Acres	Lots	Acres	Lots	Acres	Lots	Acres	Lots	Acres
<b>Commercial</b>										
C-C	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
C-G	19	6.8	6	14.0	2	16.4	0	0.0	27	37.3
C-N	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
C-P	7	2.7	2	6.2	0	0.0	0	0.0	9	8.9
<b>Mixed Use</b>										
MU-CBD	3	1.1	0	0.0	0	0.0	0	0.0	3	1.1
MUC	3	1.4	1	1.3	0	0.0	0	0.0	4	2.8
MUE	35	13.9	4	6.1	0	0.0	0	0.0	39	19.9
MUE-1	10	3.8	1	1.5	1	5.7	0	0.0	12	11.0
MUE-2	1	1.2	0	0.0	0	0.0	0	0.0	1	1.2
MUR-1	9	3.2	0	0.0	0	0.0	0	0.0	9	3.2
MUR-2	2	0.8	0	0.0	0	0.0	0	0.0	2	0.8
<b>Industrial</b>										
I-H	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
I-L	7	2.2	2	4.5	0	0.0	0	0.0	9	6.7
I-P	5	2.0	3	6.7	0	0.0	2	34.7	10	43.4
<b>Total</b>	<b>101</b>	<b>38.9</b>	<b>19</b>	<b>40.4</b>	<b>3</b>	<b>22.1</b>	<b>2</b>	<b>34.7</b>	<b>125</b>	<b>136.2</b>

### Summary of Vacant Land by General Land Use Zoning Classification

Vacant and Part-Vacant Property										
	< 1 acre		1 to 5 acres		5 to 10 acres		> 10 acres		Total	
	Lots	Acres	Lots	Acres	Lots	Acres	Lots	Acres	Lots	Acres
Commercial	26	9.5	8	20.2	2	16.4	0	0	36	46.1
Mixed Use	63	25.3	6	8.9	1	5.7	0	0.0	70	39.9
Industrial	12	4.2	5	11.2	0	0.0	2	34.7	19	50.1
<b>Total</b>	<b>101</b>	<b>38.9</b>	<b>19</b>	<b>40.4</b>	<b>3</b>	<b>22.1</b>	<b>2</b>	<b>34.7</b>	<b>125</b>	<b>136.2</b>

Source: City of Tigard.

## APPENDIX H: REDEVELOPMENT LAND INVENTORY

City of Tigard Redevelopable Potential (Improvement to Land Value) <sup>1</sup>						
	High (< 0.33)		Moderate (0.33 to 1.00)		Low (> 1.00)	
	Lots	Acres	Lots	Acres	Lots	Acres
C-C	0	0.0	0	0.0	4	8.5
C-G	8	3.4	13	6.8	158	255.0
C-N	0	0.0	1	0.2	2	2.8
C-P	11	3.8	17	10.9	35	33.6
MU-CBD	24	10.5	50	38.4	86	59.0
MUC	7	12.6	11	24.2	35	155.0
MUE	70	40.5	22	12.3	59	61.8
MUE-1	15	11.5	10	6.9	24	30.9
MUE-2	0	0.0	0	0.0	6	29.4
MUR-1	10	3.9	23	5.6	16	5.3
MUR-2	6	2.4	8	2.6	6	3.0
I-H	2	3.4	4	5.5	9	41.3
I-L	3	11.0	8	25.1	61	203.5
I-P	13	12.5	13	28.2	76	193.1
<b>Total</b>	<b>169</b>	<b>115.6</b>	<b>180</b>	<b>166.6</b>	<b>577</b>	<b>1,082.0</b>

### Summary of Redevelopable Potential

City of Tigard Redevelopable Potential (Improvement to Land Value) <sup>2</sup>						
	High (< 0.33)		Moderate (0.33 to 1.00)		Low (> 1.00)	
	Lots	Acres	Lots	Acres	Lots	Acres
Commercial	19	7.2	31	17.8	199	299.8
Mixed Use	132	81.4	124	89.9	232	344.3
Industrial	18	27.0	25	58.8	146	437.9
<b>Total</b>	<b>169</b>	<b>115.6</b>	<b>180</b>	<b>166.6</b>	<b>577</b>	<b>1082.0</b>

Notes: <sup>1</sup> Improvement to Land Value calculated from Washington County Tax Assessor data (Sept 2010).

<sup>2</sup> 196 Properties contained a zero Improvement or Land Value and are not represented here.

Source: City of Tigard.

## APPENDIX I: SUMMARY OF STAKEHOLDER INTERVIEWS

In support of the City of Tigard's statewide planning Goal 9 Economic Opportunity Analysis, consulting staff interviewed twelve business leaders, employers and economic experts to gather perspectives on the City's current position and future economic opportunities. Summary of interview responses are included after each question, shown in italics. The list of respondents is included at the end of the summary.

1. *What is Tigard's primary market advantage within the state and region with regard to attracting population and jobs? What do you feel are its greatest assets?*

Stakeholders consistently reported that Tigard's location is its primary asset, particularly its proximity to I-5 and other major transportation corridors such as Highway 217 and Highway 99W. Other factors frequently cited included Tigard's position relative to Portland, an educated, affluent population, and open spaces. Four respondents mentioned that the size of Tigard and its suburban setting are attractive. Other named assets include the variety of housing options, diversity of office and industrial buildings and availability of land.

2. *I'm going to read you a list of seven (7) items. From the list, please identify Tigard's primary strengths as a place to do business.*

The list below is organized in order of frequency of response, shown in parentheses.

- Proximity to I-5 and other transportation corridors (11)
  - Quality of life (10)
  - Available, skilled workforce (10)
  - Adequate public infrastructure (transportation, utilities, etc.) (5)
  - Access to local markets and customers (5)
  - General business climate (4)
  - Interaction with firms in the same and/or related industries (2)
3. *(Optional- for employers) Do you have plans to maintain or expand your business in Tigard? If not, will you relocate within the region or elsewhere? Why or why not?*

Most employers who were interviewed said they plan to maintain their current location but are unlikely to expand. Two others said they hope to expand as the economy improves. Reasons for not moving include preferred location, access, and property ownership. One employer said a recent employee survey showed that most of their employees live near the business. One business owner said they may relocate when the current lease expires and relocate to a more thriving business district.

4. *What geographic area(s) do you think best define(s) Tigard's competitive market region for commercial office, retail and industrial development?*

Most interviewees responded to this question by identifying areas in the City that are thriving or successful employment districts. Four respondents felt that the Tigard Triangle is a particularly competitive market area within the city, especially for industrial and retail uses. One person felt strongly that the Triangle was not as competitive as the Hunziker area. Washington Square and the surrounding area were cited twice as being competitive for retail. Other areas mentioned by one person included Oregon Business Park, PacCorp and the area between Highway 99W and Scholls Ferry Road.

5. *The City is interested in redevelopment in its downtown and along the Highway 99W corridor, developing a mixed-use district in the triangle south of Highway 99W and north of Highway 217, and adding more neighborhood commercial uses to meet local needs. Do you agree with these priorities? Why or why not? Are there other areas or corridors the City should focus on?*

Most respondents agreed with these priorities, though several cautioned against development that would compound existing transportation problems (particularly along Highway 99W). There was support for revitalizing downtown by adding new businesses and destinations; including mixed uses, parks and housing that contribute to a unique identity for the City. There was also a good deal of support expressed for improving the Triangle by adding services and diversifying the types of businesses there with available land. Other ideas for focused efforts included the Tiedeman/Greenburg area, the area north of Highway 99W and in the Oak Street or Locust Street areas by Washington Square.

6. *What can Tigard do locally to complement the regional and state economy?*

Several respondents felt that improvements to the transportation network are important to support the Tigard economy. This included improving conditions for vehicle traffic, providing access to alternative transportation facilities such as bike lanes and light rail, and working with regional agencies (e.g., JPACT) to solve transportation problems. Two respondents suggested that the City needs an economic development department and/or active business recruitment by the mayor, city manager and economic development staff. Other ideas included lower taxes, incentives to start a business or re-locate in Tigard, and grants for small businesses. Two respondents recommended continuing to improve upon the current level of service and responsiveness of City building and planning staff. One suggested retaining large industrial tracts to attract potential employers.

7. *What types of land and/or economic development actions or incentives are most needed in the City to nurture job growth and private investment?*

Respondents' most common suggestion was for the City to improve infrastructure – particularly transportation. Others suggested lowering taxes and strategically reducing system development charges (SDCs) for small businesses or other potential employers. Another suggested using enterprise zones or urban renewal areas to capture future tax revenues. Two others emphasized the importance of diversifying local businesses and professional services, particularly downtown.

8. *What actions should be taken by the City to create a more balanced and sustainable community?*

Interview respondents had several ideas about how to create a balanced and sustainable community. These include diversifying the types of business in the city, adding more transportation options and creating mixed-use districts. Two people said that the City needs to focus its efforts and build a distinct identity and greater sense of community, including supporting local business and adding more commercial services to residential areas. Others suggested creating affordable housing and mixed-use districts near commuter rail and future light rail. Two respondents noted that they thought the City is doing well with its current efforts.

9. *Along those lines, the City wishes to better balance jobs and housing. What types of housing do you think are most needed?*

While three interviewees responded that the current mix of housing is adequate, others suggested the need for a more diverse housing stock. Specific needs include moderate to low-income housing in or near downtown and commercial services, second-floor residential, condominiums and small lot or zero lot line homes. A few respondents suggested siting mixed-income housing near transit routes.

10. *What business clusters exist or should exist in Tigard? What can the City do to build and strengthen these clusters?*

Most interview respondents said that Tigard does not have business clusters other than some collection of general services and industry. One identified a cluster of finance and professional services. Several felt that Tigard has a good diversity of businesses and does not need to build clusters. Others suggested that the City could encourage clusters by recruiting a large company so that supporting organizations follow, or by acquiring and consolidating large parcels to sell to a major employer. One respondent recommended the City find a niche such as specialty medical, technical or manufacturing that does not compete with existing retail establishments including Washington Square.

11. *What opportunities and challenges are there to expanding the traded sector in Tigard? What goods and services could be produced locally rather than imported, and what could be exported?*

Most respondents did not have an answer for this question. One suggested that all services are imported and another suggested polling the manufacturing sector to identify existing goods and services offered in Tigard. Another interviewee pointed out that there is a great deal of vacant Class A and B office and industrial space, which is both a challenge and an opportunity for the City to attract new industry and business.

12. *Are there certain goods or services that you think are missing in the City of Tigard today?*

Goods and services that interviewees said were missing from Tigard include downtown grocery and retail, upscale restaurants and neighborhood commercial services. Others suggested that Tigard needs light rail or bus rapid transit as well as more parks and trails. One recommended that Tigard develop a unique identity based on neighborhood and housing design in order to compete with the large surrounding retail and cited Sierra Madre, CA as a successful example.

13. *Is there anything else you'd like to add?*

Interview respondents offered the following closing comments:

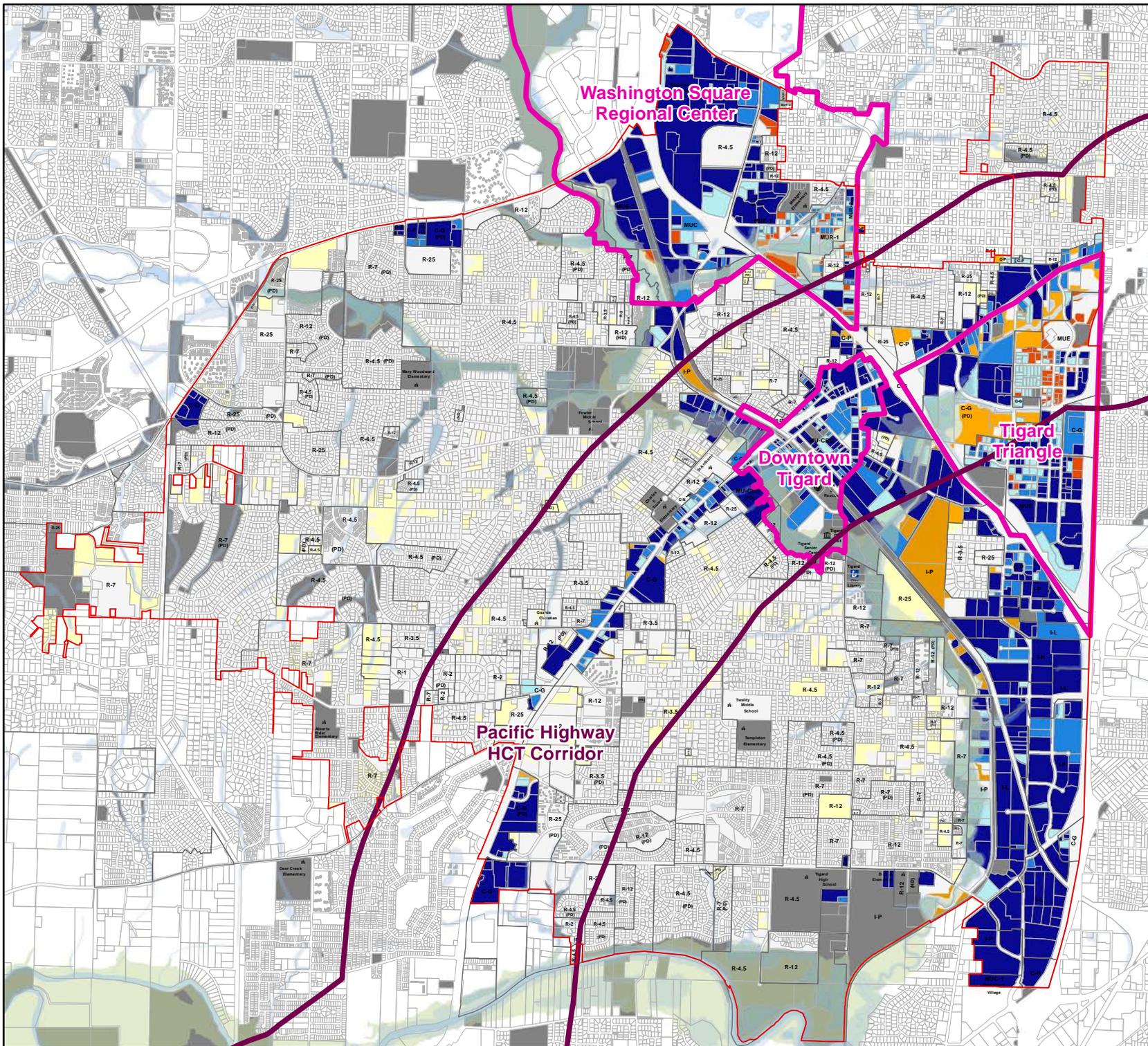
- One person stated that he is frustrated with the lack of economic development activity on the part of the City.
- Tigard has the opportunity to be a good example for a small city. Improve transportation options and get people off the freeways while maintaining mobility in and between towns.
- The City needs to be efficient to support businesses. Be prepared for the economic upturn. Keep an eye on the planning department and have a contingency plan to respond to an increase in business activity (e.g., hire contractors or new staff).
- Be sure to “over-communicate” this and other City projects. Explore and use a variety of communication media, including mail and social media.
- It is great that the City is doing this type of outreach and planning.
- Tigard's city council members toured Vancouver, BC a few years ago to look at urban planning and transportation issues. The trip, hosted by Metro, was very beneficial in generating ideas on how to meet these challenges.

### **List of Interviewees**

1. Kirsten Alvares, Gerber Legendary Blades
2. Jonae Armstrong, Washington Square
3. Mark Ellsworth, Economic Revitalization Team
4. Donald Fox, Fox Chiropractic Clinic
5. Mike Marr, Tigard Central Business District
6. Debi Mollahan, Tigard Area Chamber of Commerce
7. Bonnie Nakashimada, George Fox University
8. Jonathan Schlueter, Westside Economic Alliance
9. George Specht, Specht Properties
10. Eric Sporre, PACTrust/Oregon Business Park
11. Mike Stevensen, B&B Printing
12. Eric Turner, GVA/Kidder Matthews

# Appendix J: Buildable Lands and Redevelopment/ Refill Potential

City of Tigard  
Oregon

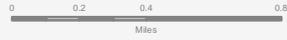


- City Limits
- Zoning
- Taxlot Boundary
- Wetland
- Water
- Stream Corridor
- 100 yr Floodplain
- Buildable Lands**
- Commercial
- Industrial
- Mixed Use
- Residential
- Redevelopment Potential**
- Improve\_Land**
- High
- Moderate
- Low
- Government Owned Land

The inventory presented is based on specific assumptions and was formulated over a four year period. The inventory should not be considered an exhaustive list of what is not available for development, but a static representation based on the available data. Inclusion does not mean a property will develop or confers a mandate to do so, as exclusion does not prevent a property from developing in the future. For purposes of this inventory, buildable lands were identified as property outside of Title 3 lands that are:

1. Fully vacant: undeveloped, privately-owned parcels
2. Partially vacant: developed, privately-owned parcels with 1/4 acre or more of the parcel vacant

\*\* The information represented on this map is current as of January 1, 2010. Revisions will be made as new decisions or amendments occur to alter the content of the map.



Source: City of Tigard  
Map Data: Business Center  
Cartography: Community Development Dept  
City of Tigard  
October 2010

This map was derived from several databases. The City cannot accept responsibility for any errors. Therefore, there are no warranties for this product. However, any notification of errors would be appreciated.

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