

# Appendix B

## *Task 2: Existing and Future Conditions*

Project Memo 2: Existing and Future Conditions – January 9, 2012

- Technical Memo: Existing and Future Transportation Conditions – September 19, 2012
- Technical Memo: South Albany Public Facilities – October 6, 2011
- Revised Technical Memo: Assessment of Environmental Conditions – January 10, 2012 (original draft dated September 16, 2011)
- Technical Memo: South Albany Area Plan Archeological Research – September 20, 2011

Revised Project Memo 3: Market Analysis – January 20, 2012  
(original draft dated September 22, 2011)



# Memorandum



**To:** Heather Hansen and Greg Bryne  
**From:** Joe Dills, AICP  
**Copies:** David Helton, SAAP Project Team  
**Date:** January 9, 2012  
**Subject:** South Albany Area Plan - Existing and Planned Conditions

**Project No.:** 16056

## Introduction

The purpose of this memorandum is to summarize existing and planned conditions in the South Albany Area Plan project study area. It fulfills Task 2.1 of the project scope of work.

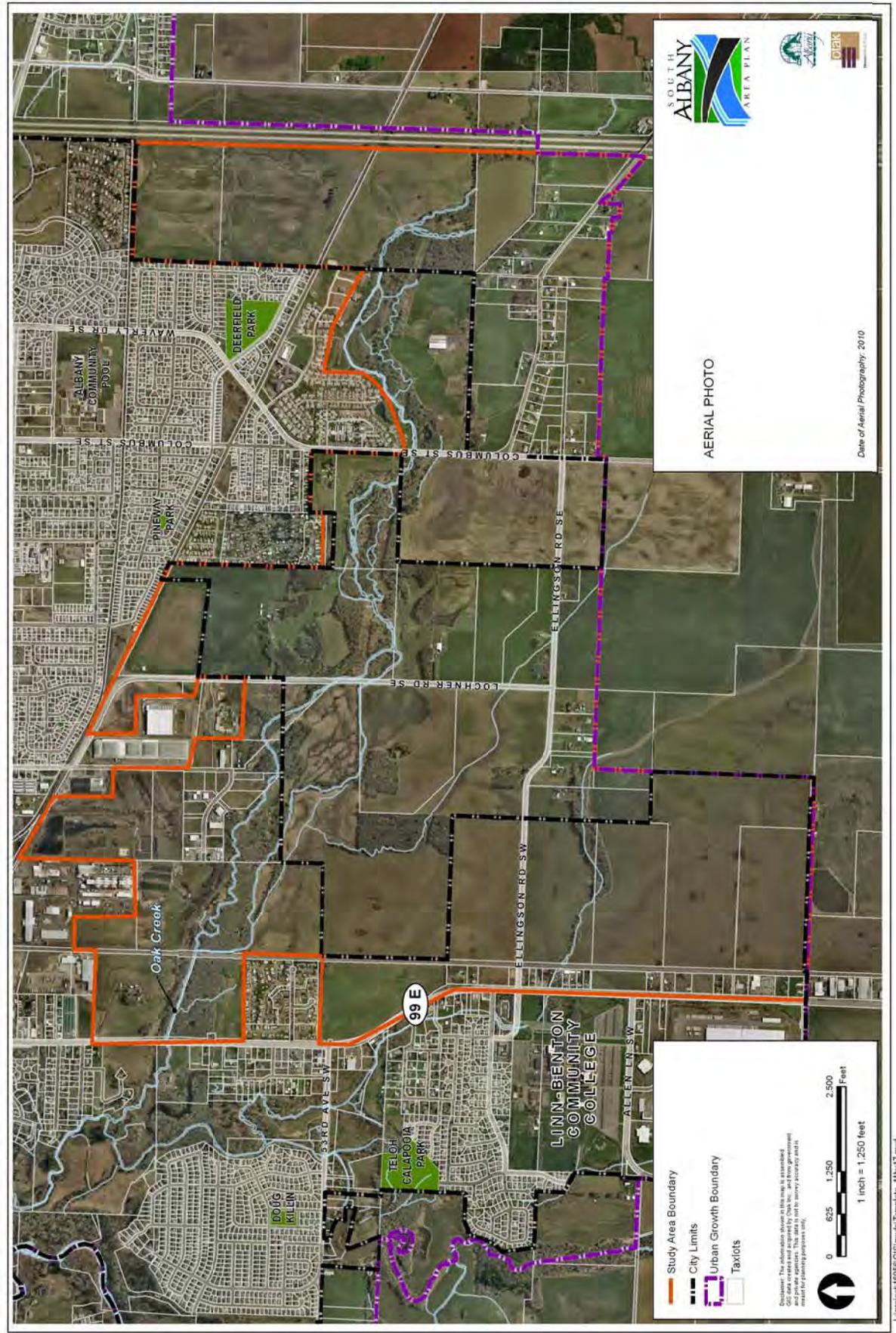
This memorandum addresses land use, transportation, public facilities, environmental conditions, parks and open space, archeological resources, and planned growth. Buildable lands are addressed in a separate memorandum. Four of the topics (transportation, public facilities, environmental conditions, archeological resources) have more extensive technical memoranda, listed in Appendix A and published separately. A market analysis has also been prepared (see Appendix A).

## Land Use

The study area is 1,957 acres and contains Albany's largest supply of undeveloped land, as shown on the aerial photo on page 2. This area is approximately 48 percent (943 acres) inside the City Limits and 52 percent (1,014 acres) outside the City Limits. Ownerships are shown on the map on page 3.

Land use along the Highway 99E corridor is a mix of small businesses, the Target Distribution Center, Linn-Benton Community College, and residential areas ranging from low to medium-density. To the east of the Highway 99E corridor, rural residential homes, farms and open space are the primary land uses within the study area. North of the study area there are industrial users and residential areas ranging from low-density neighborhoods to the Mennonite Village community (retirement living). Interstate-5 and farms exist to the east, outside the Urban Growth Boundary (UGB). Farms are also the predominant land use south of the study area. The wooded areas of Oak Creek and the oak groves north of Ellingson Road are key landscape features.

**Heather Hansen and Greg Bryne**  
*South Albany Area Plan - Existing and Planned Conditions*





All properties in the study area are within the UGB. Inside the City, City zoning applies. Outside the City (and within the UGB), each parcel has a City Comprehensive Plan designation and County zoning designation. Prior to annexation, the City and County coordinate on land use planning and development review. When lands are annexed, City zoning is applied.

The map on page 5 illustrates the City's zoning inside the City Limits and the City Comprehensive Plan designations outside the City within the UGB. Three Comprehensive Plan designations are applicable outside the City Limits: Urban Residential Reserve (URR), Open Space (OS), and a 1 acre area of Public and Semi-Public Land. The purpose statements for URR and OS are described below (*Source: Albany Comprehensive Plan, pages 9-9 to 9-11*).

#### **URBAN RESIDENTIAL RESERVE:**

Identifies areas between the developed urban area and the Urban Growth Boundary within which a variety of residential zones may be permitted to accommodate all needed housing types without a Plan change. All zoning decisions will be based upon criteria as specified in the Development Code. However, the three following policies will be utilized in converting Urban Residential Reserve (URR) land to a particular residential zoning classification:

1. The average developed density within the URR designation will be up to 35 units per acre.
2. The City will at all times maintain at least a 5-year supply of land designated for low-, medium-, and high-density residential uses.
3. Land within the URR designation will be changed to low- and medium-density Plan designations if such changes are needed to develop accurate 5-year capital improvement plans involving any such area or, in some cases, upon annexation to the City.

In addition to residential uses, it is anticipated that approximately 20 to 50 acres of the Urban Residential Reserve land will be utilized for neighborhood commercial and office professional uses to 2025. Approximately 100 acres will be needed for new school and park sites to 2025.

#### **OPEN SPACE:**

Identifies and protects areas where development is infeasible or undesirable and where it is in the public interest to protect lands for the maintenance of natural drainageways and flood channels, to protect fish and wildlife habitats, to enhance scenic and historic areas, to protect natural resources, and to protect potential recreation trails and park sites. The principal private uses of these areas will include grazing and crop production, and recreation and open space uses within private developments.



Albany also has a Comprehensive Plan designation titled Village Center which may be designated as part of the South Albany Area Plan. It is not currently designated within the study area, but has been discussed for the area. The Comprehensive Plan describes Village Center as follows:

**VILLAGE CENTER:**

Provides for a mixture of uses to serve nearby neighborhoods. These uses must include retail and residential uses and may include offices, community and personal services, and live-work units. Development within a Village Center will be pedestrian friendly, fit the desired scale and character of nearby neighborhoods and prevent the appearance of strip commercial development. Within the Village Center Plan designation there will be at least two zones. One is a mixed-use commercial zone; the other is a medium- to high-density residential zone that provides a mix of housing choices. In order for additional land to be designated Village Center, applicants must demonstrate the need for the Village Center in a particular location and what residential populations it is intended to serve.

The following are the applicable zoning districts within the study area.

RS-5—RESIDENTIAL SINGLE-FAMILY DISTRICT. The RS-5 District is intended primarily for low- to moderate-density, single-family development. The average minimum detached single-family lot size is 5,000 square feet.

RS-6.5—RESIDENTIAL SINGLE-FAMILY DISTRICT. The RS-6.5 District is intended primarily for low-density, urban single-family residential development. The average minimum lot size is 6,500 square feet.

RM—RESIDENTIAL MEDIUM-DENSITY DISTRICT. The RM District is primarily intended for medium-density, residential urban development. New RM districts should be located on a collector or arterial street, or in Village Centers. Development may not exceed 25 units per gross acre.

RMA—RESIDENTIAL MEDIUM-DENSITY ATTACHED DISTRICT. The RMA District is intended primarily for medium- to high-density, urban residential development. All units, whether single- or multiple-family, shall be attached. New RMA districts should be located on a collector or arterial street, or in Village Centers. Development may not exceed 35 units per gross acre.

OS – OPEN SPACE DISTRICT. The OS District is intended for the establishment, continuation, and preservation of agricultural uses, park and recreation areas, wildlife habitats, wetlands, natural areas, and other uses that do not involve the construction of structures other than minor facilities that might be required to conduct the principal use. Uses that are allowed in the OS district are listed following the Schedule of Permitted Uses, and do not appear in the Schedule.

NC – NEIGHBORHOOD COMMERCIAL DISTRICT. The NC district is intended primarily for small areas of retail establishments serving nearby residents' frequent needs in convenient locations. The NC District is typically appropriate for small clusters or service centers located at intersections within residential neighborhoods. Businesses should fit into the residential pattern of development and not create land use, architectural, or traffic conflicts. Generally, uses located within NC districts should have as their primary market area the population within a one-half mile radius.

RC – REGIONAL COMMERCIAL DISTRICT. The RC district is intended primarily for developments that serve the wider Albany region. RC allows a wide range of retail sales and service uses, and is typically appropriate for developments that require large sites near Interstate 5. Design guidelines, building location, and front-yard landscaping will provide an enhanced community image along major transportation corridors. These uses often have significant impacts on the transportation system. Sound and visual buffers may be required to protect nearby residential areas. RC districts may not be appropriate in all locations.

OP – OFFICE PROFESSIONAL DISTRICT. The OP district is intended to provide a vertical or horizontal mix of professional offices, personal services, live-work, residential, and limited related commercial uses in close proximity to residential and commercial districts. The limited uses allowed in this district are selected for their compatibility with residential uses and the desired character of the neighborhood. OP is typically appropriate along arterial or collector streets as a transitional or buffer zone between residential and more intense commercial or industrial districts.

IP – INDUSTRIAL PARK DISTRICT. The IP district is intended primarily for light manufacturing, high-tech, research and development, institutions, and offices in a quality environment. Uses are characterized by attractive building architecture and landscaped yards and streetscapes, and the absence of objectionable external effects. The district is designed for industrial and business parks containing offices together with clean, non-polluting industries. IP is located along or near highly visible corridors to provide a positive image and a transition to residential or natural areas from heavier industrial uses.

LI – LIGHT INDUSTRIAL DISTRICT. The LI district is intended primarily for a wide range of manufacturing, warehousing, processing, assembling, wholesaling, specialty contractors, and related establishments. Uses will have limited impacts on surrounding properties. This district is particularly suited to areas having good access to highways and perhaps to rail. LI may serve as a buffer around the HI district and may be compatible with nearby residential zones or uses.

HI – HEAVY INDUSTRIAL DISTRICT. The HI district is intended primarily for industrial uses and support activities that are potentially incompatible with most other uses, and which are characterized by large amounts of traffic, extensive shipping of goods, outside

storage or stockpiling of raw materials, by-products, or finished goods, and a controlled but higher level of noise and/or pollution. This district is located away from residential areas and has easy access to highways and perhaps to rail.

The following table summarizes the land areas within each Plan designation and zoning district:

<b>Table I: Comprehensive Plan and Zoning**Comprehensive Plan Designation (Outside City)</b>	<b>Acres*</b>	<b>Percent*</b>	<b>Subtotals*</b>
Open Space	255	14%	
Public and Semi-Public	1	0%	
Urban Residential Reserve	729	40%	
			985
<b>Zone District (In City)</b>			
HI -- Heavy Industrial	28	2%	
IP -- Industrial Park	309	17%	
LI -- Light Industrial	122	7%	
NC -- Neighborhood Commercial	12	1%	
OP -- Office Professional	1	0%	
OS -- Open Space	157	9%	
RC -- Regional Commercial	36	2%	
RM -- Residential Medium-Density	3	0.2%	
RMA -- Residential Medium-Density Attached	0.2	0.0%	
RS-5 -- Residential Single-Family	89	5%	
RS-6.5 -- Residential Single-Family	99	5%	856
<b>Total</b>	<b>1,841</b>		<b>1,841</b>

\*Does not include right-of-way

\*\* Acreages are based on the initial study area of 1,919 acres

The study area is characterized by large parcel sizes as compared to the urbanized areas of Albany. There are 198 total tax lots in the study area. Key parcel metrics are summarized as follows:

- East Sub-area - East of Lochner Road. There are 110 parcels, six of which are greater than 50 acres. Along Seven Mile Lane, small parcels average 1-2 acres.
- West Sub-area - West of Lochner Road and north of the planned Ellingson Road realignment. There are 45 parcels, three of which are greater than 50 acres. There are 35 parcels that are five acres or less.
- Southwest Sub-area - Southwest of the planned realignment of Ellingson Road. There are 43 parcels, six of which are greater than 50 acres. In this sub-area, 35 parcels are less than five acres.

## Transportation

The City of Albany has a very recently updated Transportation System Plan, which is a key base of planning information for the South Albany Area Plan.

The Transportation System Plan (TSP) transportation improvement project list was based on the *Most Likely Land Use Scenario* developed in the TSP update process. This land use scenario included increased intensity in the SAAP Study Area, as compared to the Comprehensive Plan, to make this scenario consistent with the Oak Creek Refinement Plan.

The *Most Likely Land Use Scenario* assumed an additional 233 households above the 2030 base case model in the South Albany area (TAZs 332, 333, 334, 335, 337, and 339). The households were assumed to be developed as a mix of medium-density residential along Ellingson Road and Lochner Road, and low-density residential elsewhere. Comprehensive Plan amendments consistent with these assumptions were completed by the City during the TSP update. A table documenting the assumptions of the Comprehensive Plan Amendment is provided below along with a map of the Oak Creek Refinement Plan Area.

The 2030 households, population and employment forecast for the *Most Likely Land Use Alternative* used to develop the TSP are shown below.

**Table 2: Most Likely Land Use Alternative Forecasts**

	Households			Population			Employment		
	2006	2030	Annual Growth	2006	2030	Annual Growth	2006	2030	Annual Growth
<b>Within UGB</b>	18,875	24,875	1.3 percent	47,630	60,495	1.1 percent	19,060	25,975	1.5 percent
<b>Outside UGB</b>	2,050	2,820	1.6 percent	5,350	7,105	1.4 percent	3,645	4,670	1.2 percent
<b>Total</b>	20,925	27,695	1.3 percent	52,980	67,600	1.1 percent	22,700	30,645	1.5 percent

*Source: City of Albany*

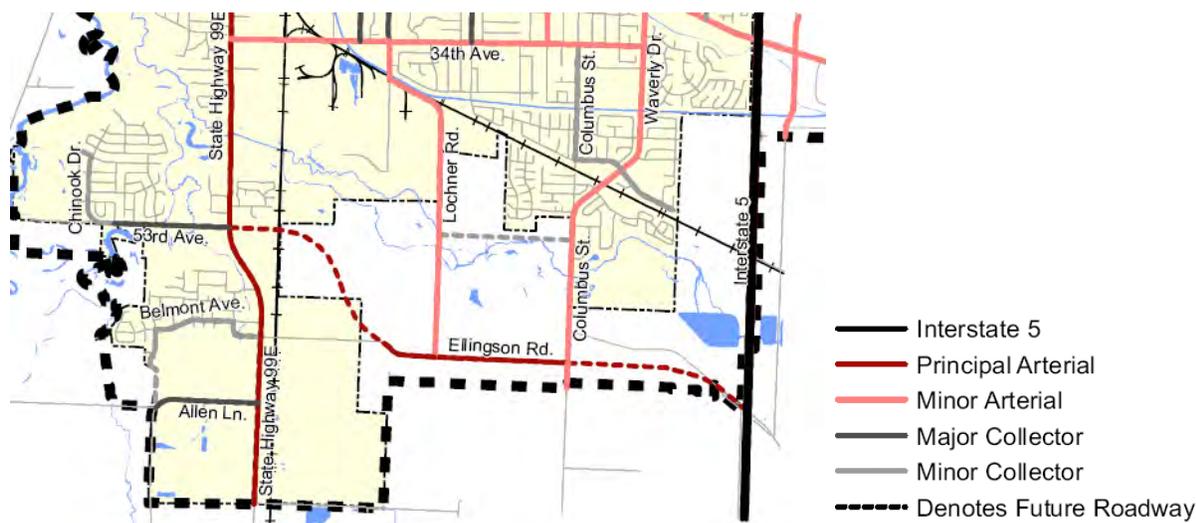
The growth assumptions of the *Most Likely Land Use Scenario* in the South Albany Project Study Area are summarized in the table below. This is based on an estimate prepared by the City of Albany, selecting TAZs that approximate the study area boundary. As shown in the table below, the SAAP study area is forecast to have a significantly higher growth rate than the City's average growth rate, and includes a substantial portion of the City's overall projected growth.

**Table 3: South Albany Project Study Area Forecasts**

	Households			Population			Employment		
	2006	2030	Annual Growth	2006	2030	Annual Growth	2006	2030	Annual Growth
<b>South Albany</b>	115	1,576	11.5 percent	338	3,741	10.5 percent	431	2,058	6.7 percent

Source: City of Albany

The future roadway functional classifications and general locations and alignments of future roadways are shown below. Currently, Ellingson Road extends to the west and connects with OR 99E. With the construction of the 53<sup>rd</sup> Avenue Extension (which includes a railroad overpass), the existing railroad crossing at Ellingson Road will be closed to vehicles, pedestrians, and bicycles. Ellingson Road from OR 99E to the railroad will serve local access only and Ellingson Road from the railroad east to the new alignment will also be downgraded to a “local roadway” in the functional classification plan. Closure of the Ellingson Road railroad crossing to pedestrians and bicycles will result in out of direction travel that is significant for pedestrians and bicycles to use the 53<sup>rd</sup> Avenue Extension from Linn-Benton Community College, neighborhoods west of the SAAP study area, or from the south on Highway 99E. Source: Figure 7-4 of TSP

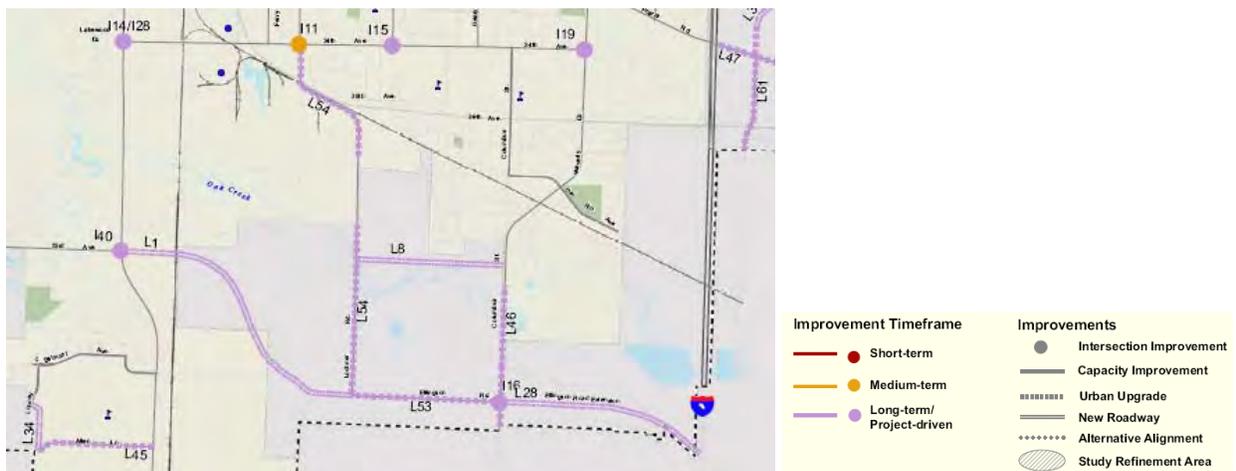


Year 2030 two-way, weekday PM peak hour traffic volumes on the roadways in the Preferred Plan roadway network (and based on the *Most Likely Land Use Scenario*) in the study area are shown below. The 53<sup>rd</sup> Avenue Extension/Ellingson Road and Columbus Street/Waverly Drive will be the primary access points to the SAAP area. Source: Figure 7-2 of TSP.



As part of improvements to Highway 34 south of the study area, Columbus Street is planned to be converted to a right-in/right-out access only at Highway 34. This may change the travel pattern to/from the SAAP study area and increase reliance on the 53<sup>rd</sup> Avenue Extension and Highway 99E. The travel demand model used in the development of the TSP needs to be reviewed to determine if this network modification was assumed at the time the TSP was being developed. If not, the traffic volumes in the TSP intersection analysis to be used in a future phase of this project may need modification.

The roadway projects included in the TSP within the study area to meet the future needs are shown below and in Table 4. *Source: Figure 7-1 of TSP*



The multi-modal projects included in the TSP within the study area are shown below and in Table 4.  
 Source: Figure 7-5 of TSP



Improvement Timeframe		Improvement Type	
	Short-term		Crossing Improvement
	Medium-term		Bike Project
	Long-term/ Project-Driven		Pedestrian Project
			Multi-Use Path Project

**Table 4: TSP Projects Located in South Albany Area Plan**

ID	Project Name	Project Type	Timeline	Project Cost	Max SDC Growth Allocation	TSDC Funded
B19	38 <sup>th</sup> Avenue and 39 <sup>th</sup> Avenue	Bike Boulevard	Medium-term	\$ 106,000	100 percent	\$106,000
I11	34 <sup>th</sup> Avenue/ Marion Street	Intersection Control Change	Medium-term	\$345,000	100 percent	\$345,000
I14	OR 99E/34 <sup>th</sup> Avenue	Intersection Add Lane(s)	Long-term	\$192,000	32 percent	\$61,440
I16	Ellingson Road/ Columbus Street	Intersection Control Change	Long-term	\$345,000	100 percent	\$172,500
I28	OR 99E/34 <sup>th</sup> Avenue	Intersection Add Lane(s)	Long-term	\$456,000	32 percent	None
I40	OR 99E/53 <sup>rd</sup> Avenue	Intersection Add Lane(s)	Long-term	\$550,000	38 percent	\$209,000
L1	53 <sup>rd</sup> Avenue Extension	New Road or Alignment	Long-term	\$17,986,000	54 percent	None
L8	Lochner-Columbus Connector	New Road or Alignment	Long-term	\$2,742,000	100 percent	\$548,400
L28	Ellingson Road Extension	New Road or Alignment	Long-term	\$4,430,000	61 percent	None
L46	Columbus Street	Urban Upgrade	Long-term	\$2,727,000	49 percent	None
L53	Ellingson Road	Urban Upgrade	Long-term	\$5,847,000	49 percent	None
L54	Lochner Road	Urban Upgrade	Long-term	\$5,756,000	44 percent	None
M2	Oak Creek Trail	Multiuse Path	Long-term	\$2,645,000	70 percent	\$200,000
M9	Lebanon Trail	Multiuse Path	Long-term	\$581,000	70 percent	None
M12	99E/Oak Creek	Crossing Improvement	Long-term	\$129,000	70 percent	\$90,300
Short-term Costs				\$0		
Medium-term Costs				\$451,000		
Long-term Costs				\$44,386,000		
Total Costs				\$44,837,000		

As shown above, nearly \$45,000,000 of project needs were identified in the TSP within the SAAP study area. The majority of the costs are to address long-term needs meaning that the projects are needed to accommodate future growth, not existing deficiencies.

### Public Facilities

The City of Albany has three master plan documents in place related to public facilities: Water Facility Plan (2004); Wastewater Facility Plan (1998); and Stormwater Master Plan (1988). Of these plans, only the Water System Master Plan is up to date. The Wastewater and Stormwater Master

plans are in the process of updating over the next two years. The Water Facility Plan has also had periodic updates through technical memoranda over the last seven years. City staff was interviewed for current information related to each of the facilities.

### **Water Facility Plan**

Water supply for the City of Albany is adequate to serve new development within the urban growth boundary. New development in the South Albany area will be possible with the extension of transmission lines, including a 24- to 16-inch diameter main in Ellingson Road, and 12-inch mains in Lochner Road and Columbus Street. Additional storage and pumping capacity will be required to serve the study area. The current plan is to construct a two phase reservoir and pumping station on Ellingson Road. According to a memo from CH2M Hill (2007), the first phase of the Ellingson Road reservoir and pump station will be 5 million gallons (MG) of storage with a 7.5 million gallon per day (MGD) pumping capacity. Construction of this reservoir and pump station will allow the 34<sup>th</sup> Avenue Station, which is currently in need of significant upgrade to remain in service, to be abandoned. The remainder of development in the South Albany area will be served by 8-inch diameter distribution mains.

### **Wastewater**

The majority of the South Albany study area lies within the Columbus interceptor basin. Future development will be served by a series of gravity mains, force mains and lift stations that would convey sanitary sewer flows to the Columbus Street interceptor and then to the Albany Wastewater Treatment Plant (WWTP). This interceptor has available capacity to convey additional flows from the development of the South Albany Area. Flows at the WWTP vary greatly throughout the year due to infiltration and inflow (I/I) entering the collection system from groundwater and surface runoff sources. The plant occasionally operates above hydraulic capacity during wet weather periods. Processing of bio-solids at the plant is at capacity and may restrict large new industrial development, unless alternate methods of disposal are found. The City is working to gradually reduce I/I through a lateral replacement program and improvements to its collection system.

The Wastewater Facility Plan (1998) is very dated, and believed to be obsolete in regards to the South Albany area. A new Wastewater Facility Plan is under development. Discussions with City staff indicated that additional local lift stations will be required to convey wastewater to the Columbus Street interceptor. Currently, the Oak Creek lift station (within the study area) pumps to the 34<sup>th</sup> Avenue lift station. The Marion Street lift station (northern portion of the study area) operates at capacity, and the 4-inch force main to Columbus is under-sized. With development of the South Albany area, a new force main from the Oak Creek lift station east to the Columbus Street interceptor would be constructed, with a connection for the Marion Street lift station. These projects are not currently identified in the CIP. Other local lift stations will be identified in the Wastewater Facility plan update.

## **Stormwater**

Albany falls into two subbasins as defined by Oregon Department of Environmental Quality, the Upper Willamette and the Calapooia. The Calapooia River flows through the southwestern portion of the city, and enters the Willamette River within the Albany city limits. Other waterbodies within the City's jurisdiction include the lower portions of Oak, Periwinkle, Cox, Burkhart, and Truax Creeks, as well as Thornton Lake in North Albany. All of these smaller waterbodies are considered part of the Upper Willamette subbasin for the purposes of this Plan. The streams and rivers within the city limits are receiving waters for stormwater runoff, with the exception of the Albany-Santiam Canal.

The Stormwater Master Plan dates to 1988 and does not reflect the current thinking for management of stormwater for the City. Over the course of the next two years, a new stormwater model and master plan will be developed for the City. This plan will include an assessment of the existing stormwater facilities and identification of short- and long-range improvement projects. The new plan will include more stringent detention and water quality standards, including an emphasis on the use of Low Impact Development (LID) practices. New development will be required to address hydromodification as opposed to the more traditional method of managing peak stormwater discharges. Lastly, the plan will facilitate development of System Development Charges (SDCs) for stormwater that will help fund future projects.

The urban growth boundary includes at least 14 different drainage basins, the majority of which extend beyond the boundary and into the surrounding County. Albany has a number of storm drainage problems related to urbanization and inadequate conveyance (both piped and channel) system capacities. The major waterway flowing through the South Albany project study area, Oak Creek, is part of the largest drainage basin in the City.

The South Albany area is currently a patchwork of agricultural, low-density residential, wetlands, riparian zones, and a few small ponds and lakes. As urban development is added, proper planning for the management of stormwater runoff will be critical to minimize flooding, erosion, and siltation of existing waterways. The Stormwater Master Plan will provide specific guidance related to management of stormwater runoff as the South Albany Area is developed.

## **Environmental Conditions**

Based upon field observations and background research, the study area contains eight habitat communities. These habitats are listed below in order of dominance within the study area.

1. Agriculture, Pastures, and Mixed Environs (36.0 percent)
2. Agricultural Lands with herbaceous wetland inclusions (34.3 percent)
3. Westside Riparian Wetlands (11.0 percent)
4. Urban and Mixed Environments (10.7 percent)
5. Westside Oak Woodlands (3.9 percent)

6. Lakes, Rivers, Ponds, and Reservoirs (2.5 percent)
7. Herbaceous Wetlands (1.3 percent)
8. Westside Grasslands (0.3 percent)

The Agriculture, Pastures and Mixed Environments habitat community is the dominant habitat type within the study area and includes a broad range of agricultural uses including mowed, hayed and grazed fields, and associated structures including fences, roadsides, field borders, barns, outbuildings, and silos. This habitat type is not considered high quality habitat for sensitive wildlife or botanical species due to the amount of extensive ground disturbance associated with agricultural activities and frequent human presence. Agricultural lands with herbaceous wetland inclusions are the second most common habitat type in the PSA and do not support sensitive species within the PSA. They are also considered to be low quality habitat due to on-going agricultural activities and frequent human disturbances common to this habitat. However, if these areas are managed as herbaceous wetland (abandoned from agriculture), they have the potential to support such sensitive species as the Northern Pacific Pond Turtle, the painted turtle and Nelson's checkermallow.

The Westside Riparian Wetlands habitat community is associated with the Oak Creek riparian corridor that extends across the northern portion of the PSA. This habitat community may provide high quality habitat for sensitive species due to its connectivity and structure. Species such as the Northern Pacific Pond Turtle, the Painted Turtle, and Howell's montia; along with sensitive fish species have the potential to be present within this habitat type within the PSA.

The Urban and Mixed Environments, Low-Density Zone habitat community occurs at the "outer zone of the urban-rural continuum," (Johnson and O'Neil 2001). Within this community, there is typically 10 percent to 20 percent impervious surface and low-density, single-residence housing. This community also includes roads, fences, houses, and outbuildings. Low-density urban areas are not considered high quality habitat for sensitive wildlife species due to fragmented vegetation communities and the amount of human disturbance. It is unlikely that sensitive species with the potential to occur within the PSA would be present in this habitat type.

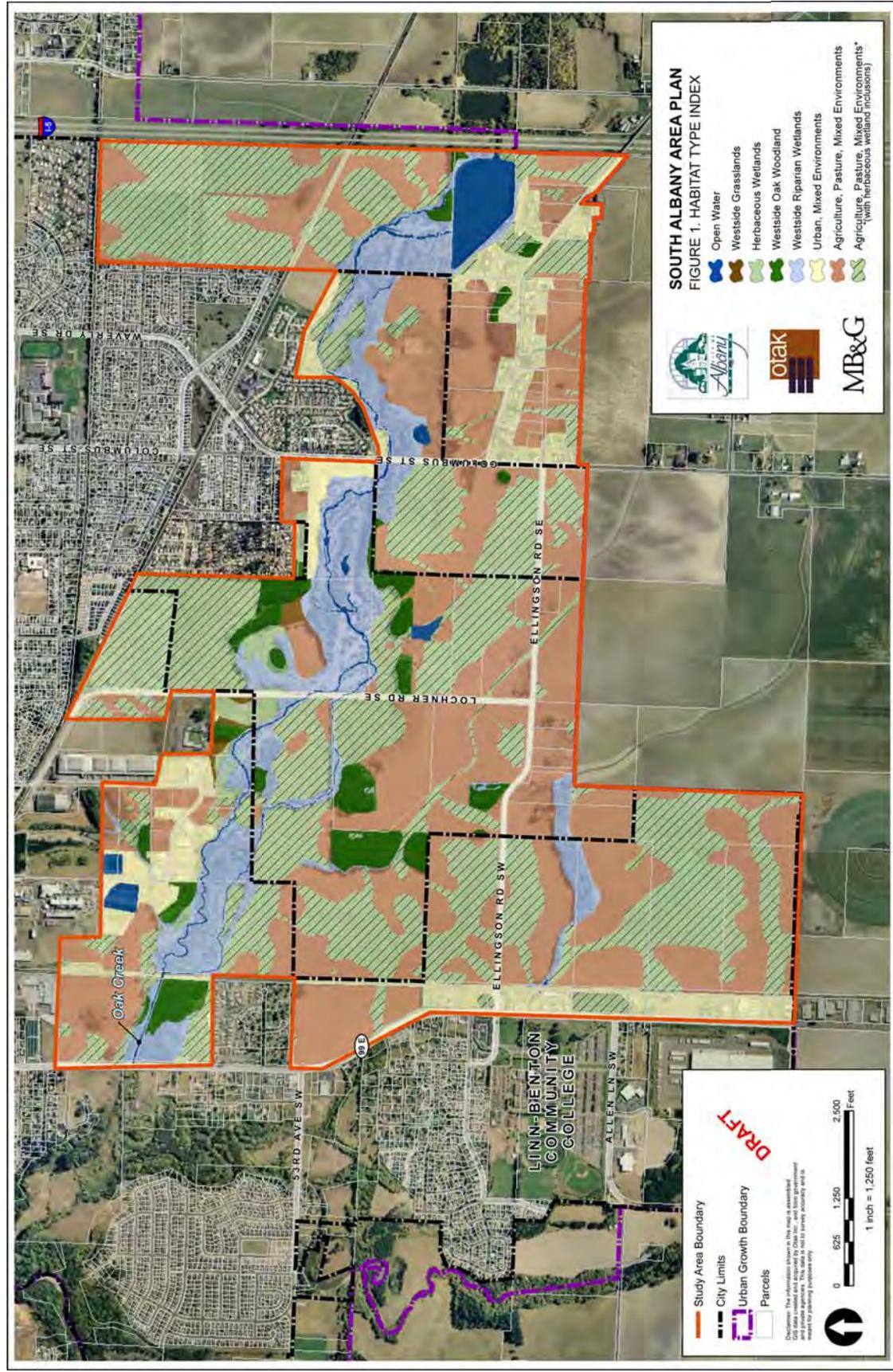
The Westside Oak Woodlands habitat community is located in small discontinuous pockets within the PSA and is dominated by deciduous broadleaf trees or a mixture of deciduous and coniferous species with moderately drained soils and water availability. Although oak woodlands demonstrate valuable habitat due to their rarity within the PSA, segmentation of this habitat type has diminished its overall ecological value. These habitats have the potential to support sensitive plant species such as Nelson's checkermallow, Kincaid's lupine, and thin-leaved peavine within the PSA.

The Lakes, Rivers, Ponds, and Reservoirs habitat community within the PSA include stream channels and areas of open water. The commercial retention ponds within the PSA are not considered to be high quality habitat. However, Oak Creek and Freeway Lakes are considered to be of higher ecological value and may support such species as the Northern Pacific Pond Turtle, the painted turtle, and Howell's montia, along with sensitive fish species.

The Herbaceous Wetlands habitat community encompasses approximately 1.3 percent of the PSA and includes emergent herbaceous plants that can be found in poorly-drained flats or depressions, often adjacent to stream channels or open water. This habitat community is considered to be of high quality habitat for sensitive species. Within the PSA, species such as the Northern Pacific Pond Turtle and Howell's montia have the potential to occur within this habitat type.

The Westside Grasslands habitat community occupies only a very small portion of the PSA (0.3 percent) and is generally grassland with less than 30 percent shrub canopy cover. This wildlife-habitat community is considered to be of moderate quality habitat for sensitive wildlife or botanical species due to the amount of fragmentation associated with agricultural activities and frequent human presence. However, these fragmented landscapes have the potential to support Kincaid's lupine, Meadow checkermallow, and thin-leaved peavine within the PSA.

In general, the City of Albany's Goal 5 significance designations for riparian and wetland areas corresponded to two habitat types developed in accordance to the Johnson and O'Neil (2001) wildlife habitat types: the Westside Riparian-Wetland (PFO) type and the Herbaceous Wetlands (PEM) type. Based upon office review of existing natural resources information and field observations, minor wetland additions were made to the original LWI (Pacific Source 1999), but these additions were in areas with low significance value such as agriculture or urban lands. In some developed areas, wetlands were removed from the LWI because the hydrology could no longer be supported.



## **Parks and Open Space**

The Albany Parks and Recreation Master Plan (May, 2006) is a comprehensive plan for Albany's park and recreation system. Selected components are summarized below:

- The plan assumed Albany would grow to 53,493 people by 2015.
- The plan includes a standard of 6.3 acres per 1,000 population (2.3 for neighborhood parks; 2.0 for community parks; 2.0 for Citywide parks).
- South Albany is noted as an underserved area for parks.
- The proposed park system recommendations included a Community Park and a Neighborhood Park within the study area. A proposed multi-use trail follows the Oak Creek corridor.

The project descriptions applicable to South Albany are:

### **Proposed Neighborhood Park (NP-5)**

A neighborhood park is proposed to serve Area #22 in southern Albany, which has been identified as a potential growth area. The recent annexation of the Henshaw property will likely contribute to development in this zone. The current population of Area #22 is 149 people, but it is expected to grow to 1,189 in the year 2015. The City should use dedicated land in this area to develop a neighborhood park in accordance to the guidelines presented in Chapter 4.

Recommendations for this site include:

- Develop a 3-acre site as a neighborhood park.

### **Proposed Community Park (CP-1)**

The Community Needs Assessment identifies a need for the following types of facilities commonly located in community parks:

- Sport fields (baseball, softball, soccer, football)
- Outdoor basketball court
- Skate park
- Picnic pavilion/large group picnic area
- Play area
- Open space for children's and family activities
- Dog park

- Community garden
- Internal pathways and trails

Some, but not all, of these facility needs (baseball/softball fields, dog park) will be met through the redevelopment of Timber Linn Park. For this reason, a new community park is proposed in south Albany (Area #22) to provide space for other facilities (soccer/football fields, skate park) and to make certain facilities (picnic pavilion, community-scale play area) more geographically accessible to residents living in this part of the City. The City should develop the community park in accordance to the guidelines presented in Chapter 4. In selecting a site, the City should consider opportunities to link the park to the proposed Oak Creek Greenway and evaluate the natural resource value of wetlands in this area for possible preservation.

Recommendations for this site include:

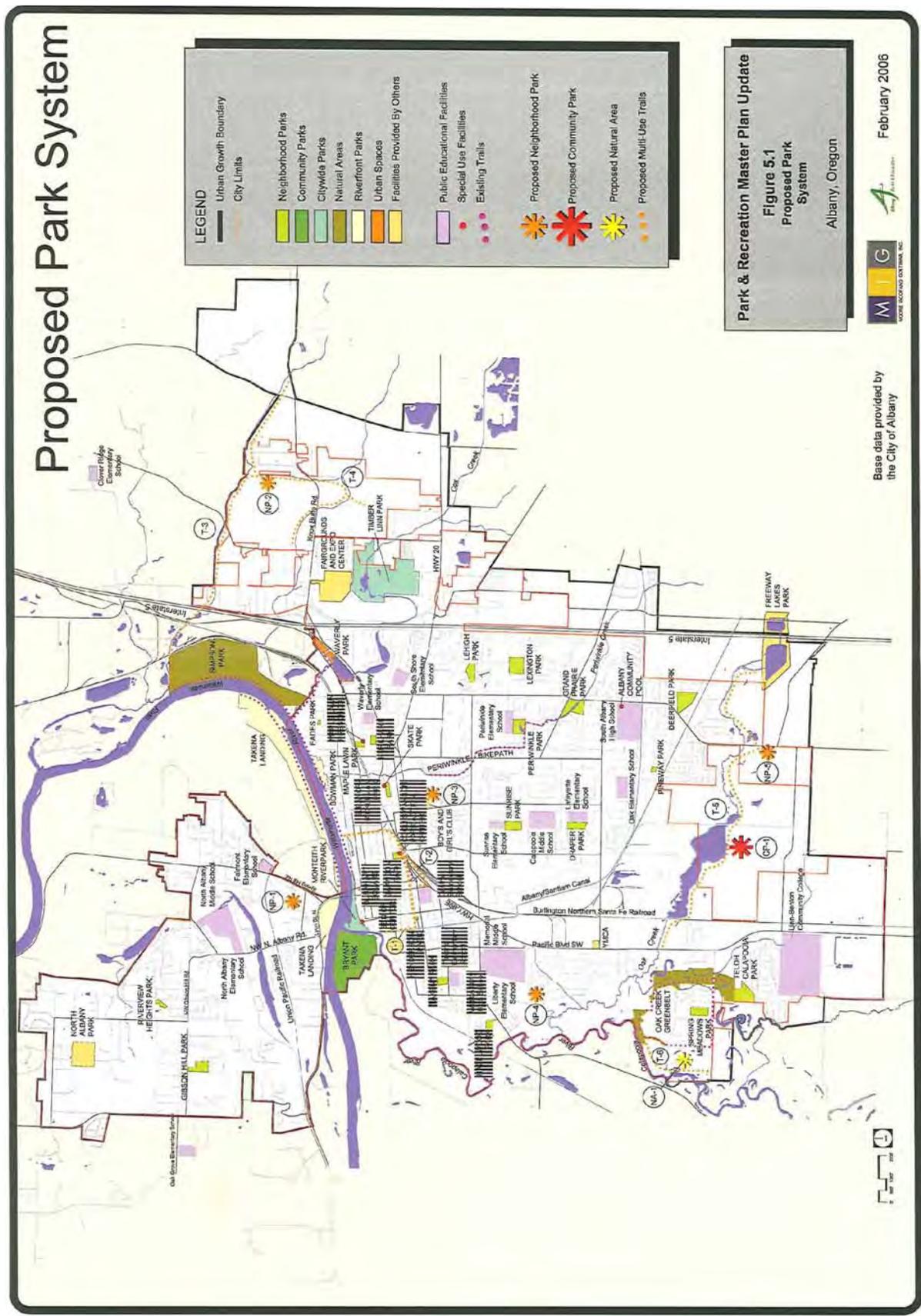
- Acquire a 40-acre site for a community park in south Albany.
- Develop a soccer field complex.
- Develop additional community park facilities as indicated by needs identified in the needs assessment.

#### **Oak Creek Greenway / Trail (T-5)**

Oak Creek crosses southern Albany, from Linn County's Freeway Lakes Park near Interstate 5 to the Calapooia River. The creek runs through many undeveloped areas and wetlands, and thus, may offer one of the best opportunities for a new greenway and extended trail within the city. A trail is proposed along the creek from Highway 99 on the west side to Freeway Lakes Park on the east side. The trail may have opportunities to connect the newly proposed neighborhood park (NP-5) to the proposed community park (CP-1). Also, a linkage may eventually be made to the existing Oak Creek Greenbelt, Teloh Calapooia Park, Spring Meadows Park, and the proposed natural area along the Calapooia River.

Recommendations for this site include:

- Acquire corridor and develop a 3.0 mile trail along Oak Creek connecting NP-5 and CP-1.



## **Archeological and Cultural Resources**

Overall, more than one-third of the proposed planning area has been previously surveyed for cultural resources. The location of archaeological sites in those areas that have already been surveyed revealed a strong correlation between past human occupation and the floodplain and terraces along Oak Creek and its tributaries. Aside from a few single isolated flakes, all of the other sites and isolated finds have been found on these floodplain and terraces. This pattern of site distribution is also repeated east of Highway 99, where a number of sites have been recorded on the terraces and floodplain along Oak Creek and the Calapooia River (Lebow et al. 1996; Thomas 1992). The available archaeological data suggests that the site distribution pattern observed within the areas surveyed will most likely extend into the areas of the proposed project that have not been surveyed. However, dense vegetation and the lack of erosion in some areas means sites may be difficult to locate during a surface survey, and in order to find these sites, it may be necessary to use subsurface discovery techniques.

Archaeological sites already recorded within the project area appear to be clustered at the 230-foot contour level and below. This elevation in the western portion of the project follows the terrace edge along Oak Creek, which is at approximately the 225-foot contour, with sites clustered upslope within 25- to 50-meters of that edge. Projections of likely site locations in the eastern portion of the project are more speculative, where no intensive surveys has been conducted, and where elevations are rising. It remains likely, however, that sites will most likely be found within 50 meters of creeks and wetlands.

An additional consideration is the discovery of a mound site (35LIN711) on the floodplain of Oak Creek indicates that the presence of prehistoric mound sites extends up the Oak Creek drainage. The presence of mound sites in the Willamette Valley has been reported by various interested parties since the arrival of Euro-Americans to the valley in the mid-nineteenth century. It has been estimated that over 450 mounds were situated along the Willamette River and its tributaries between Eugene and Albany (Roulette 1993). The location of mound sites along the Calapooia River, Oak Creek, and Muddy Creek was first documented in 1928 on a “Chart of Calapooia Prehistoric Mounds” compiled by W.P. Anthony. This map of 125 mound locations was based on information from a “survey” conducted by A. Blevins, Porter Slate, and Stewart Brock (Collins 1951:58, Plate I). Much speculation on the origins of these mounds, some of it quite fanciful, has been presented over the years. However, many of these speculations were based on the discoveries of relic collectors and it was not until the 1920s that the first professional investigations were conducted on mounds in the Albany-Tangent area (Strong et al. 1930). Based on their limited excavations, Strong, Shenk, and Steward concluded that the mounds were possibly artificial in construction and consisted of refuse material, along with artifacts and burials, placed on natural rises.

In the 1940s the Fuller and Fanning mounds were excavated along the Yamhill River by a private artifact collector and reported by William Laughlin. A large assemblage of artifacts, and around 60 human burials were removed from the excavation at those sites (Laughlin 1943). Laughlin also

conducted excavations at other mounds in the Harrisburg, Halsey, and Shedd areas in the 1940s (Laughlin 1941), and under the direction of Luther Cressman, researchers from the University of Oregon excavated two mound sites along the Long Tom River in the 1930s and 40s (Collins 1951; White 1975). In the 1960s through the 1980s, archaeologists from the University of Oregon again conducted excavations at mound sites in the Long Tom River drainage (Cheatham 1988; Cordell 1975; Miller 1970), and more recently excavations were conducted at a mound site along the Calapooia River in the early 1990s (Roulette 1993).

In Roulette's (1993) discussion of mound sites in the Willamette Valley, he suggests that mounds were focal seasonal resource production localities from which foodstuffs were processed for storage. Roulette (1993:18) proposes that the accumulation of this "form of secondary refuse aggregates" began around 2,000 years ago and that the continued reoccupation of these focal points on the landscape resulted in the recognizable appearance of mounded midden deposits that are commonly referred to as the Calapooia mounds.

Based on the archaeological evidence available for the planning area, there is a high likelihood for archaeological sites to be present within those areas of the project area that have not been surveyed for cultural resources. This is especially true for the floodplain and adjacent terraces along Oak Creek. Given the high probability of cultural resources in the project area, a comprehensive management plan should be implemented for locating and managing cultural resources prior to development.

## **Planned Growth**

As part of the City's TSP update in 2007, the City developed forecasts of population and employment growth for the City of Albany and allocated that growth to sub-areas within the City, including the South Albany area.<sup>1</sup> The TSP presented four alternatives for growth in Albany. For the SAAP, the team is using Alternative 4, the "most likely land use alternative." The City is using the forecasts from this alternative in other planning efforts and directed the team to use it as part of the SAAP project. It is consistent with the Balanced Development Patterns document.

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<sup>1</sup> This analysis used the forecasts from the City's TSP, rather than Linn County's adopted coordinated population forecast, which forecasts population for Albany through 2020, which is ten years short of the planning period used in this study.

Table 5 presents the forecasts for population and employment growth in the South Albany Area<sup>2</sup> and the City.<sup>3</sup> Table 5 shows growth of nearly 6,300 households in Albany over the 24-year period between 2006 and 2030, an increase of about one-third. Nearly one-quarter of these households (about 1,460 households) are projected to locate in the South Albany Area. Table 5 shows growth of more than 7,700 employees in Albany, an increase of about one-third. About 21 percent of these employees (1,600 employees) are projected to locate in the South Albany Area.

**Table 5: Population and Employment Forecast, South Albany and City of Albany, 2006 to 2030**

	South Albany Area	Within Albany City Limits	Outside City Limits; Inside UGB	UGB Total
<b>Households</b>				
2006	115	18,536	340	18,876
2030	1,576	24,900	250	25,150
Change 2006-2030				
Number	1,461	6,364	(90)	6,274
Percent	1270%	34%	-26%	33%
AAGR	11.5%	1.2%	-1.3%	1.2%
<b>Population</b>				
2006	338	46,610	1,020	47,630
2030	3,741	61,700	625	62,325
Change 2006-2030				
Number	3,403	15,090	(395)	14,695
Percent	1007%	32%	-39%	31%
AAGR	10.5%	1.2%	-2.0%	1.1%
<b>Employment</b>				
2006	431	22,903		
2030	2,058	30,643		
Change 2006-2030				
Number	1,627	7,740		
Percent	377%	34%		
AAGR	6.7%	1.2%		

Source: City of Albany, Transportation System Plan

Note: The South Albany Area includes the following TAZ: 324, 325, 326, 327, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 347, 348, 512, and 514.

<sup>2</sup> The forecast for the South Albany Area in Table 5 is based on a forecast of households and employment at for the Traffic Analysis Zones (TAZs) that approximate the South Albany Area. The South Albany Area includes the following TAZ: 324, 325, 326, 327, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 347, 348, 512, and 514.

<sup>3</sup> Table 5 shows households and population in Albany for: (1) the area within the Albany city limits and (1) the area between the city limits and the UGB (also called the “urbanizing” area. The number of households and populations in these two areas are added together in Table 5 to show households and population in the total UGB.

The employment forecast from the TSP only forecast employment growth within Albany’s city limits. As a result, Table 5 does not show an employment forecast for the UGB Total. It was reasonable for the TSP to forecast employment growth for the city limits, assuming that most growth in the area between the city limits and UGB will be used to accommodate residential growth.

Table 6 shows the population and employment forecast for the 20-year forecast period used in the project: 2010 to 2030. The forecast in Table 3 uses the forecast in Table 5 to estimate average annual growth and to extrapolate growth for the 20-year period based on the annual growth.<sup>4</sup> The forecast in Table 6 is pro-rated based on average annual growth and assumes linear growth. However, actual growth will happen unevenly, with a lot of growth some years and little growth other years.

**Table 6: Population and Employment Growth, South Albany and City of Albany, 2010 to 2030**

	<b>South Albany Area</b>	<b>City of Albany</b>
New households		
Per year	60	265
2010-2030	1,200	5,300
New People		
Per year	141	628
2010-2030	2,820	12,560
Employment		
Per year	67	322
2010-2030	1,340	6,440

Source: City of Albany, Transportation System Plan; extrapolations by ECONorthwest

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<sup>4</sup> For example, Table 5 shows that South Albany will add 1,461 households over the 24-year forecast period. On an annual basis, that is 60 new households. Over the 2010 to 2030 period, South Albany will add 1,200 households (60 households times 20 years).

## **Appendix A**

### **List of Technical Memoranda for Task 2 of the South Albany Area Plan**

Technical Memorandum #2: Existing and Planned Conditions. Kittleson & Associates, September 19, 2011.

South Albany Public Facilities. Memorandum by Otak, Inc., October 6, 2011

Assessment of Environmental Conditions, South Albany Area Plan. Mason, Bruce and Girard, Inc., September 16, 2011.

South Albany Area Plan Archeological Research. Heritage Research Associates, September 20, 2011.

South Albany Area Plan – Draft Project Memorandum #3: Market Analysis. EcoNorthwest, September 22, 2011.



**KITTELSON & ASSOCIATES, INC.**

**TRANSPORTATION ENGINEERING / PLANNING**

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## TECHNICAL MEMORANDUM

### **Draft Project Memorandum #2: Existing and Planned Conditions**

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**Date:** September 19, 2011

**Project #:** 11500

**To:** Joe Dills, OTAK

**From:** Susan Wright, P.E.

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### Overview

This memorandum is prepared as a summary of existing and future transportation conditions in the South Albany Area Plan (SAAP) study area. The project study area is roughly defined as the area of South Albany bounded by the City's Urban Growth Boundary on the south, Interstate 5 (I-5) on the east, land developed to urban densities on the north, and Oregon Route 99E on the west. This memorandum uses data and analysis from the Albany 2030 Transportation System Plan (TSP), adopted by the City of Albany in February 2010 and prepared by Kittelson & Associates, Inc. The following includes a summary of the land use assumptions made in the TSP as well as descriptions of the TSP projects located in the SAAP study area in order to provide context for land use and transportation planning in the SAAP study area.

### Land Use Forecast Assumptions

The Albany TSP update included an analysis of land use alternatives for the entire city of Albany that tested the system's sensitivity to large increases or reductions in population or employment projections in various areas of the city. The analysis considered the impact to the transportation system for four land use alternatives. The alternatives and modeling were based on year 2030 population and employment projections using a travel demand model calibrated to 2006 conditions and, therefore, represented the impact of 24 years of growth on the performance of the current transportation system. The analysis used the Comprehensive Plan population and employment projections as a base, augmented them based on current developments in the community to arrive at two additional land use alternates and ultimately resulted in a fourth alternative which became

referred to as the “most likely” 2030 land use scenario. The *Most Likely Scenario* served as a the base map against which transportation solutions were then tested.

## METHODOLOGY

The land use alternatives were developed through a collaborative process that included Department of Land Conservation and Development (DLCD) representatives as well as City of Albany and KAI staff. The future transportation deficiencies for the adopted Comprehensive Plan land use scenario formed the basis for all alternatives development. The consultant team and city staff identified areas where land use alternatives might lessen future transportation deficiencies. Areas with planned Comprehensive Plan updates were also identified and incorporated into the alternatives planning.

For each alternative, the household and population forecasts by TAZ were updated and provided to the ODOT Transportation Planning and Analysis Unit (TPAU) for modeling. Future transportation demand for each land use alternative was estimated based on a traffic forecasting model developed by TPAU.

KAI and City staff reviewed the results (primarily roadway demand to capacity ratios, network performance measures, 2030 deficiency lists, and transit coverage percentages) of each Land Use Alternative. The results of each Land Use Alternative led to the fourth and final alternative, the *Most Likely Land Use Alternative*. This Alternative combined the lessons learned from previous Alternatives and balanced them with the practical consideration of what Comprehensive Plan changes were reasonable.

## FORECAST GROWTH

The travel demand model for Albany was constructed using 2006 household and employment data and 2006 traffic counts as its base. Future year analysis used year 2030 household and employment forecasts approved by the state and counties for each TAZ within the model area, based on the Comprehensive Plan.

To develop the 2030 Forecast Transportation Conditions, a series of four land use alternatives were tested within the regional transportation model to test the impacts of a variety of potential growth scenarios that could occur. The goal of this sensitivity testing of land use was to determine if there was a desired growth pattern that would facilitate shorter trips, reducing vehicle miles traveled, as well as avoid existing or projected congestion problems on the transportation system. The land use alternative testing considered pre-existing regional plans such as the East I-5 Plan and the Oak Creek Refinement Plan.

None of the land use alternatives resolved future problems on the existing street system. On the state system in particular, this is primarily due to the influence of trips that pass through Albany without an origin or destination in Albany (such as traffic traveling on Highway 20 from the Corvallis area to I-5). Generalized summaries of the four land use alternatives tested are presented below:

**Land Use Alternative #1:** Analyzed the possibility that Millersburg will grow at a rate faster than reflected in their comprehensive plan, given the number of recent proposed developments which would significantly increase Millersburg's size. Although the City of Albany does not have control over land use policies or growth rates in Millersburg, its close proximity means increased growth will impact both Cities' transportation systems.

**Land Use Alternatives #2 and 3:** Assumed higher growth in East I-5 and Oak Creek areas because they had less capacity constraints, particularly in the Oak Creek area, than other areas of the City. Growth in East I-5 will place additional demand at the two I-5 interchanges at Santiam Highway and Knox Butte. Replacing growth in North Albany with growth in the East I-5 and Oak Creek Areas would reduce congestion on critical roadways in North Albany, especially Willamette River bridges.

**Most Likely Land Use Concept (Alternative #4):** Alternative #4 was deemed the "Most Likely Land Use Alternative." It is based on the combined lessons learned from Land Use Alternative #1, 2, and 3, as well as practical consideration of likely Comprehensive Plan amendments in order to comply with DLCDC standards. The requirement to be consistent with the population forecast agreed upon by the counties and the state also contributed to the assumptions and selection of Alternative #4.

Overall, the *Most Likely Land Use Alternative* is similar to Alternative #3 in that it shifts additional growth to the East I-5 and Oak Creek Areas, while recognizing that some of the projected growth in North Albany may shift to less congested areas of the City.

Most of the scenarios including the *Most Likely Land Use Scenario* shift the location of where growth will occur by 2030. There are three of these locations in the *Most Likely Land Use Scenario*. Some of the employment related assumptions for these three areas required Comprehensive Plan and Zoning map amendments which were completed prior to adoption of the TSP. They are described in Table 1.

**TABLE 1 COMPREHENSIVE PLAN AND ZONING MAP CHANGE ASSUMPTIONS**

Area	Type	General Location	TAZ	Site Info	Inside City?	Existing Zoning	Future Zoning
1	Expansion of Regional Commercial Site	North of Knox Butte Road & West of Expo Parkway	165	Approximately 4 acres	Yes	Residential Medium Density	Regional Commercial
2	Hospital Property	East of I-5 & North of US 20	457 458	Map 11S-3W-10 Tax lot 200	Yes	Residential Single Family	Office Professional
Area	Type	General Location	TAZ	Site Info	Inside City?	Existing Plan Designation	Future Plan Designation/ Zoning
3	Oak Creek Refinement Plan Area	South Albany	326	Approx. 50 acres south of planned 53 <sup>rd</sup> /Ellingson alignment	No	Urban Residential Reserve	Light Industrial Designation/ Industrial Park Zoning
			322 333 325	30-40 acres at Ellingson and Lochner	No		Village Center Designation/ Mixed Use Commercial Zoning

The *Most Likely Land Use Scenario* made several assumptions relevant to the Project Study Area, listed as Area 3 in Table 2 above. The *Most Likely Land Use Scenario* included increased intensity in the SAAP Project Study Area, in part, to make this scenario consistent with the Oak Creek Refinement Plan. The *Most Likely Land Use Scenario* assumed an additional 233 households above the 2030 base case model in the South Albany area (TAZs 332, 333, 334, 335, 337, 339). The households were assumed to be developed as a mix of medium density residential along Ellingson Road and Lochner Road, and low density residential elsewhere. Comprehensive Plan Amendments to be consistent with these assumptions were completed by the City during the TSP Update. A map of the Oak Creek Refinement Plan Area is provided in Attachment 1. The 2030 households, population and employment forecast for the *Most Likely Land Use Alternative* used to develop the TSP are shown in Table 2.

**TABLE 2 MOST LIKELY LAND USE ALTERNATIVE FORECASTS**

	Households			Population			Employment		
	2006	2030	Annual Growth	2006	2030	Annual Growth	2006	2030	Annual Growth
<b>Within UGB</b>	18,875	24,875	1.3%	47,630	60,495	1.1%	19,060	25,975	1.5%
<b>Outside UGB</b>	2,050	2,820	1.6%	5,350	7,105	1.4%	3,645	4,670	1.2%
<b>Total</b>	20,925	27,695	1.3%	52,980	67,600	1.1%	22,700	30,645	1.5%

## SOUTH ALBANY PLAN AREA ASSUMPTIONS

The growth assumptions of the *Most Likely Land Use Scenario* in the South Albany Project Study Area are summarized in Table 3. This is based on an approximation prepared by the City of Albany based on the TAZs that approximate the study area boundary. As shown in Table 3, the SAAP study area is forecast to have a significantly higher growth rate than the city's average growth rate and includes a substantial portion of the city's overall projected growth.

**TABLE 3 SOUTH ALBANY PROJECT STUDY AREA FORECASTS**

	Households			Population			Employment		
	2006	2030	Annual Growth	2006	2030	Annual Growth	2006	2030	Annual Growth
South Albany	115	1,576	11.5%	338	3,741	10.5%	431	2,058	6.7%

Source: city of Albany

## Transportation System Plan

This section presents the individual elements of the City of Albany Transportation System Plan, specifically those relevant to the SAAP study area. The TSP addresses those components necessary for the development of the future transportation network including:

- Roadway System Plan
  - Functional Classification Plan
  - Intersection Operations Standards
  - Street Design Standards
  - Access Management Standards
- Pedestrian Plan
- Bicycle Plan
- Transit Plan
- Air
- Water and Wastewater Transmission Line Plan
- Implementation Plan

## TIMELINE FOR RECOMMENDED PROJECTS

For each modal system, the evaluation of transportation improvements resulted in a preferred set of transportation improvement projects. The timeline for implementation of the projects is color-coded on the project maps and described according to the following terms:

- **Near-term:** These improvements are warranted under existing conditions or are expected to be warranted with a relatively short (i.e., approximately five-year) time frame. These improvements should be constructed as opportunities and resources allow.
- **Mid-term:** These improvements are planned for implementation in the six-to-ten-year time frame.
- **Long-term or Development Driven:** These projects will be needed to accommodate anticipated growth. They should be planned for likely implementation within the 20-year planning horizon. The timeline for development driven projects is unknown and the improvements will not be necessary prior to development within the area surrounding the project. Projects may move up in priority order if development occurs in the near or mid-term and may not be needed once Albany becomes part of a Metropolitan Planning Organization (MPO).

## IMPROVEMENT PROJECTS IN SOUTH ALBANY AREA PLAN STUDY AREA

Several improvement projects in the Albany 2030 TSP are located in South Albany. The majority of these projects fall under the long-term timeline described above. They are necessary to accommodate anticipated growth in the South Albany region. A map of the roadway plan including both roadway link projects as well as intersection projects is provided in TSP Figure 7-1. The roadway alignments in TSP Figure 7-1 are conceptual in nature and subject to modification during design.

TSP Figure 7-2 and Figure 7-3 provide the 2030 weekday p.m. peak hour two-way roadway link volumes and demand-to-capacity ratios for the TSP Preferred Plan, respectively. The travel demand forecast in TSP Figure 7-2 was based on the *Most Likely Land Use Scenario* summarized previously using year 2030 population and employment projections approved by the state and the counties, and a modeling methodology approved by ODOT and also includes the projects from the TSP Preferred Plan. A comparison of the traffic demand versus the capacity of a roadway to serve the demand is a frequent tool used to evaluate future roadway needs. This comparison is the demand-to-capacity ratio (D/C). TSP Figure 7-3 shows the 2030 D/C ratio for each segment with the planned improvements. *Demand* indicates a motorist's desire to travel along a particular roadway, rather than actual *volumes*. This is an important distinction, because a roadway can only serve a traffic volume

corresponding to its capacity. As shown in TSP Figure 7-3, all roadways in South Albany have a demand to capacity ratio less than 0.90.

The future roadway functional classifications and general locations and alignments of future roadways are shown in TSP Figure 7-4. Currently, Ellingson Road extends to the west and connects with OR 99E. With the construction of the 53<sup>rd</sup> Avenue Extension (which includes a railroad overpass), the existing railroad crossing at Ellingson Road will be closed to both vehicles and pedestrians and bicycles. Ellingson Road from OR 99E to the railroad will serve local access only and Ellingson Road from the railroad east to the new alignment will also be downgraded to a "local roadway" in the functional classification plan. The closure of the Ellingson Road railroad crossing to pedestrians and bicycles will result in out of direction travel that is significant to use the 53<sup>rd</sup> Avenue Extension for pedestrians and bicycles from Linn-Benton Community College, neighborhoods west of the SAAP study area, or from the south on Highway 99E.

As part of improvements to Highway 34 south of the study area, Columbus Street is planned to be converted to a right-in/right-out access only at Highway 34. This may change the travel pattern to/from the SAAP study area and increase reliance on the 53<sup>rd</sup> Avenue Extension and Highway 99E above what is reflected in TSP Figure 7-2. *The travel demand model used in the development of the TSP needs to be reviewed to determine if this network modification was assumed at the time the TSP was being developed. If not, the traffic volumes in the TSP intersection analysis to be used in a future phase of this project may need modification.*

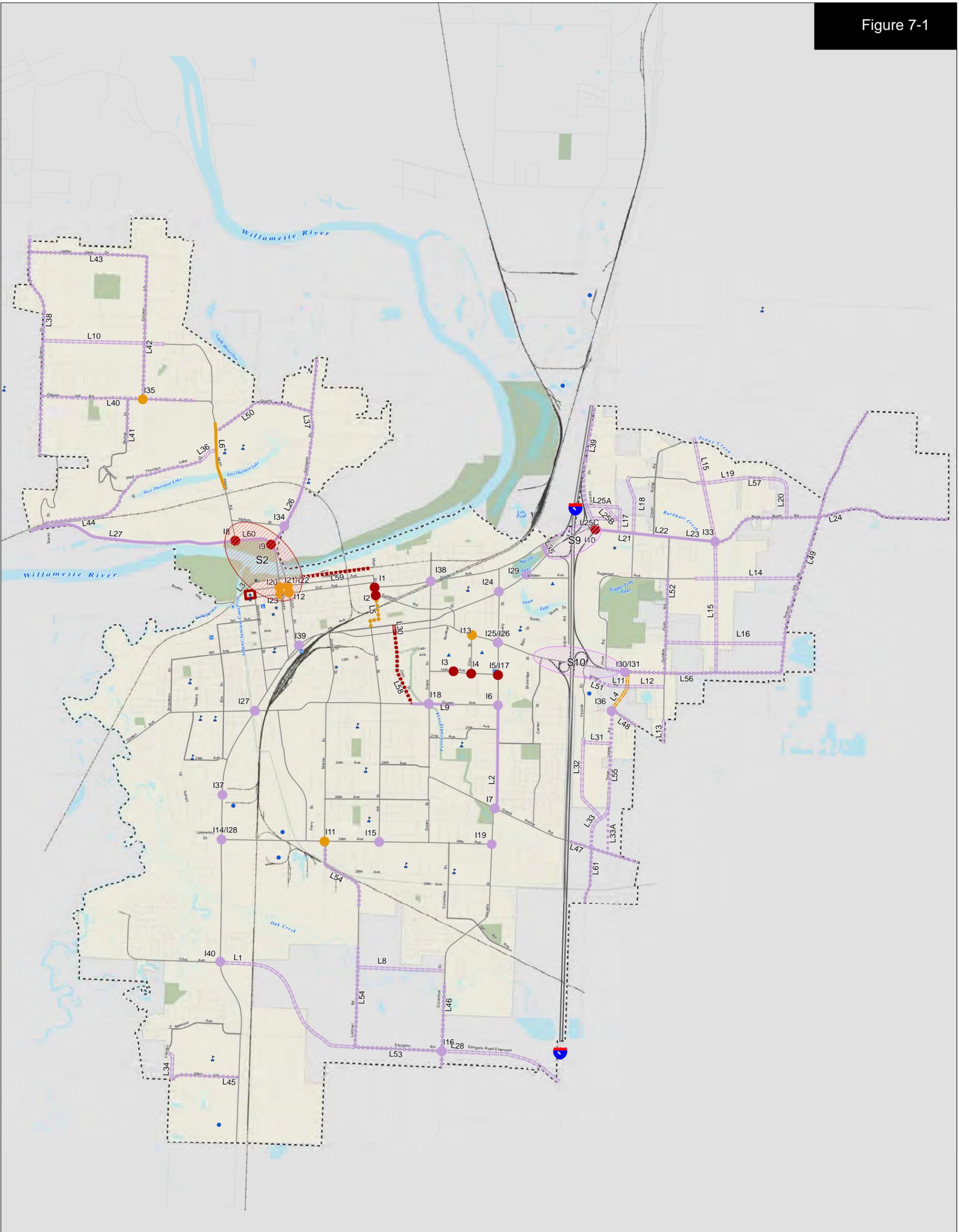
Several improvement projects included in the City of Albany's pedestrian, bicycle, and multi-use trail system plan are also located in South Albany. This plan seeks to provide guidance on how to best facilitate pedestrian and bicycle travel over the next 20 years. A map of the pedestrian, bicycle, and multi-use trail system plan is provided in TSP Figure 7-5. The multi-use trail alignments in TSP Figure 7-5 are conceptual in nature and subject to modification during design. A table including all the project names and types is provided in Table 4. Additional information on these projects can be found on the project prospectus sheets in Attachment B.

**TABLE 4 TRANSPORTATION IMPROVEMENT PROJECTS LOCATED IN SOUTH ALBANY**

ID	Project Name	Project Type	Timeline	Project Cost	MAX SDC Growth Allocation	TSDC Funded
B19	38th Avenue and 39th Avenue	Bike Boulevard	Medium-term	\$ 106,000	100%	\$106,000
I11	34 <sup>th</sup> Avenue/ Marion Street	Intersection Control Change	Medium-term	\$345,000	100%	\$345,000
I14	OR 99E/34th Avenue	Intersection Add Lane(s)	Long-term	\$192,000	32%	\$61,440
I16	Ellingson Road/ Columbus Street	Intersection Control Change	Long-term	\$345,000	100%	\$172,500
I28	OR 99E/34th Avenue	Intersection Add Lane(s)	Long-term	\$456,000	32%	None
I40	OR 99E/53 <sup>rd</sup> Avenue	Intersection Add Lane(s)	Long-term	\$550,000	38%	\$209,000
L1	53rd Avenue Extension	New Road or Alignment	Long-term	\$17,986,000	54%	None
L8	Lochner-Columbus Connector	New Road or Alignment	Long-term	\$2,742,000	100%	\$548,400
L28	Ellingson Road Extension	New Road or Alignment	Long-term	\$4,430,000	61%	None
L46	Columbus Street	Urban Upgrade	Long-term	\$2,727,000	49%	None
L53	Ellingson Road	Urban Upgrade	Long-term	\$5,847,000	49%	None
L54	Lochner Road	Urban Upgrade	Long-term	\$5,756,000	44%	None
M2	Oak Creek Trail	Multiuse Path	Long-Term	\$2,645,000	70%	\$200,000
M9	Lebanon Trail	Multiuse Path	Long-term	\$581,000	70%	None
M12	99E/Oak Creek	Crossing Improvement	Long-term	\$129,000	70%	\$90,300
Short-term Costs				\$0		
Medium-term Costs				\$451,000		
Long-term Costs				\$44,386,000		
Total Costs				\$44,837,000		

As shown above, nearly \$45,000,000 of project needs were identified in the TSP within the SAAP study area. The majority of the costs are to address long-term needs meaning that the projects are needed to accommodate future growth, not existing deficiencies.

Figure 7-1



**Improvement Timeframe**

- Short-term
- Medium-term
- Long-term/  
Project-driven

**Improvements**

- Intersection Improvement
- Capacity Improvement
- Urban Upgrade
- New Roadway
- Alternative Alignment
- Study Refinement Area

**Destinations**

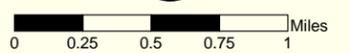
- ▲ School
- Major Employer
- ▲ Other
- Albany General Hospital
- Amtrak Station
- Public Library
- ★ Public Building

**Boundaries**

- Parks
- Urban Growth Boundary
- City Limits

**Other Roads**

- Study Roads
- Local Roads



City of Albany, Oregon

**Albany Transportation System Plan**

**Planned Auto Improvements**

Figure 7-2

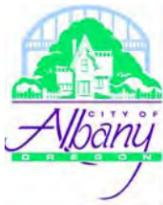
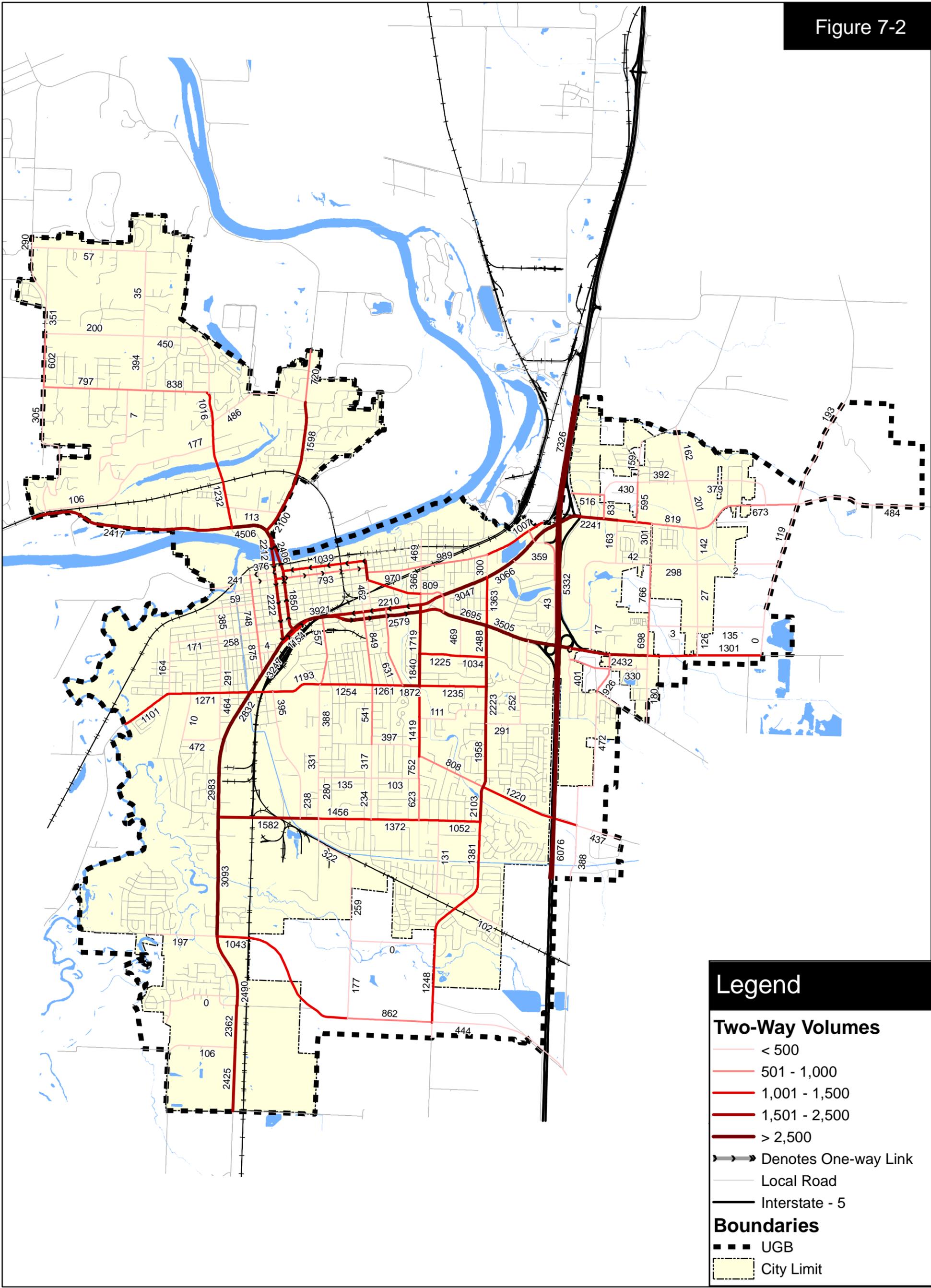
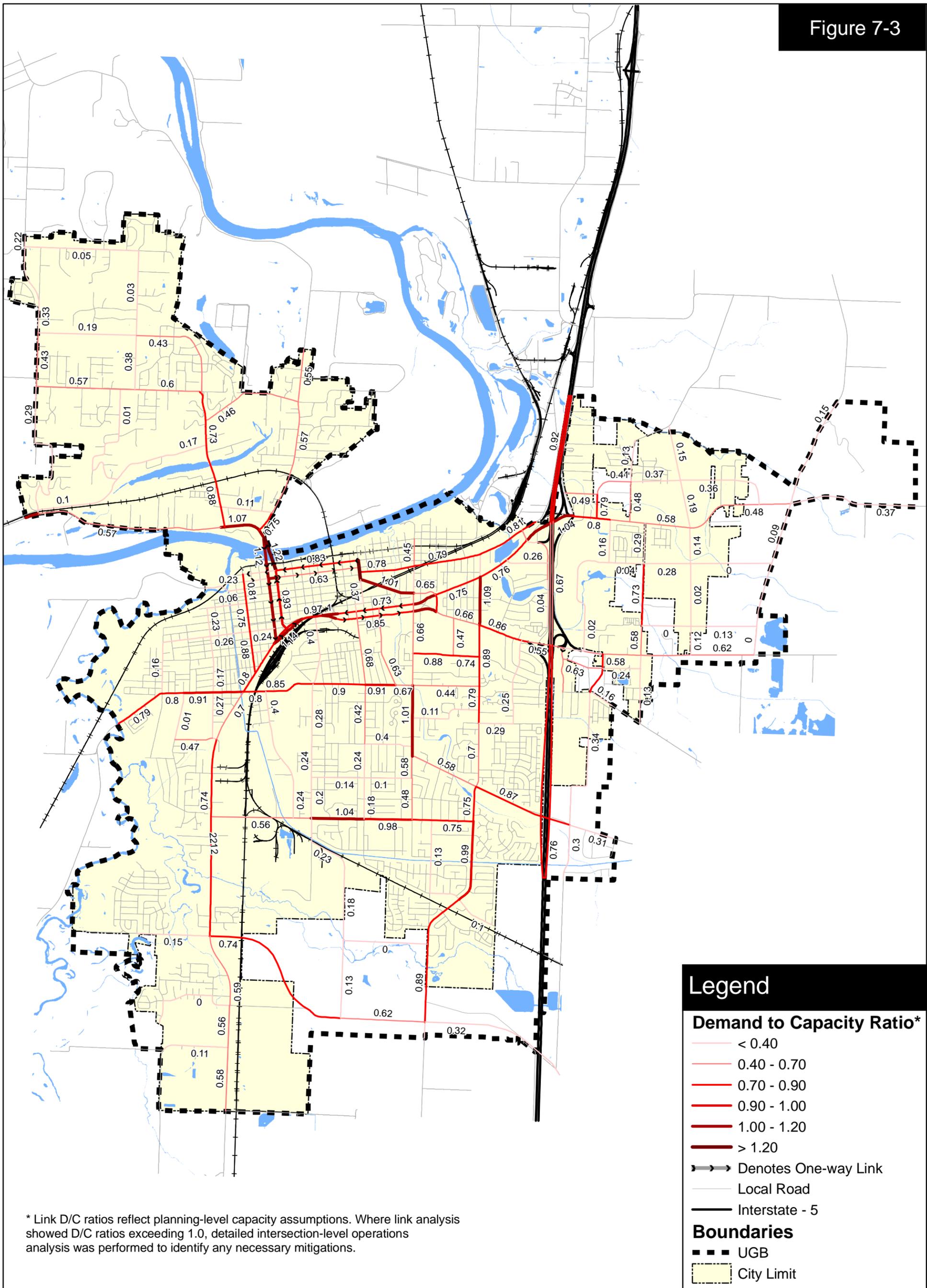
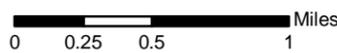


Figure 7-3



\* Link D/C ratios reflect planning-level capacity assumptions. Where link analysis showed D/C ratios exceeding 1.0, detailed intersection-level operations analysis was performed to identify any necessary mitigations.

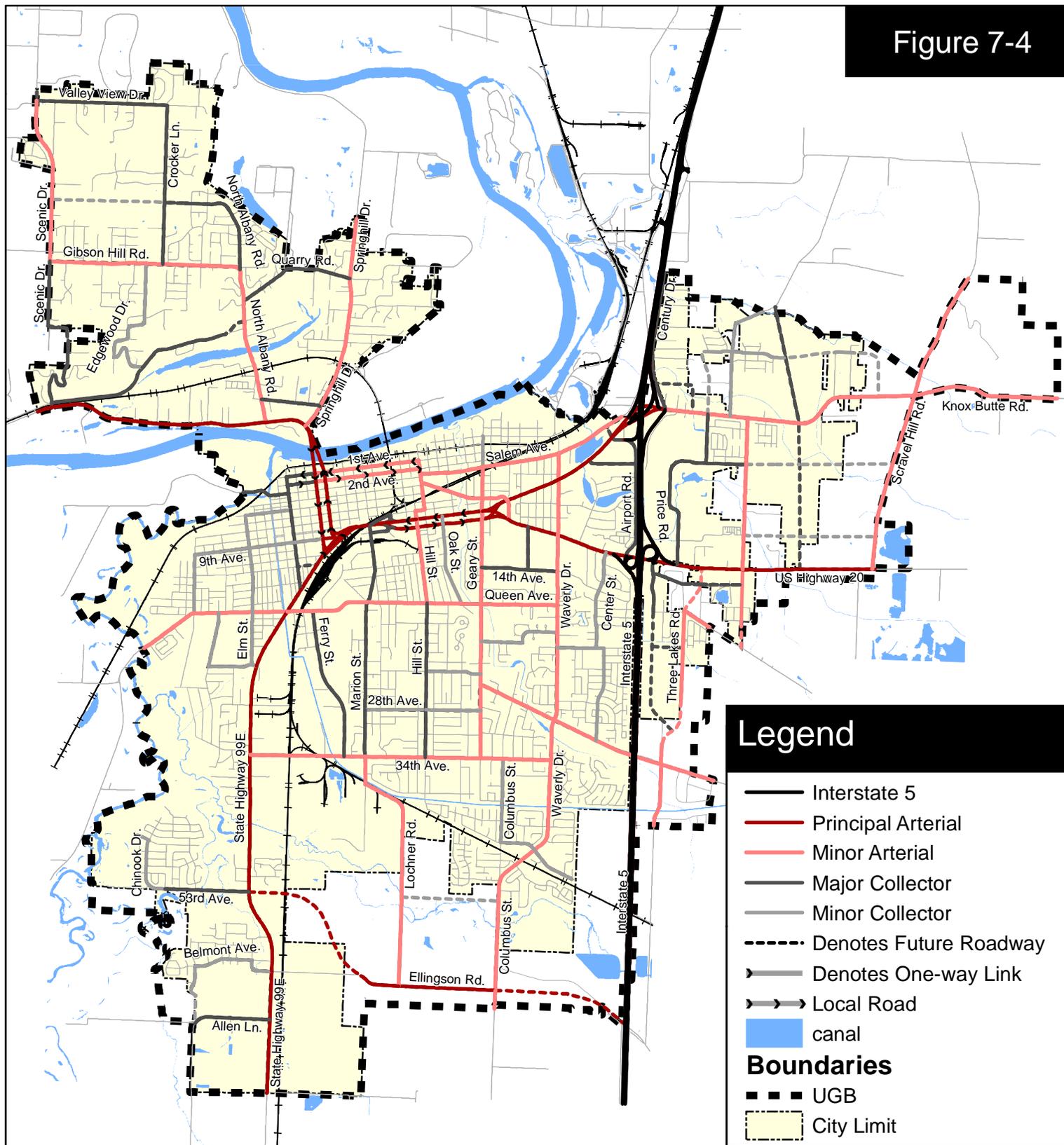


City of Albany, Oregon

**Albany Transportation System Plan**

**PM Peak Hour  
2030 Demand to Capacity Ratios  
(Preferred Transportation Network)**

Figure 7-4

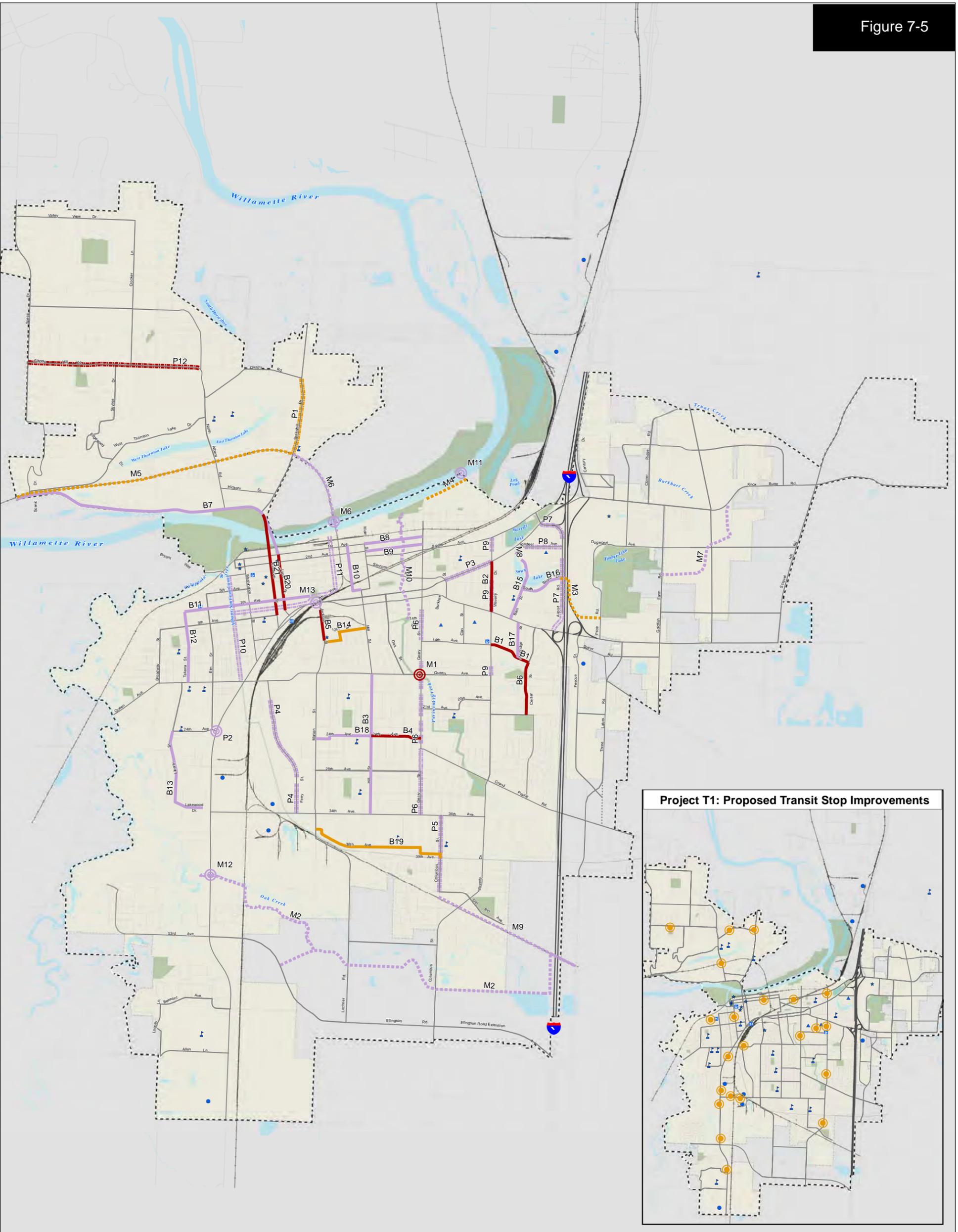


City of Albany, Oregon

**Albany Transportation System Plan**

**Roadway Functional Classification Map**

Figure 7-5



**Improvement Timeframe**

- ⊙ **Short-term**
- ⊙ **Medium-term**
- ⊙ **Long-term/  
Project-Driven**

**Improvement Type**

- ⊙ **Crossing Improvement**
- **Bike Project**
- - - **Pedestrian Project**
- ⋯ **Multi-Use Path Project**

**Destinations**

- ⬇ School
- Major Employer
- ▲ Other
- ⊞ Albany General Hospital
- ⊞ Amtrak Station
- ⊞ Public Library
- ★ Public Building

**Boundaries**

- Parks
- Urban Growth Boundary
- City Limits

**Other Roads**

- Study Roads
- Local Roads



0 0.25 0.5 0.75 1 Miles

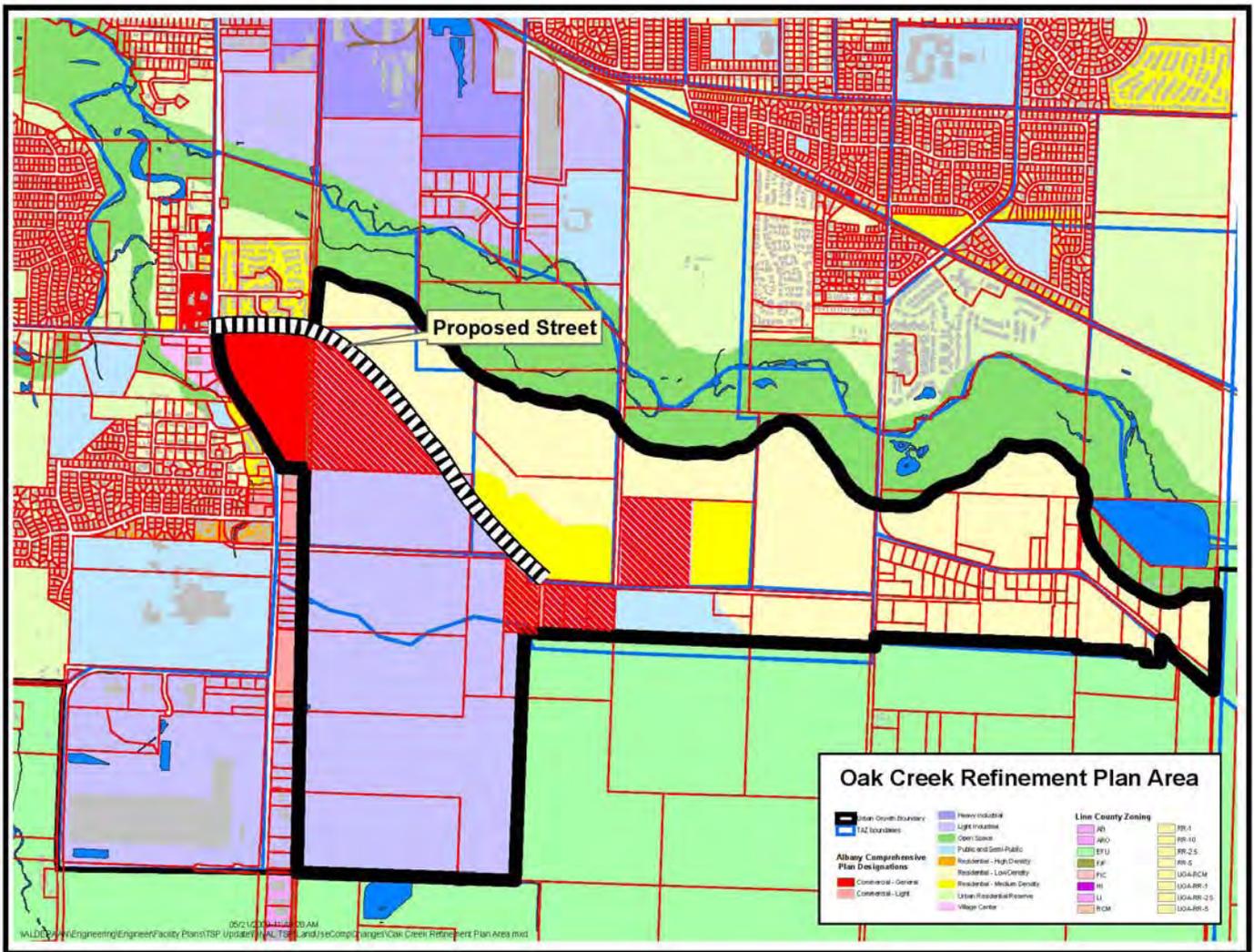
City of Albany, Oregon  
**Albany Transportation System Plan**

**Planned Bicycle and Pedestrian Improvements**

Note: This map shows stand-alone projects only. All new roadway and urban upgrade projects will include bike and ped facilities

## Attachment A – Oak Creek Area Comprehensive Plan Changes

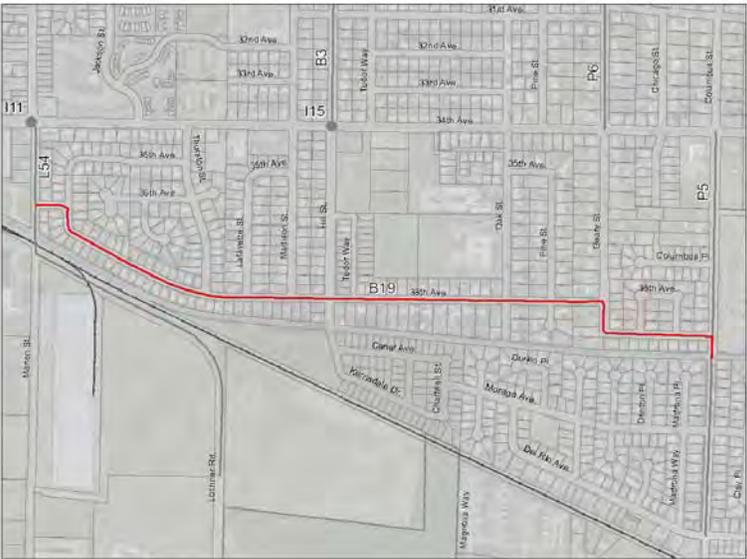
# AREA 3 – OAK CREEK REFINEMENT PLAN AREA



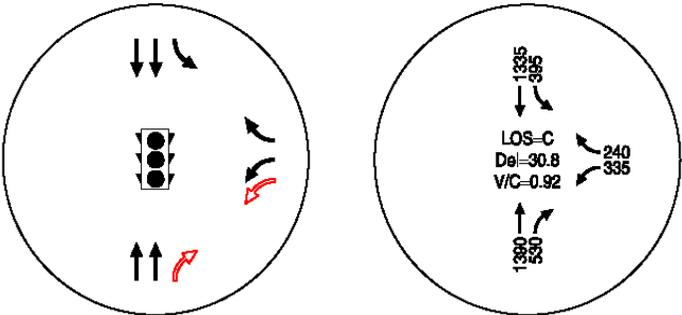
## COMPREHENSIVE PLAN AND ZONING MAP CHANGE ASSUMPTIONS

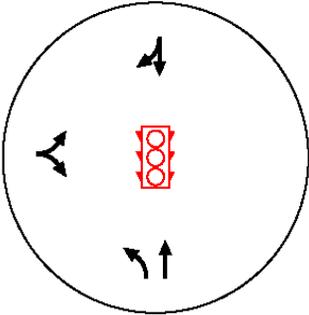
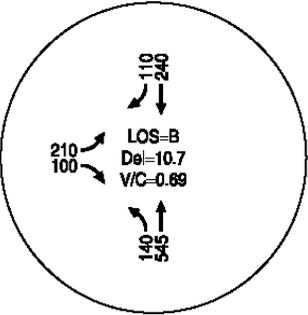
Area	Type	General Location	TAZ	Site Info	Inside City?	Existing Plan Designation	Future Plan Designation/ Zoning
3	Oak Creek Refinement Plan Area	South Albany	326	Approx. 50 acres south of planned 53 <sup>rd</sup> /Ellingson alignment	No	Urban Residential Reserve	Light Industrial Designation/ Industrial Park Zoning
			322 333 325	30-40 acres at Ellingson and Lochner	No		Village Center Designation/ Mixed Use Commercial Zoning

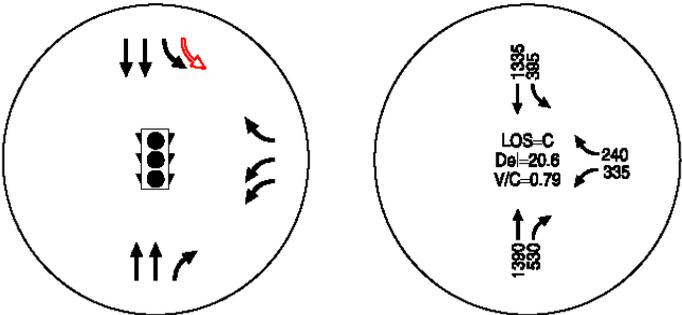
## Attachment B – TSP Project Prospectus sheets

<b>Project #:</b> B19		<b>38th Avenue and 39th Avenue</b>			
<b>Description:</b> Install bike boulevard treatments including wayfinding, traffic calming, and intersections treatments as deemed necessary on 38th Avenue from Marion Street to Geary Street and 39th Avenue from Geary Street to Columbus Street..					
<b>Category:</b> Bike Boulevard		<b>Classification:</b> Local		<b>Agency Coordination:</b>	<b>Time Frame:</b> Medium-Term
<b>Project Costs:</b>	Const./Eng.	ROW	Other	<b>Total Cost</b>	<i>SDC Eligible:</i>
	\$106,000	\$0	\$0	<b>\$106,000</b>	100%
<b>Project Goals Met:</b>					
Efficiency <input type="checkbox"/>	Capacity <input type="checkbox"/>	Safety <input checked="" type="checkbox"/>	Transit <input type="checkbox"/>	Ped/Bike <input checked="" type="checkbox"/>	Livability <input checked="" type="checkbox"/>
<b>Project Location:</b>			<b>Related Projects:</b> P5, M9		
					
<b>Illustrative Section:</b>					
					

<b>Project #:</b> I11	<b>34th Avenue/Marion Street</b>				
<b>Description:</b> Install a new traffic signal					
<b>Category:</b> Intersection Control Change		<b>Classification:</b> Minor Arterial / Major Collector		<b>Agency Coordination:</b>	<b>Time Frame:</b> Medium-Term
<b>Project Costs:</b>	Const./Eng.	ROW	Other	<b>Total Cost</b>	<i>SDC Eligible:</i>
	\$345,000	\$0	\$0	<b>\$345,000</b>	100%
<b>Project Goals Met:</b>					
Efficiency <input type="checkbox"/>	Capacity <input checked="" type="checkbox"/>	Safety <input checked="" type="checkbox"/>	Transit <input type="checkbox"/>	Ped/Bike <input type="checkbox"/>	Livability <input type="checkbox"/>
<b>Project Location:</b>			<b>Related Projects:</b>		
			L54		
<b>Illustrative Section:</b>					

<b>Project #:</b> I14	<b>OR 99E/34th Avenue</b>				
<b>Description:</b> Switch southbound left-turn to protected phasing and install a 125-foot northbound right-turn lane and northbound right-turn overlap phasing. Right-turn lane length adjusted from 200 feet to 125 based on ROW considerations. Install second westbound 125-foot left-turn lane on 34th Avenue. Assumes current YMCA access is relocated east along 34th Avenue to edge of property. Other option is to convert YMCA access on 34th to right-in, right-out and develop full 200 foot WB left-turn lanes on 34th.					
<b>Category:</b> Intersection Add Lane(s)		<b>Classification:</b> Principal Arterial/ Minor Arterial		<b>Agency Coordination:</b> ODOT	<b>Time Frame:</b> Long-term
<b>Project Costs:</b>	Const./Eng.	ROW	Other	<b>Total Cost</b>	<i>SDC Eligible:</i>
	\$175,000	\$12,000	\$6,000	<b>\$192,000</b>	32%
<b>Project Goals Met:</b>					
Efficiency <input type="checkbox"/>	Capacity <input checked="" type="checkbox"/>	Safety <input checked="" type="checkbox"/>	Transit <input type="checkbox"/>	Ped/Bike <input type="checkbox"/>	Livability <input type="checkbox"/>
<b>Project Location:</b>			<b>Related Projects:</b> I28, B13		
					
<b>Illustrative Section:</b>					
					

<b>Project #:</b> I16	<b>Ellingson Road/Columbus Street</b>				
<b>Description:</b> Install a new traffic signal					
<b>Category:</b> Intersection Control Change		<b>Classification:</b> Principal Arterial / Minor Arterial		<b>Agency Coordination:</b> Linn County	<b>Time Frame:</b> Long-term
<b>Project Costs:</b>	Const./Eng.	ROW	Other	<b>Total Cost</b>	<i>SDC Eligible:</i>
	\$345,000	\$0	\$0	<b>\$345,000</b>	100%
<b>Project Goals Met:</b>					
Efficiency <input type="checkbox"/>	Capacity <input checked="" type="checkbox"/>	Safety <input checked="" type="checkbox"/>	Transit <input type="checkbox"/>	Ped/Bike <input type="checkbox"/>	Livability <input type="checkbox"/>
<b>Project Location:</b>			<b>Related Projects:</b> L28, L46, L53		
					
<b>Illustrative Section:</b>					
					

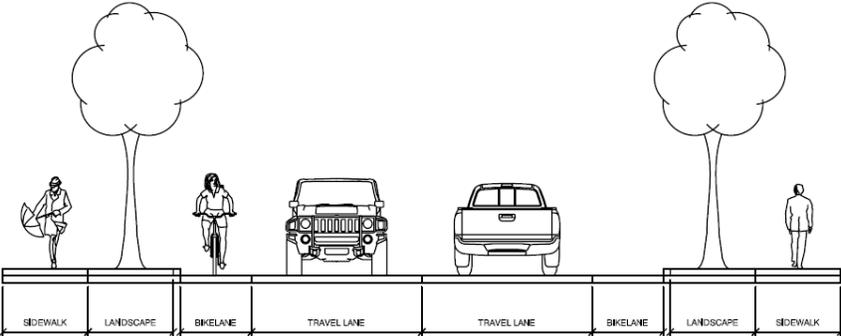
<b>Project #:</b> I28		<b>OR 99E/34th Avenue</b>			
<b>Description:</b> Install a second southbound left-turn lane.					
<b>Category:</b> Intersection Add Lane(s)		<b>Classification:</b> Principal Arterial/ Minor Arterial		<b>Agency Coordination:</b> ODOT	<b>Time Frame:</b> Long-term
<b>Project Costs:</b>	Const./Eng.	ROW	Other	<b>Total Cost</b>	<i>SDC Eligible:</i>
	\$359,000	\$96,000	\$0	<b>\$456,000</b>	32%
<b>Project Goals Met:</b>					
Efficiency <input checked="" type="checkbox"/>	Capacity <input checked="" type="checkbox"/>	Safety <input type="checkbox"/>	Transit <input type="checkbox"/>	Ped/Bike <input type="checkbox"/>	Livability <input type="checkbox"/>
<b>Project Location:</b>			<b>Related Projects:</b>		
			I14, B13		
<b>Illustrative Section:</b>					
					

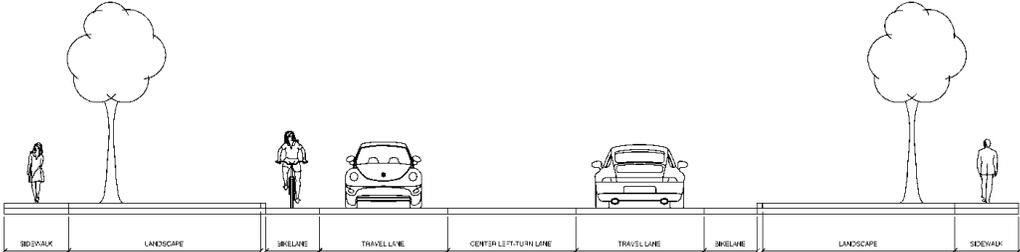
<b>Project #:</b> I40		<b>OR 99E/53rd Avenue</b>			
<b>Description:</b> Install second southbound left-turn lane on 99E (the need for this project should be reviewed after development of the parcel in the southeast corner of the intersection, otherwise known as the "Piano" shaped parcel, as dual southbound lefts may not be required if a southbound left-turn lane in to the "piano" parcel is provided).					
<b>Category:</b> Intersection Add Lane(s)		<b>Classification:</b> Principal Arterial/Principal Arterial		<b>Agency Coordination:</b> ODOT	<b>Time Frame:</b> Long-term
<b>Project Costs:</b>	Const./Eng.	ROW	Other	<b>Total Cost</b>	<b>SDC Eligible:</b>
	\$421,000	\$54,000	\$75,000	<b>\$550,000</b>	38%
<b>Project Goals Met:</b>					
Efficiency <input checked="" type="checkbox"/>	Capacity <input checked="" type="checkbox"/>	Safety <input type="checkbox"/>	Transit <input type="checkbox"/>	Ped/Bike <input type="checkbox"/>	Livability <input type="checkbox"/>
<b>Project Location:</b>			<b>Related Projects:</b>		
			L1		
<b>Illustrative Section:</b>					

<b>Project #:</b> L1		<b>53rd Avenue Extension</b>			
<b>Description:</b> A 1.4 mile extension of 53rd Avenue east from OR 99E to Ellingson Road, including a four-lane grade-separated rail-crossing. The road will have a three-lane cross-section with 110-foot right-of-way for a future five-lane cross-section from the rail-crossing to the Lochner Road/Ellingson Road intersection. It is assumed that ROW for the three-lane section will be dedicated and the additional ROW for a five-lane section will be purchased. The cross-section shown assumes 110-feet of right-of-way with three travel lanes. The extra wide landscape strips are where future lanes would be added.					
<b>Category:</b> New Road or Alignment		<b>Classification:</b> Principal Arterial		<b>Agency Coordination:</b> ODOT, Linn County, Railroad & ODOT Rail	<b>Time Frame:</b> Long-term
<b>Project Costs:</b>	Const./Eng.	ROW	Other	<b>Total Cost</b>	<i>SDC Eligible:</i>
	\$17,000,000	\$986,000	\$0	<b>\$17,986,000</b>	54%
<b>Project Goals Met:</b>					
Efficiency <input checked="" type="checkbox"/>	Capacity <input type="checkbox"/>	Safety <input checked="" type="checkbox"/>	Transit <input type="checkbox"/>	Ped/Bike <input type="checkbox"/>	Livability <input type="checkbox"/>
<b>Project Location:</b>			<b>Related Projects:</b> L53, L54, M2		
<b>Illustrative Section:</b>					
<p style="text-align: center;">99E/53RD AVE</p>					

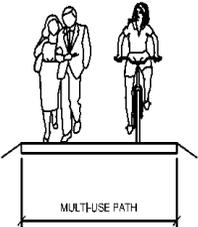
<b>Project #:</b> L8		<b>Lochner-Columbus Connector</b>			
<b>Description:</b> Develop a new collector street that provides connectivity to Oak Creek residential area between Lochner Road and Columbus Street. Project cost assumes ROW will be dedicated.					
<b>Category:</b> New Road or Alignment		<b>Classification:</b> Minor Collector		<b>Agency Coordination:</b>	<b>Time Frame:</b> Long-term
<b>Project Costs:</b>	Const./Eng.	ROW	Other	<b>Total Cost</b>	<i>SDC Eligible:</i>
	\$2,742,000	\$0	\$0	<b>\$2,742,000</b>	100%
<b>Project Goals Met:</b>					
Efficiency <input checked="" type="checkbox"/>	Capacity <input checked="" type="checkbox"/>	Safety <input type="checkbox"/>	Transit <input type="checkbox"/>	Ped/Bike <input checked="" type="checkbox"/>	Livability <input type="checkbox"/>
<b>Project Location:</b>			<b>Related Projects:</b> L46, L54		
<b>Illustrative Section:</b>					

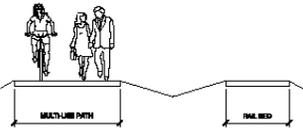
<b>Project #:</b> L28		<b>Ellingson Road Extension</b>			
<b>Description:</b> Extends Ellingson Road from Columbus Avenue to Interstate 5 overcrossing at Seven Mile Lane. Realign Seven Mile Lane on the west side of I-5 to align with current Ellingson Road, forming a four-leg intersection at Columbus Street. This section of Ellingson Road should be evaluated for the need to preserve right-of-way for a future five-lane section at the next TSP Update. Project cost assumes ROW will be dedicated.					
<b>Category:</b> New Road or Alignment		<b>Classification:</b> Principal Arterial		<b>Agency Coordination:</b>	<b>Time Frame:</b> Long-term
<b>Project Costs:</b>	Const./Eng.	ROW	Other	<b>Total Cost</b>	<i>SDC Eligible:</i>
	\$3,930,000	\$0	\$500,000	<b>\$4,430,000</b>	61%
<b>Project Goals Met:</b>					
Efficiency <input checked="" type="checkbox"/>	Capacity <input checked="" type="checkbox"/>	Safety <input type="checkbox"/>	Transit <input type="checkbox"/>	Ped/Bike <input type="checkbox"/>	Livability <input type="checkbox"/>
<b>Project Location:</b>			<b>Related Projects:</b> L46, L53, I16		
<b>Illustrative Section:</b>					

<b>Project #:</b> L46		<b>Columbus Street</b>			
<b>Description:</b> Add sidewalk, curb, and gutter from Waverly Drive to urban growth boundary, west side of roadway only.					
<b>Category:</b> Urban Upgrade		<b>Classification:</b> Minor Arterial		<b>Agency Coordination:</b> Linn County	<b>Time Frame:</b> Long-term
<b>Project Costs:</b>	Const./Eng.	ROW	Other	<b>Total Cost</b>	<i>SDC Eligible:</i>
	\$2,687,000	\$40,000	\$0	<b>\$2,727,000</b>	49%
<b>Project Goals Met:</b>					
Efficiency <input type="checkbox"/>	Capacity <input type="checkbox"/>	Safety <input checked="" type="checkbox"/>	Transit <input type="checkbox"/>	Ped/Bike <input checked="" type="checkbox"/>	Livability <input checked="" type="checkbox"/>
<b>Project Location:</b>			<b>Related Projects:</b> L28, L53, I16, M2		
					
<b>Illustrative Section:</b>					
					

<b>Project #:</b> L53	<b>Ellingson Road</b>				
<b>Description:</b> Add sidewalk, curb, gutter, and bike lanes from 53rd Avenue Extension to Columbus Street. Construct with three travel lanes but future right-of-way for five-lanes. The cost estimate assumes ROW is available for the three-lane section but purchased for the five-lane section.					
<b>Category:</b> Urban Upgrade		<b>Classification:</b> Principal Arterial		<b>Agency Coordination:</b> Linn County	<b>Time Frame:</b> Long-term
<b>Project Costs:</b>	Const./Eng.	ROW	Other	<b>Total Cost</b>	<i>SDC Eligible:</i>
	\$5,157,000	\$690,000	\$0	<b>\$5,847,000</b>	49%
<b>Project Goals Met:</b>					
Efficiency <input type="checkbox"/>	Capacity <input type="checkbox"/>	Safety <input checked="" type="checkbox"/>	Transit <input type="checkbox"/>	Ped/Bike <input checked="" type="checkbox"/>	Livability <input checked="" type="checkbox"/>
<b>Project Location:</b>			<b>Related Projects:</b> L1, L28, L46, L54, I16		
					
<b>Illustrative Section:</b>					
					

<b>Project #:</b> L54		<b>Lochner Road</b>			
<b>Description:</b> Add sidewalk, curb, gutter, and bike lanes to Lochner Road and Marion Road, from 34th Avenue to Ellingson Road, excluding the portion already constructed.					
<b>Category:</b> Urban Upgrade		<b>Classification:</b> Minor Arterial		<b>Agency Coordination:</b> Linn County	<b>Time Frame:</b> Long-term
<b>Project Costs:</b>	Const./Eng.	ROW	Other	<b>Total Cost</b>	<i>SDC Eligible:</i>
	\$5,756,000	\$0	\$0	<b>\$5,756,000</b>	44%
<b>Project Goals Met:</b>					
Efficiency <input type="checkbox"/>	Capacity <input type="checkbox"/>	Safety <input checked="" type="checkbox"/>	Transit <input type="checkbox"/>	Ped/Bike <input checked="" type="checkbox"/>	Livability <input checked="" type="checkbox"/>
<b>Project Location:</b>			<b>Related Projects:</b> L1, L8, L53, I11, M2		
<b>Illustrative Section:</b>					

<b>Project #:</b> M2		<b>Oak Creek Trail</b>			
<b>Description:</b> Construct multi-use path along Oak Creek corridor from Three Lakes Road to west of Oregon 99E.					
<b>Category:</b> Multiuse Path		<b>Classification:</b> NA		<b>Agency Coordination:</b> ODOT, Railroad & ODOT Rail	<b>Time Frame:</b> Long-term
<b>Project Costs:</b>	Const./Eng.	ROW	Other	<b>Total Cost</b>	<i>SDC Eligible:</i>
	\$940,000	\$1,705,000	\$0	<b>\$2,645,000</b>	70%
<b>Project Goals Met:</b>					
Efficiency <input type="checkbox"/>	Capacity <input type="checkbox"/>	Safety <input type="checkbox"/>	Transit <input type="checkbox"/>	Ped/Bike <input checked="" type="checkbox"/>	Livability <input checked="" type="checkbox"/>
<b>Project Location:</b>			<b>Related Projects:</b> L1, L46, L54, M12		
					
<b>Illustrative Section:</b>					
					

<b>Project #:</b> M9		<b>Lebanon Trail</b>			
<b>Description:</b> Construct a multi-use path parallel to the railroad tracks south of Del Rio Avenue from Columbus Street to the Urban Growth Boundary to provide for a future connection to Lebanon.					
<b>Category:</b> Multiuse Path		<b>Classification:</b> NA	<b>Agency Coordination:</b> ODOT		<b>Time Frame:</b> Long-term
<b>Project Costs:</b>	Const./Eng.	ROW	Other	<b>Total Cost</b>	<i>SDC Eligible:</i>
	\$206,000	\$374,000	\$0	<b>\$581,000</b>	70%
<b>Project Goals Met:</b>					
Efficiency <input type="checkbox"/>	Capacity <input type="checkbox"/>	Safety <input type="checkbox"/>	Transit <input type="checkbox"/>	Ped/Bike <input checked="" type="checkbox"/>	Livability <input checked="" type="checkbox"/>
<b>Project Location:</b>			<b>Related Projects:</b> B19, M2, P5		
					
<b>Illustrative Section:</b>					
					

<b>Project #:</b> M12		<b>99E/Oak Creek</b>			
<b>Description:</b> Construct hybrid pedestrian signalized crossing improvement at Oregon 99E/Oak Creek Trail					
<b>Category:</b> Crossing Improvement		<b>Classification:</b> Principal Arterial		<b>Agency Coordination:</b> ODOT	<b>Time Frame:</b> Long-term
<b>Project Costs:</b>	Const./Eng.	ROW	Other	<b>Total Cost</b>	<i>SDC Eligible:</i>
	\$129,000	\$0	\$0	<b>\$129,000</b>	70%
<b>Project Goals Met:</b>					
Efficiency <input type="checkbox"/>	Capacity <input type="checkbox"/>	Safety <input type="checkbox"/>	Transit <input type="checkbox"/>	Ped/Bike <input checked="" type="checkbox"/>	Livability <input checked="" type="checkbox"/>
<b>Project Location:</b>			<b>Related Projects:</b>		
			M2		
<b>Illustrative Section:</b>					
					

# Technical Memorandum



17355 SW Boones Ferry Road  
Lake Oswego, OR 97035  
Phone (503)635-3618  
Fax (503) 635-5395

**To:** Joe Dills  
**From:** Darrin Stairs, PE  
**Copies:** Project File  
**Date:** October 6, 2011  
**Subject:** South Albany Area Plan – Public Facilities (Water, Wastewater and Stormwater)  
**Project No.:** 16056

This purpose of this memorandum is to summarize the capacity of existing, planned and needed infrastructure facilities to serve the South Albany area in a logical and orderly manner. The project study area is generally described as that area bounded by the urban growth boundary (UGB) on the south, Interstate 5 (I-5) on the east, land developed to urban densities on the north and Oregon Route 99E on the west. This memo specifically investigates municipal water, wastewater and stormwater facilities. Other public facilities (transportation, parks, etc) will be summarized elsewhere. Research of existing facility plans, coupled with interviews with City staff, were used to prepare this memorandum.

## **Water**

The supply for the City of Albany (COA) water system includes the 18-mile Santiam-Albany Canal with its intake on the South Santiam River. The system can supply up to 20 million gallons of treated water per day. Demand occasionally exceeds production capacity and is addressed with reservoir storage. The distribution system, purchased from Pacific Power & Light in 1984, varies from poor to generally good. There are 190 miles of water mains, of which thirty miles were installed before 1955. Many of the older lines are corroded and leak severely, with an estimated loss of 25%. Some locations in the City experience low pressure during fire flows and high demand. There are half a dozen at-grade reservoirs that provide storage capacity throughout the City.

The current Water System Master Plan was prepared in 2004 by CH2MHill. Additional modeling and subsequent memoranda have provided periodic updates to the plan. Of particular note is the memo titled “Albany Water System Modeling: South Albany Transmission and Ellingson Reservoir”, dated December 5, 2007. The memo was timed when a large industrial user (Pepsico) was planning to develop in the south Albany Area. The City desired to provide additional water distribution and storage capacity with two projects: the Ellingson Road Reservoir and the South Albany Transmission line (SAT). Although the Pepsico project did not come to fruition, “Phase 1” of the SAT project was completed, including a 24-inch transmission line across Highway 99E into

the Pepsico property. With future development of the South Albany Area, the 24-inch main will continue along Ellingson Road to the intersection with Lochner Road. From Lochner Road east to Columbus Street the transmission main will be 16” diameter. Twelve inch diameter mains will continue north on Lochner and Columbus Roads from the Ellingson transmission main, and will complete the water system looping for the area. Other water distribution lines within the study area, added with future developments, will be constructed to city standards and will likely be 8” diameter.

The first phase of the abandoned Pepsico project would have been served without the construction of the Ellingson Road Reservoir and pump station. Additional development of the south Albany area will require the reservoir and pump station improvements to be completed. The 2007 CH2MHill memorandum recommended a first phase reservoir of 5 million gallons, and a pumping capacity of 7.5 MGD. With these improvements, the 34<sup>th</sup> Avenue reservoir and pump station, which currently requires significant upgrades to remain in service, could be abandoned. The Ellingson Road Phase 1 and 2 reservoir projects, estimated at \$5.5M and \$3.872M respectively, are currently identified as “unfunded” in the Capital Improvement Plan (Project 1639).

### **Wastewater**

The majority of the South Albany study area lies within the Columbus interceptor basin. Future development will be served by a series of gravity mains, force mains and lift stations that would convey sanitary sewer flows to the Columbus Street interceptor and then to the Albany Wastewater Treatment Plant (WWTP). This interceptor has available capacity to convey additional flows from the development of the South Albany Area. Flows at the WWTP vary greatly throughout the year due to infiltration and inflow (I/I) entering the collection system from groundwater and surface runoff sources. The plant occasionally operates above hydraulic capacity during wet weather periods. Processing of biosolids at the plant is at capacity and may restrict large new industrial development. The City is working to gradually reduce I/I through a lateral replacement program and improvements to its collection system.

The Wastewater Facility Plan (1998) is very dated, and believed to be obsolete in regards to the South Albany area. A new Wastewater Facility Plan is under development. Discussions with City staff indicated that additional lift stations will likely be required to convey wastewater to the Columbus Street interceptor. Currently the Oak Creek lift station (within the study area) pumps to the 34<sup>th</sup> Avenue lift station. The Marion Street lift station (northern portion of the study area) operates at capacity, and the 4” force main to Columbus is under-sized. The future plan, with development of the South Albany area would include a new force main from the Oak Creek lift station east to the Columbus Street interceptor, with a connection for the Marion Street lift station. These projects are not currently identified in the CIP.

**Stormwater**

Albany falls into two sub-basins as defined by DEQ, the Upper Willamette and the Calapooia. The Calapooia River flows through the southwestern portion of the city and enters the Willamette River within the Albany city limits. Other waterbodies within the City's jurisdiction include the lower portions of Oak, Periwinkle, Cox, Burkhart, and Truax Creeks as well as Thornton Lake in North Albany. All of these smaller waterbodies are considered part of the Upper Willamette sub-basin for the purposes of this Plan. The streams and rivers within the city limits are receiving waters for stormwater runoff, with the exception of the Albany-Santiam Canal.

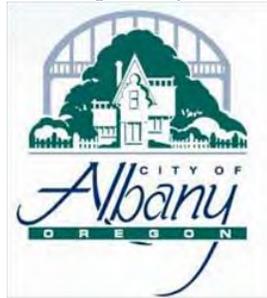
The City of Albany (COA) Stormwater Master Plan dates to 1988 and does not reflect the current planning and management of stormwater for the City. Over the course of the next two years a new stormwater model and master plan for the COA will be developed. The plan will include an assessment of the existing stormwater facilities and identification of short- and long-range improvement projects. The new plan will include more stringent detention and water quality standards, including an emphasis on the use of Low Impact Development (LID) practices. New development will be required to address hydromodification as opposed to the more traditional method of managing peak stormwater discharges. Lastly, the plan will facilitate development of System Development Charges (SDCs) for stormwater that will help fund future projects.

The urban growth boundary includes at least 14 different drainage basins, the majority of which extend beyond the boundary and into the surrounding County. Albany has a number of storm drainage problems related to urbanization and inadequate conveyance (both piped and channel) system capacities. The major waterway flowing through the project study area, Oak Creek, is part of the largest drainage basin in the City. The Oak Creek basin extends from the foothills of the city of Lebanon.

The project study area is currently a patchwork of agricultural, low density residential, wetlands, riparian zones, and a few small ponds and lakes. As urban development is added to the South Albany area, proper planning for the management of stormwater runoff will be critical to minimize flooding, erosion and siltation of existing waterways. As the Stormwater Master Plan for the COA is developed, it should provide specific guidance for the development of the South Albany Area. Albany does not currently have a funding source for regional stormwater facilities; funding mechanisms for those facilities should be identified and the timing of the improvements coordinated with development of the South Albany area.

**Assessment of Environmental Conditions**  
**South Albany Area Plan**  
**City of Albany, Oregon**

*Prepared for:*



City of Albany  
333 Broadalbin Street SW  
Albany, Oregon 97321

*Prepared by:*

**MB&G**

Mason, Bruce & Girard, Inc.  
707 SW Washington Street, Suite 1300  
Portland, Oregon 97205  
(503) 224-3445

January 10, 2012

MB&G Project No. 0010644

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## 1.0 INTRODUCTION

### 1.1 INTRODUCTION AND PURPOSE OF REPORT

The purpose of the South Albany Area Plan project is to effectively address population growth in South Albany and to serve the growing demand for regional travel and development. While addressing this impending growth, the project also serves to conserve essential biological and wetland resources and minimize potential impacts to natural areas. This Assessment of Environmental Conditions Report documents the biological and wetland resources within the project study area (PSA) for the project. Biological and wetland resources were identified using a combination of office-based records reviews, analysis of available Geographic Information Systems (GIS) information, and observations from field reconnaissance. While additional data collection may be necessary, existing baseline data has been reviewed and summarized in this report to thoroughly characterize environmental features within the PSA. This report will help to develop project alternatives that avoid and/or minimize environmental impacts.

### 1.2 PROJECT DESCRIPTION

The PSA is located within the City of Albany, Linn County, Oregon and encompasses approximately 1,916 acres. The PSA is located along the Oak Creek riparian corridor between Highway 99East (99E) and Interstate 5 (I-5), and extends north to the Santiam-Albany Canal and south to the City of Albany's Urban Growth Boundary (UGB) (Figure 1). The current City limits cover nearly half of the PSA, with the remaining study area extending to the UGB.

The PSA is located within the Oak Creek watershed basin (Hydrologic Unit Code [HUC] 5<sup>th</sup> Field #1709000306). A section of Oak Creek and its associated riparian corridor are located in the northern portion of the PSA. Oak Creek flows northwest through the PSA into the Calapooia River, which discharges into the Willamette River northwest of downtown Albany. The topography of the PSA is generally flat with a gentle slope to the northwest. Elevation ranges from 200 feet to 270 feet above mean sea level (MSL).

The PSA has experienced significant alterations to the natural landscape resulting from the construction of I-5, Highway 99E, as well as on-going agricultural practices and some industrial development. Several roadway and utility rights-of-way (ROWs) traverse the PSA. Agricultural practices dominate the landscape within the PSA, but land use also includes residential, commercial and industrial development. Activities within the Oak Creek riparian corridor include wildlife viewing as well as educational and recreational opportunities. Extensive tilling and irrigation practices have been in use for decades on agricultural lands, disrupting natural hydrology. The primary agricultural product for the area within and surrounding the PSA is perennial ryegrass (*Lolium perenne*), which is used for grass seed distribution. A small percentage of agricultural lands in this area are planted for the production of common wheat (*Triticum aestivum*). Due to these and other land practices, the majority of native vegetation has been removed within the PSA, although areas of native scrub-shrub and forested habitat are present within the Oak Creek riparian corridor.

## 2.0 METHODOLOGY

For this assessment of environmental conditions, Mason, Bruce & Girard, Inc. (MB&G) biologists utilized information from secondary sources along with reconnaissance field visits to the PSA. An evaluation of recent natural resource studies, maps, photos, GIS data, and other background materials was conducted prior to visiting the study area in order to facilitate detection of baseline biological and wetland features. Some natural features were observed from a distance, utilizing public lands and road rights-of-ways. However, when access was granted, private lands were surveyed by foot in order to characterize the existing vegetative conditions and determine the presence or absence of sensitive wildlife species habitats and wetland features.

### 2.1 REVIEW OF EXISTING INFORMATION

During the office-based review, the best available published resources were used to determine the potential presence of sensitive fish, wildlife, and plant species as well as the presence of wetland habitat within the PSA. These resources include:

- The United States Fish and Wildlife Service (USFWS) list of species that are federally-listed as proposed, candidate, or a species of concern that may occur in Linn County (USFWS 2011);
- A project-specific Oregon Biodiversity Information Center (ORBIC) database search (ORBIC 2011);
- A StreamNet database search (StreamNet 2011);
- The Oregon Department of Agriculture (ODA) list (Currin pers. comm. 2011) of state-listed threatened or endangered plant species that may occur in Linn County;
- Johnson and O'Neil Wildlife-Habitat types (Johnson and O'Neil 2001);
- City of Albany Local Wetland Inventory (LWI) for the Willamette River, Calapooia River, and Oak Creek (Pacific Habitat Services 1999);
- City of Albany Riparian Inventory for the Willamette Calapooia, and Oak Creek (Pacific Habitat Services 1999);
- USFWS National Wetland Inventory (NWI) mapping (USFWS 2011);
- United States Geological Survey (USGS) topographic maps (USGS 1984);
- The Soil Survey of Linn County, Oregon (Langridge, 1987);
- Aerial photographs (NAIP 2009; City of Albany, 2007);
- South Albany Area Plan (Winterbrook Planning 2007);
- City of Albany - Goal 5 (LCDC 1996).

Potential presence of sensitive species was researched prior to the site reconnaissance using a query of the ORBIC database (ORBIC 2011), the USFWS list of Federally Listed, Proposed, Candidate Species and Species of Concern which may occur within Linn County, Oregon (USFWS 2011), and a query of the StreamNet database (StreamNet 2011). In addition to compiling a list of sensitive wildlife and plant species, MB&G categorized vegetation communities within the PSA following Johnson and O'Neil's Wildlife-Habitat Relationships in Oregon and Washington classification system (Johnson and O'Neil 2001).

Wetland and waters were identified prior to the site investigation using aerial photographs (NAIP 2009; City of Albany 2007), the LWI (Pacific Habitat Services 1999), and the Soil Survey of Linn County, Oregon (Langridge 2007). Previous wetland delineation reports addressing areas

within the PSA were requested from the Department of State Lands (Downing 2011). The LWI layer was determined to be the most accurate source of existing wetland and waters data as it was field-verified and digital LWI data was available. Field maps were created using the LWI along with property access records to assist MB&G biologists in prioritizing areas that required special attention during the on-site field reconnaissance. Where the LWI was unavailable, the NWI layer was used in its place (USFWS 2010).

## 2.2 FIELD INVENTORY

MB&G biologists conducted field reconnaissance of the PSA on August 3, 4 and 5, 2011. The main goals of the field reconnaissance were to assess general habitat conditions for sensitive fish, wildlife and botanical species; to assess dominant vegetation assemblages and habitat types; to record casual observations of wildlife and vegetation; to determine any modifications to the existing LWI; and to observe activities that may affect land use and natural resources. Vegetation community and habitat boundaries originally digitized during the office-based review were refined during the field reconnaissance based on observations of specific vegetative structure, strata, and habitat quality. The major vegetation and land use communities were identified in reference to Johnson and O'Neil (2001) habitat types. The limits of these habitat types were delineated on field maps and later translated into GIS data. During field observations, MB&G biologists were careful to note the presence of any species of concern with the potential to occur in the PSA. However, no species-specific surveys were conducted. Instead, MB&G relied on a general field assessment and the resources listed in Section 2.1 to determine the historical presence of listed wildlife species within and surrounding the PSA.

Site investigations were conducted from public roadways and from private property for which MB&G biologists were granted access. For those accessible parcels, the field reconnaissance was conducted by foot. Some areas within the PSA were inaccessible to MB&G due to lack of right-of-entry from private landowners. However, the number and configuration of public roads made it possible to identify most habitat types and wetland boundaries, regardless of accessibility. For lands within the PSA that were not accessible, could not be reviewed from public ROW, or were not adjacent to an accessible parcel; MB&G relied on aerial photographic interpretation, existing environmental data, and mapping resources for habitat and wetland analysis.

During the field reconnaissance, any additions to wetlands not noted on the original LWI were hand-drawn on field maps and subsequently digitized in the office. The presence and location of wetlands and waters were determined based on presence of hydrophytic vegetation and above-ground, visible hydrology indicators. Only those features (including roadside ditches) that may be considered jurisdictional by the Army Corps of Engineers (ACOE) or Oregon Department of State Lands (DSL) were mapped during the field reconnaissance. Wetlands were not removed from the LWI unless the area was significantly altered or developed and could no longer support wetland hydrology. Particular attention was paid to wetlands determined to be significant (by the LWI under the City of Albany's Goal 5 Inventory) and their associated riparian areas within the PSA, as sensitive plant and wildlife species are often associated with these areas.

## 2.3 MAPPING

Using map templates provided by Otak, Inc., the LWI information and MB&G observations were compiled as a base layer and used for the creation of habitat-type and land use boundaries

maps. MB&G used available GIS information from the City of Albany and from an internal geospatial library to refine the habitat and land use margins. The following GIS data were used to create the final mapping product:

- LWI (Pacific Habitat Services 1999);
- City Limits and Urban Growth Boundary (City of Albany 2007);
- City of Albany Goal 5 Significant Wetlands (Pacific Habitat Services 1999);
- Aerial photographs (City of Albany 2006);
- Streams and rivers (City of Albany 2007);
- Roadway and parcel boundaries (City of Albany 2007);
- Johnson and O’Neil layer (2001, 1:100,000);
- Field maps and notes.

Habitat community boundaries were mapped at a scale of 1:6,000 with a minimum mapping unit of two acres. These boundaries were determined based on vegetation structure, potential for supporting plants and wildlife, and human-related disturbance within the community. These boundaries were digitally traced from field maps into GIS data and were combined with the LWI layer. Consolidated data was subsequently attributed with secondary characteristics pertaining to data gathered at the ground level, such as agricultural usage and predominant tree cover. The Johnson and O’Neil Wildlife – Habitat Relationships in Oregon and Washington (Johnson and O’Neil 2001) GIS layer provided a coarse dataset from which to assemble the more detailed habitat-type product. Roadway and parcel boundaries, along with stream features, were used to further define habitat and land use polygons. High resolution aerial photographs provided by the City of Albany were useful in confirming canopy cover type, as well as determining urban development.

### 3.0 FINDINGS

A biological resources review was undertaken to determine the segmentation of habitat within the PSA. MB&G conducted a review of existing information on biological resources and conducted a subsequent field reconnaissance within the PSA.

#### 3.1 TERRESTRIAL WILDLIFE

Three sensitive wildlife species with the potential to occur within Linn County were identified during a records review of data sources discussed in Section 2.1. Two of these sensitive species have the potential to occur within the PSA. These species are listed in Table 3.1 along with the presence of mapped critical habitat in the vicinity of the PSA, a summary of their preferred wildlife-habitat associations (Figure 1, Appendix A) (Johnson and O’Neil 2001), and federal and state listing status.

**Table 3.1 Sensitive Wildlife Species Identified During Records Review of the South Albany Area Plan PSA**

Common Name	Scientific Name	Mapped Critical Habitat	Preferred Wildlife – Habitat Relationships Occurring within PSA (Section 3.4)	Habitat Observed within PSA	Federal Listing Status	State Listing Status	Source
Northern spotted owl	<i>Strix occidentalis caurina</i>	Yes (>25 miles outside of PSA)	None	No	T	T	USFWS
Northern Pacific pond turtle	<i>Actinemys marmorata marmorata</i>	No	<ul style="list-style-type: none"> <li>•Open Water – Lakes, Rivers, and Streams</li> <li>•Herbaceous Wetlands</li> <li>•Westside Riparian – Wetlands</li> </ul>	Yes	SOC	SC	USFWS; ORBIC
Painted turtle	<i>Chrysemys picta</i>	No	<ul style="list-style-type: none"> <li>•Open Water – Lakes, Rivers, and Streams</li> <li>•Herbaceous Wetlands</li> <li>•Westside Riparian – Wetlands</li> </ul>	Yes	N/A	SC	ORBIC

E= Listed Endangered; T= Listed Threatened; SOC= Species of Concern; SC= Sensitive critical

During the field reconnaissance, no sensitive wildlife species were observed. In addition, there are no wildlife-habitat communities (Section 3.4) within the PSA appropriate to support the nesting or foraging activities of the northern spotted owl. As such, it is unlikely these owls are present within the PSA. They are more commonly associated with old growth forests and more contiguous habitat types; neither of which is available within the PSA.

Potential habitat for the Northern Pacific pond turtle and the painted turtle is present within the PSA. The three preferred habitat communities for these sensitive turtle species include Open Water, Herbaceous Wetlands, and Westside Riparian-Wetlands (refer to Section 3.4 for descriptions). The Oak Creek riparian area, along with several small ponds and Freeway Lakes, may provide nesting, feeding, and basking areas appropriate for these species. A records review found observations of the Northern Pacific pond turtle along eight sites along the Calapooia River and one sighting at Freeway Lakes between 1994 and 2002, within a mile of the PSA (ORBIC 2011). In addition, three painted turtle specimens were collected approximately 2.5 miles north of the PSA in 1941 (ORBIC 2011).

The Oak Creek riparian area appears to serve as a valuable wildlife corridor because of its connectivity in an otherwise fragmented environment. This corridor is most likely utilized by wildlife for travel between undeveloped areas located east and west of the PSA.

### 3.2 BOTANICAL RESOURCES

Nine sensitive botanical species with the potential to occur within Linn County were identified during a records review of the data sources. Six of these sensitive botanical species have the potential to occur within the PSA (Currin pers. comm. 2011, USFWS, 2011); however, only five of the species have habitat within the PSA. These species are listed in Table 3.2 along with their preferred habitat and presence of mapped critical habitat, if applicable.

**Table 3.2 Sensitive Botanical Species Identified During Records Review of the Project PSA.**

Common Name	Scientific Name	Mapped Critical Habitat (Yes or No)	Preferred Habitat	Potential Habitat Present within PSA	Flowering Period	Federal Listing Status	State Listing Status	Source
Whitetop aster	<i>Sericocarpus rigidus</i>	No	Low elevation, moist native prairies, on well-drained upland soils in oak savannas. <sup>1</sup>	No. No native prairies or oak savannas present within PSA.	July—early September <sup>1</sup>	SOC	T	USFWS, ODA
Wayside aster	<i>Eucephalis vitalis</i>	No	Often found in dry, open Douglas fir forests and clearcuts. <sup>1</sup>	No. No Douglas fir stands present within PSA.	July—early September <sup>1</sup>	SOC	T	USFWS, ODA
Willamette daisy	<i>Erigeron decumbens</i> var. <i>decumbens</i>	Yes (> 10 miles from PSA)	Native wetland and upland prairie, oak savanna, heavier soils, restricted to native prairie grassland. <sup>1</sup>	No. No native prairies or oak savannas present within PSA.	May—early August <sup>1</sup>	E	E	USFWS, ODA
Bradshaw's lomatium	<i>Lomatium bradshawii</i>	No	Flat, moist, native prairies with heavy clay soils. <sup>1</sup>	No. No native prairies present within PSA.	March-June <sup>1</sup>	E	E	USFWS, ODA
Nelson's checkermallow	<i>Sidalcea nelsoniana</i>	No	Relatively open areas on damp soil, in meadows, wet prairie remnants, fencerows, roadsides, deciduous forest edges, occasionally Oregon ash wetlands. <sup>1</sup>	Yes. Multiple locations within PSA, especially along the Oak Creek riparian corridor.	May—September <sup>1</sup>	T	T	USFWS, ODA
Kincaid's lupine	<i>Lupinus subpureus</i> ssp. <i>kincaidii</i>	Yes (> 10 miles from PSA)	Upland prairie grasslands, oak savanna, woodland edges. <sup>1</sup>	Yes. Small patches of segmented grasslands in the center of PSA; woodland edge habitat throughout PSA.	Late April-July <sup>1</sup>	T	T	USFWS, ODA
Thin-leaved peavine	<i>Lathyrus holochlorus</i>	No	Low elevation roadsides, fencerows, creek banks, forest edges, oak savannas, shrublands, and grasslands. <sup>1</sup>	Yes. Multiple locations within PSA.	May—July <sup>1</sup>	SOC	N/A	USFWS, ORBIC
Howell's montia	<i>Montia howellii</i>	No	Meadows, vernal pools, usually occur in wetlands.	Yes. Oak Creek corridor – herbaceous wetlands and areas surrounding open water.	Late fall-early spring <sup>2</sup>	N/A	C	ORBIC
Meadow checker-mallow	<i>Sidaicea campestris</i>	No	Native to grassland but limited to fence-rows, roadsides and ditch-banks.	Yes. Multiple locations within PSA.	April-early July <sup>3</sup>	N/A	C	ORBIC

E= Listed Endangered; T= Listed Threatened; SOC= Species of Concern; C= Candidate

<sup>1</sup> Oregon Flora Project 2011

<sup>2</sup> ORO90-95-27 <http://www.blm.gov/or/districts/eugene/plans/files/95-27-EA.pdf>

<sup>3</sup> Eastman 1990

Most areas within the PSA have undergone disturbances to habitat that likely limit the ability for sensitive plants to be present (e.g., agricultural cultivation, suburban development). However, the riparian corridor surrounding Oak Creek provides potentially suitable habitat for these sensitive species due to its continuity and structure. MB&G biologists based the potential presence of listed botanical species on the Johnson and O’Neil habitat types listed in Section 3.4 along with field reconnaissance observations.

Nelson’s checkermallow is often associated with deciduous forest edges and Oregon ash wetlands, both of which are present within the PSA. To a lesser extent, grasslands and woodland edges are also habitat present within the PSA that supports Kincaid’s lupine; however, these habitats are fairly segmented and isolated. A population of Howell’s montia is located outside of the PSA on the east side of I-5 next to the central pool of Freeway Lake.PSA (ORBIC 2011). In addition, historic observations of both meadow checker-mallow and thin-leaved peavine have occurred within the PSA along roadsides (ORBIC 2011). Due to the potential presences of these species, additional botanical surveys are recommended within the limits of any proposed development alternatives associated with the South Area Albany Plan. These surveys will need to be conducted during the appropriate flowering window for the species discussed above.

### 3.3 AQUATIC/FISHERIES RESOURCES

Four sensitive fish species with the potential to occur within the PSA were identified during a records review of existing data sources discussed in Section 2.1. These species are listed in Table 3.3 along with their respective Evolutionary Significant Unit (ESU) and mapped critical habitat, if applicable. Four sensitive fish species were identified as potentially occurring within 2 miles of the PSA (USFWS 2011, StreamNet 2011, ORBIC 2011).

**Table 3.3 Sensitive Fish Species and Habitat Identified During Records Review of the PSA**

Scientific Name	Common Name	Mapped Critical Habitat (Yes or No)	Essential Fish Habitat Within PSA <sup>1</sup>	Essential Salmonid Habitat Within PSA <sup>2</sup>	Known to occur within Oak Creek <sup>3</sup>	Federal Listing Status	State Listing Status
<i>Salvelinus confluentus</i>	Bull trout	No	NA	NA	No <sup>3</sup> Occur >25 miles southeast in the South Santiam River	T	SV
<i>Oregonichthys crameri</i>	Oregon Chub	Yes (> 10 miles downstream of PSA in Santiam 1-5 side channels)	NA	NA	No <sup>3</sup> (> 10 miles downstream of PSA in Santiam 1-5 side channels)	T	SC
<i>Oncorhynchus mykiss</i>	Steelhead (Upper Willamette River ESU, winter run)	Yes (1.5 miles downstream - Calapooia River)	N/A	No	No Occur downstream (Calapooia River)	T	SC

**Table 3.3 Sensitive Fish Species and Habitat Identified During Records Review of the PSA (continued).**

Scientific Name	Common Name	Mapped Critical Habitat (Yes or No)	Essential Fish Habitat Within PSA <sup>1</sup>	Essential Salmonid Habitat Within PSA <sup>2</sup>	Known to occur within Oak Creek <sup>3</sup>	Federal Listing Status	State Listing Status
<i>Oncorhynchus tshawytscha</i>	Chinook salmon (Upper Willamette River ESU, spring run)	Yes (1.5 miles downstream - Calapooia River)	Yes	No	No Occur downstream (Calapooia River)	T	SV

E= Listed Endangered; T= Listed Threatened SOC= Species of Concern SC= Sensitive critical; SV= Sensitive vulnerable  
<sup>1</sup>NOAA 2011, <sup>2</sup>DSL 2011, <sup>3</sup>StreamNet 2011

Oak Creek has one unnamed tributary which discharges at the western terminus of 39<sup>th</sup> Avenue, less than one half mile from the northwestern boundary of the PSA. Oak Creek flows into the Calapooia River approximately 1.5 miles northwest of the PSA. Oak Creek is designated as a fish-bearing stream by the Oregon Department of Fish and Wildlife (ODFW).

The Calapooia River has been mapped as critical habitat for steelhead and Chinook salmon. In addition, occurrences of these sensitive species have been documented downstream of where Oak Creek flows into the Calapooia. The Calapooia River and the Oak Creek riparian corridor appear to serve as important habitat and connectivity functions for sensitive fish species. Prior to initiating any development alternatives associated with the South Albany Area Plan that may impact sections of Oak Creek, it is recommended that additional fish surveys be conducted to determine detailed fish distribution within the PSA.

### 3.4 HABITAT TYPES

Based upon field observations and background research, the PSA contains eight habitat communities based on Johnson and O’Neil (2001) habitat conditions. These habitats are listed below in order of abundance within the PSA:

1. Agriculture, Pastures, and Mixed Environs (36.0%)
2. Agricultural Lands with herbaceous wetland inclusions (34.3%)
3. Westside Riparian Wetlands (11.0%)
4. Urban and Mixed Environments (10.7%)
5. Westside Oak Woodlands (3.9%)
6. Lakes, Rivers, Ponds, and Reservoirs (2.5%)
7. Herbaceous Wetlands (1.3%)
8. Westside Grasslands (0.3%)

The following paragraphs provide a description of each habitat community shown on project mapping (Appendix A), as well as the dominant vegetation present and wildlife species observed either directly or indirectly (e.g., tracks, scat, landowner anecdotal evidence, etc.) within the PSA. These descriptions do not provide a complete inventory of plant or wildlife species within each habitat community, but are presented to convey the differences between the communities identified during the field reconnaissance.

### 3.4.1 Agriculture, Pastures and Mixed Environments

The Agriculture, Pastures and Mixed Environments habitat community encompasses approximately 36.0% of the PSA (690 acres) and includes a broad range of agricultural uses including mowed, hayed and grazed fields, and associated structures including fences, roadsides, field borders, barns, outbuildings, and silos. Although barns and other outbuildings potentially provide some roosting habitat for sensitive bat species, most native vegetation has been removed and little to no cover is available for other migrating, foraging or nesting wildlife species. In addition, there is potential for direct wildlife-human conflict (e.g., coyotes preying upon chickens) and competition for food resources with livestock.

The dominant vegetation within this habitat community includes perennial ryegrass, common wheat, bulbous bluegrass (*Poa bulbosa*), Canada thistle (*Cirsium arvense*), common dandelion (*Toraxacum officinale*), common velvetgrass (*Holcus lanatus*), dovefoot geranium (*Geranium molle*), English hawthorn (*Crataegus monogyna*), hairy cat's ear (*Hypochaeris radicata*), Himalayan blackberry (*Rubus armeniacus*), meadow foxtail (*Alopecurus pratensis*), meadow knapweed (*Centaurea pratensis*), purple deadnettle (*Lamium purpureum*), tall fescue (*Schedonorus phoenix*) and tall tumble-mustard (*Sisymbrium altissimum*).

Wildlife species directly observed or that presented signs of use (e.g., scat and tracks) in this habitat community during the field reconnaissance include American crow (*Corvus brachyrhynchos*), American robin (*Turdus migratorius*), Anna's hummingbird (*Calypte anna*), European starling (*Sturnus vulgaris*), killdeer (*Charadrius vociferous*), red-tailed hawk (*Buteo jamaicensis*), turkey vulture (*Cathartes aura*), and nutria (*Myocastor coypus*) (scat in a farm field located in the northwestern corner of the PSA). No other direct or indirect observations of mammals, reptiles or amphibians were made within this habitat community during the field reconnaissance.

This habitat community is not considered high quality habitat for sensitive wildlife or botanical species due to the amount of extensive ground disturbance associated with agricultural activities and frequent human presence. The sensitive species listed in Tables 3.1 and 3.2 with the potential to occur within the PSA would not be supported by this habitat-type.

### 3.4.2 Agricultural Lands with Herbaceous Wetland Inclusions

The Agriculture Lands with Herbaceous Wetland Inclusions habitat community is not listed as a habitat type under the definitions of Johnson and O'Neil (2001). However, MB&G biologists determined that these areas have the potential to be managed as **Herbaceous Wetlands** (see description below) in the absence of agricultural activities. Hence, it is important to distinguish between the two; considering agricultural lands support different wildlife and botanical species than do herbaceous wetlands (see description below). In addition, agricultural areas, regardless of the inclusion of wetlands, are considered to be low quality habitat while herbaceous wetlands are thought to be the more valued habitat type. The agricultural areas with herbaceous wetland inclusions were identified by the LWI and field observations and encompass approximately 34.3% of the PSA (657 acres). MB&G biologists used a combination of mapped hydric soils, wetland hydrology and remnant hydric vegetation to approximate where these wetland inclusions exist. Although wetland conditions are present, agriculture remains the dominant land use of this modified habitat type. The limits of actual wetlands in this habitat type are subject to a detailed delineation and approval of the delineation by the DSL.

Under existing conditions with active agricultural practices, this habitat type does not support sensitive species within the PSA and is considered low quality habitat. However, if these areas are managed as herbaceous wetland, they have the potential to support such sensitive species as the Northern Pacific pond turtle, the painted turtle and Nelson's checkermallow.

### 3.4.3 Westside Riparian-Wetlands

The Westside Riparian-Wetlands habitat community encompasses less than 11.0% of the PSA (211 acres) and can be characterized by tall, wet woodland or forest. For the purposes of this report, this habitat type is synonymous with Palustrine Forested Wetlands (PFO) identified on the NWI and is closely associated with Oak Creek and its tributaries. Westside riparian wetlands provide important protection, foraging and nesting habitat for wildlife species. The occurrence of this wildlife-habitat community is considered valuable due to its rarity within the PSA and its overall ecological value.

Dominant vegetation within this habitat community includes Oregon ash (*Fraxinus latifolia*), black cottonwood (*Populus trichocarpa*), creeping buttercup, elderberry species (*Sambucus* sp.), Himalayan blackberry, western redcedar (*Thuja plicata*), reed canarygrass (*Phalaris arundinacea*), sword fern (*Polystichum munitum*), yellow-flag iris (*Iris pseudacorus*), and youth-on-age (*Tolmiea menziesii*).

Wildlife species directly observed or that presented signs of use (e.g., scat and tracks) in this habitat community during the field reconnaissance include Canada goose (*Branta canadensis*), dark-eyed junco, northern red-legged frog (*Rana aurora aurora*), Pacific chorus frog (*Pseudacris regilla*), red-winged blackbird (*Agelaius phoeniceus*), and song sparrow. No direct or indirect observations of mammals or reptiles were made within this habitat community during the field reconnaissance.

The Oak Creek riparian corridor within the PSA may provide high quality habitat for sensitive species due to its connectivity and structure. Species such as the Northern Pacific Pond Turtle, the Painted Turtle, and Howell's montia, along with sensitive fish species have the potential to be present within this habitat type within the PSA.

### 3.4.4 Urban and Mixed Environments, Low Density Zone

The Urban and Mixed Environments, Low Density Zone habitat community encompasses approximately 10.7% of the PSA (206 acres). It is located throughout the PSA; however, it is mainly concentrated adjacent to major roadways, including Highway 99E SW. This habitat community occurs at the "outer zone of the urban-rural continuum" (Johnson and O'Neil 2001). Within this community, there is typically 10% to 20% impervious surface and low-density, single-residence housing. This community also includes roads, fences, houses, and outbuildings. Within the PSA, most of the native vegetation has been removed and little to no vegetative cover is available for migrating, foraging or nesting wildlife species.

Dominant vegetation observed within this habitat community consists of residential ornamental grass and shrub species. Common plants observed throughout this habitat type include common dandelion, creeping buttercup (*Ranunculus repens*), meadow foxtail and tall fescue. No sensitive plant species were observed within this community.

Wildlife species directly observed or that presented signs of use (e.g., scat and tracks) in this habitat community during the field reconnaissance include American crow, American robin, black-capped chickadee (*Poecile atricapillus*), European starling, dark-eyed junco (*Junco*

*hyemalis*), song sparrow (*Melospiza melodia*), and western scrub jay (*Aphelocoma californica*). No direct or indirect observations of mammals, reptiles or amphibians were made within this wildlife-habitat community during the field reconnaissance.

Low density urban areas are not considered high quality habitat for sensitive wildlife species due to the amount of human disturbance. It is unlikely that sensitive species with the potential to occur within the PSA (as listed on Tables 3.1 and 3.2) would be present in this habitat type.

#### 3.4.5 Westside Oak Woodlands

The Westside Oak Woodlands habitat community encompasses approximately 3.9% of the PSA (75 acres) and is dominated by deciduous broadleaf trees or a mixture of deciduous and coniferous species with moderately drained soils and water availability. Due to surrounding development, these woodlands provide important habitat for wildlife species. This habitat type provides nesting sites for birds as well as food for insects. Oaks are thought to be one of the most important tree species for providing wildlife food, i.e. acorns.

Dominant vegetation within this wildlife-habitat community includes Oregon white oak (*Quercus garryana*), Pacific madrone (*Arbutus menziesii*), shore pine (*Pinus contorta* var. *contorta*), or California black oak (*Q. kelloggii*). In riparian oak stands, Oregon ash is occasionally co-dominant with white oak. The understory commonly includes oceanspray (*Holodiscus discolor*), baldhip rose (*Rosa gymnocarpa*), poison-oak (*Toxicodendron diversiloba*), serviceberry (*Amelanchier alnifolia*), beaked hazel (*Corylus cornuta*), trailing blackberry (*Rubus ursinus*), and Indian plum (*Oemleria cerasiformis*).

Wildlife species common in this habitat community include black-tailed deer (*Odocoileus hemionus*), wild turkey (*Meleagris gallopavo*), acorn woodpecker (*Melanerpes formicivorus*), Western gray squirrel (*Sciurus griseus*), common bushtit (*Psaltriparus minimus*), scrub jay (*Aphelocoma caerulescens*), white-breasted nuthatch (*Sitta carolinensis*) and mourning dove (*Zenaida macroura*). No direct or indirect observations of birds, mammals, reptiles or amphibians were made within this wildlife-habitat community during the field reconnaissance.

Although oak woodlands demonstrate valuable habitat due to their rarity within the PSA, segmentation of this habitat type has diminished its overall ecological value. These habitats have the potential to support sensitive plant species such as Nelson's checkermallow, Kincaid's lupine, and thin-leaved peavine within the PSA.

#### 3.4.6 Lakes, Rivers, Ponds, and Reservoirs

The Lakes, Rivers, Ponds, and Reservoirs habitat community encompasses approximately 2.5% of the PSA (47 acres) and includes stream channels and open water. This wildlife-habitat community is synonymous with the Palustrine Unconsolidated Bottom (PUB) Cowardin wetland class and includes Oak Creek and its tributaries, Freeway Lakes (Linn County Parks and Recreation), in addition to commercial, urban and agricultural ponds. Oak Creek extends across the northern portion of the PSA and provides important habitat for fish and wildlife species. Freeway Lakes is bisected by Interstate 5 and was created in 1957 as a source of fill material for roadway construction. It consists of three lakes of which the largest (21 acres) is included in the PSA. The remaining open water areas may be water quality limited, decreasing the ecological value for these wetlands.

Wildlife species directly observed or that presented signs of use (e.g., scat and tracks) in this habitat community during the field reconnaissance include mallard (*Anas platyrhynchos*), Canada goose, great blue heron (*Ardea herodias*), red-winged blackbird, wood duck (*Aix sponsa*), and various gull species. No direct or indirect observations of mammals, reptiles or amphibians were made within this wildlife-habitat community during the field reconnaissance.

The commercial retention ponds within the PSA are not considered to be high quality habitat. However, Oak Creek and Freeway Lakes are considered to be of higher ecological value and may support such species as the Northern Pacific Pond Turtle, the Painted Turtle, and Howell's montia, along with sensitive fish species.

#### 3.4.7 Herbaceous Wetlands

The Herbaceous Wetlands habitat community encompasses approximately 1.3% of the PSA (24 acres) and includes emergent herbaceous plants that can be found in poorly-drained flats or depressions, often adjacent to stream channels or open water. This wildlife-habitat community is synonymous with Palustrine Emergent (PEM) wetlands and includes road side ditches used for drainage. Herbaceous wetlands are the second least common wildlife-habitat community within the PSA. Roadside ditches within the PSA are disturbed and contain weedy species; however, the herbaceous wetland patches within the Oak Creek corridor are considered valuable due to their rarity within the PSA and overall ecological value. Many sensitive bird species use herbaceous wetlands for migratory resting places, breeding or feeding ground. This community also provides essential nesting and foraging habitat for amphibian and reptile species dependent on wetlands.

Dominant vegetation within this wildlife-habitat community includes colonial bentgrass, common rush (*Juncus effusus*), creeping buttercup, curly dock (*Rumex crispus*), meadow foxtail, reed canarygrass and water knotweed (*Polygonum amphibium*).

Wildlife species common in this habitat community (limited to the Oak Creek riparian corridor) include beaver (*Castor canadensis*), Canada goose, mallard, Pacific chorus frog, red-winged blackbird and wood duck (*Aix sponsa*). No direct or indirect observations of birds, mammals, reptiles or amphibians were made within this wildlife-habitat community during the field reconnaissance.

This habitat community is considered to be high quality habitat for sensitive species. Within the PSA, species such as the Northern Pacific Pond Turtle and Howell's montia have the potential to occur within this habitat type.

#### 3.4.8 Westside Grasslands

The Westside Grasslands habitat community encompasses approximately 0.3% of the PSA (5 acres) and is generally grassland with less than 30% shrub canopy cover. Westside Grasslands are the least common wildlife-habitat community within the PSA along with Herbaceous Wetlands (see below).

Dominant native vegetation within this wildlife-habitat community is red fescue (*Festuca rubra*) and California oatgrass (*Danthonia californica*), while the exotic grasses include colonial bentgrass (*Agrostis tenuis*), sweet vernalgrass (*Anthoxanthum odoratum*), Kentucky bluegrass (*Poa pratensis*), tall oatgrass (*Arrhenatherum elatius*), medusahead (*Taeniatherum caput-medusae*), tall fescue, and soft brome (*Bromus mollis*).

Wildlife species common to this habitat community include song sparrow, savannah sparrow (*Passerculus sandwichensis*), European starling, Brewer's blackbird (*Euphagus cyanocephalus*), black-tailed deer, American robin, and killdeer. No direct or indirect observations of mammals, reptiles or amphibians were made within this wildlife-habitat community during the field reconnaissance.

This wildlife-habitat community is not considered high quality habitat for sensitive wildlife or botanical species due to the amount fragmentation associated with agricultural activities and frequent human presence. However, these fragmented landscapes have the potential to support Kincaid's lupine, meadow checkermallow, and thin-leaved peavine within the PSA.

### 3.5 EXISTING WETLAND AND WATERS RESOURCES

A wetlands and waters resources review was undertaken to record any broad-scale changes to the original LWI. MB&G conducted a review of existing information on wetland and water resources and subsequent field reconnaissance within the PSA.

#### 3.5.1 Wetlands

The following is a description of each Cowardin (1979) wetland classification and includes the dominant vegetation present within each wetland type in the PSA. These descriptions do not provide a complete inventory of plant species within each wetland type but are presented to convey the general vegetation communities identified during the field reconnaissance. These wetland classifications are associated with several of the wildlife-habitat communities listed in Section 3.4.

**Palustrine Forested (PFO)** wetlands are characterized by wetlands or portions of wetlands that are dominated by woody species over 30 feet in height with over 50% canopy cover (Cowardin 1979). Dominant vegetation observed for PFO wetlands within the PSA include Oregon ash, white oak, Himalayan blackberry, red alder, reed canarygrass, sword fern, and western redcedar. PFO wetlands are commonly associated with the Westside Riparian-Wetland habitat type identified within the PSA, as described in Section 3.4.

**Palustrine Emergent (PEM)** wetlands are characterized by poorly-drained flats or depressions, marshes and shallow ponds that are dominated by grasses and other herbaceous plants (Cowardin 1979). Dominant vegetation observed for PEM wetlands within the PSA includes colonial bentgrass, common rush, creeping buttercup, curly dock, meadow foxtail, reed canarygrass, and water knotweed. PEM wetlands are commonly associated with the Herbaceous Wetland and Agricultural Lands with Herbaceous Wetland Inclusions habitat types identified within the PSA, as described in Section 3.4.

**Palustrine Unconsolidated Bottom (PUB)** wetlands have less than 30% vegetation cover with a mix of silt, clay, and organic matter substrate (Cowardin 1979). Submerged vegetation can include species of waterweed (*Elodea* spp.), water milfoil (*Myriophyllum* spp.), bladderworts (*Utricularia* spp.), pondweeds (*Potamogeton* spp.) and Mare's tail (*Hippuris vulgaris*). PUB wetlands are associated with the Lakes, Rivers, Ponds, and Reservoirs (Open Water) habitat type identified within the PSA, as described in Section 3.4.

The Cowardin wetland types, their Johnson and O'Neil wildlife habitat associations and acreages identified within the PSA are presented in Table 3.4.

**Table 3.4 Wetland Types and Acreages Identified within the PSA**

Wetland Type	Wildlife Habitat Associations	Acreage of Wetlands
Palustrine Forested (PFO)	Westside Riparian	240
Palustrine Emergent (PEM)	Herbaceous Wetlands	5
	Agriculture Lands with Wetland Inclusions	722
Palustrine Unconsolidated Bottom (PUB)	Open Water	39

A review of previous wetland delineation reports is listed in Table 3.5 below. A total of 29 wetland delineations referring to lands within the PSA have been concurred (approved) by the DSL since 1991.

**Table 3.5 Existing Wetland Delineations within the PSA (from Most Recent to Oldest Reports)**

Wetland Delineation Report #	Tax Lot	Wetland Delineation Report #	Tax Lot
WD2010-0207	11S03W21 (502)	WD2005-0727 WD2008-0538	11S03W29 (300)
WD2010-0129	11S03W20 (603)	WD2003-0393 WD2005-0407	11S03W30 (500,700,1100,1200)
WD2009-0121 WD2009-0253	11S03W19A (501)	WD1998-0223	11S03W30 (400)
WD2009-0061	11S03W19A (100)	WD1997-0258	11S03W20 (1500)
WD2008-0506	11S03W19 (400,402,404,414)	WD1997-0067	11S03W30 (311)
WD2007-0547	11S03W30 (304,500)	WD1995-0042	11S03W20 (N/A <sup>1</sup> )
WD2007-0290 WD2007-0291	11S03W19 (500)	WD1994-0290	11S03W20 (1300)
WD2007-0287	11S03W29 (400)	WD1994-0288	11S03W20 (1 BLOCK 1)
WD2007-0258	11S03W19 (304)	WD1994-0126	11S03W20 (N/A <sup>1</sup> )
WD2007-0142	11S03W19 (N/A <sup>1</sup> )	WD1994-0107	11S03W20 (N/A <sup>1</sup> )
WD2006-0604 WD2007-0693	11S03W19A (500)	WD1993-0195	11S03W19 (N/A <sup>1</sup> )
WD2006-0575	11S03W19A (2200)	WD1991-0006	11S03W19 (N/A <sup>1</sup> )

<sup>1</sup>Tax lot information not available

### 3.5.2 Waters

Waters that are most likely jurisdictional to wetland fill regulations administered by the U. S. Army Corps of Engineers (ACOE) or DSL include Oak Creek, its unnamed tributary, commercial and residential ponds, and the portion of Freeway Lakes within the PSA. Additional coordination with DSL and ACOE will likely be necessary to determine the jurisdictional status of the roadside ditches identified within the PSA. This determination will be based upon their flow, use, and storm water function. The majority of these ditches occur along existing roadways. Common vegetation associated with these ditches includes colonial bentgrass, common rush, creeping buttercup, curly dock, meadow foxtail, reed canarygrass, and water knotweed.

MB&G biologists mapped roadside ditches during the field reconnaissance; however, the mapping was not exhaustive due to the scale of the analysis. Depending on the proposed locations of proposed development alternatives associated with the South Area Albany Plan, additional inventories of roadside ditches may need to be conducted within the limits of proposed disturbance of selected alternatives to assess the jurisdiction of the roadside ditches.

## 4.0 SUMMARY AND CONCLUSIONS

### 4.1 SUMMARY AND CONCLUSIONS

The purpose of the proposed South Albany Area Plan is to address increasing population growth in South Albany and to serve the growing demand for regional travel and development. While addressing this impending growth, the project also serves to conserve essential biological and wetland resources and minimize potential impacts to natural areas. This Assessment of Environmental Conditions Report documents the biological and wetland resources within the PSA of the project. Using the results of office research of existing natural resource documentation, map templates provided by Otak, Inc., the LWI (Pacific Source 1999) information and MB&G field observations, base mapping was prepared to approximate the location of vegetation and wildlife habitat types and land use boundaries. These boundaries were determined based on vegetation structure, potential for supporting plants and wildlife, and human-related disturbance within the community.

Based upon field observations and background research, the PSA contains eight habitat communities, based on Johnson and O'Neil (2001) habitat conditions. These habitats are listed below in order of dominance within the PSA.

1. Agriculture, Pastures, and Mixed Environs (36.0%)
2. Agricultural Lands with herbaceous wetland inclusions (34.3%)
3. Westside Riparian Wetlands (11.0%)
4. Urban and Mixed Environments (10.7%)
5. Westside Oak Woodlands (3.9%)
6. Lakes, Rivers, Ponds, and Reservoirs (2.5%)
7. Herbaceous Wetlands (1.3%)
8. Westside Grasslands (0.3%)

The Agriculture, Pastures and Mixed Environments habitat community is the dominant habitat type within the PSA and includes a broad range of agricultural uses including mowed, hayed and grazed fields, and associated structures including fences, roadsides, field borders, barns, outbuildings, and silos. This habitat type is not considered high quality habitat for sensitive wildlife or botanical species due to the amount of extensive ground disturbance associated with agricultural activities and frequent human presence. Agricultural lands with herbaceous wetland inclusions are the second most common habitat type in the PSA and do not support sensitive species within the PSA. They are also considered to be low quality habitat due to on-going agricultural activities and frequent human disturbances common to this habitat. However, if these areas are managed as herbaceous wetland (abandoned from agriculture), they have the potential to support such sensitive species as the Northern Pacific pond turtle, the painted turtle and Nelson's checkermallow.

The Westside Riparian Wetlands habitat community is associated with the Oak Creek riparian corridor that extends across the northern portion of the PSA. This habitat community may provide high quality habitat for sensitive species due to its connectivity and structure. Species such as the Northern Pacific pond turtle, the painted turtle, and Howell's montia; along with sensitive fish species have the potential to be present within this habitat type within the PSA.

The Urban and Mixed Environments, Low Density Zone habitat community occurs at the "outer zone of the urban-rural continuum," (Johnson and O'Neil 2001). Within this community, there is typically 10% to 20% impervious surface and low-density, single-residence housing. This community also includes roads, fences, houses, and outbuildings. Low density urban areas are not considered high quality habitat for sensitive wildlife species due to fragmented vegetation communities and the amount of human disturbance. It is unlikely that sensitive species with the potential to occur within the PSA would be present in this habitat type.

The Westside Oak Woodlands habitat community is located in small discontinuous pockets within the PSA and is dominated by deciduous broadleaf trees or a mixture of deciduous and coniferous species with moderately drained soils and water availability. Although oak woodlands demonstrate valuable habitat due to their rarity within the PSA, segmentation of this habitat type has diminished its overall ecological value. These habitats have the potential to support sensitive plant species such as Nelson's checkermallow, Kincaid's lupine, and thin-leaved peavine within the PSA.

The Lakes, Rivers, Ponds, and Reservoirs habitat community within the PSA include stream channels and areas of open water. The commercial retention ponds within the PSA are not considered to be high quality habitat. However, Oak Creek and Freeway Lakes are considered to be of higher ecological value and may support such species as the Northern Pacific pond turtle, the painted turtle, and Howell's montia, along with sensitive fish species.

The Herbaceous Wetlands habitat community encompasses approximately 1.3% of the PSA and includes emergent herbaceous plants that can be found in poorly-drained flats or depressions, often adjacent to stream channels or open water. This habitat community is considered to be of high quality habitat for sensitive species. Within the PSA, species such as the Northern Pacific pond turtle and Howell's montia have the potential to occur within this habitat type.

The Westside Grasslands habitat community occupies only a very small portion of the PSA (0.3%) and is generally grassland with less than 30% shrub canopy cover. This wildlife-habitat community is considered to be of moderate quality habitat for sensitive wildlife or botanical species due to the amount fragmentation associated with agricultural activities and frequent human presence. However, these fragmented landscapes have the potential to support Kincaid's lupine, meadow checkermallow, and thin-leaved peavine within the PSA.

In general, the City of Albany's Goal 5 significance designations for riparian and wetland areas corresponded to two habitat types developed in accordance to the Johnson and O'Neil (2001) wildlife habitat types: the Westside Riparian-Wetland (PFO) type and the Herbaceous Wetlands (PEM) type. Based upon office review of existing natural resources information and field observations, minor wetland additions were made to the original LWI (Pacific Source 1999) but these additions were in areas with low significance value such as agriculture or urban lands. In some developed areas, wetlands were removed from the LWI because the hydrology could no longer be supported.

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## **Appendix A**

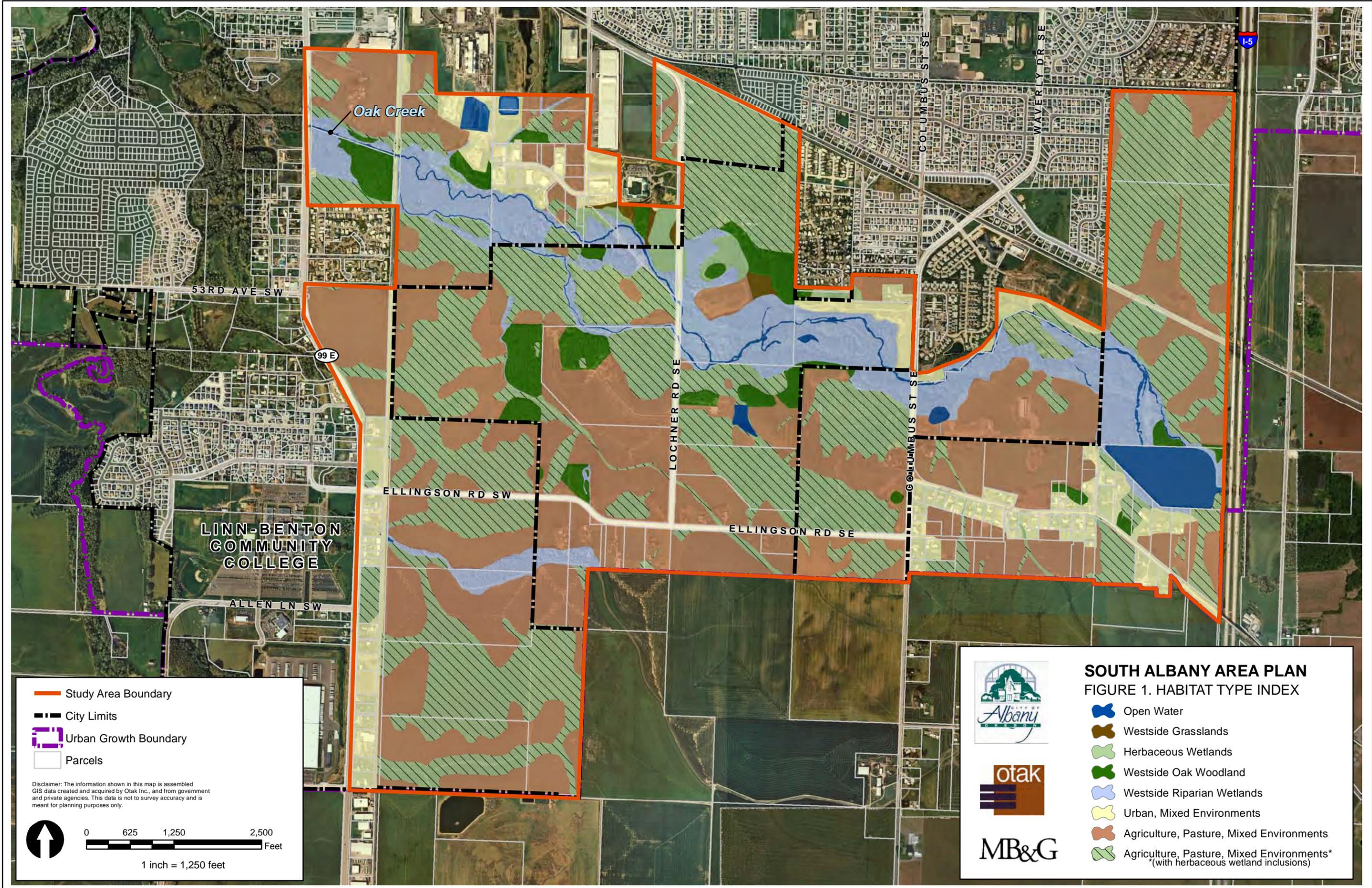
### **Figures – Habitat Type Mapping**

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Assessment of Environmental Conditions

South Albany Area Plan

Linn County, Oregon



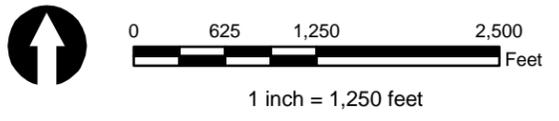
**SOUTH ALBANY AREA PLAN**  
**FIGURE 1. HABITAT TYPE INDEX**

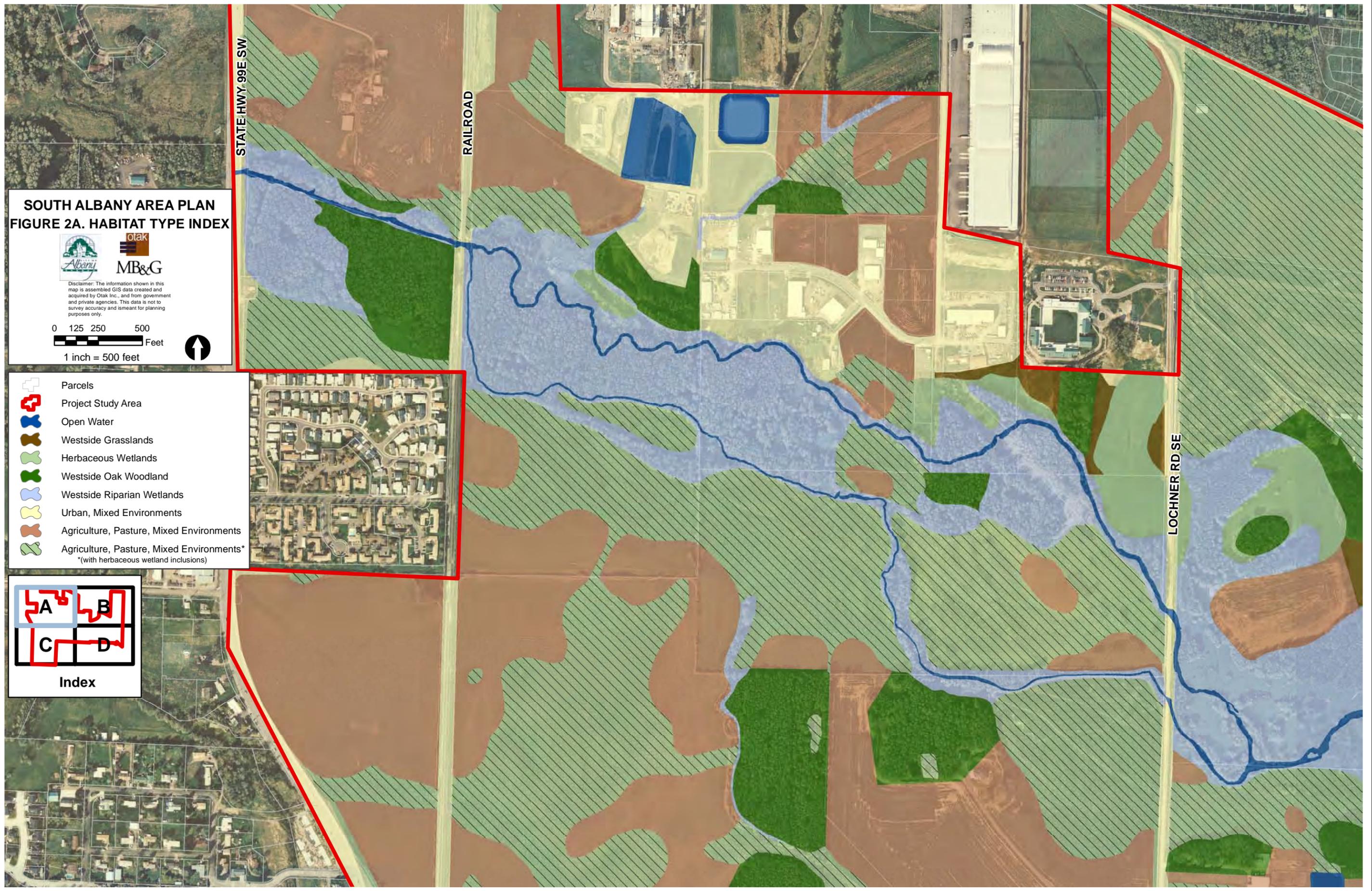


-  Open Water
-  Westside Grasslands
-  Herbaceous Wetlands
-  Westside Oak Woodland
-  Westside Riparian Wetlands
-  Urban, Mixed Environments
-  Agriculture, Pasture, Mixed Environments
-  Agriculture, Pasture, Mixed Environments\*  
\*(with herbaceous wetland inclusions)

-  Study Area Boundary
-  City Limits
-  Urban Growth Boundary
-  Parcels

Disclaimer: The information shown in this map is assembled GIS data created and acquired by Otak Inc., and from government and private agencies. This data is not to survey accuracy and is meant for planning purposes only.

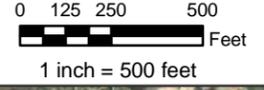




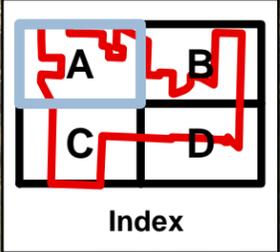
**SOUTH ALBANY AREA PLAN  
FIGURE 2A. HABITAT TYPE INDEX**



Disclaimer: The information shown in this map is assembled GIS data created and acquired by Otak Inc., and from government and private agencies. This data is not to survey accuracy and is meant for planning purposes only.



-  Parcels
-  Project Study Area
-  Open Water
-  Westside Grasslands
-  Herbaceous Wetlands
-  Westside Oak Woodland
-  Westside Riparian Wetlands
-  Urban, Mixed Environments
-  Agriculture, Pasture, Mixed Environments
-  Agriculture, Pasture, Mixed Environments\*  
\*(with herbaceous wetland inclusions)

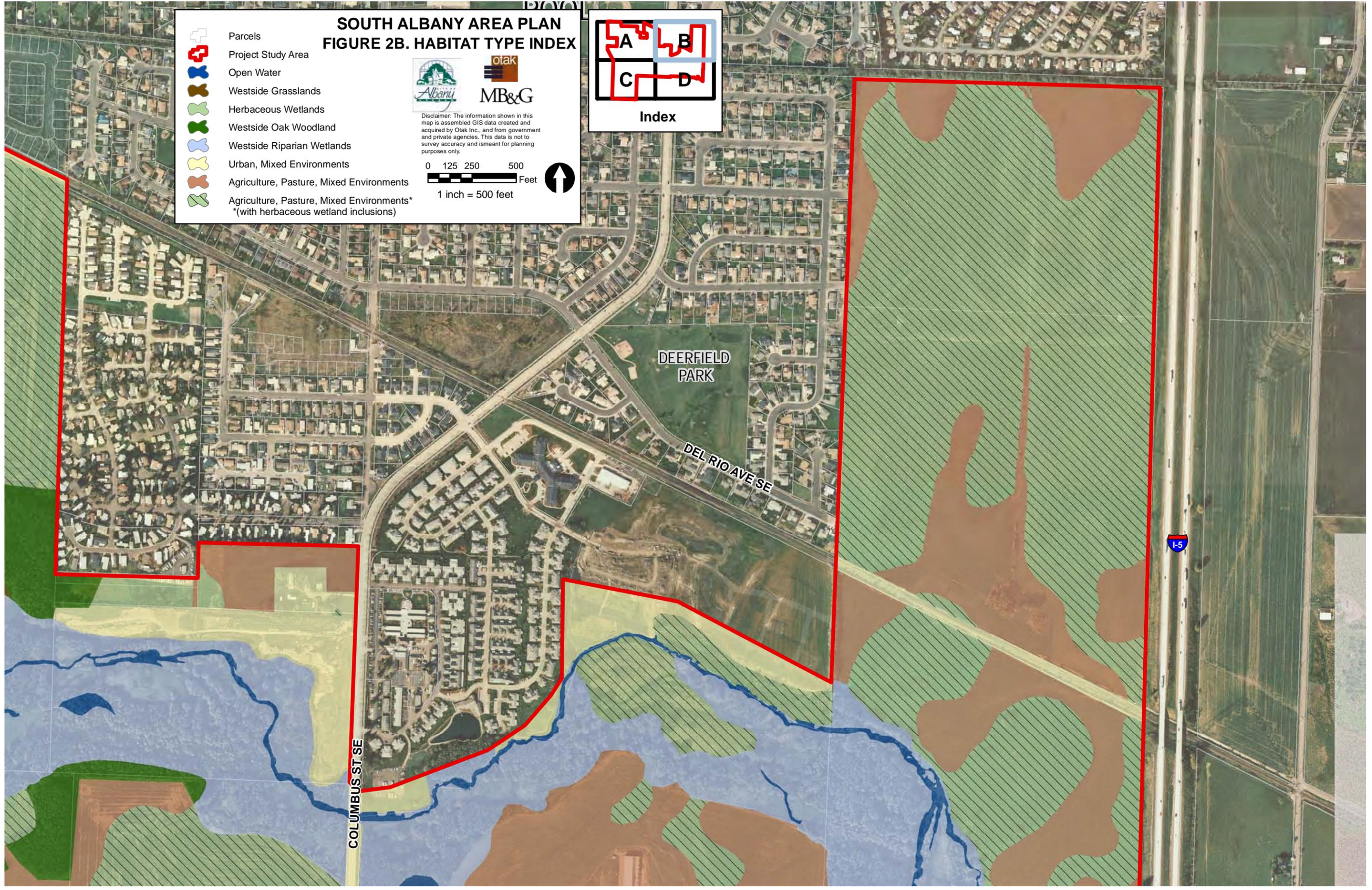
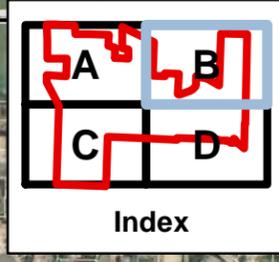
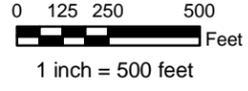


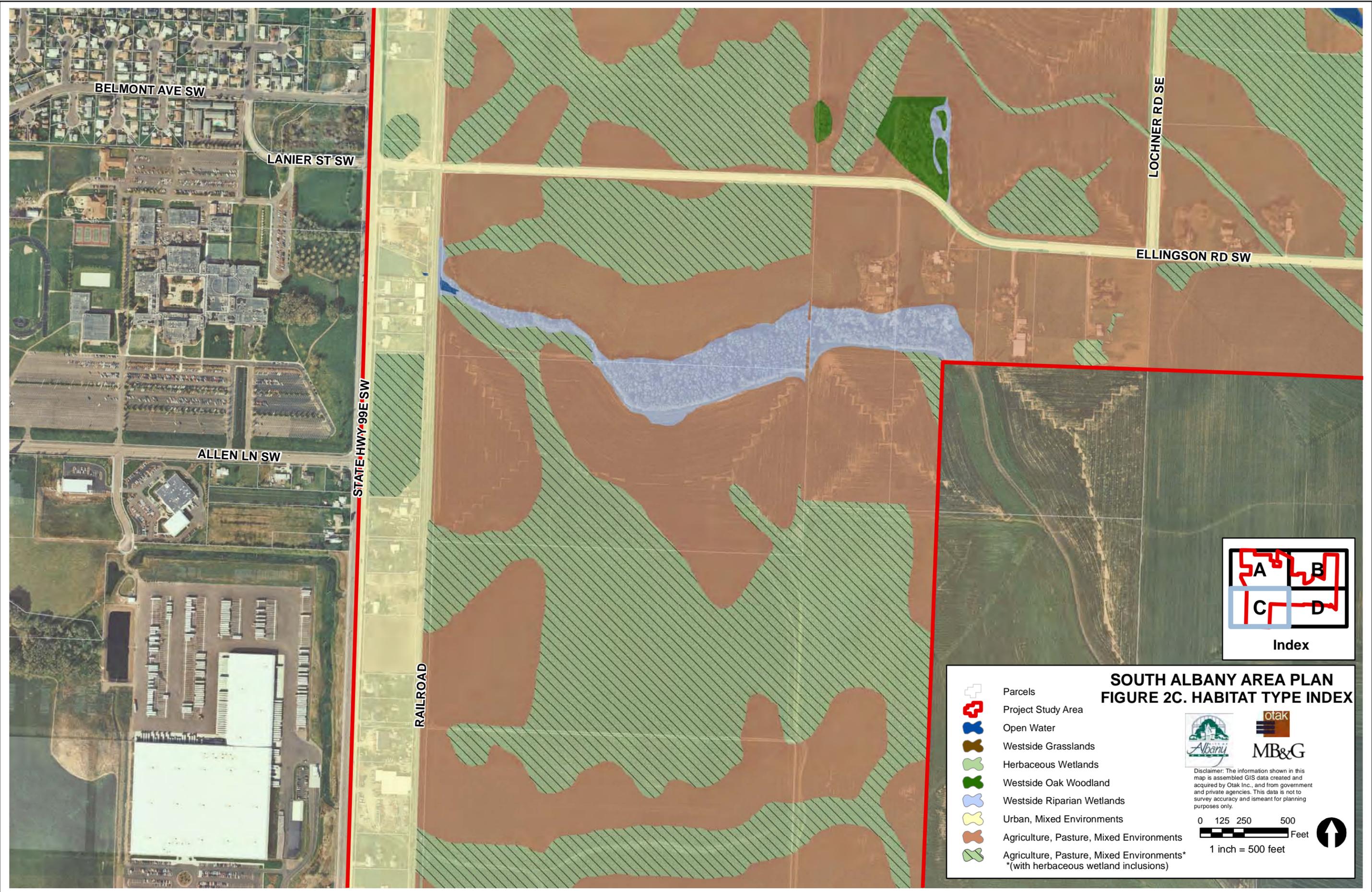
**SOUTH ALBANY AREA PLAN  
FIGURE 2B. HABITAT TYPE INDEX**

- Parcels
- Project Study Area
- Open Water
- Westside Grasslands
- Herbaceous Wetlands
- Westside Oak Woodland
- Westside Riparian Wetlands
- Urban, Mixed Environments
- Agriculture, Pasture, Mixed Environments
- Agriculture, Pasture, Mixed Environments\*  
\*(with herbaceous wetland inclusions)



Disclaimer: The information shown in this map is assembled GIS data created and acquired by Otak Inc., and from government and private agencies. This data is not to survey accuracy and is meant for planning purposes only.





BELMONT AVE SW

LANIER ST SW

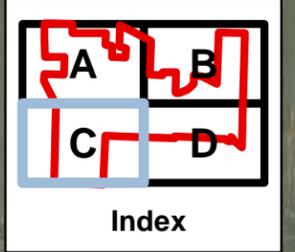
ALLEN LN SW

STATE HWY 99E SW

RAILROAD

LOCHNER RD SE

ELLINGSON RD SW



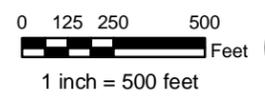
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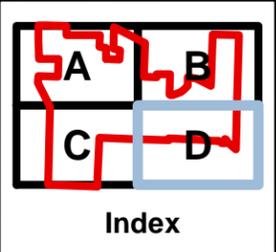
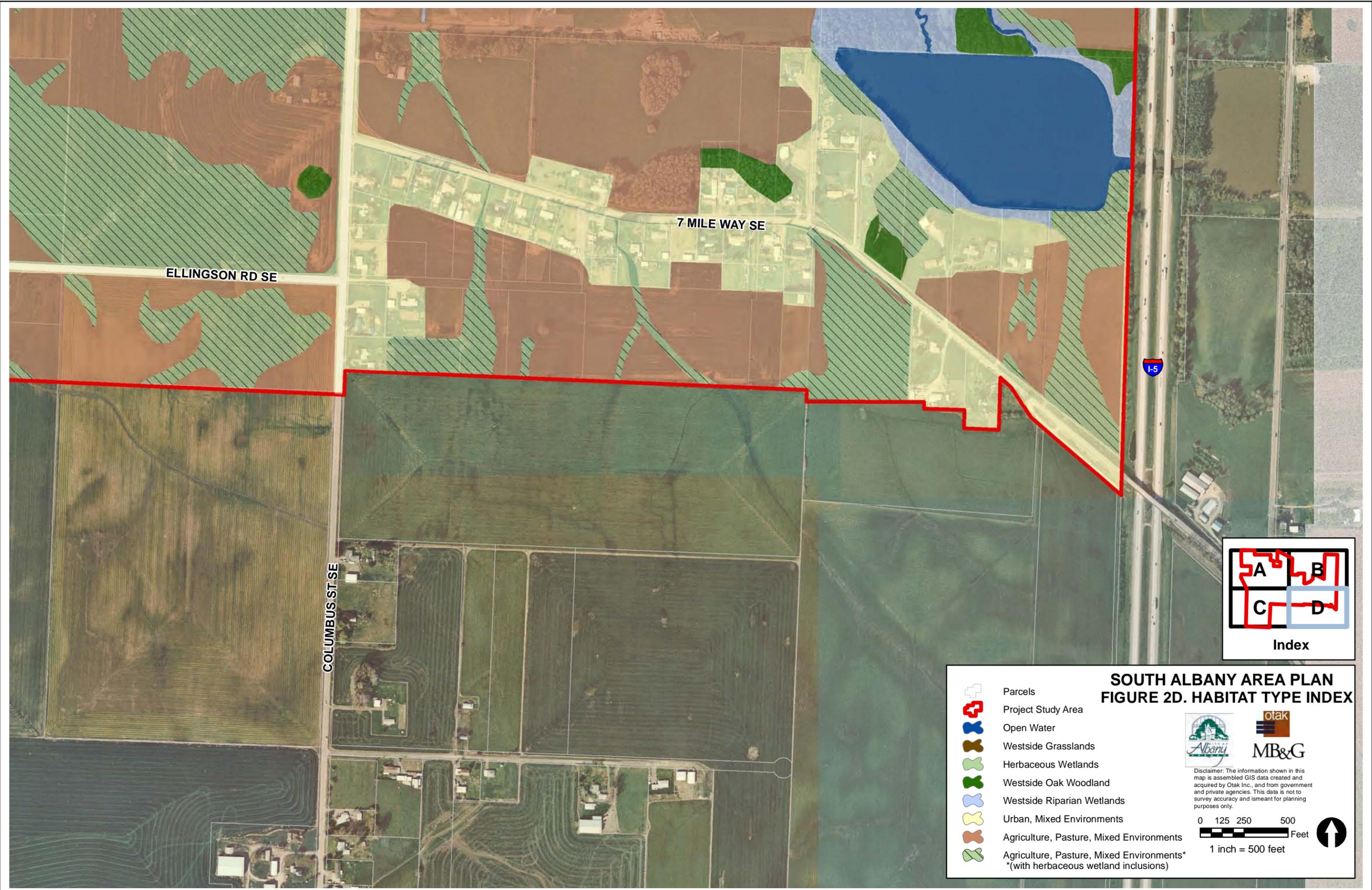
**SOUTH ALBANY AREA PLAN  
FIGURE 2C. HABITAT TYPE INDEX**

- Parcels
- Project Study Area
- Open Water
- Westside Grasslands
- Herbaceous Wetlands
- Westside Oak Woodland
- Westside Riparian Wetlands
- Urban, Mixed Environments
- Agriculture, Pasture, Mixed Environments
- Agriculture, Pasture, Mixed Environments\*  
\*(with herbaceous wetland inclusions)



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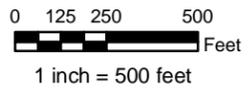


**SOUTH ALBANY AREA PLAN  
FIGURE 2D. HABITAT TYPE INDEX**

-  Parcels
-  Project Study Area
-  Open Water
-  Westside Grasslands
-  Herbaceous Wetlands
-  Westside Oak Woodland
-  Westside Riparian Wetlands
-  Urban, Mixed Environments
-  Agriculture, Pasture, Mixed Environments
-  Agriculture, Pasture, Mixed Environments\*  
\*(with herbaceous wetland inclusions)



Disclaimer: The information shown in this map is assembled GIS data created and acquired by Otak Inc., and from government and private agencies. This data is not to survey accuracy and is meant for planning purposes only.



**Appendix B**  
**Representative Ground Level Photographs**

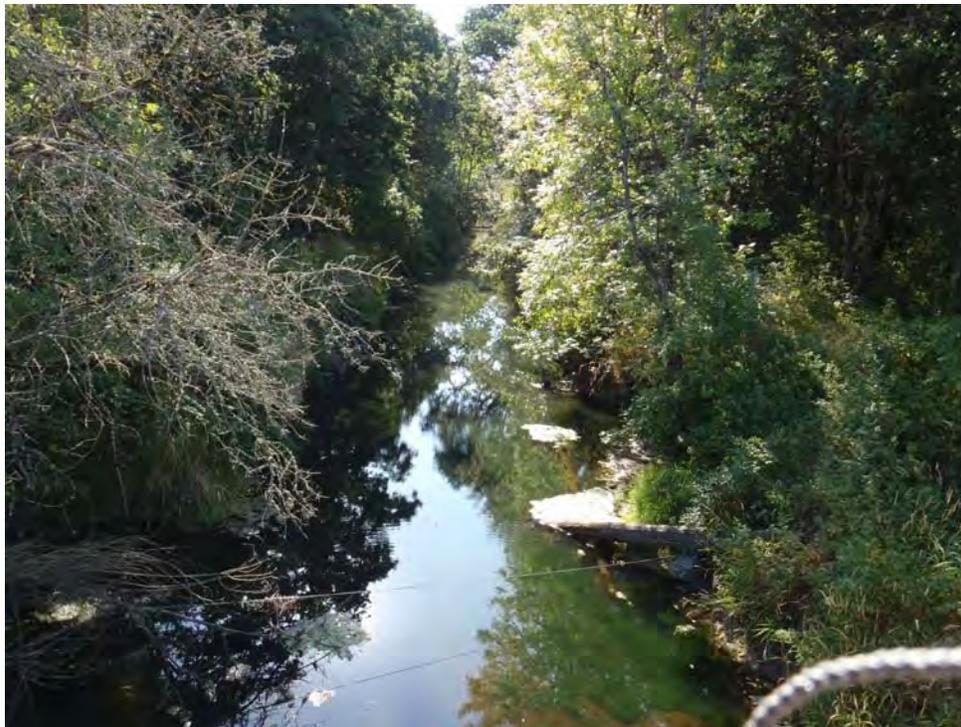
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Assessment of Environmental Conditions

South Albany Area Plan

Linn County, Oregon

1



2



<b>MB&amp;G</b>	1. View to the east from Columbia Street SE of Oak Creek displaying the Westside Riparian-Wetland habitat community. Oregon ash dominates this habitat type.
Mason, Bruce & Girard, Inc. August 3, 2011 August 5, 2011	2. View to the north of the Herbaceous Wetland habitat type located in the north central portion of the PSA. Signature patterns from aerial photos correspond to hydric vegetation shown here at this location.

3



4



<p><b>MB&amp;G</b></p>	<p>3. View to the northwest showing an isolated stand of Westside Oak Woodland habitat with an Herbaceous Wetland roadside ditch in the foreground. The oak stand is a good example of the distinct segmentation of oak habitat within the PSA.</p>
<p>Mason, Bruce &amp; Girard, Inc. August 3, 2011</p>	<p>4. View to the northwest of the Agriculture, Pasture, and Mixed Environments habitat community. An area of agricultural land exhibiting wetland inclusions is evident in the photo background, closer to the Oak Creek riparian corridor.</p>

5



6



<p><b>MB&amp;G</b></p>	<p>5. View of the Agriculture, Pasture, and Mixed Environments habitat community with a Westside Oak Woodland community in the photo background. Agricultural lands are not considered to provide high quality habitat for sensitive species.</p>
<p>Mason, Bruce &amp; Girard, Inc. August 3, 2011</p>	<p>6. View to the south of the Westside Riparian-Wetland habitat type in photo background. Oregon ash dominates the area to the left, while white oak dominates the on the right. This habitat type is considered to be of high quality and may support sensitive species within the PSA.</p>

7



8



<b>MB&amp;G</b>	7. View to the south of Freeway Lakes (within the PSA) which is indicative of the Lakes, Rivers, Ponds, and Reservoirs wildlife-habitat community. This habitat type may provide suitable habitat for sensitive turtle species within the PSA.
Mason, Bruce & Girard, Inc. August 3, 2011 August 4, 2011	8. View from within the Oak Creek riparian corridor indicative of the Westside Riparian-Wetland habitat community. Tree species include a mix of Oregon ash and white oak tree species and ground cover is dominated by snowberry, salmonberry and mixed grasses.

## **D R A F T**

### **South Albany Area Plan Previous Archaeological Research**

Robert R. Musil, PhD, RPA  
Heritage Research Associates, Inc.

The archaeological site records maintained by the State Historic Preservation Office (SHPO) in Salem, Oregon were reviewed to locate previously reported archaeological sites in or near the project area, as well as previous cultural resources surveys and other archaeological investigations that have been conducted in the area. The review of the SHPO site and project files indicate that 15 cultural resources investigations have been conducted within the proposed planning area boundaries.

Approximately 675 acres have already been surveyed within the western portion of the 1400-acre project area. These investigations have resulted in the identification of five prehistoric archaeological sites and 14 isolated finds within the proposed planning area.

#### **Reported Sites and Isolated Finds**

Archaeological site 35LIN706 is a diffuse scatter of lithic debris situated on a sloping terrace on the north side of the intermittent stream that drains into Oak Creek. Fifty-one pieces of flaking debris, a chert endscraper, and a chert core were observed on the ground surface within a 110 x 50 m area on this terrace. A maximum density of three artifacts per square meter was observed on the surface of the site. The flaking debris includes 27 obsidian, 20 chert, and four basalt flakes. One of the obsidian flakes is a small interior bifacial thinning flake and the rest are small flake fragments. Seven of the obsidian flakes exhibit cortex. The basalt flakes are all interior flake fragments. The chert flaking debris is represented by five flake fragments, 10 pieces of angular debris, three early stage core reduction flakes, and two late stage core reduction flakes. The three core reduction flakes exhibit secondary cortex (Musil 2007a).

Test excavations conducted in 2007 at 35LIN706 entailed the excavation of eighteen 50 × 50 cm test probes within the boundaries of the surface artifact scatter at the site. Two broad-necked projectile points, a used flake, a small chert core, a unifacially flaked cobble, and 127 pieces of debitage were collected from the site during the testing (Musil 2007b).

Site 35LIN709 is a large diffuse scatter of lithic debris located on the slope and edge of the higher terrace above the Oak Creek floodplain just east of an intermittent drainage. Twenty-seven pieces of flaking debris, two flaked basalt cobbles, and a piece of groundstone were observed within a 125 x 80 m area between the drainage and the west edge of the property. A maximum density of two flakes per square meter was noted at this site. The flaked cobbles are both split cobbles that exhibit flake scars on the edges of the fracture face. The groundstone implement is a large rounded basalt cobble that exhibits a flattened grinding surface on one face

and a small pecked depression on the opposite face. The chert debitage observed at this site is represented by eight flake fragments, two pieces of angular debris, and eight late stage core reduction flakes. Five of the chert flakes exhibit secondary cortex. The basalt flakes include two flake fragments, two late stage core reduction flakes, and an early stage core reduction flake. The early stage core reduction flake is the only basalt flake that displays cortex. A single split obsidian pebble was also observed (Musil 2007c).

Site 35LIN710 is located about 200 m east of site 35LIN709 on the edge and slope of the same higher terrace above Oak Creek. The site consists of a large diffuse scatter of lithic debris on top of and on the slope of the terrace. The scatter covers roughly a 100 x 60 m area. The site is situated about 50 m west of an intermittent drainage. A maximum density of two flakes per square meter was observed on top of the slope. A total of 33 pieces of flaking debris, a basalt biface fragment, a chert core, a cobble chopper, a chert flake uniface, and a battered basalt cobble were observed on the ground surface at this site. The basalt biface is a mid-stage biface that is missing the tip and base. The chert debitage includes 10 flake fragments, 12 pieces of angular debris, and eight late stage core reduction flakes. Four of the chert flakes exhibited secondary cortex. The three basalt flakes include an interior flake fragment and two early stage core reduction flakes that display secondary cortex (Musil 2007c).

Site 35LIN711 is a large oval-shaped earthen mound located on the lower floodplain of Oak Creek just south of an abandoned drainage that once connected to Oak Creek. The mound is aligned northwest to southeast, is 115 m x 95 m in size, and roughly 1.5 m (5 feet) high. The mound is covered by a diffuse scatter of flaking debris and broken rock. Some of the rocks appear to be fire-cracked. A total of 22 pieces of flaking debris, over 100 pieces of rock, and a small basalt biface fragment were observed on the slopes and top of the mound. In contrast to the plentiful rock observed on the mound, very little rock was observed in the grass field that surrounds the mound. A number of cigarette butts were also noted lying on the ground across the mound, and nine flakes were found lying in a small pile on top of the mound. Both of these observations suggest that artifact collectors had recently examined the mound for artifacts immediately after the field was cultivated, and most likely removed any stone tools from the surface of the mound (Musil 2007c).

Site 35LIN759 is located on the edge of a terrace just north of Oak Creek. The site was discovered during discovery probing prior to the installation of a sewer line. A total of 12 flakes were recovered from five separate shovel probes (Lebow 2001a).

The 14 isolated finds represent 11 locations where individual flakes were observed on the ground surface (Lebow 2011b; Musil 2007a, 2007c; Winterhoff and Dahlstrom 2004). The three remaining isolated finds represent localities where multiple artifacts were noted, but were not found in large enough numbers to meet the SHPO's criteria for designation as an archaeological site (2007c).

## **Project Reports**

A total of 15 cultural resources reports are on file at SHPO that report the results of archaeological investigations that have been conducted within the proposed planning area. One

of the surveys was conducted along Highway 99 (Pettigrew 1982) and four projects have been undertaken along Interstate 5 (Buchanan and Chapman 2008a, 2008b; Winterhoff and Dahlstrom 2004; Winterhoff and Montana 2005). Five additional projects have reported on surveys conducted along transmission line (Thomas 1992), sewer line (Musil 2007d), water line (Solimano and Ellis 2009), fiber optic line (Fagan et al. 1998a, 1998b), and street (Musil 2007e) corridors. The remaining five projects have reported on investigations related to proposed commercial and housing developments south of Oak Creek (Lebow 2011; Musil 2007a, 2007b, 2007c; Rosenson 1982).

## **Summary**

Overall, more than one-third of the proposed planning area has been previously surveyed for cultural resources. The location of archaeological sites in those areas that have already surveyed reveals a strong correlation between past human occupation and the floodplain and terraces along Oak Creek and its tributaries. Aside from a few single isolated flakes, all of the other sites and isolated finds have been found on these floodplain and terraces. This pattern of site distribution is also repeated east of Highway 99 where a number of sites have been recorded on the terraces and floodplain along Oak Creek and the Calapooia River (Lebow et al. 1996; Thomas 1992). The available archaeological data suggest that the site distribution pattern observed within the areas surveyed will most likely extend into the areas of the proposed project that have not been surveyed. However, dense vegetation and the lack of erosion in some areas means sites may be difficult to locate during a surface survey, and in order to find these sites it may be necessary to use subsurface discovery techniques.

Archaeological sites already recorded within the project area appear to be clustered at the 230-foot contour level and below. This elevation in the western portion of the project follows the terrace edge along Oak Creek, which is at approximately the 225-foot contour, with sites clustered upslope within 25-50 meters of that edge. Projections of likely site locations in the eastern portion of the project are more speculative where no intensive surveys have been conducted and where elevations are rising. It remains likely, however, that sites will most likely be found within 50 meters of creeks and wetlands.

An additional consideration is the discovery of a mound site (35LIN711) on the floodplain of Oak Creek indicates that the presence of prehistoric mound sites extends up the Oak Creek drainage. The presence of mound sites in the Willamette Valley has been reported by various interested parties since the arrival of Euro-Americans to the valley in the mid-nineteenth century. It has been estimated that over 450 mounds were situated along the Willamette River and its tributaries between Eugene and Albany (Roulette 1993). The location of mound sites along the Calapooia River, Oak Creek, and Muddy Creek was first documented in 1928 on a "Chart of Calapooia Prehistoric Mounds" compiled by W.P. Anthony. This map of 125 mound locations was based on information from a "survey" conducted by A. Blevins, Porter Slate, and Stewart Brock (Collins 1951:58, Plate I). Much speculation on the origins of these mounds, some of it quite fanciful, has been presented over the years. However, many of these speculations were based on the discoveries of relic collectors and it wasn't until the 1920s that the first professional investigations were conducted on mounds in the Albany-Tangent area (Strong et al. 1930).

Based on their limited excavations, Strong, Shenk, and Steward concluded that the mounds were possibly artificial in construction and consisted of refuse material, along with artifacts and burials, placed on natural rises.

In the 1940s the Fuller and Fanning mounds were excavated along the Yamhill River by a private artifact collector and reported by William Laughlin. A large assemblage of artifacts and around 60 human burials were removed from the excavation at those sites (Laughlin 1943). Laughlin also conducted excavations at other mounds in the Harrisburg, Halsey, and Shedd areas in the 1940s (Laughlin 1941), and under the direction of Luther Cressman, researchers from the University of Oregon excavated two mound sites along the Long Tom River in the 1930s and 40s (Collins 1951; White 1975). In the 1960s through the 1980s, archaeologists from the University of Oregon again conducted excavations at mound sites in the Long Tom River drainage (Cheatham 1988; Cordell 1975; Miller 1970), and more recently excavations were conducted at a mound site along the Calapooia River in the early 1990s (Roulette 1993).

In Roulette's (1993) discussion of mound sites in the Willamette Valley, he suggests that mounds were focal seasonal resource production localities from which foodstuffs were processed for storage. Roulette (1993:18) proposes that the accumulation of this "form of secondary refuse aggregates" began around 2000 years ago and that the continued reoccupation of these focal points on the landscape resulted in the recognizable appearance of mounded midden deposits that are commonly referred to as the Calapooia mounds.

Based on the archaeological evidence available for the planning area, there is a high likelihood for archaeological sites to be present within those areas of the project area that have not been surveyed for cultural resources. This is especially true for the floodplain and adjacent terraces along Oak Creek. Given the high probability of cultural resources in the project area, a comprehensive management plan should be implemented for locating and managing cultural resources prior to development.

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**January 20, 2012**

**TO: GREG BRYNE AND HEATHER HANSEN**  
**CC: JOE DILLS (OTAK) AND DAVID HELTON (ODOT)**  
**FROM: BETH GOODMAN AND BOB PARKER**  
**SUBJECT: SOUTH ALBANY AREA PLAN -PROJECT MEMORANDUM #3:**  
**MARKET ANALYSIS**

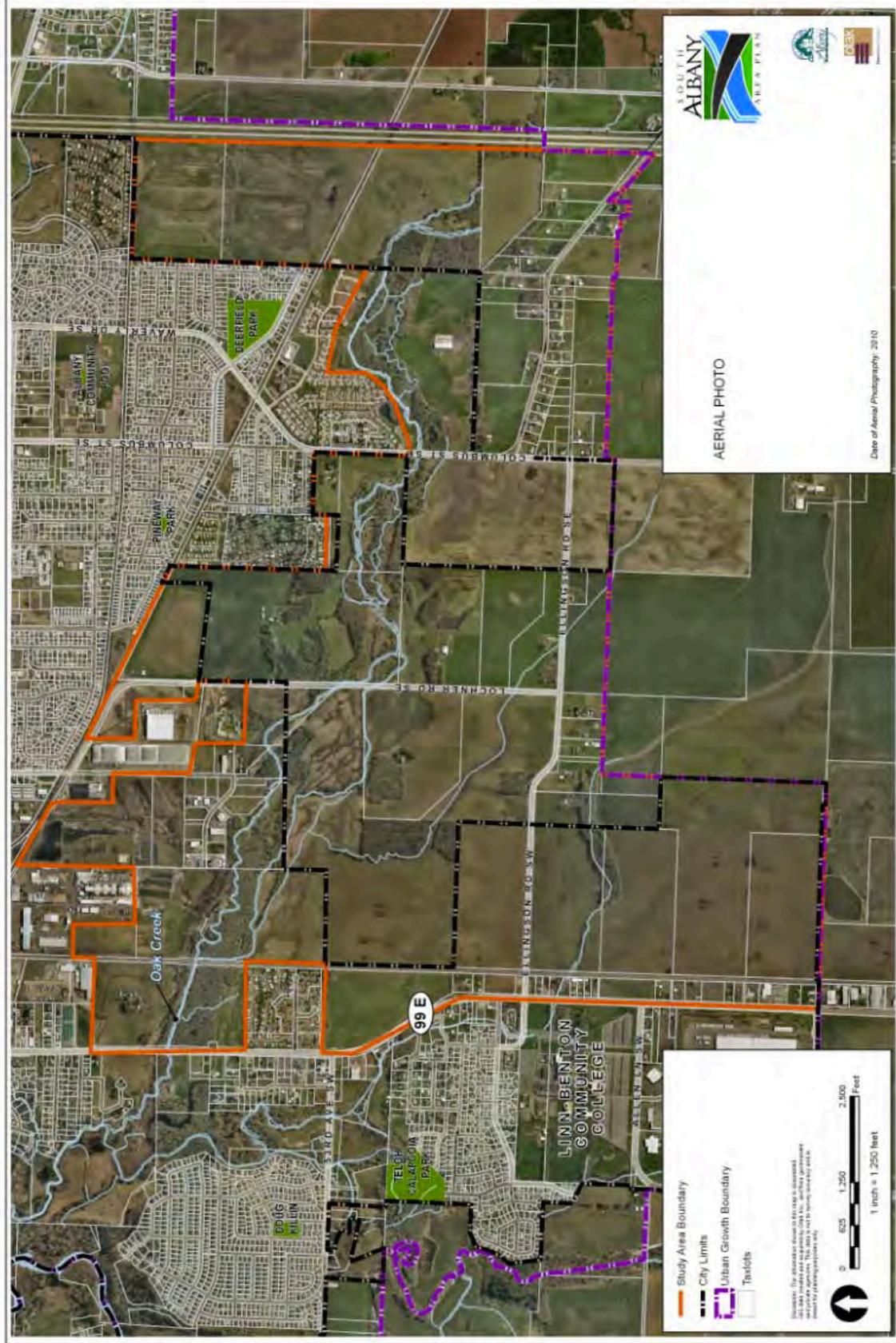
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## **1 BACKGROUND**

The memorandum is part of the South Albany Area Plan (SAAP), a project funded by a Transportation and Growth Management (TGM) grant from the state of Oregon. The purpose of the project is to develop a concept plan to guide growth in South Albany by building on previous planning projects and incorporating a range of ideas into the planning process.

This memorandum presents the draft deliverable for Task 2.2 of the work program – a market analysis for the South Albany area. The purpose of the market analysis is to identify a range of potential development opportunities on the site that may be supported by market conditions in South Albany and the mid-Willamette Valley. The range of potential uses considered in this analysis include: residential, mixed-use, retail and non-retail commercial, industrial, and open space. Map 1 shows the SAAP.

Map 1. South Albany Study Area



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Source: OTAK, Albany GIS

## 1.1 METHODS

Development in the South Albany area will be driven by a combination of local demand for housing, retail, and services and regional demand for industrial land. This memorandum provides an assessment of the opportunities for development in the South Albany area. The conclusions are based on a combination of interviews with stakeholders,<sup>1</sup> input from participants at a public workshop about the SAAP,<sup>2</sup> the vision for the South Albany Area,<sup>3</sup> previous planning projects in Albany,<sup>4</sup> forecasts for growth in Albany, a qualitative assessment of market conditions and development patterns in Albany, and ECONorthwest's accumulated knowledge from other market analyses it has conducted and project work in Albany. The main sources of information used in this analysis are:

- South Albany Area Plan, Draft Concept Diagram, 2007
- Albany Transportation System Plan, 2010
- Albany Economic Opportunities Analysis Update, 2007
- Albany Housing Needs Analysis, 2006

This market study evaluates *long-term* demand (20-years) for land in the South Albany Area. Thus, many of the nuances that would be evaluated in an analysis for a specific development product are not appropriate or necessary. Long-term demand for land is typically analyzed as a function of population and employment growth in the study area. The studies listed above include population and employment growth forecasts, as well as allocations of those forecasts to subareas in Albany (including the study area). This market analysis uses those studies as a foundation and then explores factors that may affect demand for land over the 20-year planning horizon. The study also evaluates potential build-out of the South Albany Area, based on the estimate of buildable land in the study area and estimates of development density. Build-out of the study area is estimated to occur beyond the 20-year planning horizon.

Consistent with the project work program, this memorandum identifies a range for the type, level, density, and mix of development that can be supported in the project planning area over the 20-year planning period. It considers likely market conditions and evaluates development in the absence of additional City policies or incentives to encourage desired development. In short, the market analysis is intended to inform the

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<sup>1</sup> Summarized in the OTAK memorandum "South Albany - Summary of Stakeholder Interviews," August 9, 2011.

<sup>2</sup> Summarized in the OTAK memorandum "South Albany Area Plan - Public Workshop #1 Summary," January 2012.

<sup>3</sup> Summarized in the OTAK memorandum "South Albany Area Plan - Vision and Plan Objectives," January 16, 2012.

<sup>4</sup> Summarized in the OTAK memorandum "South Albany Area Plan- Project Memorandum #1: Vision Elements and Evaluation Criteria," August 26, 2011.

evaluation of policy changes that the City might consider to support the desired development patterns.

## 1.2 ORGANIZATION OF THIS MEMORANDUM

This memorandum is organized as follows:

- **Market Profile.** This section describes potential demand for land for employment uses and residential uses, based on existing forecasts for regional and local growth. It also includes a summary of buildable lands in Albany and the South Albany Area.
- **Area Characteristics: Opportunities and Constraints.** This section describes the existing conditions in the South Albany Area (e.g., transportation access, surrounding uses and environmental constraints). It identifies potential development districts within the study area and describes potential opportunities and constraints.
- **Development Opportunities.** This section describes the development opportunities in the South Albany Area supported by the market, based on the market profile, the area characteristics, and interviews with knowledgeable stakeholders.

## 2 MARKET PROFILE

Demand for new development, and for land in Albany and in the South Albany Area must be evaluated in the context of local and regional expectations about growth, and of Albany's current and possible future place in the land market of the mid-Willamette Valley. This section summarizes previous adopted forecasts of population and employment growth, and an assessment of demand for residential and commercial land in Albany.

### 2.1 ALBANY RESIDENTIAL AND COMMERCIAL AND INDUSTRIAL DEVELOPMENT

Forecasts for growth are foundational assumptions needed to project future land demand. The scope of work requires that this memorandum identify a range for the type, level, density, and mix of development that can be supported in South Albany over the planning period. This section describes potential future development in South Albany based on existing forecasts, policies, and other planning work that affects development in the study area. Where appropriate, we have commented on potential variations for future development in South Albany.

As part of the City's Transportation System Plan (TSP) update in 2007, the City developed forecasts of population and employment growth for the City of Albany and

allocated that growth to sub-areas within the City, including the South Albany area.<sup>5</sup> The TSP presented four alternatives for growth in Albany. For this analysis, we use Alternative 4, the most likely land use alternative. The City is using the forecasts from this alternative in other planning efforts and directed us to use this forecast as part of the SAAP project and is consistent with the Balanced Development Patterns document.

Table 1 presents the forecasts for population and employment growth in the South Albany Area<sup>6</sup> and the City.<sup>7</sup> Table 1 shows growth of nearly 6,300 households in Albany over the 24-year period between 2006 and 2030, an increase of about one-third. Nearly one-quarter of these households (about 1,460 households) are projected to locate in the South Albany Area. Table 1 shows growth of more than 7,700 employees in Albany, an increase of about one-third. About 21% of these employees (1,600 employees) are projected to locate in the South Albany Area.

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<sup>5</sup> This analysis used the forecasts from the City's TSP, rather than Linn County's adopted coordinated population forecast, which forecasts population for Albany through 2020, which is ten years short of the planning period used in this study.

<sup>6</sup> The forecast for the South Albany Area in Table 1 is based on a forecast of households and employment at for the Traffic Analysis Zones (TAZs) that approximate the South Albany Area. The South Albany Area includes the following TAZ: 324, 325, 326, 327, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 347, 348, 512, and 514.

<sup>7</sup> Table 1 shows households and population in Albany for: (1) the area within the Albany city limits and (1) the area between the city limits and the UGB (also called the "urbanizing" area. The number of households and populations in these two areas are added together in Table 1 to show households and population in the total UGB.

The employment forecast from the TSP only forecast employment growth within Albany's city limits. As a result, Table 1 does not show an employment forecast for the UGB Total. It was reasonable for the TSP to forecast employment growth for the city limits, assuming that most growth in the area between the city limits and UGB will be used to accommodate residential growth.

**Table 1. Population and employment forecast, South Albany and City of Albany, 2006 to 2030**

	South Albany Area	Within Albany City Limits	Outside City Limits; Inside UGB	UGB Total
Households				
2006	115	18,536	340	18,876
2030	1,576	24,900	250	25,150
Change 2006-2030				
Number	1,461	6,364	(90)	6,274
Percent	1270%	34%	-26%	33%
AAGR	11.5%	1.2%	-1.3%	1.2%
Population				
2006	338	46,610	1,020	47,630
2030	3,741	61,700	625	62,325
Change 2006-2030				
Number	3,403	15,090	(395)	14,695
Percent	1007%	32%	-39%	31%
AAGR	10.5%	1.2%	-2.0%	1.1%
Employment				
2006	431	22,903		
2030	2,058	30,643		
Change 2006-2030				
Number	1,627	7,740		
Percent	377%	34%		
AAGR	6.7%	1.2%		

Source: City of Albany, Transportation System Plan

Note: The South Albany Area includes the following TAZ: 324, 325, 326, 327, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 347, 348, 512, and 514.

Table 2 shows the population and employment forecast for the 20-year forecast period used in the project: 2010 to 2030. The forecast in Table 2 uses the forecast in Table 1 to estimate average annual growth and to extrapolate growth for the 20-year period based on the annual growth.<sup>8</sup> The forecast in Table 2 is pro-rated based on average annual growth and assumes linear growth. However, actual growth will happen unevenly, with a lot of growth some years and little growth other years. **The forecast shown in Table 2 is used throughout the remainder of this market analysis.**

<sup>8</sup> For example, Table 1 shows that South Albany will add 1,461 households over the 24-year forecast period. On an annual basis, that is 60 new households. Over the 2010 to 2030 period, South Albany will add 1,200 households (60 households times 20 years).

**Table 2. Population and employment growth, South Albany and City of Albany, 2010 to 2030**

	South Albany Area	City of Albany
New households		
Per year	60	265
2010-2030	1,200	5,300
New People		
Per year	141	628
2010-2030	2,820	12,560
Employment		
Per year	67	322
2010-2030	1,340	6,440

Source: City of Albany, Transportation System Plan; extrapolations by ECONorthwest

### 2.1.1 Residential land demand

The *Albany Housing Needs Analysis 2005 to 2025* summarizes the City's projected demand for housing and the factors that will affect housing demand in Albany. The analysis found that Albany had a deficit of about 50 acres of land for medium density (e.g., 12 to 15 dwellings per gross acre) residential development (e.g., in zoning designations RMA or RM) and a 14-acre deficit for mixed-uses land (e.g., in the HM/MUR and WF zones). The analysis showed a surplus of land designated for lower residential densities (e.g., 3 to 5 dwellings per gross acre). The analysis concluded that the deficits of land for medium density development could be accommodated through rezoning lands designated for lower density housing.

The *Albany Housing Needs Analysis* presented key assumptions necessary to project residential land demand in the South Albany Area: (1) the future mix of housing and (2) future housing density. Table 3 presents an estimate of residential land demand in the South Albany Area, based on these assumptions in the. Table 3 assumes:

- The mix of housing in South Albany will be the same as the housing mix projected for all of Albany (Table 5-17 in the *Housing Needs Analysis*). Table 3 shows that about 64% of new housing will be single-family (detached and attached) or manufactured homes in parks. The remaining 36% of new housing will be attached housing, predominantly multifamily housing in structures with five or more units.
- Housing densities will be approximately the same as projected for all of Albany.<sup>9</sup> Table 3 shows an average housing density of 6.3 dwelling units per gross acre,

<sup>9</sup> The *Albany Housing Needs Analysis* presents housing density by zoning district, rather than housing type. The density estimates in Table 3 are based on the average density by plan designation (Table 5-9 in the *Albany Housing Needs Analysis*) and the number of dwelling units allocated to each zoning district (Table 4-17 in the *Albany Housing Needs Analysis*).

with single-family and manufactured homes in parks averaging about 5 dwelling units per gross acre. Attached housing will vary from 6.6 to 12.7 dwelling units per gross acre on average.

Table 3 shows demand for about 192 gross acres of residential land in South Albany for the 2010-2030 period. The majority of residential land (137 gross acres) will be for single-family housing.

**Table 3. Forecast for demand for new dwellings and land for housing, South Albany, 2010 to 2030**

	New Dwelling Units		Land Demand	
	Percent	Units	Density	Gross Acres
<b>New Households</b>	<b>100.0%</b>	<b>1,200</b>	<b>6.3</b>	<b>191.6</b>
Single-family	59.2%	710	5.2	136.5
Manufactured Homes in Parks	4.8%	58	4.9	11.8
Duplex	9.1%	109	6.6	16.5
Tri- and Quad-Plex	3.3%	40	8.8	4.5
Multifamily with 5+	23.6%	283	12.7	22.3

Source: ECONorthwest, based on the forecast for new dwelling units in Table 2 and assumptions in the *Albany Housing Needs Analysis 2005 to 2025*.

The key assumptions in Table 3, about housing mix and housing density, for South Albany are based on the assumptions for Albany from the City's Housing Needs Analysis. It is possible, perhaps even probable, that the mix and density of housing development in South Albany will differ from what is shown in Table 3.

For example, Table 3 essentially shows a mix of 65% single-family housing types (including manufactured homes in parks) and 35% multifamily housing. The amount of multifamily housing that may be built in South Albany will depend, on large part on the zoning districts used in South Albany. If the City zones more land for multifamily housing, beyond the nearly 45 acres needed for attached housing types in Table 3, then South Albany could accommodate a larger share of multifamily housing than the amount shown in Table 3.

There are limits, however, to the amount of multifamily housing likely to be built in South Albany (or that would be desirable from a planning perspective), especially over the next 20-years, given that the area is located at the edge of the City's UGB, it is adjacent to existing single-family neighborhoods, and the need to build infrastructure throughout the area. It might be reasonable to assume that 45% of South Albany's new housing would be multifamily housing (540 units) and 55% would be single-family

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For example, Table 5-9 shows an average density of 15 dwelling units per gross acre in RM-3/RMA and Table 5-17 shows demand for 65 single-family dwellings in that zoning district, resulting in demand for 4.3 acres in RM-3/RMA. Based on the same calculations for all zoning districts, Albany will have 2,029 single-family units on 387.7 gross acres, at an average density of 5.2 dwellings per gross acre. The densities in Table 3 are based on the same types of calculations for each housing type.

housing types (660 units). Some reasons for this increase in share in multifamily housing could include the proximity to Linn-Benton Community College or to employment that may locate in South Albany, which could create more local demand for multifamily housing. On the other hand, it might be reasonable to assume that developers would perceive more demand for single-family housing, which would account for more than 60% of new housing built in South Albany.

The housing densities assumptions used in Table 3 (ranging from 5 to 12.7 dwelling units per gross acre) are reasonable. South Albany's location at the edge of the UGB and proximity to existing neighborhoods make it an unlikely place to support much higher average densities, although South Albany could accommodate some amount of higher density housing, up to 20 dwelling units per gross acre, in areas near commercial or other employment centers where there is direct access to major roads.

### 2.1.2 Employment land demand

Forecasting employment land demand for South Albany requires two key assumptions: future employment growth and future employment densities. The forecast for employment growth in Albany from the TSP projects that about 1,340 new employees will locate in the South Albany Area between 2010 and 2030. The TSP also projects the type of employment by sector (e.g., retail or industrial). Albany updated and adopted an economic opportunities analysis (*Update of Economic Opportunities Analysis for the City of Albany*, dated September 16, 2007) provides assumptions about future employment densities for the City of Albany.

Table 4 presents an estimate of employment land demand in the South Albany Area, based on the assumptions in the employment forecast in the TSP and density assumptions in the *Update of Economic Opportunities Analysis*. Table 4 assumes:

The mix of employment in South Albany will be the mix forecast in the TSP in 2030. About 20% of employment will be retail, 33% will be non-retail commercial (e.g., offices or services), 41% will be industrial, and 6% will be government and education.

Employment densities will range from 20 employees per net acre for retail and non-retail commercial to 12 employees per acre for industrial, based on assumptions in the *Update of Economic Opportunities Analysis*. Table 4 converts from the estimate of net acres to gross acres<sup>10</sup> based on an assumption that 15% of land will be needed for rights-of-way or other public infrastructure.<sup>11</sup>

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<sup>10</sup> Net acres include land that is needed for employment use. Converting from net to gross acres accounts for land needed for public uses, such as street rights-of-way or land needed for other infrastructure. This conversion does not account for other public uses, such as parks.

<sup>11</sup> The *Update of Economic Opportunities Analysis* assumed a 10% net-to-gross conversion based on development patterns in Albany. The reason we recommend using a 15% net-to-gross conversion is that South Albany is largely

Table 4 does not project land demand for government and education because densities for these uses could vary greatly, from 30 or more employees per acre in government offices to fewer than 7 employees per acre for schools with athletic fields to no employment on parkland. Land demand for government and education, such as parks or schools, should be addressed based on specific plans for public uses in South Albany or citywide (e.g., the Albany Parks Master Plan)

Table 4 shows demand for about 95 gross acres of employment land in South Albany. Employment land demand is divided between industrial (53 acres), non-retail commercial (26 acres), and retail (16 acres).

**Table 4. Forecast of employment and demand for employment land, South Albany, 2010 to 2030**

Sector	New Employment		Land Need		
	Employees	Percent of Total	Density (emp. per net acre)	Net Acres	Gross Acres
Retail	273	20%	20	14	16
Non-retail commercial	445	33%	20	22	26
Industrial	544	41%	12	45	53
Government and Education	78	6%	NA	NA	NA
<b>Total</b>	<b>1,340</b>	<b>100%</b>		<b>81</b>	<b>95</b>

Source: ECONorthwest, based on the forecast for new dwelling units in Table 3 and assumptions in the *Update of Economic Opportunities Analysis for the City of Albany*.

The employment forecast in Table 4 assumes that some, if not most, retail and some commercial employment will locate on the approximately 36 acre “piano” property, which is located on the east side of Highway 99 E and is zoned for regional commercial (RC) uses. The businesses that locate on this property are expected serve the wider Albany region, not just households in the study area or nearby neighborhoods.

One way to estimate the retail land needed to serve new households in South Albany is based on the number of households locating in South Albany, average annual household expenditures of households in Albany, average sales per square foot of retail space (from the Urban Land Institute), and average retail development densities. Based on growth of about 1,200 households, South Albany will generate demand for about 90,000 new square feet of retail space, which is would require 6 to 12 gross acres of land for retail uses.

The City’s 2007 economic opportunities analysis concluded that Albany did not have sufficient land designated for employment uses within the existing UGB, assuming that Pepsi would develop their site in the South Albany Area. The analysis recommended

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undeveloped, compared to the entire City. More land will be needed for public infrastructure in South Albany than in other parts of Albany, which have an existing transportation system.

that the City of Albany redesignate land to provide the following opportunity sites for employment growth:

- An additional very large industrial site in the 120-150 acre range;
- 1-2 large industrial sites in the 20-50 acre range, including a business park site;
- 1-2 large commercial sites in the 20-50 acre range for community shopping centers or large format retail;
- 1-2 medium industrial sites in the 5-20 acre range for smaller manufacturing uses; and
- 1 medium commercial site in the 5-20 acre range for health services and larger neighborhood retail.

It is reasonable to expect that some, but not all, of these sites could be accommodated in the South Albany Area. For example, the “piano” property probably accounts for one of the large commercial sites for community shopping or large format retail. The South Albany Area could accommodate other employment, which may or may not be accounted for in Table 4, such as one or more industrial sites of 20-50 acres or 120-150 acres. In addition, the need for a very large industrial site (120 to 150 acres) was probably eliminated when Pepsico did not develop their site in South Albany, leaving that site available for development currently.

The analysis in Table 4 implies that future employment will grow in South Albany in a linear fashion, adding a stable number of jobs each year. In reality, economic development occurs unevenly, with few jobs added some years and many jobs added in some years, when an new business locates in the area. Retail and service-based businesses are likely to locate in South Albany after residential development starts.

If the City chooses to locate industrial opportunity sites in South Albany, it is possible that the area could account for a much larger share of overall employment growth. For example, if the City designates 250 acres of large site industrial and attracts employers that average 12 employees per acre, 3,000 employees could work in South Albany. Given the nature of traded-sector industry recruitment it is difficult to forecast when, or even if, employers will choose to locate on the sites. One thing is clear: no employment growth can occur if the city does not locate opportunity sites in the area.

## **2.2 KEY FINDINGS FOR THE SOUTH ALBANY AREA**

ECO’s review of regional and local market factors provides insight into development options in for the South Albany Area. The following is a summary of the key findings for South Albany:

- Population growth in Albany will create demand for residential and retail development, both within the City in general and in South Albany in specific.

- About 1,200 new dwellings are forecast to locate in South Albany over the 20-year period, requiring about 190 gross acres of land. The forecast for residential land demand, which builds from the TSP's allocation of households to South Albany, shows demand for about 166 acres of land for lower-density detached housing and about 54 acres for medium-density and attached housing.
- The employment forecast shows that South Albany will add 1,340 new employees over the 20-year period. Employment will be divided between retail (270 employees), non-retail commercial (445 employees), industrial (544 employees), and government and education (75 employees).
- New employment will create demand for land, with demand for about 95 acres for commercial and industrial uses. Employment land demand is divided between industrial (53 acres), non-retail commercial (26 acres), and retail (16 acres). Government and education employment will be located on publically owned land.

### **3 SOUTH ALBANY AREA LAND SUPPLY AND OPPORTUNITIES**

#### **3.1 LOCAL SUPPLY OF BUILDABLE LAND AND BUILD-OUT CAPACITY**

The South Albany Area has about 1,957 acres of land, with 273 acres committed to current uses.<sup>12</sup> The study area has 925 acres of unbuildable land that is constrained by floodway, floodplains, riparian corridor, and significant wetlands. The study area has 514 acres of non-significant wetlands, some amount of which is buildable, depending on the level of wetland mitigation.

Table 5 shows four estimates of buildable land in the South Albany Area at full-build-out:

- The study area has between approximately 700 to 1,100 acres of buildable land, depending on the amount of non-significant wetlands assumed to develop and mitigated.
- At build-out, the study area has capacity to accommodate between 2,600 to 4,100 dwelling units. This is about 1,400 to 2,900 more dwelling units more than the 20-year forecast for growth of 1,200 dwelling units in the study area (Table 3).
- At build-out, the study area has capacity to accommodate between 5,000 to 7,300 employees. This is about 3,600 to 6,000 more employees than the 20-year forecast of 1,340 employees in the study area (Table 4).

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<sup>12</sup> Committed uses include lands with existing development (i.e., houses or businesses), land in existing or planned rights-of-way, and other land committed to a specific use.

**Table 5. Estimate of build-out capacity for buildable land for residential and employment development, South Albany Area**

Total Area (acres) (A)	Residential Land and Capacity			Employment Land and Capacity			
	Area in Residential, Reserve and Other Designations (acres)	Buildout Estimate (households) (B)	Number of Households Beyond 20 Year Forecast (C)	Area in Existing Commercial and Industrial Designations (acres)	Buildout Estimate (employees) (D)	Number of Employees Beyond 20 Year Forecast (E)	
Scenario A All non-significant wetlands retained	708	406	2,558	1,358	302	4,983	3,643
Scenario B 50% of non-significant wetlands buildable/mitigated	899	527	3,317	2,117	373	6,146	4,806
Scenario C 75% of non-significant wetlands buildable/mitigated	993	585	3,684	2,484	408	6,728	5,388
Scenario D 100% of non-significant wetlands buildable/mitigated	1,088	645	4,064	2,864	443	7,310	5,970

Source: OTAK "South Albany Area Plan – Buildable Lands Inventory and Analysis," January 12, 2012

Notes:

(A) Total area adjusted by 1% to account for rounding.

(B) Density of 6.3 du/acre.

(C) 20 year forecast is 1200 households.

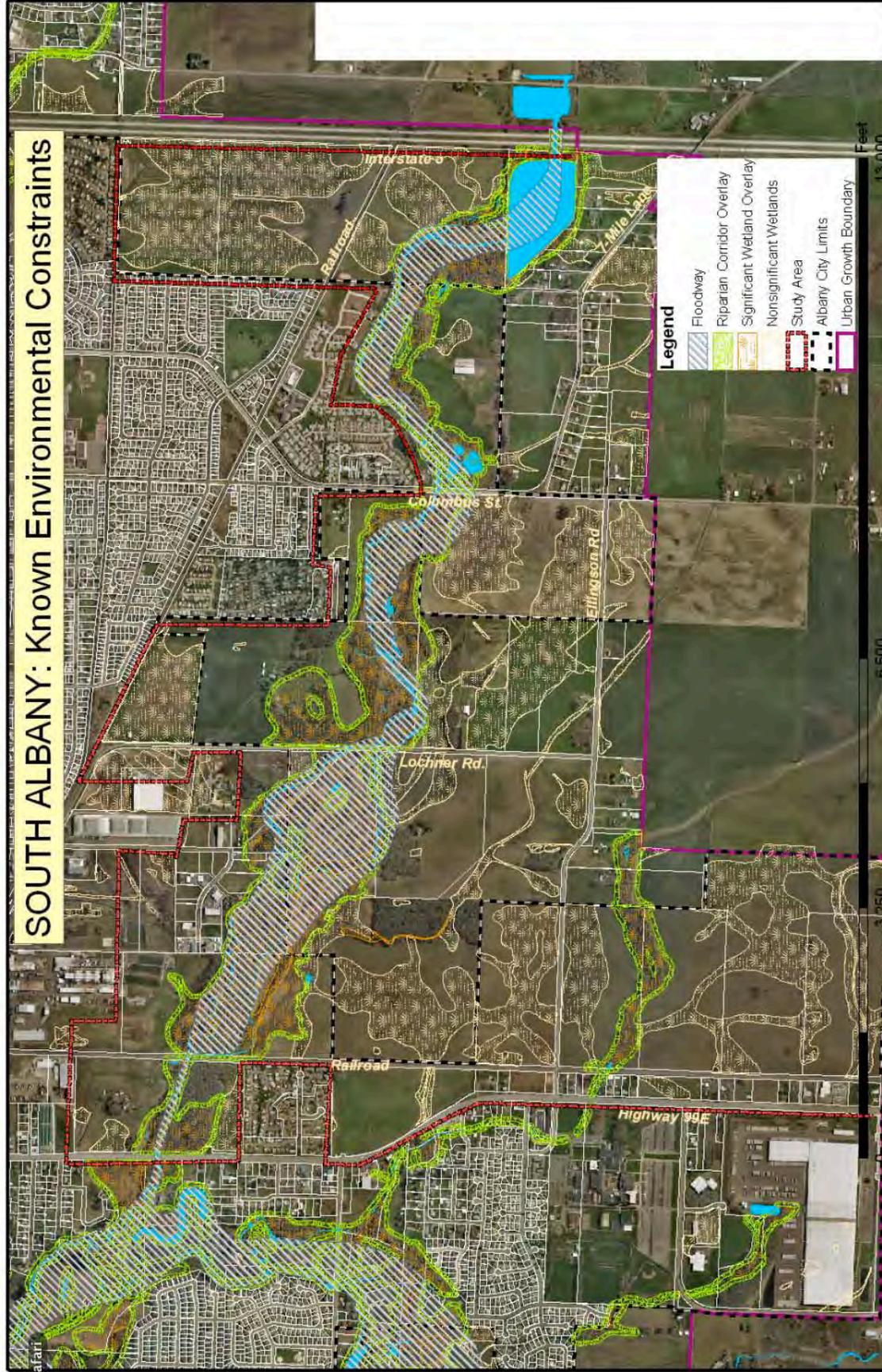
(D) Employment density of 16.5 employees per acre, which is the overall average number of employees per acre in Table 4

(E) 20 year forecast is 1,340 employees

Map 2 shows environmental constraints in South Albany. Unbuildable environmental constraints are located predominantly within the Oak Creek Corridor. Non-significant wetlands, however, are found throughout the study area and affect most large parcels of land. Assuming that few or none of the non-significant wetlands will develop and be mitigated (i.e., Scenario A or B) would lead to a highly inefficient development pattern in the study area, with few areas available for contiguous development.

The preliminary Conceptual Plan for the project will use the estimates of capacity consistent with Scenario C, assuming that 75% of the non-significant wetlands will be built and mitigated. This assumption is consistent with the project objectives of: (1) using land within the Albany UGB efficiently, while protecting key resources such as the Oak Creek Corridor, and (2) developing key infrastructure in areas where substantial amounts of buildable land can be served, and (3) creating a cohesive development pattern in South Albany, which results in a complete and walkable community in the study area.

Map 2. Environmental constraints in the South Albany Area



Source: City of Albany, GIS

### 3.2 SOUTH ALBANY AREA OPPORTUNITIES AND CONSTRAINTS

This section describes the opportunities and constraints of the existing conditions of the South Albany Area and potential development districts for the SAAP from a real estate market perspective.

- **Study area location.** The study area is bordered by Highway 99E to the east and I-5 to the west. The northern border of the study area is Albany and Eastern Railroad short-haul rail line and the southern border of the study area is the Albany UGB. The study area is located directly south of residential development and about three miles from Albany's downtown.
- **Existing development.** The Study Area is largely vacant, undeveloped land. Existing development in the study area includes industrial uses, such as ATI-Wah Chang (a metals manufacturer) and Sno-Temp (a food processor and shipping firm), residential development at Mennonite Village, and farm uses and farm houses.
- **Study area land characteristics.** The Study Area is about 1,900 acres in size, with about 900 acres within the City limits and 1,000 acres outside the city limits but inside the UGB. Most parcels are relatively large, 50 acres or more, and there are fewer than 20 landowners in the study area. The study area is relatively flat. The most common zoning designations in the study area are: Urban Residential Reserve (nearly 730 acres), Open Space (about 410 acres, both inside and outside the city limits), Industrial Park (nearly 310 acres), and Light Industrial (about 120 acres).
- **Potential conflicts with existing development.** One of the concerns that existing landowners and business managers have is the potential for conflicts of use between industrial uses and residential uses. The existing industrial uses are located where they are, in part, because of potential incompatibilities between industrial and residential uses, such as complaints about odors, noise, or transportation. Nearby residents have complained about odors associated with the industrial uses. In addition, some of the existing industrial users are dependent on moving their products by truck or the short-haul railroad, both of which can cause conflicts with nearby residential development.
- **Major constraints.** The predominant constraints in the study area are Oak Creek and wetlands. The City's recent Goal 5 work documents Oak Creek's Open Space zoning, floodway, floodplain, riparian corridor, a lake, and slopes greater than 25% (958 acres), significant wetlands (285 acres), and nonsignificant wetlands (514 acres). Other constraints include: archeological sites, oak groves, BPA power line right-of-ways, and soil conditions in varying areas throughout the Study Area that may not be suitable for higher density development.

While the Oak Creek corridor is a development constraint, it presents opportunities as well. The Oak Creek area could be preserved as a natural area, possibly with bicycle or walking paths that would serve as an alternative transportation route to downtown or commercial areas north of the study area. Oak Creek could serve as a buffer between industrial uses to the north of the Creek and commercial or residential uses to the south.

- **Access to transportation.** One of the study area's biggest advantages is access to Highway 99E and rail lines. Once the Ellingson Road realignment project has been completed, access from the study area to Highway 99E will be improved, making the study area more appealing to automobile dependent uses, such as businesses and residents. Access to the Union Pacific long-haul line that runs to the west of the study area and the Albany and Eastern Railroad short-haul rail line is attractive to rail-dependent businesses. Businesses that need to transport large amounts of goods by rail may choose to locate along the Albany and Eastern Railroad, where they can access the short-haul rail lines.<sup>13</sup>
- **Local transportation.** Existing access to the study area from the rest of Albany is limited to a few streets: Ellingson Road at Highway 99E, Lochner Road at Marion Street, and Columbus Street and Waverly Drive. The City has plans for realignment of Ellingson Road to connect to Highway 99E at 53rd Avenue, which will provide an above grade crossing of the Union Pacific Railroad. The City also plans to improve Lochner's bridge crossing of Oak Creek (which is prone to flooding) and the Lochner and Marion Street interchange. Development of the study area would require these changes to access the area. It would also require developing an internal street grid, which would be based around the existing major streets (Ellingson Rd, Lochner Rd, and Columbus St.).
- **Existing infrastructure.** There is urban-level infrastructure available in the study area. The City has sufficient sewer capacity to service the area for most uses. The City's Capital Improvement Plan (CIP) includes building a lift station off of Highway 99E to service the study area for sewer. The City had plans to service the Pepsico site with eight million gallons of water, which can be provided to other parts of the Study Area. The Study Area does not have stormwater infrastructure and water quality of stormwater runoff could be an issue.

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<sup>13</sup> According to City staff, when Pepsico investigated accessing the Union Pacific rail line, via a spur off the main rail line, they found connecting to the UP rail line would be very costly.

### 3.3 KEY FINDINGS FOR THE SOUTH ALBANY

ECO's review of the characteristics of the study area provides insight into development options in for the South Albany Area. The following is a summary of the key findings for South Albany:

- South Albany has between 400 and 650 buildable acres designated for residential uses. The Conceptual Plan will assume that the study area has 685 buildable residential acres, with a build-out capacity of about 3,700 dwelling units (Scenario C).
- South Albany has between 300 and 445 buildable acres designated for employment uses. The Conceptual Plan will assume that the study area has 408 buildable residential acres, with a build-out capacity of about 6,700 employees (Scenario C).
- The study area has characteristics that present opportunities for development and characteristics that present challenges. The study area's location, large parcels of undeveloped land, topography, proximity to Highway 99E, access to rail lines, and existing infrastructure are all assets. Challenges for the study area include wetlands, floodway, Oak Creek, needed improvements to roads (e.g., the Ellingson realignment or the Lochner bridge over Oak Creek), needed stormwater infrastructure, archeological sites, oak groves, and soil conditions.

## 4 DEVELOPMENT OPPORTUNITIES

Development opportunities in the South Albany Area include a broad range of possibilities, from residential development, employment uses, and mixed-use development. This section presents stakeholders' ideas for development of the study area and our assessment of the types of development options for the study area.

### 4.1 WHAT DO REALTORS, DEVELOPERS, AND PROPERTY OWNERS THINK WILL HAPPEN?

Members of the consulting team conducted interviews with twelve stakeholders, representing a range of interests: property owners, business owners and operators, developers, City Council, Native American tribes, and other stakeholders involved in planning in Albany. These interviews are summarized in the OTAK memorandum "South Albany Area Plan- Project Memorandum #1: Vision Elements and Evaluation Criteria," dated August 26, 2011. This section summarizes the key points for the SAAP.

- **Residential opportunities.** Stakeholders generally agreed that the study area offers opportunity for some residential development. In general, stakeholders agreed that the eastern part of the study area, along Columbus Street and around Mennonite Village, would be appropriate for residential development. Some stakeholders thought that the area south of Oak Creek and north of the Pepsi site should be developed for residential uses.
  - **Single-family housing.** Stakeholders thought that the study area could accommodate some low density single-family housing (e.g., 4.5 to 5 dwelling units per gross acre).
  - **Multi-family housing.** Stakeholders identified opportunities for higher density housing (e.g., housing at 20 dwelling units per gross acre) along transportation corridors, such as Ellingson Road, and around village centers.
- **Commercial opportunities.** Stakeholders described potential for a range of commercial opportunities, from small-scale neighborhood retail to large-scale community retail to mixed-use.
  - **Regional commercial.** The "piano" site, which is located along Highway 99, has been identified by the City as a regional commercial center. Assuming this site develops with a combination of larger-scale retail (e.g., large-format retailers) and smaller-scale retail and services (e.g., specialty retail, a hair salon, or a bank), then demand for retail and services in southern Albany may be largely accommodated on the "piano" site.

This site is about 36 acres. If the site is entirely buildable, it could accommodate between 700 and 1,000 employees, assuming an average

employment density of 20 to 30 employees per acre<sup>14</sup>. The capacity for build space on this site is in excess of the forecast for residential growth in South Albany, which makes sense because this site is intended to serve multiple neighborhoods in southern Albany.

The “piano” site is the place where a big-box retail and other large-format retailers might be most likely to locate, with the ready access to the site from Highway 99 E. Depending on development form and parking requirements, the site could accommodate between 300,000 and 700,000 square feet of built space, which could serve between 4,000 to 9,000 households.

- **Village center.** Stakeholders identified opportunities for development in one or more commercial village centers that would serve the existing and new residents. The village center(s) could have neighborhood commercial uses (e.g., a coffee shop, a convenience store, a hair salon, or a small medical clinic), a medium-sized grocery store (i.e., a Trader Joe’s or a small Market of Choice), and other locally-serving retail or services. The village center(s) should not compete with the community commercial located along Highway 99E for large-format retail, such as big-box stores.

The study area could support one or more village centers, with a total of about 100,000 to 120,000 square feet of built space on about 10 acres of land. This development could take place in one 10-acre village center or it could be several smaller village centers, of one to five acres a piece. Demand for this full amount of retail may not materialize until later in the 20-year period or near build-out of the study area.

The Concept Plan should specify the approximate location of the village center(s) near the center of the study area, such as at the intersection of Ellingson Road with Lochner Road or Columbus Road. Stakeholders identified the potential for mixed-use in or around the village center(s). In addition, public uses (i.e., parks, schools, library branch, etc.) could be built near the village center(s), creating an additional draw of people to the village center(s).

Having one or more village centers within the study area will provide goods and services to nearby neighborhoods. This will decrease the need for residents to travel outside by the study area to address everyday needs, decreasing demand on the automotive transportation system. In addition, having one or more village centers within the

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<sup>14</sup> We commonly see between 20 and 30 employees per acre in retail developments in Oregon, with up to 40 employees per acre in denser retail that is mixed with office development.

study area is important to creating a walkable community, with places that people would naturally gather.

- **Regional market for commercial sites.** The vacancy rates for commercial and retail in Albany is about 10% to 15%, according to several real estate brokers we spoke with. Commercial and retail vacancies are a little lower in Albany than in Lebanon but higher than Corvallis. The rental costs of commercial and retail space ranges from \$0.60 to \$3.00 per square foot per month in Albany, depending on the age and condition of the space. These prices are generally similar to the cost in other nearby cities, with commercial and retail space being more expensive in Corvallis.

The implications of this information are: (1) the study area will not support regional retail (e.g., a mall), and (2) commercial uses will support local needs, both for the South Albany Area and for the broader southern Albany area.

- **Industrial opportunities.** Several stakeholders discussed the industrial opportunities of the study area, as an extension of Albany's industrial core. Stakeholders thought that manufacturing firms might find the study area's characteristics attractive, such as: its location at the edge of Albany's urban growth boundary, the access to Highway 99, the access to rail via a short-line rail road, the configuration and large size of parcels in the study area, and the relatively flat topography.
  - **Light industrial uses.** Stakeholders generally identified the area south of Oak Creek and the realigned Ellingson Road as an appropriate area for larger-scale light industrial or other employment uses. Some stakeholders identified this entire area as appropriate for employment uses and some identified the southern part of it, currently owned by Pepsico, as appropriate for employment uses.

Stakeholders generally, but not universally, suggested that the study area would provide good opportunities for light industrial uses, such as food processing. Some stakeholders identified metals manufacturing and warehouse and distribution as good uses for the study area. ECO's previous work on industrial lands in the mid-Willamette Valley suggest that most new development will be built-to-suit; developers perceive speculative industrial space as too risky. Moreover, ECO's 2007 analysis of the potential impact on wetlands on development of industrial sites suggests that (1) the impacts are less of an issue for large industrial users, and (2) any steps the city can take to minimize uncertainties related to wetlands permitting will make the sites more attractive. The fact the city has done an extensive inventory is a good start.

The Oregon Cascades West Council of Governments has led a partnership with the State, Linn and Benton Counties, and cities in the region (including Albany) to develop a balanced approach for protecting wetlands and providing an adequate inventory of developable industrial sites. The partners identified two strategies to meet this goal: (1) off-site mitigation through wetland mitigation bank(s) and (2) using Regional General Permits for selected industrial sites to increase the certainty about allowable development by identifying wetland mitigation requirements and setting drainage and other improvement standards.<sup>15</sup>

- **Regional market for industrial sites.** The vacancy rates for industrial space in Albany and nearby cities is about 20% to 30%, according to several real estate brokers we spoke with. The leasing costs of industrial space ranges from \$0.30 to \$0.60 per square foot per month in Albany. The cost of vacant serviced industrial land is \$1 to \$3 per square foot, depending on the size of the site and the available infrastructure. These prices are generally similar to the cost in other nearby cities.

The implications of these findings are that (1) Albany is competing in a regional site market, and (2) the inventory of vacant industrial space will potentially substitute for new development – particularly for smaller employers. We don't think this is a significant issue for large site employers – as stated above, most of those businesses would require a built-to-suit facility.

- **Natural resource protection opportunities.** Stakeholders recognized the opportunities for natural resource protection along Oak Creek as important. They suggested that Oak Creek should be preserved, both as green space and as a natural feature. Oak Creek's greenspace can buffer residential and industrial uses. Some stakeholders identified the oak groves and archeological sites as other opportunities for natural resource protection.

In addition to protecting the study area's natural resources, stakeholders identified the importance of mitigating constraints, such as wetlands, in a way that allows the area to develop over the next 20 years. Some stakeholders suggested that some mitigation could be done on-site, through low impact development techniques or cluster development.

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<sup>15</sup> For additional information, see the *Regional Industrial Wetlands/Wetlands Mitigation Project* May 2011 Status report at <http://www.ocwcog.org/Files/Status%20Report%20-%20Wetlands%20Effort.pdf>

## 4.2 POTENTIAL DEVELOPMENT OPPORTUNITIES

The purpose of this memorandum is to identify a range of potential development and redevelopment opportunities in the South Albany Area. The analysis has considered a range of potential residential, retail, commercial, industrial, and mixed uses based on information from stakeholders, knowledgeable professionals, study area characteristics, and ECO's experience with development patterns in similar settings.

The actual pattern and level of development in the study area will depend on a number of factors, including landowner preferences, public and private investment, and public policies. The ideas put forth by developers, landowners, and other stakeholders represent some ideas for what could (or what should) happen in the South Albany Area. It is important to note, however, that the expectations of these stakeholders do not represent all of the views of how the study area should be developed. This project is an extension of previous planning projects, including the Great Neighborhoods project.

The type, amount, and character of development in the study area is subject, in part, to the City's policy decisions. The City can affect development in South Albany through policy choices, strategic investments, and forming partnerships that foster development that is consistent with the City's vision for creating a "neighborhood of choice." This vision should result in a walkable, welcoming community with neighborhoods of choice and a thriving employment center.

That said, private property owners and developers will choose to invest in development when they perceive that the development will generate sufficient rate of return, which depends on market conditions, development costs, site and regulatory constraints, and other factors. Thus, the actual type and level of development is always uncertain.

Our task is to identify a range of potential development opportunities for the South Albany Area. Our assessment of potential development opportunities in the study area leads us to the following conclusions:

- Improving the street network that connects the study area to the rest of Albany and the major streets within the South Albany Area will be critical to any development of the study area. The study area will require an internal circulation pattern that makes exiting the study area and accessing Highway 99E and other parts of Albany easy. Connector streets, such as 53rd Street or Columbus Street, will need to be able to accommodate the increased traffic.
- Creating a well-connected network of pedestrian and bicycle paths and trails will be essential to creating a neighborhood where people choose to walk to bicycle. These paths and trails should create connections within the study areas between major streets within the study area, natural areas (such as the Oak Creek Corridor), commercial and employment centers, and residential neighborhoods. The paths and trails should also create connections with areas outside the study area, such as the Linn-Benton Community College campus.

- Development of the study area is made easier by availability of City sewer and water and the fact that there are relatively few owners of land in the study area.
- Addressing the constraints in the study area will be critical to development of South Albany. The study area has multiple constraints, with Oak Creek and wetlands being the largest constraints. Mitigating the constraints or incorporating them into the Concept Plan will be important for future development of the study area. The Plan must take the market into consideration when proposing mitigation measures. If mitigation is too difficult, time-consuming, or costly, landowners may choose not to or be unable to develop their land.
- The Oak Creek corridor (including the floodway, floodplain, wetlands, and riparian corridor) provide opportunities for preserving a natural resource and creating a unique open space area. Oak Creek can provide amenities to the area that make South Albany more appealing to developers, such as walking and biking trails, an attractive natural view, and a buffer between industrial and other uses. The Concept Plan should treat Oak Creek as both a natural area to preserve but as an amenity for adjacent development.
- The amount of land in the South Albany Area, 1,000 vacant buildable acres (under development Scenario C), exceeds the amount of land needed to accommodate the forecast residential and commercial and employment growth.
- At full buildout, South Albany could accommodate about 3,700 dwelling units, depending on the type and density of new housing. The excess capacity could be used to help the City address the deficit of medium density housing identified in Albany's Housing Needs Analysis. Developing more multifamily housing in South Albany would require balancing the preferences of existing residents, potential infrastructure capacity, and ensuring that there are appropriate sites for multifamily residential development available. Medium-density housing should be located near transportation corridors, in a village center, near commercial development, or as a part of mixed-use development. Medium-density housing could be developed at densities as high as 20 dwelling units per acre. Medium- and low-density housing could be mixed in some areas, such as along major streets or near a village center. The City can influence the type and amount of multifamily development through strategic investments, incentives to build multifamily housing, and working in partnership with private or nonprofit developers to build more multifamily housing in the study area.
- The study area's attributes, including a large amount of flat, vacant land with few ownerships, make it ideal for some types of employment uses. Land in the South Albany Study Area could be used to meet some of the City's

expected commercial and industrial employment growth. South Albany could accommodate about 6,700 jobs, depending on the type and density of new employment.

- The “piano” property has been identified a site for regional commercial development. Demand for large-scale retail and services is likely to be limited to the amount that can be accommodated on this site. Other retail or services locating in the study area are likely to be smaller-scale and locate in the village center(s). The “piano” property could accommodate 700 to 1,000 employees and serve between 4,000 and 9,000 households.
- The *Economic Opportunities Analysis* identified demand for a very large industrial site (120 to 150 acres),<sup>16</sup> several large industrial or commercial sites in the (20 to 50 acres), and several medium-sized industrial or commercial sites (5 to 20 acres). While not all of these sites should (or perhaps could) locate in South Albany, the study area could accommodate some employment uses. South Albany has some of the City’s largest parcels, with good access to Highway 99E, making these sites unique within the City. The sites located along Highway 99E present the greatest opportunities for employment use, given that there are no plans to build an Interstate 5 interchange with Ellingson Road.
- Stakeholders generally agreed that the sites owned by Pepsico are good sites for employment uses. Stakeholders did not agree on employment uses in other parts of the site, such as areas north of Oak Creek. Several stakeholders, including one landowner, suggest that the sites north of Pepsico should be developed for residential uses. In addition, some stakeholders suggested that sites north of Oak Creek and east of Columbus are good opportunities for light industrial uses.
- Although the study area’s attributes may make it attractive to light industrial uses, the land in South Albany will compete with industrial land in other parts of the mid-Willamette Valley. In a recent project we completed for the cities of Salem and Keizer, we found that serviced industrial land in Mill Creek is selling for about \$2.50 per square foot. This price is comparable to the cost of land in South Albany and neighboring cities. There are about 600 acres of vacant land in Mill Creek, which has better access to I-5, as well as having most urban

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<sup>16</sup> When the EOA was completed in 2007, it assumed that Pepsico would develop their parcels in the South Albany Area, creating potential demand for another very large industrial site. However, Pepsico did not develop the site, leaving the site available to accommodate additional employment growth in South Albany.

services. In addition, the Tangent Business Park, which also has good access to I-5, has about 70 acres of vacant industrial land.<sup>17</sup>

- Development of some types of commercial uses in the study area could compete with some types commercial uses in Albany. For example, development of a large-scale office park could compete with redevelopment of commercial office uses in Downtown or other employment centers. If the City wants to locate a business park in South Albany, the most appropriate types of business parks would be an industrial park (for light industrial uses) or a business park that combines light industrial, flex space, and some types of commercial uses.
- The City's vision for development of the South Albany Area includes developing one or more village center(s). The village center(s) should be developed as activity centers at key intersections. The village center(s) should be special, unique environments that are connected with the surrounding neighborhoods by multiple modes of transportation, including pedestrian and bicycle paths. The village center(s) could be anchored with public uses (i.e., near a park or library branch) and may offer opportunities for a mixed-use center.

The size of the center(s) and the types of businesses locating in the centers is related to the timing of development and the retail uses allowed on the "piano" property.

- Some types of businesses are likely to locate in the village center(s) relatively early in the development of the study area, such as a coffee shop or a convenience store. Other uses would be likely to locate in the village center(s) as the study area develops and has developed neighborhoods. These types of businesses are those who depend on locating near a concentration of existing households, such as a grocery store, fitness facility, or medical offices.
- One of the types of uses that the City wants to encourage in the village center(s) is a grocery store. At build-out, the study area will have about 3,700 new households. Combined with the existing households in the study area and in nearby neighborhoods, this is enough households to support a grocery store.<sup>18</sup>

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<sup>17</sup> The Tangent Business Park's website states that the Business Park has about 100 acres of shovel ready sites, at 30% buildout. The estimate of 70 acres of land undeveloped in the Business Park is based on this information. <http://www.tangentbusinesspark.com/shovelreadysites.html>

<sup>18</sup> Typically 4,000 to 5,000 households are required to support a grocery store.

It is difficult to predict when a grocery store may be built in the study area. A grocery store is unlikely to be built at the very beginning of development of the study area, before there are many new households in the study area. It is equally unlikely to expect that a grocery store would not be built before build-out is completed in the study area. A reasonable estimate is that a grocer would choose to locate in the study area once major roads are built and when there is one or more neighborhood in the study area.

- The broader southern Albany area will attract a grocery store, especially as the study area and other parts of southern Albany develop. The logical place to expect a grocery store to locate is on the “piano” property, which has direct access to and visibility from Highway 99 E.

Part of the City’s strategy for creating a walkable, complete community and managing traffic flow out of the South Albany Area is to encourage the siting of a grocery store in the village center in the study area. The key to locating a grocery store in the village center is through placing use restrictions on the “piano” property that restrict the types of retail uses allowed on the property to disallow the siting of a grocery store. These restrictions would need to be developed carefully, so that other desired retail uses are allowed on the “piano” property.

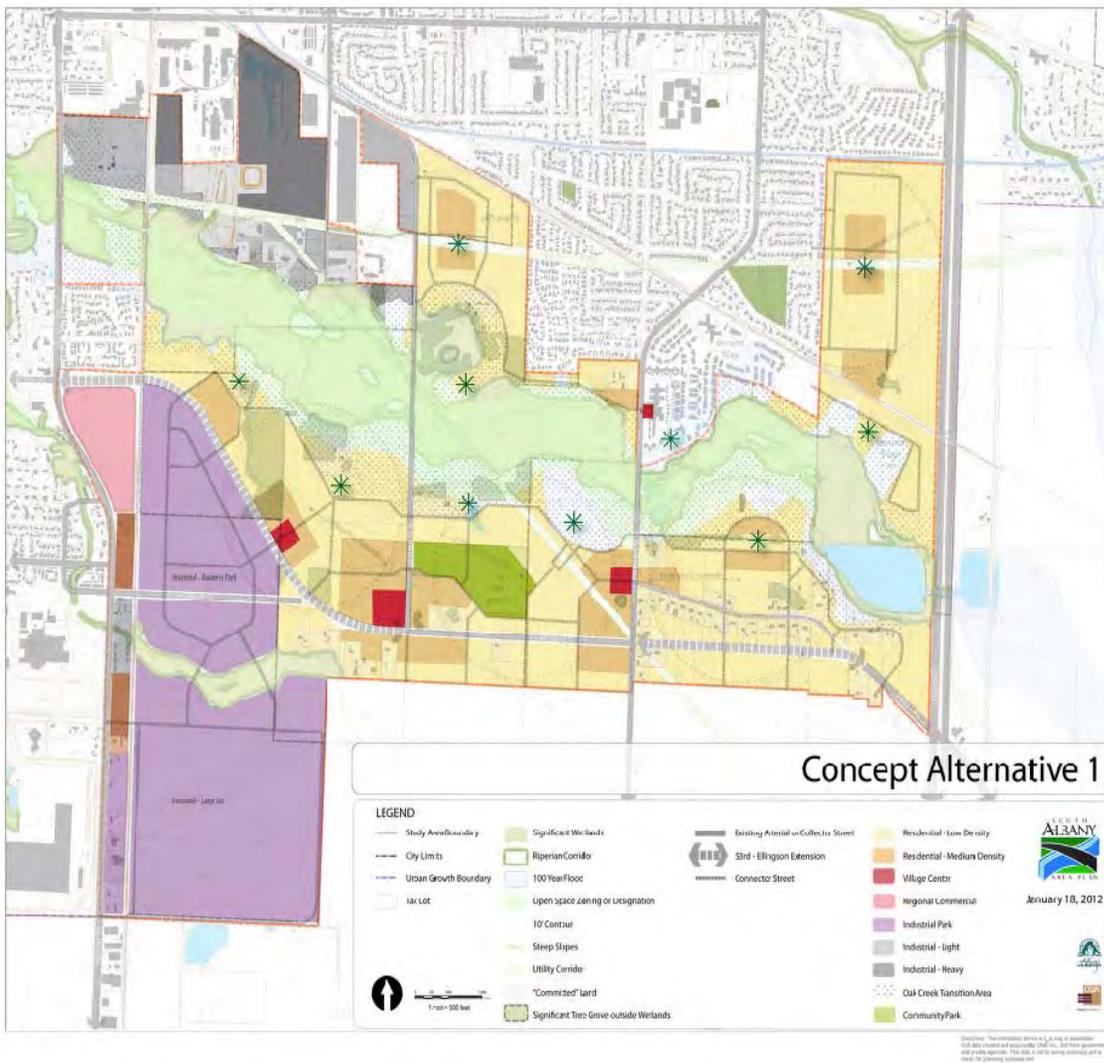
- The City has expressed interested in mixed-use development, as part of building a neighborhood of choice, as identified in the Great Neighborhoods project. The South Albany Area may be appropriate for mixed-use development, either horizontal mixed-use (e.g., commercial/retail or residential buildings adjacent to each other) or vertical mixed-use (e.g., a multistory building with retail on the ground floor and housing on the top floors). Our research on other projects suggests that medium-sized cities are struggling to make mixed-use development work well. The most common problem is that there is demand for the housing but the commercial space has high vacancies.

Developing a mixed-use center in South Albany is, in part, a policy choice. The challenges in developing a mixed-use center can be off-set through support from the City for developing the center. The City may need to use creative approaches for a mixed-use center, especially one with vertically integrated mixed-use, in the South Albany Area. For example, the City may need to work with private or nonprofit organizations to develop the mixed use center, using incentives such as public investment and working closely with developers to mitigate problems that arise through the development process.

- The economic downturn will continue to depress demand for development of all types (and land) in the short term (3-5 years). Demand for land over the next 3 to 7 years is likely to be predominantly for residential and commercial uses. Demand for industrial land is harder to forecast, particularly in light of other industrial land in the region, such as Mill Creek in Salem. Albany could see a major employer locate on a study area in the near term future, or find that little development has occurred over the 20-year planning period.
- Some uses are likely to develop sooner than others. In the next five to 10 years after the Concept Plan is complete, residential development is likely to start sooner than retail development (except for on the “piano” property). Our research from other projects suggests that retail development often comes to a new area slower than housing. The Concept Plan should consider that the study area may not be ripe for retail or mixed-use development until more housing has been developed in the study area. The Concept Plan can show development opportunities in phases, with long-term plan of the study area at build-out.

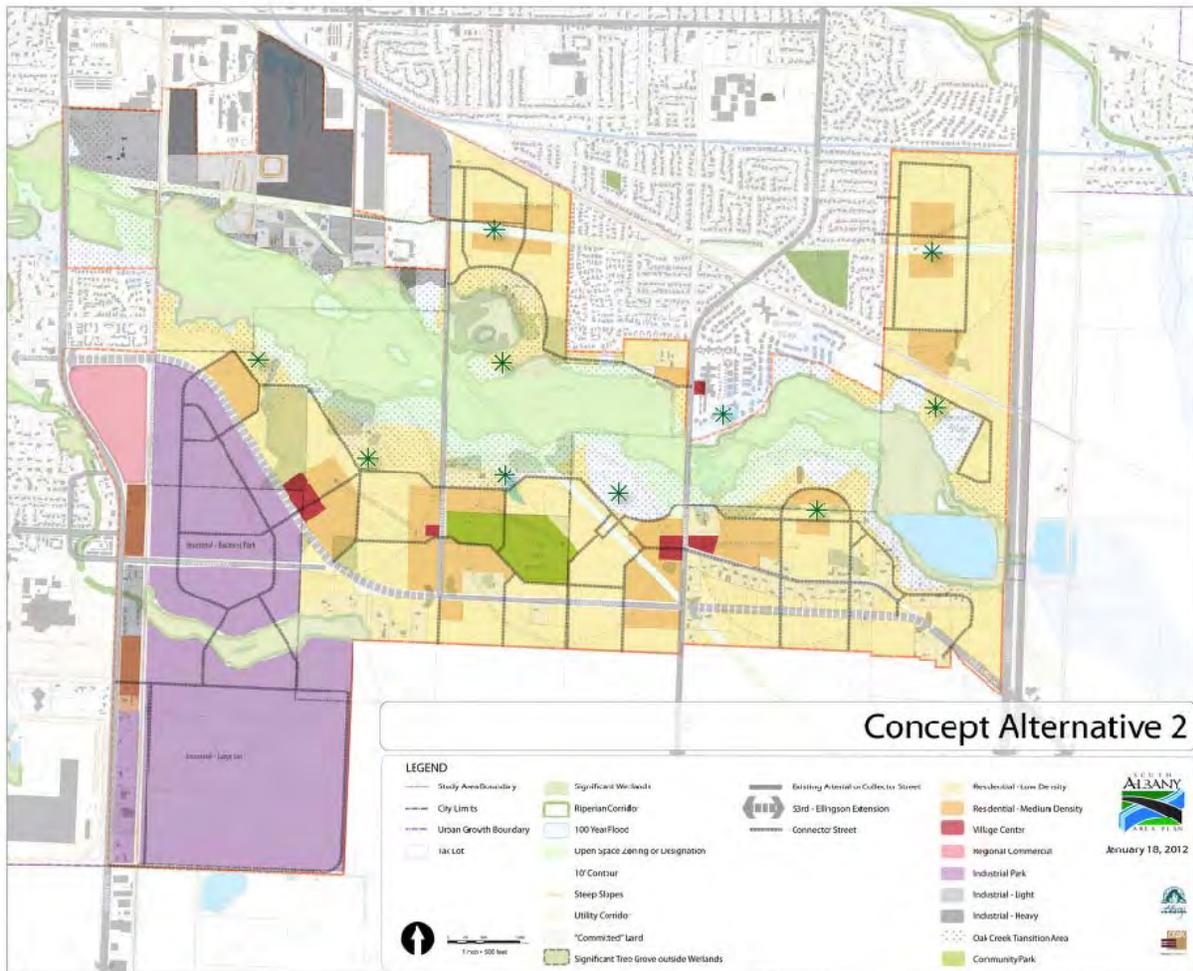
Maps 3 and 4 show drafts of the Concept Plan Alternatives for the South Albany Areas. The yellow areas are designated for low-density housing and the brown areas are for medium-density housing. The purple area shows the employment center, which is zoned for industrial uses. The red areas show the commercial center. Both alternatives show four commercial center, with one larger center, two medium-sized centers, and one small center.

### Map 3. Draft Concept Alternative 1, South Albany Area



Source: OTAK Draft Concept Plan, January 2012

**Map 4. Draft Concept Alternative 2, South Albany Area**



Source: OTAK Draft Concept Plan, January 2012