

**I-5 Exits 40 and 43 (Gold Hill)
Interchange Area Management Plans**

**Technical Memorandum #3
Study Area Inventory**

Prepared for

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Table of Contents

3. EXISTING CONDITIONS.....	1
3.1. Transportation System Inventory	1
3.1.1. Roadway Inventory	1
3.1.2. Interchange Geometry.....	2
3.1.3. Truck Turning Movement Inventory.....	3
3.1.4. Pavement Conditions.....	4
3.1.5. Pedestrian and Bicycle Facilities Inventory.....	4
3.1.6. Transit Inventory.....	5
3.1.7. Bridge Inventory	5
3.1.8. Access Inventory	6
3.1.9. Rail Inventory	9
3.1.10. Summary of Existing Transportation System Deficiencies	9
3.2. Existing Environmental Summary	11
3.2.1. Wildlife Habitat and Wetlands.....	11
3.2.2. Threatened and Endangered Species	12
3.2.3. Hazardous Materials	14
3.2.4. Historic and Archaeological Resources.....	16
3.2.5. Floodplains and Floodways.....	17
3.3. Existing Land Use Summary	18
3.3.1. Socioeconomic and Environmental Justice	18
3.3.2. Land Use and Zoning.....	21
3.3.3. Section 4(f) Resources	23
3.3.4. Section 6(f) Resources	24
3.3.5. Potential Design Constraints.....	24

List of Tables

Table 3-1. Roadway Inventory	1
Table 3-2. Truck Turning Movement Inventory	3
Table 3-3. Pavement Conditions.....	4
Table 3-4. Bridge Conditions.....	6
Table 3-5. IMSA Access Inventory.....	7
Table 3-6. Summary of Existing Deficiencies	10
Table 3-7. ONHIC-Identified Federal and State Listed Threatened or Endangered Species	13
Table 3-8. IMSA State Hazardous Material Sites and Incidences	15
Table 3-9. NRHP-listed Resources.....	16
Table 3-10. Population and % Population Change, 2000, 2010, 2040	19
Table 3-11. Age of Census Tracts, 2010	19
Table 3-12. Race and Ethnicity, 2010.....	20
Table 3-13. Poverty, Disability, Female Head of Household, 2010.....	20
Table 3-14. Environmental and Land Use Summary.....	25

List of Figures (Attached at End)

- Figure 3-1 (a & b). Access Management Inventory
- Figure 3-2 (a & b). Natural Features
- Figure 3-3 (a & b). Hazardous Sites
- Figure 3-4 (a & b). Community Features
- Figure 3-5 (a & b). Tax Lot Maps
- Figure 3-6 (a & b). Comprehensive Plan Designations
- Figure 3-7 (a & b). Zoning Map Designations
- Figure 3-8 (a & b). Miscellaneous Landmarks and Features

3. EXISTING CONDITIONS

This memorandum summarizes the inventory of existing conditions within the Interstate 5 (I-5) Exits 40 and 43 Interchange Management IMSA (IMSA). The existing conditions assessment includes system inventories for roadway, bicycle/pedestrian, transit, bridge conditions, access and rail. Existing environmental and land use conditions are reviewed in the project IMSAs, with the intent to help inform the conceptual alternatives development process in a subsequent phase of the project.

3.1. Transportation System Inventory

The transportation system inventory examines the highway and intersecting roadways, truck intersection turning movements, bicycle and pedestrian facilities, transit facilities, bridge conditions, access locations, and rail facilities.

3.1.1. Roadway Inventory

I-5 Exits 40 and 43 are rural interchanges that currently function as the main access to the City of Gold Hill and the unincorporated community of Rock Point, respectively. The roadways within the IMSA are largely rural without any on-street parking. Table 3-1 provides an inventory of the roadway characteristics. The inventory reviews the state and local (Jackson County) functional classification as well as posted speed, number of lanes, and widths of the travel lanes, travel surface and paved surface. The majority of the inventory was constructed from ODOT mapping and online databases, specifically TransGIS.

Table 3-1. Roadway Inventory

Roadway/ Highway Name	Jurisdiction ^{1,2}	ODOT/Federal Functional Classification ^{1,2}	City/County Functional Classification ^{1,2}	Posted Speed	No. of Lanes	Width (ft)	
						Travel Surface	Paved Surface
Interstate 5							
Mainline	ODOT	Interstate, FR, NHS	-	65	4	48	86
I-5 Exit 40 Ramps	ODOT	Interstate, NHS	Minor Arterial (SB ramps only)	45 ³	1	16	26
I-5 Exit 43 Ramps	ODOT	Interstate, NHS	Minor Arterial (all except NB on ramp)	45	1	16	26
I-5 Exit 40							
Access Rd (OR 99)	ODOT	Rural Minor Arterial	Minor Arterial	35	2	24-26	24-34
Blackwell Rd	Jackson County	Rural Major Collector	Major Collector	40	2	24	28
2 nd Ave (OR 99)	ODOT	Rural Minor Arterial	Minor Arterial	40	2	22	24
Lampman Rd	Jackson County	Local	Local	45	2	18-22	18-22
Old Stage Rd	Jackson County	Local / Rural Major Collector ⁴	Local / Rural Major Collector ⁴	45	2	21	21

Table 3-1. Roadway Inventory

Roadway/ Highway Name	Jurisdiction ^{1,2}	ODOT/Federal Functional Classification ^{1,2}	City/County Functional Classification ^{1,2}	Posted Speed	No. of Lanes	Width (ft)	
						Travel Surface	Paved Surface
I-5 Exit 43							
OR 234 / Rogue River Hwy (OR 99)	ODOT	Rural Minor Arterial	Minor Arterial	45	2	18-28	18-38
Main St (OR 99)	ODOT	Rural Minor Arterial	Minor Arterial	Basic Rule	2	26	26-36
N River Rd	Jackson County	Rural Major Collector	Minor Collector	45	2	24	24
Profetta Ln	Jackson County	Local	Local	Basic Rule	2	20-22	20-22
Frontage Rd	Jackson County	Local	Local	45	2	22	22

Acronyms: NHS = National Highway System; FR = Freight Route; TR = Truck Route

Notes:

1. State functional classification maps and TransGIS mapping tool
2. Jackson County Transportation System Plan, 2005
3. The Exit 40 southbound off ramp has a posted speed of 35 mph
4. The Jackson County Transportation System Plan (TSP) classifies Old Stage Rd. as a local road west of Access Rd, and a rural major collector south of Access Rd

3.1.2. Interchange Geometry

Both the Exit 40 and Exit 43 interchanges have a standard diamond layout. All ramp terminal intersections are STOP-controlled with single lane off-ramps that flare at the approaches to the local roadway system.

I-5 Exit 40

The existing interchange geometric design at Exit 40, as summarized by ODOT in the *I-5 State of the Interstate Report*, does not meet some of the current design guidelines, which raises potential safety concerns. The geometric assessment, conducted in 2000 and visually confirmed using aerial imaging, showed the following deficiencies:

- Northbound Off Ramp: Does not have adequate deceleration distance before horizontal curves on ramp (200 feet versus desired 460 feet for 35 mph curve)
- Southbound Off Ramp: Does not have adequate deceleration distance before horizontal curves on ramp (280 feet versus desired 500 feet for 30 mph curve)
- Northbound On Ramp: Does not have adequate acceleration length after horizontal curves on ramp (770 feet versus desired 1,100 feet after a 30 mph curve)
- Southbound On Ramp: Does not have adequate acceleration length after horizontal curves on ramp (710 feet versus desired 1,100 feet after a 30 mph curve)

The bridge over I-5 at Exit 40 was repaired as part of the Oregon Transportation Investment Act (OTIA) with construction completed in 2009. The bridge is now two lanes wide with a paved width of approximately 36 feet. This allows for 12-foot travel lanes and 5- to 6-foot shoulders on both sides of the road.

I-5 Exit 43

The existing interchange geometric design at Exit 43 also has safety concerns summarized by ODOT in the *I-5 State of the Interstate Report*. The geometric deficiency assessment, conducted in 2000 and visually confirmed using aerial imaging, showed the following deficiencies:

- Northbound Off Ramp: Does not have adequate deceleration distance before horizontal curves on ramp (305 feet versus desired 350 feet for 55 mph curve)
- Southbound Off Ramp: Does not have adequate deceleration distance before horizontal curves on ramp (280 feet versus desired 350 feet for 65 mph curve)
- Northbound Off Ramp Intersection: Cross street does not meet desired stopping sight distance (165 feet versus 250-280 feet for 55 mph speed and crest vertical curve)
- Southbound Off Ramp Intersection: Cross street does not meet desired stopping sight distance (165 feet versus 250-280 feet for 55 mph speed and crest vertical curve)

Although the stopping sight distance at the off ramp intersections with Main Street does not meet the standard for a 55 mph speed, few vehicles are likely to be traveling at that speed on Main Street because of the nearby intersections and the upgrade at the overpass.

The bridge over I-5 at Exit 43 is two lanes wide with a paved width of approximately 30 feet. This provides 12-foot travel lanes and 2-foot shoulders with raised curbs on both sides of the road.

3.1.3. Truck Turning Movement Inventory

The truck turning movement inventory assesses the level of difficulty for truck traffic to navigate I-5 Exit 40 and Exit 43 study area intersections. Table 3-2 provides an inventory of existing truck turning deficiencies (i.e., truck needs portion of opposing travel lane to complete turning movement) at major study area intersections. Intersections that primarily serve residential traffic were not assessed for truck accessibility.

Table 3-2. Truck Turning Movement Inventory

Intersections	Deficient Movements	
<i>I-5 Exit 40</i>		
Access Rd & Blackwell Rd (OR 99)	Access Rd: NBL, NBR	Blackwell Rd: WBL, EBR
Access Rd & I-5 NB Ramps	Access Rd: None	I-5 NB Ramps: WBL, WBR
Access Rd & I-5 SB Ramps	Access Rd: SBL	I-5 SB Ramps: EBL
Access Rd & Old Stage Rd	Access Rd: NBL, SBR	Old Stage Rd: None
<i>I-5 Exit 43</i>		
OR 99/OR 234 & N. River Rd	OR 99/OR 234: NBL	N. River Rd: EBR
OR 99/OR 234 & Main St	OR 99/OR 234: WBL, EBR	Main St: NBL, NBR
Main St & I-5 NB Ramps	Main St: NBL	I-5 NB Ramps: WBL, WBR
Main St & I-5 SB Ramps	Main St: SBL	I-5 SB Ramps: EBL

Acronyms: EB = eastbound; WB = westbound; NB = northbound; and SB = southbound. L = left; T = through; and R = right.

All intersections assessed in each IMSA have at least two turning movements that will not allow a WB-67 (design vehicle) to execute a turning maneuver without crossing into oncoming traffic or tracking onto the roadway shoulder. In some cases, both are necessary when a WB-67 is making a turn. Truck turning movement diagrams can be found in Appendix B.

3.1.4. Pavement Conditions

Inside the IMSA, pavement type and conditions vary. Table 3-3 summarizes the pavement conditions of roads within the IMSA.

Table 3-3. Pavement Conditions

Roadway / Highway Name	Pavement Type	Pavement Condition ¹	Shoulder Width (ft)	
			Left	Right
Interstate 5				
Mainline	Paved	Fair	7	12
Exit 40 Ramps	Paved	Fair/Poor ²	5	5
Exit 43 Ramps	Paved	Fair	5	5
I-5 Exit 40				
Access Rd (OR 99)	Paved	Fair	0-5	0-5
Blackwell Rd	Paved	Fair	0-2	0-2
2 nd Ave (OR 99)	Paved	Poor	0-1	0-1
Lampman Rd	Paved	Fair	0	0
Old Stage Rd	Paved / Gravel	Good	0	0
I-5 Exit 43				
OR 234 / Rogue River Hwy (OR 99)	Paved	Fair – Poor	0-6	0-6
Main St	Paved	Poor	0-2	0-2
N River Rd	Paved	Fair	0	0
Profetta Ln	Paved	Poor	0	0
Frontage Rd	Paved	Fair	0	0

Notes:

1. From ODOT TransGIS database
2. I-5 Exit 40 southbound on ramp is rated as Poor; all other ramps at this interchange are rated as Fair.

3.1.5. Pedestrian and Bicycle Facilities Inventory

Traditional pedestrian and bicycle facilities do not exist within the IMSAs; none of the IMSA roadways have paved sidewalks or bicycle lanes. In addition to the lack of established pedestrian and bicycle facilities, many of the roads have substandard shoulder width and pavement quality, as discussed in the previous section.

I-5 Exit 40

The IMSA for Exit 40 includes or abuts several popular bike routes. One route runs along Old Stage Road from Gold Hill, across the freeway (through the IMSA), and continuing southward towards Medford and Jacksonville. The nearby Rogue River Greenway Trail (RRGT) runs

through Gold Hill on a combination of city streets and a multi-use path that runs along the Rogue River northeast of the city. Several bicycling websites identify loops that use both the RRG and Old Stage Road.

I-5 Exit 43

The IMSA for Exit 43 includes the RRG, which runs on-street along OR 234 to N River Road. This on-street segment of the RRG connects between two multi-use paths and the Valley of the Rogue State Park, making it a popular route for cyclists.

3.1.6. Transit Inventory

Transit is limited through the IMSA, with the only stops being in Gold Hill for the Southwest Point Shuttle and the Rogue Valley Commuter Line. The Southwest Point Shuttle (operated by Klamath Shuttle) makes a daily round trip between Brookings and Klamath Falls, with a westbound morning and eastbound afternoon stop in Gold Hill. Klamath Shuttle is interlined with Greyhound Lines, Inc., and Greyhound tickets can be purchased through them. The Rogue Valley Commuter Line is a three-year demonstration project that provides round-trip bus service from Grants Pass to Medford. The commuter bus makes five trips per day in each direction and will only stop in Gold Hill if the user calls ahead. The Gold Hill stop is on Access Road north of interchange 40 at the Jackson County Fire District parking lot.

3.1.7. Bridge Inventory

The 2012 bridge inventory data was obtained from ODOT's Bridge Maintenance Section and reviewed. One element used to evaluate bridge conditions is the sufficiency rating, which is a complex formula that takes into account four separate factors to obtain a numeric value rating the ability of a bridge to service demand. The result of this method is a percentage in which 100 percent would represent an entirely sufficient bridge and zero percent would represent an entirely insufficient or deficient bridge. Those bridges with a sufficiency rating of 80 or less are eligible for rehabilitation. Those bridges with a sufficiency of 50 or less are eligible for replacement. Bridges lose their eligibility status for a period of ten years after a (Highway Bridge Program) project is completed.

Two additional elements are used to rate bridge conditions: structural deficiency and functional obsolescence. Structural deficiency is determined based on the condition rating for the deck, superstructure, substructure, or culvert and retaining walls. It may also be based on the appraisal rating of the structural condition or waterway adequacy. Functional obsolescence is determined based on the appraisal rating for the bridge deck geometry, underclearances, and approach roadway alignment. It may also be based on the appraisal rating of the structural condition or waterway adequacy.

There are four bridges located within or near the IMSA, as listed in Table 3-4 and shown on Figure 3-8a and Figure 3-8b.

I-5 Exit 40

The Access Road Bridge (07601B) over I-5 at Exit 40 was repaired as part of OTIA III with construction completed in 2009. The bridge is now two lanes wide with a paved width of approximately 36 feet. There are no deficiencies listed for the bridge and the sufficiency rating is 69.2, an improvement over previous ratings before repairs and widening.

Table 3-4. Bridge Conditions

Bridge ID	Milepoint	Name	No. of Lanes	Sufficiency Rating	Deficiencies
<i>I-5 Exit 40</i>					
07601B	3.07	OR 234 spur over I-5 (Hwy 271 Spur over Hwy 1 [S Gold Hill])	2	69.2	ND
00576	2.65	OR 234 across the Rogue River (Rogue River, Hwy 271 [Gold Hill])	2	57.9	SD
<i>I-5 Exit 43</i>					
08382	14.64	OR 99 over I-5 (Hwy 60 over Hwy 1)	2	59.2	ND
00332A	0.09	OR 234/OR 99 across Rogue River & Lampman Rd (Rogue River +, Hwy 271 [Rock point])	2	43.3*	OD: LC, LSL

Acronyms: ND = Not Deficient; SD = Structurally Deficient; OD = Other Deficiencies; LC = Load Capacity; LSL = Low Service Life

* New book for rating bridges used. Sufficiency rating of 53.4 on August 5, 2013

Source: ODOT, 2012 Bridge Condition Report

Just outside of the IMSA, the bridge (00576) crossing the Rogue River east of Gold Hill is identified as structurally deficient with a sufficiency rating of 57.9. The travel lanes are 10 feet wide and there is no shoulder; advanced warning signs on either side of the bridge indicate to users that it is narrow.

I-5 Exit 43

The Main Street Bridge (08382) over I-5 at Exit 43 is two lanes wide with a paved width of approximately 30 feet. There are no deficiencies listed for the bridge and the sufficiency rating is 59.2.

The OR 234/OR 99 Bridge (00332A) crossing a narrow strait of the Rogue River is identified as having low service life and load capacity deficiencies. This historic bridge was rehabilitated in 2001 with new railing and a deck overlay. No load restrictions are posted. However, the travel lanes are still only 9 feet wide and advanced warning signs on either side of the bridge indicate to users that it is narrow.

3.1.8. Access Inventory

Access inventory data was obtained from aerial photography and site visits. This data includes public street intersections, as well as both public and private access points to businesses and residences. For Exit 40, 34 access points were identified along the IMSA roads, while 21 access points were identified for Exit 43.

Figure 3-1a and Figure 3-1b provides aerial maps depicting existing access locations for each interchange. Table 3-5 corresponds to the figures and provides details for all relevant approaches in the IMSA including: roadway, type of use, width, side of the road and distance to next access point. Access spacing is measured along one side of the roadway without regard for connections on the opposite side.

At Exit 40, the northbound and southbound ramp terminals are spaced approximately 615 feet apart with accesses located as close as 185 feet from the ramps. At Exit 43, the northbound and southbound ramp terminals are spaced approximately 650 feet apart with accesses located as close as 140 feet from the ramps. The Oregon Highway Plan (OHP) recommends a minimum spacing of 1,320 feet (¼ mile) on either side of freeway ramps. As traffic volumes continue to grow, the proximity of these intersections could affect the safe and efficient function of the interchange area.

Outside the ¼-mile influence area of the ramp terminals, Jackson County uses spacing standards for minor collectors (150 feet), major collectors (225 feet), and arterials (300 feet), as identified in their TSP¹.

Table 3-5. IMSA Access Inventory

ID	Main Roadway	Access Type	Tax Lot	Site Use	Width (ft)	Distance to Next Point (ft)
I-5 Exit 40						
Access Points along South/East Side of Road						
2	Old Stage Rd	Private	300	Residential	12	693
4	Old Stage Rd	Public	--	Medford Moose Lodge #178 LO	30	410
7	Old Stage Rd	Private	500	Residential	30	359
11	Old Stage Rd	Private	500	Residential	20	552
17	Access Rd	Public	--	I-5 Exit 40 Southbound On Ramp	80	614
18	Access Rd	Public	--	I-5 Exit 40 Northbound Off Ramp	70	187
19	Access Rd	Public	--	Lampman Rd	80	755
21	Access Rd	Private	1500	Residential	18	210
24	Access Rd	Private	1500	Residential	15	103
25	Access Rd	Private	1800	Residential	12	121
26	Blackwell Rd	Public	--	Access Rd	80	472
27	Blackwell Rd	Private	2000	Residential	20	294
29	Blackwell Rd	Private	2300	Residential	20	158
30	Blackwell Rd	Private	2400	Residential	14	25
31	Blackwell Rd	Private	2600	Residential	30	216
33	Blackwell Rd	Private	2800	Residential	15	51
34	Blackwell Rd	Private	2800	Residential	15	51
40	Lampman Rd	Private	600	Residential	20	225
42	Lampman Rd	Public	--	Chavenor Rd	45	145

¹ Jackson County Transportation System Plan Table 5-2, 2005.

Table 3-5. IMSA Access Inventory

ID	Main Roadway	Access Type	Tax Lot	Site Use	Width (ft)	Distance to Next Point (ft)
Access Points along North/West Side of Road						
1	Old Stage Rd	Private	200	Residential	30	649
3	Old Stage Rd	Private	200	Residential	12	687
5	Old Stage Rd	Public	--	Access Rd	60	92
6	Old Stage Rd	Private	1100	Residential	260	218
8	Old Stage Rd	Private	1100	Residential	260	118
9	Old Stage Rd	Private	1200	Residential	10	215
10	Old Stage Rd	Private	1300	Residential	25	125
12	Old Stage Rd	Private	1600	Residential	12	83
13	Old Stage Rd	Private	1700	Residential	12	101
14	Old Stage Rd	Private	1800	Residential	12	39
15	Old Stage Rd	Private	1900	Residential	10	90
16	Old Stage Rd	Private	2000	Residential	18	90
17	Access Rd	Public	--	I-5 Exit 40 Southbound Off Ramp	60	614
18	Access Rd	Public	--	I-5 Exit 40 Northbound On Ramp	90	187
20	Access Rd	Public	--	Jackson County Fire District #3	60	333
22	Garden Row	Public	--	Running Salmon RV Park	45	23
23	Garden Row	Public	--	Running Salmon RV Park	25	328
28	Blackwell Rd	Private	300	Residential	30	487
32	Blackwell Rd	Private	201	Residential	25	487
35	Lampman Rd	Private	1100	Residential	12	178
36	Lampman Rd	Private	900	Residential	18	314
37	Lampman Rd	Private	800	Residential	18	320
38	Lampman Rd	Private	700	Residential	25	171
39	Lampman Rd	Private	500	Residential	18	282
41	Lampman Rd	Public	--	Chavenor Rd	60	145
43	Lampman Rd	Private	1201	Residential	25	345
I-5 Exit 43						
Access Points along South/East Side of Road						
44	OR 99	Private	2100	Residential	20	177
46	OR 99	Private	2200	Residential	15	193
47	OR 99	Private	2300	Residential	18	88
49	OR 99	Private	2400	Residential	110	50
50	OR 99	Private	2500	Residential	20	122
51	OR 99	Private	2500	Residential	40	368
53	OR 99	Private	2703	Residential	30	212
55	OR 99	Public	2702	Rowley & Rowley Inc.	12	218
56	OR 99	Public	--	Access Rd	95	384
58	Access Rd	Public	--	I-5 Exit 43 Northbound Off Ramp	46	648
59	Access Rd	Public	--	I-5 Exit 43 Southbound On Ramp	65	138
61	Frontage Rd	Private	3000	Brotherton Pipeline, Inc.	35	410
62	Frontage Rd	Private	2801	Brotherton Pipeline, Inc.	25	406
63	Frontage Rd	Private	2800	Brotherton Pipeline, Inc.	70	218
64	Frontage Rd	Private	2800	Brotherton Pipeline, Inc.	90	218

Table 3-5. IMSA Access Inventory

ID	Main Roadway	Access Type	Tax Lot	Site Use	Width (ft)	Distance to Next Point (ft)
Access Points along North/West Side of Road						
45	OR 99	Private	1900	Residential	30	299
48	OR 99	Private	1700	Residential	12	236
51	OR 99	Private	1600	Residential	14	269
52	OR 99	Private	1600	Residential	30	223
54	OR 99	Private	1500	Residential	14	972
57	OR 99	Public	--	Lampman Rd	75	972
58	Access Rd	Public	--	I-5 Exit 43 Northbound On Ramp	50	648
59	Access Rd	Public	--	I-5 Exit 43 Southbound Off Ramp	35	138
60	Frontage Rd	Public	--	Frontage Rd	65	913

Shaded cells indicate ramp terminals; Acronyms: TBD = To be determined with site visit

Source David Evans and Associates, Inc.

3.1.9. Rail Inventory

One railroad line passes through the IMSA. The Central Oregon and Pacific (CORP) Railroad is a short line railroad owned by RailAmerica, Inc., which is based in Jacksonville, Florida. Currently, the railroad line is exclusively for freight, with 90 percent of their delivery consisting of forest products.

CORP, headquartered in Roseburg, Oregon, has 389 miles of track between Eugene, Oregon and Black Butte, California. CORP tracks are maintained to Federal Railroad Administration (FRA) Class 1 (47 miles) and Class 2 (200 miles) conditions, which limits maximum speeds to 10 mph for Class 1 or 25 mph for Class 2. Figure 3-8a and Figure 3-8b show how the rail line moves near through IMSA. Current service includes one northbound and one southbound train five days a week on four routes:

- Medford and Grants Pass
- Glendale and Medford
- Medford and Black Butte
- White City and Medford

No passenger rail service is available in the IMSA; the closest available is AMTRAK located in Klamath Falls, OR.

3.1.10. Summary of Existing Transportation System Deficiencies

Existing deficiencies identified through the interchange inventory and analyses are summarized in Table 3-6.

Table 3-6. Summary of Existing Deficiencies

Deficiency	Location	Related Goals
Geometry		
Ramp Deficiencies	<p>I-5 Exit 40</p> <ul style="list-style-type: none"> Northbound and Southbound Off Ramps: Does not have adequate deceleration distance before horizontal curves on ramp Northbound and Southbound On Ramps: Does not have adequate acceleration length after horizontal curves on ramp <p>I-5 Exit 43</p> <ul style="list-style-type: none"> Northbound and Southbound Off Ramps – Does not have adequate deceleration distance before horizontal curves on ramp Northbound and Southbound Off Ramp Intersections: Cross street does not meet desired stopping sight distance 	<ul style="list-style-type: none"> Mobility Freight Operations Safety
Inadequate Truck Turning Radius	<p>I-5 Exit 40</p> <ul style="list-style-type: none"> Access Rd & Blackwell Rd (OR 99): NBL, NBR on Access Rd and WBL, EBR on Blackwell Rd Access Rd & I-5 NB Ramp: WBL, WBR on I-5 NB Ramps Access Rd & I-5 SB Ramps: SBL on Access Rd and EBL on I-5 SB Ramps Access Rd & Old Stage Rd: NBL, SBR on Access Rd <p>I-5 Exit 43</p> <ul style="list-style-type: none"> OR 99/OR 234 & N. River Rd: NBL on OR 99/OR 234 and EBR on N. River Rd OR 99/OR 234 & Main St: WBL, EBR on OR 99/OR 234 and NBL, NBR on Main St Main St & I-5 NB Ramps: NBL on Main St and WBL, WBR on I-5 NB Ramps Main St & I-5 SB Ramps: SBL on Main St and EBL on I-5 SB Ramps 	<ul style="list-style-type: none"> Mobility Freight Operations Safety
Access Spacing	<ul style="list-style-type: none"> Multiple accesses within ½ mile of ramps for both interchanges 	<ul style="list-style-type: none"> Safety
Pavement		
Poor Pavement	<ul style="list-style-type: none"> 2nd Avenue (OR 99) OR 234/Rogue River Hwy (OR 99) Main Street Profetta Lane 	<ul style="list-style-type: none"> Mobility
Bridge		
Structurally Deficient	<p>I-5 Exit 40</p> <ul style="list-style-type: none"> OR 234 across the Rogue River (sufficiency rating: 57.9) 	<ul style="list-style-type: none"> Mobility Freight Operations
Other Deficiency	<p>I-5 Exit 43</p> <ul style="list-style-type: none"> OR 234/OR 99 across Rogue River and Lampman Rd (sufficiency rating: 43.3 and identified as load capacity, low service life) 	<ul style="list-style-type: none"> Mobility Freight Operations Safety
Pedestrian Facilities		
Limited Sidewalks	<ul style="list-style-type: none"> No designated sidewalk areas are present within the I-5 Exit 40 or I-5 Exit 43 IMSAs. 	<ul style="list-style-type: none"> Safety
Limited Bike Lanes	<ul style="list-style-type: none"> No bike lanes are striped within the I-5 Exit 40 or I-5 Exit 43 IMSAs. Shoulder widths for bicycle usage are insufficient along most roadways. 	<ul style="list-style-type: none"> Safety

3.2. Existing Environmental Summary

To understand the potential existing environmental conditions and to help inform the subsequent conceptual alternatives development process for improvements in the IMSAs, this section identifies and reviews the existing environmental conditions in the IMSAs. The information gathered was taken primarily from published documents and maps, GIS data, and email correspondence with appropriate professional contacts. A summary of the research that includes the mapped known environmental resources is provided. It identifies areas where existing conditions may constrain transportation improvement projects.

3.2.1. Wildlife Habitat and Wetlands

The IMSAs are within the Middle Rogue River Watershed. The Rogue River runs south to north through the eastern section of both IMSAs (see Figure 3-2a Figure 3-2b). The Rogue River supports Summer and Winter steelhead and Fall and Spring Chinook salmon, Coho salmon, and Pacific Lamprey. In the Exit 40 IMSA, Kane Creek flows from southwest to northeast and supports Summer and Winter steelhead. Blackwell Creek is east of I-5 just north of Lampman Road and flows from the south into the Rogue River. Other than the Rogue River, there are no creeks or streams in the Exit 43 IMSA; the Gold Hill Irrigation Canal is not considered wildlife habitat.

The Jackson County Goal 5 Resources Background Document 1990 (Open Spaces, Scenic and Natural Areas and Historic Resources), identifies the West Valley Wildlife Area west of I-5 in both IMSAs. The Wildlife Area is described as:

Unit locates south and west of the Interstate-5 corridor on generally north-facing slopes drained by tributaries of the Rogue River and Bear Creek. Supports low densities of resident deer throughout the year, with annual movement fluctuating according to weather severity. Its slope space, predominance of conifers and hardwoods, and limited browse species make this extended range relatively poor habitat and of least importance in comparison to other range units in the county.

Outside of the IMSAs to the east of the Rogue River is the Sardine Creek Wildlife Area. This unit is described as:

Unit is located to the south and east of the Evans Creek Unit, generally north of Rogue River and the City of Gold Hill. This unit is similar to the Evans Creek Unit in that it supports a resident deer population, where animal movement fluctuates elevationally with weather severity. Slope space and vegetative variety make the Sardine Creek Unit a relatively more desirable habitat.

Other wildlife potentially found in the IMSAs are mourning dove, valley quail, blue grouse, ruffed grouse, mountain quail, band-tailed pigeon, western gray squirrel, ducks, geese, American coot, common snipe, black bear, cougar, fox, coyote, otter, mink, muskrat, raccoon, and beaver.

Wildlife needs the ability to move to access food, water, shelter, mates, and wintering habitat and to disperse to maintain healthy populations. Loss of habitat connectivity due to manmade barriers is a major contributor to loss of species and degradation of ecosystems. In the IMSAs, the water resources (Rogue River, Kane and Blackwell creeks) provide linear wildlife habitat and connections between the upland wildlife areas and water resources. However, I-5 creates a barrier between wildlife areas to the west and east and the Rogue River. The Oregon Department of Fish and Wildlife (ODFW), under the Oregon Wildlife Movement Strategy and in partnership with other government agencies, produces data for wildlife linkages, which are key movement areas for wildlife, specifically across roads. For Exit 43, the entire IMSA has a moderate to high wildlife movement threat value based on roadkill data (ODOT's Wildlife Collision Hotspots dataset), and areas identified during the workshops by ODFW and other agency staff, areas important for multiple species, and areas connected to public lands. A more detailed qualitative explanation of ranking process can be found in the ODFW linkages report.²

In the Exit 40 IMSA, there is a small area of Freshwater Forested/Shrub Wetlands at the river bend on the east side of the Rogue River. There is a Freshwater Emergent Wetland west of Old Stage Road. Wetland areas can be found along both Kane and Blackwell Creeks. In the Exit 43 IMSA, there is a Freshwater Emergent Wetland on the eastern and western side of the Rogue River. In addition to the mapped wetlands, there are likely unmapped wetland areas in the Exit 40 and 43 IMSAs due to the topography of the IMSAs which is a valley floor with the Rogue River and supporting streams.

IAMP Considerations: *To preserve wildlife habitat, disturbances to undeveloped areas should be avoided or minimized if possible. Wildlife movement and passage should be considered in project design. Erosion control and water quality Best Management Practices can protect impacts to aquatic habitat. Wetland permits will be required if impacts to wetlands are unavoidable. Wetland impacts could be minimized or avoided and protective measures and/or mitigation integrated into project design and construction.*

3.2.2. Threatened and Endangered Species

The Oregon Natural Heritage Information Center (ONHIC) database documents the federally listed and state listed threatened and endangered (T&E) species. The State of Oregon and the federal government maintain separate lists of T&E species. These are species whose status is such that they are at some degree of risk of becoming extinct. The ONHIC information, based on reported historic sightings within two miles of the IMSAs, is summarized in Table 3-7. There is only one federally-listed threatened species, the Coho salmon, and no state-listed T&E species. However, there are both state and federal species listed as sensitive or species of concern.

Under state law (Oregon Revised Statutes 496.171 to 496.192) the Fish and Wildlife Commission, through the ODFW, maintains the list of native wildlife species in Oregon that

²https://nrimp.dfw.state.or.us/web%20stores/data%20libraries/files/ODFW/ODFW_806_2_Linkages_Report_Final_2009.pdf.

have been determined to be either threatened or endangered according to criteria set forth by rule (Oregon Administrative Rule [OAR] 635-100-0105). Plant listings are handled through the Oregon Department of Agriculture, while most invertebrate listings are conducted through the Oregon Natural Heritage Program.

Under federal law, the U.S. Fish and Wildlife Service (USFWS) and National Oceanic and Atmospheric Administration (NOAA) share responsibility for implementing the federal Endangered Species Act (ESA) of 1973 (Public Law 93-205, 16 United States Code (USC) § 1531), as amended. In general, USFWS has oversight for land and freshwater species and NOAA for marine and anadromous fish species. In addition to information about listed species listed, the USFWS Oregon Field Office maintains a list of Species of Concern.

Table 3-7. ONHIC-Identified Federal and State Listed Threatened or Endangered Species

Common Name	Scientific Name	Status	
		Federal ¹	State ²
<i>Vertebrate Animal</i>			
Common kingsnake	<i>Lampropeltis getula</i>	SOC	SV
Townsend's big-eared bat	<i>Corynorhinus townsendii</i>	SOC	SV
California mountain kingsnake	<i>Lampropeltis zonata</i>	SOC	SC
Steelhead (Klamath Mountains Province ESU, summer run)	<i>Oncorhynchus mykiss pop. 24</i>	-	SC/SV
Chinook salmon (Southern Oregon/Northern California Coast ESU, spring run)	<i>Oncorhynchus tshawytscha pop. 25</i>	-	SV
Chinook salmon (Southern Oregon/Northern California Coast ESU, fall run)	<i>Oncorhynchus tshawytscha pop. 26</i>	-	SV
Coho salmon (Southern Oregon/Northern California Coasts ESU)	<i>Oncorhynchus kisutch pop. 2</i>	LT	SV
<i>Invertebrate Animal</i>			
Franklin's bumblebee	<i>Bombus franklini</i>	SOC	-
<i>Vascular Plant</i>			
Slender meadow-foam	<i>Limnanthes gracilis ssp. gracilis</i>	SOC	C
Red-root yampah	<i>Perideridia erythrorhiza</i>	SOC	C

Acronyms: SOC = Species of Concern; LT = Listed Threatened; SV = Sensitive-Vulnerable; SC = Sensitive-Critical; C Candidate for Listing as Threatened or Endangered)

Source: Oregon Natural Heritage Information Center (ONHIC) database, 2012

Once it is listed as T&E, a species is afforded the full range of protections available under the ESA, including prohibitions on killing, harming or otherwise “taking” a species. In some instances, the listing of a species can be avoided by the development of Candidate Conservation Agreements that may remove threats facing the candidate species.

A species is listed as one of two categories, endangered or threatened, depending on its status and the degree of threat it faces. An “endangered species” is one that is in danger of extinction throughout all or a significant portion of its range. A “threatened species” is one that is likely to

become endangered in the foreseeable future throughout all or a significant portion of its range. “Species of Concern” is an informal term under the federal listing that is not specifically defined in the federal ESA. The term commonly refers to species that are declining or appear to be in need of conservation.

Under Oregon’s Sensitive Species Rule (OAR 635-100-040), a “sensitive” species classification was created that focuses fish and wildlife management and research activities on species that need conservation attention. “Sensitive” refers to naturally reproducing fish and wildlife species, subspecies, or populations that are facing one or more threats to their populations and/or habitats. Implementation of appropriate conservation measures to address the threats may prevent them from declining to the point of qualifying for threatened or endangered status.

Sensitive species are assigned one of two subcategories. “Critical” sensitive species are imperiled with extirpation from a specific geographical area of the state because of small population sizes, habitat loss or degradation, and/or immediate threats. Critical sensitive species may decline to the point of qualifying for threatened or endangered status if conservation actions are not taken. “Vulnerable” sensitive species are facing one or more threats to their populations and/or habitats. Although not currently imperiled with extirpation from a specific geographical area of the state, vulnerable species could, however, become so with continued or increased threats to populations and/or habitats. For plants, there are no sensitive species candidates for listing as threatened or endangered.

NOAA Fisheries released a Southern Oregon/Northern California Coast (SONCC) Coho Salmon Recovery Plan³ on September 30, 2014 to restore the SONCC coho salmon to healthy, self-sustaining numbers so that the protections of the Endangered Species Act are no longer necessary. This includes the Upper Rogue River cohos salmon population including Kane Creek. The recovery plan provides identified actions to organize and coordinate recovery of the species such as: increase regulatory oversight to reduce pollutants and increase instream flows.

IAMP Considerations: *During project development, surveys should be conducted for Species of Concern in order to avoid habitat areas. Measures must be incorporated into project design and construction alternatives to protect water quality for listed aquatic species.*

3.2.3. Hazardous Materials

On January 15, 2013, federal and state databases were searched for identified hazardous waste sites and incidences within or near the IMSAs.

None of the federal databases identified any sites or incidences in the IMSAs:

³http://www.westcoast.fisheries.noaa.gov/publications/recovery_planning/salmon_steelhead/domains/southern_oregon_northern_california/SONCC%20Final%20Sept%202014/sonccfinal_ch32_upperrogueriver.pdf

- National Priority List (NPL)—List of national priorities among the known releases or threatened releases of hazardous substances, pollutants, or contaminants
- Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS)—Abandoned hazardous waste sites—“Superfund”
- Resource Conservation and Recovery Act (RCRA) Generators—Generate or store defined amount of hazardous waste in any one calendar month and are subject to regulatory control
- Emergency Response Notification System (ERNS)—Releases or potential releases reported to the National Response Center, which acts as a reporting center for the Environmental Protection Agency and U.S. Coast Guard

Table 3-8 and Figure 3-3a and Figure 3-3b summarize sites identified within the IMSA. Background data files for each identified site are in Appendix C.

All of the identified sites, incidents, and permitted facilities have been remediated, are being monitored, have been investigated and found not to be contaminated to the point of needing further action, or are a permitted facility. The land within the IMSAs has been previously disturbed by transportation uses that may include undocumented spills or an accumulation of many years of roadway runoff. It has been historically disturbed by agricultural uses that may include the use of chemical pesticides therefore undocumented hazardous materials may be present. Mercury vapor lamps and treated timbers may be present in the IMSAs and would require special handling if they need to be removed or replaced.

IAMP Considerations: Known hazardous material sites are likely avoidable. However, a Phase I Environmental Site Assessment is recommended depending on the type of improvement and construction activities and because additional sites may be created before construction begins.

Table 3-8. IMSA State Hazardous Material Sites and Incidences

Database	Description	Total Sites Found	
		IC 40	IC 43
Underground Storage Tanks (USTs) - Registration, installation, operation, and removal of USTs; cleanup of soil and groundwater contamination from petroleum leaks	Two sites at one location: 9625 Old Stage Road	2	--
TRAACS - Air Quality Permit	Gasoline Service Station Site Location: 9625 Old Stage Road Underground Natural Gas Site Location: 11 Frontage Road	1	1
Water Quality Permits (WQSIS)	RV Trailer Parks and Campsites – Onsite Vineyard Site Location: 58 N River Road	--	1

3.2.4. Historic and Archaeological Resources

Under Section 106 of the National Historic Preservation Act of 1966 (Public Law 89-665), 16 USC 470, and under federal regulations governing the protection of historic and cultural resources (36 Code of Federal Regulations [CFR] 800), federal agencies, and the state and local agencies to which the federal agency has delegated responsibility, are directed to avoid undertakings that adversely affect properties that are included in or are eligible for inclusion in the National Register of Historic Places (NRHP). The NRHP identifies and documents (in partnership with state, federal, and tribal preservation programs) districts, sites, buildings, structures, and objects that are significant in American history, architecture, archaeology, engineering, and culture. This section summarizes NRHP resources near the IMSA, as well as other historic, prehistoric, and cultural resources.

For the IMSAs, the State Historic Preservation Office (SHPO) database shows historical resources listed on the NRHP as shown in Table 3-9 and shown in Figure 3-2a and Figure 3-2b.

Table 3-9. NRHP-listed Resources

Map ID No.	Historic Name	Location Description	Resource Type	Primary Construction Date	Original Use	Eligibility Evaluation
I-5 Exit 40						
1	Vroman, Cyrenus & Ellen House	Old Stage & Blackwell Roads	Building	1915	Single Dwelling	Eligible/Contributing
2	Crawford, Joshua M & Mina S, House	95 Garden Row	Building	1890	Single Dwelling	Undetermined
3	Stickel, Hunter, House	9437 Old Stage Road	Building	1905	Single Dwelling	Eligible/Contributing
I-5 Exit 43						
4	Nye, HB House	41 Hwy 99	Building	1910	Single Dwelling	Eligible/Contributing
5	Gray, Charles House	54 Hwy 99	Building	1925	Single Dwelling	Eligible/Contributing
6	Del Rio Orchard Packing House	40 N River Rd	Building	1910	Agricultural Processing	Eligible/Contributing
7	White, John B, House	86 N River Rd	Building	1859	Single Dwelling	Eligible/Significant

Source: SHPO NRHP database, 2012

Jessica Bochart, ODOT’s Rogue Valley Office Archaeologist, was contacted to identify recorded archaeological locations within the IMSAs. Ms. Bochart identified known archaeological sites in the Exit 40 IMSA and indicated there is a high probability overall for archaeological and historical resources in both Exit 40 and 43 IMSAs. The location of known archaeological sites is not disclosed to prevent tampering or scavenging of sites. Ms. Bochart provided the following basis for her conclusion for cultural resources and the potential for cultural resources in the IMSA:

- At Exit 40 there is a significant archaeological site known as the Gold Hill Burial Site. The exact site boundaries have never been established. Areas that are not significantly disturbed would have a high probability for containing intact cultural resource deposits.
- There is a high potential for encountering human remains within the IMSAs, which would require careful and close coordination with the applicable Native American tribes.

As mentioned above, it is likely that historical and archaeological resources are in the IMSAs including resources that have not been identified and surveyed and structures that have not been determined for eligibility and entered into the SHPO database. Due to the high potential for resources in numerous areas within the IMSAs, historical and cultural resources surveys by professionals should be conducted during the development of specific transportation improvement projects. The cultural surveys potentially could provide project design parameters if resources, their values, and their locations have been identified.

IAMP Considerations: *Cultural resources and a high probability for cultural resources have been identified for the IMSAs. Improvements should be designed to avoid ground disturbing actions in areas that have not been previously disturbed. Cultural Resources field investigations should be conducted before any ground disturbing actions.*

3.2.5. Floodplains and Floodways

Acting through the local planning agencies, the Federal Emergency Management Agency (FEMA) regulates development within Regulated Floodways and Special Flood Hazard Areas (SFHA). A "Regulatory Floodway" means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height. SFHA are defined as the areas that will be inundated by the flood event having a one-percent chance of being equaled or exceeded in any given year. The one-percent annual chance flood is also referred to as the base flood or 100-year flood. Development in the regulated floodway typically requires a project to demonstrate no net rise and could require an amendment to the FEMA regulated floodway boundaries.

FEMA-designated regulated floodways and SFHA in the vicinity of the IMSA are displayed in Figure 3-2a and Figure 3-2b. In the Exit 40 IMSA (FEMA Map Panel: 41029C1736F, May 3, 2011), Kane Creek and its associated floodplain transect the Exit 40 IMSA from the southwest to northeast, crossing Old Stage Road from the southwest, then under I-5 just south of the interchange and flowing east until it empties into the Rogue River. The Rogue River floodplain extends to I-5 past Lampman Road in the Exit 40 IMSA. The Rogue River floodway is approximately 1,000 feet from the I-5 northbound on-ramp at its closets point in the IMSA.

In the Exit 43 IMSA (FEMA Map Panel: 41029C1736F and 41029C1737F, May 3, 2011), the Rogue River floodplain and floodway are in the eastern portion IMSA. The floodplain crosses west of OR 99 in much of the IMSA and west of I-5 in the southern portion of the IMSA.

IAMP Considerations: Depending on the location of the improvement, Jackson County standards require no-net rise in the floodway and/or or limited rise to one foot above base flood elevation in the floodplain as documented through a floodplain development permit.

3.3. Existing Land Use Summary

To understand the existing land use issues, and to help inform the subsequent conceptual alternatives development process for improvements in the IMSAs, this section identifies and reviews the land use and population in the IMSAs. The information gathered was taken primarily from published documents and maps, GIS data, and email correspondence with appropriate professional contacts. A summary of the research that includes the mapped known environmental resources is provided. It identifies areas where existing conditions may constrain transportation improvement projects.

3.3.1. Socioeconomic and Environmental Justice

Executive Order (EO) 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations of February 11, 1994, requires agencies undertaking federal projects to identify low-income and minority populations; assess whether high and adverse human health or environmental impacts would result from the alternatives; and ensure participation of low-income and minority populations in the transportation decision making process. The Federal Highway Administration (FHWA) defines a disproportionately high and adverse impact on minority and low-income populations as one that:

- Is predominantly borne by a minority population and/or a low-income population; or
- Will be suffered by the minority population and/or low-income population and is appreciably more severe or greater in magnitude than the adverse effect that will be suffered by the non-minority population and/or non-low-income population.

EO 12898 states that agencies must consider whether human health effects, in terms of risks and rates, are significant or above accepted norms.

Additional underserved populations are the “transportation disadvantaged.” The “transportation disadvantaged” are those persons who because of physical or mental disability, income status, or age are unable to transport themselves or to purchase transportation and are, therefore, dependent upon others to obtain access to health care, employment, education, shopping, social activities, or other life-sustaining activities. Projects receiving federal assistance must also evaluate impacts to these populations to comply with the Age Discrimination Act of 1975, Federal-Aid Highways Act, Rehabilitation Act of 1973 and Americans with Disabilities Act of 1990.

Socioeconomic data for the IMSA was drawn primarily from the U.S. Census Bureau 2000 Census, 2010 Census, and American Community Survey (ACS) 2007 to 2011. The census tracts reviewed for this memorandum (seen in Figure 3-2a and Figure 3-2b) represent the following geographical areas:

- Census tract 1100 represents the south eastern edge of the Exit 40 IMSA, south of Access Road and Upper River Road and extending to Central Point.
- Census tract 2800 represents the north eastern edge of the Exit 40 IMSA.
- Census tract 2900 represents the Exit 43 IMSA east of the Rogue River.
- Census tract 3001 represents most of the areas west of the Rogue River in both IMSAs.

The census data documents a 12 percent population increase in Jackson County between 2000 and 2010 which is the same as the state’s increase, see Table 3-10. The City of Gold Hill had a slightly larger population between 2000 and 2010 increase at 14 percent. Surrounding census tracts vary from an increase of 49 percent in census tract 1100 to a decrease of 3 percent in census tract 3001. These variances could be attributed to population losses in rural areas and gains in urban areas.

Table 3-10. Population and % Population Change, 2000, 2010, 2040

Geography		2000 Population	% Population Change	2010 Population	Estimated 2040 Population	% Population Change
Oregon		3,421,399	12%	3,831,074	5,425,408	42%
Jackson County		181,269	12%	203,206	297,496	46%
Gold Hill		1,073	14%	1,220	1,901	56%
Census Tract	1100	3,829	49%	5,689		
	2800	4,605	2%	4,686		
	2900	7,078	2%	7,258		
	3001	3,961	-3%	3,822		

Sources: 2010 Census, Census 2000 Summary File 1 (SF 1) 100-Percent Data, P001: TOTAL POPULATION [1] - Universe: Total population, Portland State Population Research Center

Jackson County and Gold Hill have an older population than the state as a whole as shown in Table 3-11. Within the IMSAs, the more urban census tract 1100 has a substantially younger population than the rural census tracts (2800, 2900, and 3001).

Table 3-11. Age of Census Tracts, 2010

Geography		Median Age; Total (Estimate)	19 and under	20 to 39 years	40 to 64 years	65 and older
Oregon		38.4	25.4%	26.9%	33.9%	13.8%
Jackson County		42.1	24.4%	23.1%	34.8%	17.7%
Gold Hill		43.9	22.2%	23.2%	40.2%	14.4%
Census Tract	1100	41.1	25.7%	22.6%	36.7%	15.1%
	2800	48.9	20.7%	17.5%	43.3%	18.7%
	2900	52.2	18.6%	15.9%	39.7%	25.8%
	3001	52.0	17.2%	15.8%	44.6%	22.5%

Source: 2010 Census QT-P1-Geography Age Groups and Sex

The U.S. Bureau of Census identifies minorities as individuals who identify themselves as Black or African American, American Indian and Alaska Native, Asian, Native Hawaiian and other

Pacific Islander, other race, two or more races, and of Hispanic origin. Based on U.S. Census 2010 data, Jackson County, Gold Hill, and the IMSAs, are less diverse than the state as shown in Table 3-12. In particular, the more rural census tracts are less diverse than the state and the county.

Table 3-12. Race and Ethnicity, 2010

Geography	White	Black or African American	American Indian and Alaska Native	Asian	Native Hawaiian and Other Pacific Islander	Some Other Race	Two or More Races	Not Hispanic	Hispanic	
Oregon	83.6%	1.8%	1.4%	3.7%	0.3%	5.3%	3.8%	88.3%	11.7%	
Jackson County	88.7%	0.7%	1.2%	1.2%	0.3%	4.5%	3.5%	89.3%	10.7%	
Gold Hill	93.5%	0.2%	1.6%	0.5%	0.0%	0.7%	3.6%	97.3%	2.7%	
Census Tract	1100	91.3%	0.3%	1.6%	0.9%	0.2%	2.8%	2.9%	91.5%	8.5%
	2800	93.6%	0.3%	1.0%	0.6%	0.1%	1.1%	3.4%	96.2%	3.8%
	2900	94.0%	0.5%	1.2%	0.5%	0.0%	1.2%	2.7%	95.8%	4.2%
	3001	94.3%	0.3%	0.8%	0.5%	0.1%	1.0%	2.9%	96.1%	3.9%

Source: 2010 Census QT-P4-Geography-Oregon: Race, Combinations of Two Races, and Not Hispanic or Latino: 2010, QT-P10-Geography-Census Tract

Persons are considered to be in poverty status when income earned is less than the income threshold. As shown in the Table 3-13, the census tracts in the IMSA and Gold Hill have a lower percentage of individuals living in poverty than Jackson County or the state. However, except for Census Tract 3001 which has the same percent of persons with disability than the state, Jackson County, Gold Hill and all the other census tracts the IMSA have more persons with disability than the state. Census tract 1200 has a higher percentage of persons with disability and female head of households with children. Gold Hill has more Female Head of Households than the County and State. However, the rural IMSA census tracts have less. Census tract 1100 is the same as the state and a little lower than the County.

Table 3-13. Poverty, Disability, Female Head of Household, 2010

Geography	Percent Population for Whom Poverty Status is Determined	% Persons with Disability over the Age of 5	% Female Head of Household w/Children
Oregon	14.8%	18.8%	10.1%
Jackson County	15.8%	20.2%	11.0%
Gold Hill	13.7%	22.4%	12.3%
Census Tract	1100	4.4%	21.6%
	2800	8.5%	25.1%
	2900	12.4%	24.5%
	3001	10.9%	18.8%

Source: 2010 Census, QT-P11 Households and Families, ACS S1701. Poverty Status in the Past 12 Months by Sex by Age - Universe: Population for Whom Poverty Status Is Determined, Source: Census 2000 (SF 3) QT-P21: Disability by Sex 2000

IAMP Considerations: *Disproportionate impacts to environmental justice populations by potential projects may be avoided. Potentially affected populations, businesses, and impacts to public resources should be determined through more thorough site analysis, interviews, and other public outreach efforts, as appropriate.*

3.3.2. Land Use and Zoning

Both IMSAs are located within Jackson County, Oregon, one east and one west of the City of Gold Hill Urban Growth Boundary (UGB), between Grants Pass and Medford Oregon. The Rogue River runs west to east through the both IMSAs. The City of Gold Hill lies north of the river, between the two interchanges. The immediate area around the interchanges and I-5 is a narrow valley floor with largely undeveloped hills to the west and east.

Community Features

Figure 3-4a and Figure 3-4b shows community features overlaid on aerial photography of the Exit 40 IMSA. Observations show undeveloped land adjacent and southeast of Exit 40. Beyond the undeveloped areas, to the east, are agricultural and rural residential uses. To the east is a KOA Kampground. Outside of the IMSA to the northeast, is the Gold Hill Sports Park.

North of the interchange is the Lampman Road Baptist Church and a fire station along Access Road along with rural and agricultural uses. Ben Hur Lampman is just north of the IMSA alongside the Rogue River. The Rogue River is approximately one-quarter-mile north of the interchange. Blackwell and Kane Creeks flow from the southwest into the Rogue River. Southeast of the interchange are rural residential uses including a mobile home park and Laurel Hill Golf Course. Southwest of the interchange is undeveloped land and a creek with rural agricultural uses. West of Old Stage Road is the Rogue Valley Zipline Adventure and Moose Family Center with rural and agricultural use beyond.

Aerial observations surrounding Exit 43 show rural residential uses east of the interchange and undeveloped land with one commercial use west of Exit 43. No community features are highlighted at this interchange. The Rogue River is less than 0.15 miles from I-5 in the vicinity of Exit 43 and is used for recreational opportunities such as fishing and rafting.

The Rogue River Greenway includes portions of constructed recreation trails including a recently completed section on the west side of the river between the IMSA 40 and 43 near Sardine Creek. Eventually, the Greenway will span an area roughly 30 miles in length from the City of Grants Pass through the cities of Rogue River and Gold Hill and on to Central Point where it will connect to the existing 20 miles of the Bear Creek Greenway and Ashland and Medford. The trail was deemed a State Designated Regional Trail, a non-motorized public trail that serves as a connecting route between communities and recreational sites, in September 2014 by the Oregon Parks & Recreation Department.

Tax Lots

Figure 3-5a and Figure 3-5b show the tax lots and estimated right-of-way in the IMSAs. Lots are mostly larger to support the rural uses in the area.

Jacksons County Comprehensive Plan

Most of the land surrounding the interchanges is undeveloped and designated for rural uses, as shown in Figure 3-6a and Figure 3-6b. Because of the terrain in the area, property with development potential is adjacent to major roads and highways, in particular those south of Gold Hill along Blackwell Road.

The Jackson County Comprehensive Plan map identifies most of the parcels immediately around I-5 Exit 40 interchange as Rural Residential or Agricultural land. There are some Commercial lands to either side of Old Stage Road, where it intersects the Access Road. In addition, there is an area designated limited use between I-5 and Old Stage Road.

Land use surrounding Exit 43 is primarily Agricultural but includes some other uses as well, as seen in Figure 3-6a. Rural Residential designations are located on both sides of I-5, mostly west of the interchange but also in the northeast corner of the IMSA. Northwest of the interchange there is commercial land. There is also an area designated industrial southwest of the interchange.

Jackson County Zoning

The zoning designations within the IMSAs generally correspond to the comprehensive plan designations as shown on Figure 3-7a and Figure 3-7b.

The purpose of each zoning designation is described below:

- **EFU:** The purpose of the Exclusive Farm Use (EFU) District (Section 4.2) is to conserve agricultural land and to implement the Oregon Agricultural Land Use Policy, ORS 215.243, Statewide Planning Goal 3 (Agricultural Lands), and OAR 660-033. Depending on the type of transportation improvement, a Type 1 to Type 4 permitting review is required.
- **FR, WR:** Forest Resource (FR); Woodland Resource (WR). These districts are intended to conserve forest lands and implement the Oregon Administrative Rules, and Statewide Planning Goal 4 (Forest Lands) (Section 4.3).
- **IC:** The purpose of the Interchange Commercial district is provide for commercial uses that serve the immediate needs of the traveling public, and are located at freeway interchanges with state highways or county roads. Depending on the type of transportation improvement, the project may be permitted outright or require a Type 1 to Type 2 permitting review.
- **RR:** The purpose of the rural residential zoning districts is to provide for large-lot residential areas, consistent with the predominant rural character of the area and the physical capability of the land.

- **AR:** The purpose of the Aggregate Removal (AR) District is to allow for the protection and utilization of aggregate and other mineral resources, and to ensure the reclamation of mined land. Transportation improvements typically require a Type I review.
- **RLI:** The purpose of the Rural Light Industrial district is to provide for industrial uses that rely on site-specific natural resources for their processes and activities, or create a byproduct of substantial direct benefit to resource-producing lands or uses.
- **LU:** The purpose of the Limited Use (LU) district is to limit uses and activities to those justified in a Comprehensive Plan Amendment “Reasons” exception statement adopted by the County and acknowledged by the state pursuant to ORS 197.732(1)(c) as required by OAR 660-004-0018(4)(a), or to recognize existing lawfully established nonconformities as permitted uses.

IAMP Considerations: During project development, ODOT will need to determine whether any prime, unique, or statewide importance farmland may be converted to nonagricultural (e.g. transportation facilities) uses, and may need to comply with the federal Farmland Protection Policy Act. Conversion of farmland also may require a Goal Exception to the Oregon Statewide Planning Goals, depending on the type and function of a proposed transportation improvement. OAR 660-012-0065 identifies transportation facilities, services and improvements which may be permitted on rural lands consistent with Goals 3, 4, 11, and 14 without a goal exception. OAR 660-012-0070 outlines the exception process for transportation improvements on rural land.

3.3.3. Section 4(f) Resources

Section 4(f) refers to a part of federal law that protects public parks, recreation lands, wildlife and waterfowl refuges, and public or private historic sites. Section 4(f) applies only to Departments of Transportation (DOTs) and their agencies. Highway projects that use public parks must fulfill the requirements of Title 23, USC, Section 138, Section 4(f) of the Department of Transportation Act of 1966, as amended.

A “use” that is subject to the provisions of Section 4(f) occurs:

- When land is permanently incorporated into a transportation facility;
- When there is a temporary occupancy of land that is adverse in terms of the statute’s preservationist purpose; or
- When there is constructive use of the land.

DOTs must demonstrate that a proposed project will not “use” the publicly owned parks and recreation land, where “use” can mean both actual conversion of recreation lands into a transportation use, or a “constructive use,” where off-site impacts of the transportation project substantially impair the site’s vital functions. Findings of “no feasible and prudent alternatives” and “all possible planning to minimize harm” must be well-documented and supported. A feasible alternative is an alternative that is possible to engineer, design, and build. To find that an alternative that avoids a Section 4(f) resource is not “prudent,” one must document that there are unique problems or unusual factors involved with the use of such an alternative. This

means that the cost, the social, economic, and environmental impacts, and/or community disruption resulting from such alternatives reach extraordinary magnitudes.

Section 4(f) resource lands within the IMSA consist of the resources identified in *Section 3.2. Existing Environmental Summary*. Future resources north of the Rogue River include the Rogue River Greenway Trail. In addition, structures and resources eligible or potentially eligible for inclusion on the NRHP within the IMSA but not yet identified may be potential candidates for Section 4(f) status.

IAMP Considerations: *Transportation improvements should try to avoid areas of new ground disturbance due to the identified and potential cultural resources in the IMSAs. A Section 4(f) evaluation will require ODOT to assess all reasonable alternatives that adversely affect protected lands. If every potential alternative that can meet the purpose and need for the project would impact some Section 4(f) property, then the alternative with the least impact must be selected unless it is not feasible and prudent.*

3.3.4. Section 6(f) Resources

The Land and Water Conservation Fund (LWCF) Act of 1965 established grants-in-aid funding to assist states in the planning, acquisition, and development of outdoor recreational land and water areas and facilities. Section 6(f) of the LWCF Act prohibits the conversion of property acquired or developed with the assistance of the LWCF for anything other than public outdoor recreation use without the approval of the Secretary of the U.S. Department of the Interior.

Section 6(f) of the LWCF Act applies to transportation projects that propose impacts to, or the permanent conversion of, outdoor recreation property that was acquired or developed with LWCF Act grant assistance. Section 6(f) requires that replacement lands of equal value, location, and usefulness are provided as conditions to approval of land conversions.

IAMP Considerations: *No Section 6(f) resources were identified in the IMSAs.*

3.3.5. Potential Design Constraints

This review identified a “red flag” for ground disturbing transportation improvement actions in the I-5 Exit 40 IMSA due to the cultural resources in the area. In addition, the baseline data identifies several other land use and environmental conditions that could potentially be affected by transportation improvements. Special attention should be given to avoiding or minimizing:

- Cultural Resources
- Habitat and riparian corridor impacts
- Wetlands impacts
- Impacts to T&E species
- Exclusive Farm Use or other resource lands

Table 3-14 summarizes resources that may present potential design constraints. These resources are also summarized in the figures presented in this memorandum. The table considers federal regulations and standards because potential projects identified in the IAMP may be partially federally funded or require federal permits, and therefore would need to comply with federal regulations and standards.

Other design constraints which were not reviewed in this memorandum may include fish passage at stream crossings and stormwater treatment requirements.

This memo identifies baseline resource information in the IMSA from a “visual windshield validation” perspective. ODOT will need to undertake detailed studies of specific areas to determine design limitations for specific proposed projects. Potential projects identified in the IAMP may require permits, regulatory requirements, or authorizations.

Table 3-14. Environmental and Land Use Summary

Feature	Summary of Key Resources and Concept Guidance	Key Potential Conflict Location(s)	Potential Approval/Permit If Resource Impacted
Wildlife Habitat & Wetlands	Riparian corridors, aquatic habitat, wildlife habitat and wetlands along the Rogue River and Kane and Blackwell Creek. <i>Disturbance to undeveloped areas should be avoided if possible. Wetland delineations should be conducted once concept areas are identified. Impacts to wetlands should be avoided. Mitigation and permitting will be necessary if impacts cannot be avoided. BMPs incorporated into project design and construction can help minimize impacts.</i>	Rogue River and Kane and Blackwell Creek	U.S. Army Corps of Engineers Oregon Department of State Lands Oregon Department of Fish and Wildlife Local land use approvals
Threatened and Endangered Species	T&E Species are found in the IMSA. <i>Concepts should avoid disturbance of areas where the species are found and water quality impacts and physical impediments in T&E species contributing waterways.</i>	Rogue River and Kane and Blackwell Creek	Oregon Department of Fish and Wildlife NMFS, USFWS, ODA (State and Federal Endangered Species Act Consultation)
Floodplains and Floodways	Rogue River floodway and floodplain, Kane Creek floodplain. <i>Fill in floodways and floodplains should be avoided. No net rise will have to be demonstrated if improvements involve any sort of fill in floodways. Cut and fill requirements will need to be adhered to in floodplains.</i>	Rogue River and Kane Creek	FEMA regulations administered through local land use approvals
Socioeconomic and Environmental Justice	Community resource and potential for EJ populations. <i>Displacements should be avoided or minimized.</i>	Throughout IMSAs: (Additional information necessary to determine if there are potential EJ populations.) Moose Family Center and Church (Exit 40).	The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Uniform Act) Title VI Compliance
Land Use and Zoning	EFU, Areas of Special Concern Overlays. <i>Impacts to resource zones should be avoided. Impacts to EFU zones may require goal exception.</i>	Throughout IMSAs	Local land use approvals Potential goal exception for use of Agricultural lands
Historical and Archaeological Resources	Historical and cultural resources. <i>Further surveys will need to be completed, especially if improvements will include ground-disturbing activities and or right-of-way acquisition of lots with potential historical resources.</i>	Throughout IMSAs	Local land use approvals State Historic Preservation Office, and FHWA – 4(f)

Table 3-14. Environmental and Land Use Summary

Feature	Summary of Key Resources and Concept Guidance	Key Potential Conflict Location(s)	Potential Approval/Permit If Resource Impacted
Parks and Recreation and Section 4(f) Resources	Parks and Historical/Cultural Resources. <i>Avoid resources if possible. Any "use" of Section 4(f) lands will need to demonstrate that it is either a "de minimis" impact or that there was no alternative for the impact.</i>	Throughout IMSAs	Federal Highway Administration Consultation and Approval Local land use approvals Oregon Parks and Rec/National Parks Service
Section 6(f) Resources	None.	N/A	National Parks Service Consultation and Approval
Hazmat	Areas along highly traveled roads and highways.	Throughout IMSAs	Coordination with DEQ

Attachments:

- Figure 3-1 (a & b). Access Management Inventory*
- Figure 3-2 (a & b). Natural Features*
- Figure 3-3 (a & b). Hazardous Sites*
- Figure 3-4 (a & b). Community Features*
- Figure 3-5 (a & b). Tax Lot Maps*
- Figure 3-6 (a & b). Comprehensive Plan Designations*
- Figure 3-7 (a & b). Zoning Map Designations*
- Figure 3-8 (a & b). Miscellaneous Landmarks and Features*

- Appendix A. Methodology Memorandum*
- Appendix B. Truck Turning Movement Diagrams*
- Appendix C. Hazardous Materials*



I-5 Exits 40 and 43 Interchange Area Management Plans

Figure 3-1a
Access Management
I-5 Exit 40

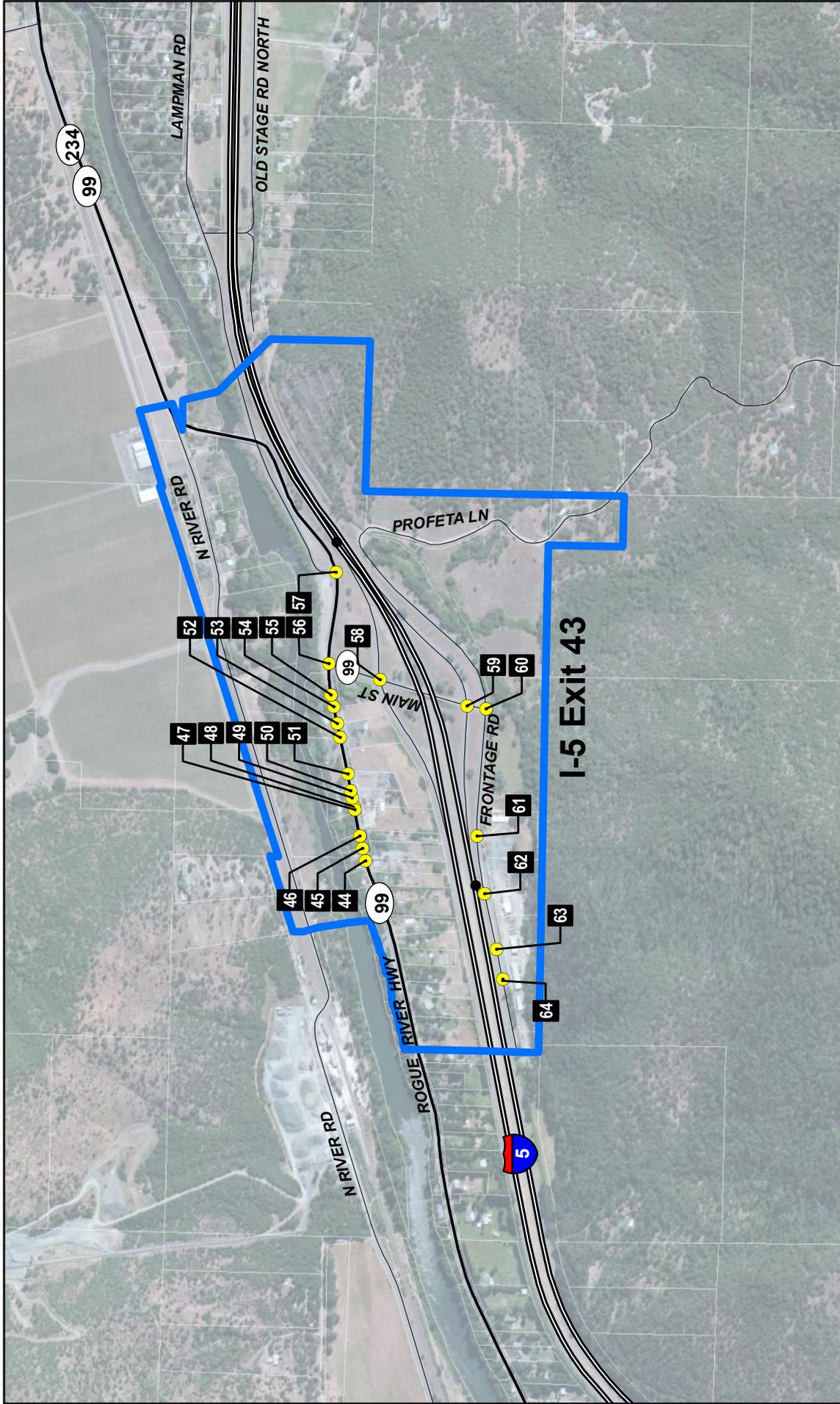
Legend

- Interchange Management Study Area (IMSA)
- Urban Growth Boundary (UGB)
- Interstate
- Highway
- Local Road
- Access Points
- Taxlot Boundaries indicated in white

Scale: 1,000 500 0 1,000 Feet

North Arrow: N

Source Data: ESRI, Jackson County, NAIP 2009



I-5 Exits 40 and 43 Interchange Area Management Plans

Figure 3-1b
Access Management
I-5 Exit 43

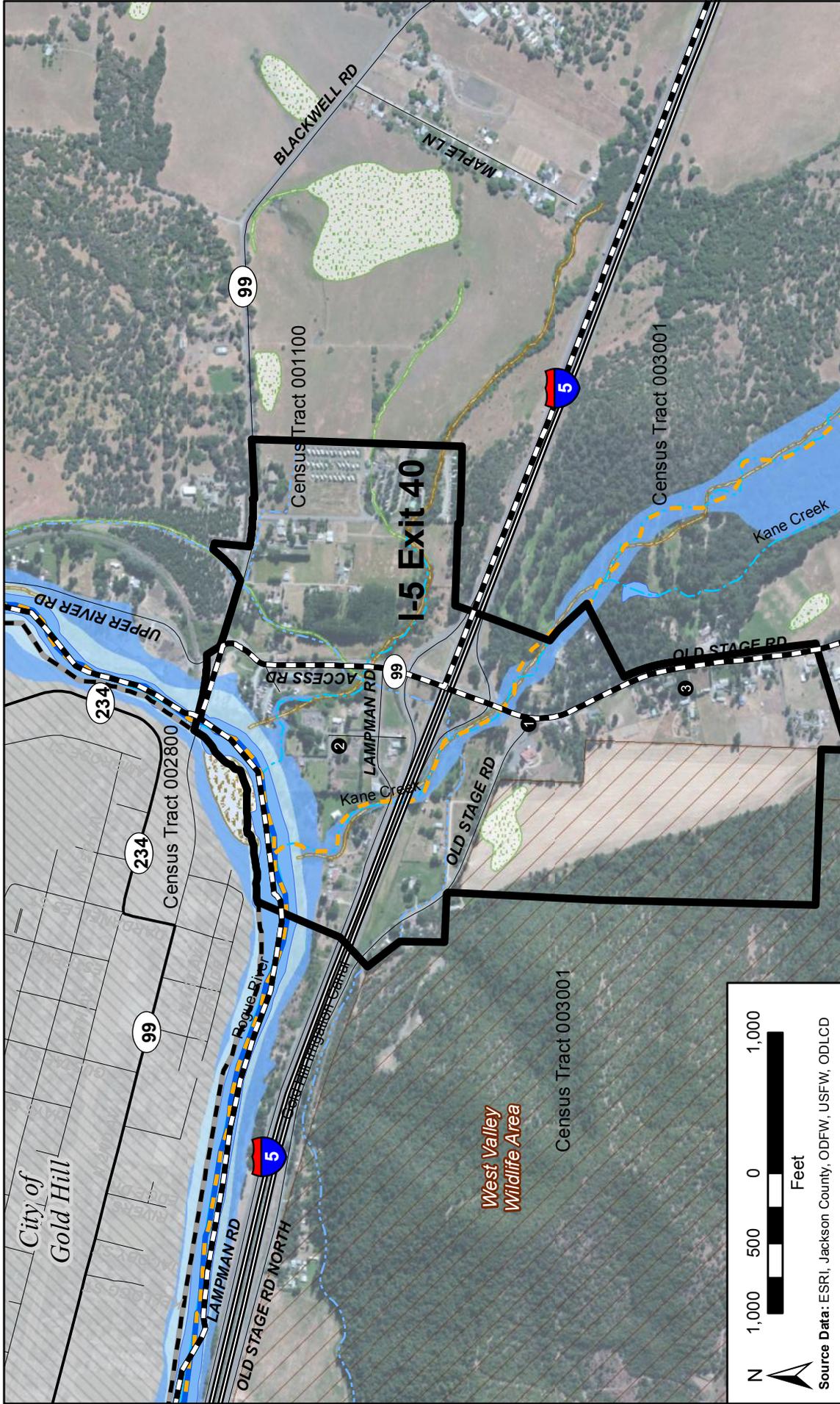
Legend

- Interchange Management Study Area (IMSA)
- Urban Growth Boundary (UGB)
- Taxlot Boundaries indicated in white
- Interstate
- Highway
- Local Road
- Access Points

Scale: 1,000 500 0 1,000 Feet

North Arrow: N

Source Data: ESRI, Jackson County, NAIP 2009



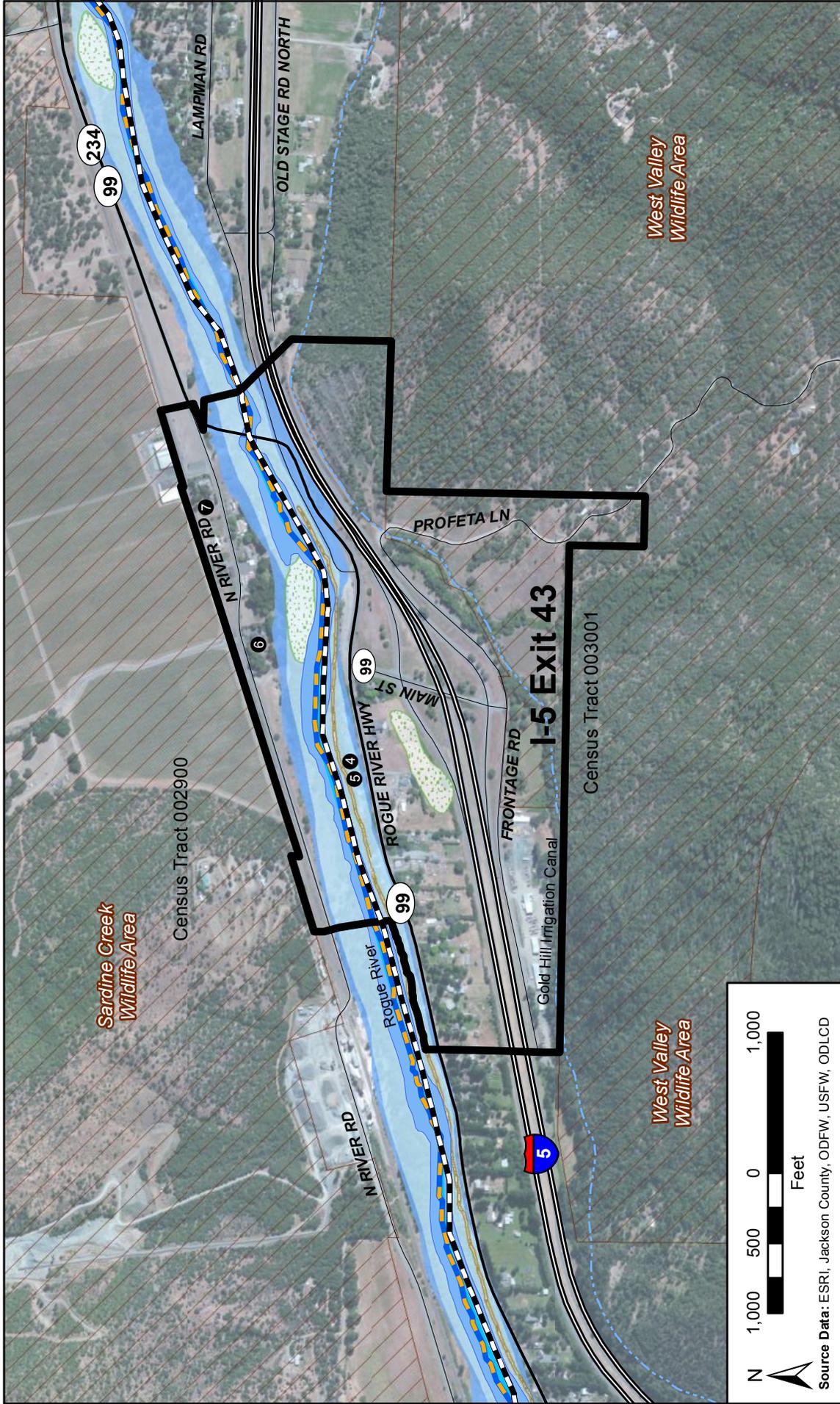
I-5 Exits 40 and 43 Interchange Area Management Plans

Figure 3-2a
Natural Features
I-5 Exit 40

Wetland Classifications		ODFW Habitat Distribution	
Freshwater Emergent Wetland	Summer & Winter Steelhead	Fall & Spring Chinook Salmon, Summer & Winter Steelhead, Coho Salmon, and Pacific Lamprey	Historic Site
Freshwater Forested/Shrub Wetland			

River	Interchange Management Study Area
Creek/Stream	Urban Growth Boundary
Ditch/Irrigation Canal	City Limits
100-Year Floodplain	Interstate
Floodway	Highway
Wildlife Areas	Local Road
Census Tract Boundary	

Source Data: ESRI, Jackson County, ODFW, USFW, ODLCD



I-5 Exits 40 and 43 Interchange Area Management Plans

Interchange Management Study Area

Urban Growth Boundary

City Limits

Interstate

Highway

Local Road

River

Creek/Stream

Ditch/Irrigation Canal

100-Year Floodplain

Floodway

Wildlife Areas

Census Tract Boundary

Wetland Classifications

Freshwater Emergent Wetland

Freshwater Forested/Shrub Wetland

ODFW Habitat Distribution

Summer & Winter Steelhead

Fall & Spring Chinook Salmon, Summer & Winter Steelhead, Coho Salmon, and Pacific Lamprey

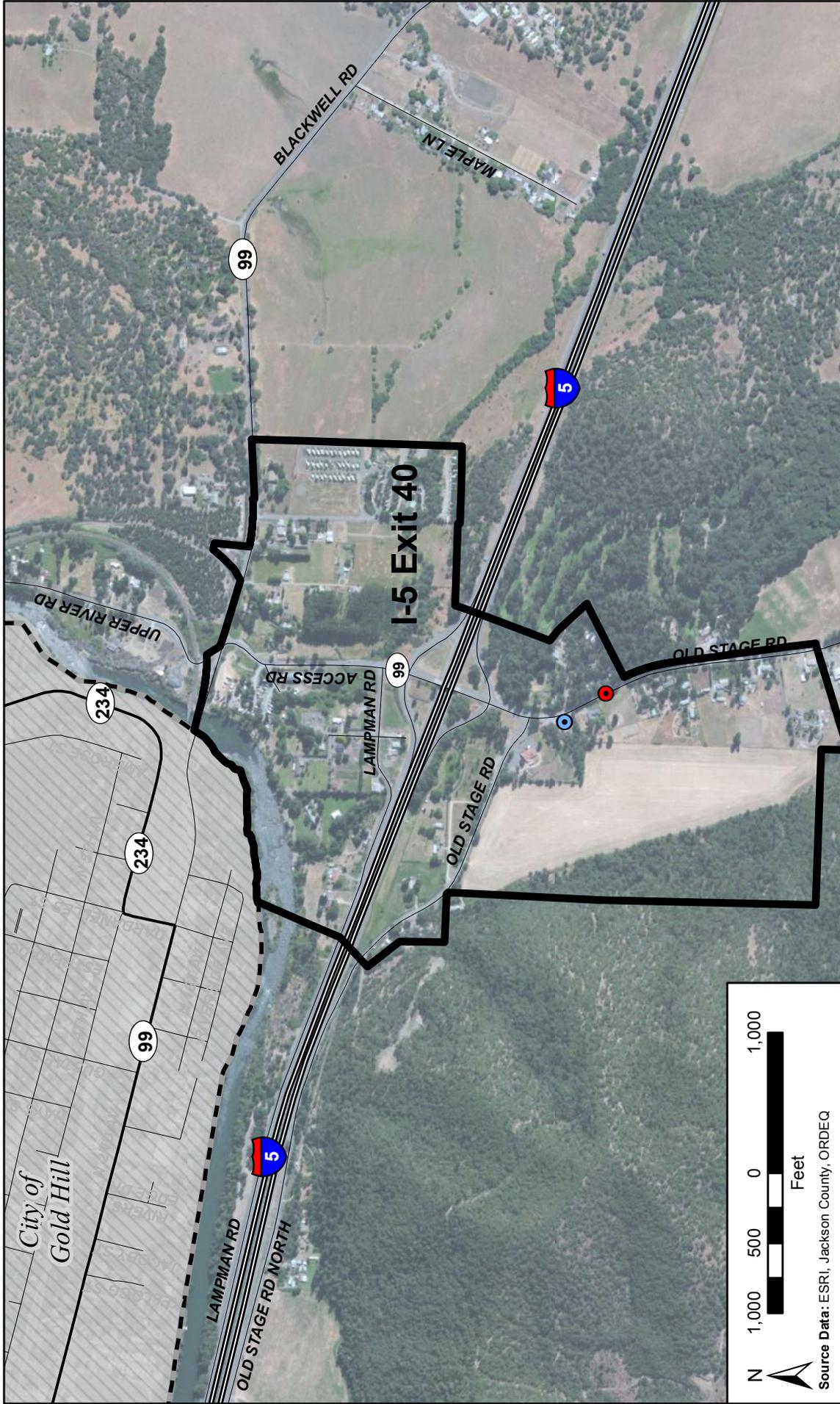
Historic Site

Figure 3-2b

Natural Features

I-5 Exit 43

Source Data: ESRI, Jackson County, ODFW, USFW, ODLCD



I-5 Exits 40 and 43 Interchange Area Management Plans

Figure 3-3a
Hazardous Sites
I-5 Exit 40

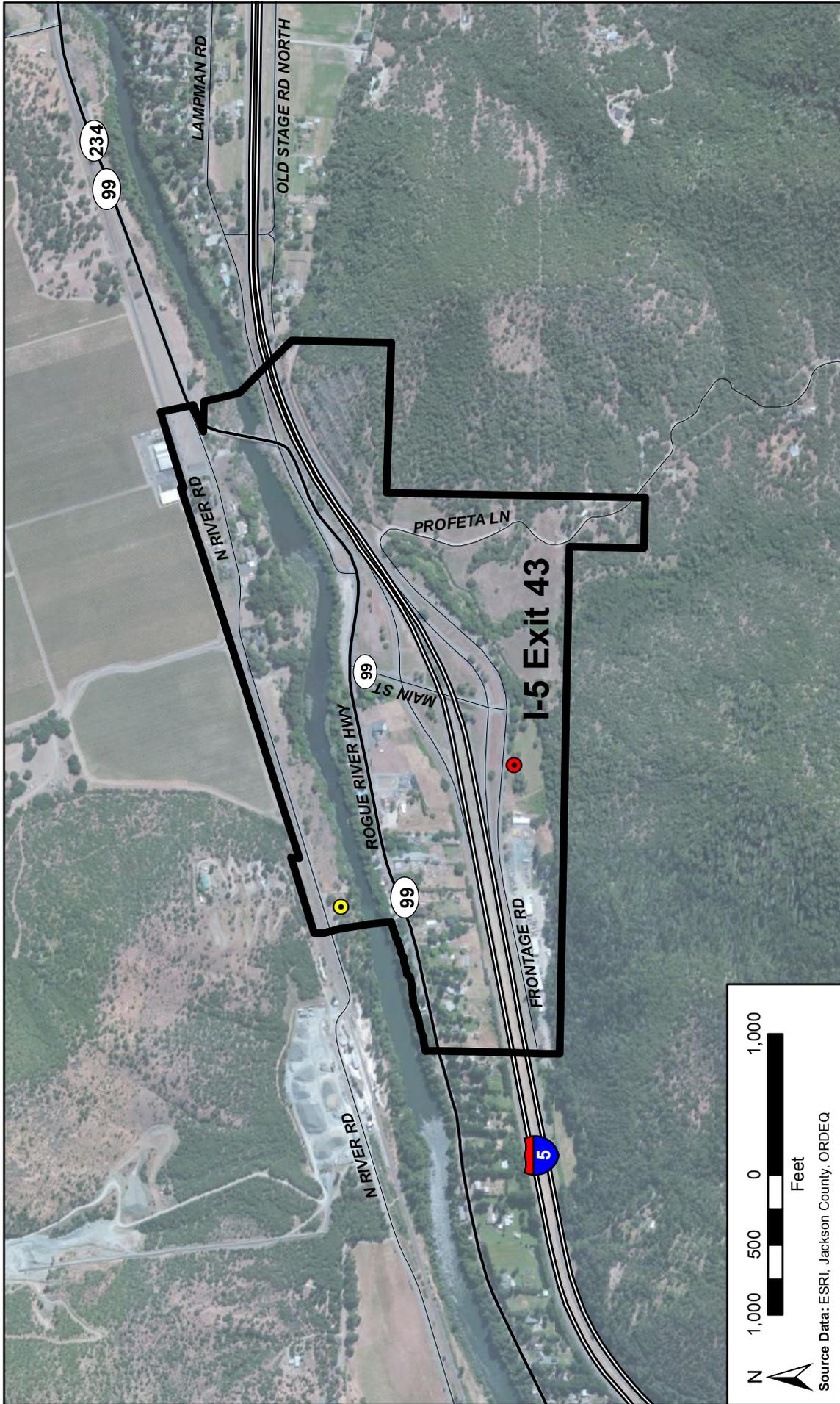
Legend

	Interchange Management Study Area		Interstate
	Urban Growth Boundary		Highway
	City Limits		Local Road

Hazardous Sites (by status and type)

	Active, WQSIS
	Active, TRAACS
	Active, UST

Source Data: ESRI, Jackson County, ORDEQ



Source Data: ESRI, Jackson County, ORDEQ



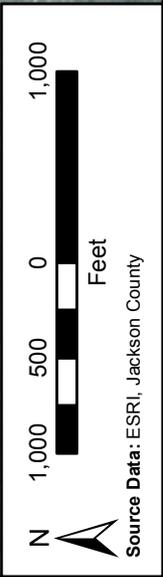
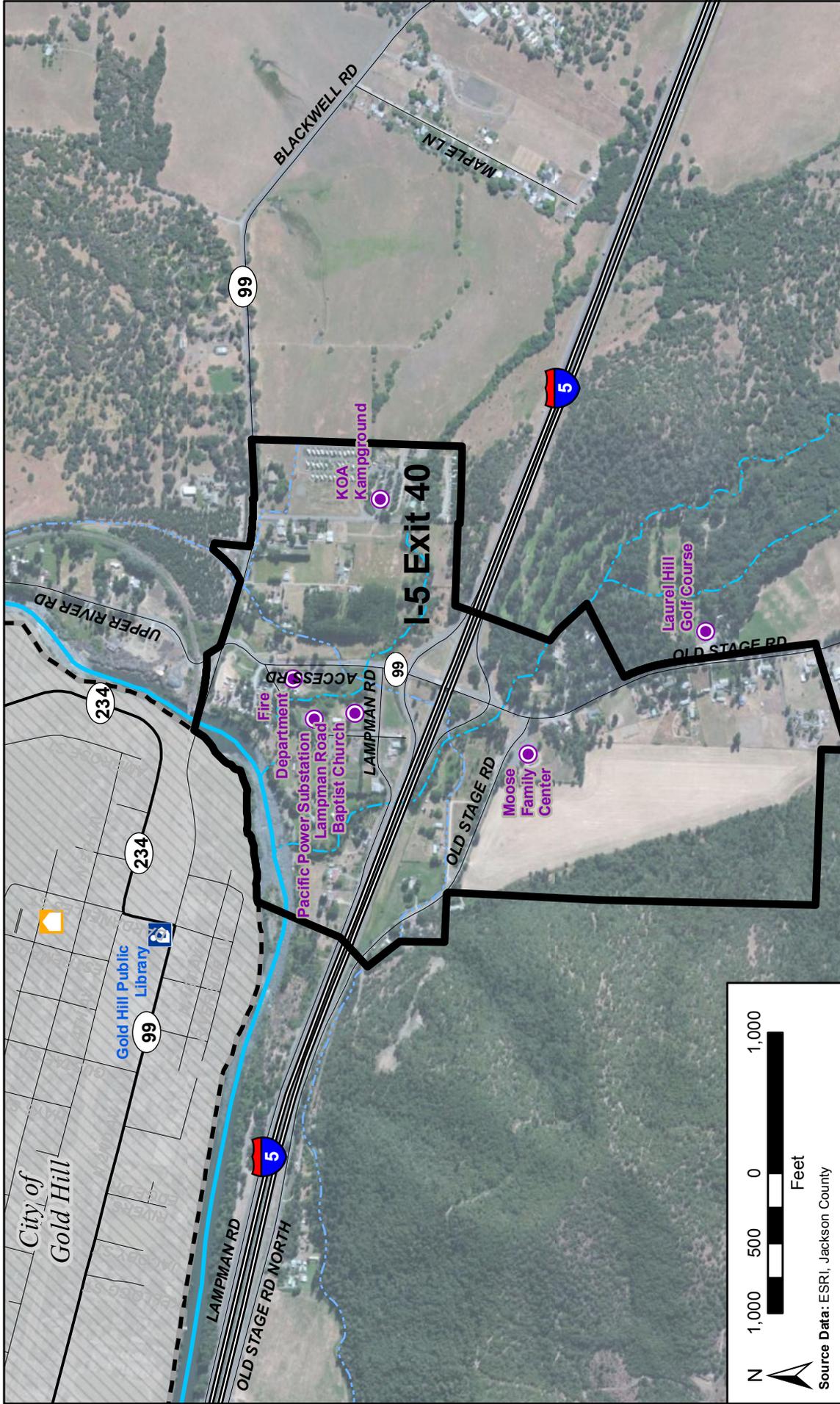
Legend

- Interchange Management Study Area
- Urban Growth Boundary
- City Limits
- Interstate
- Highway
- Local Road

- Hazardous Sites (by status and type)
- Active, WQSIS
 - Active, TRAACS
 - Active, UST

I-5 Exits 40 and 43 Interchange Area Management Plans

Figure 3-3b
Hazardous Sites
I-5 Exit 43

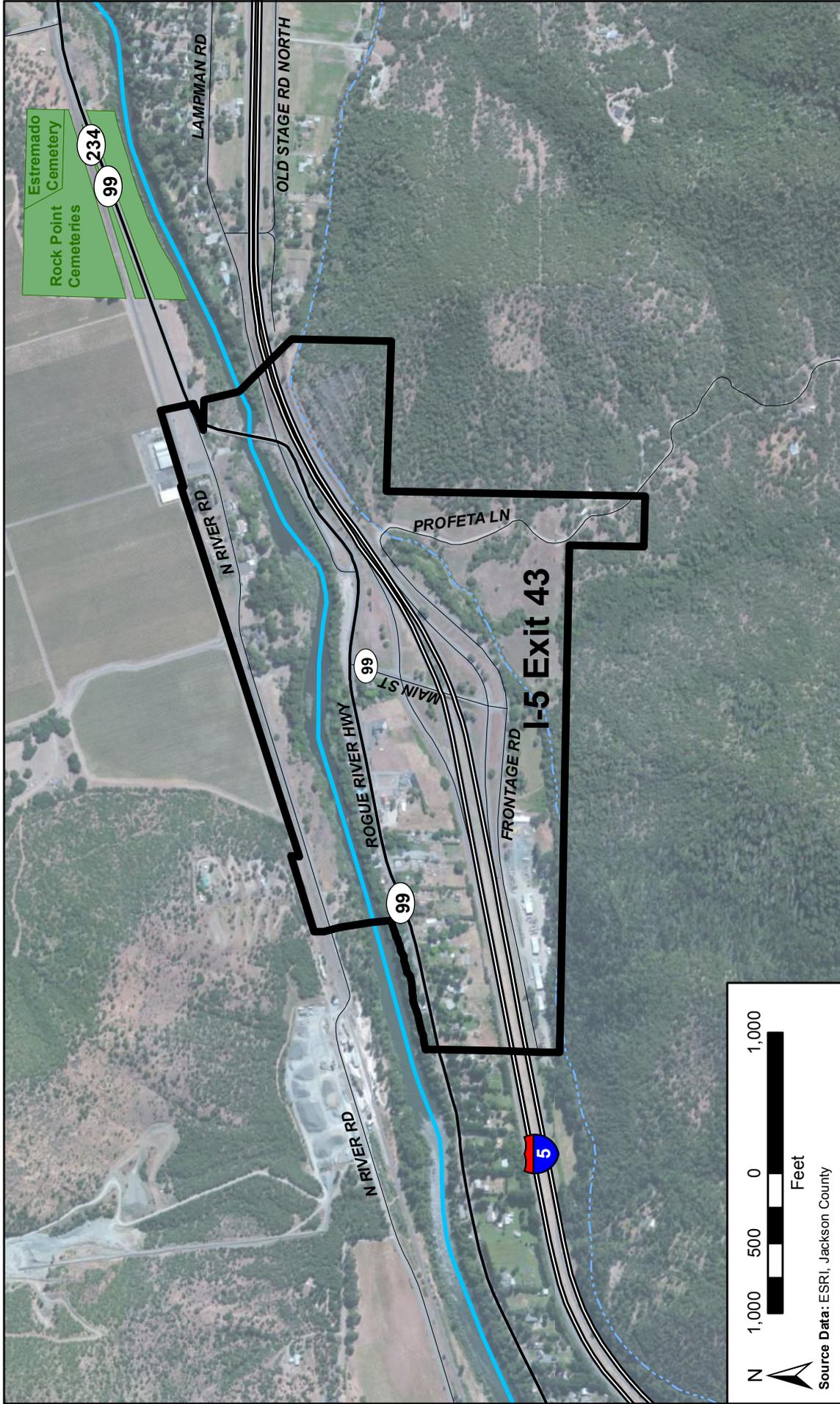


Source Data: ESRI, Jackson County

I-5 Exits 40 and 43 Interchange Area Management Plans

Legend		Community Features	
Interchange Management	Interstate	City Hall	Cemetery
Study Area	Highway	Library	Other Points of Interest
Urban Growth Boundary	Local Road		
City Limits			

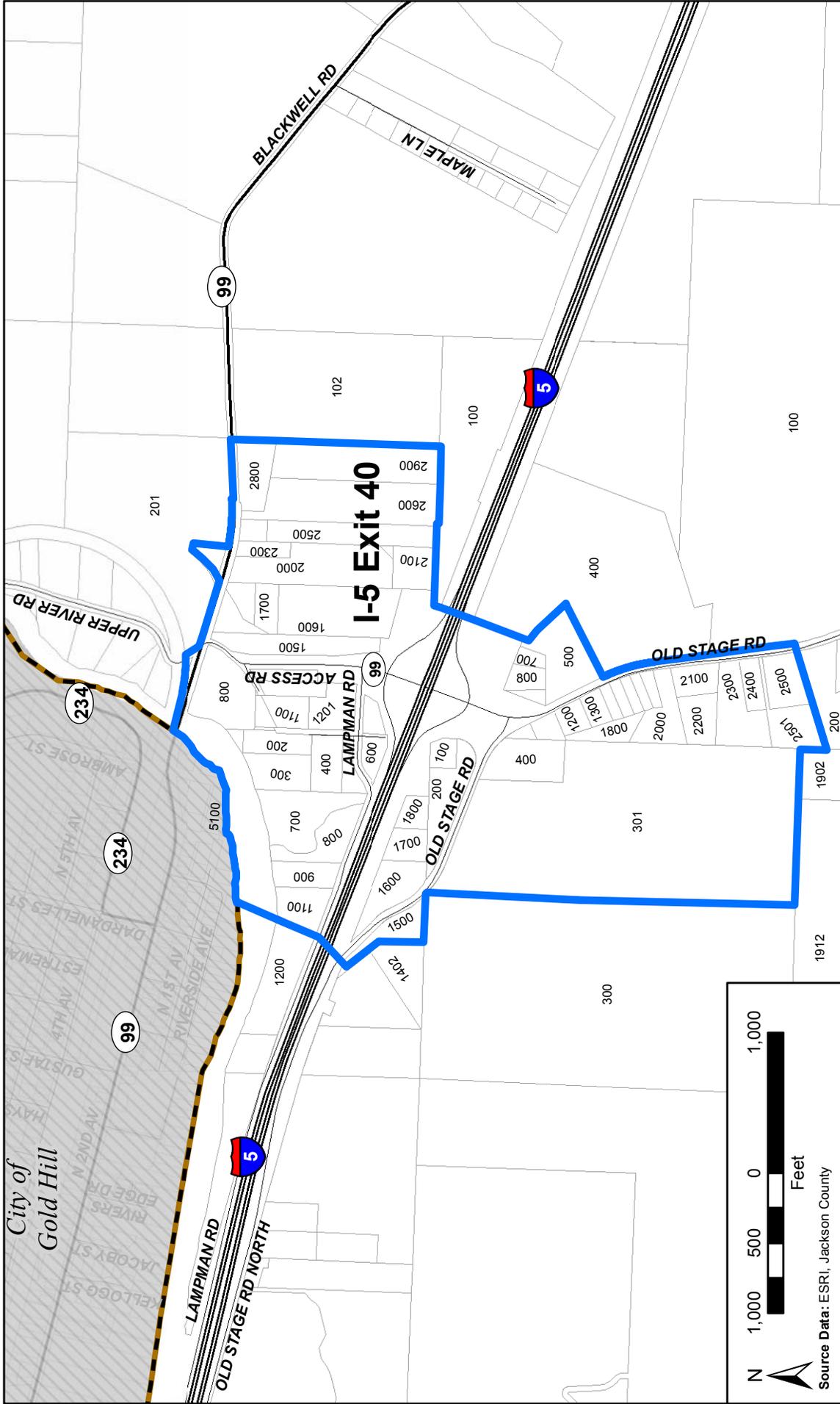
Figure 3-4a
Community Features
I-5 Exit 40



I-5 Exits 40 and 43 Interchange Area Management Plans

Figure 3-4b
Community Features
I-5 Exit 43

Legend	Community Features
<ul style="list-style-type: none"> Interchange Management Study Area Urban Growth Boundary City Limits 	<ul style="list-style-type: none"> City Hall Library Cemetery Other Points of Interest
<ul style="list-style-type: none"> Interstate Highway Local Road 	



I-5 Exits 40 and 43 Interchange Area Management Plans

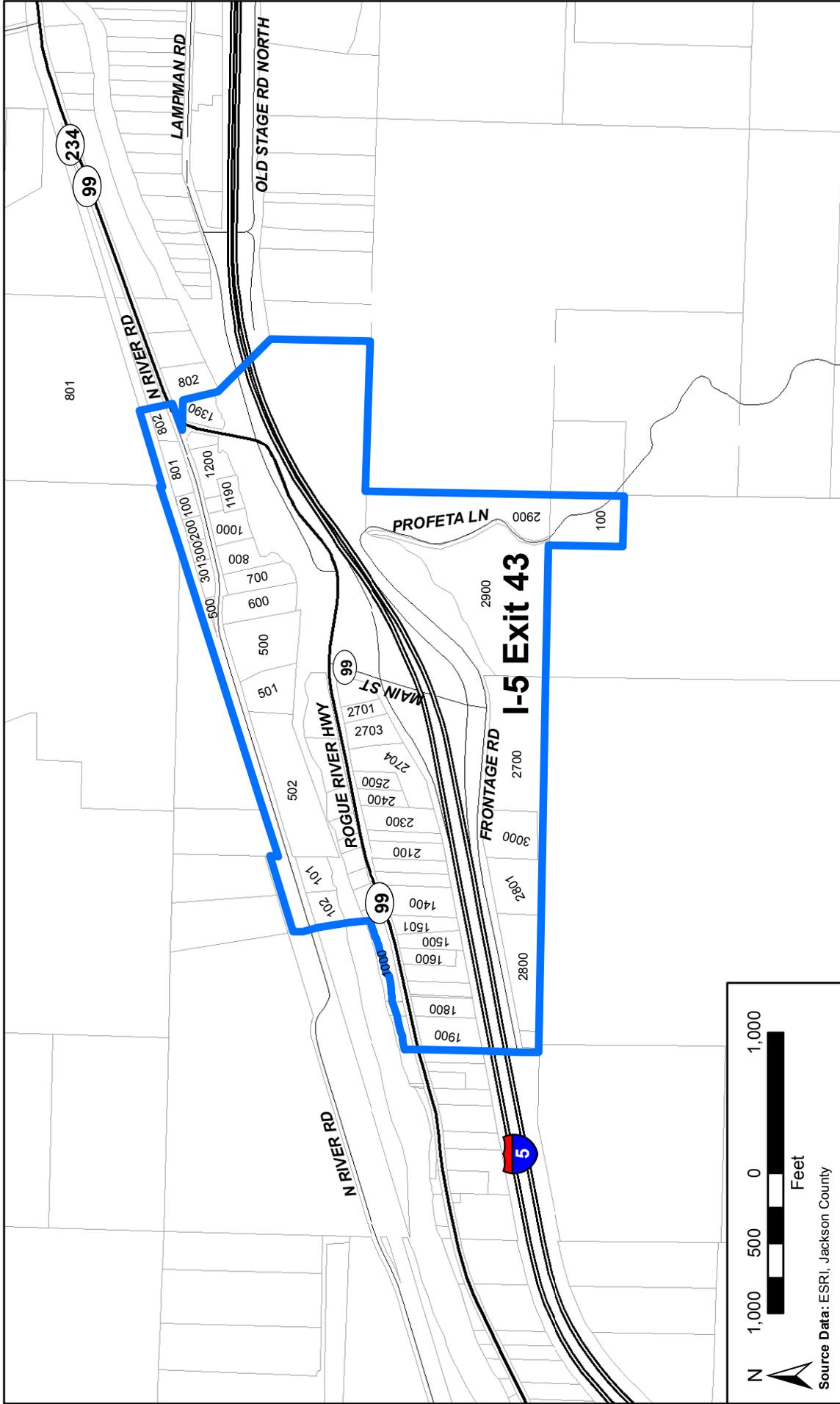
Figure 3-5a
Tax Lots
I-5 Exit 40

Legend

- Interchange Management Study Area (IMSA)
- Urban Growth Boundary (UGB)
- City Limits
- Interstate
- Highway
- Local Road
- Tax Lot Boundaries



Source Data: ESRI, Jackson County



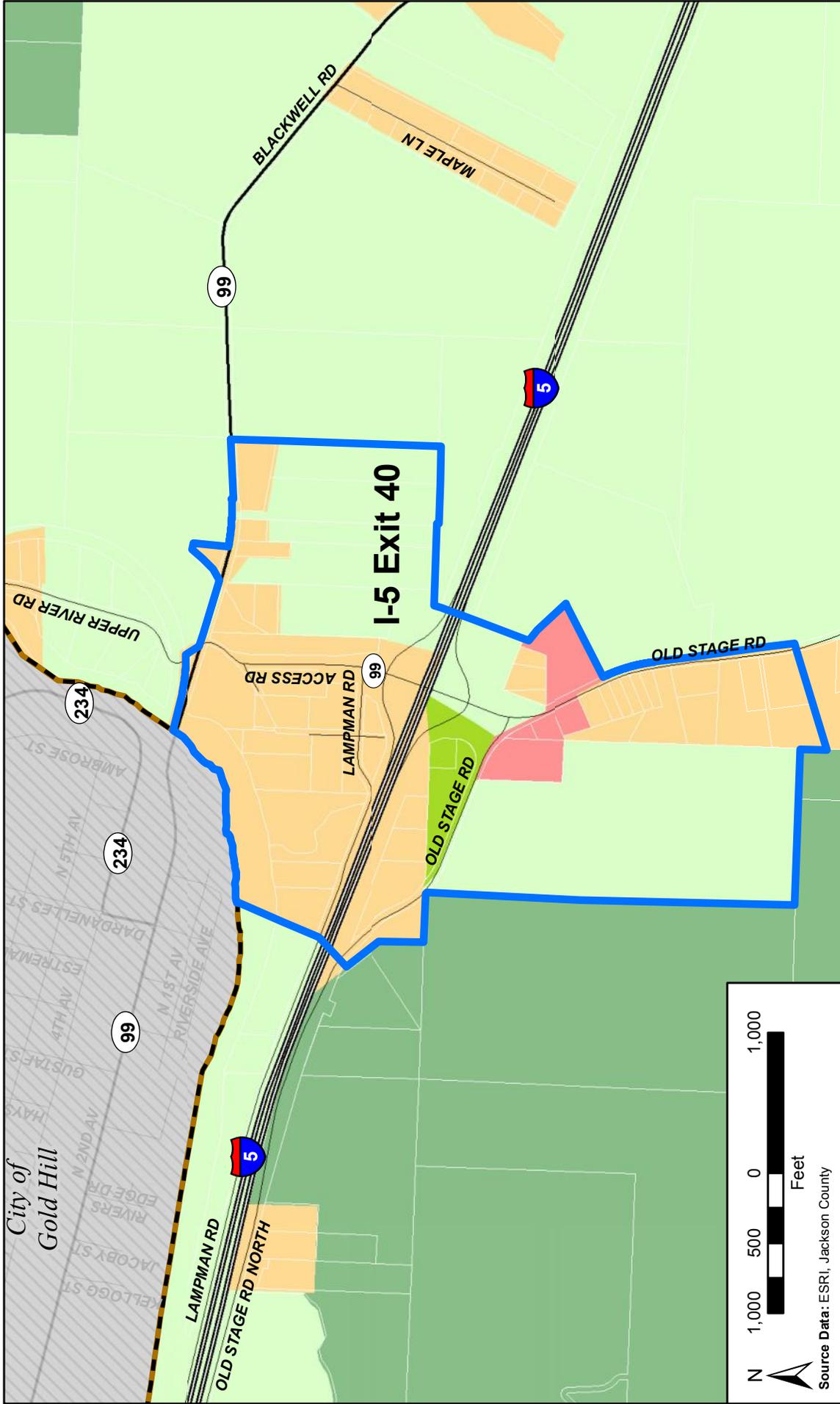
Source Data: ESRI, Jackson County

I-5 Exits 40 and 43 Interchange Area Management Plans

Figure 3-5b
Tax Lots
I-5 Exit 43

Legend

- Interchange Management Study Area (IMSA)
- Urban Growth Boundary (UGB)
- City Limits
- Interstate
- Highway
- Local Road
- Tax Lot Boundaries



I-5 Exits 40 and 43 Interchange Area Management Plans

Figure 3-6a
Jackson County Comprehensive
Plan Designations
I-5 Exit 40

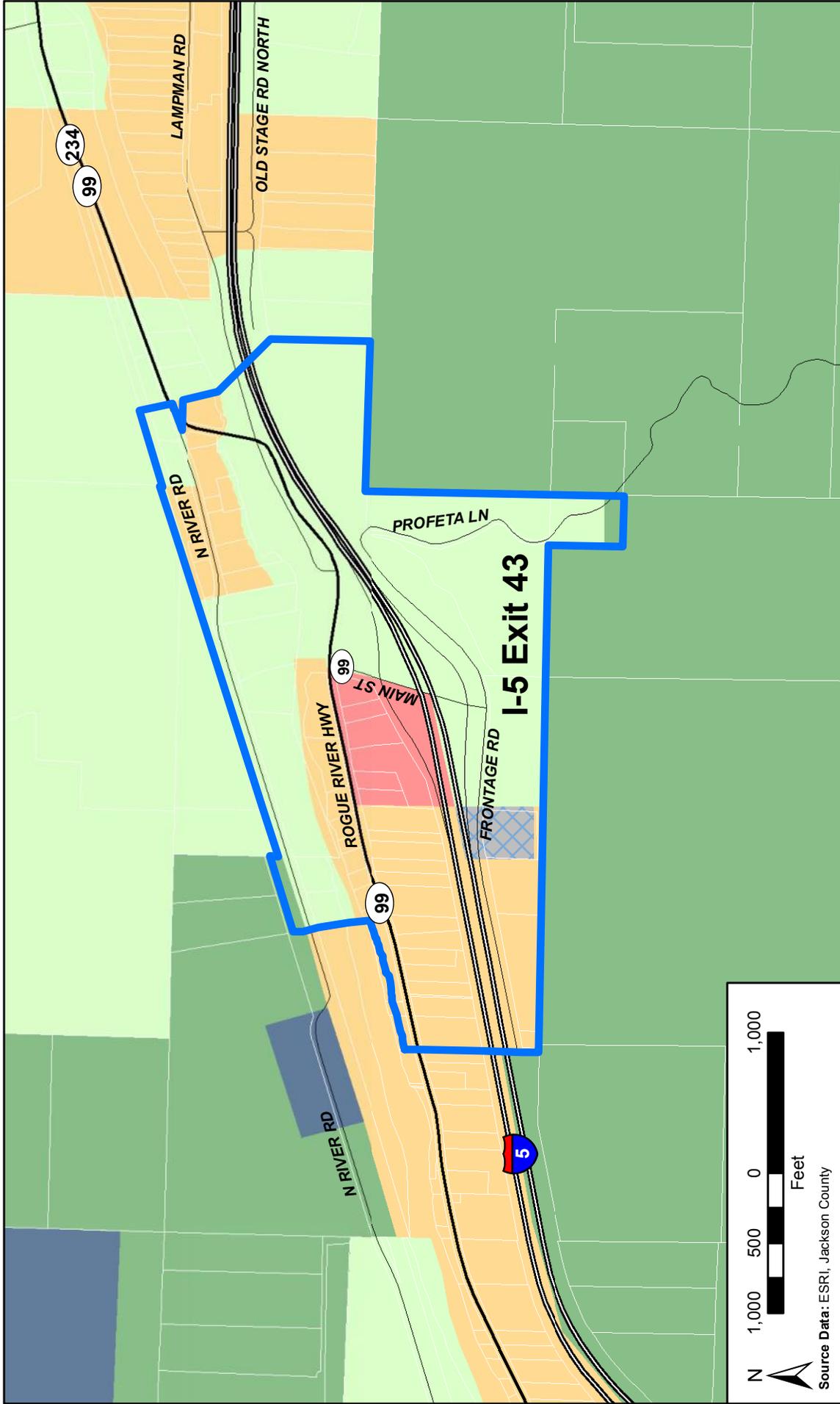
Legend

- Interchange Management Study Area (IMSA)
- Urban Growth Boundary (UGB)
- Taxlot Boundaries indicated in white
- Interstate
- Highway
- Local Road

Jackson County Comprehensive Plan Designations

- Agricultural Land
- Commercial Land
- Forestry / Open Space Land
- Limited Use Land
- Rural Residential Land
- No Data

Source Data: ESRI, Jackson County



I-5 Exits 40 and 43 Interchange Area Management Plans

Figure 3-6b
Jackson County Comprehensive
Plan Designations
I-5 Exit 43

Jackson County Comprehensive Plan Designations

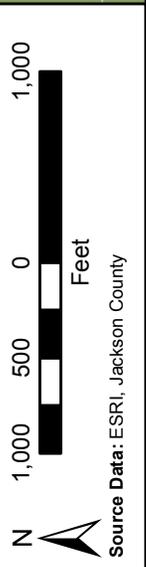
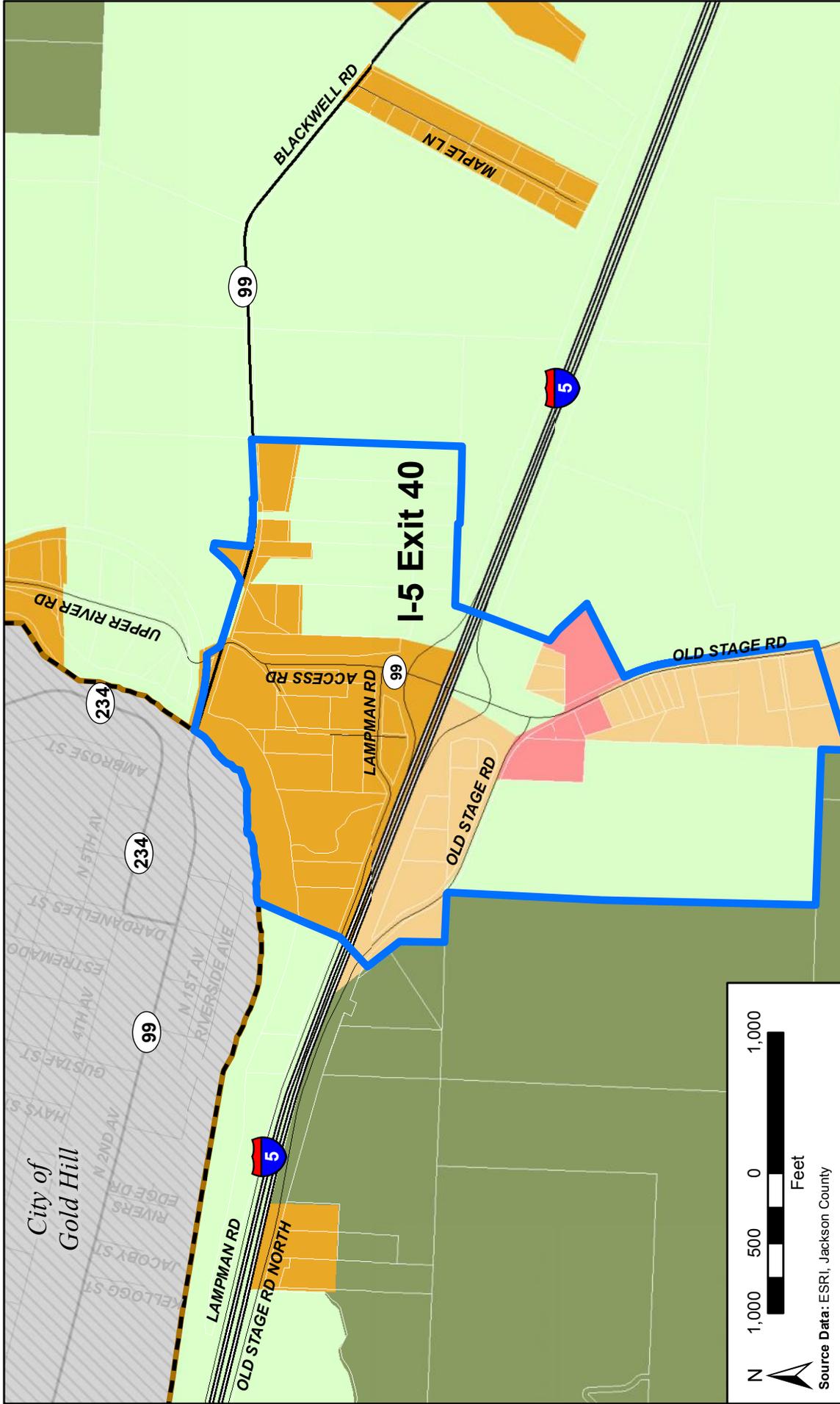
	Forestry / Open Space Land
	Agricultural Land
	Commercial Land
	Aggregate Removal Land
	Forestry
	Industrial Land
	Rural Residential Land

Legend

	Interchange Management Study Area (IMSA)
	Urban Growth Boundary (UGB)
	Interstate Highway
	Local Road
	Taxlot Boundaries indicated in white

Source Data: ESRI, Jackson County

Scale: 1,000 500 0 1,000 Feet



Source Data: ESRI, Jackson County

I-5 Exits 40 and 43 Interchange Area Management Plans

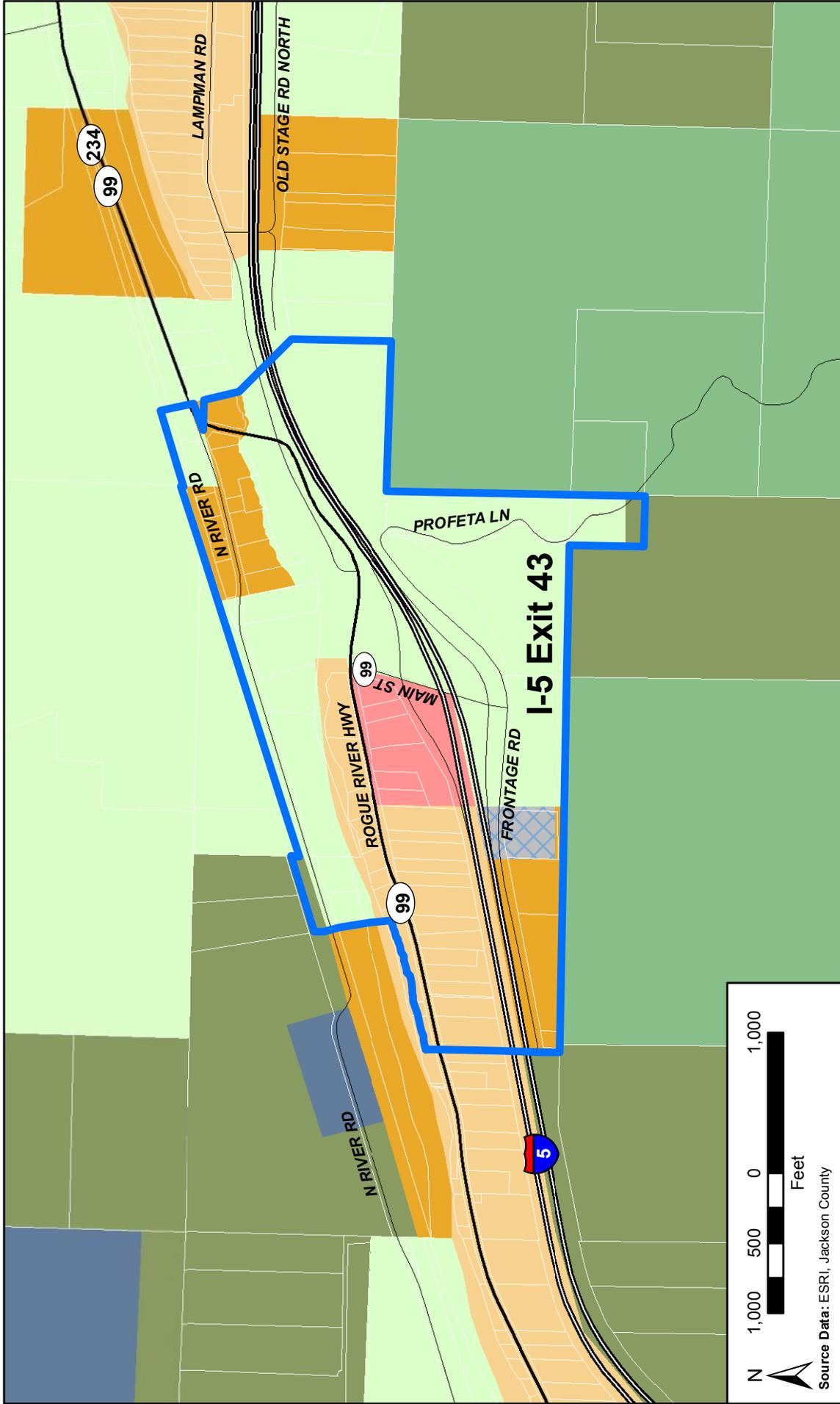
Figure 3-7a
Jackson County Zoning Designations
I-5 Exit 40

Legend

- Interchange Management Study Area (IMSA)
- Urban Growth Boundary (UGB)
- Taxlot Boundaries indicated in white
- Interstate
- Highway
- Local Road

Jackson County Zoning Designations

- Exclusive Farm Use (EFU)
- Interchange Commercial (IC)
- Rural Residential - 2.5 (RR-2.5)
- Rural Residential - 5 (RR-5)
- Woodland Resource (WR)



I-5 Exits 40 and 43 Interchange Area Management Plans

Legend

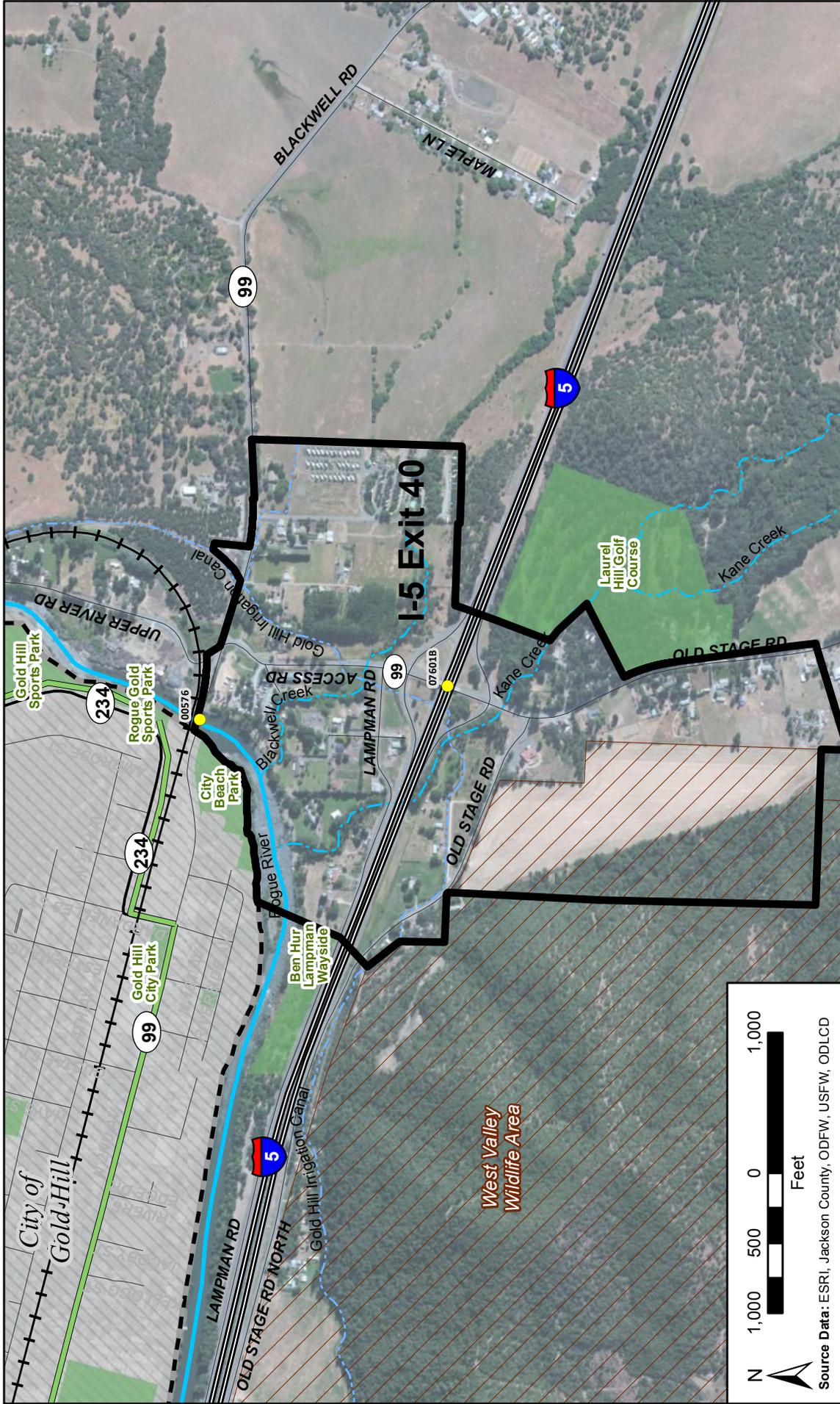
- Interchange Management Study Area (IMSA)
- Urban Growth Boundary (UGB)
- Taxlot Boundaries indicated in white
- Interstate
- Highway
- Local Road

Jackson County Zoning Designations

- Aggregate Removal (AR)
- Exclusive Farm Use (EFU)
- Forest Resource (FR)
- Interchange Commercial (IC)
- Rural Light Industrial (RLI)
- Rural Residential - 2.5 (RR-2.5)
- Rural Residential - 5 (RR-5)
- Woodland Resource (WR)

Figure 3-7b
Jackson County Zoning Designations
I-5 Exit 43

Source Data: ESRI, Jackson County

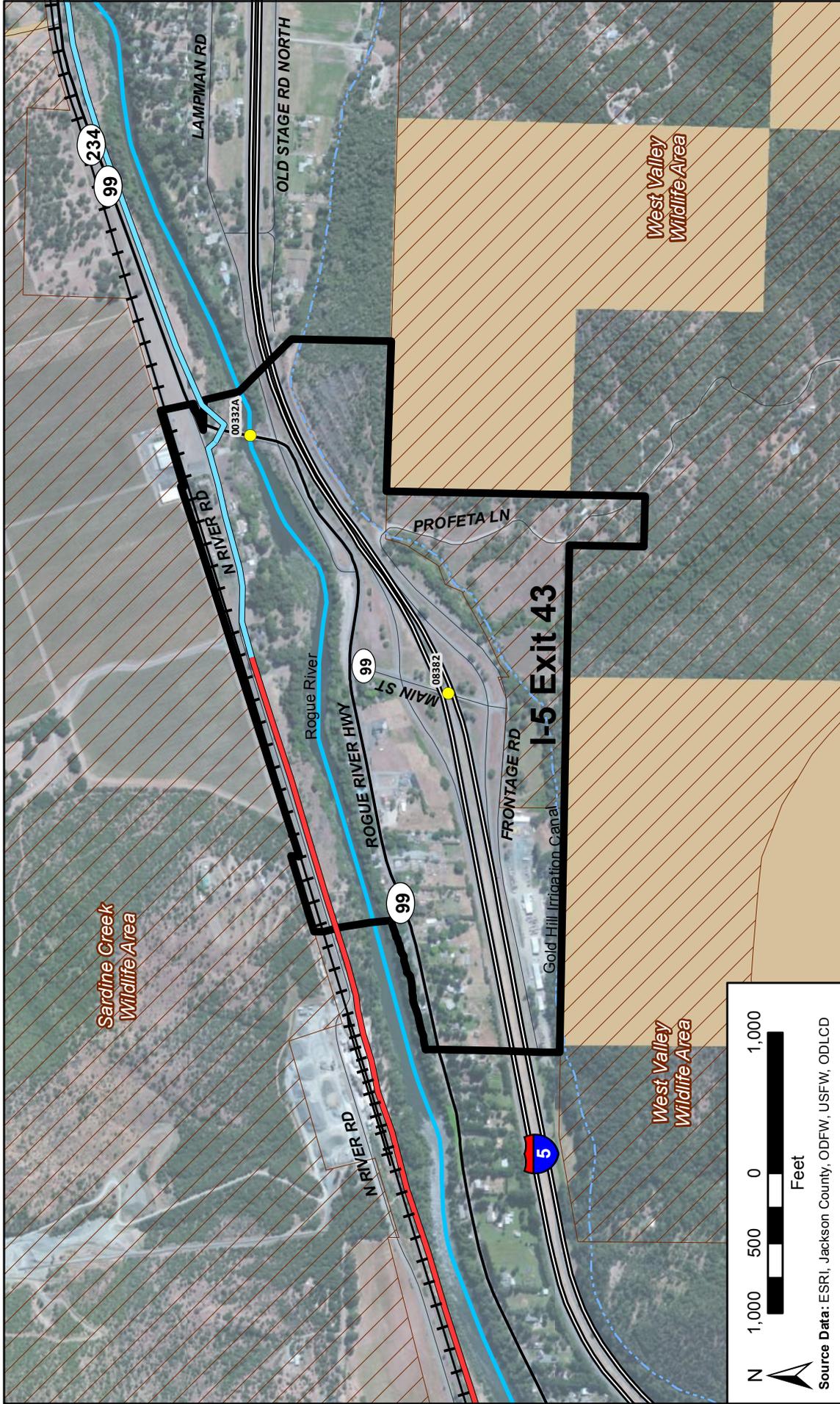


I-5 Exits 40 and 43 Interchange Area Management Plans

**Figure 3-8a
Miscellaneous Landmarks
and Features
I-5 Exit 40**

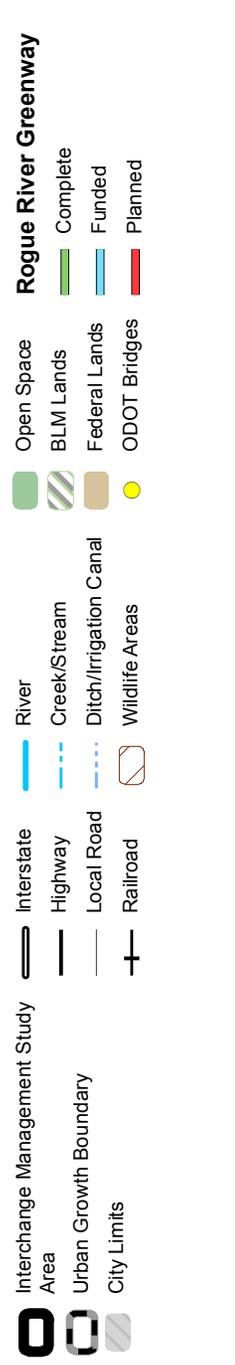


Source Data: ESRI, Jackson County, ODFW, USFW, ODLCD



I-5 Exits 40 and 43 Interchange Area Management Plans

Figure 3-8b
Miscellaneous Landmarks and Features
I-5 Exit 43



Source Data: ESRI, Jackson County, ODFW, USFW, ODLCD

**I-5 Exits 40 and 43 (Gold Hill)
Interchange Area Management Plans**

**DRAFT Technical Memorandum #3
Appendix A: Methodology Memorandum**

Prepared for

Oregon Department of Transportation, Region 3
3500 NW Stewart Parkway
Roseburg, Oregon 97470

Prepared by

David Evans and Associates, Inc.
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June 2013

Table of Contents

A.1. Introduction	1
A.2. Study Area.....	1
A.3. Study Period.....	1
A.4. Data Collection	1
A.5. Inventory of Existing Facilities	2
A.6. Traffic Volumes.....	2
A.6.1. Existing 2013 Volumes.....	2
A.6.2. Future Design Year 2038 Volumes	2
A.7. Evaluation Comparison Tools	2
A.7.1. Traffic Operations Standards.....	3
A.7.2. Arterial and Intersection Operations.....	3
A.8. Crash History Analysis.....	3
A.9. Non-Auto Modes Evaluation	3

A.1. Introduction

This methodology report summarizes the approach for data collection, impacts analysis, and mitigation that the IAMP for I-5 Exits 40 and 43 will use for traffic analysis.

A.2. Study Area

The study area includes I-5 Exits 40 and 43, extending about ½-mile from each interchange, but remaining outside of both Gold Hill city limits and the urban growth boundary.

IAMP 40 includes five intersections for analysis:

- OR 99/2nd Ave / Blackwell Rd at Access Rd
- Lampman Rd at Access Rd
- I-5 Northbound Ramps at Access Rd
- I-5 Southbound Ramps at Access Rd
- Old Stage Rd at Access Rd

IAMP 43 includes seven intersections for analysis:

- N River Rd at Hwy 234/OR 99
- Lampman Rd at Hwy 234/OR 99
- Main St at Hwy 234/OR 99
- I-5 Northbound Ramps at Main St
- I-5 Southbound Ramps at Main St
- Main St at Frontage Rd/Profetta Ln
- Profetta Ln at Old Stage Rd

A.3. Study Period

The transportation and traffic analysis will be based on existing year 2013 conditions for the design hour (30th highest) volumes.

Future analysis will focus on design hour conditions for the year 2038 to correspond with the forecast period for the nearby Rogue Valley Metropolitan Planning Organization (MPO).

A.4. Data Collection

ODOT will provide current manual 16-hour vehicle classification counts for all of the study area intersections listed above, except for Lampman Rd at Hwy 234/OR 99, N River Rd at Hwy 234/OR 99, and Profetta Ln at Old Stage Rd, which ODOT will provide 4-hour classification counts for. Data for existing weekday counts will be reviewed to determine which hour is the highest traffic demand hour for each interchange management area. Turning movements, peak hour factors, vehicle classification, and other data describing demand in the corridor will be derived for this peak hour.

Crash data will be obtained from the ODOT Crash Analysis and Reporting Unit for the most recent five complete years for the study area. Data will be requested for the following locations:

Interchange 40:

- Access Rd: Old Stage Rd to OR 99/Hwy 234/Blackwell Rd
- I-5: Mile Points 40 to 41.5
- I-5 Interchange 40 northbound and southbound ramps

Interchange 43:

- Frontage Rd/Profetta Lane: Main St to Old Stage Rd
- Main St: Frontage Rd/Profetta Ln to Rogue River Hwy/OR 99/Hwy 234
- Rogue River Hwy/OR 99/Hwy 234: Main St to N River Rd/Hwy 234
- Lampman Rd: Section between the 2 intersections with OR 99
- I-5: Mile Points 42 to 44.5
- I-5 Interchange 43 northbound and southbound ramps

A.5. Inventory of Existing Facilities

The transportation system inventory examines the highway and intersecting roadways, bicycle and pedestrian facilities, transit facilities, bridges conditions, access locations, and rail facilities.

A.6. Traffic Volumes

Traffic volumes will be developed for two study periods: existing 2013 and design year 2038.

A.6.1. Existing 2013 Volumes

The existing peak hour volumes will be determined from the existing weekday counts and adjusted to design hourly volumes following the methodologies outlined in the ODOT Transportation Planning and Analysis Unit's (TPAU) Analysis Procedures Manual (APM).

A.6.2. Future Design Year 2038 Volumes

Forecast traffic volumes will be developed for the 2038 forecast year based on TPAU's cumulative analysis process. Calculation of volumes on I-5 will use ODOT's Future Volume Tables to estimate through trips.

A.7. Evaluation Comparison Tools

Tools and techniques used to evaluate and compare the alternatives include traffic operations analysis tools for more detailed assessment of future conditions.

A.7.1. Traffic Operations Standards

The operational standards from the Oregon Highway Plan (OHP) and the Highway Design Manual (HDM) will be used in the assessment of intersection operations. Both documents base their mobility standards on the calculation of volume-to-capacity (v/c) ratios; however, the standards in the HDM are based on higher performance levels than those in the OHP. The mobility standards from the OHP will be applied to the existing and no build analysis while the standards from the HDM will be applied to the design alternatives. The HDM standards are used for build alternatives to reflect the expectation that an investment in the highway system should result in better operations than the no build alternative, where no investment is made.

A.7.2. Arterial and Intersection Operations

The operational analysis will evaluate v/c ratios along with delay and queuing using the Synchro/SimTraffic software program. Throughout the analysis process, TPAU staff will review modeling assumptions, analysis settings, and other assumptions to help ensure consistency of data with other studies under way.

An assessment of adding traffic signals may be needed. Any traffic signal assessments will use ODOT's traffic signal warrants. Analysis results must be compared with ODOT's mobility standards and specific recommendations for mitigation improvements needed to meet standards must be identified and verified by TPAU.

A.8. Crash History Analysis

The study area evaluation will include an analysis of the most recent five-year crash history to identify any patterns amongst the crashes that are indicative of existing geometric or operational deficiencies. The analysis will also identify any recent changes in the crash patterns over the five-year period. Based on the crash patterns, the analysis may identify improvements for the build alternatives that could mitigate safety issues.

A.9. Non-Auto Modes Evaluation

Non-auto modes will also be evaluated to identify improvements included in the build alternatives that would impact bicycle and pedestrian facilities.

**I-5 Exits 40 and 43 (Gold Hill)
Interchange Area Management Plans**

**DRAFT Technical Memorandum #3
Appendix B: Truck Turning Movement Diagrams**

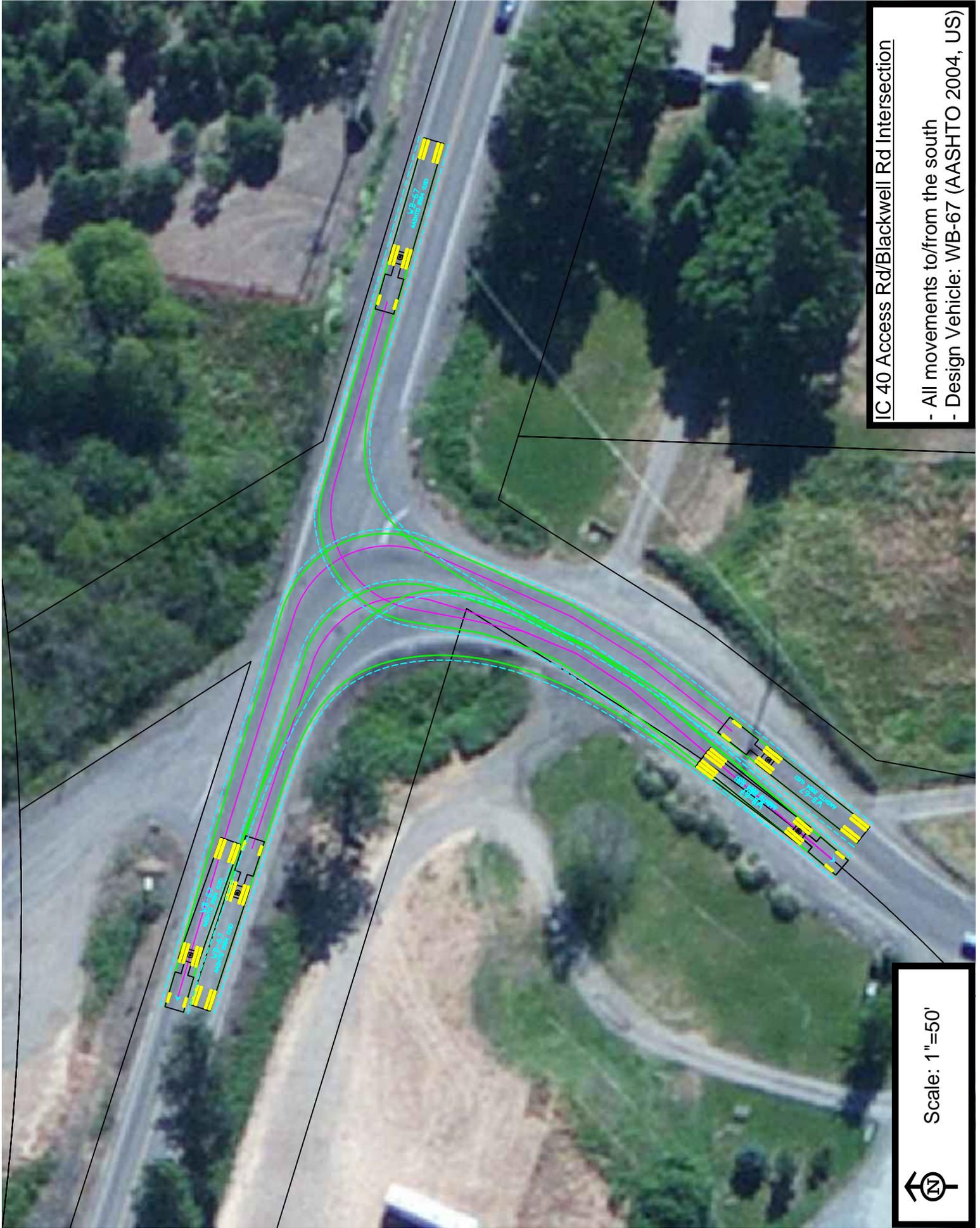
Prepared for

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Portland, Oregon 97201

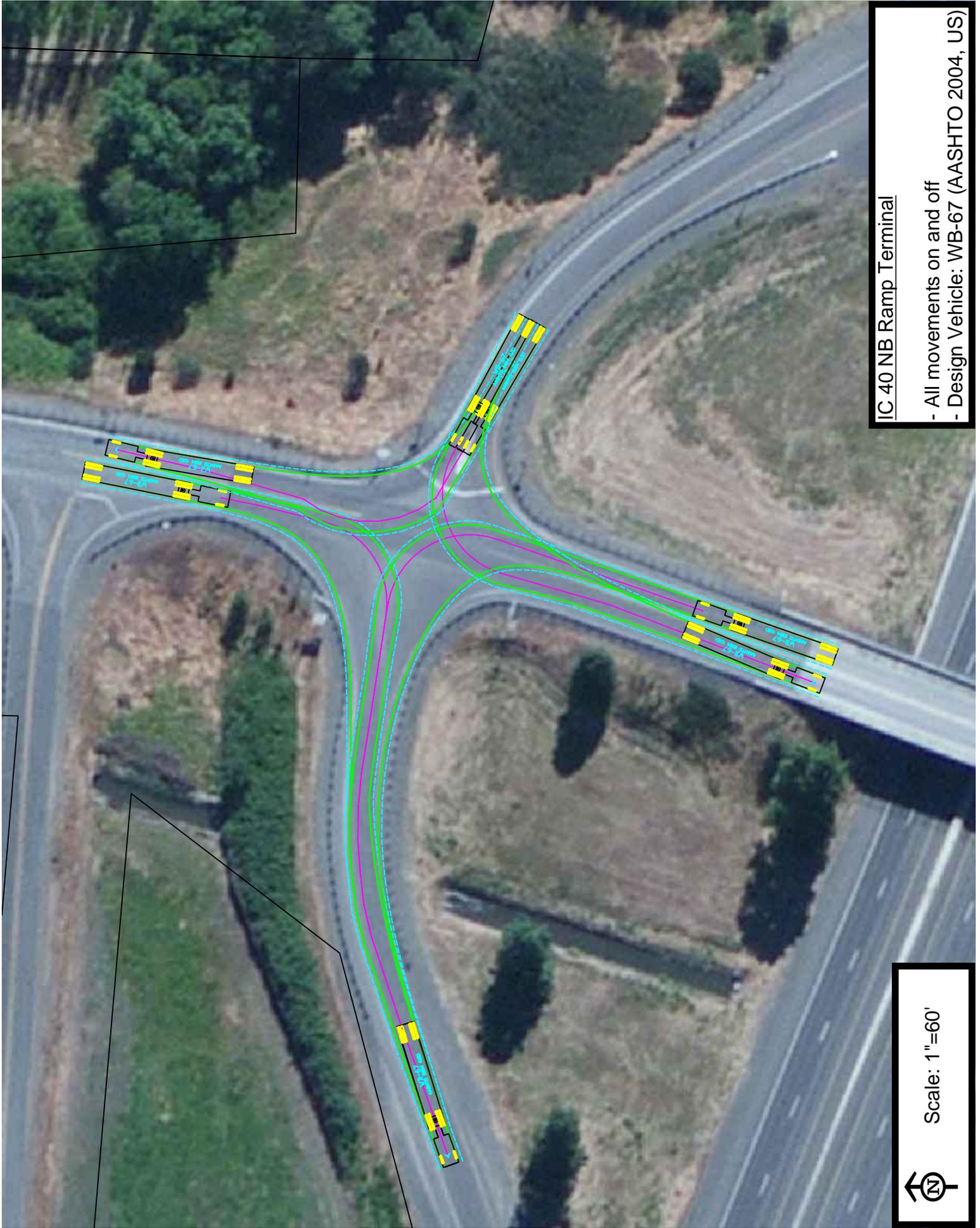
June 2013



IC 40 Access Rd/Blackwell Rd Intersection
- All movements to/from the south
- Design Vehicle: WB-67 (AASHTO 2004, US)

Scale: 1"=50'



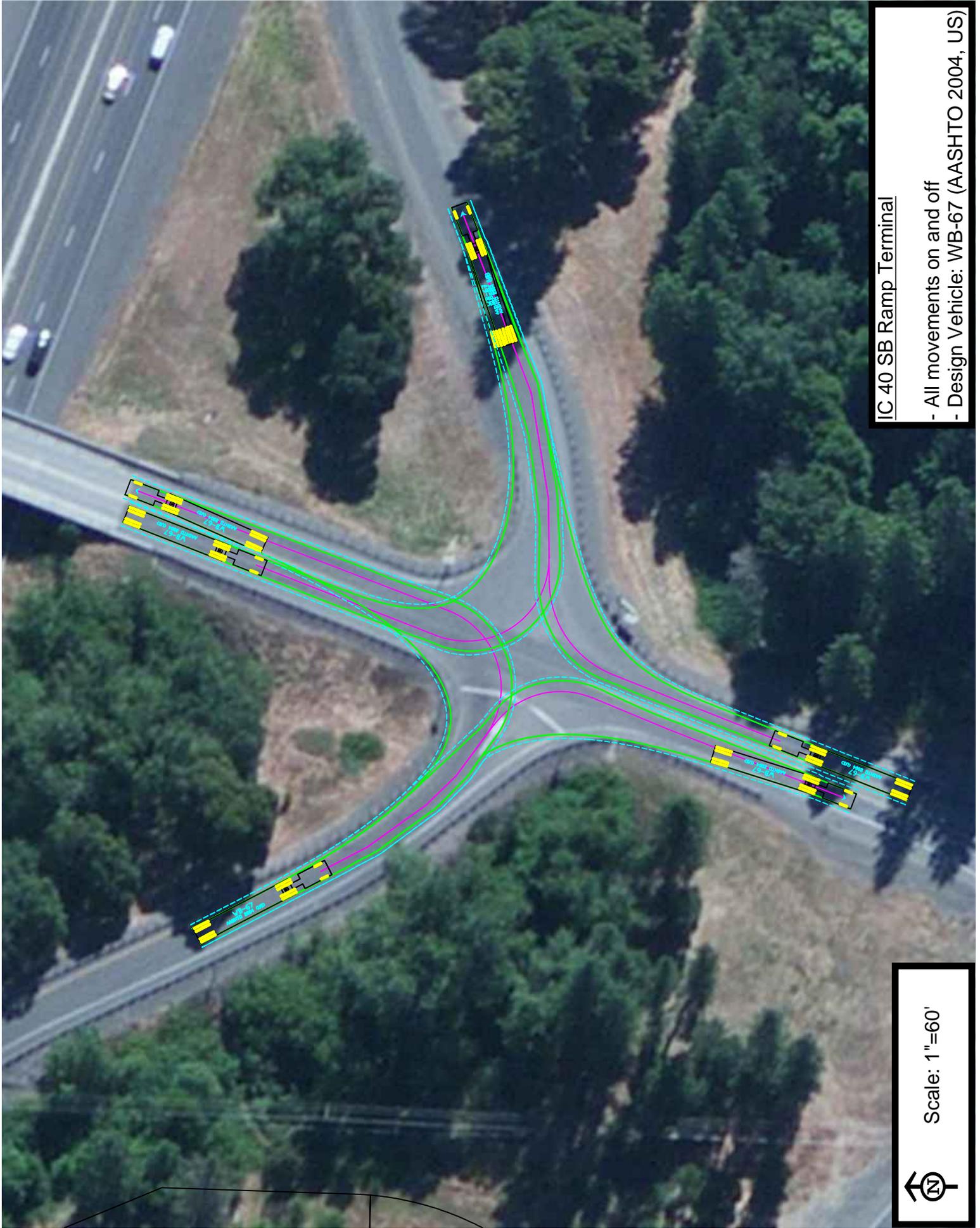


IC 40 NB Ramp Terminal

- All movements on and off
- Design Vehicle: WB-67 (AASHTO 2004, US)

Scale: 1"=60'



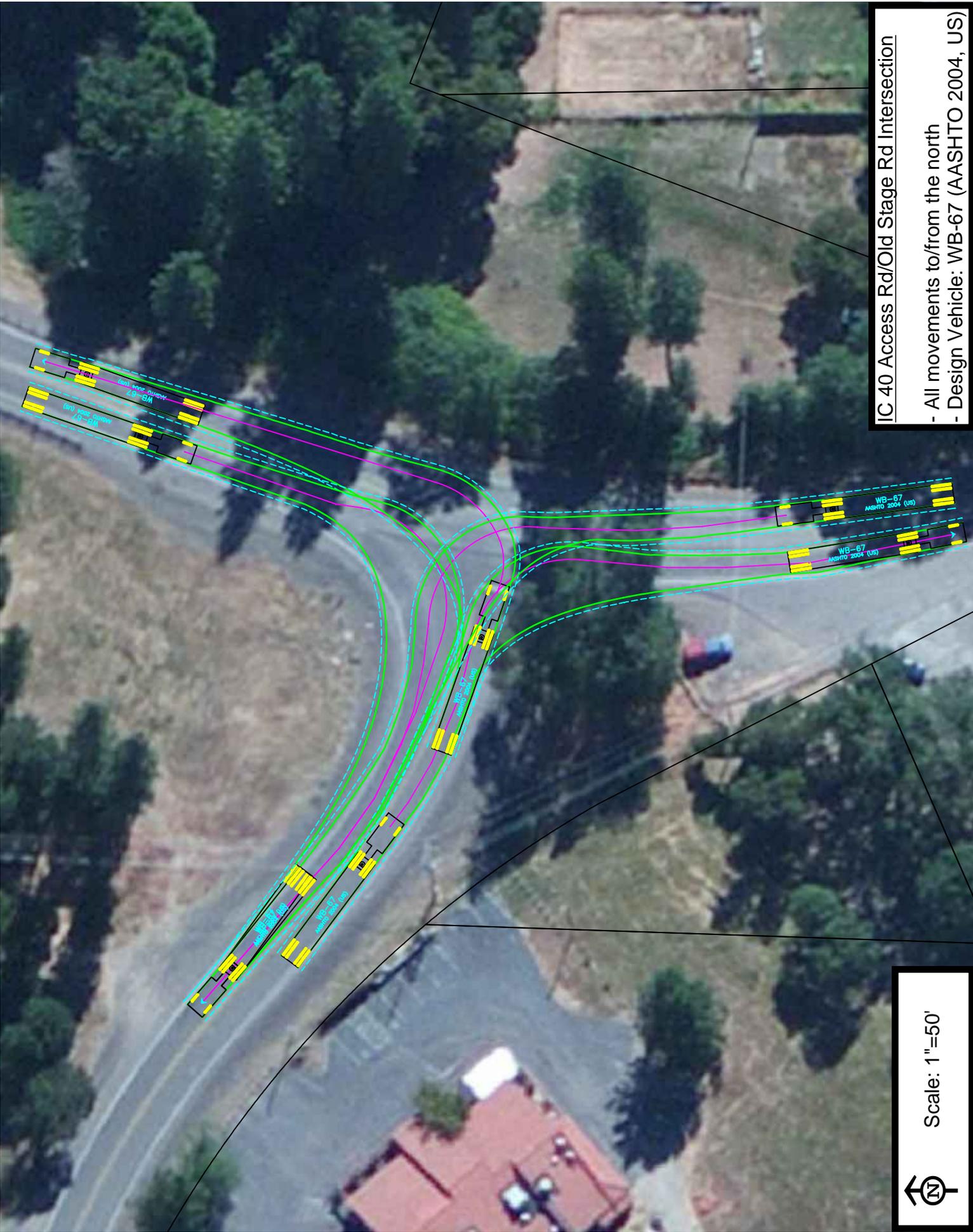


IC 40 SB Ramp Terminal

- All movements on and off
- Design Vehicle: WB-67 (AASHTO 2004, US)

Scale: 1"=60'

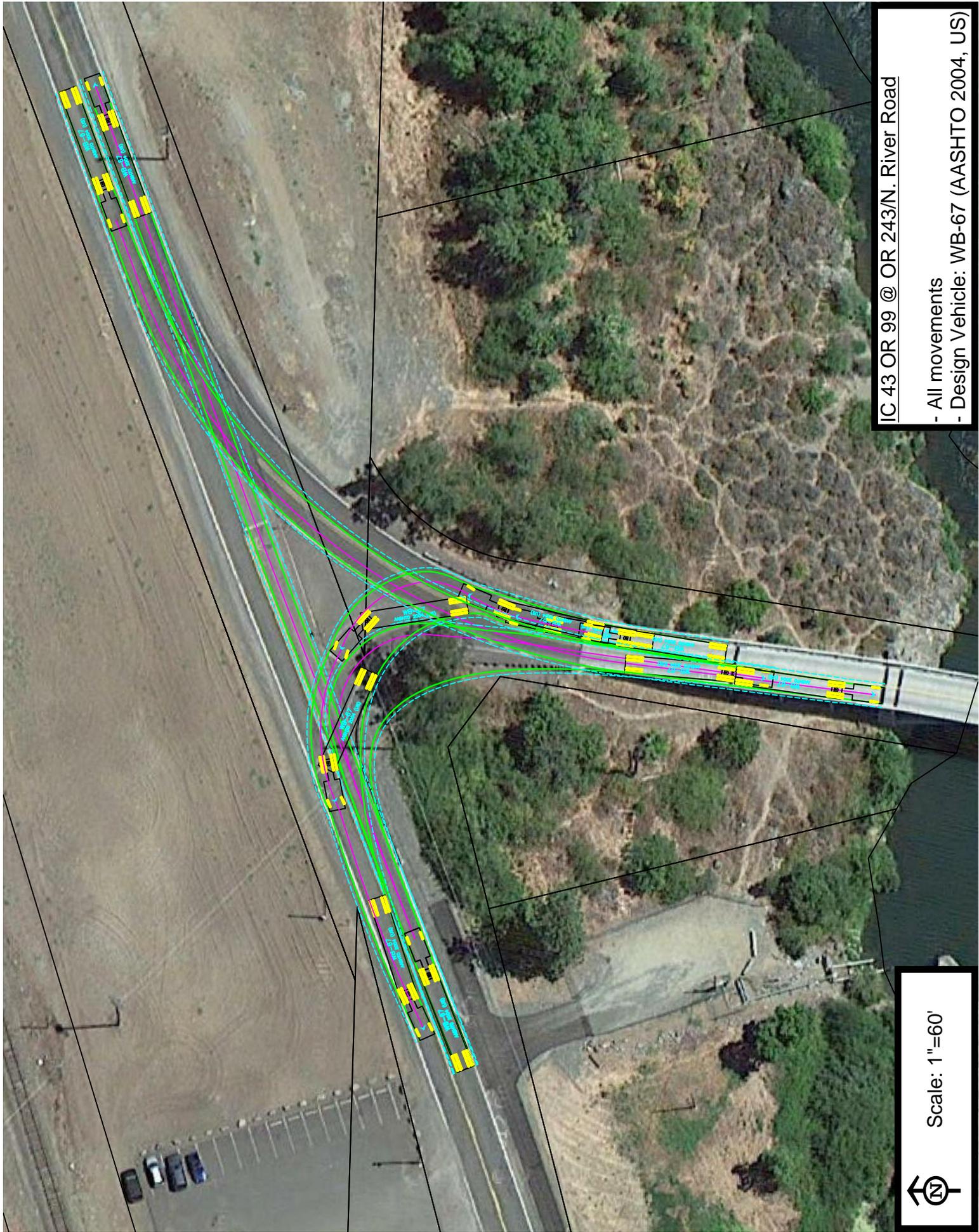




IC 40 Access Rd/Old Stage Rd Intersection

- All movements to/from the north
- Design Vehicle: WB-67 (AASHTO 2004, US)

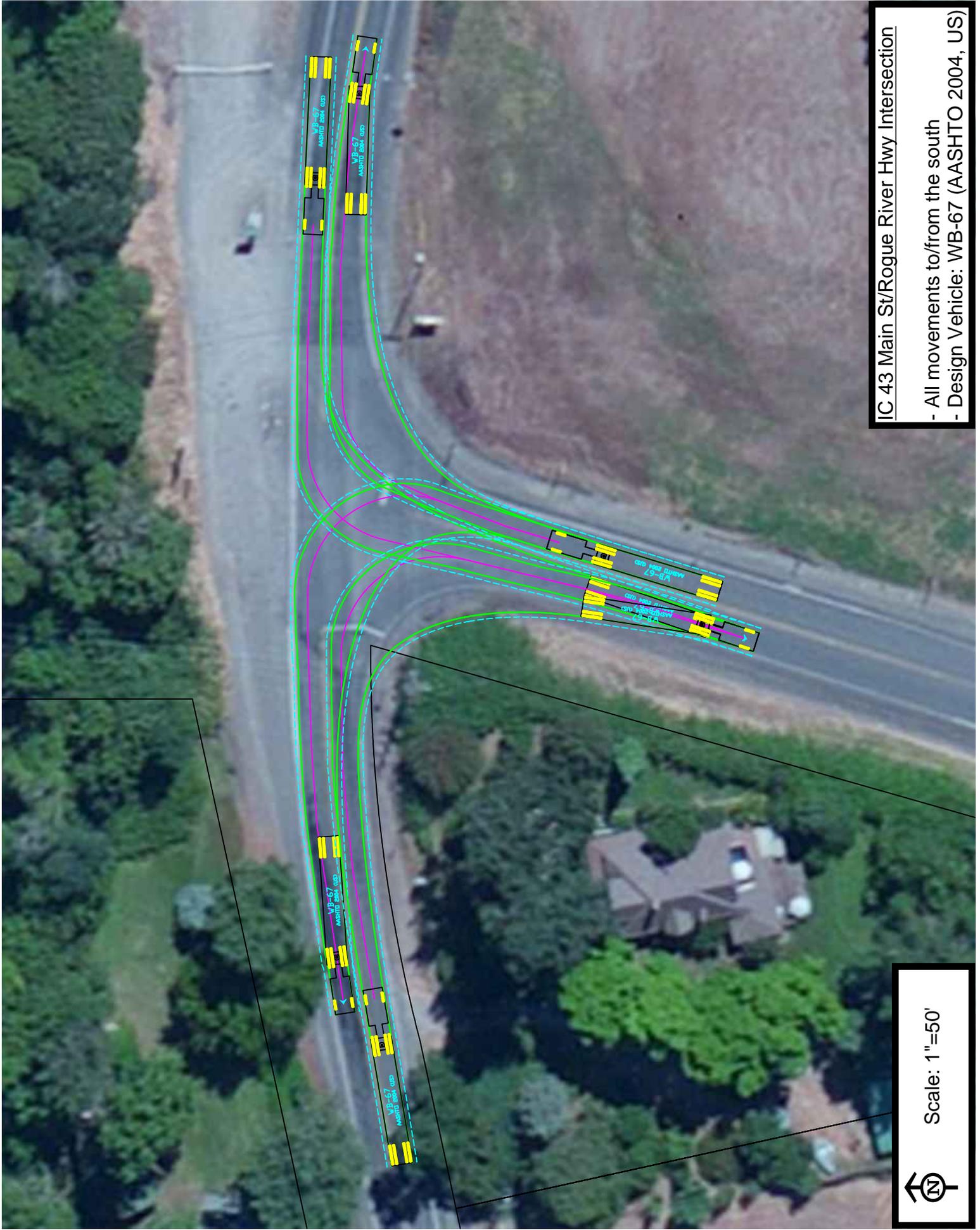
Scale: 1"=50'



IC 43 OR 99 @ OR 243/N. River Road

- All movements
- Design Vehicle: WB-67 (AASHTO 2004, US)

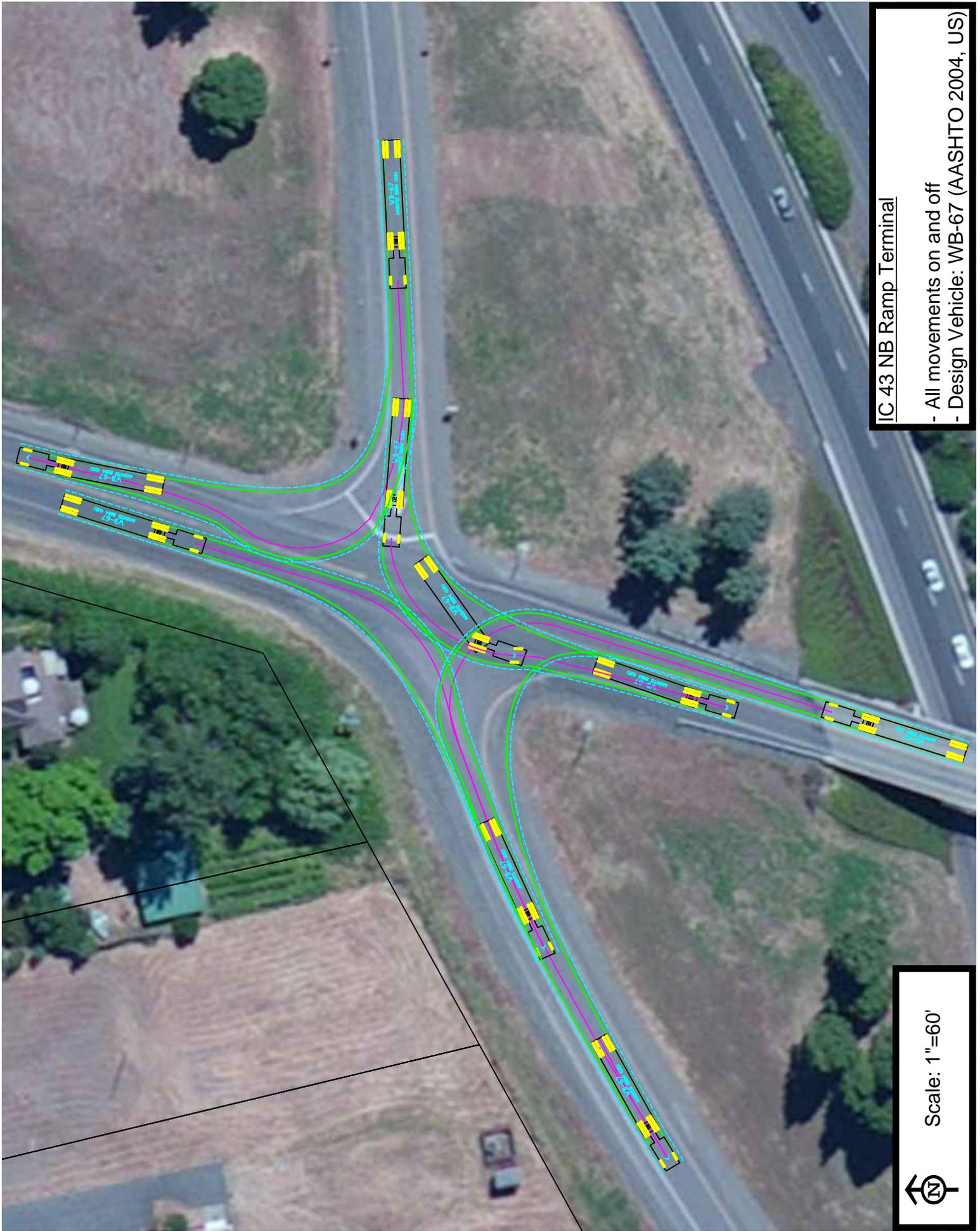
Scale: 1"=60'



IC 43 Main St/Rogue River Hwy Intersection

- All movements to/from the south
- Design Vehicle: WB-67 (AASHTO 2004, US)

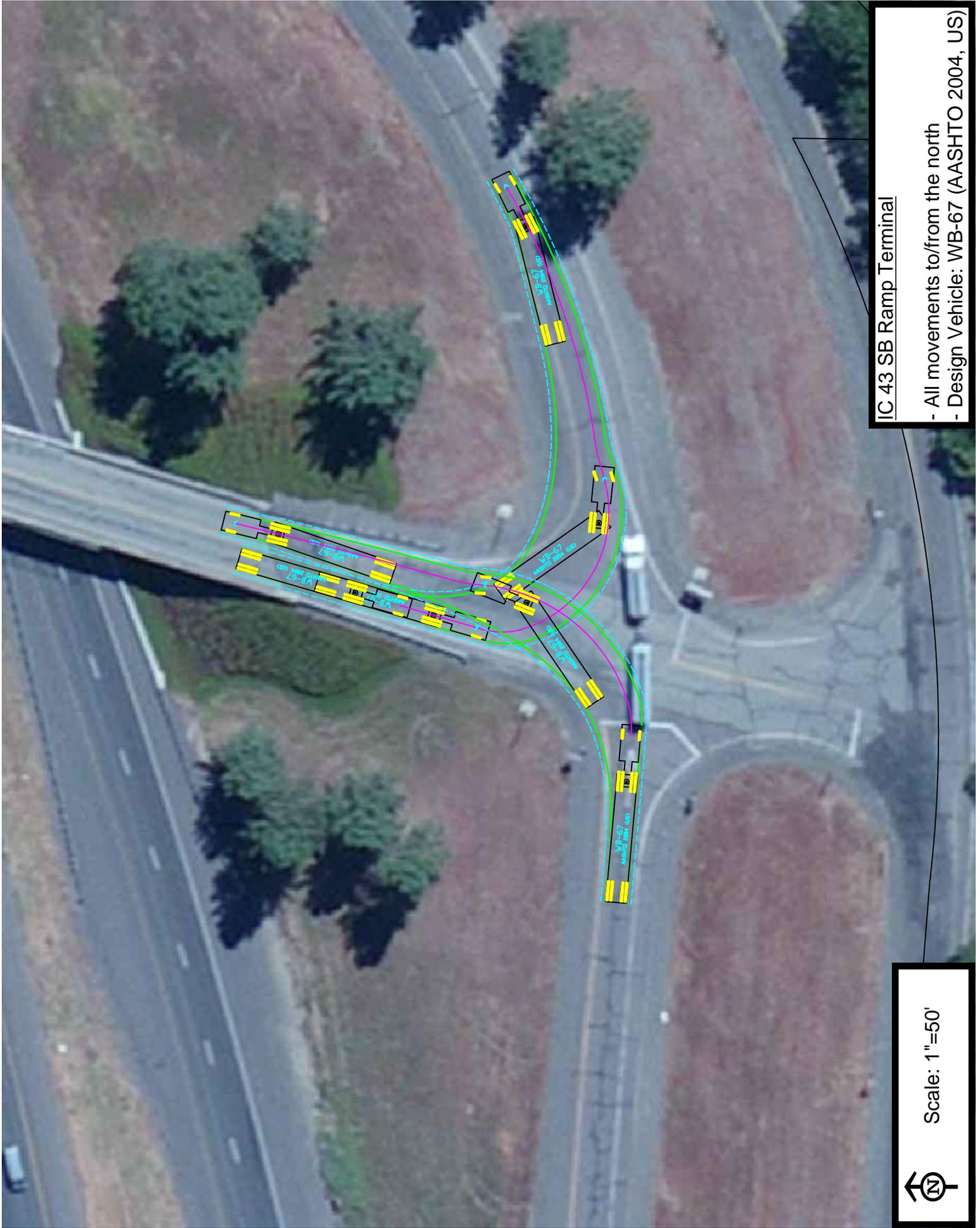
Scale: 1"=50'



IC 43 NB Ramp Terminal

- All movements on and off
- Design Vehicle: WB-67 (AASHTO 2004, US)

Scale: 1"=60'



IC 43 SB Ramp Terminal

- All movements to/from the north
- Design Vehicle: WB-67 (AASHTO 2004, US)

Scale: 1"=50'



**I-5 Exits 40 and 43 (Gold Hill)
Interchange Area Management Plans**

**DRAFT Technical Memorandum #3
Appendix C: Hazardous Materials**

Prepared for

Oregon Department of Transportation, Region 3
3500 NW Stewart Parkway
Roseburg, Oregon 97470

Prepared by

David Evans and Associates, Inc.
2100 SW River Parkway
Portland, Oregon 97201

June 2013

Incident City	Incident Date	Incident Number	Incident Street Number	Incident Street	Incident Street Name	Service Name	Incident Type	Remarks
GOLD HILL	3/18/2010	1000322	450	INTERSTATE 5 NB	ROGUE RIVER RFP	Oil or other combustible liquid spill	S - Walk-in report (Paul Netters) of a diesel fuel spill on the I-5 NB off ramp at Exit 45B. O - Small amount, estimated at about one gallon, of diesel has been spilled and tracked by traffic on the off ramp. Most of the product has evaporated. Assessed as not being a hazard. A - Good intent, small spill evaporating. P - Respond, investigate, return. NOTE: J. Webb later took a phone call from ODOT reporting there had been a larger spill about MP 43 that had absorbent spread on it. ODOT was looking for any information we might have that would help locate the person responsible for the spill.	
Gold Hill	1/16/2010	1000199	496	JUANITA	JACKSON CO FD #3	Gas leak (natural gas or LPG)	RESPONDED TO A NATURAL GAS LEAK. ARRIVED ON SCENE AND NOTED A NEXT DOOR BARBEQUE WITH FOOD AND GAS ODOR FROM IT. R/P SAID THEY COULDN'T SMELL ANYTHING AFTER OUR ARRIVAL. ODOR FROM NEIGHBORS WENT AWAY, NO MORE ODOR NOTED. ALARM TERMINATED.	
GOLD HILL	8/18/2011	1101071	205	ROGUE RIVER	ROGUE RIVER RFP	Gas leak (natural gas or LPG)	CALLED TO A REPORT OF A SMELL OF GAS IN A CLOSED BUILDING. 7400 HAD NO RESPONDING UNIT DUE TO THE NORTH RIVER ROAD FIRE. 6600 WAS REQUESTED TO RESPOND BUT COULD NOT RESPOND A UNIT DO TO NO PERSONNEL. AV ISTA RESPONDED AND HANDLED THE INCIDENT. HM 8 RESPONDED AT THE REQUEST OF JACKSON COUNTY FIRE DIST NO 3 TO I-5 AT MP 40 GOLD HILL EXIT. FOUND ACID TANK TRUCK PARKED ON THE ROADSIDE AT EXIT 40, I-5 NB. SMALL WHITE VAPOR CLOUD WAS OBSERVED EMITTING FROM TOP CENTER OF TRAILER. HM 8 MADE ENTRY & DETERMINED THE LEAK WAS AT A FITTING IN THE VAPOR RECOVERY TUBE OF THE TOP FILLING PIPING. HM 8 PATCHED THE LEAK WITH A NEOPRENE PATCH AND STAINLESS STEEL BOND. ASSISTED ODOT & OSP IN MOVING THE VEHICLE TO A SECURE LOCATION AT I-5 MP 66, ODOT GRAVEL PIT. VEHICLE WAS SECURED & GUARDED BY ODOT PERSONNEL. MET WITH ODOT, OSP, KVS & FIRST STRIKE ENVIRONMENTAL AT MP 66 AT 0900. ASSISTED IN DEVELOPING TRANSPORT PLAN & CONTINGENCY PLANS TO GET THE LOAD TO ITS DESTINATION IN TACOMA, WA. ADDITIONAL TIME NOT NOTED ON FRONT IN TIME SECTION IS 6.5 HRS.	
GOLD HILL	10/8/2001	10236	I-5 AT MP 40		HAZMAT TEAM SOUTHERN O	HYDROGEN FLUORIDE		

Incident City	Incident Date	Incident Number	Incident Street Number	Incident Street Name	Service Name	Incident Type	Remarks
GOLD HILL							REPORTED MVA UNKNOWN IF INJURY ALSO REPORTED THAT IT WAS A MOTOR HOME WHICH WAS ON FIRE. DISPOSITION: RESPONDED 1 ENGINE WITH 1 ++ RESCUE WITH 3 CODE 3 TO SCENE. UPON ARRIVAL, WE FOUND A MOTOR HOME WHICH HAD DRIFTED OFF SIDE OF ROAD STRUCK A LARGE ROAD SIGN & THEN HIT BEGINNING OF A GUARD RAIL. FUEL TANK & LPG TANK WERE DISLODGED FROM UNDERCARRIAGE. FUEL TANK HAD BEEN PUNCTURED & WAS LEAKING ONTO SHOULDER GRAVEL. LPG TANK WAS CRACKED AT VALVE STEM NECK & CONTENTS WERE ESCAPING INTO ATMOSPHERE. ALSO NOTE MOTOR HOME WAS ON TOP OF LPG REAR DUALS. BYSTANDERS STATE LPG TANK WAS ON FIRE, BUT THEY EXTINGUISHED IT WITH FIRE EXTINGUISHERS. DRIVER STATED HE WAS NOT INJURED. OUR ACTIONS INCLUDED ESTABLISHING A COMMAND HOT & WARM ZONES. PERSONNEL PULLED A PRECONNECT, 2 PERSONNEL PUT ON SCBA'S & HOSED AREA & DISSIPATE LEAKING PROPANE WITH WATER. NB TRAFFIC WAS CLOSED BY OSP & HWY DEPT. A WATER TENDER WAS ORDERED FOR WATER SUPPLY. IT RESPONDED CODE 1 WITH 2 PERSONNEL. CREWS WERE ROTATED ON HOSE LINE BECAUSE OF HEAT. WE ALSO REQUESTED AN ENGINE FROM 6600 TO STANDBY AT OUR STATION & AN ENGINE WITH 3 PERSONNEL & SPARE BA BOTTLES TO SCENE CODE 1. WE THEN MADE CONTACT DIESEL FUEL WAS RELEASED WHEN MAIN FUEL TANK RUPTURED DURING A MOTOR VEHICLE ACCIDENT. THERE WERE FOUR FUEL TANKS. ALL TANKS FED MAIN TANK VIA ELECTRIC FUEL PUMP. DIESEL FUEL RELEASED INTO DITCH. OSP CONTACTED OARS & DEQ. DEQ CONTACTED A CLEAN UP COMPANY. VEHICLE WAS RECOVERED BY TOW COMPANY. SEE STATE MARSHAL REPORT FOR ADDITIONAL INFO.
GOLD HILL	6/23/1989	890269	I-5 N @ MP #43	ROGUE RIVER RFPD		GASOLINE	
GOLD HILL	4/8/1992	920208	I-5 NB MP #48	ROGUE RIVER RFPD		DIESEL FUEL	
	7/13/1989	890292	I-5 NEAR MP #38	JACKSON CO RFPD #3		DRUG LAB CHEMICALS	THIS INCIDENT WAS A MOTOR VEHICLE ACCIDENT. A FORD VAN TRANSPORTING CHEMICALS INVOLVED IN DRUG LABS. THERE WAS EXPLOSION & FIRE IN THE VAN ON IMPACT. TWO OCCUPANTS OF THE VAN PULLED FREE; ONE FLED THE SCENE THE OTHER RECEIVED BURNS & TRAUMA INJURIES. ONLY KNOWN CHEMICAL INVOLVED WAS SOME QUANTITY OF RED PHOSPHOROUS. VEHICLE & CONTENTS WERE TOWED TO OSP LOT ON HWY 99 IN MEDFORD.

Incident City	Incident Date	Incident Number	Incident Street Number	Incident Street Name	Service Name	Incident Type	Remarks
GOLD HILL	7/18/1991	910333		I-5 SB @ EXIT 43	ROGUE RIVER RFPD	GASOLINE	RESPONDED TO A ROLL OVER MVA.ON ARRIVAL WE FOUND A VEHICLE ON ITS ROOF-APPROX. 5 GAL GASOLINE LEAKED OUT OF THE FILL SPOUT ON THE PASSING LANE OF INTERSTATE.THE FUEL WAS EVAPORATED PRIOR TO FD ARRIVAL.LEFT SCENE.NO ACTION TAKEN.
GOLD HILL	4/7/1990	900100		I-5 SOUTH @ MP#42	ROGUE RIVER RFPD	GASOLINE	THE OWNER OF THE VEHICLE WAS NOT TO BE FOUND. THE GASOLINE WAS HEADED FOR THE DRAINAGE DITCH. THE FUEL WAS DIKED UP & STATE POLICE NOTIFIED WHO STATED THEY WOULD IN RETURN WOULD NOTIFY THE ROAD DEPARTMENT. THE FUEL TANK WAS PLUGGED & OSP HAD THE VEHICLE TOWED AWAY.
GOLD HILL	8/20/1991	910440		MP#40 I-5 SB	JACKSON CO RFPD #3	DUPLICATING FLUID	

Oregon DEQ Facility Profiler 2.0

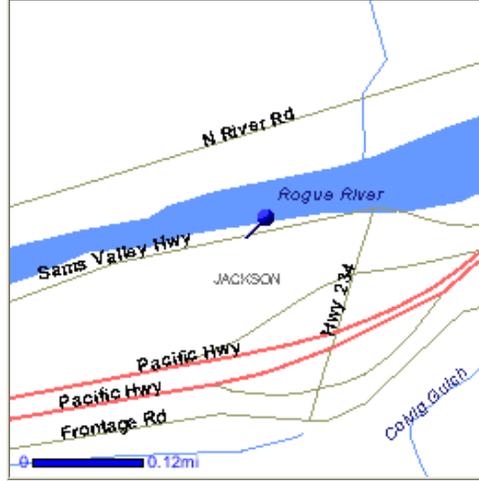
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Facility Summary Report

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Maps



Facility / Site Information for Location 15854

Facility/Site Name:	DODD, DENNIS & PEGGY	Latitude:	42° 25' 46.9"
Address:	97 ROGUE RIVER HIGHWAY	Longitude:	-123° 5' 55.7"
City State Zip:	GOLD HILL OR 97525	Location Accuracy:	HIGH
		Last Updated:	3/21/2002 4:35:00 PM

Aliases

DODD, DENNIS & PEGGY	WQSIG	THE OLD BARN RESTAURANT	WQSIG
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Geographic Features

Township:	T36S-R3W-S19	Congress Dist:	2	Forest Type:	
County:	JACKSON	OR Senate Dist:	02	Vegetation:	Siskiyou mixed evergreen forest
Watershed:	MIDDLE ROGUE	OR House Dist:	04	Agricultural Land:	N/A
Drinking Water Source:	CITY OF ROGUE RIVER				

Oregon DEQ Program Information

[Water Quality Permits \(WQSIG\)](#)

File Number	Permit Number	Start date	Effective Date	Review Date	Permit Type	Permit SubType	Comments	Status	Detail Information ¹	Permit Status
109828	15750	04/21/1998	04/24/1998	05/31/2000	DOMESTIC	WPCF General Permit - Domestic on-site sewage system	GEN52A Recirculating gravel filter on-site system less than 5,000 gpd	Active Admin extended	SIS Detail Report	Permit Status

SIC CODE	SIC Description	PRIMARY
4952	SEWERAGE SYSTEMS	N
5812	EATING PLACES	Y

¹ Linked reports may be unavailable from 9:00pm to 7:00am PST due to system maintenance.

² DEQ does not maintain air discharge permit information for Lane County.

More Information on this location

[Oregon DEQ Neighborhood Info \(by region/county\)](#)
[See wells in the same Township Range Section from the Oregon Water Resources Department Well logs Application](#)
[See county's scanned assessor maps through ORMAP](#)

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Oregon DEQ Facility Profiler 2.0

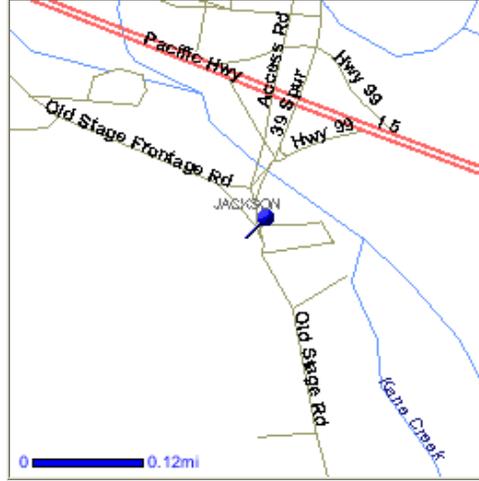
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Facility Summary Report

[Facility Profiler](#) [Print Report](#)

Maps



Facility / Site Information for Location 18190

Facility/Site Name:	DARDANELLE SERVICE	Latitude:	42° 25' 25.3"
Address:	9625 OLD STAGE RD	Longitude:	-123° 2' 35.5"
City State Zip:	CENTRAL POINT OR 97502	Location Accuracy:	HIGH
		Last Updated:	5/18/2007 4:27:07 PM

Aliases

DARDANELLE SERVICE	LUST	DARDANELLES COMMUNITY STORE	UST
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Geographic Features

Township:	T36S-R3W-S22	Congress Dist:	2	Forest Type:	
County:	JACKSON	OR Senate Dist:	02	Vegetation:	Siskiyou mixed evergreen forest
Watershed:	MIDDLE ROGUE	OR House Dist:	04	Agricultural Land:	N/A
Drinking Water Source:	CITY OF ROGUE RIVER				

Oregon DEQ Program Information

[Leaking Underground Storage Tanks \(LUST\)](#)

Log Number	Received	Cleanup Initiated	Cleanup Complete	Type	Heating Oil Tank	UST Facility ID	Status	Detail Information ¹
15-97-0068		09/08/1997		REGULATED		359	CLEANUP_COMPLETED	LUST Site Report

[Underground Storage Tanks \(UST\)](#)

UST Facility ID	Permit Number	Installed	Content	Gallons	Status	Reg Cert NO
359	BECCE	09/01/1997	Gasoline	3000	Active	15-359-2012-OPER
359	BECCF	09/01/1997	Gasoline	9000	Active	15-359-2012-OPER

SIC CODE	SIC Description	PRIMARY
5541	GASOLINE SERVICE STATIONS	N

¹ Linked reports may be unavailable from 9:00pm to 7:00am PST due to system maintenance.

² DEQ does not maintain air discharge permit information for Lane County.

More Information on this location

[Oregon DEQ Neighborhood Info \(by region/county\)](#)
[See wells in the same Township Range Section from the Oregon Water Resources Department Well logs Application](#)
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Oregon DEQ Facility Profiler 2.0

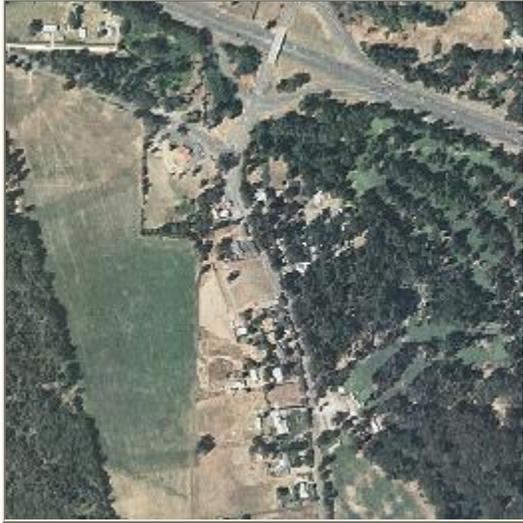
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Facility Summary Report

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Maps



Facility / Site Information for Location 117780

Facility/Site Name:	DARDANELLES COMMUNITY STORE, LLC	Latitude:	42° 25' 22.4"
Address:	9625 OLD STAGE RD	Longitude:	-123° 2' 32.6"
City State Zip:	CENTRAL POINT OR 97502-9645	Location Accuracy:	HIGH
		Last Updated:	10/18/2010 9:28:03 AM

Aliases

Dardanelles Community Store, LLC TRAACS

Geographic Features

Township:	T36S-R3W-S22	Congress Dist:	2	Forest Type:	
County:	JACKSON	OR Senate Dist:	02	Vegetation:	Siskiyou mixed evergreen forest
Watershed:	MIDDLE ROGUE	OR House Dist:	04	Agricultural Land:	N/A

Drinking Water Source:

Oregon DEQ Program Information

[Air Quality Permits \(TRAACS\)](#)

Air Quality Permit	Start Date	Effective Date	Review Date	Closed Date	Status	Type	Sub Type	Detail Information ¹	EPA Number
15-9641-22-01	12/08/2010	10/18/2010	03/01/2020		Active	ACDP	General	AQ Report	OR02909641

SIC CODE	SIC Description	PRIMARY
5541	GASOLINE SERVICE STATIONS	Y

¹ Linked reports may be unavailable from 9:00pm to 7:00am PST due to system maintenance.

² DEQ does not maintain air discharge permit information for Lane County.

More Information on this location

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[See wells in the same Township Range Section from the Oregon Water Resources Department Well logs Application](#)
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