

I-5 Exit 40 Improvement Concepts – Summary Evaluation Matrix

ID	Location	General Description	Purpose	Traffic Operations and Safety ^{1,2,3}	Basic Roadway Geometry and Right of Way ⁴	Environmental and Land Use ⁵	Cost Opinion ⁶
INTERCHANGE RAMP IMPROVEMENTS							
R-1	Southbound Off Ramp	Extend length of southbound off ramp	Provide adequate deceleration distance	<ul style="list-style-type: none"> Off Rvamp ADT (vpd): Existing - 750, Future (2038) - 900 1 fatal crash during a 5-year analysis period No change to ramp capacity/operations Would provide additional queue storage Would enhance driver comfort during deceleration 	<ul style="list-style-type: none"> Off ramp has single 16' lane Current deceleration length is 280' and taper is 185' Desired deceleration length is 500' and taper is 400' Includes guardrail Improvements anticipated to be within ODOT ROW 	<ul style="list-style-type: none"> Existing zoning is rural residential, and EFU Nearby Kane Creek and Ditch/Irrigation canal Would require extension of existing box culvert and modifications to the irrigation canal Additional stormwater treatment may be needed with increased impervious surface No socioeconomic impacts anticipated 	<ul style="list-style-type: none"> \$1,470,000 Does not include utility relocation, hazardous materials, or ROW
R-2	Southbound On Ramp	Extend length of southbound on ramp	Provide adequate acceleration distance	<ul style="list-style-type: none"> On Ramp ADT (vpd): Existing - 1,800, Future (2038) - 2,250 3 crashes during a 5-year analysis period; minor injury (1) PDO (2) No change to ramp capacity or I-5 merge operations Additional length (compared to today) for larger vehicles to get up to speed 	<ul style="list-style-type: none"> On ramp has single 17' lane Current acceleration length is 700' and taper is 225' Desired acceleration length is 1,100' and taper is 300' Improvements anticipated to be within ODOT ROW 	<ul style="list-style-type: none"> Existing zoning is EFU No nearby environmental resources Additional stormwater treatment may be needed with increased impervious surface No socioeconomic impacts anticipated 	<ul style="list-style-type: none"> \$850,000 Does not include utility relocation, hazardous materials, or ROW
R-3	Southbound Ramp Terminal	Modify northeast corner of ramp terminal intersection to better accommodate truck movements (EBL, SBL)	Improve turning radii to accommodate WB-67	<ul style="list-style-type: none"> Off Ramp ADT (vpd): Existing - 750, Future (2038) - 900 Access Rd ADT (vpd): Existing - 2,550-3,800, Future (2038) - 3,200-4,750 No crashes reported during the 5-year analysis period No change to roadway capacity/operations Would improve overall safety Would make truck turning and acceleration easier 	<ul style="list-style-type: none"> Off ramp has single 16' lane Access Rd has paved surface of 24-34' Constructible within the available ROW (northeast corner) Significant fill needed for steep slopes on Access Road and the southbound on ramp 	<ul style="list-style-type: none"> Existing zoning is EFU Would facilitate access to future intermodal hub, interchange commercial and/or nearby industrial development No nearby environmental resources Additional stormwater treatment may be needed with increased impervious surface No socioeconomic impacts anticipated 	<ul style="list-style-type: none"> \$110,000 Does not include utility relocation, hazardous materials, or ROW
R-4	Northbound Off Ramp	Extend length of northbound off ramp	Provide adequate deceleration distance	<ul style="list-style-type: none"> Off Ramp ADT (vpd): Existing - 2,300, Future (2038) - 2,900 5 crash during a 5-year analysis period resulting in minor injuries (4) and PDO No change to ramp capacity/operations Would provide additional queue storage Would enhance driver comfort during deceleration 	<ul style="list-style-type: none"> Off ramp has single 16' lane Current deceleration length is 200' and no taper Desired deceleration length is 460' and taper 360' Includes guardrail Improvements anticipated to be within ODOT ROW 	<ul style="list-style-type: none"> Existing zoning is rural residential Nearby Kane Creek, no impacts anticipated Additional stormwater treatment may be needed with increased impervious surface No socioeconomic impacts anticipated 	<ul style="list-style-type: none"> \$620,000 Does not include utility relocation, hazardous materials, or ROW
R-5	Northbound On Ramp	Extend length of northbound on ramp	Provide adequate acceleration distance	<ul style="list-style-type: none"> On ramp ADT (vpd): Existing - 1,000, Future (2038) - 1,300 1 crash during a 5-year analysis period; PDO No change to ramp capacity or I-5 merge operations Additional length (compared to today) for larger vehicles to get up to speed 	<ul style="list-style-type: none"> On ramp has single 17' lane Current acceleration length is 765' and taper is 190' Desired acceleration length is 1,100' and taper is 295' Additional ROW needed for improvement Includes guardrail 	<ul style="list-style-type: none"> Existing zoning is rural residential ROW needed from adjacent lands Nearby Kane Creek, no impacts anticipated Additional stormwater treatment may be needed with increased impervious surface No socioeconomic impacts anticipated 	<ul style="list-style-type: none"> \$1,100,000 Does not include utility relocation, hazardous materials, or ROW
R-6	Northbound Ramp Terminal	Modify southwest corner of ramp terminal intersection to better accommodate truck movements (WBL)	Improve turning radii to accommodate WB-67	<ul style="list-style-type: none"> Off Ramp ADT (vpd): Existing - 2,300, Future (2038) - 2,900 Access Rd ADT (vpd): Existing - 3,800-5,450, Future (2038) - 4,750-6,800 7 crashes during a 5-year analysis period; (1 serious injury) Observed crash rate exceeds statewide critical crash rate No change to roadway capacity/operations Would improve overall safety Would make truck turning and acceleration easier 	<ul style="list-style-type: none"> Off ramp has single 16' lane Access Rd has paved surface of 24-34' Includes guardrail Constructible within the available ROW (southwest corner) 	<ul style="list-style-type: none"> Existing zoning is rural residential Would facilitate access to future intermodal hub, interchange commercial and/or nearby industrial development No nearby environmental features Additional stormwater treatment needed with increased impervious surface No socioeconomic impacts anticipated 	<ul style="list-style-type: none"> \$160,000 Does not include utility relocation, hazardous materials, or ROW

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INTERSECTION IMPROVEMENTS							
I-1	2 nd Ave (OR 99)/ Blackwell Rd/ Access Rd	Modify intersection <ul style="list-style-type: none"> Option A: Modify traffic control to all-way STOP Option B: Modify traffic control to all-way STOP and add left-turn lane 	Better facilitate turning movements and pedestrian crossing	<ul style="list-style-type: none"> Blackwell Rd ADT (vpd): Existing – 2,500, Future (2038) – 3,500 2nd Ave ADT (vpd): Existing – 5,800, Future (2038) – 6,500 Access Rd ADT (vpd): Existing – 5,500, Future (2038) – 6,800 Operations: Existing NB V/C=0.55, Future NB V/C=0.76 4 crashes during a 5-year analysis period including 3 minor injury Roadway user needs vary at intersection: rural section (to east), narrow bridge (to west), heavy recreational traffic, all modes <p><u>Option A:</u></p> <ul style="list-style-type: none"> All-Way STOP: Existing NB V/C=0.44, Future NB V/C=0.55 Stopping traffic on 2nd Ave/Blackwell Rd may facilitate posted speed transition but may result in more rear-end collisions Pedestrian/bicycle crossings easier with traffic stopped on 2nd Ave/Blackwell Rd <p><u>Option B:</u></p> <ul style="list-style-type: none"> All-Way STOP: Existing NB V/C=0.44, Future V/C=0.55 Left-turn lane criteria evaluated and met (ODOT-TPAU) Left-turn lane on Blackwell Rd improves safety by separating turns from through traffic Other benefits and concerns with all-way STOP same as Option A 	<ul style="list-style-type: none"> Existing travel lanes: 12' (all roadways) Existing shoulder width: 1-2' (all roadways) Existing paved width: 24'-28' (all roadways); ROW: 80' (2nd Ave), 83' (Blackwell Rd), 40' (Access Rd) <p><u>Option A:</u></p> <ul style="list-style-type: none"> Same as above <p><u>Option B:</u></p> <ul style="list-style-type: none"> Add 14' left-turn lane on Blackwell Rd Widen shoulders to 8' on Blackwell Rd and 12' on 2nd Ave Assumes equal widening to each side Significant fill needed for steep slopes on both sides of 2nd Ave/Blackwell Rd for turn lane and shoulder widening Would require restriping and additional signage 	<ul style="list-style-type: none"> Existing zoning is rural residential and EFU No environmental resource in immediate vicinity <p><u>Option A:</u></p> <ul style="list-style-type: none"> No land use or environmental impacts Improved pedestrian access generally benefits socioeconomically disadvantaged populations <p><u>Option B:</u></p> <ul style="list-style-type: none"> Potential land use impacts (EFU lands) – may need to consider Statewide Planning Goals No nearby natural elements or environmental impacts identified Additional stormwater treatment may be needed with increased impervious surface Improved pedestrian access generally benefits socioeconomically disadvantaged populations 	<ul style="list-style-type: none"> Option A: \$10,000 Option B: \$850,000 Does not include utility relocation, hazardous materials, or ROW
I-2	2 nd Ave (OR 99)/ Blackwell Rd/ Access Rd	Modify southwest corner of intersection to better accommodate truck movements (EBR)	Improve turning radii to accommodate WB-67	<ul style="list-style-type: none"> Blackwell Rd ADT (vpd): Existing – 2,500, Future (2038) – 3,500 2nd Ave ADT (vpd): Existing – 5,800, Future (2038) – 6,500 Access Rd ADT (vpd): Existing – 5,500, Future (2038) – 6,800 4 crashes during a 5-year analysis period including 3 minor injury No change to roadway capacity/operations Would improve overall safety Would make truck turning and acceleration easier 	<ul style="list-style-type: none"> Existing travel lanes: 12' (all roadways) Existing shoulder width: 1-2' (all roadways) Existing paved width: 24'-28' (all roadways); ROW: 80' (2nd Ave), 83' (Blackwell Rd), 40' (Access Rd) Appears constructible within the available ROW Includes guardrail Significant fill needed for steep slopes: Access Road and 2nd Avenue (OR 99) 	<ul style="list-style-type: none"> Existing zoning is rural residential, and EFU Potential impacts to adjacent rural residential lands from fill Would facilitate access to future intermodal hub, interchange commercial and/or nearby industrial development Additional stormwater treatment may be needed with increased impervious surface No socioeconomic impacts anticipated 	<ul style="list-style-type: none"> \$225,000 Does not include utility relocation, hazardous materials, or ROW
I-3	Access Rd/ Old Stage Rd	Modify northwest and southwest corners of intersection to better accommodate truck movements (SBR, NBL, and EBR)	Improve turning radii to accommodate WB-67	<ul style="list-style-type: none"> Access Rd ADT (vpd): Existing - 2,550, Future (2038) – 3,200 Old Stage Rd ADT (vpd): Existing - 400, Future (2038) - 450 No crashes reported during the 5-year analysis period No change to roadway capacity/operations Would improve overall safety Would make truck turning and acceleration easier 	<ul style="list-style-type: none"> Existing travel lanes: 12' (Access Rd), 10' (Old Stage Rd) Existing shoulder: 0-5' (Access Rd), 0' (Old Stage Rd) Existing paved width: 24-34' (Access Rd), 21' (Old Stage Rd) ROW: 70'+ (Access Rd), 65'+ (Old Stage Rd) Constructible within the available ROW <p><i>Note: Geometric data from TM 3, based on ODOT Roadway Inventory report (2012). Since then, intersection and roadway have been modified as part of the Kane Creek Fish Passage project</i></p>	<ul style="list-style-type: none"> Existing zoning is EFU, interchange commercial Potential impacts to adjacent lands (EFU) – may need to consider Statewide Planning Goals Would facilitate access to interchange commercial and/or nearby industrial development Nearby Kane Creek, though no environmental impacts anticipated Additional stormwater treatment may be needed with increased impervious surface No socioeconomic impacts anticipated 	<ul style="list-style-type: none"> Northwest: \$165,000 Southwest: \$115,000 Does not include utility relocation, hazardous materials, or ROW

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MULTIMODAL IMPROVEMENTS							
MM-1	2 nd Avenue / Blackwell Road (OR 99) Bridge (ID 00576)	Enhance multimodal access between I-5 and the City of Gold Hill <u>Option A:</u> ▪ Add sharrows and signage to travel lanes <u>Option B:</u> ▪ Widen existing cantilevered path (south side) <u>Option C:</u> ▪ Option B ▪ Additional cantilevered path on the north side <u>Option D:</u> ▪ Build a parallel structure	Provide facilities for all modes of travel	<ul style="list-style-type: none"> 2nd Ave ADT (vpd): Existing – 5,800, Future (2038) – 6,500 No documented crash patterns along 2nd Avenue All options intended to be consistent with the Oregon Bicycle and Pedestrian Design Guidelines recommendations <u>Option A</u> <ul style="list-style-type: none"> Would increase driver awareness of non-auto travel Would require a condition C approval for sharrow installation <u>Option B</u> <ul style="list-style-type: none"> Would improve existing separated facilities Could attract more bicycle usage with wider facilities <u>Option C</u> <ul style="list-style-type: none"> Would provide facilities to cross on both sides of the bridge Same benefits as Option B but more extensive Would reduce need for pedestrians and bicyclists to cross the highway to access the multi-use path on south side thus Greater potential safety benefits than Option B <u>Option D</u> <ul style="list-style-type: none"> Would separate modes of traffic by providing dedicated facilities to cross the river for non-motorized users Would increase safety for vulnerable users 	<ul style="list-style-type: none"> Existing travel lanes: 11' Existing shoulder width: 1' Existing cantilever structure width: 6' <u>Option A</u> <ul style="list-style-type: none"> No change to roadway <u>Option B</u> <ul style="list-style-type: none"> No change to roadway Cantilevered path widening from 6' to 8' Widening has not been assessed for structural viability Improvements anticipated to be within ODOT ROW <u>Option C</u> <ul style="list-style-type: none"> Same as Option B Additional cantilevered path has not been assessed for structural viability May need easement from Southern Pacific Railroad for north side cantilever <u>Option D</u> <ul style="list-style-type: none"> No change to roadway or existing bridge Separate facilities for non-motorized traffic New structure assumed to 250' long, 15' wide (10' path, 2' shy each side, and railing) Significant ROW impacts, to be determined at time of design Would require new connections to existing roadways 	<ul style="list-style-type: none"> Existing zoning is rural residential near existing bridge with EFU and rural residential to north <u>All Options:</u> <ul style="list-style-type: none"> Improved pedestrian access generally benefits socioeconomically disadvantaged populations <u>Option A:</u> <ul style="list-style-type: none"> No impacts anticipated <u>Option B:</u> <ul style="list-style-type: none"> Would affect the aesthetics and historical nature of the bridge on the south side Would require work over the Rogue River and freshwater emergent wetlands <u>Option C:</u> <ul style="list-style-type: none"> Additional stormwater treatment may be needed with increased impervious surface Same impacts as Option B but more extensive Potential land use impacts with added path <u>Option D:</u> <ul style="list-style-type: none"> Potential land use impacts; consideration of Statewide Planning Goals may be needed Would require work over the Rogue River and freshwater emergent wetlands Air quality and noise analysis may be needed 	<ul style="list-style-type: none"> <u>Option A:</u> \$10,000 <u>Option B:</u> \$400,000 <u>Option C:</u> \$700,000 <u>Option D:</u> \$1,400,000 Does not include utility relocation, hazardous materials, or ROW Cost opinions for bridge construction (Options B, C and D) include work bridge and falsework considerations; but do not include 50% E & C, roadway, TP&D costs, or inflation
MM-2	Blackwell Road (OR 99)	Widen to provide a multiuse path between Access Road and the KOA campground	Provide facilities for all modes of travel, enhance access to the City, and improve safety	<ul style="list-style-type: none"> Blackwell Rd ADT (vpd): Existing – 2,500, Future (2038) – 3,500 No change in vehicular capacity or operations Multiuse path separates traffic modes improving overall safety Consistent with the Oregon Bicycle and Pedestrian Design Guidelines recommendations 	<ul style="list-style-type: none"> Existing travel lanes: 12' Existing shoulder width: 2' Existing paved width: 28' ROW: 83' 10' multiuse path on south side with 3' gravel shoulders Steep drainage ditches May require ROW acquisition 	<ul style="list-style-type: none"> Existing zoning rural residential Potential impacts to adjacent lands No nearby environmental features Additional stormwater treatment may needed with increased impervious surface Improved pedestrian access generally benefits socioeconomically disadvantaged populations 	<ul style="list-style-type: none"> \$215,000 Does not include utility relocation, hazardous materials, or ROW
MM-3	2 nd Ave (OR 99)/ Blackwell Rd/ Access Rd	Improve multimodal system ▪ Construct multiuse path from Upper River Road to Access Road under east end of bridge ▪ Provide access to bridge crossing (connection)	Enhance access to the City of Gold Hill and across Blackwell Road (OR 99)	<ul style="list-style-type: none"> Blackwell Rd ADT (vpd): Existing – 2,500, Future (2038) – 3,500 2nd Ave ADT (vpd): Existing – 5,800, Future (2038) – 6,500 Access Rd ADT (vpd): Existing – 5,500, Future (2038) – 6,800 4 crashes during a 5-year analysis period including 3 minor injury No non-motorized crashes during a 5-year analysis period No change to roadway capacity/operations Project would connect other multimodal facilities Multiuse path separates traffic modes and improves safety Improved level of service/experience for non-motorized users Consistent with the Oregon Bicycle and Pedestrian Design Guidelines recommendations 	<ul style="list-style-type: none"> Existing travel lanes: 12' (all roadways) Existing shoulder width: 1-2' (all roadways) Existing paved width: 24'-28' (all roadways); ROW: 80' (2nd Ave), 83' (Blackwell Rd), 40' (Access Rd) 10' multiuse path on south side with 3' gravel shoulders Connection path: 7' wide, 250' long with tubular steel railing and guardrail Additional ROW needed both for multiuse path and connection path; extent unknown until design phase 	<ul style="list-style-type: none"> Existing zoning is rural residential, and EFU Potential land use impacts; consideration of Statewide Planning Goals may be needed Near Rogue River, fish passage and freshwater emergent wetlands need to be considered Additional stormwater treatment may be needed with increased impervious surface Improved pedestrian access generally benefits socioeconomically disadvantaged populations 	<ul style="list-style-type: none"> Multiuse path: \$301,000 Connection path: \$203,000 Does not include utility relocation, hazardous materials, or ROW

Notes:

- Traffic operations were evaluated for concepts that were identified to address operational deficiencies. The operational assessment focuses on the volume-to-capacity (v/c) ratio for the 2011 existing and 2035 future condition.
- At intersections where potential changes in traffic control or turn lanes were considered, the procedures in the ODOT Analysis Procedures Manual (APM) were followed.
- Some improvements are focused on addressing safety concerns or may address safety as well as traffic operations deficiencies. Crash patterns from the six-year analysis period (2005 through 2010) are discussed for those improvements that address safety.
- Illustrations were developed for concepts that involve infrastructure improvements.
- Impacts to resources were qualitatively assessed based on the data assembled for the environmental and land use reconnaissance. The level of analysis of the study area is designed to identify those areas judged to have considerable potential for conflict.
- Rough order of magnitude cost opinions were developed using present day dollars and are consistent with standard estimating methods. The estimates include a contingency factor but do not include right-of-way costs. The cost opinions are intended to help differentiate alternatives by approximating the relative costs of each project.

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INTERCHANGE RAMP IMPROVEMENTS							
R-1	Southbound Off Ramp	Extend length of southbound off ramp	Provide adequate deceleration distance	<ul style="list-style-type: none"> ▪ Off Ramp ADT (vpd): Existing - 500, Future (2038) - 600 ▪ 4 crash during a 5-year analysis period, resulted in minor injury (2), PDO (2) ▪ No change to ramp capacity/operations ▪ Would provide additional queue storage ▪ Would enhance driver comfort during deceleration 	<ul style="list-style-type: none"> ▪ Off ramp has single 16' lane ▪ Current deceleration length is 280' ▪ Desired deceleration length is 345' ▪ Improvements anticipated to be within ODOT ROW 	<ul style="list-style-type: none"> ▪ Existing is rural residential, rural light industrial, and EFU ▪ Nearby West Valley Wildlife Area; no impacts anticipated ▪ No ROW impacts ▪ Unknown hazardous waste site near off ramp diverge from I-5; additional investigation needed ▪ Additional stormwater treatment may be needed with increased impervious surface ▪ No socioeconomic impacts anticipated 	<ul style="list-style-type: none"> ▪ \$370,000 ▪ Does not include utility relocation, hazardous materials, or ROW
R-2	Southbound Ramp Terminal	Modify southwest corner of ramp terminal intersection to better accommodate truck movements (EBR)	Improve turning radii to accommodate WB-67	<ul style="list-style-type: none"> ▪ Off Ramp ADT (vpd): Existing - 500, Future (2038) - 600 ▪ Main St ADT (vpd): Existing – 250-700, Future (2038) – 300-900 ▪ No crashes reported during the 5-year analysis period ▪ No change to roadway capacity/operations ▪ Would improve overall safety ▪ Would make truck turning and acceleration easier 	<ul style="list-style-type: none"> ▪ Off ramp is single 16' lane ▪ Widen section of roadway between the southbound off ramp and Profetta Ln up to 28' ▪ Constructible within the available ROW (southwest corner) 	<ul style="list-style-type: none"> ▪ Existing zoning is EFU ▪ Would facilitate access to interchange commercial and light industrial lands on Frontage Rd/Profetta Ln ▪ Nearby West Valley Wildlife Area, no impacts anticipated ▪ Additional stormwater treatment needed with increased impervious surface ▪ No socioeconomic impacts anticipated 	<ul style="list-style-type: none"> ▪ <u>\$150,000</u> ▪ Does not include utility relocation, hazardous materials, or ROW
R-3	Northbound Off Ramp	Extend length of northbound off ramp	Provide adequate deceleration distance	<ul style="list-style-type: none"> ▪ Off Ramp ADT (vpd): Existing - 300, Future (2038) - 350 ▪ 0 crashes during a 5-year analysis period ▪ No change to ramp capacity/operations ▪ Would provide additional queue storage ▪ Would enhance driver comfort during deceleration 	<ul style="list-style-type: none"> ▪ Off ramp has single 16' lane ▪ Current deceleration length is 305' and taper is 187' ▪ Desired deceleration length is 345' and taper is 215' ▪ Includes guardrail ▪ Improvements anticipated to be within ODOT ROW 	<ul style="list-style-type: none"> ▪ Existing zoning is EFU ▪ Nearby Rogue River; no impacts anticipated ▪ Additional stormwater treatment may be needed with increased impervious surface ▪ No socioeconomic impacts anticipated 	<ul style="list-style-type: none"> ▪ <u>\$550,000</u> ▪ Does not include utility relocation, hazardous materials, or ROW
R-4	Northbound Ramp Terminal (I-5 And Main Street)	Modify northeast corner of ramp terminal intersection to better accommodate truck movements (WBR)	Improve turning radii to accommodate WB-67	<ul style="list-style-type: none"> ▪ Off Ramp ADT (vpd): Existing - 300, Future (2038) - 350 ▪ Main St ADT (vpd): Existing – 750-1,250, Future (2038) – 900-1,500 ▪ No crashes reported during the 5-year analysis period ▪ No change to roadway capacity/operations ▪ Would improve overall safety ▪ Would make truck turning and acceleration easier 	<ul style="list-style-type: none"> ▪ Off ramp is single 16' lane ▪ Widen section of roadway between the northbound off ramp and Rogue River Hwy up to 17' ▪ Constructible within the available ROW (northeast corner) 	<ul style="list-style-type: none"> ▪ Existing zoning is interchange commercial and EFU ▪ Would facilitate access to interchange commercial and light industrial lands on Frontage Rd/Profetta Ln ▪ Nearby Rogue River and freshwater emergent wetlands; no impacts anticipated ▪ Additional stormwater treatment may be needed with increased impervious surface ▪ No socioeconomic impacts anticipated 	<ul style="list-style-type: none"> ▪ <u>\$60,000</u> ▪ Does not include utility relocation, hazardous materials, or ROW

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INTERSECTION IMPROVEMENTS							
I-1	Rogue River Highway (OR 99) at Main Street	Enhance pedestrian access and modify traffic control <u>Option A</u> <ul style="list-style-type: none"> Add pedestrian crossing on west side and signage Maintain existing unconventional STOP control at intersection <u>Option B</u> <ul style="list-style-type: none"> Modify intersection traffic control (change to all-way STOP) Add crosswalk at intersection 	Provide facilities for all modes of travel	<ul style="list-style-type: none"> Main St ADT (vpd): Existing - 1,250, Future (2038) - 1,500 Rogue River Hwy ADT (vpd): Existing – 400-1,800, Future (2038) – 450-2,150 0 crashes during a 5-year analysis period Would improve overall safety <u>Option A:</u> <ul style="list-style-type: none"> Operations: Existing NB V/C=0.09, Future NB V/C=0.09 Provides a designated crossing area for pedestrians crossing roadway to improve safety Crosswalks not typical at rural intersections <u>Option B:</u> <ul style="list-style-type: none"> All-Way STOP: Existing WB V/C=0.13, Future V/C=0.15 Conventional STOP control conducive to driver expectation and indicator of changing roadway conditions Other benefits and concerns same as Option A 	<ul style="list-style-type: none"> Existing travel lanes: 12' Existing shoulder width: 2' Existing paved width: 18'-38' No additional ROW needed for either option (A or B) 	<ul style="list-style-type: none"> Existing zoning rural residential, interchange commercial, EFU No land use or environmental resource impacts Improved pedestrian access generally benefits socioeconomically disadvantaged populations 	<p><u>Option A:</u> \$7,000 <u>Option B:</u> \$10,000</p> <ul style="list-style-type: none"> Does not include utility relocation, hazardous materials, or ROW
I-2	Rogue River Highway (OR 99) at Main Street	Modify southwest corner of intersection to better accommodate truck movements (EBR)	Improve turning radii to accommodate WB-67	<ul style="list-style-type: none"> Main St ADT (vpd): Existing - 1,250, Future (2038) - 1,500 Rogue River Hwy ADT (vpd): Existing – 400-1,800, Future (2038) – 450-2,150 0 crashes during a 5-year analysis period No change to roadway capacity/operations Would improve overall safety Would make truck turning and acceleration easier 	<ul style="list-style-type: none"> Existing travel lanes: 12' Existing shoulder width: 2' Existing paved width: 18'-38' May require additional ROW (southwest corner) 	<ul style="list-style-type: none"> Existing zoning rural residential, interchange commercial, EFU Additional ROW needed on southwest corner (interchange commercial zoning) Would facilitate access to interchange commercial Nearby freshwater emergent wetlands, no impact anticipated Additional stormwater treatment may be needed with increased impervious surface No socioeconomic impacts anticipated 	<p><u>\$160,000</u></p> <ul style="list-style-type: none"> Does not include utility relocation, hazardous materials, or ROW
I-3	Rogue River Highway (OR 99/2 nd Avenue) at N. River Road	Improve intersection function <u>Option A</u> <ul style="list-style-type: none"> Modify southwest corner of intersection to better accommodate truck movements (EBL) <u>Option B</u> <ul style="list-style-type: none"> Option A improvements Intersection realignment Modify intersection traffic control (change to all-way STOP) Add crosswalk at intersection 	Provide facilities for all modes of travel including WB-67	<ul style="list-style-type: none"> N River Rd ADT (vpd): Existing - 1,050, Future (2038) - 1,150 Rogue River Hwy ADT (vpd): Existing – 1,550-2,300, Future (2038) – 1,850-2,700 0 crashes during a 5-year analysis period <u>Option A:</u> <ul style="list-style-type: none"> Operations: Existing EB V/C=0.05, Future NB V/C=0.06 Would make truck turning and acceleration easier Would improve overall safety <u>Option B:</u> <ul style="list-style-type: none"> All-way STOP: Existing WB V/C=0.17, Future WB V/C=0.20 Would make truck turning and acceleration easier Would provides a designated crossing area for pedestrians crossing roadway to improve safety Conventional STOP control conducive to driver expectation and indicator of changing roadway conditions Additional STOP signs along highway increase potential for rear-end collisions and may negative the safety of the crosswalk 	<ul style="list-style-type: none"> Existing travel lanes: 12' (both roadways) Existing shoulder width: 0' (N. River Rd)-2' (Rogue River Hwy) Existing paved width: 24' (N. River Rd); 18;-38' (Rogue River Hwy) Physical constraints: utility corridor, railroad tracks, and historic Rogue River Bridge <u>Option A:</u> <ul style="list-style-type: none"> Modifications to southwest corner Some fill may be needed to increase turning radius May require additional ROW <u>Option B:</u> <ul style="list-style-type: none"> Changes to southwest corner same as Option A Potential reduction in paved surface on southeast corner with intersection realignment 	<ul style="list-style-type: none"> Existing zoning is rural residential, and EFU <u>Option A:</u> <ul style="list-style-type: none"> Potential land use impacts; consideration of Statewide Planning Goals may be needed Near Rogue River, with 2 classified habitats which need to be considered Nearby Sardine Creek Wildlife area Any impact to the new multiuse path could trigger Section 6(f) concerns. Additional stormwater treatment may be needed with increased impervious surface No socioeconomic impacts anticipated <u>Option B:</u> <ul style="list-style-type: none"> Changes to southwest corner same as Option A Potential pavement reduction on southeast corner could offset added pavement on southwest corner Improved pedestrian access generally benefits socioeconomically disadvantaged populations 	<p><u>Option A:</u> \$220,000 <u>Option B:</u> \$230,000</p> <ul style="list-style-type: none"> Does not include utility relocation, hazardous materials, or ROW

I-5 Exit 43 Improvement Concepts – Summary Evaluation Matrix

ID	Location	General Description	Purpose	Traffic Operations and Safety ^{1,2,3}	Basic Roadway Geometry and Right of Way ⁴	Environmental and Land Use ⁵	Cost Opinion ⁶
MULTIMODAL IMPROVEMENTS							
MM-1	Study Area Roadways (Main St and Rogue River Hwy)	Enhance multimodal access between I-5 and the City of Gold Hill <u>Option A:</u> ▪ Add sharrows and signage to travel lanes <u>Option B:</u> ▪ Widen shoulders(to 8’ on both sides) along Rogue River Hwy where ROW exists (spot treatments), install guardrail <u>Option C:</u> ▪ Add Option A signage ▪ Add activated warning lights	Provide facilities for all modes of travel	<ul style="list-style-type: none"> Main St ADT (vpd): Existing – 250-1,250, Future (2038) – 300-1,500 Rogue River Hwy ADT (vpd): Existing – 400-1,800, Future (2038) – 450-2,150 Posted speed: 45 mph (Rogue River Hwy), Main St speed is not posted 2 crashes reported during the 5-year analysis period, both PDO <u>Option A:</u> <ul style="list-style-type: none"> No change to roadway capacity/operations Occasional slowing of traffic when bicycle is present and increased driver awareness Sharrows on Main St only, Rogue River Hwy could be considered but would require a condition C approval process <u>Option B:</u> <ul style="list-style-type: none"> No change to roadway capacity/operations Wider shoulders on Rogue River Hwy would separate non-motorized traffic from travel lane Would allow motorized traffic pass bridge non-motorized traffic more easily <u>Option C:</u> <ul style="list-style-type: none"> Same as Option A except for sharrows 	<ul style="list-style-type: none"> Existing travel lanes: 12’ Existing shoulder width:, 2’ Existing paved width: 18’-38’ <u>Option A:</u> <ul style="list-style-type: none"> Would maintain existing paved section and ROW <u>Option B:</u> <ul style="list-style-type: none"> Would widen the paved roadway to the south in spot locations along Rogue River Hwy; within existing ROW 	<ul style="list-style-type: none"> Existing zoning is rural residential, interchange commercial, and EFU <u>All Options:</u> <ul style="list-style-type: none"> Improved pedestrian/bicycle access generally benefits socioeconomically disadvantaged populations <u>Option A:</u> <ul style="list-style-type: none"> No impacts anticipated <u>Option B:</u> <ul style="list-style-type: none"> Two hazardous sites identified along Rogue River Hwy (WQSI, unknown HazWaste) Rogue River and freshwater emergent wetlands are in close proximity to the Hwy (to the north); impacts not anticipated Additional stormwater treatment may be needed with increased impervious surface <u>Option C:</u> <ul style="list-style-type: none"> No impacts anticipated 	<ul style="list-style-type: none"> <u>Option A:</u> \$15,000 (signage and sharrows-Main St; signage-Rogue River Hwy) <u>Option B:</u> \$450,000 <u>Option C:</u> \$50,000 per warning light installation
MM-2	OR 234/OR 99 Rock Point Bridge (ID 00332A)	Enhance multimodal access across the Rock Point Bridge <u>Option A:</u> ▪ Add sharrows and signage to the bridge <u>Option B:</u> ▪ Construct 8’ cantilevered path on both sides <u>Option C:</u> ▪ Build a parallel structure directly north of the Main St/Rogue River Hwy intersection and connecting to N. River Rd	Provide facilities for all modes of travel	<ul style="list-style-type: none"> Rogue River Hwy ADT (vpd): Existing –1,550, Future (2038) – 1,850 No documented crash patterns on Rogue River Hwy <u>Option A:</u> <ul style="list-style-type: none"> No change to roadway capacity/operations Would increase driver awareness of non-auto travel Would require a condition C approval for sharrow installation <u>Option B:</u> <ul style="list-style-type: none"> Would improve overall safety by separating travel modes <u>Option C:</u> <ul style="list-style-type: none"> Would separate modes of traffic by providing dedicated facilities to cross the river for non-motorized users Would increase safety for vulnerable users 	<ul style="list-style-type: none"> Existing travel lanes: 9’ Existing shoulder width: none Existing structure width: 19’-20’ <u>Option A:</u> <ul style="list-style-type: none"> No change to roadway Improvements anticipated to be within ODOT ROW <u>Option B:</u> <ul style="list-style-type: none"> No change to roadway Cantilevered path would be 8’ Widening has not been assessed for structural viability Improvements anticipated to be within ODOT ROW <u>Option C:</u> <ul style="list-style-type: none"> No change to roadway Separate facilities for non-motorized traffic New structure assumed to 270’ long, 15’ wide (10’ path, 2’ shy each side, and railing) Assumed to be located directly north of Main St and connect to to N. River Rd Significant ROW impacts, to be determined at time of design 	<ul style="list-style-type: none"> Existing zoning is EFU near existing bridge with interchange commercial and rural residential near Main St <u>All Options:</u> <ul style="list-style-type: none"> Improved pedestrian access generally benefits socioeconomically disadvantaged populations <u>Option A:</u> <ul style="list-style-type: none"> No impacts anticipated <u>Option B:</u> <ul style="list-style-type: none"> Would affect the aesthetics and historical nature of the bridge on the south side Would require work over the Rogue River Additional stormwater treatment may be needed with increased impervious surface <u>Option C:</u> <ul style="list-style-type: none"> Potential land use impacts; consideration of Statewide Planning Goals may be needed Would require work over the Rogue River and freshwater emergent wetlands Air quality and noise analysis may be needed 	<ul style="list-style-type: none"> <u>Option A:</u> \$1,500 <u>Option B:</u> \$1,000,000 <u>Option C:</u> \$1,500,000 Does not include utility relocation, hazardous materials, or ROW

- Notes:
- Traffic operations were evaluated for concepts that were identified to address operational deficiencies. The operational assessment focuses on the volume-to-capacity (v/c) ratio for the 2011 existing and 2035 future condition.
 - At intersections where potential changes in traffic control or turn lanes were considered, the procedures in the ODOT Analysis Procedures Manual (APM) were followed.
 - Some improvements are focused on addressing safety concerns or may address safety as well as traffic operations deficiencies. Crash patterns from the six-year analysis period (2005 through 2010) are discussed for those improvements that address safety.
 - Illustrations were developed for concepts that involve infrastructure improvements.
 - Impacts to resources were qualitatively assessed based on the data assembled for the environmental and land use reconnaissance. The level of analysis of the study area is designed to identify those areas judged to have considerable potential for conflict.
 - Rough order of magnitude cost opinions were developed using present day dollars and are consistent with standard estimating methods. The estimates include a contingency factor but do not include right-of-way costs. The cost opinions are intended to help differentiate alternatives by approximating the relative costs of each project.