

Highway 138 Corridor Solutions Study
Roseburg, Oregon

Technical Memorandum #4:
Concept Development and Screening

DRAFT

Prepared for

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April 2007

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Introduction

A coordinated effort by the project team and members of the three oversight committees (Citizen Advisory, Technical Advisory, and Steering) led to 17 study area design concepts and options for consideration. Through the development and application of screening criteria, the list of design concepts and options were reduced to six alternatives to be forwarded for further analysis of how they would function under year 2030 conditions, further assessment of impacts, and preliminary cost opinions. Each of the 17 design concepts and options were presented for public review during an Open House held on April 11, 2007.

Technical Memorandum #4 describes the 17 design concepts and options for the study area and the screening process utilized to identify fatal flaws that removed some of the design options from further consideration. The memorandum concludes with a summary of written comments submitted during a public Open House held on April 11, 2007 at the Douglas County Library plus addition presentation by Oregon Department of Transportation (ODOT) staff to various local organizations.

Screening Criteria

The screening criteria used to identify alternatives for more detailed evaluation reflect the Purpose and Need statements plus Goals and Objectives identified in Technical Memorandum #1. The Circulation and Design Option Screening Criteria Scoring Matrix displayed in Appendix A indicates how the various concepts and design options were assessed based on the extent to which they were considered to meet the criteria. The screening criteria are divided into seven categories plus a relative cost assessment as follows:

- **Project Purpose:** To what extent do the concept and design options address the mobility, safety, connectivity, and multi-modal needs of Highway 138 within the study area?
- **Traffic Flow:** The concepts and design options are assessed on whether they provide a solution that meets future regional and through travel demand along the corridor, whether it adheres to State, County, and local planning efforts, and whether they enhance local freight access.
- **Connectivity:** Under this category, the matrix indicates the concepts and design options that provide a grade-separated railroad crossing versus those that do not, assesses the extent to which they protect access and minimize disruption to existing circulation in the downtown vicinity, and considers whether they provide a solution that could enhance economic development.
- **Environmental Impacts:** To what extent do the concepts and design options avoid or impact wetlands and aquatic/terrestrial wildlife habitat?
- **Cultural Impacts:** Under this category, the concepts and design options are assessed based on the extent to which they impact recreational resources, properties listed or eligible for listing on the National Register of Historic Places, the Downtown, Laurelwood, and Mill-

Pine Historic Neighborhoods, known archaeological resources, and the extent to which the concepts and options protect and enhance existing neighborhoods and businesses.

- **Safety:** The concepts and design options are assessed based on whether they mitigate operational and safety impact on Highway 138.
- **Multi-Modal:** To what extent do the concepts and design options improve linkages for non-auto travel modes?

Circulation Concepts and Design Options

The project team and oversight committees developed 17 design options that can be categorized under five concepts. The Concept 1 design options attempt to enhance the existing corridor to the greatest extent possible. Concepts 2 through 4 all reroute the corridor from its current alignment and are differentiated by whether they keep the alignment largely in the vicinity of downtown (Concept 2), provide a direct Harvard Avenue to Diamond Lake Boulevard connection (Concept 3), or utilize existing uphill topography north of Diamond Lake Boulevard to ensure a grade separation of the railroad line (Concept 4). Finally, Concept 5 introduces a new bridge over the South Umpqua River south of downtown and outside the study area boundaries aligned with Portland Avenue, which connects with Interstate 5 at Exit 123. Referenced figures illustrating each design option are placed at the end of the memorandum in Appendix B.

Concept 1: Existing Corridor Alignment with Intersection Capacity Improvements

Design options under Concept 1 preserve the existing Highway 138 corridor alignment by implementing improvements to the system designed to maximize its efficiency. The three design options described below could be incorporated individually or in tandem with each other or some of the other concepts described in this section.

Design Option 1(a): Intersection Capacity Enhancements

As displayed in Appendix B, Figure 1, this design option would focus on the three primary intersections within the downtown: Stephens/Diamond Lake Boulevard; Stephens/Douglas; and the four intersections where the Washington/Oak and Stephens/Pine couplets converge. Improvements at these locations could range from simply re-striping to larger scale improvements such as increasing existing turning radii and adding lanes. Incorporating potential southbound left turn movements onto Douglas Avenue off of Stephens Street have been explored in the past and have been deemed to be not workable.

Intersection improvements at the Stephens/Diamond Lake Boulevard intersection are likely to include additional travel lanes and possibly reorienting the intersection to provide some wider turning radii and reducing the number of stopped movements at the signal.

Potential Impacts

If improvements are limited to re-striping, physical impacts to the downtown vicinity could be minimal. However, larger scale enhancements that widen intersection turning radii or add travel lanes will directly affect adjacent downtown city blocks, portions of which would have to be acquired for new roadway alignments.

Improvements at the Stephens/Diamond Lake intersection could impact the two bridges that cross Deer Creek and could potentially require widening one or both structures. This would give rise to potential environmental impacts and structural work would significantly increase the cost of this option. Widening and/or reorienting the intersection could also impact adjacent properties.

Although Design Option 1(a) is generally considered to be the lowest cost solution, a common concern raised by the three oversight committees regarding this design concept is that it may at best provide minimal traffic flow improvements. The design option, along with Design Option 1(b) is considered to have the least environmental impact and ranks as having low cultural impacts.

Screening Results

The three oversight committees recommended that Design Option 1(a) be forwarded as an alternative for further analysis.

Design Option 1(b): Winchester/Stephens Couplet

This design option concept incorporates a couplet aligned with Winchester Street (northbound) and Stephens Street (southbound) north of Diamond Lake Boulevard (see Appendix B, Figure 2). Motorists traveling southbound on Stephens Street and destined for downtown would follow the right lane(s) and continue south, merging with traffic veering southbound off of Diamond Lake Boulevard. Southbound motorists on Stephens Street destined for Diamond Lake Boulevard would follow left lanes to a signalized T-intersection with Diamond Lake Boulevard. At the southern end of the new couplet, northbound traffic destined to points north of Diamond Lake Boulevard would veer to the right onto an overpass that flies over Diamond Lake Boulevard and aligns with Winchester until it reconnects back to Stephens Street. Northbound motorists destined for Diamond Lake Boulevard would utilize the far left lane(s) to turn onto Diamond Lake Boulevard. Westbound traffic along Diamond Lake Boulevard could stay on the roadway as it veers south onto Stephens Street and into downtown, or if heading to points north, turn right onto a short two-way portion of Winchester Street and merge with the northbound one-way lanes of Winchester Street.

Potential Impacts

Although not a likely stand-alone option, Design Option 1b could potentially be incorporated into other Concept 1 and 2 design options. Concerns expressed by the committees centered on impacts to surrounding neighborhoods and intersections along Winchester Street and that the design option does not meet project purpose. Nonetheless, there was some interest in exploring the possibility of merging the design option perhaps with some of the other concepts and design options under consideration. Ultimately, it was agreed upon by members of the Technical

Advisory Committee (TAC) to screen a third design option under Concept 1 that combines the Design Options 1(a) and 1(b).

Screening Results

The three oversight committees were in agreement that Design Option 1(b) should not advance as a standalone alternative for analysis. However, the TAC recommended screening a third design option under Concept 1 that folds Design Option 1(b) with 1(a).

Design Option 1(c): Combined Capacity Improvements and Couplet

The TAC recommended a third Concept 1 design option be screened for consideration that consolidated the intersection capacity enhancements that are the centerpiece of Design Option 1(a) with the Stephens/Winchester couplet proposal of Design Option 1(b) as displayed in Appendix B, Figure 3.

Potential Impacts

The impacts associated with Design Concepts 1(a) and 1(b) are also applicable with Design Option 1(c). The potential benefits of incorporating the improvements may not offset the substantial impacts expected along the Winchester corridor and adjacent neighborhoods, coupled with potential disruption of downtown city blocks.

Screening Results

Although the design proposal was not presented to the Citizens Advisory Committee (CAC), the TAC and Steering Committee (SC) were both in agreement that this design option should not advance as an alternative for further analysis.

Concept 2: Downtown Realignment

The varying design options discussed under this concept incorporate a new Highway 138 alignment into the existing downtown grid – placing prioritization of traffic flow through downtown on the newly realigned highway. The design options utilize the existing couplet bridges or build a parallel new bridge aligned with or in proximity to Douglas Avenue. The section of the realigned downtown highway between the bridges and where it arcs northward towards Diamond Lake Boulevard could potentially be a five-lane corridor with center turn lane or perhaps comprise four-lanes with a boulevard style landscaped median. All design options discussed below utilize the Oak Avenue Bridge and corridor as a secondary two-way auxiliary roadway providing direct access into and out of downtown and points south. None of the design options provide a grade separated crossing of the railroad line. Finally, all options would require some degree of reconfiguring existing streets in the downtown vicinity.

Design Option 2(a): Widen Washington Avenue Bridge (Washington-Stephens-Diamond Lake Alignment)

This design option, displayed as Appendix B, Figure 4 widens the Washington Avenue Bridge to four travel lanes with two-way travel. Past the bridge, the route veers north along the Stephens

Street alignment to Diamond Lake Boulevard. Signalized intersections would be positioned at Pine Street, Douglas Avenue, Diamond Lake Boulevard, and Winchester Street. The northbound couplet portion of Stephens Street south of Washington Street would merge onto the reconfigured corridor. Washington Avenue east of Stephens Street could either remain a westbound one-way street or convert to two-way traffic. West of Stephens Street, however, the alignment would be restricted to a one-way eastbound loop south onto Pine street.

The Oak Avenue Bridge could also be converted to a two-way travel but would remain two lanes. Changes to travel patterns on Oak Avenue would further affect traffic flow downtown.

Potential Impacts

Of the five Concept 2 design options under consideration, Design Option 2(a) has the least amount of impact to the existing downtown alignment and to the physical and cultural environment. The design option is also likely the least costly of the five downtown alignment options under consideration. Nonetheless, depending on the final realignment, the two blocks between Oak and Douglas Avenues and Pine and Stephens Streets could be impacted. The primary concern expressed by the oversight committees was that the design option does not properly address or improve the intersection at Stephens Street and Diamond Lake Boulevard and would therefore require improvements similar to those described for Design Option 1(a) to address concerns at that location.

Screening Results

With the CAC split on its decisions regarding Design Option 2(a), the TAC and SC voted on the option and forwarded it for consideration as an alternative for further study.

Design Option 2(b): New Bridge (Douglas-Stephens-Diamond Lake Alignment)

The design option incorporates a new parallel, two-way, four-lane bridge north of the existing Washington Avenue Bridge in alignment with Douglas Avenue (see Appendix B, Figure 5). The route would then veer north along Stephens Street and then veer east onto Diamond Lake Boulevard. The Washington Avenue Bridge and corridor would be vacated west of Spruce Street and become a two-way traffic roadway east of Spruce Street. Meanwhile, Spruce Street would stop short of connecting with Douglas Avenue. Signalized intersections would be placed along the new corridor at Douglas Avenue/Stephens Street, Stephens Street/Diamond Lake Boulevard, and Diamond Lake Boulevard/Winchester Street.

As with Option 2(a), the Oak Avenue Bridge could also be converted to a two-way travel but would remain two lanes. Changes to travel patterns on Oak Avenue would further affect traffic flow downtown.

Potential Impacts

Cultural impacts of this design option are considered to be high with regard to Section 4(f) and historic resources. Widening Douglas Avenue to five lanes will impact the Lane House and other nearby historic properties fronting the roadway and the new bridge alignment would also impact Riverside Park. The design option would also have a significant environmental impact

associated with constructing a new bridge over the South Umpqua River. Concern was expressed by members of the oversight committees regarding the potential impacts on the downtown couplet system and how the new alignment would interact with the rest of downtown.

Screening Results

Overall, Design Option 2(b) was deemed to have significant environmental and cultural impacts while providing minimal to no traffic flow or connectivity advantages over Design Option 2(a). Therefore, the design option was not recommended as an alternative to be considered for further study.

Design Option 2(c): Widen Washington Avenue Bridge (Washington-Rose-Diamond Lake Alignment)

Design Option 2(c) places the two-way, four-lane bridge alignment back on Washington Avenue as in Design Option 2(a). However, this time, Highway 138 crosses Stephens Street and veers north onto the Rose Street alignment toward Diamond Lake Boulevard (see Appendix B, Figure 6). The reconfiguration would require signalized intersections through downtown at three locations: Washington Avenue/Stephens Street; Rose Street/Douglas Avenue; and Diamond Lake Boulevard/Winchester Street. The segment of Rose Street south of Washington Avenue would connect with the Highway 138 corridor via a right-in/right-out intersection at the corner where Washington Avenue turns north onto the section of the Rose Street alignment that connects with Diamond Lake Boulevard. Another change under this design option would be the Diamond Lake Boulevard approach to Stephens Street. Although several potential new configurations are possible, designing a connection that does not curtail movements between Stephens Street north of Highway 138 and Diamond Lake Boulevard may prove difficult.

As with the other Concept 2 options, the Oak Avenue Bridge could be converted to a two-way travel but would remain two lanes. Changes to travel patterns on Oak Avenue would further affect traffic flow downtown.

Potential Impacts

Common concerns expressed by members of the oversight committees were the impacts to properties targeted for future development, particularly the old Safeway site and the north side of Douglas Avenue, where a public service building is under consideration. Although there are some possible historic resources along Rose Street, impacts to these buildings could potentially be avoided or mitigated. Finally, the design option would incorporate two parallel highways through downtown Roseburg.

Screening Results

Concerns expressed by the oversight committees were substantial. Nonetheless, there was enough interest in seeing more detail on how the design option would operate that it was recommended for advancement as an alternative for further study.

Design Option 2(d): New Bridge (Sweeping Curve to Diamond Lake Boulevard)

Differing from the other four Concept 2 design options under consideration which generally reroute Highway 138 along the existing alignments of the downtown grid, Design Option 2(d) would initiate a sweeping diagonal S-curve through downtown and towards Diamond Lake Boulevard (see Appendix B, Figure 7). The design option would incorporate a new two-way, four-lane bridge over the South Umpqua River that would gradually sweep northward then east where the corridor merges into the existing Diamond Lake corridor. Subsequently, the Washington Avenue Bridge and corridor would be vacated between Harvard Avenue and Spruce Street. The configuration of the highway corridor would require two signalized intersections – one at Stephens Street and the other at Winchester Street – the fewest of the Concept 2 design options. The option would enable an exclusive westbound lane off of Diamond Lake Boulevard that could merge onto northbound Stephens Street.

As with the other Concept 2 options, the Oak Avenue Bridge could be converted to a two-way travel but would remain two lanes. Changes to travel patterns on Oak Avenue would further affect traffic flow downtown.

Potential Impacts

Some members of the oversight committee noted the potential for addressing the congestion issues in the vicinity of Stephens Street and Diamond Lake Boulevard. Significant impacts to environmental/cultural resources and surrounding neighborhoods and businesses can be expected. Construction of a new bridge would impact the South Umpqua River. Likewise, the new bridge would cross directly over Riverside Park and the new alignment would impact historic resources. The assessed degree of impact depends upon the specific alignment of the S-curve.

Screening Results

Due to significant environmental and cultural impacts, Design Option 2(d) was not recommended by the oversight committees as a viable alternative for further study.

Design Option 2(e): New Bridge (Douglas-Jackson-Diamond Lake Boulevard)

Similar to Design Option 2(b), this option incorporates a new parallel bridge in alignment with Douglas Avenue north of the existing Washington Avenue Bridge and corridor (see Appendix B, Figure 8). However, instead of veering north up Stephens Street, the highway alignment would utilize the Jackson Street alignment to bring Highway 138 traffic up to Diamond Lake Boulevard. The Washington Avenue Bridge and corridor would be vacated between Harvard Avenue and Spruce Street. The realigned corridor would pass through three signalized intersections at Stephens Street, Diamond Lake Boulevard and one at the curve where Washington Avenue turns into Jackson Street to provide access to the segment of Jackson Street south of Washington Avenue. Under the design option, Douglas Avenue would cross Jackson Street and then turn south to become Rose Street.

As with the other Concept 2 options, the Oak Avenue Bridge could be converted to a two-way travel but would remain two lanes. Changes to travel patterns on Oak Avenue would further affect traffic flow downtown.

Potential Impacts

Members of the oversight committees cited possible impacts along Douglas Avenue and Jackson Street. The design option would have a significant impact associated with the construction of a new bridge across the South Umpqua River. Potential impacts to 4(f) resources and historic properties are considerable given the alignment of the proposed multi-lane roadway directly above Riverside Park and fronting the historic Lane House. In addition, realigning Highway 138 along Jackson Street would permanently alter a primary gateway into the Downtown Neighborhood District. Finally, the oversight committees also expressed concerns that the option merely shifts the current intersection problem occurring at Diamond Lake Boulevard and Stephens Street to the intersection at Winchester Street.

Screening Results

Considering the potential for significant impacts to environment and cultural resources, plus surrounding neighborhoods and businesses, members of the oversight committees did not recommend Design Option 2(e) for further study as an alternative.

Concept 3: Direct Alignment

The Direct Alignment design options that comprise Concept 3 all are configured to provide the most direct link between Harvard Avenue west of the South Umpqua River to Diamond Lake Boulevard on the east side of the river. The central feature of all four design options described below is a new bridge crossing diagonally over the South Umpqua River and southern portion of Elk Island. The Washington Avenue Bridge would likely need to be vacated under all four options. The options are differentiated primarily by whether and how they provide a grade separated crossing over the railroad line. Three of the four design options do provide a grade separated crossing, either by flying over the existing railroad alignment, relocating the railroad, or by elevating the existing railroad line to enable streets to traverse under the line. Currently unknown is whether the Oak Avenue Bridge will need to be widened to four lanes (two lanes in each direction) under all design option scenarios. If the new alignment flies over Stephens and Winchester Street with no access as with Design Option 3(b), the required bridge widening will be a certainty. Otherwise, widening of the Oak Avenue Bridge is an unknown with regards to the other three design options.

Design Option 3(a): New Bridge (Harvard-Diamond Lake Boulevard At-Grade Crossing at Railroad/Stephens Street)

Under Design Option 3(a), the east end of the bridge would cross the existing railroad line at grade and connect with Stephens Street at a signalized crossing before proceeding eastward along the existing Diamond Lake Boulevard alignment (see Appendix B, Figure 9). The existing two lane configuration of the Oak Avenue Bridge may be sufficient for two-way travel to and

from downtown and points south under this option. However, further analysis would be needed to confirm that a widened four lane bridge would not be necessary.

Potential Impacts

In all likelihood, Design Option 3(a) would be the least expensive of the options considered under Concept 3; however, the common deficiency noted by the oversight committees on this design option is the lack of a grade-separated railroad crossing.

Other issues include the potential wetlands impacts and possibly some cultural impacts to historic and 4(f) resources. An existing dwelling considered potentially eligible for listing on the National Register of Historic Places lies near the most direct alignment between Harvard Avenue and Diamond Lake Boulevard. The new roadway would also cross an existing multi-use trail popular with bicyclists, pedestrians, and other recreational users.

Screening Results

The design option was recommended by the oversight committees for advancement as an alternative for further study.

Design Option 3(b): New Bridge (Harvard-Diamond Lake Boulevard Grade-Separated Flyover Crossing at Railroad/Stephens Street)

Design Option 3(b) would continue the new bridge east of the river, over the railroad line and Stephens Street landing at a point west of Jackson Street, as displayed in Appendix B, Figure 10. Subsequently, the configuration would require that Winchester Street terminates short of connecting with Diamond Lake Boulevard. The southern segment of Jackson Street would reconnect with the northern portion as a continuous street crossing Diamond Lake Boulevard as a signalized intersection. Because the grade-separated crossing of Stephens would require traffic to/from Stephen Street north of Diamond Lake Boulevard to travel through downtown, Design Option 3(b) would require that the Oak Avenue Bridge be widened to four lanes with two-way traffic flow.

Potential Impacts

While this would provide more efficient movement of through traffic from Harvard Avenue to Diamond Lake Boulevard and points east and the option provides a grade-separated crossing of the existing railroad line, the trade-off is diminished access to downtown and surrounding neighborhoods from the realigned elevated highway. The option would eliminate direct access from Diamond Lake Boulevard to Stephens Street and would eliminate through access into downtown from Winchester. The option would also impose significant environmental impacts with the construction of a new bridge and the widening of the existing Oak Avenue Bridge

Screening Results

Due primarily to poor connections on the east side coupled with downtown and neighborhood impacts, the design option was not recommended by the oversight committees for advancement as an alternative for further study.

Design Option 3(c): New Bridge (Harvard-Diamond Lake with At-Grade Stephens Crossing Supplemented by Railroad Realignment)

This design option would incorporate the identical bridge configuration and cross traffic at Stephens Street and Winchester Street as Design Option 3(a). The difference would be that the railroad would be rerouted and a bridge would be constructed over the South Umpqua River and Elk Island as displayed in Appendix B, Figure 11. Rerouting the railroad line would begin in the vicinity of Oak Avenue and along the Spruce Street alignment, travel through existing neighborhoods and parks across the river, and reconnect on its existing alignment on the opposite side of the river from the Laurelwood neighborhood. The downtown grid pattern west of Stephens Street would be disrupted under the option because the railroad realignment would require that Washington and Douglas Avenues terminate at the new railroad alignment.

Potential Impacts

Although the design option provides a solution for separating railroad operations from arterial traffic circulation, the environmental and cultural impacts are significant. Aligning the railroad down Spruce Street would impact historic structures in the vicinity of the Lane House and bisect Riverside Park. This option would also result in a substantial volume of new fill within the South Umpqua River floodway.

Screening Results

The design option was not recommended by the oversight committees for consideration as an alternative for further study due to the significant environmental and cultural impacts.

Design Option 3(d): New Bridge (Harvard-Diamond Lake with Elevated Railroad)

The Central Oregon & Pacific Railroad (CORP) presented members attending the TAC meeting with a design option that would elevate the railroad over several existing downtown roadways and a new direct bridge connection from Harvard Avenue to Diamond Lake Boulevard. This option would gradually elevate the existing railroad bed starting from the south in the vicinity of Mosher Avenue to a point where the line goes over Oak, Washington, and Douglas Avenues as an overpass and then continues north and over the realigned Highway 138 at Diamond Lake Boulevard, before descending north of the Diamond Lake Boulevard corridor to its existing grade (see Appendix B, Figure 12). Because this option would eliminate several at-grade railroad crossings without significant impacts to the existing downtown grid, members of the TAC recommended forwarding Design Option 3(d) for screening.

Potential Impacts

Visual and noise impacts could potentially be significant under this design scenario. An ideal clearance for vehicles passing under railroad tracks would be 17 feet. Thus, trains passing through the downtown vicinity could possibly be elevated more than 20 feet above street level. The design option would pose significant impacts to the Mill-Pine Neighborhood and cross streets such as Mosher Avenue, which serves as a primary access point into Mill-Pine, and Lane Avenue. Finally, the option will impose historic impacts from the old railroad station (operated

as a restaurant by McMenamain Brothers) to the historic properties along Spruce Street, Douglas Avenue, and Pine Street.

Screening Results

Although the design proposal was not presented to the CAC, the TAC and SC were both in agreement that this design option be advanced as an alternative for further analysis.

Concept 4: Northern Grade-Separated Alignment

Design options under Concept 4 attempt to utilize the existing topography to align a new bridge that crosses over the railroad line. North of Diamond Lake Boulevard, the railroad line stays along the level banks of the South Umpqua River while Stephens Street and the surrounding landscape east of the corridor ascend uphill – thus enabling a bridge to cross over the railroad with shorter distances to descend onto the surface streets. All design options under consideration incorporate bridges over the river and Elk Island to align north and parallel to the existing Highway 138 route along Diamond Lake Boulevard, reconnecting with the existing corridor at a point east of Jackson Street. The design options would also require vacating the Washington Avenue Bridge and widening Oak Avenue Bridge to four-lane, two-way traffic due to access limitations with some of the new bridge configurations.

Design Option 4(a): New Bridge (Flyover Railroad/Access via Jackson Street)

Under this design option, the eastern terminus of the bridge aligns with Rowe/Odell Avenues, descending to a signalized intersection at Jackson Street north of Diamond Lake Boulevard (see Appendix B, Figure 13). The limited bridge clearance at Winchester Street would require closing Winchester Street north of Odell Avenue and eliminating existing north-south through access to Diamond Lake Boulevard.

Potential Impacts

Of the four Concept 4 options under consideration, Design Option 4(a) is considered to have the most disruption to circulation and access in the project area because of the closure of Winchester Street to through travel and the lack of connection to Stephens Street. The option would impose significant impacts to wetlands and wildlife in the vicinity where it crosses South Umpqua River, Deer Creek and Elk Island. Likewise, the design option would impose a sizeable impact on adjacent neighborhoods and businesses.

Screening Results

Although the Citizen Advisory Committee voted against forwarding this option, the other two oversight committees recommended the design option be advanced as an alternative for further analysis.

Design Option 4(b): New Bridge (Access with Right-In/Right-Out Ramps)

The option follows the identical alignment as Design Option 4(a) with the difference being the incorporation of right-in/right-out ramps at an elevated intersection with Winchester Street.

These ramps would link the bridge with Winchester Street, Diamond Lake Boulevard and Stephens Street as displayed in Appendix B, Figure 14.

Potential Impacts

The on and off ramps at the eastern end of the bridge would provide improved access to Stephens and Winchester Streets and the surrounding neighborhoods. However, the elevated intersection and ramps would be visually imposing and through travel on Winchester Street would still not be possible. The option would also impose significant impacts to wetlands, wildlife and adjacent neighborhoods and businesses.

Screening Results

The design option was not recommended by the oversight committees for consideration as an alternative for further study due to the significant visual, environmental and business impacts.

Design Option 4(c): New Bridge (Flyover Railroad/Stephens/Winchester)

The advantage of this design option is that it would enable all the existing surface streets in the vicinity to remain intact (with the exception of Washington Avenue from Harvard Avenue to Spruce Street). The eastern terminus of the new bridge would align between Diamond Lake Boulevard and Rowe/Odell Avenues, clearing both Stephens and Winchester Streets, thereby allowing for the continued north-south service that those streets currently provide (see Appendix B, Figure 15). However, the added bridge clearance would be at the expense of existing businesses in that block and a longer bridge through the surrounding neighborhood that would not reconnect to grade level until somewhere near Jackson Street.

Potential Impacts

A longer bridge section east of the river would be necessary to clear both Stephens and Winchester Streets. Subsequently, the bridge would impact a significant portion of the businesses north of Diamond Lake Boulevard and provide no access onto Stephens and Winchester Streets. The option would also impose significant impacts to wetlands, wildlife and adjacent neighborhoods and businesses.

Screening Results

The design option was not recommended by the oversight committees for consideration as an alternative for further study due to concerns that the route would bypass the city and impose undue environmental and business impacts.

Design Option 4(d): New Bridge (Wright-Odell Alignment)

The northernmost of the Concept 4 options, Design Option 4(d) would enable the new Highway 138 alignment to bridge the railroad while directly connecting with Stephens Street and Winchester Street at-grade. As displayed in Appendix B, Figure 16, the new Highway 138/Stephens Street intersections would need to be repositioned in alignment with Wright

Avenue approximately 1,000 feet north of the Diamond Lake Boulevard, cross Winchester Street, then veer in a southeasterly direction toward Diamond Lake Boulevard.

Potential Impacts

The new alignment would impact residential and commercial areas in the vicinity while providing a circuitous connection to Diamond Lake Boulevard. The uphill slope in the northbound direction along Stephen Street could impose problems for vehicles, particularly trucks, stopped at a signalized intersection attempting to accelerate after the light turns green. The issue could be partially remedied by constructing a truck lane through the intersection and continuing north until level terrain is reached.

Screening Results

The oversight committees did not recommend the design option be advanced as an alternative for further study due to environmental and neighborhood impacts, the circuitous connection to Diamond Lake Boulevard, and the steep graded intersection along Stephens Street that the option would impose.

Concept 5: Portland Avenue Bridge

This concept has only one option which would construct a new bridge across the South Umpqua River and CORP Railroad line aligned along Portland Avenue as displayed in Appendix B, Figure 17. The bridge would enable direct access from Stephens Street south of downtown to Interstate 5 via Exit 123. The natural topography would enable the new bridge to fly over the railroad while connecting with Stephens Street at grade.

Potential Impacts

Constructing a new bridge over the South Umpqua River would impose significant environmental impacts. The concept would also impose some impacts to the downtown and Mill-Pine historic neighborhoods. Although Concept 5 holds the advantage over the other concepts under consideration with regards to relative ease of providing a grade-separated railroad crossing, it would likely provided limited relief downtown and no relief to future Stephens/Diamond Lake intersection congestion.

Screening Criteria

Although a good remedy for providing a grade-separated crossing of the railroad, the concept was not considered a viable alternative for further analysis by the oversight committees due to its limited ability to address the purpose and need of the study.

Public Outreach and Summary of Comments Received

The project team held the second Public Open House for the Highway 138 Corridor Solutions Study on April 11, 2007 at the Douglas County Library in downtown Roseburg. This open house gave the public the first opportunity to view all the concepts and design options under

consideration along with those options recommended as alternatives for further study. The forum also enabled participating citizens to voice their concerns and to seek clarification on various aspects of the study. Although 77 citizens filled in the sign-in sheet for this event, the actual number in attendance was estimated to be higher.

The project team received 26 completed comment forms for review that are transcribed and attached as Appendix C. Several expressed support for a specific design option while a few pinpointed specific options that should be eliminated. The following is a summary of specific design options that received up or down votes:

Design Option 1(a)	Two in support
Design Option 2(a)	One in support
Design Option 2(c)	Two in support
Design Option 3(a)	Six in support (one against)
Design Option 3(b)	One in support
Design Option 3(d)	Seven in support (one against)
Design Option 4(b)	One in support
Concept 5	One in support

In addition, three returned forms expressed support for a direct new bridge to Diamond Lake Boulevard without identifying a specific design option. One expressed support of a new bridge directly linking to Diamond Lake Boulevard (at-grade or grade-separated railroad crossing not specified); while two specifically expressed support for a new bridge that spans both the railroad as well as the river.

Some of the comments expressing support for a particular design option acknowledged some of the trade-offs involved. For example, one visitor considered Option 3(a) to be the most cost effective for moving traffic, although motorists would still be stopping at the railroad tracks when trains are present. Likewise, some of the support for Option 3(d) was tempered by aesthetic issues of an elevated viaduct and projected costs.

One individual stood near the doorway leading into the open house and solicited signatures for a petition opposing a “flyover” alternative, as attendees entered the room. The same individual also distributed form letters opposing a “flyover” alternative during the open house. No reference to a specific alternative was made on the petition or form letters. The petition was later submitted with 16 signatures.

Other comments centered more or less on the following themes:

- Investigate human and environmental impacts
- Encourage increased increase public transit and pedestrian access before enhancing roadways for vehicle needs
- View traffic problems as a whole and incorporate ideas into a city wide plan
- Direct access to I-5 would benefit businesses
- Would have been helpful to display cost estimates beside each option

- All the options appear to require widening of Harvard Avenue, which would be disastrous (two comments received centered on this theme)
- Railroad crossing is a public safety issue (emergency access to the hospital)
- Keep bridges open or at the very least convert for bicycle and pedestrian access
- Avoid historic landmarks
- Negotiate with the railroad to operate longer trains at night
- Encourage development with downtown as a destination instead of a pass through
- Rebuild Champion rail spur and extend to Glide while discouraging high school and truck traffic on Diamond Lake Boulevard by making it a two-lane parkway with 25 MPH speed limit
- Encourage less driving
- Protect Elk Island

In addition to the April 11th Public Open House session, ODOT staff have attended and presented the concepts before the following groups.

- Umpqua Valley Republican Women - April 4 (approximately 35 people in attendance)
- Roseburg Area Chamber Economic Development Committee - April 10 (approximately 12 people in attendance)
- Home Builders Association - April 12 (approximately 80 people in attendance)
- Roseburg Evening Rotary - April 17 (approximately 30 people in attendance)
- Roseburg Executive Club – April 18 (approximately 40 people in attendance)