Integrating Land Use & Transportation in the Highway 62 Corridor

North Medford - White City

Rogue Valley Council of Governments

Rogue Valley Metropolitan Planning Organization

June 2003
This project is partially funded by a grant from the Transportation and Growth Management (TGM) Program, a joint program of the Oregon Department of Transportation and the Oregon Department of Land Conservation and Development. This TGM grant is financed, in part, by federal Transportation Equity Act for the 21st Century (TEA-21), local government, and the State of Oregon funds.

The contents of this document do not necessarily reflect views or policies of the State of Oregon.
# TABLE OF CONTENTS

**SUMMARIES OF THE TOPICAL AREAS:**

- *Executive Summary* ......................................................... 6
- *Public Involvement and Committee Work* ...................... 8
- *Design Workshop Summary* ........................................... 9
- *Base Case Summary* ....................................................... 11
  - Background ........................................................................ 11
  - Housing & Employment Growth ..................................... 11
  - Traffic Congestion .......................................................... 11
  - Bicycle & Pedestrian ...................................................... 11
  - Transit ............................................................................... 11
- *Land Use Scenarios Summary* ......................................... 12
  - Northern Terminus .......................................................... 12
  - Vilas Road ........................................................................ 12
  - Foreign Trade Zone ........................................................ 12
  - Southern Terminus ......................................................... 13
- *Local Street Network Summary* ....................................... 14
- *Regional Boulevard Summary* ........................................ 17
- *Technical Analysis Summary* ......................................... 23
- *Conclusion* ................................................................. 25

**SECTION 1 EXISTING PLANS & POLICIES** ........................................ 26

- *Introduction* ............................................................... 27
- *Report Organization* ...................................................... 27
- *Part 1 - Planning Policies* ............................................... 28
- *Part 2 - Code Requirements* ......................................... 40
- *Appendix A* .................................................................... 44

**SECTION 2 PUBLIC INVOLVEMENT** .............................................. 49

- *Stakeholder Identification and Interviews* ....................... 50
- *Advisory Committees* .................................................... 53
- *Public meetings* ............................................................ 55
- *Publicity* .......................................................................... 56
- *Background Information* ................................................ 58

**SECTION 3 PROJECT SUBAREAS** .............................................. 59

- *Introduction* .................................................................... 60
Report Organization ............................................................................................................................................................................ 60

SECTION 4 BASE CASE ASSUMPTIONS .......................................................................................................................... 71

SECTION 5 BASE CASE SCENARIO-FUTURE CONDITIONS .......................................................................................... 75

    Introduction ........................................................................................................................................................................ 76
    Future Land Use Conditions ............................................................................................................................................... 76
    Future Transportation Conditions ........................................................................................................................................ 79
    Future Transportation Conditions ........................................................................................................................................ 80
    Bicycle and Pedestrian Improvements ........................................................................................................................................ 83
    Transit System - Future Changes ............................................................................................................................................ 83

SECTION 6 LAND USE & TRANSPORTATION ASSUMPTIONS ........................................................................... 84

    Introduction ........................................................................................................................................................................ 85

SECTION 7 DESIGN WORKSHOP .......................................................................................................................... 95

    Design Workshop Process .................................................................................................................................................. 96
    Outline for Design Workshop ............................................................................................................................................... 99
    Design Workshop Themes ................................................................................................................................................ 101

SECTION 8 WORKSHOP RESULTS & EVALUATIONS ................................................................................... 113

    Workshop Organization .......................................................................................................................................................... 114
    Subarea Concept Evaluations ................................................................................................................................................ 115
    North Terminus ........................................................................................................................................................................ 115
    Vilas Road Interchange .......................................................................................................................................................... 119
    Foreign Trade Zone ................................................................................................................................................................. 122
    South Terminus ........................................................................................................................................................................ 125
    Regional Boulevard................................................................................................................................................................. 129

SECTION 9 BUS RAPID TRANSIT ANALYSIS .............................................................................................. 130

SECTION 10 TRANSPORTATION BASE CASE VS WORKSHOP RECOMMENDATIONS ......................................................... 135

TABLE OF FIGURES

    WORKSHOP IDEAS ........................................................................................................................................ 10
    RECOMMENDED PROJECTS ................................................................................................................................. 16
    REGIONAL BOULEVARD STUDY: WORKSHOP STUDY 4 .......................................................................................... 18
    REGIONAL BOULEVARD STUDY: WORKSHOP STUDY 5 .......................................................................................... 19
    REGIONAL BOULEVARD STUDY: WORKSHOP STUDY 8 .......................................................................................... 20
    REGIONAL BOULEVARD STUDY: WORKSHOP STUDY 9 .......................................................................................... 21
    REGIONAL BOULEVARD STUDY: WORKSHOP STUDY 11 ................................................................................... 22
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>STUDY AREA</td>
<td>48</td>
</tr>
<tr>
<td>SOUTHERN TERMINUS OF POTENTIAL EXPRESSWAY</td>
<td>66</td>
</tr>
<tr>
<td>FOREIGN TRADE ZONE</td>
<td>67</td>
</tr>
<tr>
<td>EAST VILAS ROAD INTERSECTIONS WITH HIGHWAY 62 AND OLD MEDCO HAUL ROAD</td>
<td>68</td>
</tr>
<tr>
<td>NORTHERN TERMINUS OF POTENTIAL EXPRESSWAY</td>
<td>69</td>
</tr>
<tr>
<td>REGIONAL BOULEVARD</td>
<td>70</td>
</tr>
<tr>
<td>HIGH GROWTH TRANSPORTATION ANALYSIS ZONES</td>
<td>78</td>
</tr>
<tr>
<td>PROPOSED TOD AND FUTURE HIGHWAY 62</td>
<td>79</td>
</tr>
<tr>
<td>YEAR 2023 CONGESTED AREAS</td>
<td>82</td>
</tr>
<tr>
<td>BASE CASE WITH COMP PLAN, TOD, CONGESTION, AND STREET CLASS (2023)</td>
<td>90</td>
</tr>
<tr>
<td>BASE CASE WITH ZONING, TRAFFIC, STREET CLASS, AND AERIAL PHOTOGRAPHY</td>
<td>91</td>
</tr>
<tr>
<td>BASE CASE WITH BICYCLE, PEDESTRIAN, AND TRANSIT FACILITIES (2002)</td>
<td>92</td>
</tr>
<tr>
<td>ENVIRONMENTAL CONDITIONS</td>
<td>93</td>
</tr>
<tr>
<td>TAXLOT VALUE PER ACRE</td>
<td>94</td>
</tr>
<tr>
<td>WORKSHOP IDEAS</td>
<td>105</td>
</tr>
<tr>
<td>REGIONAL BOULEVARD STUDY: WORKSHOP STUDY #1</td>
<td>107</td>
</tr>
<tr>
<td>REGIONAL BOULEVARD STUDY: WORKSHOP STUDY #2</td>
<td>107</td>
</tr>
<tr>
<td>REGIONAL BOULEVARD STUDY: WORKSHOP STUDY #3</td>
<td>108</td>
</tr>
<tr>
<td>REGIONAL BOULEVARD STUDY: WORKSHOP STUDY #4</td>
<td>108</td>
</tr>
<tr>
<td>REGIONAL BOULEVARD STUDY: WORKSHOP STUDY #5</td>
<td>109</td>
</tr>
<tr>
<td>REGIONAL BOULEVARD STUDY: WORKSHOP STUDY #6</td>
<td>109</td>
</tr>
<tr>
<td>REGIONAL BOULEVARD STUDY: WORKSHOP STUDY #7</td>
<td>110</td>
</tr>
<tr>
<td>REGIONAL BOULEVARD STUDY: WORKSHOP STUDY #8</td>
<td>110</td>
</tr>
<tr>
<td>REGIONAL BOULEVARD STUDY: WORKSHOP STUDY #9</td>
<td>111</td>
</tr>
<tr>
<td>REGIONAL BOULEVARD STUDY: WORKSHOP STUDY #10</td>
<td>111</td>
</tr>
<tr>
<td>REGIONAL BOULEVARD STUDY: WORKSHOP STUDY #11</td>
<td>112</td>
</tr>
<tr>
<td>PROPOSED BRT ALIGNMENT SHOWING STATIONS AND STOPS</td>
<td>133</td>
</tr>
<tr>
<td>EMME/2 MODELING RESULTS</td>
<td>134</td>
</tr>
<tr>
<td>RECOMMENDED PROJECTS: EXPRESSWAY STUDY AREA</td>
<td>138</td>
</tr>
</tbody>
</table>
TABLE OF TABLES

<table>
<thead>
<tr>
<th>Table Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>FINAL RECOMMENDATIONS</td>
<td>15</td>
</tr>
<tr>
<td>RESULTS OF BRT MODELING</td>
<td>24</td>
</tr>
<tr>
<td>TAC MEETING SCHEDULE</td>
<td>53</td>
</tr>
<tr>
<td>CAC MEETING SCHEDULE</td>
<td>55</td>
</tr>
<tr>
<td>BASE CASE ASSUMPTIONS</td>
<td>72</td>
</tr>
<tr>
<td>HIGH-GROWTH TRANSPORTATION ANALYSIS ZONES (TAZs)</td>
<td>77</td>
</tr>
<tr>
<td>YEAR 2000-2023 FORECAST AVERAGE DAILY TRAFFIC GROWTH</td>
<td>80</td>
</tr>
<tr>
<td>YEAR 2023 FORECAST CONGESTION LEVELS</td>
<td>81</td>
</tr>
<tr>
<td>NORTH TERMINUS RTP EVALUATION CRITERIA</td>
<td>117</td>
</tr>
<tr>
<td>VILAS ROAD INTERCHANGE RTP EVALUATION CRITERIA</td>
<td>120</td>
</tr>
<tr>
<td>RESULTS OF BRT MODELING</td>
<td>132</td>
</tr>
<tr>
<td>WORKSHOP PROJECT RECOMMENDATIONS</td>
<td>137</td>
</tr>
</tbody>
</table>
SUMMARIES FOR EACH OF THE TOPICAL AREAS:
EXECUTIVE SUMMARY

The Crater Lake Highway Transportation and Land Use Study is a response to a high level of concern in Jackson County about land development and traffic safety and congestion in and around Hwy. 62. The public has had to cope with mounting traffic delays, accidents, and pollution from motor vehicles for several years. These problems have been documented by the Oregon Department of Environmental Quality and Department of Transportation.

Conditions along the highway corridor have led to frustration and an expectation that problems will get worse without intervention. Rather than doing nothing, or placing blame, the Crater Lake Highway study offered decision-makers and the public the opportunity to address the issues in a thoughtful manner for nearly a year.

The study was sponsored by the Rogue Valley Metropolitan Planning Organization, and funded through the Transportation & Growth Management Program of the Oregon Department of Transportation and the Department of Land Conservation and Development. It was a partnership among the two state departments, the Rogue Valley Council of Governments, the City of Medford, Jackson County and the Rogue Valley Transportation District. All told, eight agencies and offices worked with citizens to set the course of the study and shape the results.

Key findings and recommendations of the study address the following four categories.

- **Base Case Assumptions** – a description of the transportation and land use conditions that are forecast to occur in the study area through 2030. This forecast anticipates that housing will nearly double in the planning period and employment will increase by more than 200 percent. Historically, the study area has been key to the economic well being of the region and will continue to be so in the decades ahead. If an expressway were not built, or another solution to traffic safety and congestion not implemented, the study predicts extreme traffic congestion.

- **Land-Use Scenarios** – a set of recommendations throughout the study area that would help to protect the functions of an expressway, if one is built. These scenarios balance land use and transportation planning. Study participants analyzed and debated several different land-use tools to produce these recommendations.

- **Local Street Network** – a set of plans for new streets and extensions of existing streets that would improve transportation. As with the land use scenarios, several transportation ideas were discussed. Recommendations include access management in some areas, transit improvements and bicycle and pedestrian facilities.

- **Regional Boulevard** – an exploration of what the existing Hwy. 62 could become if a parallel expressway were built. These cross-section illustrations show how a boulevard might serve residents, businesses, bus riders, bicyclists, pedestrians, local freight and commuters.
Additional sections of this report focus on how the study was accomplished. These sections describe the public involvement program, the formation and work of the study’s two committees (the Technical Advisory Committee and the Citizen Advisory Committee), and a daylong design workshop.

The public had many different ways to learn about and participate in the study. Public outreach included surveys, mailings, special events, and the Citizen Advisory Committee. More than 500 residents and business interests in the study area were surveyed at the start of the study, and meetings and special events were publicized and updated throughout the study.

The Citizen Advisory Committee and the Technical Advisory Committee, which was comprised of staff from the study’s partners, were responsible for determining the content of the study and the shape of the final recommendations. CAC and the TAC meet separately and jointly throughout the course of the study.

The centerpiece of the study was an all-day design workshop held midway through the project. This session brought together elected and appointed officials from the county and two cities, local and state technical staff, and the public in an informal brainstorming session to address immediate and long-term issues relating to the regional highway and its development. This session fueled the study with the ideas: potential street networks and land-use plans that would support the function of a possible expressway. The exercise went on to explore the potential for remaking the existing highway into a regional boulevard for shoppers, pedestrians, and residents if the expressway becomes a reality.
PUBLIC INVOLVEMENT AND COMMITTEE WORK

The study conducted a broad public outreach and involvement effort that ranged from surveys to formation and participation of a Citizen Advisory Committee. The effort began with a bulk-mail survey to more than 500 landowners and business operators, and it closed with a CAC meeting in which committee members voted on specific land-use, streetscape and road-network designs. In between, the study gained front-page mention in the local newspaper, and brought together private citizens, elected officials and technical experts in a daylong, hands-on design workshop.

To reach the broadest possible audience, the study used many different approaches. Staff interviewed stakeholders, held meetings, displayed information on maps, charts and posters, published study reports and a newsletter. The study hosted several public sessions, including regular meetings of the Citizen Advisory Committee, which were held in the study area.

Results of the outreach effort were demonstrated in the continuous participation of the citizens’ committee (16 members attended the first study meeting in July, 2002, and 10 members attended the final meeting in June, 2003), the turnout at an open house (more than 50 people attended), and the level of participation in the design workshop (49 people spent a Saturday brainstorming land-use and street-network ideas.)

Two committees were responsible for directing and providing feedback on the work products in the study. These committees – the Technical Advisory Committee and the Citizen Advisory Committee – were formed, managed, and facilitated by RVCOG. This work included setting a schedule of meetings, producing and distributing agendas and memos in advance of all meetings, writing meeting summary minutes, and providing committee members with additional materials upon request.

The committees met separately throughout the study, holding their first meetings in the summer of 2002 and their final meetings in spring, 2003. The TAC met in Medford and the CAC met in White City. The meeting schedule included one joint meeting, which was conducted as a mini workshop to brainstorm subarea concepts. Each committee was kept apprised of the other committee’s concerns and findings. Each committee reviewed other committee’s recommended changes to maps, reports, and recommendations.

Members of both committees had the additional responsibility participating in the study’s two important public events: an open house, which was the public kick-off of the study; and a design workshop, which produced the study’s key design concepts. At the open house, in October 2002, members of both committees answered questions and listened to comments in an informal setting. At the design workshop, in February 2003, committee members joined other participants in producing design concepts and street network ideas for study subareas. (Additional information about the open house is in the Public Involvement section. Information about the workshop is located in the Design Workshop section.)
DESIGN WORKSHOP SUMMARY

The Rogue Valley Council of Governments organized and conducted a daylong design workshop for the public on Feb. 1, 2003, at the Jackson County Public Works Auditorium. Forty-nine people signed in to participate in group discussions.

The purpose of the workshop was to engage the public in developing conceptual land use and streetscape designs, and local street circulation plans for the subareas that were defined earlier in the study. Groups reviewed five subareas affected by the potential expressway. Three sites cover the interchanges at the north and south ends of the expressway, and the Vilas Road interchange. The specific subareas were: South Terminus, Foreign Trade Zone, Vilas Road, North Terminus, and the Boulevard Concept. Work areas were set up for each subarea. Each area had large-scale maps, a set of predetermined tasks and context information, and a facilitator to moderate discussion and record ideas on map overlays. One participant in each group volunteered to take notes.

In advance of the workshop, participants were assigned to two discussion groups. Each discussion group consisted of about 10 people. Groups had an hour and a half to address the subarea tasks. For the second group session, participants moved to their second assigned area and repeated the process. Results of the first session were not presented at the second session.

Participants then reconvened for a catered lunch and group presentations. Reporters from each group (10 total) gave brief presentations of the group’s findings, using their group’s map transparency for reference. The workshop closed with a short question-and-answer period.

The workshop format produced two designs for each area. The fundamental findings of the two groups were similar in each study area, with most of the differences found in the details. To some extent, this can be attributed to the nature of the tasks and context statements.

The concepts derived from the workshop were evaluated using the criteria from Chapter 4 of the Regional Transportation Plan to help in developing a set of recommendations for each subarea. The evaluation criteria can be used as a tool to guide the recommendations toward land use and transportation changes that are consistent with the Regional Transportation Plan (RTP) and emphasize; 1) compact, pedestrian-friendly development patterns; 2) protection of future expressway capacity and access management; 3) local street system connectivity; and 4) accessibility to alternative modes of transportation. The evaluations for each of the subareas are described in Section 8, Workshop Results & Evaluations, beginning on page 113. Results are rated as positive, negative, or neutral. A subarea concept map is included on page 10.
Workshop Ideas

[Map of Crater Lake Highway Transportation and Land Use Study showing Workshop Ideas, Study Area, Proposed Expressway Improvements, Proposed Expressway Ramps & Upgrades, Crater Lake Hwy (Existing Hwy 92), Sub-areas, Streets, Planned Streets, City Limits, UGB and White City UCB.]
BASE CASE SUMMARY

BACKGROUND

RVCOG developed a base case scenario to evaluate how potential improvement projects identified through the study might improve land use and transportation plans in the study area. The details of the assumptions that were included in the analysis are set forth in Section 4, Base Case Assumptions.

The base case scenario describes the transportation and land use conditions that are forecast to occur in the study area through 2023 and are derived from information contained in the 2001-2023 RVMPO Regional Transportation Plan (RTP). The details of the base case scenario and future study area conditions is included in Section 5, Base Case Scenario—Future Study Area Conditions. The base case scenario does not include the completion of the proposed expressway due to the lack of funding for the project’s completion.

HOUSING & EMPLOYMENT GROWTH

The most significant land use change that is forecast in the study area is the Delta Water Transit Oriented Development (TOD), which will create significant housing and employment growth in the area. This area is due east of Hwy. 62 between Coker Butte Road and Delta Waters Road. The RTP estimates that the number of housing units in this area will almost double and employment will increase over 200 percent. The main benefit of the proposed TOD is that it will create mixed-use, pedestrian-friendly development, provide alternative transportation choices, and reduce reliance on the automobile. In the future, employment will dominate the study area, and the Delta Waters Road TOD area will be a mix of housing and employment.

TRAFFIC CONGESTION

Traffic within the study area is forecast to increase significantly over the next 20 years. Heavy congestion is predicted by the year 2023. This is the main factor behind the effort to identify a solution to address the Hwy. 62 Corridor traffic safety and congestion issues. A majority of the intersections along Hwy. 62 from Poplar Drive to Antelope Road are forecast to have high to extreme congestion levels by 2023.

BICYCLE & PEDESTRIAN

Bicycle and pedestrian facilities are planned along arterial and collector streets in the northern portion of the study area.

TRANSIT

The Rogue Valley Metropolitan Planning Organization is diverting about $250,000 a year from road projects to RVTD to pay for increased service on three major routes. Route 60, which is within the study area, would see an increase in peak-hour service. Buses would pick up riders every half-hour from 6 to 9 a.m. and 3 to 6 p.m., rather than just every hour.
LAND USE SCENARIOS SUMMARY

Balancing land use and transportation planning to protect the function of the proposed expressway for statewide and through traffic formed the basic tenet of this project. Land use issues and strategies were discussed throughout the duration of the project. Topics for discussion with elected officials, key stakeholders, Medford and Jackson County staff and committee members included: managing land uses around proposed interchanges or interchange management plans, trip based zoning, mixed-used development and preservation of existing industrial-zoned lands to accommodate future employment growth. Several land use recommendations were generated by workshop participants and supported by both the project Technical and Citizens’ Advisory Committees. The following is an overview of those land use recommendations.

NORTHERN TERMINUS

1. Continue this zoning across the triangle formed by Agate Road and current Hwy. 62, over to the current Open Space zone that contains the Denman refuge.
2. Rezone to Light Industrial two undeveloped, Commercial zoned parcels west of the expressway and east of Agate to decrease the potential for trip generation in that area.
3. Rezone from Industrial to Commercial and/or Mixed Use to allow for a greater variety of business opportunities. The concern here is that the ideas generated in this process have eliminated a good deal of commercial land at the northern terminus.
4. Rezone commercial parcels southeast of Hwy. 140 /expressway intersection to Mixed Use to decrease potential for trip generation.
5. Rezone parcels northwest and northeast of Hwy. 140/expressway intersection to Light Industrial from Commercial. There are wetlands in the northeast parcel.

VILAS ROAD

1. Rezone the north side of Vilas Road and west side of expressway to Industrial from Residential.
2. Consider height restrictions that limit floor space, traffic generators such as fast food and banks.
3. Consider land use control between commercial and industrial.
4. Consider interchange management plan.

FOREIGN TRADE ZONE

1. Limit commercial development in Industrial to limit conflict with traffic— don’t invite commercial traffic into Industrial zone, but provide for commercial needs of those working in the Industrial zone.
2. Build out circulation at north end of study area.

3. Land Use:
   a. Keep area industrial
   b. Remember noise factor from airport
   c. Supportive uses for Light Industrial zones need to focus on needs of specific area.
   d. Research what are the service needs of the area.
   e. Connect service activities for pedestrian traffic. This traffic is already being generated between the health club and surrounding uses.

3. “Enforced” mixed use: Use overlay tool to promote enforcement and connectivity of projects.

SOUTHERN TERMINUS

1. Create commercial area along expressway to provide an uninterrupted band of commercial uses along the expressway from Biddle to Lear Way; and continue north in area between the expressway and Costco area.

2. Extend existing commercial area west of Costco area to expressway

3. Promote mixed uses in the area, building on what is already there so that people can live, work and shop within a small geographical area. Area indicated on map is not as significant as the idea of fostering mix-use areas. These could also be areas for much needed affordable housing. Making available lower-cost housing is important, and land use discussions need to accommodate this kind of development.

4. Promote mixed uses in the area, building on what is already there so that people can live, work and shop within a small geographical area. Area indicated on map is not as significant as the idea of fostering mix-use areas. These could also be areas for much needed affordable housing. Making available lower-cost housing is important, and land use discussions need to accommodate this kind of development.
LOCAL STREET NETWORK SUMMARY

At the public workshop, consensus was achieved on local street plans for each of four subareas.

Access management, local street connectivity, and facilities for pedestrians and bicyclists were addressed for an area stretching from Poplar Drive nearly to White City. The TAC and CAC reviewed the draft workshop local street network plans and their comments are incorporated into the final report. The following assumptions were discussed and agreed upon by the TAC and CAC and referred to by the workshop participants in developing local street plans for the corridor.

1. Access management for local arterial streets intersecting Hwy. 62. Access management controls the flow of traffic between roads and surrounding land, emphasizing community street networks and master planning for large tracts of land.
   a. Consolidation of driveways when redevelopment occurs and internal circulation is planned. Interconnectivity of existing accesses would be required upon redevelopment.

2. The existing highway will be restructured as a regional boulevard over time, with design standards intended to increase transit and pedestrian/bicyclist amenities and orient buildings to the street. The boulevard will also serve as a primary freight route. Appropriate land uses and site design to accomplish the function of the street will be emphasized.

3. Access for area west of expressway will feed to Vilas Road.

4. Coker Butte Road will serve as primary access to area between expressway and Hwy. 62.

5. Access to expressway will be permitted only at interchanges

6. Expressway overpasses or underpasses will be required to promote east/west circulation.

7. Protect airport approaches from incompatible land uses
   a. Control height in transition surfaces

Specific local street plan recommendations for each of the subareas are listed in Section 10, Transportation Base Case vs Workshop Recommendations.
## Final Recommendations

<table>
<thead>
<tr>
<th>Sub-Area</th>
<th>Map Ref.</th>
<th>Project</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>North Terminus</strong></td>
<td></td>
<td>A</td>
</tr>
<tr>
<td></td>
<td></td>
<td>B</td>
</tr>
<tr>
<td><strong>Vilas Interchange</strong></td>
<td></td>
<td>A</td>
</tr>
<tr>
<td></td>
<td></td>
<td>B</td>
</tr>
<tr>
<td></td>
<td></td>
<td>C</td>
</tr>
<tr>
<td></td>
<td></td>
<td>D</td>
</tr>
<tr>
<td></td>
<td></td>
<td>E</td>
</tr>
<tr>
<td></td>
<td></td>
<td>F</td>
</tr>
<tr>
<td><strong>FTZ</strong></td>
<td></td>
<td>A</td>
</tr>
<tr>
<td></td>
<td></td>
<td>A</td>
</tr>
<tr>
<td><strong>Southern Terminus</strong></td>
<td></td>
<td>B</td>
</tr>
<tr>
<td></td>
<td></td>
<td>C</td>
</tr>
<tr>
<td></td>
<td></td>
<td>D</td>
</tr>
<tr>
<td></td>
<td></td>
<td>E</td>
</tr>
<tr>
<td></td>
<td></td>
<td>F</td>
</tr>
<tr>
<td></td>
<td></td>
<td>G</td>
</tr>
</tbody>
</table>
Recommended Projects
REGIONAL BOULEVARD SUMMARY

Gary Hathaway, RVTD, prepared plans and sections for a potential regional boulevard treatment for the existing Hwy. 62 alignment. The concept drawings illustrated the full range of appropriate facilities for all modes given the context of transportation facility in a subarea—pedestrian, bicycle, transit (including bus rapid transit), automobile, and freight. Workshop participants utilized the concepts to develop more detailed cross-sections. The regional boulevard groups concentrated on designing representative cross sections for three portions of the boulevard. Moving from south to north, the cross sections include the entrance to the boulevard, an area near the TOD site, and an area north of the TOD site. The designs included enhanced landscaping, a Bus Rapid Transit (BRT), and various lane arrangements reflecting differing right-of-way widths.

A total of 11 regional boulevard cross-sections were developed by workshop participants, which were evaluated by the TAC and CAC. A preference vote was taken by both committees. The top five cross-sections, representing varying right-of-way widths, are presented here for further consideration by the City of Medford and Jackson County. The proposed cross-sections are included below.
Regional Boulevard Study: Workshop Study 4

Crater Lake Highway - Regional Boulevard Study - February 1, 2003 Design Workshop
200' Right-of-Way with Center Bus Rapid Transit Corridor - Workshop Study #4

Crater Lake Highway
Coordinated Land Use & Transportation Study

Regional Boulevard Cross Section
200' Right-of-Way

Rogue Valley Council of Governments

Rogue Valley Transportation District

Drawn by Gary C. Nethaway, January 30, 2003
Regional Boulevard Study: Workshop Study 5

Crater Lake Highway - Regional Boulevard Study - February 1, 2003 Design Workshop
180' Right-of-Way without Bus Rapid Transit - Workshop Study #5

Crater Lake Highway
Coordinated Land Use & Transportation Study

Regional Boulevard Cross Section
180' Right-of-Way

Buildings
Setback Varies by Local Ordinance

20' Sidewalk
No Bldg Setback
15' Bike Lane
15' Landscaped Safety Median
25' Vehicle Boulevard
30' Landscaped Safety Median
28' Vehicle Boulevard
15' Landscaped Safety Median
15' Bike Lane
20' Sidewalk
No Bldg Setback

Rogue Valley Council of Governments

Rogue Valley Transportation District
Drawn by Gary D. Hathaway January 30, 2003
Regional Boulevard Study: Workshop Study 8
Crater Lake Highway - Regional Boulevard Study - February 1, 2003 Design Workshop
148' Right-of-Way with Bus Rapid Transit on East Side - Workshop Study #9

Crater Lake Highway Cross Section
Regional Boulevard
148' Right-of-Way

Rogue Valley Council of Governments

Rogue Valley Transportation District

Drawn by Gary O. Hethaway May 15, 2003
Regional Boulevard Study: Workshop Study 11

Crater Lake Highway - Regional Boulevard Study - February 1, 2003 Design Workshop
206' Right-of-Way with Pedestrian Overpass and Transit Corridors Both Sides - Workshop Study #11

Crater Lake Highway
Coordinated Land Use & Transportation Study

Regional Boulevard Cross Section
206' Right-of-Way

Rogue Valley Council of Governments

Rogue Valley Transportation District
Drawn by Gary O. Holloway May 7, 2003
TECHNICAL ANALYSIS SUMMARY

The proposed Bus Rapid Transit System (BRT) was modeled to assess potential transportation and air quality benefits. The BRT has been proposed in conjunction with the regional boulevard.

RVCOG to modified the EMME/2 regional travel demand model to incorporate a BRT system running along the alignment of the current Hwy. 62. The modeled BRT system would have transit stations/stops at approximately .3-mile intervals. Other modeling assumptions included:

- The BRT would operate on its own alignment and not be influenced by cross traffic;
- The BRT would operate on 10-minute headways;
- The hours of operation would be from 6am to 10 pm, 7 days/week;
- The BRT would connect with existing transit routes at stops where they intersect.

A model run was performed both with and without the proposed BRT using RTP Tier 1 year 2023 population/employment and network assumptions. These assumptions include TOD land use densities in the area of the Delta Waters intersection. The assumptions used do not include completion of the proposed Hwy. 62 expressway.

Table 1, on the next page, provides a summary of the modeling results with and without the BRT included in the model network. The results indicate that, all other things remaining the same, a BRT system would have a negligible impact on reducing vehicle miles traveled or on increasing transit ridership in the MPO area.

Several explanations could account for the discouraging modeling results. Principally, is the fact that the future land uses assumed for year 2023 do not orient themselves directly to Hwy. 62 (or a future regional boulevard) and so contribute to longer walks to transit stations. Secondly, the BRT essentially competes with existing transit service along the corridor, since its alignment is directly over RVTD’s route 60 to White City. These deficiencies could be worked out with a more intensive modeling effort, involving the redistribution of population and employment and changes to assumed land use patterns used in future-year analysis. A more exhaustive approach to examining the potential benefits of a BRT would also include a much higher level of transit-supportive facilities, such as park-and-ride lots, typically associated with development of BRT systems.

Table 1 also includes an air quality analysis showing changes in the level of particulate pollution (PM$_{10}$) resulting from implementing the BRT. Again, the changes resulting from implementing the BRT are shown to be negligible in this analysis.
### Results of BRT Modeling

#### TABLE 1

<table>
<thead>
<tr>
<th>Analysis</th>
<th>Model Scenario</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2023 Tier 1 w/o BRT</td>
<td>2023 Tier 1 w/ BRT</td>
</tr>
<tr>
<td>Daily BRT Ridership¹</td>
<td>N/A</td>
<td>940</td>
</tr>
<tr>
<td>Total Daily Transit Person Trips²</td>
<td>2,410</td>
<td>2,569</td>
</tr>
<tr>
<td>Daily VMT</td>
<td>3,122,968</td>
<td>3,122,140</td>
</tr>
<tr>
<td>Air Quality (grams PM₁₀³)</td>
<td>3,778,791</td>
<td>3,777,789</td>
</tr>
</tbody>
</table>

¹ Figures represent daily boardings. AM and PM peak-hour transit ridership figures cannot be determined with the model.
² Figures represent entire Tier 1 transit system.
³ Based on the air quality conformity determination prepared for the 2001-2023 RTP, approximately 1.21 grams of PM₁₀ is emitted per modeled VMT in MPO Area.
CONCLUSION

The study succeeded in bringing to the forefront the concept of integrating land use and transportation planning to optimize the utility of a proposed expressway between Medford and White City. Through the study process, recommendations have been developed to protect the function and integrity of the proposed expressway, and to support successful commercial areas and livable residential neighborhoods. If the decision is made to build an expressway between North Medford and White City, ideas produced in this study can guide state and local decision makers to choices that will enhance the Hwy. 62 corridor area in many ways.

The recommendations that appear here result from a dialog among government officials and staff, and the public. These participants brought a wide range of backgrounds and skills to the task. The study benefited from a high level of public participation, with members of a Citizen Advisory Committee donating many hours of their time to the effort. Significantly consensus was reached on many points. In the end, the study has produced specific, realistic street network concepts, and land-use plans for the City of Medford, Jackson County, and the Oregon Department of Transportation to consider.

This report draws on a 2-year process, which began with meetings with ODOT, Medford and Jackson County officials to reach agreement on the shape of the study. In the second year, study tasks were completed.

Although this study contains much recommendation, it is not the final word on planning in the highway corridor. More detailed analysis and modeling of the Bus Rapid Transit is needed. Also, it is suggested that the Highway 62 Solutions Team consider requesting modeling of the study’s recommendations to precisely determine benefit to the proposed expressway.
SECTION 1
EXISTING PLANS & POLICIES

TECHNICAL MEMORANDUM

Review of existing plans and policies related to the project
INTRODUCTION

The purpose of this memorandum is to provide an evaluation of Jackson County, White City and Medford comprehensive plans and ordinances to identify opportunities and constraints to integrating land use and transportation planning within the Hwy. 62 Corridor consistent with the transit oriented development (TOD) strategies in the Rogue Valley Regional Transportation Plan (RTP). This memorandum builds upon the review of existing plans and ordinances that was completed in August 1999, for the Transit Oriented Design and Transit Corridor Strategies Study.

REPORT ORGANIZATION

This memorandum covers plan policy, and ordinance information for the following local jurisdictions in the study area.

- City of Medford
- White City
- Jackson County

This memorandum focuses on transit-oriented design related portions of two types of documents:

1. Planning policy
2. Code requirements

Under these two documents types, transit oriented design plan policies, regulations, and recommendations are identified, summarized and evaluated using five important subject TOD categories. Each document summary includes a brief description of the document, the relevant
provisions by subject, and an evaluation about how the transit oriented design portions of the
document are considered as either opportunities or constraints to integrating land use and
transportation, planning in the study area, consistent with the strategies in the Rogue Valley
Regional Transportation Plan (RTP). A summary table is included to give an overview of this
evaluation. The five subject TOD categories are:

1. Mixed Land Uses
2. Higher Density Development
3. Pedestrian-Bike Connectivity
4. Site Design Features
5. Right-of-way Improvement Standards

Rogue Valley Regional Transportation Plan (RVRTP) Transit Oriented Design
(TOD) Policy

“Policy12-1: Local governments shall utilize transit-oriented design strategies to encourage
the use of local public transportation and discourage reliance upon single-occupancy vehicles.”

Attached Appendix “A,” on page 45, lists additional RTP policies related to transit oriented
design.

PART 1 - PLANNING POLICIES

CITY OF MEDFORD

Medford Comprehensive Plan

Description: The Comprehensive Plan provides background information, data and adopted City
policies regarding land use and related elements. Various elements of the Comprehensive Plan
were adopted at different times between 1985 and 2000: Environmental Element (1987, revised
2000); Population Element (1992); Economic (1994); Urbanization Element (1995); Housing
Element (1995); Public Facilities (1985, revised 1998); Goals, Policies and Implementation
(1998, revised 2000); General Land Use (1998); and no dates for Citizen Involvement or Review
and Amendment Procedure.

Transit Oriented Design Related Provisions:

1. Mixed Land Uses

   Goal 3, Policy 2: The City shall encourage mixed commercial and residential use
developments through the use of Planned Developed Overlay Zone, site design
guidelines, and site development standards. (Economic Element of Goals, Policies, and
Implementation page 14)

   Implementation 3-A (2): Cooperate in the development of a regional strategy which
focuses land use policy and public investment to manage growth, including housing
density, mix standards and public facility funding policies that meet urban goals. (Housing Element of Goals, Policies, and Implementation, page 34).

*Policy 5-C:* To provide greater flexibility and economics of land use, the City Development Code shall provide opportunities for alternative housing types and patterns, planned developments, mixed uses, and other innovations that reduce development costs and increase density. Implementation includes: investigate methods for promoting a mix of dwelling types in new residential areas, and compatible higher density infill and redevelopment in existing residential areas; and investigate methods for promoting additional housing in downtown through the removal of any barriers that may impede such development. (Housing Element of Goals, Policies, and Implementation, page 35).

*Policy 6-A:* The City shall assure that adequate buildable land for all housing types and price ranges is available in the city in the amount and timing necessary to meet the identified need for the planning period. Multiple-family, affordable, or assisted housing shall not be concentrated in any particular areas but dispersed throughout the city. (Housing Element of Goals, Policies and Implementation, page 36).

2. **Higher Density Development**

*Policy 1-D:* The City shall encourage innovative design in multiple-family development so that projects are aesthetically appealing to both the tenants and the community. (Housing Element of Goals, Policies, and Implementation, page 32).

*Policy 2-A:* The City shall strive to prevent sprawl and provide a compact urban form that preserves livability and adjacent resource lands. Implementation includes: a minimum overall housing density of eight dwelling units per net acres of buildable land, including an increase in multiple family housing types. (Housing Element of Goals, Policies, and Implementation, page 32).

3. **Pedestrian-Bike Connectivity**

*Policy 3-C:* The City shall designate areas that are or will be conveniently located close to pedestrian, bicycle and transit or high capacity transportation routes, and community facilities and services, for higher density residential development. Implementation includes: identify areas where upzoning would best support infrastructure improvements, including transit. (Housing Element of Goals, Policies, and Implementation, page 34).

*Goal 1:* To provide a sound basis for integrated transportation planning in the Medford planning area, thereby assuring maximum mobility for all Medford residents in the most cost-efficient and environmentally sound manner possible. Implementation includes: all land use decisions shall be consistent with the adopted Transportation Plan, which contains a Bicycle Facilities Master Plan and other components. (Transportation Element of Goals, Policies and Implementation, page 43).
**Policy 5 of Goal 2:** All arterial streets shall be considered as possible routes for public transit vehicles and bikeways, subject to appropriate sections of the Transportation Plan. (Transportation Element of Goals, Policies, and Implementation, page 44).

**Goal 4:** To facilitate the availability of a viable public transportation system in the Medford planning area to serve the needs of those unable to secure private transportation and those who wish to choose an alternative to private transportation. (Transportation Element of Goals, Policies, and Implementation, page 47).

**Goal 5:** To encourage and facilitate safe and convenient bicycle transportation within the Medford planning area. Policy 1: The city shall recognize bicycle transportation as a viable component of a city-wide circulation system... and shall make every reasonable effort to implement a coordinated Bicycle Facilities Master Plan. Objectives that shall guide bicycle facilities development and implementation include: (1) development of a linked bicycle network; (2) progressive establishment of the bicycle network to provide significant increases in accessibility for bicycle users; (3) provision of bicycle storage facilities at various critical locations within downtown; (4) development of an on-going bicycle safety and education program. (Transportation Element of Goals, Policies and Implementation, page 47).

**Goal 6:** To encourage and facilitate safe and convenient pedestrian movement within the Medford Urban Growth Boundary. Policy 1: sidewalks shall be recognized as in integral part of a complete urban transportation network. (Transportation Element of Goals, Policies, and Implementation, page 48).

4. **Site Design Features**

**Goal 3:** To develop locational criteria and site development standards for commercial and industrial development that will encourage efficient use of public facilities, particularly the city’s transportation systems. Policy 3: The City shall encourage cohesive, integrated commercial centers and industrial enters, rather than traditional, unrelated, linear development patterns, through site design guidelines. (Economic Element of Goals, Policies, and Implementation, page 14)

5. **Right-of-way Improvement Standards**

**Policy 1-A:** The City shall promote a community design that emphasizes aesthetics, alternative transportation modes, and pedestrian-scale development. Implementation includes: prepare community design guidelines, emphasizing such elements as mixed uses, parkways with shad trees, pedestrian ways, bicycle lanes, alley access, rear-yard garages and varied setbacks. [Housing Element of Goals, Policies and Implementation, page 31).

**COMMENTS:** The Medford Comprehensive Plan contains the City’s planning goals, policies, and implementing strategies. Overall, the comprehensive plan provides many broad goals as well as specific policies and implementation strategies that make transit-oriented development an outright goal of the City. There are also many specific implementation strategies that are
identified that provide opportunities for TOD as listed above. The Medford Comprehensive Plan goals and policies support the RTP TOD goals and policies.

**General Land Use Plan (GLUP) Element of the Medford Comprehensive Plan**

**Description:** This document addresses current and future land use patterns with the city and the future patterns within the UGB. The major contents of the plan are the (1) General Land Use Plan Map, which graphically represents the present and future land use patterns with the city, and the future patterns within the Urban Growth Boundary, and (2) the Southeast Plan, which is a special land use plan for the southeast area of the community. The Southeast Plan does not have any direct relevance to this project because it does not fall within the study area boundary.

**Transit Oriented Design Related Provisions:**

1. **Mixed Land Uses**
   
   No provisions for areas outside of the SE Plan Area

2. **Higher Density Development**

   *GLUP Map Designations:* Urban High Density Residential. This designation permits higher density urban residential uses (15 to 30 units per gross acre), and provides for multiple-family development, including duplexes, apartments, and group quarters. The zoning districts permitted in the designation are MFR-20 and MFR-30 (Multifamily Residential - 20 or 30 units per gross acre). When a Planned Development overlay zone is applied, the maximum residential density per gross acres can be increased. Medium Density Residential permits medium density residential uses (10 to 15 units per gross acre), including rowhouses, duplexes, apartments, mobile home parks, and group quarters (p. 2).

3. **Pedestrian-Bike Connectivity**

   No provisions for areas outside of the SE Plan Area

3. **Site Design Features**

   Specific site design features are not directly addressed in this document.

4. **Right-of-way Improvement Standards**

   No provisions for areas outside of the SE Plan Area

**COMMENTS:** The General Land Use Plan Map (GLUP) Map represents Medford’s future land use patterns based on anticipated growth and land needs. The GLUP Map can be amended to reflect the needs and tastes of the city’s residents. There would be no constraints to amending the GLUP Map to include TOD area overlays similar to the SE Plan Area.
Medford Comprehensive Plan Public Facilities Element

Description: This document is the public facilities chapter for City’s Comprehensive Plan. It was revised April 19, 1995 and revised again in February, 1998.

Transit Oriented Design Related Provisions:

1. Mixed Land Uses

No provisions; not applicable to this document.

2. Higher Density Development

No provisions; not applicable to this document.

3. Pedestrian-Bike Connectivity

Transportation: While the private automobile has earned the preeminent position in the Medford transportation hierarchy, there is an increasing interest in providing for an integrated multi-modal transportation system involving bicycles, public transit, air transportation, and rail, as well as private automobiles (page 21).

The most recent Bicycle Master Plan is based on the following principal elements: (1) development of a linked bicycle network in the urban area, focusing on the planned arterial and collector road system, and concentrating primarily on the provision of bike lane facilities; (2) establishment of a bicycle network to provide significant increases in accessibility for bicycle users, a realistic alternative mode of travel, and a network linking the downtown area, most residential neighborhoods, major commercial centers, and local schools (page 37).

The development of the recommended bicycle network should be accompanied by two supporting elements: (1) provision of bicycle storage facilities at various critical locations within the downtown; funding should be encouraged from private developments; (2) the development of an on-going bicycle safety and education program, aimed at both children and adults, to improve bicycle skills, observance of highway laws, and overall safety (page 37).

Bikeway facilities on arterial streets will be completed as part and parcel of the street segment with which they are associated. Hence, the timing, cost, and funding is reflected under the corresponding street projects. Bikeway facilities not associated with arterial streets are generally of lower priority and will be considered as funding opportunities become available.

Transportation Goal 5: To encourage and facilitate safe and convenient bicycle transportation within the Medford planning area. Policy 1: The city shall recognize bicycle transportation as a viable component of a city-wide circulation system... and shall make every reasonable effort to implement a coordinated Bicycle Facilities Master Plan. Objectives that shall guide bicycle facilities development and implementation include:
(1) development of a linked bicycle network; (2) progressive establishment of the bicycle network to provide significant increases in accessibility for bicycle users; (3) provision of bicycle storage facilities at various critical locations within downtown; (4) development of an on-going bicycle safety and education program (page 105).

Transportation Goal 6: To encourage and facilitate safe and convenient pedestrian movement within the Medford Urban Growth Boundary. Policy 1: sidewalks shall be recognized as an integral part of a complete urban transportation network (page 105).

4. Site Design Features

Public Transit: Improve services to existing system: develop Park and Ride lots; provide shelters and benches; provide downtown ticket/pass sales and information center and other outlets; provide for adequate display of route information and bus stop signs; provide carpool service; better serve the White City industrial area; increase the hours of service to the existing routes; and develop secondary transfer points (page 23).

Goal 4, Policy 1: The City shall encourage and support in every way possible the continuation and expansion of Rogue Valley Transportation District services and facilities, both as an important transportation mode and as an air quality strategy. Implementation: ...where appropriate, public transportation facilities shall be required as part of the developer’s public improvement requirement (page 104).

5. Right-of-way Improvement Standards

No provisions; not applicable to this document

COMMENTS: The Public Facilities Element of the Medford Comprehensive Plan primarily addresses general policies and implementation of public facilities. The guiding principles throughout support multi-modal transportation options, as directed by higher policy directed elements of the Comprehensive Plan (Goals and Policies Element in particular). This document reflects a proactive approach on the part of the City itself to develop City facilities that are more TOD supportive. The most notable example is the implementation of the Bicycle Master Plan as an important priority for the City.

Interim Transportation System Plan (Discussion Draft)

Description: The goal of the Transportation System Plan is to provide goals, objectives and policies that will guide Medford’s efforts at achieving mobility through 2015. The document is a discussion draft dated June 24, 1998. The document makes references to the Rogue Valley Regional Transportation Plan (RVRTP).

Transit Oriented Design Related Provisions:

1. Mixed Land Uses

Mixed Use Developments: The City shall facilitate the development of mixed-use developments that reduce automobile dependence and encourage walking, bicycling and
transit ridership. They should be located where they can be best supported by the overall City transportation system, but not in such a manner where the vehicular travel demand exceeds system capacity (Long Range Strategies and Issues, page V-4).

2. **Higher Density Development**

   *Increased Residential Densities*: The City, through the Medford Area Comprehensive Plan, shall provide opportunities for increased residential densities in locations that support increased use of alternative travel modes, especially transit, but do not generate vehicular traffic in excess of system capacity (Long Range Strategies and Issues, page V-4).

3. **Pedestrian-Bike Connectivity**

   *Goal*: To provide a balanced, multi-modal transportation system for the Medford urban area that supports the safe and efficient movement of goods and people (*TSP Elements*, page III-4).

   *Policy 2*: The Plan shall be updated, as necessary, to remain consistent with other regional and statewide plans (*TSP Elements*, page III-4).

   *Policy 3*: A balanced system of transportation facilities and services shall be designed to meet regional travel patterns and mobility needs of residents, businesses and industries (*TSP Elements*, page III-4).

   *Policy 5*: The vehicle, transit, bicycle and pedestrian circulation systems shall be designed to connect major population and employment centers in the Medford urban area, as well as provides access to local neighborhood residential, shopping, schools and other activity centers (*TSP Elements*, page III-5).

   *Goal, Objective 1, Policy 1.2 c.*: The Medford Transportation System shall be used to identify measures and programs that should be undertaken to increase mobility for all travel modes. (*TSP Implementation*, page IV-5)

4. **Site Design Features**

   No provisions; site design features are addressed in the City’s Land Development Code.

5. **Right-of-way Improvement Standards**

   *Urban Street Standards*: The City shall make it a priority to bring the arterial and collector street system within the Medford urban area up to urban design standards, having such features as curbs, sidewalks, corner curb ramps, bicycle lanes, drainage and illumination. Local streets should be improved to urban standards, as feasible and appropriate. (*Long Range Strategies and Issues*, Page V-3)

   *Efficient Regional Transit Service*: The City shall support the development of a transit system that, over the long-term, will provide a level of service that can accommodate the
travel demands expected over the next 40 years. The City will need to be served by a system of buses that have short headways and provide a system of direct and convenient connections to employment, retail, institutional, and educational centers. (*Long Range Strategies and Issues*, page v-3)

COMMENTS: Like the RVRTP, this document is a comprehensive examination of the transportation system for the City of Medford. This document incorporates many of the key findings and recommendations of the RVRTP, and in many cases, provides plans for implementation of them. This document is full of policies that provide multi-modal transportation systems. It is also covers a framework for implementation issues that relate to TOD. For instance, it actively supports and promotes regional transit services as well as documents how the City will generally implement strategies to support the regional transit service provider. However, it acknowledges that funding to implement them will be the key obstacle. The City is currently working towards completion of their TSP and implementation of the TOD areas identified in the RVRTP.

**WHITE CITY (unincorporated area)**

*Urban Unincorporated Community Plan, Phase I (Vol. 1)*

**Description:** This document serves as a plan for the urban unincorporated community of White City. The area has a 2000 population of 5,466 (U.S. Census) and is located one mile south of the City of Eagle Point. The document is dated September, 1998. (A second volume that is part of this Plan is a series of appendices that was not reviewed for this study.)

**Transit Oriented Design Related Provisions:**

1. **Mixed Land Uses**

   *Land Use Planning Goal 2:* To create a compact community of mixed uses and development that is oriented to facilitate the use of public transportation. Policy: Provide for the distribution of higher density residential land uses along White City’s arterial and collector streets to help facilitate public transportation and reduce energy consumption. Implementation: (A) undertake a detailed transportation system plan with the Oregon Dept. of Transportation; and (B) give careful consideration to placing higher density residential areas in near proximity to higher order and transit facilities (page 41).

   Urbanization Goal: To plan for the complete urbanization of White City as an urban unincorporated community. Policy (2): provide a mixture of land uses, housing types and residential densities to accommodate all segments of the community (page 48).

2. **Higher Density Development**

   No specific provisions.
3. **Pedestrian-Bike Connectivity**

*Streets and Motorized Vehicle Travel Goal:* To facilitate the safe and convenient movement of vehicular traffic integrated with other modes of transportation which use the network of public streets and roads while striving to reduce reliance upon the use of private automobiles.

*Public Transportation Goal:* To have a safe, efficient, and convenient public transportation system that serves all portions of White City. Policies: Encourage and facilitate the extension of transportation routes into White City’s westerly industrial area; (2) Cooperate with the Rogue Valley Transportation District (RVTD) in all ways to facilitate optimum public transit service to the community; (3) facilitate communication and coordination between RVTD and the major employers in White City to develop methods to encourage transit usage; and (4) coordinate future improvements to collector and arterial streets and other streets which serve the industrial area to include features beneficial to transit riders and RVTD operations.

*Bicycle and Pedestrian Travel Goal:* To provide facilities for safe, efficient and convenient travel by bicycle and for pedestrians. Policies: (1) implement provisions of the Regional Transportation Plan to facilitate completion of a regional bikeway network; (2) adopt and implement new street standards which provide for sidewalks on all new streets and existing adjacent streets at the time of land division or development as permitted by law; (3) adopt and implement new street standards which provide for bicycle lanes on collector and arterial streets; (4) adopt and implement regulations which require installation of sidewalks for all new streets and streets which are being redeveloped in residential and commercial areas; (5) adopt and implement regulations which require pedestrian connections between adjacent independent commercial uses; (7) provide for pedestrian connections to all transit stops; (8) adopt and implement provisions which require the installation of bicycle racks in new commercial, industrial and multiple family developments.

4. **Site Design Features**

No specific Provisions

5. **Right-of-way Improvement Standards**

No specific Provisions.

*COMMENTS:* *The White City Urban Unincorporated Community Plan, Phase I (Volume 1)* provides a very thorough framework for community planning of a heavily populated unincorporated area. It provides good documentation and background information. The goals and policy section of the document clearly shows an emphasis for more urban, compact and transit oriented community development. It has many relevant goals and policies for multi-modal transportation systems. It is also very good at providing direction for street standards, and street connectivity. It lacks, however, in stating policies for high-density residential development and for mixed-use districts. More emphasis is placed on visual aesthetics than TOD functions.
Nonetheless, this document serves as a solid starting point towards more progressive transit oriented development in the future

Urban Renewal Plan

**Description:** Urban Renewal Plan for the unincorporated area of White City in Jackson County; adopted by Jackson County Board of Commissioners on September 22, 1993.

Transit Oriented Design Related Provisions:

1. **Mixed Land Uses**
   
   No specific provisions.

2. **Higher Density Development**

   *Purpose of Property Acquisitions:* Property acquisition by the Urban Renewal Agency may be used based on criteria such as, elimination of detrimental land uses or overcrowding, excessive dwelling unit density, or conversions to incompatible types of uses. It must be determined by the Agency that acquisition of such properties and the rehabilitation or demolition of the improvements are necessary to remove blighting influences (page 22).

3. **Pedestrian-Bike Connectivity**

   *Goals and Objectives:* to provide a grade separated pedestrian overcrossing across the 200-foot right-of-way of State Hwy. 62--Crater Lake Highway (page 7). The Agency proposes to construct such an overcrossing with its funds (page 19).

   *Road, Street, and Highway Work:* The roads in the commercial and residential areas will have curbs, gutters, and sidewalks constructed. Pedestrian traffic in the industrial area is not sufficient to warrant sidewalks (page 15).

4. **Site Design Features**

   No specific provisions.

5. **Right-of-way Improvement Standards**

   *Goals and Objectives:* to improve several unimproved and partially improved public roads, streets, and highways in the area to urban standards (page 6).

   *Goals and Objectives:* to cooperate and coordinate with the Oregon Department of Transportation in its efforts to improve the safety and traffic-carrying capacity of Hwy. 62 and Hwy. 140 (page 6).

   *Goals and Objectives:* to install street lighting, trees, and other landscaping in areas of maximum concentration (page 6).
Goals and Objectives: to improve public transportation capability in the Urban Renewal Area (page 7).

Purpose of Property Acquisitions: The Agency may acquire property when it determines that property is needed to provide public improvements and facilities such as right-of-way for streets, alleys, bicycle paths, or pedestrian ways (page 22).

COMMENTS: The White City Urban Renewal Plan clearly states general policy goals that encourage transit oriented development. It also cites specific implementation plans for specific locations for public improvements with financing mechanisms. Much of the information in this document has been superseded by the Community Plan.

JACKSON COUNTY

Comprehensive Plan

Description: This document is the County’s Comprehensive Plan. The Plan is one cohesive document as opposed to a series of component elements like the City of Medford Comprehensive Plan. It was written in 1989 and updated in December, 1998.

Transit Oriented Design Related Provisions:

1. Mixed Land Uses

No specific provisions.

2. Higher Density Development

Policy: Conditions for existing commercial activities should be improved through efforts to revitalize commercial areas, especially central districts. Implementation Strategies: (A) Encourage redevelopment and restoration of city centers, including mini-parks, sidewalks, street plantings, benches, bikeways and street lighting.

The Housing section of the Plan does not directly address any mixed use residential areas, or specifically encourage high density development. However, it does actively encourage that all urban levels of development take place within urban growth boundaries (Chapter 15).

Urban Lands Element Goal: The County shall maintain a long-range commitment to the implementation of urban centered growth. Policy: The County shall allow fill-in development at urban densities where adequate urban level facilities exist. Once established, these boundaries shall not be expanded (pages 23-4, 7).

3. Pedestrian-Bike Connectivity

Comprehensive Plan Direction (iii): Public transit routes, supplemented by expanded bicycle facilities and opportunities for carpooling, vanpooling, and local employment to reduce reliance on private vehicles (page 3-2).
Transportation Goal: to provide and encourage a safe, convenient, energy efficient and economical transportation system by: providing for non-automotive travel modes in conjunction with the road system (page 22-1).

The Plan discusses modes and facilities are supported more in the following plans and programs: Transit services--Plans for the Rogue Valley Transit District, state public transit division and RVRTP; Bicycles--Jackson County Master Plan and Bear Creek Greenway Plan; and Pedestrian: Transportation Element of the comprehensive plan for each city in Jackson County and the Bear Creek Greenway Plan (pages 22-1-2).

Policy: The County shall include bicycle transportation as an important part of the overall county transportation system, and refers to the Jackson County Bicycle Master Plan.

4. Site Design Features

This document does not directly address site design features. Those issues are addressed in the Land Development Ordinance.

5. Right-of-way Improvement Standards

Policy: Transit service will be encouraged in urban and urbanizing areas, where it is an energy-efficient form of transportation, and in rural areas to meet social service needs. Implementation strategies: (A) Cooperate with RVTD by incorporating a summary of the Transit Development Program in the Transportation Element and by identifying and jointly developing park-and-ride sites on publicly-owned land; (B) develop standards to be included in county ordinances for bus turnouts and other features that would facilitate bus use and help increase highway capacity (pages 22-29).

Policy: The County shall include facilities to accommodate pedestrians as a part of the overall County transportation system. Implementation strategies: (A) provide wider paved roadway sections, including paved shoulders; (B) require construction of sidewalks as a condition of approval within the UGB; and (C) require cross walks for pedestrians at signalized intersections serving residential areas within urban boundaries and rural communities (pages 22-30).

COMMENTS: The Jackson County Comprehensive Plan is very thorough regarding containment of urban growth within urban growth boundaries and containing the spread of urban sprawl. There are many policies in place that encourage multi-modal development, or, in many cases make reference to other supporting plans and programs that support TOD attributes. However, the document does not have any policies that specially encourage high density, mixed use urban development.
PART 2 - CODE REQUIREMENTS

CITY OF MEDFORD

Medford Land Development Code

Description: This document is the code for land development in the City of Medford. It was last amended December, 1998, and some sections repealed up to the present.

Transit Oriented Design Related Provisions:

1. Mixed Land Uses

   Planned Unit Development (PUD): Purpose and Intent: permits greater flexibility in urban development than would otherwise be possible under strict requirements of this Code. One of its intents is to promote a mixture of land uses and housing types that are thoughtfully planned and integrated. (Section 10.230)

   The Zoning Code allows for neighborhood commercial areas (page 10:3:1).

2. Higher Density Development

   Planned Unit Developments: The housing density for residential portions of the PUD may be increased by up to 20 percent over the maximum permitted density in the underlying residential zone under certain provisions. (Section 10.230.D.8)

   The Zoning Code allows for seven zoning districts for residential land use classifications. All have minimum density requirements. The lowest density is the SFR-2 (2 units per gross acre) to the highest density use, MFR-30, for multifamily residential up to 30 units per gross acre. Duplexes are allowed outright in the SFR-10 zone (page 10:3:1).

   The Code allows for 8 commercial designations, from service commercial and professional office to heavy industrial (Section 10.325).

   Townhouse Dwellings: Townhouse/Rowhouse dwellings are permitted for the SFR10, SFR 15, and all multi-family zoning districts. Duplex dwelling units are permitted in SFR4, -6 and 10, and all multi-family zoning districts. Multi-family housing dwellings are permitted are allowed in SFR-10 and all multi-family zoning districts (page 10:186).

   Residential Density Calculation: The code specifies a calculation for minimum and maximum residential density calculations. When a living unit in a congregate housing facility does not contain full kitchen or cooking facilities, the unit may be counted as 0.7 of a dwelling unit for purposes of calculating density (page 10:184).

   Accessory Dwelling Units: ADU are allowed if they comply with maximum lot coverage and setback requirements where single family dwelling unit exists and other specifications (page 10:229).
Dwelling Units in Commercial Districts: Dwelling units shall be allowed in all commercial districts except Neighborhood Commercial zone subject of dwelling type standards for housing. Single family dwelling units shall be allowed in all commercial districts when attached to a commercial building and approved by the Site Plan and Architecture Commission (10:234).

3. Pedestrian-Bike Connectivity

Bicycle Parking Standards: bicycle parking spaces shall be provided in accordance to the following: (1) Commercial, Office and Institutional: 10 percent of the number of spaces provides for automobiles; (2) Industrial: 20 percent of the number of spaces provided for automobiles; (3) Multi-family residential: one space per unit for units or more (page 10: 207a).

Sidewalks: Sidewalks shall be required of all developments including single family residences along all streets except residential lanes and minimum access roads which are not required to have sidewalks (page 10:171).

Pedestrian walkway: Pedestrian walkways shall be provided (1) to each street abutting the property, and for every 300 feet of street frontage not including limited access freeways; and (2) to connect with walkways, sidewalks, bikepaths, alleyways and other bicycle or pedestrian connections. They shall be at least five feet in paved, unobstructed width (page 10:126).

Cul-de-sacs: Cul-de-sacs and flag lots may only be permitted under certain conditions: excess slope (15 percent), presence of a waterbody or wetland, it is not possible to create a street pattern which meets design requirements, or an accessway is provided consistent with the standards for accessways (page 10:165a).

Code provisions for the Bear Creek Overlay Zone, the Central Business District and the Southeast Overlay Zone are included in the code. Details are described in the document review for the Medford Comprehensive Plan (10:3:62).

4. Site Design Features

New Commercial and Institutional Development: All new commercial, office and industrial buildings on parcels within 600 feet of an existing or planned transit route, as designated by the transit provider, shall provide (1) a main entrance of the facade of a building nearest to and facing a designated transit street or route; (2) building setbacks no more than 20 feet from the designated transit stop or transit street (page 10:224a).

Street Classification System and Requirements: (1) Arterial: Standard design requirements include facilities for two-way bicycle travel and pedestrian are included; (2) Collector: Facilities for two-way bicycle travel and pedestrians are included (page 10:153).
Application, Site Plan and Architectural Review: Site Plan and Architectural Review considers consistency in the aesthetic design, site planning, and general placement of related facilities such as the design, placement and arrangement of buildings as well as any other subjects included in the code which are essential to the best utilization of land which will encourage development and use of lands in harmony with the character of the neighborhood within which the development is proposed. (Section 10.285)

Historic Preservation District: The purpose of the Historic Preservation District is to protect, enhance, perpetuate and improve those structures or districts that are of special historical interest or value. It is intended to (1) effect and accomplish the protection, enhancement and perpetuation of such improvements, sites and districts that represent or reflect elements of the City’s cultural, social, economic, political and architectural history. No alterations may be made to any structure in a historic district that affects its exterior appearance without approval of the Historic Commission. (page 10:3:84)

Landscaping and bufferyards: Landscaping, irrigation, bufferyard and street frontage landscaping requirements are required for in certain land uses for the purposes of aesthetic quality and to minimize potential conflicts caused by nuisances (page 10: 216).

Transit facilities: Transit improvements, including bus stops, pullouts, shelters, and on-street parking restrictions shall be provided at the time of development of new subdivisions of 25 lots or more, when such improvements are appropriate. Specific requirements are in place for new commercial and institutional development within 600 feet of an existing or planned transit route (page 10:224-1).

5. Right-of-way Improvement Standards

Transit Facilities for New Subdivisions: Transit improvements, including provision of bus stops, pullouts, shelters, on-street parking restrictions shall be provided at the time of development of new subdivisions of 25 lots or more when such improvements are appropriate. This is also true for development of major industrial, institutional, commercial and office developments when the building or group of buildings exceed predetermined gross square footages (page 10:224-1).

Street Circulation and Design: All streets, alleys, and accessways shall connect to other streets within the development and to existing and planned streets outside the development when not precluded by environmental or topographic constraints, existing development patterns or strict adherence to other standards in this code. Proposed streets or street extensions shall be located to provide direct access to existing or planned transit stops and other neighborhood activity centers such as schools, office parks, shopping areas and parks (page 10:152).

Street Classification System: the higher order street system includes major streets which connect residential, commercial, and industrial areas to the highway system. Arterial and collector streets have facilities for two-way bicycle travel and pedestrian are included with either on-street or off-street pathways (page 10:153).
Accessways Design: Accessways shall be lighted either by street lights on adjacent streets or pedestrian scale lighting along the accessway (page 10:167b).

Sidewalks: Sidewalks shall be five feet in width except in the Code Standards for the Central Business District and the Riverside Streetscape. Sidewalks along arterial and collector streets shall be seven feet in width (page 10:172). All sidewalks in the Riverside Streetscape area (Riverside between Jackson and McAndrews) are to be constructed with 5 foot by 7 foot concrete slabs that are offset a maximum of 18 inches (page 10:175).

COMMENTS: The City of Medford codes on land development and zoning are complete in terms of code allowances and requirements for TOD elements. The code has specifications that are clear for such allowances and requirements. Common TOD design elements, such as sidewalks, bicycle lanes, transit facilities and curb extensions are all required. The Code takes into account the broad range of TOD elements that may be useful to implement the City’s policies on multi-modal transportation development.

JACKSON COUNTY

Land Development Ordinance

Description: Jackson County’s Land Development Ordinance 1989

Transit Oriented Design Related Provisions:

1. Mixed Land Uses

The Code allows for Neighborhood Commercial Districts (NC) and General Commercial Districts (GC).

2. Higher Density Development

Minimum urban residential parcel and lot sizes range from 4,500 to 10,000 square feet. Minimum average widths range from 60 to 80 feet.

An Urban High Density District exists, allowing for multi-family dwelling units. Minimum lot size is 6000 square feet, with 1,450 square feet for each additional dwelling unit. All dwellings shall not exceed a density of thirty dwelling units per acre; except for mobile home parks may not exceed a density of nine dwelling units per acre (page 154).

Planned Unit Developments are permitted in the Code for the purposes of more efficient use of lands (page 252).

3. Pedestrian-Bike Connectivity

Sidewalks are required when:

- The subject property is located within one mile of a school, shopping center, recreation area, or other use like to induce pedestrian traffic;
• The surrounding area had developed sidewalks or is zoned for urban, residential, commercial, or industrial uses; or
• The subject division is within an Urban Growth Boundary or Urban Containment Boundary (page 37).

Sidewalks are not required in divisions creating parcels or lots larger than one acre in size or when, in the opinion of the county, sidewalks would not be necessary to accommodate pedestrian traffic (page 37).

Bicycle path right-of-ways are required to be dedicated to the public when designated in the Comprehensive Bicycle Plan for Jackson County (1978) (page 37).

The Planning Director may require the following as a condition of approval of a site plan within the urban growth boundary: sidewalks, dedication of right-of-ways for streets and pedestrian ways, and easements for utilities, waterways and slopes.

Specific standards for bicycle paths are in place (page 85).

4. Site Design Features

The site design review addresses many issues related to landscaping and buffering. No specific requirements are made regarding building orientation, building access for pedestrian-orientation or other TOD related elements.

5. Right-of-way Improvement Standards

The location and design of a dedicated right-of-way shall conform to applicable goals and policies of the County Comprehensive Plan (page 75).

COMMENTS: The ordinance does not actively encourage transit oriented development. It does allow, and in some cases require, TOD-conducive elements, such as sidewalks and bicycle paths. However, it does not allow for, commercial/residential mixed uses, nor promote pedestrian-friendly building orientations in the site design review.

APPENDIX A

RTP Policies Related to Transit Oriented Design (TOD)

6.10 Bus Bays

Policy 6 - 11: Where warranted by traffic speed, volume, and average dwell time and where approved by RVTD, local governments shall facilitate implementation of bus bays on congested arterial streets as a means of facilitating traffic flow during peak travel periods.
10.1 Bikeway Requirements

Policy 10 - 1: Local governments shall complete a bikeway network that serves bicyclists needs, especially for travel to employment centers, commercial districts, transit centers, institutions, and recreational destinations. In urban areas, bike lanes shall be provided on all arterial and major collector streets; all other urban streets shall be constructed such that the pavement is wide enough to allow safe travel by both motor vehicles and bicycles on the shared roadway (OAR 660-12-0045(6)). In rural areas, arterial and collector streets shall include four-to-six foot shoulders on each side.

10.2 Sidewalk Requirements

Policy 10 - 4: Local governments shall require or provide sidewalks/pedestrian pathways along all streets within the urban growth boundary. Sidewalks and walkways should be required in new developments in the metropolitan area and they should be provided in connection with most major street improvement projects (OAR 660-12-045 (3)(B)). Pedestrian walkway or accessway connections shall be required between adjacent developments when roadway connections cannot be provided. Also, a systematic approach to filling gaps in the sidewalk system and an annual allocation for construction is recommended.

10.3 Pedestrian and Bicyclist Connections with Transit

Policy 10 - 6: Local governments shall provide sidewalks and other amenities to make pedestrian access to bus stops easier. RVTD shall continue to provide bicycle racks on buses, and bicycle racks and lockers at transit stations to improve bicycle access to transit.

10.4 Amenities

Policy 10 - 7: Where applicable, local governments shall revise their zoning codes to require the provision of amenities to help meet bicyclist and pedestrian needs, including the provision of bicycle storage facilities.

11.2.6 Roadway Design Features to Benefit Transit

Policy 11 - 2: RVTD and local governments shall cooperate to the maximum extent to identify and include features beneficial to transit riders and transit operations when developing plans for roadway projects.
Policy 11 - 3: RVTD and local governments shall encourage connectivity between different travel modes, including accessibility of major transit facilities to bike, pedestrian, and automobile traffic.

12.1 Transit-Oriented Design

Policy 12 - 1: Local governments shall utilize transit-oriented design strategies to encourage the use of local public transportation and discourage reliance upon single-occupancy vehicles.

12.2 Protection of Transportation Corridors

Policy 12 - 2: Local governments shall consider ordinances or amendments to their Comprehensive Plans to protect and preserve corridors for transportation purposes.

12.3. Regional Land Use Development Patterns

Policy 12 - 3: Local governments shall amend their Comprehensive Plans to promote mixed or higher density developments in areas that would lower the vehicular demand on the regional transportation system.

12.4 Local Street Connectivity

Policy 12 - 4: Local governments shall discourage cul-de-sac or dead-end street designs whenever an interconnection alternative exists. Development of a modified grid street pattern shall be encouraged for connecting new and existing neighborhoods during subdivisions and partitions.

Policy 12 - 5: Wherever possible, subdivisions and any approved cul-de-sacs shall be designed to provide pedestrian connectivity between neighborhoods.
### Crater Lake Highway
Transportation Land Use Study

<table>
<thead>
<tr>
<th>TOD Attributes</th>
<th>Mixed Land Uses</th>
<th>Higher Density Development</th>
<th>Pedestrian-Bike Connectivity</th>
<th>Site Features</th>
<th>Right-of-Way Improvements</th>
</tr>
</thead>
<tbody>
<tr>
<td>规划政策 (Planning Policy)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Comprehensive Plan - Housing Element (Rev. Sept 1995)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Comprehensive Plan - Public Facilities Element (Rev. Feb 1996)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Comprehensive Plan - General Land Use Plan (April 1998)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Interim Transportation Plan (Draft June 1998)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Land Development Code (Amended Dec 1990)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Urban Renewal Plan (July 1993, Amended Sept 1993)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Urban Unincorporated Community Plan Sept 1998)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Comprehensive Plan (1988, Updated Dec 1996)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 设施需求 (Code Requirements)

<table>
<thead>
<tr>
<th>TOD Attributes</th>
<th>Mixed Land Uses</th>
<th>Higher Density Development</th>
<th>Pedestrian-Bike Connectivity</th>
<th>Site Features</th>
<th>Right-of-Way Improvements</th>
</tr>
</thead>
</table>
|度度支持或鼓励目标实现 (Degree of Support or Encouragement of Objectives)

- Specific, Quantifiable Provisions which Support
- General, Qualitative Provisions which Support
- Combination of Provisions which Support and Discourage
- Specific or General Provisions which Discourage
- No Provisions

47
Study Area

Crater Lake Transportation and Land Use Study

Section 2

48

Crater Lake Transportation and Land Use Study

Section 2

48
SECTION 2
PUBLIC INVOLVEMENT

Stakeholder identification, survey & interviews;
advisory committees (TAC & CAC) meetings & work;
Open House; publicity; local communication
with individuals & groups
STAKEHOLDER IDENTIFICATION AND INTERVIEWS

Public involvement work began with a broad-based effort to inform people who live, work and own property in the study area of the project, its goals and opportunities for public participation.

The study used three distinct approaches. Each of these approaches, with the responses obtained, is outlined in this section.

1. A bulk mailing to 525 property owners and business operators;
2. Telephone interviews with 16 key agency staff and elected and private officials; and
3. Face to face interviews with significant large private property interests within the study area.

From this effort, 20 people came forward to participate in study’s Citizen Advisory Committee. Additionally, interested parties identified in this process became the core of the study mailing list, which was maintained and updated throughout the study.

Bulk Mailing.

On June 6, 2002, a bulk mailing of 525 was sent to property owners and business operators residing in the study area of the Crater Lake Highway Transportation and Land Use Study. The mailing included a cover letter announcing the study and a short survey. Persons were to apply to participate in encouraged the CAC to be established for the study by returning the survey and indicating their interest in being a CAC member.

Twenty-five addressees were people known to be interested in the area, either because of their membership in a local organization, their self-identification, or their identification by a local city councilor or other member of the community. Five hundred were selected from GIS and Claritas databases as property owners or business operators.

Addressees from GIS and Claritas were selected on a geographical basis to include persons all along the Crater Lake Highway corridor as follows:

Area 1) White City residential area – 50 addressees;
Area 2) White City industrial area – 50 addressees;
Area 5) Residents off W. Vilas Road – 35 addressees;
Area 6) Commercial and residential addressees near the intersection of Vilas Road and Crater Lake Hwy. – 34 addressees;
Area 8) Property owners near the intersection of Delta Waters Road and Crater Lake Hwy. – 50 addressees;
Area 9) Residential owners off Delta Waters Road east of the intersection with Crater Lake Hwy. – 50 addressees;
Area 10) Business operators and property owners near the intersection of Crater Lake Hwy. and Poplar Drive – 50 addressees; and
Area 11) Business owners and property owners along the Crater Lake Hwy. corridor between White City and Delta Waters Road – 200 addressees.

The letter and survey mailed and answers received appear in Appendix C.

**Bulk mail survey summary responses.** This section shows aggregate answers to the bulk mail survey.

*Question 1.* A limited access expressway for “through traffic”, parallel to Crater Lake Highway, is the focus of this study. It would come off the highway near Agate Road and end near the N. Medford Interchange. From your perspective, how would this benefit or hinder our community and activities on the highway? Why?

**How it could benefit**  Number of responses: 19

- It would decrease congestion and increase safety.
- It would facilitate access to and from businesses along Hwy. 62.
- It would facilitate the efficient flow of freight traffic.
- It would benefit commuters from Medford to White City and commuters from outlying areas to Medford and to Interstate 5.

**How it could hinder**  Number of responses: 6

- It might hurt businesses on Crater Lake Highway who are dependent on traffic.
- It doesn’t solve the problem. We need a direct connection between Hwy. 140 and Interstate 5.
- It doesn’t solve the real problem, which is the lack of roads off Hwy. 62 that connect with each other.
- This could hinder the community if access, business and local community are not taken into account.

**Ambivalent**  Number of responses = 6

- I am not sure how this would work. I need more information.
- I am not sold on the idea that this is the best way to solve the problem.
- Need to consider the needs of both local business and traffic.

Question 2. *In the future, what kinds of land uses will be appropriate along Crater Lake Highway?*

Responses were quite uniform. Most people felt that the corridor should continue with a mix of commercial and light industrial. Some mentioned residential. In general, people felt that the area is already developed with these uses and should continue in that direction.
Question 3. What transportation problems on Crater Lake Highway would you like this study to address?

- Turning into and out of businesses on Crater Lake Highway is dangerous.
- It is difficult for traffic to enter and exit from side streets.
- Congestion, especially at the Fred Meyer/Poplar Square intersection and the Delta Waters/Costco intersections with Crater Lake Highway.
- Impact on the businesses in the area.
- Truck movement from and to I-5 to the airport and White City.

Telephone Interviews

In June, 2002, study staff compiled a list of 21 people to be interviewed by telephone to gather more in-depth information about study area needs and concerns. Individuals and their interest are listed here. Interview comments appear in Appendix C.

1. Ralph Wehinger, Foreign Trade Zone.
2. Richard Clark, Fred Meyer Real Estate Development assistant vice president, Portland.
3. Jerry Rich, Abby’s Pizza manager, 2550 Crater Lake Hwy. (He subsequently forwarded to owners)
4. Mike Gardiner, Oak Harbor Freight Lines terminal manager.
5. Troy Hutchins, Vice-Pres., FV Martin Trucking Co. (lumber hauler) vice president.
6. Cheryl Stout, White City resident, White City Urban Renewal district.
7. Mike Dyal, Medford City Manager,
8. Medford City Councilors
   Ed Chun
   Jim Kee
   Claudette Moore
   John Michaels
9. Terry Maxson, Eastman Kodak shipping & logistics manager.
10. Jackson County Commissioner Sue Kupillas.
11. Marilyn Rice, farm/ranch property owner.
15. Bob Korfhage, President Siskiyou Velo Club.
16. Fire Chief Randy Iverson, Rural Fire District #3.
17. Jackson County Sheriff Bob Kennedy.
19. Southern Oregon Visitor’s Association, Cami Farmer.

In-Person Interviews

John Morrison, study public involvement coordinator, met with four people to talk to them in depth about the study. These people were chosen because of their significant land holding in the study area: Reg Breeze, Olson Family, Curt Burrill and Bill Greenstein. Morrison’s notes of the interviews appear in Appendix C.

ADVISORY COMMITTEES

A Citizen Advisory Committee and a Technical Advisory Committee were formed to provide guidance and feedback throughout the duration of the study. They provided direction and endorsement of project findings. The CAC also served as a public sounding board for the public at large to become involved in the project. This section provides details on the work of the two committees.

The committees provided input, direction and endorsements of the project findings. They reviewed staff draft reports, technical memoranda and maps, making comments and recommending changes that were incorporated into this final report. Each committee was kept apprised of the other committee’s input and provided feedback.

Technical Advisory Committee. RVCOG drew from the MPO technical advisory committee, the Hwy. 62 corridor project Solution Team and other staff from participating jurisdictions to form the TAC. Members represented both land use and transportation interests form the following: Oregon Department of Transportation, Oregon Department of Land Conservation and Development, City of Medford, Jackson County, Rogue Valley Transportation District.

This committee provided the study with pertinent information from members’ respective agencies. These contributions included information from the Medford Transportation System Plan, city zoning, Jackson County and White City Transportation System plans, White City rezoning and urban renewal, Rogue Valley International-Medford Airport operations and plans, and ODOT’s work on the North Medford Interchange and the Hwy. 62 corridor. The TAC was instrumental in producing a study that is compatible with the participating agencies’ goals and answers at least some of their concerns in the study area.

TAC meetings are shown on the table below. TAC summary minutes are in Appendix D.

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Meeting Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Crater Lake Transportation and Land Use Study
Section 2
Citizen Advisory Committee. RVCOG used rosters of interested individuals from ODOT's planning work on the North Medford interchange and the Hwy. 62 corridor, including that project's CAC, plus individuals identified through the study's own stakeholder surveys to form a CAC. People identified from the ODOT project were sent study information and survey and invited to apply for a position on the CAC. Similarly, in stakeholder bulk-mail survey, and interviews, people were asked to apply for the CAC. The resulting list of interested individuals was further evaluated to ensure a CAC with a mix of interests and perspectives. The mix of attributes sought in CAC members included residents and non-residents of the study area, commuters, people with specific interest in a particular subarea, and business interests including retail, freight, manufacturing, transit, bicycle-pedestrian, real estate development, land use, public safety. A list of 22 potential CAC members was developed that included three people from the previous ODOT project CAC. Several people either did not show up for the first meeting or bowed out early in the process, leaving a CAC of about 15 who attended most CAC meetings, the open house and design workshop. About half were Medford residents.

The CAC was a public forum for the study. With its broad-based background, the CAC brought a range of real-life experiences, concerns and suggestions to the study process. CAC meetings gave committee members and the public at large the opportunity to review and help shape study elements.

CAC meetings are shown on the table below. CAC summary minutes are in Appendix D.
CAC Meeting Schedule

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Meeting Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>July 29</td>
<td>6-8 p.m.</td>
<td>Rogue Family Center, White City</td>
</tr>
<tr>
<td>August 19</td>
<td>6-8 p.m.</td>
<td>Rogue Family Center, White City</td>
</tr>
<tr>
<td>September 16</td>
<td>6-8 p.m.</td>
<td>Rogue Family Center, White City</td>
</tr>
<tr>
<td>November 18</td>
<td>6-8 p.m.</td>
<td>Rogue Family Center, White City</td>
</tr>
<tr>
<td>January 15</td>
<td>1:30 – 3:30 p.m.</td>
<td>Medford City Hall, Rm. 340</td>
</tr>
<tr>
<td>June 2</td>
<td>6-8 p.m.</td>
<td>Rogue Family Center, White City</td>
</tr>
</tbody>
</table>

In addition to the meetings shown above, CAC members were invited to attend Technical Advisory Committee meetings. CAC meeting schedule also included participation in the open house and the design workshop (described in Section 2).

In advance of each meeting, members received a packet that included the agenda, draft staff reports and drafts of other study products to be addressed, and the minutes of the previous meeting to be approved.

All meetings were public, with announcements sent to local media and to people on the study’s mailing list.

PUBLIC MEETINGS

All meetings of the Technical Advisory Committee and the Citizen Advisory Committee were open to the public. Announcements of CAC meetings were mailed to interested parties on the study mailing list. In addition to these working meetings a special kick-off open house was held to introduce the study and continue the process of gathering public comments and study suggestions.

Open House

The study sponsored an open house 4-7 p.m., Oct. 9, 2002, at the Rogue Family Center. The purpose of the session was to introduce the Crater Lake Highway Transportation and Land Use study and study participants to the public, and to solicit public comments in a comfortable, informal setting.

About 50 people attended including several members of the study CAC and TAC. (Sign in sheets attached in file.) RVCOG staff: Dan Moore, Dick Converse, John Morrison, Vicki Guarino.

The project newsletter was distributed. Informational displays included maps of the study area and base case conditions (existing zoning, traffic, street class, bicycle, pedestrian and transit...
facilities and 2030 comp plan, congestion, street class, bike lanes, sidewalks, TOD sites) and informational panels about the project and public involvement.

A video describing Hwy. 62 planning ("Hwy. 62 Corridor Solutions, March 2001") was shown throughout the meeting to provide background to the study.

Visitors were invited to participate in a simple origin and destination study. On a map of Jackson County, they affixed a green dot at their home, and a red dot at their most common destination. Dots were numbered so that a specific origin could be linked to a specific destination. Thirty people participated. Respondents lived as far away as Prospect. None lived in White City, and most lived in the Medford-Central Point area. White City was a significant destination, second only to North Medford. Map in file.

Feedback forms were available, and six were returned during the meeting. Comments included concerns for wetlands, an expressway impeding east-west connectivity, multi-modal transportation needs, bike and pedestrian safety, avoiding increased traffic on Agate Road, dangerous and inadequate ingress-egress between local streets and Hwy. 62.

Several people asked to be added to the mail list for CAC meeting notices

In the week leading up to open house, RVCOG undertook the following tasks to publicize the event and bring the public up to date on the study.

- **News Release:** Open House news release, copy attached, was distributed to all news media outlets in Jackson County on Sept. 30, 2002. Follow up visit and interview with Mail Tribune
- **Invitations:** A letter inviting interested members of the public to the open house, and briefly describing the project were mailed Oct. 1-2, 2002, to nearly 600 people on the following RVCOG mailing lists – MPO Policy; MPO TAC; MPO PAC; lists from stakeholder survey conducted at the beginning of the project; TRADCO (Transportation Advocacy Committee) Jackson County members; project interested parties list (including representatives of the Medford chamber of commerce transportation subcommittee; open house interest list; list of local officials and media.

**PUBLICITY**

Throughout the study, a variety of means were used to supply the public with information about the study, encourage people to attend study meetings and special events, solicit public input, and provide ongoing feedback on study accomplishments.

The study’s publicity efforts capitalized on concerns that already exist in Jackson County about land development and traffic safety and congestion. The public has had to cope with mounting traffic delays, accidents, and pollution from motor vehicles for a number of years. These problems are both anecdotal and documented by the Department of Environmental Quality and Department of Transportation.
Results of the study’s publicity can be seen in the level of participation at two key study events. More than 50 people attended the October 2002 Open House, and 49 people participated in the day-long design workshop in February 2003. At CAC meetings, audiences were far smaller, but remained interested in the work throughout the process and attended multiple meetings.

A summary of publicity tools used appears below.

**Mailing lists.** The study created and maintained a project mailing list. An initial list of more than 500 addresses was built using GIS. The study sent an introductory letter, survey, and invitation to join the Citizen Advisory Committee to these addresses (see Stakeholder Identification and Interviews, Bulk Mailing section above). Respondents who asked to be kept up to date on the study were put on an “interested parties” list. Names were added upon request throughout the study. Address on this list received notice of all CAC meetings, the open house and the design workshop.

The interested parties list was augmented with addresses of local officials, business leaders and local transportation advocates (local members of TRADCO transportation advocacy group) to advertise and invite participation in the study’s two major events: the open house and the design workshop.

**Web site.** Study information was posted regularly on the Rogue Valley Council of Governments web site. The final report is to be posted upon completion.

**Press releases.** The media received notification of all CAC meetings, the open house, design workshop and will receive notice of the final report when completed. Resulting media coverage included a news story in advance of the open house that included a front-page “teaser” headline keying readers to the story inside.

**Project newsletter.** A four-page newsletter was printed and distributed in early October 2002, just prior to the Open House. It was mailed to addresses on the interested parties’ lists and to a Rogue Valley Council of Governments list of local elected and appointed officials. Small bundles of the newsletter were distributed to public libraries in Medford, White City and Eagle Point, the Oregon Department of Transportation’s White City office, the information booth and public offices at the Jackson County Courthouse, Jackson County Roads and Parks, the Rogue Family Center (county multi-service center in White City). In addition, many key retail outlets in north Medford, White City and Eagle Point agreed to stock small bundles at their check-out stands and community news racks. Also, copies were set out at the study open house, and at other transportation-related meetings.

A copy of the newsletter is in Appendix H.

**Local Communications**

- Weekly (Friday morning) Project Team conference calls with TGM grant manager
- October 16, 2002 – met with city and county public works and planning staff to discuss subarea assumptions
- November 1, 2002 - met with Medford Mayor and Council President to discuss project objectives
- November 15, 2002 – met with Medford and Jackson County Planning Directors to discuss project objectives
- December 4, 2002 – met with Medford Planning Commission Chair (Bob Tull) and other members to discuss project objectives
- December 11, 2002 – met with Medford Planning Director to discuss City Council presentation on project objectives
- January 23, 2003 – Presentation to Medford City Council on project objectives
- February 11, 2003 – Presentation to Medford Citizens’ Planning Advisory Committee on project objectives
- February 27, 2003 – Presentation to Medford City Council on project issues, outcomes, etc.
- Monthly project progress reports to TRADCO, MPO TAC & Policy Committee

**BACKGROUND INFORMATION**

Outreach efforts included distribution of background “white papers” and letters, which appear in Appendix D.
SECTION 3
PROJECT SUBAREAS

TECHNICAL MEMORANDUM

Descriptions & characteristics of the four project subareas; maps of each subarea
INTRODUCTION

The purpose of this memorandum is to describe the characteristics of the project subareas, including reasons for characterizing each proposed project subarea. The subareas relate in some way to the proposed expressway extending from near the Crater Lake Highway/Interstate 5 interchange north to where it re-enters the existing Crater Lake Highway near Corey Road. The memorandum describes four nodes extending north from the Hwy. 62 Interchange to White City. While six nodes had originally been defined, it became clear early in the process that the southern study area was not two nodes, but one extending from the Hwy. 62 Interchange to Delta Waters Road. East Vilas Road has two study areas, one at its intersection with Hwy. 62 and another where it connects with the old Medco Haul Road. Because the ¼ mile buffer area overlaps, the two nodes have been melded into one study area. The northern node also was expanded because the connection of the expressway to the existing Crater Lake Highway is not a single point, but a series of off-ramps and on-ramps. Not all areas of interest are within the proposed corridor. The Delta Waters and East Vilas Road intersections are major areas of interest in the existing highway right-of-way, and will continue to generate high traffic volumes, although they are not anticipated to have direct connections to the expressway.

REPORT ORGANIZATION

Four project subareas have been identified for evaluation. Each study area extends ¼ mile from an interest area, usually an intersection. Throughout the report they will be identified as follows:

- Southern Terminus of Potential Expressway to Delta Waters
- Foreign Trade Zone
Junction of East Vilas Road with Hwy. 62 and the old Medco Haul Road
Northern Terminus of Potential Expressway

This memorandum focuses on existing land use, existing comprehensive plan and zoning designations, road network, including functional classifications, pedestrian and bicycle facilities, and transit facilities. It also includes reasons for designating each subarea.

Southern Terminus of Potential Expressway to Delta Waters Road

The area between the Crater Lake Highway Interchange and Delta Waters is dominated by commercial uses. All properties are in the Medford city limits. Major streets are Crater Lake Highway, Biddle Road, Hilton Road, Bullock Road, and Poplar Drive. The segment of Crater Lake between the I-5 northbound ramps junction and Poplar Drive is built on an urban cross-section including curbs and sidewalks, and has seven lanes including a center left-turn lane. Signals are provided at the Fred Meyer access and Poplar Drive. The speed limit is 35 miles per hour.

From Poplar Drive to Delta Waters Road, the highway has four lanes with a center-raised median. This segment is projected to have moderate to high levels of congestion in 2005. Access to the highway from other streets and major driveways along this segment is restricted to right-in/right out only, with an average access spacing of 15 access points per mile. Wide shoulders are provided on both sides of the highway, but curbs and sidewalks are generally absent. The speed limit is 45 miles per hour.

The Crater Lake Highway and Delta Waters intersection serves both commercial and residential users, feeding large retailers and professional offices to the north and residential neighborhoods to the east. It is a signalized intersection, as is the Delta Waters/Crater Lake Avenue intersection. Other major streets in the area include Lear Way and Skypark Drive. Crater Lake Highway, Crater Lake Avenue, and Delta Waters west of Crater Lake Avenue are arterials. East of Crater Lake Avenue, Delta Waters is a collector. Congestion is projected to be moderate in 2005.

The Medford Comprehensive Plan classifies Crater Lake Highway and Biddle Road as arterials. Poplar Drive is a collector; other streets are considered minor streets. RVTD provides bus service on Crater Lake Highway, Poplar Drive, Bullock Road, Biddle Road, Hilton Road, Crater Lake Avenue, Delta Waters Road, and Lear Way. On-street bicycle lanes are provided along Crater Lake Highway and Delta Waters Road. Sidewalks are located on both sides of Crater Lake Highway and Poplar Drive. Sidewalks are on one side of Hilton Road, on both sides of Lear Way and Crater Lake Avenue south of Delta Waters. Along Crater Lake Highway, sidewalks are on the southeast side to Delta Waters, and on the northwest side near the large retailers. The north side of Delta Waters also has sidewalks between Crater Lake Highway and Crater Lake Avenue.

Commercial and industrial uses in the area include Fred Meyer, Poplar Square, Rogue Regency Motel, Motel 6, Pony Soldier Inn, Lithia Body and Paint, Mini Storage Warehouse, and Carl’s Jr. A small area of homes is east of Poplar Square.
This area is slated for major alterations resulting from reconfiguration of the freeway interchange. Unless the present challenge by property owners is successful, several businesses will be removed to allow for new off-ramp and on-ramp alignments.

Commercial and industrial uses near the Delta Waters intersection include Wal-Mart, Office Depot, Safeway, Michaels Arts and Crafts, Chevy’s Mexican Restaurant, Lava Lanes, Butler Truck, and a professional office park west of Lear Way. Approximately 20 houses are on either side of Crater Lake Avenue, south of Delta Waters.

Lands north of Hilton Road are designated as General Industrial. Most of the remaining area is Commercial. A small area of Urban Residential is on the southeastern fringe of the study area. Zones include I-G (General Industrial), I-L (Light Industrial), C-R (Regional Commercial), C-C (Community Commercial), C-H (Heavy Commercial), and SFR-6 (Single-Family Residential).

Comprehensive Plan designations near Delta Waters include Commercial, General Industrial and, to a lesser extent, Urban Residential and Urban High Density Residential. Zones include I-L (Light Industrial), C-C (Community Commercial), C-H (Heavy Commercial), SFR-6 (Single-Family Residential), and MFR-20 (Multiple-Family Residential).

Two small palustrine wetlands are found at the northwest edge of the study area, adjacent to the bike path. No vernal pools are mapped. A small stream crosses the south portion, and has a shallow floodplain.

The area warrants special attention because of its proximity to the freeway interchange, and because its location at the south end of the project area warrants discussion about the relationship of the project to the remainder of the region’s transportation system. The area is also highly congested. Further, the Delta Waters/Crater Lake Highway intersection is among the busiest on Crater Lake Highway, directing traffic to a significant commercial center and large residential areas. It also was identified as a potential Transit-Oriented Development (TOD) site in a report published in 1999. This designation provides a wider mix of land uses, with a goal of achieving greater transit and pedestrian mobility.

**Foreign Trade Zone**

The Robert Smith North American Trade Center is federally designated as Foreign Trade Zone (FTZ) No. 206 and is located on the east portion of the Rogue Valley International – Medford Airport.* The site contains the FTZ offices, Immigration and Naturalization Service, U.S. Customs Service, a storage building, and a three-berth parking apron for large planes. No other structures are located in the study area. Foreign Trade Zones are specially designated areas, in or adjacent to a U.S. Customs Port of Entry, which are considered to be outside the customs territory of the U.S. The designation has a major spin-off benefit of requiring the presence of local customs agents who, because they are available to inspect FTZ products, can also inspect items flowing into the market for which duty must be paid.

*U.S. Customs Service closed Medford operations in January, 2003, but the FTZ remained in the Crater Lake Transportation and Land Use Study because of its continuing potential for air cargo.
Access to the site is from International Way, which connects to Crater Lake Highway via Commerce Drive. No other streets are in the study area. International Way does not have sidewalks, but does provide access to the northern terminus of a bike path that extends from the Bear Creek Greenway. RVTD does not serve the FTZ.

A majority of the area has an Airport comprehensive plan designation. The remainder is designated Light Industrial and Heavy Industrial. The airport is zoned I-L (Light Industrial), while lands to the east are zoned I-G (General Industrial) and AD-MU (Airport Development-Mixed Use).

A very narrow floodplain is found along a small creek that crosses the northeast portion of the study area. Several vernal pools are mapped. No other wetlands are noted.

The Foreign Trade Zone has the potential to play a major role in the region’s economy. Efficient access to this area is imperative for the potential to be fully realized.

**East Vilas Road Intersections with Hwy. 62 and Old Medco Haul Road**

This study area was initially described as two subareas, but because of the proximity of potential improvements associated with the expressway, the areas overlap. East Vilas Road is an arterial west of the highway, but is a minor road east of the intersection. Crater Lake Highway is built with five lanes, wide shoulders, and intermittent curbing on the west side only. Moderate congestion is projected in 2005 for the portion of the highway in the study area. Crater Lake Avenue parallels the highway, and is a collector. East Vilas Road is heavily used as a connection from Crater Lake Highway to Table Rock Road and the Central Point freeway interchange. The portion between Crater Lake Highway and Table Rock Road was reconstructed in 2002, and now has three lanes. RVTD provides bus service on Crater Lake Highway, but not East Vilas Road. The area lacks sidewalks, but both major roads have on-street bike lanes.

The junction of East Vilas Road and the old Medco Haul Road is not an active intersection at this time, but is included as a study area because it would be a major intersection if the Crater Lake Highway Hybrid Alternative were constructed as currently envisioned. International Way coincides with the abandoned Medco Haul Road that is currently used as private access to land east of the airport. East Vilas Road is the dominant road in the study area, and is an arterial. Industry Drive is a minor street serving the Vilas Industrial Park.

Crater Lake Avenue provides access to more than a dozen commercial structures, several of which are vacant. Uses include Oregon Furniture, Butler Kia, National Stoves, Totally Texas, Fluid Connector Products, Oregon-California Supply, and Weast Trailer Sales. On the west side of Crater Lake Highway are a Bimor gas station, Lucas Truck and Equipment, and United Pipe. The Medford Gun Club is north of Vilas Road. Only a couple dwellings are located at the eastern fringe of the study area. In additional to the Vilas Industrial Park, other uses along East Vilas Road include a mini warehouse, Jetcraft Boats, and the western portion of the Medford Gun Club. Large areas are vacant or underdeveloped.

Most of the study area is outside the city limits, but within the urban growth boundary. The area east of the commercial strip along Crater Lake Avenue is outside the urban growth boundary.
Comprehensive Plan designations include Heavy Industrial, Commercial, and Exclusive Farm Use. Zoning in the city is I-H (Heavy Industrial), I-L (Light Industrial) and C-H (Heavy Commercial). County zoning includes AD-MU (Airport Development – Mixed Use), GC (General Commercial), RR-5 (Rural Residential) and EFU (Exclusive Farm Use).

Small palustrine wetlands near the eastern edge of the study area are included on the National Wetlands Inventory. No floodplains are shown.

Recent reconstruction of East Vilas Road responded to increased traffic moving between Crater Lake Highway and Table Rock Road. This route continues to serve as a cutoff for those wanting to head north on the freeway. The intersection serves an important role in distributing traffic in the north Medford area. The area might also serve as an alternative location for Transit-Oriented Development instead of the Delta Waters TOD where recent development has reduced the opportunities to take advantage of TOD principles.

As noted previously, the western portion of the study area is identified because of the role it would play as a major intersection if the hybrid alternative were selected. It would provide direct access to the Foreign Trade Zone.

**Northern Terminus of Potential Expressway**

The northern terminus of the expressway connects with Crater Lake Highway near Corey Road. Crater Lake Highway is built with five lanes, wide shoulders that accommodate bicycles, and intermittent curbing on the west side only. RVTD provides bus service on Crater Lake Highway. Moderate congestion is found at the intersection with Corey Road. The area lacks sidewalks. Other roads in the study area include Fowler Lane, East Gregory Road, and Agate Road, all county roads. Crater Lake Avenue terminates at Corey Road.


Comprehensive Plan designations include Commercial, Light Industrial, Suburban Residential, and Open Space Reserve. Zoning includes GC (General Commercial), LI (Light Industrial), SR-2.5 (Suburban Residential – 2.5 acre minimum) and OSR (Open Space Reserve).

The National Wetlands Inventory maps a palustrine wetland between Corey Road and East Gregory Road. A large portion of the OSR zoned land is tentatively designated as vernal pools that should be protected. This will reduce development potential of the site.

This area is appropriately included as a study area because it is where the hybrid route would connect with Crater Lake Highway.

**Conclusion**

The Oregon Highway Plan requires that the state and local governments protect the through-movement of traffic on new expressways. Each of the identified areas has the potential to affect
efficient movement of traffic, whether as part of the actual right-of-way or being a nearby concentration of development. These conditions warrant specific attention in the Crater Lake Highway Transportation and Land Use Study. The next step will be to assess conditions that could be expected if the area continues to develop according to established zoning patterns.

Maps

Maps of the four study subareas and the existing Hwy. 62, which could become a regional boulevard if the expressway were built, appear on the following pages.
Southern Terminus of Potential Expressway
Foreign Trade Zone
East Vilas Road Intersections with Highway 62 and Old Medco Haul Road
Northern Terminus of Potential Expressway
Regional Boulevard
SECTION 4
BASE CASE ASSUMPTIONS

TECHNICAL MEMORANDUM

Description of assumptions used to depict existing & future conditions
The objective of this memo is to describe the assumptions used to develop maps depicting existing and future conditions and characteristics relating to land use and the transportation system near the Crater Lake Highway corridor. This “base case” will be useful to evaluate how successful potential improvement projects are in addressing the identified problems. Maps prepared for this task show existing and future land use and transportation conditions in the corridor. Future conditions assume that development and travel patterns contemplated by current local, regional, and state plans will continue to the year 2023. They do not take into account the proposed expressway. Exact numbers of existing and projected population, households, and employment are not possible because several Transportation Analysis Zones (TAZs) extend beyond the project boundaries, but they do indicate overall trends for the study area.

<table>
<thead>
<tr>
<th>Year</th>
<th>Employees</th>
<th>Households</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>15,248</td>
<td>7,766</td>
<td>20,927</td>
</tr>
<tr>
<td>2023</td>
<td>21,185</td>
<td>10,289</td>
<td>28,078</td>
</tr>
</tbody>
</table>

Seven categories will be reviewed, using the following assumptions in mapping each feature:

**Land Use, including structures/improvements**

Land use is derived from aerial photographs taken in early 2001, the nearest year to the base line year of 2000. Aerial photography provides the most accurate sense of the existing level of development and availability of land for future development. The maps also show building footprints, using Jackson County data developed using the aerial photographs.
Comprehensive Plan and zoning designations

Comprehensive Plan and zoning designations reflect City of Medford and Jackson County maps. The maps show Comprehensive Plan designations. In nearly all cases, the plan and zoning designations coincide. The primary exception is in several White City properties where single-family zoning exists, yet the comprehensive plan calls for multi-family use. This circumstance is consistent with state law, because the comprehensive plan designation is more intensive than the zoning designation.

Road network, including functional classification

The road system includes arterials, collectors, and local streets, maintained by Oregon, Jackson County, or Medford. Crater Lake Highway is a state expressway and is part of the National Highway System (NHS). Biddle Road is also listed as an intermodal connector on the NHS system.

Arterial streets:

Crater Lake Highway, Table Rock Road, Biddle Road, East Vilas Road, Hwy. 140, Antelope Road, and parts of Crater Lake Avenue.

Collector streets:

Poplar Drive, Bullock Road, Delta Waters Road, Lear Way, Coker Butte Road, McLoughlin Drive, Corey Road, East Gregory Road, Avenue C, 7th Street, Pacific Avenue, and Avenue G.

All others are local streets.

Congestion

The map shows moderate, high, and extreme levels of congestion. Although several methods measure congestion, the method used in this study compares average daily one-way traffic to the capacity of roads. The transportation model provides traffic counts that are used to compute the number of hours when congestion is expected. Moderate congestion is from 5 to 7 hours per day, high congestion is from 7 to 10 hours, and extreme congestion is more than 10 hours.

Property access

Access is evident on the aerial photographs. Crater Lake Highway and Hwy. 140 are Statewide Highways with restricted access. Access to other roads and streets is gained through permits obtained from Medford and Jackson County.

Pedestrian and bicycle facilities, including deficiencies for safe and convenient travel between destinations

The maps show sidewalks, pedestrian ways, and bicycle facilities. Deficiencies exist primarily where connections are lacking or where traffic volumes are high on wide rights-of-way, creating barriers to efficient flow of pedestrians and bicyclists.
Transit system – routes and stops

RVTD routes and stops are mapped. Lines on the map show the routes, and bus symbols designate stops along the routes.

Because the volume of information is too great to portray easily on one map, two maps will be prepared to show existing conditions and two will show future conditions. For each period, one map will concentrate on land use, while the other will show plan designations and traffic issues.
SECTION 5
BASE CASE SCENARIO-FUTURE CONDITIONS

TECHNICAL MEMORANDUM

Future land use & transportation conditions; bicycle & pedestrian improvements; transit system changes
INTRODUCTION

The purpose of this memorandum is to describe the transportation and land use conditions that are forecast to occur in the Crater Lake Highway Study Area through the year 2023. Forecast conditions are based on planned development and roadway network changes scheduled in the 2001-2023 RVMPO Regional Transportation Plan (RTP). The results of computer modeling performed for the RTP have been used to identify future congestion levels predicted for the study area. Housing and employment forecasts are the result of the cooperative efforts of local, regional, and state agencies.

FUTURE LAND USE CONDITIONS

The Crater Lake Highway Study Area (“study area”) is comprised of a diversity of land uses as described in detail in Section 3, Project Subareas. In order to describe the “base case” or currently planned future land use scenario for the study area, information was drawn from the RTP. While not a land use planning document per se, the RTP contains the best available long-range land use and transportation planning forecast information for the study area. References in this memo to future conditions within the study area are based on assumptions contained in the RTP or on computer modeling performed for the RTP. It is important to note that the RTP does not include the completion of the proposed Hwy. 62 under the “base case” or assumed future-year scenario. This is due simply to the lack of funding for this project’s completion (estimated at $114 million in the RTP). In general, the current mix of commercial, industrial, agriculture and residential uses is planned to continue through the end of the RTP’s planning horizon year of 2023. Perhaps the most significant land use change forecast in the study area is the proposed Delta Waters Transit-Oriented Development (TOD). Figure 2 on page 79 illustrates the boundaries of the proposed TOD along with the proposed Hwy. 62. Although the details of this development have not been worked out, forecasts made in the RTP include significant growth in both housing and employment in this area. The proposed TOD offers the potential to link land
use and transportation in ways that will reduce reliance on the private auto and thereby minimize the transportation impact of this development.

Table 1, below, and Figure 1 (page 78) shows where the majority of housing and employment growth is forecast to occur in the study area between the years 2000 and 2023. Both the table and figure show numbered Transportation Analysis Zones (TAZs) used for computer modeling purposes, where either housing units or employment is forecast to increase by over 35 percent. Empty cells in the table indicate that growth in either housing or employment is forecast to be less than 35 percent.

**Table 1**

High-Growth Transportation Analysis Zones (TAZs)

<table>
<thead>
<tr>
<th>TAZ No.</th>
<th>UGB Agency</th>
<th>Housing Units</th>
<th>% Growth</th>
<th>Employees</th>
<th>% Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>2000</td>
<td>2023</td>
<td>2000</td>
<td>2023</td>
</tr>
<tr>
<td>109</td>
<td>Jackson Co.</td>
<td>49</td>
<td>67</td>
<td>36%</td>
<td></td>
</tr>
<tr>
<td>110</td>
<td>Jackson Co.</td>
<td>81</td>
<td>109</td>
<td>35%</td>
<td></td>
</tr>
<tr>
<td>120</td>
<td>Jackson Co.</td>
<td>134</td>
<td>187</td>
<td>39%</td>
<td></td>
</tr>
<tr>
<td>121</td>
<td>Jackson Co.</td>
<td>88</td>
<td>121</td>
<td>37%</td>
<td></td>
</tr>
<tr>
<td>123</td>
<td>Jackson Co.</td>
<td>207</td>
<td>308</td>
<td>49%</td>
<td></td>
</tr>
<tr>
<td>130</td>
<td>Jackson Co.</td>
<td>37</td>
<td>53</td>
<td>43%</td>
<td></td>
</tr>
<tr>
<td>131</td>
<td>Jackson Co.</td>
<td>1</td>
<td>80</td>
<td>7500%</td>
<td></td>
</tr>
<tr>
<td>200</td>
<td>Medford</td>
<td>412</td>
<td>717</td>
<td>74%</td>
<td></td>
</tr>
<tr>
<td>201</td>
<td>Medford</td>
<td>244</td>
<td>354</td>
<td>45%</td>
<td></td>
</tr>
<tr>
<td>202</td>
<td>Medford</td>
<td>141</td>
<td>219</td>
<td>56%</td>
<td></td>
</tr>
<tr>
<td>203</td>
<td>Medford</td>
<td>355</td>
<td>527</td>
<td>48%</td>
<td></td>
</tr>
<tr>
<td>204</td>
<td>Medford</td>
<td>345</td>
<td>478</td>
<td>38%</td>
<td></td>
</tr>
<tr>
<td>206</td>
<td>Medford</td>
<td>462</td>
<td>764</td>
<td>66%</td>
<td></td>
</tr>
<tr>
<td>207</td>
<td>Medford</td>
<td>820</td>
<td>1525</td>
<td>86%</td>
<td></td>
</tr>
<tr>
<td>208</td>
<td>Medford</td>
<td>250</td>
<td>528</td>
<td>111%</td>
<td>144</td>
</tr>
<tr>
<td>209</td>
<td>Medford</td>
<td>661</td>
<td>1088</td>
<td>65%</td>
<td>270</td>
</tr>
<tr>
<td>219</td>
<td>Medford</td>
<td>57</td>
<td>83</td>
<td>46%</td>
<td></td>
</tr>
<tr>
<td>220</td>
<td>Medford</td>
<td>32</td>
<td>76</td>
<td>137%</td>
<td></td>
</tr>
<tr>
<td>226</td>
<td>Medford</td>
<td>2</td>
<td>37</td>
<td>1650%</td>
<td></td>
</tr>
<tr>
<td>227</td>
<td>Medford</td>
<td>67</td>
<td>224</td>
<td>233%</td>
<td></td>
</tr>
<tr>
<td>229</td>
<td>Medford</td>
<td>152</td>
<td>417</td>
<td>174%</td>
<td></td>
</tr>
<tr>
<td>237</td>
<td>Medford</td>
<td>198</td>
<td>331</td>
<td>67%</td>
<td></td>
</tr>
<tr>
<td>238</td>
<td>Medford</td>
<td>174</td>
<td>237</td>
<td>37%</td>
<td></td>
</tr>
<tr>
<td>239</td>
<td>Medford</td>
<td>89</td>
<td>122</td>
<td>36%</td>
<td></td>
</tr>
<tr>
<td>605</td>
<td>Jackson Co.</td>
<td>1000</td>
<td>1620</td>
<td>62%</td>
<td>54</td>
</tr>
<tr>
<td>606</td>
<td>Jackson Co.</td>
<td>200</td>
<td>274</td>
<td>37%</td>
<td>563</td>
</tr>
</tbody>
</table>
High Growth Transportation Analysis Zones

Figure 1

Crater Lake Highway Study
High Growth Transportation Analysis Zones

Legend
- Outside Study Area Boundary
- Street System
- Transportation Analysis Zones

Scale in Mils
0.5
0.5

Information displayed on this map was derived from multiple sources. Our maps are only for graphic display and general planning purposes. This is not a survey product. Rogue Valley Council of Governments cannot accept responsibility for any errors. We do not guarantee the accuracy or the completeness of the contents of this map. Therefore, there are no warranties for this product. Notification of errors would be appreciated.
FUTURE TRANSPORTATION CONDITIONS

Although planned land uses for the study area are not expected to result in “dramatic” changes over present conditions, traffic is nevertheless expected to significantly increase throughout the planning period. Several locations within the study area are forecast to experience “extreme” congestion by the year 2023. Indeed, this is a major factor behind the effort to construct a “new” Hwy. 62.

As with the future land use conditions described above, transportation conditions have been forecast using information developed for the 2001-2023 RTP. Primary among these information sources is the EMME/2 travel demand model used by RVCOG to predict traffic volumes throughout the Rogue Valley Metropolitan Planning Area through the year 2023. This computer model uses the “best practice” travel forecasting methods to estimate traffic volumes on collector and arterial streets, thereby allowing sketch-level estimates of future congestion.

Table 2, below, shows forecast traffic growth for selected street segments within the study area. Traffic growth is expressed in “average daily traffic” (ADT), representing computer modeled one-way traffic volumes for the years 2000 (current) and 2023 (future). The selected segments represent locations within the study area where traffic congestion is anticipated to be of greatest concern.

<table>
<thead>
<tr>
<th>Street</th>
<th>Segment</th>
<th>Modeled Average Daily Traffic (ADT)¹</th>
<th>Traffic Growth 2000-2023</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Year 2000</td>
<td>Year 2023</td>
</tr>
<tr>
<td>Agate Rd</td>
<td>Hwy 62 to Ave. G</td>
<td>4,900</td>
<td>7,400</td>
</tr>
<tr>
<td>Antelope Rd</td>
<td>West of Agate</td>
<td>5,000</td>
<td>7,000</td>
</tr>
<tr>
<td>Antelope Rd</td>
<td>East of Hwy 62</td>
<td>4,500</td>
<td>6,600</td>
</tr>
<tr>
<td>Avenue G</td>
<td>East of Agate</td>
<td>3,500</td>
<td>4,600</td>
</tr>
<tr>
<td>Biddle Rd</td>
<td>@ Hwy 62</td>
<td>7,300</td>
<td>10,200</td>
</tr>
<tr>
<td>Crater Lake Ave</td>
<td>Temple to Cardinal</td>
<td>7,000</td>
<td>10,600</td>
</tr>
<tr>
<td>Delta Waters Rd</td>
<td>East of Hwy 62</td>
<td>6,300</td>
<td>9,600</td>
</tr>
<tr>
<td>Highway 62</td>
<td>West of NB I-5 Off-Ramp</td>
<td>23,500</td>
<td>30,000</td>
</tr>
<tr>
<td>Highway 62</td>
<td>NB I-5 Off-Ramp to Delta Waters</td>
<td>23,800</td>
<td>27,200</td>
</tr>
<tr>
<td>Highway 62</td>
<td>Delta Waters to Cardinal</td>
<td>14,100</td>
<td>17,500</td>
</tr>
<tr>
<td>Highway 62</td>
<td>Cardinal to Hwy 140</td>
<td>19,500</td>
<td>24,500</td>
</tr>
<tr>
<td>Highway 62</td>
<td>Hwy 140 to White City</td>
<td>11,800</td>
<td>18,000</td>
</tr>
<tr>
<td>Poplar Dr</td>
<td>South of Hwy 62</td>
<td>6,400</td>
<td>8,900</td>
</tr>
</tbody>
</table>

¹ - “Modeled” ADT is derived from the RVCOG travel demand model and may differ somewhat from actual counts performed in these locations. Figures shown are intended primarily for comparison purposes.
Table 3 shows forecast congestion levels along selected segments within the study area. Figures shown under the “Congested Hours” column, in general, represent the number of hours per day that a given street segment would be operating at or near capacity. Congestion levels are expressed in terms of “high,” “moderate,” and “low,” varying according to the number of congested hours.

**Table 3**

**Year 2023 Forecast Congestion Levels**

<table>
<thead>
<tr>
<th>Street</th>
<th>Segment</th>
<th>Congested Hours</th>
<th>Congestion Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agate Rd</td>
<td>Hwy 62 to Ave. G</td>
<td>7.4 - 9.6</td>
<td>High</td>
</tr>
<tr>
<td>Antelope Rd</td>
<td>West of Agate</td>
<td>8.4 – 8.7</td>
<td>High</td>
</tr>
<tr>
<td>Antelope Rd</td>
<td>East of Hwy 62</td>
<td>8.4 – 8.6</td>
<td>High</td>
</tr>
<tr>
<td>Avenue G</td>
<td>East of Agate</td>
<td>6.2 – 6.4</td>
<td>Moderate</td>
</tr>
<tr>
<td>Biddle Rd</td>
<td>South of Hwy 62</td>
<td>4.6 – 6.5</td>
<td>Moderate</td>
</tr>
<tr>
<td>Crater Lake Ave</td>
<td>Temple to Cardinal</td>
<td>4.0 – 6.7</td>
<td>Moderate</td>
</tr>
<tr>
<td>Delta Waters Rd</td>
<td>East of Hwy 62</td>
<td>6.2 – 6.9</td>
<td>Moderate</td>
</tr>
<tr>
<td>Highway 62</td>
<td>West of NB I-5 Off-Ramp</td>
<td>7.6 – 9.2</td>
<td>High</td>
</tr>
<tr>
<td>Highway 62</td>
<td>NB I-5 Off-Ramp to Delta Waters</td>
<td>10.4 – 16.1</td>
<td>Extreme</td>
</tr>
<tr>
<td>Highway 62</td>
<td>Delta Waters to Cardinal</td>
<td>8.5 – 9.7</td>
<td>High</td>
</tr>
<tr>
<td>Highway 62</td>
<td>Cardinal to Hwy 140</td>
<td>10.9 – 13.8</td>
<td>Extreme</td>
</tr>
<tr>
<td>Highway 62</td>
<td>Hwy 140 to White City</td>
<td>7.2 – 9.9</td>
<td>High</td>
</tr>
<tr>
<td>Poplar Dr</td>
<td>South of Hwy 62</td>
<td>5.0 – 10.7</td>
<td>Moderate - Extreme</td>
</tr>
</tbody>
</table>

Figure 3 on page 82 shows locations within the study area where congestion is forecast to reach “extreme” levels by 2023. Not surprisingly, these locations extend almost entirely throughout the current Hwy. 62 corridor in the study area. Figure 3 also shows where congestion is likely to be a concern, although not at levels considered extreme. These areas are contained within circles on the map.
Crater Lake Highway Study

Year 2023 Congested Areas

Figure 3

LEGEND

- Area of Concern
- Area of Extreme Congestion
- Outside Study Area Boundary
- Street System

Scale in Miles

Crater Lake Transportation and Land Use Study
Section 5
BICYCLE AND PEDESTRIAN IMPROVEMENTS

Bicycle system improvements in the study area are planned along Table Rock Road in the western part of the study area and also along collector and arterial streets in the northern portion of the study areas.

TRANSIT SYSTEM – FUTURE CHANGES

No changes to the current routing or scheduling of buses in the study area have been forecast in the Regional Transportation Plan through the year 2023.
SECTION 6
LAND USE & TRANSPORTATION
ASSUMPTIONS

TECHNICAL MEMORANDUM

Identification of issues & goals
to guide planning workshop
INTRODUCTION

The purpose of this memorandum is to establish a set of land use and transportation assumptions that will guide a public planning workshop for the Crater Lake Highway Integrated Land use and Transportation project. The objective of the study is to protect the long-term function of a future expressway currently planned to the west of the existing Hwy. 62. Access management, local street connectivity, and facilities for pedestrians and bicyclists will be addressed for an area stretching from Poplar Drive nearly to White City. This document is intended to provide guidance for a public workshop where participants will attempt to achieve consensus on conceptual land use and local street plans for each of four subareas.

A list of assumptions was developed prior to a Land Use Design Workshop conducted on August 21 and 22, 2000. The workshop was part of the OR62 Corridor Solutions Project, which led to selection of a preferred route for the expressway. The workshop was designed to identify land use concepts that might evolve over the ensuing 30 years, to quantify future travel demand within the corridor, and to ensure that the expressway corridor does not become obsolete. While the findings of the workshop have not been incorporated into the expressway Environmental Impact Statement, many of the assumptions are consistent with the opportunities and constraints pertinent to this phase of the project.

The assumptions embody opportunities and constraints that will serve as a foundation for developing land use and transportation scenarios for each of the four project subareas. Each subarea relates to the proposed expressway extending from near the Crater Lake Highway/Interstate 5 interchange north to where it reenters the existing Crater Lake Highway near Corey Road. Areas surrounding the expressway interchanges with Hwy. 62 represent the north and south subareas. Another subarea includes the expressway interchange at Vilas Road, extending eastward to the present intersection of Vilas Road and Hwy. 62. This interchange is unique among the three proposed interchanges because it connects with a road that does not have the access restrictions found on Crater Lake Highway. The fourth subarea is the Foreign Trade...
Zone, located between the Rogue Valley International-Medford Airport and Lear Way. The Foreign Trade Zone will be a major feeder to the transportation system.

Primary Project Goal: TO PROTECT THE FUNCTION OF THE PROPOSED EXPRESSWAY FOR STATEWIDE AND THROUGH TRAFFIC BY BETTER BALANCING LAND USE AND TRANSPORTATION PLANNING

To achieve this overarching aim, assumptions will center on four issues:

- Land Use (densities, design, jobs/housing balance, marketability)
- Transportation (mobility and accessibility, system capacity, financial constraints)
- Economic development
- Environmental conditions

LAND USE (DENSITIES, DESIGN, JOBS/HOUSING BALANCE, MARKETABILITY)

1. Trip based land use plan/zoning

   Also known as trip allocation ordinances, this concept assures that existing or planned highway capacity is fairly distributed to properties along a highway, permitting a match of available capacity and planned land uses. Unless this concept is implemented, the expressway will serve as a magnet for traffic-generating uses that cumulatively will exceed the facility’s capacity. Consistent with Action 1B.2 of the Oregon Highway Plan and Policy 12-3 of the RVMPO Regional Transportation Plan, refine permitted and conditional uses to reflect the effects of various uses on traffic generation, preserving the capacity of the expressway.

   Planning and zoning needs to reinforce the primary function of any new facility for through movement of vehicles. Access to the proposed expressway itself is severely restricted; access to surrounding facilities is effectively managed and balanced with allowed land uses. Application of the concept requires revision of the list of permitted uses in development codes. (See additional discussion of trip allocation in Appendix E.)

2. Land Use Concepts
   a. Create/retain discrete boundary between Medford and White City
      i. Retain existing open space/agricultural lands in vicinity of Whetstone Creek and along Hybrid corridor
      ii. Provide buffer between Medford and White City
      iii. Retain distinctive natural or man-made features
         - White Oak grove south of Vilas and west of existing highway
         - Old Medco log pond
   b. Design mixed-use nodes. The mixed use concept emphasizes a diversity of housing densities, a pedestrian-oriented environment, location within walking distance of transit, and a mix of retail, office, community service uses.
      Potential areas for mixed-use nodes include:
      i. Coker Butte/Crater Lake Avenue area
ii. Vilas Road/ Crater Lake Highway intersection  
iii. North of Vilas Road, near Peace and Justice Lanes  
c. Plan for compact growth, providing increased residential densities, shared parking in commercial areas, increased floor area ratios, and other measures to decrease sprawl.  
d. Freight industry and freight dependent uses will continue and Foreign Trade Zone will be a hub. Because plans do not directly connect the Foreign Trade Zone to the expressway, access to the surface transportation system is critical.  
e. The area north of Vilas Road between Crater Lake Highway and Table Rock Road has been identified in the Regional Problem Solving project as an area that will absorb growth in the next 50 years if present growth rates continue. Because of its lower agricultural suitability, it is more suited to growth than other undeveloped land around Medford and Central Point. It is not intensively developed now, affording opportunities to design compact mixed use neighborhoods in proximity to employment centers.  
f. Transportation facilities will vary based on intended land use. Pedestrian facilities and local street connections will have less emphasis in the Foreign Trade Zone.  

3. Modify commercial zoning around north interchange to refine permitted uses and design standards for the area west of Poplar/Bullock and north of Morrow Road.  
a. Emphasis on traveling public  
   i. Motel/restaurant complexes, but fast food and sit-down restaurants, truck stops, and drive-through uses would be excluded.  
   ii. Auto fueling (including mini-marts)  
   iii. Retail (low trip generators)  

4. Modify industrial district within the Hwy. 62 Corridor.  
a. Permit light industrial uses, subject to design standards  
b. Limit commercial uses to those supporting industrial uses*  
c. Restructure Medford’s PUD regulation to limit non-industrial uses in this area.*  
*Exclusions are necessary to avoid more intensive uses (high trip generators)  

TRANSPORTATION (MOBILITY AND ACCESSIBILITY, SYSTEM CAPACITY, FINANCIAL CONSTRAINTS)  

1. Access management for local arterial streets intersecting Hwy. 62. Access management controls the flow of traffic between roads and surrounding land, emphasizing community street networks and master planning for large tracts of land.  
a. Consolidation of driveways when redevelopment occurs and internal circulation is planned. Interconnectivity of existing accesses would be required upon redevelopment.  

2. The existing highway will be restructured as a regional boulevard over time, with design standards intended to increase transit and pedestrian/bicyclist amenities and orient
buildings to the street. The boulevard will also serve as a primary freight route. Appropriate land uses and site design to accomplish the function of the street will be emphasized.

3. Access for area west of expressway will feed to Vilas Road.

4. Coker Butte Road will serve as primary access to area between expressway and Hwy. 62.

5. Access to expressway will be permitted only at interchanges.

6. Expressway overpasses or underpasses will be required to promote east/west circulation.

7. Protect airport approaches from incompatible land uses
   a. Control height in transition surfaces
   b. Limit noise sensitive uses.

ENVIRONMENTAL

1. National Wetlands Inventory sites can be developed only when approved by the Division of State Lands.

2. Vernal pools maps include three main categories:
   a. Develop. Pools exist, but development can occur subject to Division of State Lands (DSL) approval of removal/fill permits. Mitigation will likely be necessary.
   b. Conserve. Development will be severely constrained. Wetlands need to be protected in their present configuration.
   c. Protect. Vernal pools on public land. Private development is not possible, and public agencies practices are restricted, even in wildlife preserves.

3. ODF&W sites will remain publicly owned open space.

ECONOMIC DEVELOPMENT

Economic development in the corridor will be considered in its regional context. Downtown Medford will continue as the office and retail center, and White City will be the manufacturing center, but existing zoning anticipates additional retail, wholesale, warehousing, and light industrial in the corridor.

1. Adjustments to commercial and industrial zoning standards are required to ensure that uses along the corridor complement rather than compete with uses in central Medford.

2. Vilas Road will attract additional light industrial businesses similar to the existing industrial park.

3. Medford is designated as an E-commerce enterprise zone, permitting qualifying business firms to receive an income tax or corporate excise tax credit, up to $2 million. The credit
itself equals 25 percent of that tax year’s capitalized investment in operations related to E-commerce.

4. The Foreign Trade Zone will play a major role in the region’s economy. Efficient access to this area, including an unimpeded route to the expressway, is imperative for the potential to be fully realized.

5. Vilas Road will continue as a major east/west connection, and will experience rising property values.

6. The Vilas Road interchange will be a development magnet unless constraints are imposed. Its role in providing access to the Foreign Trade Zone must be preserved.

7. Value is added in the corridor when public investments are innovatively planned in strategic locations.
Base Case with Comp Plan, TOD, Congestion, and Street Class (2023)
Base Case with Zoning, Traffic, Street Class, and Aerial Photography (2002)
Base Case with Bicycle, Pedestrian, and Transit Facilities (2002)
Environmental Conditions
Taxlot Value per Acre

Crater Lake Transportation and Land Use Study
Section 6

94
SECTION 7
DESIGN WORKSHOP

Workshop process;
subarea themes,
issues & ideas
DESIGN WORKSHOP PROCESS

A. Introduction

Participants will receive an information packet prior to the workshop that will include a description of the event, project background, directions to the venue, agenda, and project team information. Information packets will be available at the workshop for walk-in participants. At the beginning of the workshop, participants will be welcomed and provided a general sense of the goals and objectives for the workshop. A facilitator will go over the agenda for the day and answer questions.

B. Design Workshop Objectives

A facilitator will present the workshop objectives to the participants.

“To identify, discuss and refine concepts and ideas that will form the basis of recommendations for balanced land use and transportation planning for the Crater Lake Highway Corridor.”

Here are some specific objectives:

1. To identify opportunities and constraints for future development within the corridor
2. Form workgroups to identify and develop land use and transportation scenarios for each of the project focus areas
3. To identify land use and transportation concepts that will protect the function and integrity of a proposed new expressway
4. To identify design concepts for a regional boulevard within the corridor
5. To identify proposed policies that the City of Medford and Jackson County could adopt that would implement proposed recommendations from the study.
6. To form groups and work together to develop land use and transportation plans for each of the subareas.

General Workshop Format

A facilitator will briefly explain the general format for the workshop:

- Teams will be asked to graphically depict conceptual solutions on a base map and to list policy solutions
Members of other teams will review and discuss each team's set of ideas and solutions.

**Workshop Outcomes**

A facilitator will briefly explain the expected outcomes of the workshop:

- Sketch level land use and transportation plans
- Concept plans that will be refined by the project team, reviewed by the TAC and CAC and forwarded to the city of Medford and Jackson County for consideration in their respective comprehensive plans and transportation system plans.

**C. Description of Group Process / Ground Rules**

After the introduction and orientation to the goals and objectives of the workshop, work groups of 6-10 participants will be formed. Each group will have a facilitator who is familiar with the study. The facilitator will be responsible for making sure that all group members are able to participate in the discussions, and that the group completes work assignments. The facilitator will draw group ideas on a subarea map. Each group will designate one member to serve as a reporter to take notes on group ideas and present group findings to the entire workshop in the afternoon plenary session.

Facilitators will work throughout the group work portion of the workshop to:

- Answer questions and clear up misconceptions
- Make sure all voices are heard
- Give direction
- Ensure that participants are aware of the time remaining

**Participant Roles and Responsibilities**

- **Workshop Participants**: To share their insights and perspectives on community development. It is important for the success of the workshop for participants to share their opinions and respect the opinions of others.
- **Technical Advisory Committee**: To provide technical support to workshop participants, synthesize and summarize (as appropriate) the results of the workshop and to present the results to the City of Medford and Jackson County
- **Citizen Advisory Committee**: Provides input to the Technical Advisory Committee and serves as a communication link between constituencies.
D. Presentation of the Assumptions or “Opportunities and Constraints” to Achieve Workshop Goals

This is where participants are asked to “think inside the box” (as opposed to “outside the box”) and the parameters or the identified opportunities and constraints are presented. The challenge to the participants is that this creates boundaries that describe what factors about a proposed idea or concept will or will not work. The parameters will center on four issues:

- Land Use (densities, design, jobs/housing balance, marketability) e.g., trip based zoning, open space/buffers, mixed-use nodes, FTZ, RPS
- Transportation (mobility and accessibility, system capacity, financial constraints) e.g., multi-modal options, access management, airport approaches, bus rapid transit (BRT), transit, regional boulevard concept
- Economic development; e.g., FTZ, industrial areas, regional commercial
- Environmental conditions; e.g., wetlands, vernal pools,

E. Workshop Process

The Morning Session

Participants will break into small groups around a set of five tables, each focusing on a particular area of interest. After one and a half hours, participants will move to a different table. Assignments to tables will be made before the meeting, by asking participants for their preferences.

The areas are:
1. The Regional Boulevard Concept
2. The Foreign Trade Zone
3. The Southern Terminus Area
4. Vilas Road/Interchange
5. Northern Terminus

Each interest area table will be supplied with a set of resource materials pertinent to the area. Each table’s facilitator will be adequately briefed on the area and capable of responding to related questions. At least two people familiar with all aspects of the project will fulfill a ‘roaming’ facilitator role, to ensure that all questions are answered.

Each interest area will be supplied with a pertinent set of “givens” for that area. This will consist of basic information, as well as features that restrict or shape work in the area (for example, the need to avoid impacts on vernal pools).

The work at each interest area will be identified by a set of planning concerns/questions for consideration by participants. At the outset, the table facilitator will review both the givens and the questions with participants. Participants will be asked to generate ideas and discuss them with each other, while the facilitator draws the idea on the map. Apart from working on these
specific questions, participants will also document concerns, issues, and ideas of specific interest to them. At the end of the first session, work products will be grouped and put aside; a second set of fresh maps and materials will be readied for the next set of people to work on that interest area.

By the end of the morning, there will be two sets of work products for each interest area.

**Lunch Service**

*A simple lunch will be provided. Participants will be given a few minutes to gather their lunches and the Plenary Session will begin as they eat.*

**Afternoon Plenary Session**

This session is dedicated to sharing the work products from the morning session. The process will be to hear from of the two reporters from the first subarea table. These two reports will be followed by brief questions and comments from the larger group. Each subarea table will report in this fashion. A total of 10 reports on 5 interest areas will be given.

After all groups have reported, the facilitator will take questions and comments from the entire group.

**F. Closing Comments**

The facilitator will explain how participants’ ideas and work will be used in the project and how participants can stay involved in the process.

**OUTLINE FOR DESIGN WORKSHOP**

8:30 a.m. Welcome
Overview of the issues and the study; who has been involved; workshop process

9 - 10:30 a.m. First working group facilitated session
Groups of up to about 10 people addressing an area of interest

- South Terminus
- Foreign Trade Zone
- Vilas-interchange area
- North Terminus
- Regional Boulevard Concepts

10:45 a.m. - 12:15 p.m. Second working group facilitated session
Participants move to second area of interest
12:30 p.m.  Group presentations. Reconvene participants for catered lunch, and presentations from each group (at least 10 groups total)

2:30 p.m.  Adjourn/close

---

**Workshop Preparation**

All participants are to RSVP, naming their three top areas of interest for the working group sessions. Staff will try to assign participants their first two choices. (Additional groups will convene as needed to accommodate numbers.)

Group task: With the help of a knowledgeable facilitator:
- Develop conceptual land use plan
- Develop streetscape design scenarios
- Develop local street circulation plans (cars, freight, transit, bike/ped)

Materials:
- Large-scale area maps
- Pertinent background from study technical memoranda.
- Materials for completing tasks
- Three lists of issues/questions to be addressed in area plans
  - Issues they must address/answer in the conceptual plan
  - Issues the may address and/or issues that might help the design process
  - Group issues (from group discussion, and individual participant's concerns)
DESIGN WORKSHOP THEMES

Crater Lake Highway Transportation and Land Use Study
Design Workshop
February 1, 2003

Common Themes

Presumption that expressway will be built in approximately the location shown on maps

Transit centers

Mixed use areas

Pedestrian oriented main streets

Employment centers

North Terminus

Issues:

Facilitate the flow of traffic among the roads east of the expressway.

Prevent the northern terminus area from becoming congested, using zoning, local street networks, shared accesses and frontage or backage roads to maintain smooth traffic flows.

Preserve the separate identity of Medford and White City.

Growth decisions are influenced by wetlands, vernal pools, and nature preserves.

Ideas:

Contrary to the current design, have an intersection that joins Corey and Agate and East Gregory, allowing for east/west travel

Extend Domino Road all the way south to Springbrook to provide for north/south connectivity.

Develop a new road, going from Hwy 140, through Leigh Way, south of the Denman refuge, and the vernal pools, going all the way to Seven Oaks Interchange. This will create reserves of vernal pools. The new road will be dependent upon the vernal pools and the pools upon the road.

Extend McLoughlin Drive south to Medford and north to 24th Street in White City, to provide north/south connectivity.

Have Crater Lake Avenue extend north and continue as a frontage road for the expressway, allowing access to local businesses, so they don’t have to use Hwy 62.
Create a cloverleaf to allow travel from Hwy. 140 onto the expressway, along this realignment.

Buffer between Medford and White City to create a visual separation. Consider using circulation, zoning, natural or man-made features as tools.

Lock in and preserve the existing open space, agricultural and wetlands areas.

Vilas Road Interchange

**Issues:**

Preserving free flow of traffic on the expressway

Access near the interchange

Alternate local street network for uses north of Vilas Road.

Land uses near interchange

**Ideas:**

Vilas Road Intersection. Frontage or backage roads for business access.

Numerous suggestions for local access connections as alternatives to use of Vilas near expressway intersection.

Extend Lear Way to Justice

Rezone the north side of Vilas and west side of expressway to Industrial from Residential.

Create frontage roads each side north and south of Vilas with connection points between Runway Drive and Airway Drive – Industry Drive.

Create an east/west under/over crossing of expressway north of Vilas Road.

Consider height and floor space restrictions and limit traffic generators such as fast food and banks.

Low trip generators for access management plan

No zone changes recommended – maintain lower traffic patterns.

**Foreign Trade Zone**

**Issues:**

Truck circulation throughout the area, using the FTZ as a hub

Need to preserve the role of Vilas Road in providing access to FTZ
Freight routes to Interstate 5

Reduce potential conflicts with non-freight uses.

Determine appropriate zoning requirements; e.g. amount of commercial in Industrial zones.

**Ideas:**

Provide southbound-only on-ramp to expressway, allowing easy access from FTZ so haulers don’t have to go north to Vilas to reach I-5.

Underpass at Commerce for east/west connection in the middle of the area.

Provide southern access from FTZ to Bullock.

Reduce conflicts with non-freight uses by keeping the number of connections to the boulevard to a minimum.

Keep area industrial, but take “smokestack” or heavy industry out of the area, move up to White City (Could be a problem because of air quality restrictions in White City)

Limit commercial development in Industrial to limit conflict with traffic – don’t invite commercial traffic into industrial zone, but provide for commercial needs of those working in the industrial zone.

Some discussion of effect of commercial development on downtown. Do we care or do we let the market decide?

Connect service activities for pedestrian traffic. This traffic is already being generated between the health club and surrounding uses.

“Enforced” mixed use. Use overlay tool to promote enforcement and connectivity of projects.

**South Terminus**

**Issues:**

Propose routes by which expressway travelers may access commercial areas and residential neighborhoods.

Preserve and enhance neighborhoods

Areas where land-use changes could be beneficial.

Commercial uses in industrial zones.

**Ideas:**

Establish Morrow and Poplar as route from interchange to Fred Meyer area (by way of Biddle).
Expressway off-ramp, right-turn-only to Whittle Ave.

Maintain Poplar-Bullock through connection.

Connect Lear Way to Bullock with tunnel under expressway and airport

Efforts must be taken to keep existing commercial area around Fred Meyer and Poplar Center viable. Stores can’t be cut off from traffic.

BRT buy right of way now, make sure expressway can accommodate BRT line even if one can’t be built immediately.

Create a park on vacant land west of Whittle Ave. Park features: consider low water use improvements (natural areas, experimental gardens, community gardens, perhaps reserve area force school or training facility if airport flight rules permit.

Pedestrian-scale lighting; complete missing sidewalks, bike/ped connections; pave alleys. Make sure there is adequate buffering between different uses.

Extend existing commercial area west of Costco area to expressway.

Mixed use area, building on what is already there so that people can live, work and shop within a small geographical area.

Preserve economic potential of airport.
Workshop Ideas

Crater Lake Transportation and Land Use Study
Section 8
**Regional Boulevard**

The regional boulevard groups concentrated on designing representative cross sections for three portions of the boulevard. Moving from south to north, the cross sections include the entrance to the boulevard, an area near the TOD site, and an area north of the TOD site. The designs included enhanced landscaping, a Bus Rapid Transit (BRT), and various lane arrangements reflecting differing right-of-way widths.
Regional Boulevard Study: Workshop Study #3

Crater Lake Highway - Regional Boulevard Study - February 1, 2003 Design Workshop
200' Right-of-Way with Bus Rapid Transit on East Side - Workshop Study #3

Regional Boulevard Cross Section
200' Right-of-Way

Crater Lake Highway
Coordinated Land Use & Transportation Study

Regional Boulevard Study: Workshop Study #4

Crater Lake Highway - Regional Boulevard Study - February 1, 2003 Design Workshop
200' Right-of-Way with Center Bus Rapid Transit Corridor - Workshop Study #4

Regional Boulevard Cross Section
200' Right-of-Way

Crater Lake Highway
Coordinated Land Use & Transportation Study
Regional Boulevard Study: Workshop Study #7

Crater Lake Highway - Regional Boulevard Study - February 1, 2003 Design Workshop
134' Right-of-Way without Bus Rapid Transit - Workshop Study #7

Regional Boulevard Study: Workshop Study #8

Crater Lake Highway - Regional Boulevard Study - February 1, 2003 Design Workshop
168' Right-of-Way with BRT on East Side - Workshop Study #8
Regional Boulevard Study: Workshop Study #9

Crater Lake Highway - Regional Boulevard Study - February 1, 2003 Design Workshop 148' Right-of-Way with Bus Rapid Transit on East Side - Workshop Study #9

Regional Boulevard Cross Section 148' Right-of-Way

Crater Lake Highway Coordinated Land Use & Transportation Study

Regional Boulevard Study: Workshop Study #10

Crater Lake Highway - Regional Boulevard Study - February 1, 2003 Design Workshop Pedestrian Underpass and Bus Rapid Transit Corridors Both Sides - Workshop Study #10

Regional Boulevard Cross Section 206' Right-of-Way

Crater Lake Highway Coordinated Land Use & Transportation Study
Regional Boulevard Study: Workshop Study #11
SECTION 8
WORKSHOP RESULTS & EVALUATIONS

TECHNICAL MEMORANDUM

Compilation of ideas generated in design workshop; discussion of evaluation criteria; evaluation of workshop ideas
The purpose of this memo is to give an overview of the workshop, describe the methodology for evaluating the scenarios developed for each subarea, and to present the results of the evaluation.

**WORKSHOP ORGANIZATION**

The Rogue Valley Council of Governments organized and conducted a daylong design workshop for the public on Feb. 1, 2003, at the Jackson County Public Works Auditorium. Forty-nine people signed in to participate in group discussions.

The purpose of the workshop was to engage the public in developing conceptual land use, streetscape designs, and local street circulation plans for the subareas that were defined earlier in the study. Groups reviewed five area affected by the potential expressway. Three sites cover the interchanges at the north and south ends of the expressway, and the Vilas Road interchange. The specific subareas were: South Terminus, Foreign Trade Zone, Vilas Road, North Terminus, and the Boulevard Concept. Work areas were set up for each subarea. Each area had large-scale maps, a set of predetermined tasks and context information, and a facilitator to moderate discussion and record ideas on map overlays. One participant in each group volunteered to take notes.

In advance of the workshop, participants were assigned to two discussion groups. Each discussion group consisted of about 10 people. Groups had one and a half (1½) hours to address the subarea tasks. For the second group session, participants moved to their second assigned area and repeated the process. Results of the first session were not presented at the second session.

Participants then reconvened for a catered lunch and group presentations. Reporters from each group (10 total) gave brief presentations of the group’s findings, using their group’s map transparency for reference. The workshop closed with a short question-and-answer period.
The workshop format produced two designs for each area. The fundamental findings of the two groups were similar in each study area, with most of the differences found in the details. To some extent, this can be attributed to the nature of the tasks and context statements.

**SUBAREA CONCEPT EVALUATIONS**

The concepts derived from the workshop were evaluated using the criteria from Chapter 4 of the Regional Transportation Plan to help in developing a set of recommendations for each subarea. The evaluation criteria can be used as a tool to guide the recommendations toward land use and transportation changes that are consistent with the Regional Transportation Plan (RTP) and emphasize: 1) compact, pedestrian-friendly development patterns; 2) protection of future expressway capacity and access management; 3) local street system connectivity; and 4) accessibility to alternative modes of transportation. The evaluations for each of the subareas are described below. Results are rated as positive, negative, or neutral. A subarea concept map is included on the last page of the document.

**NORTH TERMINUS**

The North Terminus groups identified the following issues associated with the subarea:

- Facilitate the flow of traffic among the roads east of the expressway
- Prevent the northern terminus from becoming congested, using zoning, local street networks, shared accesses, and frontage or backage roads to maintain smooth traffic flows.
- Preserve the separate identities of Medford and White City
- Growth decisions are influenced by wetlands, vernal pools, and nature preserves.

Each North Terminus Group addressed the following tasks in the development of subarea concepts:

1. What changes in local street networks could be made to facilitate the flow of traffic among the roads east of the expressway? What changes would also facilitate their travel north and south?
2. What changes can you suggest to prevent the northern terminus area from becoming congested? Consider using zoning, local street networks, shared accesses and frontage or backage roads to maintain smooth traffic flows.
3. Looking at the southbound off ramp and the quarter mile marker, what ideas can you suggest for this area, with respect to uses, access and viability?
4. What can you suggest as a buffer between Medford and White City to create a visual separation? Consider using circulation, zoning, natural or man-made features as tools.
Additional recommendations:

- Review and possible revision of existing plans for local street connectivity based on suggestions and needs expressed in workshop.
- Possible alternatives for vernal pools protection through creation of shared, limited access transportation/vernal pool reserve areas.
- Revisit open space preservation policies for the establishing of buffer areas for visual separation.
- Lock in and preserve the existing open space, agricultural and wetlands areas.
- Redraw the open space zone boundary on the east (which includes Hoover Ponds) to encompass the long, linear wetland that goes into the residential and commercial zoning to the west.
- Continue this zoning across the triangle formed by Agate Road and current Hwy. 62, over to the current Open Space zone that contains Denman wildlife refuge.
<table>
<thead>
<tr>
<th>Design Workshop Suggestions</th>
<th>North Terminus RTP Evaluation Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>North Terminus</strong></td>
<td></td>
</tr>
<tr>
<td>1. Combine Crater Lake Ave. and Crater Lake Highway rights-of-way up to the point of merge with the new expressway. This will allow for adequate north/south travel lanes.</td>
<td>Reduce Reliance on Single-Occupant Vehicle</td>
</tr>
<tr>
<td></td>
<td>Consider the Impact on Residents and Local Businesses</td>
</tr>
<tr>
<td></td>
<td>Improve Efficiency of Existing Infrastruc.</td>
</tr>
<tr>
<td>2. To prevent congestion, have a free flow intersection at the intersection of Hwy 140 and the northern terminus of the expressway. Provide alternative access to Hwy 62 from Ave. A for existing businesses who currently have direct access to Hwy 62.</td>
<td>Reduce Reliance on Single-Occupant Vehicle</td>
</tr>
<tr>
<td></td>
<td>Consider the Impact on Residents and Local Businesses</td>
</tr>
<tr>
<td></td>
<td>Improve Efficiency of Existing Infrastruc.</td>
</tr>
<tr>
<td>3. Have a Regional Boulevard design through the area where White City connects with Highway 62 to benefit that community and its businesses.</td>
<td>Reduce Reliance on Single-Occupant Vehicle</td>
</tr>
<tr>
<td></td>
<td>Consider the Impact on Residents and Local Businesses</td>
</tr>
<tr>
<td></td>
<td>Improve Efficiency of Existing Infrastruc.</td>
</tr>
<tr>
<td>4. Have Crater Lake Ave. extend north and continue as a frontage road for the expressway, allowing access to local businesses, so they don’t have to use Hwy 62.</td>
<td>Reduce Reliance on Single-Occupant Vehicle</td>
</tr>
<tr>
<td></td>
<td>Consider the Impact on Residents and Local Businesses</td>
</tr>
<tr>
<td></td>
<td>Improve Efficiency of Existing Infrastruc.</td>
</tr>
<tr>
<td>5. Create a frontage road west of and parallel to the expressway, between Leigh Way and the end of Agate Rd. where it currently connects with Highway 62. This will allow access to existing businesses off the Hwy.</td>
<td>Reduce Reliance on Single-Occupant Vehicle</td>
</tr>
<tr>
<td></td>
<td>Consider the Impact on Residents and Local Businesses</td>
</tr>
<tr>
<td></td>
<td>Improve Efficiency of Existing Infrastruc.</td>
</tr>
<tr>
<td>6. Rezone to Light Industrial two undeveloped, commercial zoned parcels west of the expressway and east of Agate, in order to decrease the potential for trip generation in that area.</td>
<td>Reduce Reliance on Single-Occupant Vehicle</td>
</tr>
<tr>
<td></td>
<td>Consider the Impact on Residents and Local Businesses</td>
</tr>
<tr>
<td></td>
<td>Improve Efficiency of Existing Infrastruc.</td>
</tr>
<tr>
<td>7. Change the path of the expressway to follow Agate Road rather than following the current path of Hwy 62 through</td>
<td>Reduce Reliance on Single-Occupant Vehicle</td>
</tr>
<tr>
<td></td>
<td>Provide Access to Alt. Modes of Trans.</td>
</tr>
<tr>
<td></td>
<td>Consider the Impact on Residents and Local Businesses</td>
</tr>
<tr>
<td></td>
<td>Improve Efficiency of Existing Infrastruc.</td>
</tr>
<tr>
<td></td>
<td>Provide Environ. Sensitive Trans.</td>
</tr>
<tr>
<td></td>
<td>Maximize Safety of the Trans. System</td>
</tr>
</tbody>
</table>
### Design Workshop Suggestions

<table>
<thead>
<tr>
<th>Design Workshop Suggestions</th>
<th>North Terminus RTP Evaluation Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provide Access to Alt. Modes of Trans.</td>
<td>Consider the Impact on Residents and Local Businesses</td>
</tr>
<tr>
<td>Improve Efficiency of Existing Infrastruc.</td>
<td>Provide Environ. Sensitive Trans.</td>
</tr>
<tr>
<td>Maximize Safety of the Trans. System</td>
<td>Maximize Efficiency of the Trans. System</td>
</tr>
<tr>
<td>White City.</td>
<td></td>
</tr>
<tr>
<td>8. Provide a backage road for businesses to no longer have access to Hwy 62 due to the ¼ mile rule from the southbound ramp off the expressway.</td>
<td>Neg. Neg. Pos. Pos. ? Pos. Pos.</td>
</tr>
<tr>
<td>10. Create one-way frontage roads on both sides of the expressway in the area between Hwy 140 and Corey Road, with overpasses of the expressway connecting those frontage roads.</td>
<td>Neutral Neg. Pos. Neg. ? Pos. Pos.</td>
</tr>
<tr>
<td>16. Rezone from industrial to Commercial and/or Mixed Use to allow for a greater variety of business opportunities. The concern here is that the ideas generated in this process have eliminated a good deal of commercial land at the northern terminus.</td>
<td>Pos. Pos. Pos. Pos. Pos. Pos. Pos.</td>
</tr>
</tbody>
</table>
VILAS ROAD INTERCHANGE

The Vilas Road Interchange groups identified the following issues associated with the subarea:

- Preserving free flow of traffic on the expressway
- Access near the interchange
- Alternative local street network for uses north of Vilas Road
- Land Uses near interchange

Each Vilas Road Interchange group addressed the following tasks in the development of subarea concepts:

1. Redesign access to Vilas Road for proposed expressway. Free on and off access in all directions.
2. Alternate local street network for uses north of Vilas Road.
3. Create an east/west under/over crossing of expressway north of Vilas Road.
4. Land Use Suggestions

Additional recommendations:

- Devise strategies to limit or lessen traffic generators at the interchange area.
- Provide alternative traffic flow/connectivity options in the limited access area at the interchange
- Consider zone changes or overlays to achieve desired traffic mitigation
### Design Workshop Suggestions

<table>
<thead>
<tr>
<th>Vilas Road Interchange</th>
<th>Vilas Road Interchange RTP Evaluation Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provide a west extension from Airway Drive and Runway Drive.</td>
<td>Neutral</td>
</tr>
<tr>
<td>Extend Coker Butte extension to North Runway for easy access into FTZ as well as over expressway.</td>
<td>Neutral</td>
</tr>
</tbody>
</table>

¹ Positive, after traffic signal is installed at Coker Butte
<table>
<thead>
<tr>
<th>Design Workshop Suggestions</th>
<th>Vilas Road Interchange RTP Evaluation Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>generators such as fast food and banks.</td>
<td>Reduce Reliance on Single-Occupant Vehicle</td>
</tr>
<tr>
<td></td>
<td>Consider the Impact on Residents and Local Businesses</td>
</tr>
<tr>
<td></td>
<td>Improve Efficiency of Existing Infrastruc.</td>
</tr>
<tr>
<td></td>
<td>Provide Environ. Sensitive Trans.</td>
</tr>
<tr>
<td></td>
<td>Maximize Safety of the Trans. System</td>
</tr>
<tr>
<td></td>
<td>Maximize Efficiency of the Trans. System</td>
</tr>
<tr>
<td></td>
<td>Neutral</td>
</tr>
<tr>
<td></td>
<td>Pos.</td>
</tr>
<tr>
<td></td>
<td>Pos.</td>
</tr>
<tr>
<td></td>
<td>Neutral</td>
</tr>
<tr>
<td></td>
<td>Neutral</td>
</tr>
<tr>
<td></td>
<td>Pos.</td>
</tr>
<tr>
<td></td>
<td>Pos.</td>
</tr>
<tr>
<td>15. Peace to Coker Butte Extension</td>
<td>Neutral</td>
</tr>
<tr>
<td></td>
<td>Neg.</td>
</tr>
<tr>
<td></td>
<td>Pos.</td>
</tr>
<tr>
<td></td>
<td>Neutral</td>
</tr>
<tr>
<td></td>
<td>Neutral</td>
</tr>
<tr>
<td></td>
<td>Pos.</td>
</tr>
<tr>
<td></td>
<td>Neg.</td>
</tr>
<tr>
<td>16. Vilas Road Intersection. Frontage or backage roads for business access.</td>
<td>Neutral</td>
</tr>
<tr>
<td></td>
<td>Neg.</td>
</tr>
<tr>
<td></td>
<td>Pos.</td>
</tr>
<tr>
<td></td>
<td>Pos.</td>
</tr>
<tr>
<td></td>
<td>Neutral</td>
</tr>
<tr>
<td></td>
<td>Pos.</td>
</tr>
<tr>
<td></td>
<td>Pos.</td>
</tr>
</tbody>
</table>
FOREIGN TRADE ZONE

The Foreign Trade Zone groups identified the following issues associated with the subareas:

- Truck circulation throughout the area, using the FTZ as hub.
- Need to preserve the role of Vilas Road in providing access to FTZ.
- Freight routes to Interstate 5
- Reduce potential conflicts with non-freight traffic.
- Determine appropriate zoning requirements; e.g., amount of commercial use in industrial zones.

Each Foreign Trade Zone group addressed the following tasks in the development of subarea concepts:

1. Select best routes for truck circulation throughout the area, using the FTZ as a hub, concentrating on Vilas Road and expressway.
2. Establish best freight routes to Interstate 5
3. Develop measures to reduce potential conflicts with non-freight uses.
4. Determine appropriate zoning requirements; e.g., amount of commercial in industrial zones.

Additional recommendations:

- Potential revisions to permitted commercial uses within industrial zones.
- Review placement of industrial zoning (light, general, heavy) to optimize air quality and trip generation.
- Impacts of continued commercial development in the FTZ on development of downtown Medford and other nodes
- Analyze FTZ truck traffic to determine if it justifies having its own expressway access ramp.
### Design Workshop Suggestions

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Southbound-only on-ramp to allow easy access from FTZ so haulers don’t have to go north to Vilas to reach I-5.</td>
<td>Neg.</td>
<td>Neg.</td>
<td>Pos.</td>
<td>?</td>
<td>Neutral</td>
<td>Pos.</td>
<td>Neg.</td>
</tr>
<tr>
<td>10. Shift footprint of the expressway to boundary line between public and private land.</td>
<td>Neutral</td>
<td>Neg.</td>
<td>Pos.</td>
<td>Neutral</td>
<td>Neutral</td>
<td>Neutral</td>
<td>Neutral</td>
</tr>
<tr>
<td>• Land Use:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>i. Keep area industrial</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Design Workshop Suggestions

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ii. Remember noise factor from airport</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>iii. Supportive uses for Light Industrial zones need to focus on needs of specific area.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>iv. Research what are the service needs of the area.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>v. Connect service activities for pedestrian traffic. This traffic is already being generated between the health club and surrounding uses.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. “Enforced” mixed use</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
SOUTH TERMINUS

The South Terminus groups identified the following issues associated with the subareas:

- Propose routes by which expressway travelers may access commercial areas and residential neighborhoods.
- Preserve and enhance neighborhoods
- Areas where land-use changes could be beneficial
- Commercial uses in industrial zones

Each South Terminus group addressed the following tasks in the development of subarea concepts:

1. Propose routes by which expressway travelers may access commercial areas and residential neighborhoods
2. What features can you suggest to preserve and enhance neighborhoods?
3. Identify areas where you believe land-use changes could be beneficial.

Additional recommendations:

- Optimize access to businesses now fronting Crater Lake Highway.
- Provide alternative mode (bike/pedestrian) connectivity in this area.
- Encourage mixed use in this area.

Consider parks development in open space of airport clear zone.
<table>
<thead>
<tr>
<th>South Terminus RTP Evaluation Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Design Workshop Suggestions</strong></td>
</tr>
<tr>
<td>6. Continuation of Regional Blvd. linking Delta Waters end of the blvd. to Poplar, and preferably to Biddle. This provides access to existing businesses, provides a continuous route, establishes a boulevard link to Biddle Road.</td>
</tr>
<tr>
<td>9. Create commercial area along expressway to provide an uninterrupted band of commercial uses along the expressway from Biddle to Lear Way; and continue north in area between the expressway and Costco area.</td>
</tr>
</tbody>
</table>
### Design Workshop Suggestions

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>11. Efforts must be taken to keep existing commercial area around Fred Meyer and Poplar Center viable. Stores can’t be cut off from traffic.</td>
<td>Neutral</td>
<td>Neg.</td>
<td>Pos.</td>
<td>Pos.</td>
<td>Neutral</td>
<td>Neg.</td>
<td>Pos.</td>
</tr>
<tr>
<td>12. Local network roads are needed to give travelers choices to ease congestion on the few main roads; improves traffic dispersion and connectivity.</td>
<td>Neutral</td>
<td>Pos.</td>
<td>Pos.</td>
<td>Pos.</td>
<td>Neutral</td>
<td>Neg.</td>
<td>Neg.</td>
</tr>
<tr>
<td>13. BRT buy right of way now, make sure expressway can accommodate BRT line even if one can't be built immediately.</td>
<td>Pos.</td>
<td>Pos.</td>
<td>Pos.</td>
<td>Pos.</td>
<td>Pos.</td>
<td>Pos.</td>
<td>Pos.</td>
</tr>
<tr>
<td>18. Promote mixed uses in the area, building on what is already there so that people can live, work and shop within a small geographical area. Area indicated on map is not as significant as the idea of fostering mix-use areas. These could also be areas for much needed affordable housing. Making available lower-cost housing is important, and land use discussions need to accommodate this kind of development.</td>
<td>Pos.</td>
<td>Pos.</td>
<td>Pos.</td>
<td>Pos.</td>
<td>Pos.</td>
<td>Pos.</td>
<td>Pos.</td>
</tr>
</tbody>
</table>
## Design Workshop Suggestions

<table>
<thead>
<tr>
<th>Design Workshop Suggestions</th>
<th>South Terminus RTP Evaluation Criteria</th>
</tr>
</thead>
</table>
REGIONAL BOULEVARD

The regional boulevard groups concentrated on designing representative cross sections for three portions of the boulevard. Moving from south to north, the cross sections include the entrance to the boulevard, an area near the TOD site, and an area north of the TOD site. The designs included enhanced landscaping, a Bus Rapid Transit (BRT), and various lane arrangements reflecting differing right-of-way widths.
SECTION 9
BUS RAPID TRANSIT ANALYSIS

TECHNICAL MEMORANDUM
MEMORANDUM

DATE: May 23, 2003
FROM: Craig Anderson, Associate Transportation Planner
TO: Crater Lake Highway TAC and CAC
RE: Analysis of Bus Rapid Transit system

The Crater Lake Highway Transportation & Land Use Study considered the impacts of a Bus Rapid Transit (BRT) system in the study area. This included modeling analysis of the proposed BRT to assess potential transportation and air quality benefits. The BRT has been proposed in conjunction with the regional boulevard.

This work required the Rogue Valley Council of Governments to modify the EMME/2 regional travel demand model to incorporate a BRT system running along the alignment of the current Hwy. 62. The modeled BRT system would have transit stations/stops at approximately .3-mile intervals. Other modeling assumptions included:

- The BRT would operate on its own alignment and not be influenced by cross traffic;
- The BRT would operate on 10-minute headways;
- The hours of operation would be from 6 a.m. to 10 p.m., 7 days/week;
- The BRT would connect with existing transit routes at stops where they intersect.

A model run was performed both with and without the proposed BRT using Regional Transportation Plan Tier 1 year 2023 population/employment and network assumptions. These assumptions include TOD land use densities in the area of the Delta Waters intersection. The assumptions used do not include completion of the proposed Hwy. 62 expressway.

Table 1 provides a summary of the modeling results with and without the BRT included in the model network. The results indicate that, all other things remaining the same, a BRT system would have a negligible impact on reducing vehicle miles traveled or on increasing transit ridership in the Metropolitan Planning Organization area.
The modeling performed for this analysis should, in no way, be taken as conclusive in terms of the potential of a BRT in this area. It is likely that the modeling performed for this analysis needs to be refined to better represent how a BRT would serve a “Regional Boulevard” corridor. If time and resources were available for this type of analysis, the result would likely be much more encouraging.

Table 1 also includes an air quality analysis showing changes in the level of particulate pollution (PM$_{10}$) resulting from implementing the BRT. Again, the changes resulting from implementing the BRT are shown to be negligible in this analysis.

**TABLE 1**

Results of BRT Modeling

<table>
<thead>
<tr>
<th>Analysis</th>
<th>Model Scenario</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2023 Tier 1 w/o BRT</td>
<td>2023 Tier 1 w/ BRT</td>
</tr>
<tr>
<td>Daily BRT Ridership$^1$</td>
<td>N/A</td>
<td>940</td>
</tr>
<tr>
<td>Total Daily Transit Person Trips$^2$</td>
<td>2,410</td>
<td>2,569</td>
</tr>
<tr>
<td>Daily VMT</td>
<td>3,122,968</td>
<td>3,122,140</td>
</tr>
<tr>
<td>Air Quality (grams PM$_{10}$)$^3$</td>
<td>3,778,791</td>
<td>3,777,789</td>
</tr>
</tbody>
</table>

$^1$ Figures represent daily boardings. AM and PM peak-hour transit ridership figures cannot be determined with the model.

$^2$ Figures represent entire Tier 1 transit system.

$^3$ Based on the air quality conformity determination prepared for the 2001-2023 RTP, approximately 1.21 grams of PM$_{10}$ is emitted per modeled VMT in MPO Area.

Figure 1, on the next page, shows the proposed BRT alignment with transit stations/stops located approximate .3 mile apart between the Rogue Valley Mall and White City. Figure 2, on page 134, reveals the results of the modeling with line widths and colors indicating relative transit ridership levels.
FIGURE 1 - Proposed BRT Alignment Showing Stations and Stops
EMME/2 Modeling Results

TRANSIT VOLUMES

LINKS:
mod=a,t
&i=1,606
&j=1,606
TRANSIT LINES: 99
COL-IND: @tclr

SCENARIO: copy of sc2054 for 24-hr. O-D transit assign

WINDOW:
2130.4/126.876
2153.6/144.25

LINKS:
mod=a,t
&i=1,606
&j=1,606
TRANSIT LINES: 99
COL-IND: @tclr

SCENARIO: copy of sc2054 for 24-hr. O-D transit assign

WINDOW:
2130.4/126.876
2153.6/144.25

EMME/2 PROJECT: 2023 RVCOG Model Runs
SCENARIO 2055: copy of sc2054 for 24-hr. O-D transit assign

03-04-22 13:40
MODULE: 6.22
DKS2000...ris
SECTION 10
TRANSPORTATION BASE CASE vs WORKSHOP RECOMMENDATIONS

TECHNICAL MEMORANDUM

Comparison of workshop recommendations to base case conditions; map illustrating recommendations
Date: May 23, 2003

To: Citizen’s Advisory Committee

From: Craig Anderson, RVCOG

Subject: Transportation Base Case vs. Workshop Recommendations

The purpose of this memorandum is to illustrate how the transportation plans developed through the workshop process compare with the “base case” scenario represented by plans identified in the 2001-2023 Regional Transportation Plan. This memo is supplemented by a map showing the workshop recommendations along with projects that are currently planned as part of the RTP. A technical analysis showing how the proposed street network would function as compared to the planned network was beyond the scope of this memo and therefore has not been included.

Table 1 provides a summary of the recommendations presented at the workshop conducted on Feb. 1, 2003, and subsequently considered by the TAC at their meetings of April 23 and May 21. The attached PDF map – Recommended Projects – Expressway Study Area – identifies the location of the recommendations and how these recommendations relate to one another.

The map illustrates planned projects that are included in the 2001-2023 Regional Transportation Plan. These projects have been “constrained” to forecasted revenues through this time period. Workshop recommendations illustrated on the map have not been similarly constrained and therefore cannot be evaluated in terms of economic reality. The recommendations will serve to inform the EIS process for the Expressway Project/Hwy. 62 Unit 2 and may be considered by both the City of Medford and Jackson County as part of their TSP adoption process.

In some cases, multiple recommendations that overlap have been consolidated into one. In other cases, recommendations conflict with one another or are unnecessary in the context of another recommendation. In this sense, the recommendations shown on the map and included in Table 1 represent staff’s refinement of the workshop ideas in a manner that represents a more consistent and comprehensive “plan” should the proposed expressway become a reality.
## WORKSHOP PROJECT RECOMMENDATIONS

### TABLE 1

<table>
<thead>
<tr>
<th>Sub-Area</th>
<th>Map Ref.</th>
<th>Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Terminus</td>
<td>A</td>
<td>Change the path of expressway to follow Agate; Provide a cloverleaf to allow travel from 140 onto the expressway along this alignment; Provide free-flow intersection at Hwy 140 and northern terminus of expressway. (The following ideas either conflict with this proposal or are not necessary to implement due to this proposed realignment: Extend Crater Lake Ave. north as frontage road; Combine CL Ave. with CL Hwy up to point of merge with new expressway and add travel lanes; Provide a frontage rd. to allow access to West Coast, Homestead, etc.; Provide an alternative access from Ave. A to Hwy 62; Provide a backage road for businesses who no longer have access to Hwy 62 due to ¼ mile rule; Provide a frontage road west of and parallel to the expressway between Leigh and Agate; Provide one-way frontage roads on both sides of expressway between 140 and Corey with overpasses connecting those roads; Join the Boulevard with the southbound off-ramp via an over/underpass of the expressway.)</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>Provide a regional blvd. design in White City along Hwy 62.</td>
</tr>
<tr>
<td></td>
<td>A</td>
<td>Extend Peace Ln south w/ signal @ Peace and Vilas; Extend Peace to Coker Butte.</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>Provide frontage roads on north and south side of Vilas with connections at Runway, Airway and Industry; Provide frontage or backage roads for business access.</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>Provide a western connection between Airway and Runway Drives.</td>
</tr>
<tr>
<td></td>
<td>D</td>
<td>Extend Kingsley Dr. across expressway to airport; Provide connectors between Kingsley onto Airway and Industry Drives; Provide western connection from air cargo area to Airway Drive and Vilas Road (FTZ group idea).</td>
</tr>
<tr>
<td></td>
<td>E</td>
<td>Extend Coker Butte to North Runway for access to FTZ.</td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>Extend Runway Drive north to Maverick; Extend Runway Drive to Judge Lane.</td>
</tr>
<tr>
<td></td>
<td>G</td>
<td>Extend Maverick St. east to Lear over expressway; Build-out circulation at north end of study area (FTZ group idea).</td>
</tr>
<tr>
<td>Vilas Interchange</td>
<td>A</td>
<td>Southbound-only on-ramp to expressway from FTZ.</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>Provide frontage road on west side of expressway connecting to Regional Boulevard; Connect north and south routes on west side of expressway.</td>
</tr>
<tr>
<td></td>
<td>A</td>
<td>Establish Morrow and Poplar as route from interchange to Fred Meyer (by way of Biddle). (The following workshop ideas conflict with this proposal: Construct road through Food 4 Less to Poplar; Construct road parallel to Poplar from Morrow to back of Fred Meyer; Raise expressway to allow an access road to Fred Meyer and other businesses.)</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>Expressway off-ramp, right-turn-only to Whittle Ave.</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>Continue Regional Blvd. to link Delta Waters to Poplar.</td>
</tr>
<tr>
<td></td>
<td>D</td>
<td>Maintain Poplar-Bullock through connection.</td>
</tr>
<tr>
<td></td>
<td>E</td>
<td>Access along Medco Haul Road to Bullock for businesses.</td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>Local network roads are needed to provide options.</td>
</tr>
<tr>
<td></td>
<td>G</td>
<td>Extend Delta Waters west, tunnel under at airport to link with Bullock; Provide connection from east of airport to Bullock Road on west side of airport, further south; Provide a Bullock/Biddle connection (FTZ ideas).</td>
</tr>
<tr>
<td></td>
<td>H</td>
<td>Connect interchange-area bike paths to the Bear Creek Greenway.</td>
</tr>
<tr>
<td>FTZ</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td></td>
<td>B</td>
<td></td>
</tr>
<tr>
<td></td>
<td>C</td>
<td></td>
</tr>
<tr>
<td></td>
<td>D</td>
<td></td>
</tr>
<tr>
<td></td>
<td>E</td>
<td></td>
</tr>
<tr>
<td></td>
<td>F</td>
<td></td>
</tr>
<tr>
<td></td>
<td>G</td>
<td></td>
</tr>
<tr>
<td></td>
<td>H</td>
<td></td>
</tr>
<tr>
<td>Southern Terminus</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td></td>
<td>B</td>
<td></td>
</tr>
<tr>
<td></td>
<td>C</td>
<td></td>
</tr>
<tr>
<td></td>
<td>D</td>
<td></td>
</tr>
<tr>
<td></td>
<td>E</td>
<td></td>
</tr>
<tr>
<td></td>
<td>F</td>
<td></td>
</tr>
<tr>
<td></td>
<td>G</td>
<td></td>
</tr>
<tr>
<td></td>
<td>H</td>
<td></td>
</tr>
</tbody>
</table>
Recommended Projects: Expressway Study Area