I-5 Exits 40 and 43 (Gold Hill)

Interchange Area Management Plans

DRAFT Technical Memorandum #9

Recommended Concept

Prepared for

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9. RECOMMENDED CONCEPT

This technical memorandum summarizes the recommendations for the improvement concepts that would constitute the recommended concept for the I-5 Exits 40 and 43 Interchange Area Management Plans (IAMPs). These recommendations are based on feedback from the Technical and Citizen Advisory Committees, comments received at the Public Open House, and input from ODOT, City, and County staff. The identified improvement concepts are intended to help achieve the goals and objectives set forth for this project while addressing identified deficiencies for all modes.

9.1. Alternatives Considered

The alternatives analysis presented in Technical Memorandum (TM) #6 focused on three areas for consideration within the interchange study area:

- Interchange Ramp Enhancements
- Intersection Enhancements
- Multimodal Enhancements

During and following the review of the alternatives analysis, one additional idea was recommended and has been incorporated in the text, depicted with "(new)" in the title. The additional concept includes the same level of assessment provided in the alternatives analysis. Table 9-1. I-5 Exit 40 Improvement Concepts and Table 9-2. I-5 Exit 43 Improvement Concepts summarize the recommendation status of all the alternatives considered in TM #6.

If an alternative is recommended as part of the Recommended Concept, a priority is also assigned as follows:

- **High priority** – projects that have existing operational or safety concerns (anticipated in the short-term)
- **Medium priority** – projects that have future operational or safety concerns (anticipated in the medium-term)
- **Low priority** – projects that address a design issue (anticipated in the long-term)

For projects that are not carried forward as part of the Recommended Concept, a potential follow up action is indicated. In cases where the follow up action is to revisit the idea during the next plan update, the concept may be revisited sooner in response to significant area development or a new safety concern. Overall, the combination of state and local improvements will eventually provide a multi-modal network that would meet forecast traffic demand based on adopted comprehensive plans and regional population and employment forecasts.

The project sheets illustrating the alternatives previously discussed in *Technical Memorandum #6: Alternatives Analysis* and recommended as part of the Recommended Concept are attached at the end of this technical memorandum.

9.2. Recommendations for I-5 Exit 40

Technical Memorandum #6 presented 12 improvement concepts for this interchange, several of which have varying options to consider and should be referenced for project specifics. A brief summary of the improvement concepts is presented in Table 9-1 along with the recommendation status. The recommended concepts are shown in Figure *9-1*. The following sections discuss the concepts recommended for implementation specific to this interchange.

Table 9-1. I-5 Exit 40 Improvement Concepts

Concept	Location	General Description	Recommendation
40-R1	Southbound Off Ramp	Extend southbound off ramp: ▪ Option A: Extend southbound off ramp ▪ Option B: Straighten and extend southbound off ramp	Not recommended- *Follow up action*: review when IAMP is updated[1]
40-R2	Southbound On Ramp	Extend southbound on ramp	Not recommended- *Follow up action*: review when IAMP is updated[1]
40-R3	Southbound Ramp Terminal	Improve turning radius	Not recommended- *Follow up action*: review when IAMP is updated[1]
40-R4	Northbound Off Ramp	Extend northbound off ramp	Not recommended- *Follow up action*: review when IAMP is updated[1]
40-R5	Northbound On Ramp	Extend northbound on ramp	Not recommended- *Follow up action*: review when IAMP is updated[1]
40-R6	Northbound Ramp Terminal	Improve turning radius	Not recommended- *Follow up action*: review when IAMP is updated[1]
40-R7	Southbound Off Ramp	Move guardrail	**Recommended - Medium Priority** **Triggers:** Crash pattern of angle collisions, increased traffic volumes, or area development
40-I1	2nd Avenue/OR 99 and Blackwell Road at Access Road	Modify intersection: ▪ Option A: Modify traffic control to all-way STOP ▪ Option B: Modify traffic control to all-way STOP and add westbound left-turn lane ▪ Option C: Realign to create a standard four-legged intersection, all-way STOP control	**Recommended (Option A) - Medium Priority** **Triggers:** Crash pattern of angle collisions or increased traffic volumes (operational) *Follow up action*: Options B and C recommended for further consideration in Jackson County TSP work (2016)
40-I2	Access Road at 2nd Avenue/OR 99 and Blackwell Road	Improve turning radius	Not recommended- *Follow up action*: recommended for further consideration in Jackson County TSP work (2016), compatible with 40-I1

Table 9-1. I-5 Exit 40 Improvement Concepts

Concept	Location	General Description	Recommendation
40-I3	Access Road at Old Stage Road	Improve turning radii	Not recommended- *Follow up action*: review when IAMP is updated[1]
40-MM1	Access Road	Widen to provide 6-foot shoulders between Blackwell Road and Exit 40	**Recommended - High Priority** **Triggers:** None; existing deficiency
40-MM2	Blackwell Road/OR 99	Provide access for all modes of travel between Access Road and KOA campground: ▪ Option A: Widen to provide 6-foot shoulders ▪ Option B: Widen to provide a 10-foot multiuse path	Not recommended- *Follow up action*: recommended for further consideration in Jackson County TSP work (2016), compatible with 40-I1

1. Concept may be revisited sooner in response to significant area development or a new safety concern

9.2.1. Concept 40-R7: Southbound Off Ramp Guardrail Modification

Concept 40-R7 considers modification/repositioning of the guardrail on the southwest end of the interchange bridge with the purpose of improving existing sight distance limitations and improving safety.

Discussion

The guardrail is needed at this location, so cannot be removed. Concept 40-R7 would improve vehicular sight distance of on-coming traffic when looking toward Gold Hill (north) over the bridge by modifying the placement of the existing guardrail (pulling away from the roadway). Accompanying signage may be needed dependent on the final design selected. An additional benefit of the modification is the opportunity to improve aesthetics and possibly add a gateway treatment or Gold Hill city sign.

Trigger

The triggers for this project include: a pattern of angle collisions, increase traffic volumes, or area development.

Recommendation

This project is recommended as a medium priority. Access management is not needed for this concept.

9.2.2. Concept 40-I1: 2nd Avenue/OR 99 and Blackwell Road at Access Road – Intersection Enhancements

Concept 40-I1 has three intersection realignment options to better incorporate the off-set Upper River Road, heavy westbound left-turn movement, and northbound vehicles along Access Road. The options:

- Option A would modify the intersection traffic control to an all-way STOP to make it easier to turn left from Access Road to 2nd Avenue.
- Option B would include the all-way STOP control and add a westbound left-turn lane to facilitate access to the I-5 interchange.
- Option C would realign the intersection, straighten Access Road, and include an all-way STOP control.

Discussion

Of the three options under consideration, Option A provides the most near-term benefits with the least risk for future throw-away should the Jackson County Transportation System Plan (TSP) update (currently underway) indicates a different function for these roadways or a modification to the adjacent historical bridge structure in the future.

Option B would provide additional westbound left-turn capacity; however, may not be necessary if the intersection control is modified to an all-way STOP (Option A) or if the Jackson County TSP indicates a different function for these roadways or a modification to the adjacent historical bridge structure in the future.

Option C would address all of the intersection concerns (off-set Upper River Road, high number of turning movements to/from the interchange, upward slope of Access Road when it meets 2nd Avenue/Blackwell Road); however, a project of this magnitude should be consistent with the goals of other regional plans such as Jackson County TSP process and Gold Hill Local Street Network Plan (both currently underway).

Trigger

The triggers for this project include: a pattern of angle collisions and increase traffic volumes (operational).

Recommendation

Concept 40-I1, Option A is recommended as an element of the I-5 Exit 40 IAMP as a medium priority. Access management is not needed for this concept. Concept 40-I1, Options B and C are not recommended at this time but have been sent for consideration to the Jackson County TSP project for consideration.

9.2.3. Concept 40-MM1: Access Road – Widen to Provide Multimodal Access

Concept 40-MM1 would improve the pedestrian experience by providing a consistent shoulder (that meet the minimum Jackson County standard width) for non-motorized access along the roadway. The purpose of the improvement is to enhance connectivity for non-motorized users and provide access to other multimodal facilities.

Note: This improvement stops short before the ramp terminals. While the I-5 overpass includes 5-foot shoulders (which meets the minimum Jackson County standard for a rural arterial), 6-foot shoulders would be consistent with state standards. Should the opportunity arise for a bridge replacement, the next phase of this improvement could consider widening/replacement of Access Road between the ramp terminals to provide full-width shoulders.

Discussion

The minimal area available as a shoulder (or the nonexistent shoulder, in some cases) forces non-motorized traffic onto the roadway, causing a safety concern. The current cross-section of Access Road also creates a gap in the non-motorized network. One of the plan goals is to increase multimodal access throughout the community and, in particular, into the city. Concept 40-MM1 would create a needed link between the residential area to the south of I-5 and the downtown community to the north. The improvement non-motorized connectivity, could potentially be considered a socioeconomic benefit, because improved pedestrian access generally benefits disadvantaged populations.

This improvement is expected to impact three residential driveways and the accesses to the Running Salmon RV Park and the Jackson County Fire District building. Although impacts would be minimal, coordination with residents and Jackson County Fire would be needed.

Trigger

There are no triggers for this project. It is an existing deficiency.

Recommendation

This project is recommended as a high priority. Progress toward meeting the applicable access spacing standards must be demonstrated or a deviation must be justified and approved by the Region Access Management Engineer.

9.3. Recommendations for I-5 Exit 43

Technical memorandum #6 presented 10 improvement concepts for this interchange, several of which have varying options to consider and should be referenced for project specifics. A brief summary of the improvement concepts is presented in Table 9-2 along with the recommendation status. The recommended concepts are shown in Figure 9-2. The following sections discuss the concepts recommended for implementation specific to this interchange.

Table 9-2. I-5 Exit 43 Improvement Concepts

ID	Location	General Description	Recommendation
43-R1	Southbound Off Ramp	Extend southbound off ramp	Not recommended- *Follow up action*: review when IAMP is updated[1]
43-R2	Southbound Ramp Terminal	Improve turning radius	Not recommended- *Follow up action*: review when IAMP is updated[1]
43-R3	Northbound Off Ramp	Extend northbound off ramp	Not recommended- *Follow up action*: review when IAMP is updated[1]
43-R4	Northbound Ramp Terminal	Improve turning radius	Not recommended- *Follow up action*: review when IAMP is updated[1]
43-I1	Rogue River Highway at Main Street	Provide for all modes at the intersection ▪ Option A: Add crosswalk on west side of intersection and signage for oncoming traffic ▪ Option B: Modify the traffic control and add crosswalks on multiple approaches	Not recommended- *Follow up action*: review when IAMP is updated[1]
43-I2	Main Street at Rogue River Highway (OR 99 and OR 234)	Improve turning radius	Not recommended- *Follow up action*: review when IAMP is updated[1]
43-I3	Rogue River Highway/2nd Avenue at N. River Road	Improve intersection function ▪ Option A: Improve turning radius ▪ Option B: Option A and realign intersection and update traffic control	**Recommended – High Priority** **Triggers:** Queuing into travel lanes, pattern of rear end collisions, or area development
43-MM1	IMSA roadways	Enhance multimodal access between I-5 and the City of Gold Hill ▪ Option A: Add signage to roadway and widen shoulders where ROW permits ▪ Option B : Add signage and activated warning lights	**Recommended (Option A)– Low Priority**; dependent on timing of 43-MM2, consider 1st phase (Main St to Lampman Rd), 2nd phase (Lampman Rd to Rock Point Br.) **Triggers:** Crash pattern of bicycle/ pedestrian collisions or area development Not recommended (Option B) – no further action

Table 9-2. I-5 Exit 43 Improvement Concepts

ID	Location	General Description	Recommendation
43-MM2	Rogue River Highway (Rock Point Bridge, 00332A)	Enhance multimodal access across the bridge ▪ Option A: Add signage ▪ Option B: Construct 8' cantilevered paths on both sides of bridge ▪ Option C: Build a new structure (non-vehicular traffic) ▪ Option D: Build a new structure (all modes)	**Recommended (Option A) – High Priority** **Triggers:** Crash pattern of bicycle/ pedestrian collisions, area development or funding availability Not recommended (Options B and C) – no further action **Recommended (Option D) – Low Priority**; will result in rerouting on highway **Triggers:** same as Option A
43-MM3	(new) Widening of I-5 overcrossing – Multimodal Enhancement	Provide multimodal crossing of I-5	**Recommended – Medium Priority** **Triggers:** Crash pattern of bicycle/ pedestrian collisions, area development or funding availability
1. Concept may be revisited sooner in response to significant area development or a new safety concern			

9.3.1. Concept 43-I3: Rogue River Highway/2nd Avenue at N. River Road Intersection Enhancements

Rogue River Highway (OR 99 and OR 234 alignments, also known as 2nd Avenue) and N. River Road intersection is skewed and has unconventional traffic control. Concept 43-I3 would realign the intersection and modify the current traffic control to a more standard configuration. A later phase, such as adding a westbound left-turn lane (and associated widening of the west leg of the intersection) could be considered in order to separate westbound left-turning vehicles and facilitate northbound truck turning.

There are two options for this concept:

- Option A addresses the eastbound truck turning movement by widening the southwest corner.
- Option B would realign the southern leg (bridge access) of the intersection at a near 90-degree angle for northbound left-turning movements with a STOP control and longer storage length (traditional T-intersection, side street STOP control). A second phase of this option would add a westbound left-turn lane and would widen the western leg of the intersection to the north, opposite the left-turn lane. Option A improvements would also be included to address the truck turning limitations.

The purpose of this improvement concept is to provide improved safety for all modes and enhance the connections to area businesses and recreational areas. The realignment of the

southern leg of the intersection may also provide an additional buffer between vehicular traffic on Rogue River Highway and the newly constructed multi-use path located in the southeast corner of the intersection.

Discussion

Although this intersection has unconventional traffic control it has no operational concerns; however, there are instances when vehicles queue in the northbound direction waiting to make a left-hand turn onto N. River Road and occupy part of the southbound (on-coming)traffic lane. Any improvement will need to consider the newly built multi-use path to the south of the intersection.

Option A would improve the overall safety of the intersection without changing capacity or operations at the intersection. It could impact the new multi-use path on the south side of N. River Road.

Option B would also improve the overall safety, as well as driver expectation, by realigning the intersection to facilitate truck turning to/from Rogue River Highway/2nd Avenue and updating the intersection traffic control to a conventional layout. The bicycle and pedestrian modes would benefit from a more conventional STOP configuration and the reduced number of conflict points.

There are currently improvement concepts in development that would realign the southern leg (similar to Option B) and update the intersection with conventional traffic control.

Trigger

The triggers for this project include: queuing into travel lanes, a pattern of rear-end collisions, and area development.

Recommendation

Option A is not recommended at this time, though may be considered at a later date if new development or safety concerns arise.

Elements of Option B are recommended and include: realignment and conventional traffic control at the intersection. This is a high priority improvement. The preliminary design indicates nearby driveways would not be impacted; if the final design results in impacts to the driveway access management will need to be reviewed. The widening for the westbound left-turn lane and turning radius in the southwest corner could be later phases if new development or safety concerns arise in the future.

9.3.2. Concept 43-MM1: IMSA Roadways Multimodal Enhancements

IMSA roadways are narrow; some have minimal lane widths (as narrow as 9 feet across the Rogue River Bridge); and most have minimal shoulder widths (0 to 5 feet), all of which have no bicycle or pedestrian facilities. The purpose of Concept 43-MM1 is to improve connectivity

between the Rogue River Greenway the interchange. It considers improvements along Main Street and Rogue River Highway (excluding the bridge) and includes two options.

The two options to enhance the current infrastructure, are:

- Option A would add signage along both IMSA roadways and widen the shoulders where ROW exists. Depending on the location, signs can warn drivers of bicycles and/or pedestrians in the roadway or remind them to share the road. Sharrows were considered, but they were eliminated from consideration due to roadway speeds in excess of 30 mph. The shoulder widening is a spot treatment and would not result in continuous facilities.
- Option B would include the signage from Option A combined with warning lights to capture the drivers' attention. The installation would be ideal in areas that are constrained (areas of narrow ROW or bridge width) and would be activated only when users are present. An example of a sign/warning light combination is a caution pedestrian sign with a light ensemble attached (either LED or alternating yellow).

Discussion

Multimodal connectivity is lacking at and near Exit 43. These options would improve the safety (visibility) of non-motorized users and connectivity, though have no impact on roadway capacity. Either of the two options could provide socioeconomic benefits by improving non-motorized access across the roadways and river. Improved pedestrian and bicycle access generally benefits disadvantaged populations.

Option A would provide areas for non-motorized users to pull off of the road to let motorized users pass and would improve the user experience for non-motorized users. Additionally, it would provide areas where the modes could be separated, which would be an enhancement along the 45 mph facility.

Option B may result in occasional slowing of vehicular traffic when a bicycle or pedestrian is present.

Trigger

The triggers for this project include: a pattern of bicycle or pedestrian collisions and area development.

Recommendation

Option A is recommended as a low priority project. The signage element can be added at any time; however, the shoulder widening will need to balance the progress of Concept 43-MM2 with the area needs. It is a low priority project that could be phased. The first phase could be improvements along Rogue River Highway from Main Street to Lampman Road. The second phase would only be needed if a new bridge is not built and would include the section of roadway between Lampman Road to Rock Point Bridge. Access management is not needed for this concept.

Option B is not recommended.

9.3.3. Concept 43-MM2: Rogue River Highway (Rock Point Bridge, 00332A) – Multimodal Enhancements

The Rogue River Highway (Rock Point Bridge, 00332A) is a historic structure built in 1919 with a total structure width is 19 to20 feet which leaves no room for bicycle or pedestrian facilities.

Concept 43-MM2 considers multimodal enhancements to facilitate non-motorized crossings of the bridge and has three options for consideration.

- Option A would add signage on the bridge.
- Option B would construct 8-foot-wide paths on both sides of the Rock Point Bridge.
- Option C would build a parallel structure and maintain the aesthetics of the historic bridge. It is assumed that the parallel structure would be located at the nearest narrow section, which was assumed to be the connection between Main Street and N. River Road directly to the north. The structure is assumed to be 270 feet long and 15 feet wide. The width includes a 10-foot-wide path with a 2-foot shy distance (and railing) on both sides.

- Option D would be similar to Option C, but would serve vehicular traffic as well. The width includes a 40-foot cross-section with two 12-foot travel lanes and two 8-foot multiuse paths.

Discussion

Non-vehicular operations could be improved by providing additional facilities, as presented in any of these options, and provide socioeconomic benefits by improving non-motorized access in the IMSA. Improved pedestrian and bicycle access generally benefits disadvantaged populations.

Option A would alert motorized traffic to the presence of non-vehicular traffic that may be sharing the roadway; however, it is not anticipated to change the bridge capacity or traffic operations. It will continue to compromise the historic nature and aesthetics of the bridge.

Option B would provide pathways along the bridge that would serve non-auto modes and separate them from motorized vehicles. This option would modify the historic nature and aesthetics of the bridge and require safe transitions at either end of the bridge.

Option C would provide a dedicated non-vehicular bridge with adequate width to serve a mix of modes and directions. Option C would also move non-motorized users off of the highway onto N. River Road, a rural major collector with a comparable posted speed of 45 mph; avoid the need to widen Rogue River Highway between Main Street and the Rock Point Bridge; and provide a direct route to Exit 43. It will require new non-motorized connections to the existing roadway network. The new bridge would impact the Rogue River wildlife during construction and well as increase the overall stormwater that will need to be treated.

Option D would provide a new vehicular structure that meets current design standards for vehicular and non-auto modes (vehicle travel lanes and multimodal facilities). It would significantly impact the traffic circulation and operations within the IMSA north of the interchange. Additionally, it would provide unrestricted access to the City of Gold Hill and surrounding areas for freight, transit, and emergency vehicles, which are currently limited by the existing 9-foot travel lanes. This option would result in rerouting of the highway, including use of N. River Road, before connecting with the existing Rogue River Highway/2nd Avenue. Similar to Option C, it will require new connections to the existing roadway network. The new bridge would impact the Rogue River wildlife during construction and well as increase the overall stormwater that will need to be treated.

The cost opinion of Concept 43-MM2 Option D was not previously presented. The estimated project cost is approximately $16.6 million. This cost is for the widening only and does not include utility relocation, hazardous materials, or right-of-way.

Trigger

The triggers for this project include: a pattern of bicycle or pedestrian collisions, area development, or funding availability.

Recommendation

Option A is recommended as a high priority project. Access management is not needed for this concept.

Options B and C are not recommended.

Option D is recommended but will require substantial funding and is therefore low priority. The preliminary design indicates nearby driveways would not be impacted; if the final design results in impacts to the driveway access management will need to be reviewed.

9.3.4. (NEW) Concept 43-MM3: Widening of I-5 Overcrossing – Multimodal Enhancement

Main Street is a two-lane facility that provides access between I-5, adjacent neighborhoods, and recreational facilities. Main Street where it crosses I-5 via Interchange 43 does not have any bicycle or pedestrian facilities and minimal (1- to 2-foot-wide) shoulders. The Main Street Bridge over I-5 does not have any deficiencies listed (source: ODOT, 2012 Bridge Condition Report), and improvements to the structure are not anticipated at this time.

This improvement concept would widen the Main Street I-5 Overcrossing to 40 feet and provide two 12-foot travel lanes, two 6-foot bike lanes, ,and shy distance of 2-foot adjacent to the railing on each side as seen in the attached prospectus sheets.

Concept 43-MM3 – Traffic Operations and Safety

Existing ADT volumes on Main Street range from 200 vpd to 1,300 vpd. Future (2038) volumes are estimated to range from 200 vpd to 1,500 vpd along Main Street. Pedestrian data is not available at this time.

There were no crashes reported during the five-year analysis period on Main Street. This concept improves connectivity.

The Main Street overcrossing has two public access points, one at each ramp terminal. Profetta Lane is less than 100 feet to south of the southbound ramp terminal and is also a public access. This improvement does not impact the current access spacing.

Concept 43-MM3 – Basic Roadway Geometries and Right-of-Way Requirements

The existing cross section along Main Street includes two 12-foot travel lanes with minimal shoulders (approximately 1- to 2-foot wide). This concept would widen the existing width range of 26-28 feet to 40 feet. It would include two 12-foot travel lanes and two eight-foot shoulders.

Impacts to ROW are not anticipated with this concept.

Concept 43-MM3 – Environmental and Land Use Assessment

The adjacent land use is interchange commercial and EFU. Statewide Planning Goals would need to be considered when impacting EFU zones. Any new work in areas of undisturbed soil have a high potential for archeological resource impacts. Nearby is the Rogue River and a freshwater emergent wetland; no impacts to those resources are anticipated.

The design may increase the impervious surface area and produce additional stormwater that would need to be treated.

The concept could provide socioeconomic benefits by improving non-motorized access in the IMSA. Improved pedestrian and bicycle access generally benefits disadvantaged populations.

Concept 43-MM3 – Cost Opinions

The cost of Concept 43-MM3 is approximately $3.6 million. This cost is for the widening only and does not include utility relocation, hazardous materials, or right-of-way.

Trigger

The triggers for this project include: a pattern of bicycle or pedestrian collisions, area development, or funding availability.

Recommendation

This project is recommended as a medium priority. Access management is not needed for this concept.

9.4. Potential Management Actions

The analysis found no capacity or operational issues within the IMSA. As such, the Recommended Concept presented within this technical memorandum does not require assessment of management actions which would have been represented in technical memorandum #7.

9.5. Policy and Code Amendments

The analysis found no capacity or operational issues within the IMSA. As such, the Recommended Concept presented within this technical memorandum does not require assessment of policy and code amendments which would have been represented in technical memorandum #8.

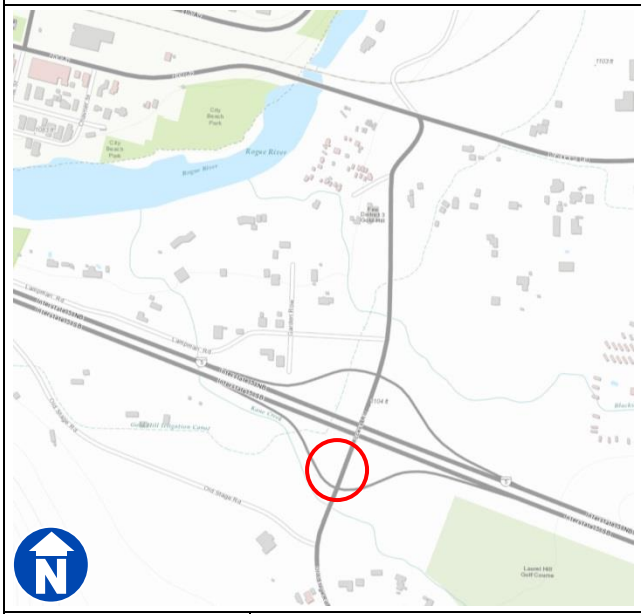
9.6. Project Sheets

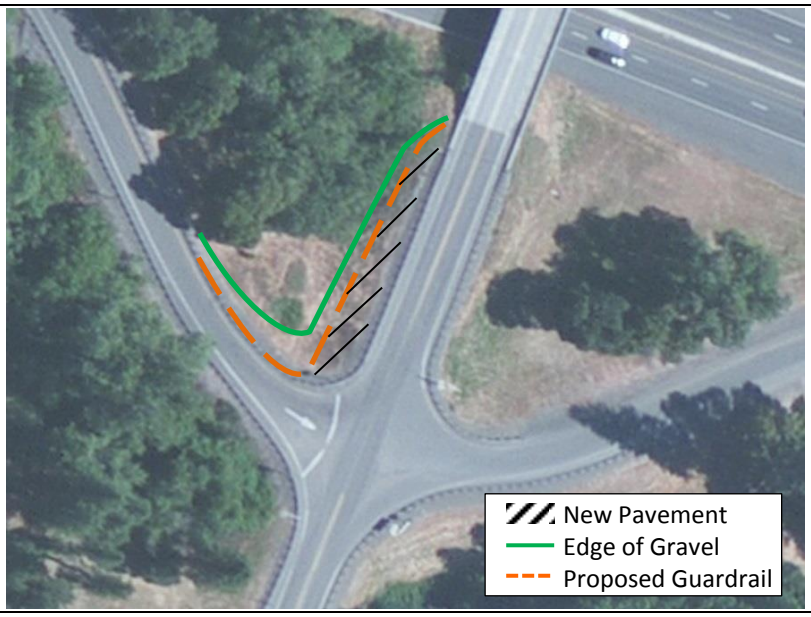
Project sheets have been prepared for each planned conceptual improvement that identifies:

- Name
- Location
- Recommended improvement
- Project purpose
- Existing/future deficiencies without project
- Result of improvements (i.e., how the project addresses deficiencies)
- Considerations/potential impacts
- Cost opinion (order of magnitude)
- Implementation (priority, phasing, triggers)
- Illustration

Project 40-R7. I-5 Exit 40 Southbound Off Ramp Guardrail Modification

I-5 Exits 40 (Kane Creek) & 43 (Rock Point): Interchange Area Management Plans

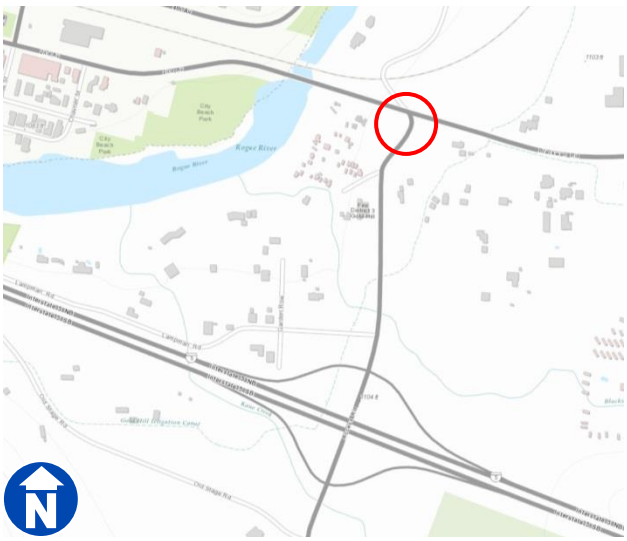




Description	Move guardrail and widen pavement in northwest corner of I-5 Exit 40 southbound ramp terminal	
Purpose	Improves sight distance for eastbound left-turning vehicles stopped at southbound off-ramp	
Roadway Characteristics	▪ Off-ramp has single 16' lane ▪ Current sight distance for vehicles on the southbound off-ramp looking left (north) at oncoming traffic on Access Road is limited by guardrail ▪ Improvements anticipated to be within ODOT ROW ▪ Off-ramp ADT (vpd): Existing – 750; Future (2038) – 900 ▪ Critical movement (EB L/T/R) V/C: Existing – 0.20; Future (2038) – 0.24 ▪ Critical movement (EB L/T/R) LOS: Existing – B; Future (2038) – C ▪ 1 fatal crash during 5-year analysis period	
How Improvement Addresses Deficiencies	**Existing/Future Deficiency**	**With Improvement**
	If a driver is stopped on the southbound off-ramp and the driver's eye level is approximately 3.5 feet from the pavement (e.g., when driving a sedan), the driver's sight distance is obstructed to the north by the guardrail on the west side of Access Road.	▪ Would provide additional sight distance for vehicles on southbound off-ramp; may decrease eastbound delay ▪ No change to ramp capacity/operations
Additional Considerations	▪ Existing zoning is rural residential, and EFU; EFU impacts would necessitate determination whether a Statewide Planning Goal Exception is needed ▪ High potential for archeological resource impacts in areas of undisturbed soils ▪ Nearby Kane Creek and ditch/irrigation canal ▪ Additional stormwater treatment may be needed with increased impervious surface ▪ Opportunity for gateway treatment to Gold Hill ▪ There is no access management needed for this concept	
Cost Opinion	▪ $240,000 ▪ Does not include utility relocation or hazardous materials	
Implementation	Medium priority ▪ Triggers: Crash pattern of angle collisions, increased traffic volumes, or area development	

Project 40-I1. 2nd Avenue/OR 99 and Blackwell Road at Access Road Intersection Enhancements

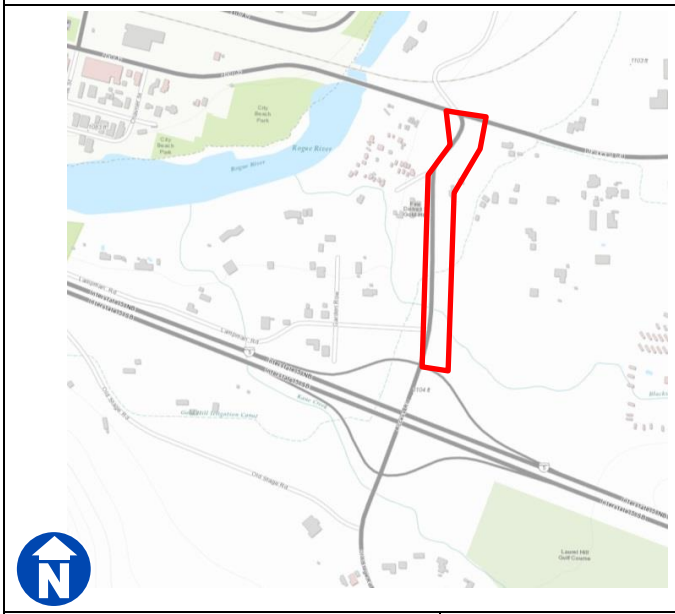
I-5 Exits 40 (Kane Creek) & 43 (Rock Point): Interchange Area Management Plans

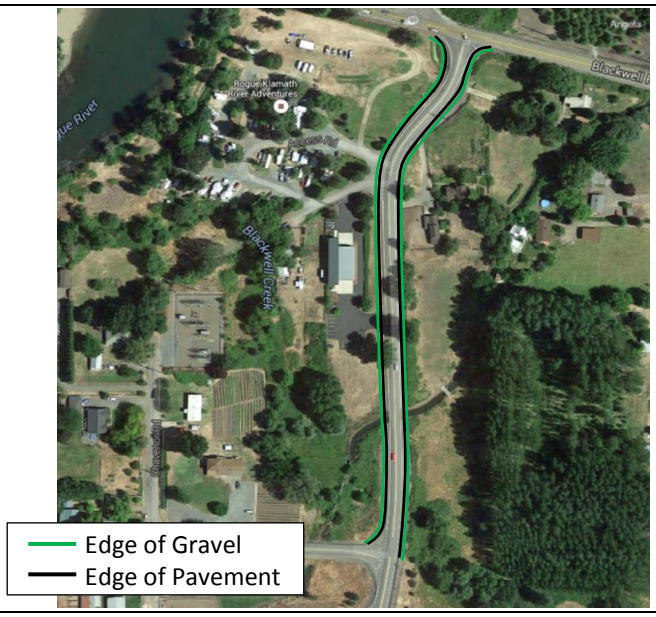


Description	Modify traffic control to all-way STOP	
Purpose	Better facilitate turning movements and pedestrian crossing	
Roadway Characteristics	▪ Existing travel lanes: 11-12' (all roadways) ▪ Existing shoulder width: 0'–2' (all roadways- most sections) ▪ Existing paved width: 24'–34' (all roadways); ▪ Blackwell Road ADT (vpd): Existing – 2,500; Future (2038) – 3,500 ▪ 2nd Avenue ADT (vpd): Existing – 5,800; Future (2038) – 6,500 ▪ Access Road ADT (vpd): Existing – 5,500; Future (2038) – 6,800 ▪ Critical movement (NB L/R) V/C: Existing – 0.55; Future – 0.76 ▪ Critical movement (NB L/R) LOS: Existing – C; Future – D ▪ Critical movement (NB L/R) Queue: Existing – 125'; Future – 175' ▪ 4 crashes during 5-year analysis period, including 3 minor injury, 1 property damage only (PDO)	
How Improvement Addresses Deficiencies	**Existing/Future Deficiency**	**With Improvement**
	The current design of the intersection creates safety concerns for vehicles turning onto Blackwell Road/2nd Avenue from Access Rd as well as westbound left-turns stopped in the shared travel lane.	▪ Pedestrian/bicycle crossings easier with traffic stopped on 2nd Avenue/OR 99 and Blackwell Road ▪ Critical movement (NB L/R) V/C: Existing – 0.44; Future – 0.55 ▪ All-way STOP LOS: Existing – B; Future – B ▪ Critical movement (NB L/R) Queue: Existing – 100'; Future – 125'
Additional Considerations	▪ Stopping traffic on 2nd Avenue/OR 99 and Blackwell Road may facilitate posted speed transition but may result in more rear-end collisions ▪ No land use or environmental impacts ▪ There is no access management needed for this concept	
Cost Opinion	$10,000	
Implementation	Medium priority ▪ Triggers: Crash pattern of angle collisions or increased traffic volumes (operational)	

Project 40-MM1. Access Road – Widen to Provide Multi-Modal Access

I-5 Exits 40 (Kane Creek) & 43 (Rock Point): Interchange Area Management Plans

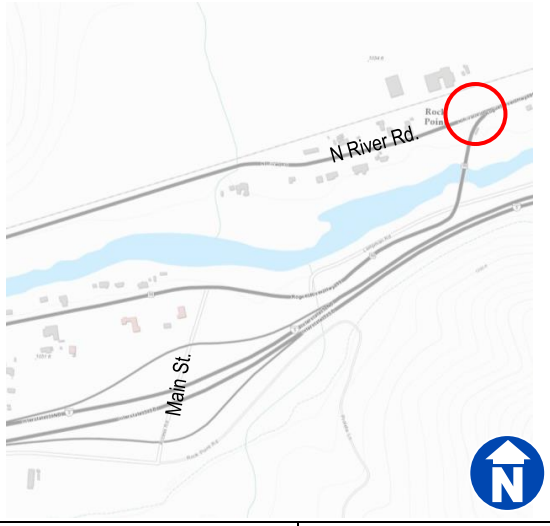


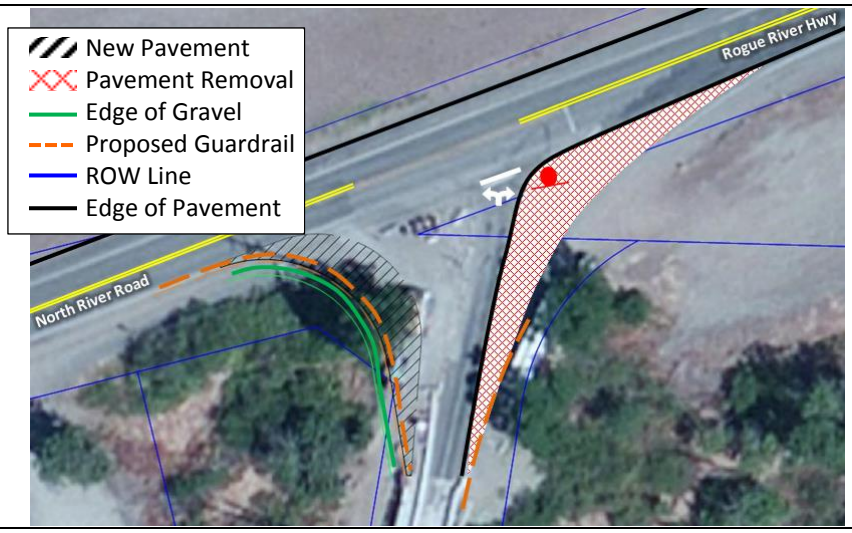


Description	Widen Access Road to provide 6'shoulders between Blackwell Road and I-5 Exit 40	
Purpose	Provide facilities for all modes of travel, enhance access to the city, and improve safety	
Roadway Characteristics	▪ Existing travel lanes: 12' (Access Road) ▪ Existing shoulder: 0–5' ▪ Improved shoulder width: 6' ▪ Existing paved width: 24'–34' (Access Road), 40' with improvement ▪ Access Road ADT (vpd): Existing – 5,500; Future (2038) – 6,800 ▪ 2 crashes during 5-year analysis period, including 3 minor injury	
How Improvement Addresses Deficiencies	**Existing/Future Deficiency**	**With Improvement**
	Currently non-motorized traffic must travel on the edge of the roadway, pinched between the roadway edge and higher speed vehicles, which is a safety concern	▪ Provide facilities for all modes of travel, enhance access to the city, and improve safety ▪ Project could connect other multimodal facilities ▪ Improved level of service/experience/connectivity for non-motorized users ▪ No change to roadway capacity/operations
Additional Considerations	▪ ROW required ▪ The guardrail at the intersection between Access Road and Lampman Road will need to be shifted ▪ There is an irrigation channel crossing Access Road where the culvert would have to be extended ▪ Progress toward meeting the applicable access spacing standards must be demonstrated or a deviation must be justified and approved by the Region Access Management Engineer	
Cost Opinion	▪ $925,000 ▪ Includes culvert extension ▪ Does not include utility relocation, hazardous materials, or ROW	
Implementation	High Priority ▪ Triggers: None; existing deficiency	

Project 43-I3. Rogue River Highway/2nd Avenue at N. River Road – Intersection Enhancements

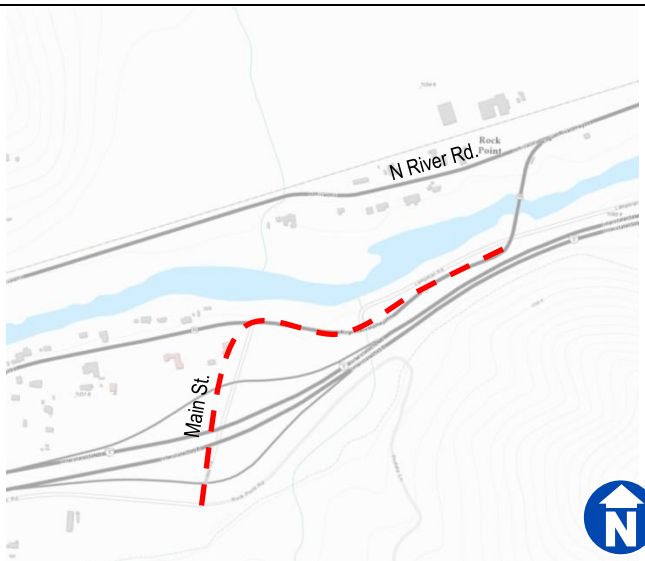
I-5 Exits 40 (Kane Creek) & 43 (Rock Point): Interchange Area Management Plans





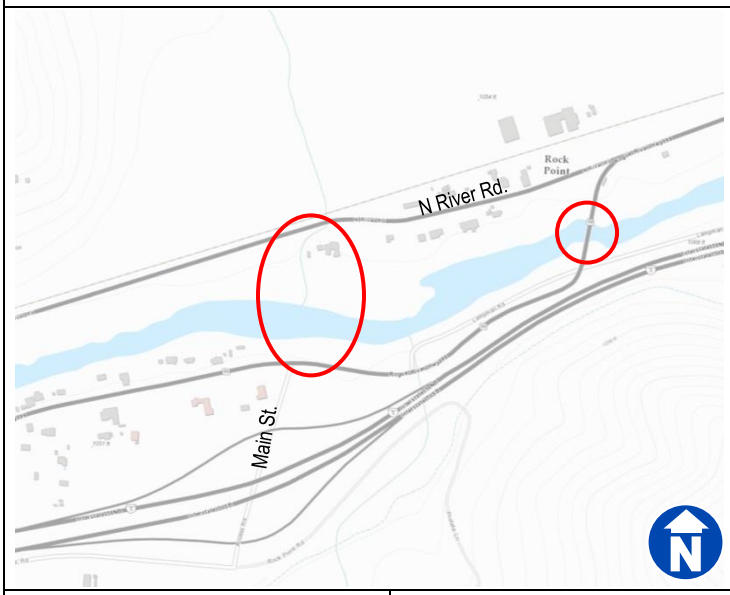
Description	▪ Modify southwest corner of intersection to better accommodate truck movements (EBR, WBL) ▪ Intersection realignment ▪ Modify intersection traffic control	
Purpose	Provide facilities for all modes of travel including WB-67 trucks	
Roadway Characteristics	▪ Existing travel lanes: 12' (both roadways) ▪ Existing shoulder width: 0' (N. River Road) to 2' (Rogue River Highway) ▪ Existing paved width: 24' (N. River Road); 18' to 38' (Rogue River Highway) ▪ Physical constraints: utility corridor, railroad tracks, and historic Rogue River Bridge ▪ N. River Road ADT (vpd): Existing – ~1,100; Future (2038) – ~1,200 ▪ Rogue River Highway ADT (vpd): Existing – ~1,600 to 2,300; Future (2038) – ~1,900 to 2,700 ▪ Critical movement (NBL) V/C: Existing – 0.08; Future (2038) – 0.09 ▪ Critical movement (NBL) LOS: Existing – A; Future (2038) – A ▪ Critical movement (NBL) Queue: Existing – 25'; Future (2038) – 25'	
How Improvement Addresses Deficiencies	**Existing/Future Deficiency**	**With Improvement**
	The intersection is skewed, has unconventional traffic control and lacks appropriate storage space for northbound left-turns	▪ Side street STOP: Existing NBL/T V/C – 0.07; Future NB V/C – 0.09 ▪ Critical movement (NBL) Queue: Existing – 25'; Future (2038) – 50' ▪ Would make truck turning and acceleration easier ▪ Conventional STOP control conducive to driver expectation and indicator of changing roadway conditions, though 45 mph speed is a concern ▪ Potential increase in the number of rear-end collisions
Additional Considerations	▪ Could add later phase to provide a left-turn refuge lane for westbound traffic ▪ Any impact to the new multi-use path could trigger Section 6(f) concerns ▪ Near Rogue River; 2 classified habitats that need to be considered ▪ Progress toward meeting the applicable access spacing standards must be demonstrated or a deviation must be justified and approved by the Region Access Management Engineer	
Cost Opinion	▪ $230,000	
Implementation	High priority ▪ Trigger: Queuing into travel lanes, pattern of rear end collisions, or area development	

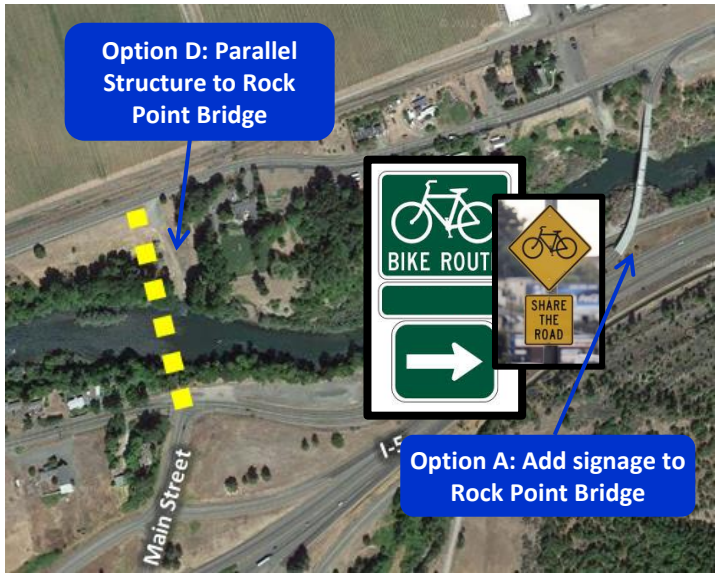
Project 43-MM1. IMSA Roadways – Multimodal Enhancements	***I-5 Exits 40 (Kane Creek) & 43 (Rock Point): Interchange Area Management Plans***



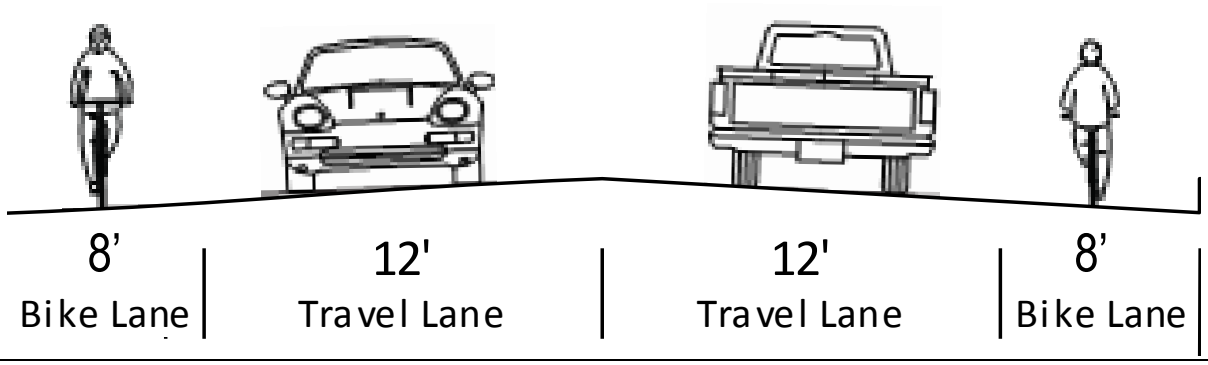
Description	Enhance multimodal access between I-5 and the City of Gold Hill (south of the Rock Point Bridge) by adding signage to travel lanes (Main Street and Rogue River Hwy) and widening shoulders where ROW exists	
Purpose	Provide facilities for all modes of travel and enhance safety	
Roadway Characteristics	▪ Existing travel lanes: 11'–14' ▪ Existing shoulder width: 0–5' ▪ Existing paved width: 22'–38' ▪ Posted speed: 45 mph (Rogue River Highway); Main Street speed is not posted ▪ Main Street ADT (vpd): Existing – 200 to 1,300; Future (2038) – 200 to 1,500 ▪ Rogue River Highway ADT (vpd): Existing – 1,600 to 2,300; Future (2038) – 1,900 to 2,700 ▪ 2 crashes (Rogue River Highway) reported during 5-year analysis period, both PDO	
How Improvement Addresses Deficiencies	**Existing/Future Deficiency**	**With Improvement**
	The roadways within the Interchange Management Study Area (IMSA) lack bicycle & pedestrian facilities	▪ Provide facilities for all modes of travel ▪ Increases awareness of bicycle presence ▪ No change to roadway capacity/operations
Additional Considerations	▪ Improved pedestrian/bicycle access generally benefits socioeconomically disadvantaged populations ▪ Would maintain existing paved section and ROW ▪ There is no access management needed for this concept	
Cost Opinion	▪ $465,000	
Implementation	Low priority ▪ Triggers: Crash pattern of bicycle/ pedestrian collisions or area development	

Project 43-MM2. Rogue River Highway (Rock Point Bridge, 00332A) – Multimodal Enhancements ***I-5 Exits 40 (Kane Creek) & 43 (Rock Point): Interchange Area Management Plans***



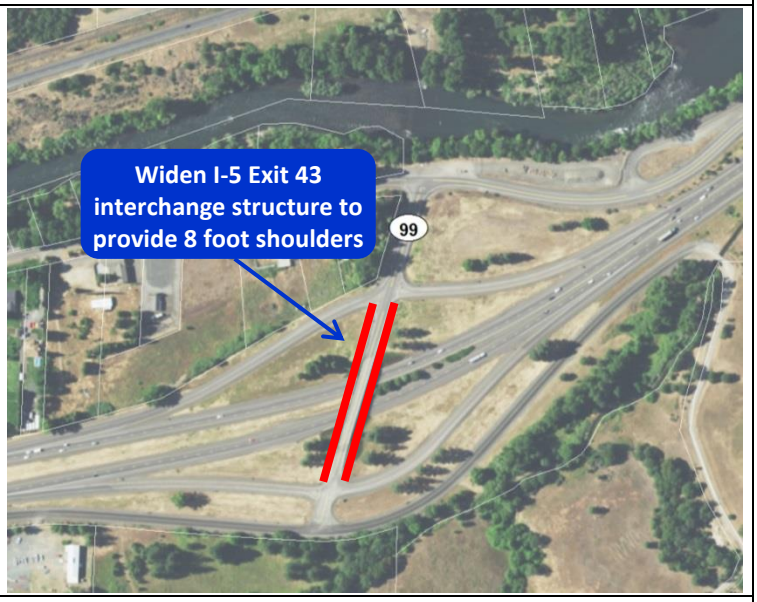


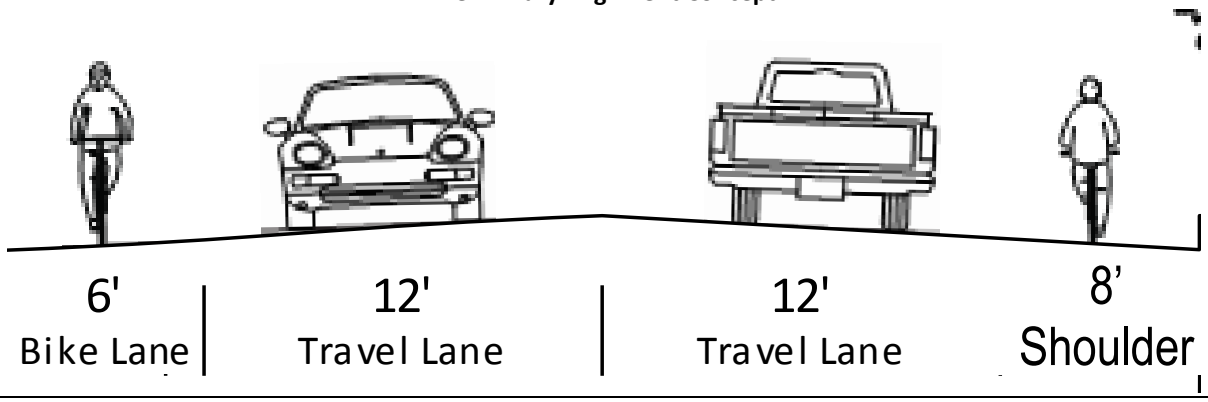
Description	Enhance multimodal access across the Rock Point Bridge: ▪ Option A: Add signage to the structure ▪ Option D: Build a parallel structure directly north of the Main Street/Rogue River Highway intersection and connecting to N. River Road to serve all modes of traffic (two 12' travel lanes and 8' multiuse path on either side)	
Purpose	Provide facilities for all modes of travel	
Roadway Characteristics	▪ Existing travel lanes: 9' ▪ Existing shoulder width: none ▪ Existing structure width: 19'–20' ▪ Rogue River Highway ADT (vpd): Existing – ~1,600; Future (2038) – ~1,900 ▪ No documented crash patterns on Rogue River Highway	
How Improvement Addresses Deficiencies	**Existing/Future Deficiency**	**With Improvement**
	The Rogue River Highway (Rock Point Bridge, 00332A) lacks bicycle & pedestrian facilities	▪ No change to roadway capacity/operations ▪ Provide facilities for all modes of travel Option A: ▪ Would increase driver awareness of non-auto travel Option B: ▪ Would have significant impacts on circulation (all modes) and operations at Main Street/Rogue River Highway intersection and also the new intersection with River Road ▪ Enhanced freight and emergency vehicle access
Additional Considerations	▪ Improved pedestrian access generally benefits socioeconomically disadvantaged populations ▪ Section 106 Determination of Effect would be required for both options Option B: ▪ Environmental concerns include the adjacent fish-bearing stream and wetlands ▪ Environmental permitting ▪ Would require work over the Rogue River and freshwater emergent wetlands ▪ Significant ROW impacts ▪ Rerouting of the Rogue River Highway	

Project 43-MM2. Rogue River Highway (Rock Point Bridge, 00332A) – Multimodal Enhancements	***I-5 Exits 40 (Kane Creek) & 43 (Rock Point): Interchange Area Management Plans***
	▪ Progress toward meeting the applicable access spacing standards must be demonstrated or a deviation must be justified and approved by the Region Access Management Engineer
Cost Opinion	▪ Option A: $1,500 ▪ Option B: $16.6 million ▪ Cost for either option does not include utility relocation, hazardous materials, or ROW
Implementation	▪ Option A: High priority ▪ Option B: Low priority ▪ Trigger: Crash pattern of bicycle/ pedestrian collisions, area development or funding availability
Preliminary Alignment Concept  	

Project 43-MM3. Widening of I-5 Overcrossing – Multimodal Enhancement

I-5 Exits 40 (Kane Creek) & 43 (Rock Point): Interchange Area Management Plans



Description	Provide multimodal crossing of I-5 by widening I-5 Exit 43 interchange structure to provide a cross-section of two 12' travel lanes and 8' shoulders	
Purpose	▪ Provide multimodal crossing of I-5 within the IMSA	
Roadway Characteristics	▪ Existing travel lanes: 12' (Main Street) ▪ Existing shoulder: 1'–2' (Main Street) ▪ Main Street ADT (vpd): Existing – 200 to 1,300; Future (2038) – 200 to 1,500 ▪ Main Street speed is not posted ▪ There were no crashes reported during the five-year analysis period on Main Street	
How Improvement Addresses Deficiencies	**Existing/Future Deficiency**	**With Improvement**
	Currently, there is not a safe alternative for bicycle & pedestrians to cross I-5 within the Interchange Management Study Area (IMSA)	▪ No change to roadway capacity/operations ▪ Provides facilities across I-5 for all modes of travel ▪ Enhanced freight and emergency vehicle access
Additional Considerations	▪ Potential land use impacts; determination of whether Statewide Planning Goal Exception is needed ▪ Additional stormwater treatment may be needed with increased impervious surface ▪ Any new work in areas of undisturbed soil have a high potential for archeological resource impacts ▪ There is no access management needed for this concept	
Cost Opinion	▪ $3.6 million	
Implementation	Medium priority ▪ Triggers: Crash pattern of bicycle/ pedestrian collisions, area development or funding availability	

Project 43-MM3. Widening of I-5 Overcrossing – Multimodal Enhancement	***I-5 Exits 40 (Kane Creek) & 43 (Rock Point): Interchange Area Management Plans***
Preliminary Alignment Concept