
Chapter 2: Alternatives

This chapter provides a description of the following items related to the LDEIS Alternatives and Preferred Alternative Modified 3J:

- History, development, and screening process of the LDEIS Alternatives
- Features of the No Build
- Features of the Build Alternatives as presented in the LDEIS
- Development and selection of Modified 3J, the Preferred Alternative

HISTORY AND DEVELOPMENT OF BUILD ALTERNATIVES

This section provides a brief project history and includes summaries of several studies and actions taken by ODOT to address issues related to Oregon 99W prior to development of the LDEIS and LFEIS.

1990 Corridor Strategy

In 1990, ODOT published the Rex Hill-Dayton Junction Reconnaissance Study (Newberg Bypass) that considered options for a bypass of Oregon 99W. The study helped ODOT administration and the public make a decision on the feasibility of a bypass. The study focused on accessibility, the safe and efficient movement of through-traffic, economic vitality, roadway safety, and the reduction of traffic congestion. ODOT prepared the alignments and estimated costs for a north, south and extended south bypass route, improvements to the existing route, a Willamette River crossing, and a McKay Road to Dundee route. Subsequently, the City of Newberg and Yamhill County incorporated a southern bypass of Oregon 99W into their respective TSPs in 1994 and 1995. Funding shortfalls postponed further action until the Oregon Legislature passed Senate Bill 626 in 1995, enabling ODOT to consider a bypass as a potential tollway.

Portland to Lincoln City Corridor, Oregon 99W and Oregon 18, 1-5 to US 101, Interim Corridor Strategy

In 1994, ODOT began developing a corridor strategy for the Oregon 99W/Oregon 18 corridor between Portland and Lincoln City. This corridor extends 75 miles from I-5 (Exit 294) to US 101 near Lincoln City, and provides access to the central Oregon coast from Portland and surrounding areas. In the study, ODOT addressed the operation, preservation, and improvement of transportation facilities in the Oregon 99W/18 corridor. The resulting corridor strategy included a series of actions that responded to Oregon 99W/18's vital role in serving commuter and recreational travel and freight movement, and to the numerous constraints associated with corridor improvements. Specific measures envisioned in the strategy included the following:

Transportation Balance

- Pursue transportation demand and system strategies.
- Develop support facilities for transit, carpooling, and the use of non-motorized modes.
- Retain the railroad as an effective means of freight transport, and investigate opportunities for commuter rail service in the corridor.

Regional Connectivity

- Develop and implement access management plans to control future access to the highway.
- Continue study of limited access bypass routes to enhance connectivity.
- Pursue improvements that enhance truck mobility and safety.

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- Support improvement of the rail freight network serving the corridor.

Highway Congestion

- Provide grade-separated interchanges at selected locations.
- Implement a program of transportation system management measures to improve efficiency of traffic flow.
- Provide capacity improvements in balance with transportation system and demand management, mode shift goals, and other community objectives.

Safety

- Target accident countermeasures for short-term implementation.
- Pursue grade separation, access control, and geometric modifications to reduce accident risk.

Transportation Impacts

- Develop detailed inventories of constraints that influence transportation improvements.
- Consider methods of avoidance and mitigation for projects in the corridor.

Following endorsement of the Interim Corridor Strategy by jurisdictions along the corridor, ODOT intended to develop a final Corridor Plan, striving to preserve and enhance the corridor through close coordination with local land use and transportation plans.

1997 Transportation Alternatives Analysis

In October 1996, ODOT's Economic Partnership Unit (EPU) moved forward with the alternatives development phase of the Newberg-Dundee Bypass project and changed the name of the project to NDTIP. This acknowledged the intent to equitably consider a full range of solutions to the congestion on Oregon 99W, consistent with federal and state regulations and policy. ODOT's objective was to select one or more solutions to the transportation problems on Oregon 99W, which were suitable for more detailed evaluation in a future project development phase. Selected solutions had to be feasible, implementable, and acceptable to the affected communities.

In 1997, FHWA issued a Notice of Intent to prepare a Location EIS. Within a year, the project had successfully developed Multimodal Alternative Packages (MAPs), some of which featured a bypass and some which did not. ODOT used a quantitative decision-making process that guided recommendations of the Project Oversight Steering Team (POST). The POST forwarded these alternatives to the Oregon Transportation Commission (OTC). The Alternatives Analysis Technical Report documents the work program and the results leading to the alternatives. The report considered MAPs. Of these, the report recommended three MAPs. The alternatives analysis process also eliminated Light Rail and Commuter Rail MAPs, as well as an alternative to widen Oregon 99W through Newberg and Dundee to handle congestion. However, because rail continued to be popular with some stakeholders, the POST also recommended that future solutions be compatible with any commuter rail that would be developed in the corridor for purposes other than a separate project. The three recommended MAPs are as follows.

- *Regional Bypass MAP*: This MAP features a new east-west bypass roadway in Yamhill and Marion counties, originating at the Oregon 99W/18 intersection and terminating at I-5 near Donald, with one interchange at Oregon 219.
- *Southern Bypass MAP*: This MAP constructs a new bypass around Newberg and Dundee. With interchanges located at Oregon 219 and in Dundee, if warranted. This MAP also includes a bus system.

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- *Transportation Management MAP*: This MAP incorporates a set of mutually supportive projects to improve the operation, efficiency, and reliability of the existing Oregon 99W corridor and to modify or reduce travel demand in Newberg and Dundee. This MAP features a bus system and does not include a bypass.

Early in 2001, several stakeholders requested and received approval for consideration of a fourth alternative, the Northern Bypass MAP.

Alternatives Developed in 2001

In 2001, at the beginning of the Location Draft EIS (LDEIS), when the POST began consideration of the Purpose and Need, the range of solutions to congestion included a Transportation Management (including bus) alternative as well as two distinctly different bypass corridors. The Purpose and Need was crafted by the POST and CETAS at this time, when a multimodal solution without a bypass was still under consideration.

Approximately six months passed before a key stakeholder and member of the POST (Dick Benner, DLCD) agreed that a bypass was needed. This was accomplished by the development of a minimum transportation performance threshold that all viable alternatives were required to pass. Transportation Planners easily concluded that the Transportation Management (bus) alternative did not pass this threshold.

When the POST rejected the Transportation Management Alternative as a stand-alone solution to congestion on Oregon 99W, they did not drop it but instead added it to every Build Alternative. That is, they reaffirmed their prior commitment to the earlier Multimodal Alternative Packages. This resulted in DLCD's public acceptance of a bypass as being necessary.

Early in 2001, several stakeholders requested and received approval for consideration of a fourth alternative, the Northern Bypass MAP. This MAP was then added to the range of alternatives.

The corridors for the above-mentioned alternatives, developed in 1997 (Regional Bypass MAP, Southern Bypass MAP, and Transportation Management MAP) and early 2001 (Northern Bypass MAP), were 0.6 miles (1 kilometer) in width. In 2001 planners reduced the width of corridors to approximately 330-410 feet (100-125 meters) to provide more certainty about the location(s) of new facilities. At some points, a wider corridor was developed to provide more flexibility during preliminary engineering in the Tier 2 process. The actual facility would require approximately 60 percent of the corridor width. The corridors are substantially wider at potential interchange locations to ensure that various designs can be accommodated. This width also allows for flexibility during the future preliminary engineering of the project.

To best determine where the corridors should be located, planners gathered data regarding:

- Wetlands
- Fish resources
- Historic and cultural resources
- Statewide Planning Goals
- Environmental justice (low-income and/or minority communities)
- Wildlife corridors
- Housing and neighborhoods
- Parks
- Properties zoned for exclusive farm use

Aided by computer analysis, ODOT engineers then developed corridors that minimized impacts to these resources.

SCREENING OF ALTERNATIVES

With considerable assistance from the public, the POST made recommendations on the alternatives to be included in the LDEIS. Members of the Project Advisory Committee (PAC) and the Collaborative Environmental and Transportation Agreement for Streamlining (CETAS)¹² participated in the screening of alternatives through their work at four summit meetings with the POST. In addition, ODOT gathered feedback from the general public at a series of meetings.

In 2001, the POST considered 18 alternatives in developing their recommendation to ODOT. Nine were dropped from further consideration.

The process for screening alternatives involved three basic questions:

- Does the alternative solve the transportation problem (meeting a minimum transportation performance threshold)?
- Is the alternative likely to fail under regulatory requirements?
- How well does the alternative achieve community-held values about livability?

Minimum Transportation Performance Threshold

The POST adopted a minimum transportation performance threshold with input from a broad spectrum of stakeholders heard at public meetings and the first project summit. The Build Alternatives had to achieve this threshold to meet the project purpose and objectives and be included in further analysis. Recommendations from the public showed a great deal of consistency with standards set out in the OHP. Consequently, the POST adopted OHP volume-to-capacity (v/c) ratios for traffic congestion¹³ as a minimum transportation performance threshold for the alternatives. The v/c ratio helps measure congestion by comparing the amount of traffic on a road to its capacity and is related to more traditional level of service (LOS) measures.

To the extent feasible, the project team modified the alternatives to meet this threshold requirement. However, Alternative 1, Transportation Management MAP, could not be modified enough to meet the v/c threshold of 0.75 and was dropped as a stand-alone alternative.

Regulatory Screen

The POST next considered how well the proposed alternatives avoided or minimized impacts to resources protected by state and federal regulations. Team members presented comparative data on how well the alternatives performed relative to the following:

- Project Purpose and Need.

¹² The Collaborative Environmental and Transportation Agreement for Streamlining (CETAS) replaced the Agency Advisory Committee (AAC), serving to coordinate the regulatory aspect of the location selection process. Agencies making up CETAS are US Fish and Wildlife Service (USFWS), US Army Corps of Engineers (USCOE), Department of Environmental Quality (DEQ), NOAA Fisheries, Oregon Department of Fish and Wildlife (ODFW), Environmental Protection Agency (EPA), ODOT, Department of Land Conservation and Development (DLCD), Department of State Lands (DSL), State Historic Preservation Office (SHPO) and FHWA.

¹³ Brian Gregor, Transportation Planning and Analysis Unit, Oregon Dept. of Transportation, Statewide Congestion Overview for Oregon, February 2004, p. B-9. Congestion is generally defined as : "When the demand for space exceeds people's tolerance, it is called ... *congestion* in the case of roads and other transportation facilities." A technical transportation definition for Oregon 99W, a designated Statewide (NHS) Freight Route, based on the table "Maximum Volume to Capacity Ratios Outside Metro", Adopted Oregon Highway Plan, 1999, p. 80, is: When the maximum volume to capacity ratio for peak hour operating conditions through a planning horizon for state highway section located outside the Portland metropolitan (METRO) area UGB is exceeded. In the case of Oregon 99W inside the Urban Growth Boundaries of Newberg, Dundee and Dayton, the maximum v/c ratio for Oregon 99W is 0.75; outside these UGBs, the maximum v/c ratio for Oregon 99W is 0.70.

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- Wetlands impacts (state and federal regulation of jurisdictional wetlands).
 - Threatened and endangered species (state and federal Endangered Species Act).
 - Environmental justice (Presidential Executive Order 12898).
 - Exclusive Farm Use land (Transportation Planning Rule goal exception).
 - Cultural and historic resources, parks and wildlife refuges (Section 4(f)).

Based on public testimony, input from CETAS, project summits and POST recommendations, ODOT dropped Alternatives 2A and 2B, the Regional Bypass Alternative MAPs. As a result of the regulatory screen, ODOT also dropped Alternatives 3A and 3B, shown in the LDEIS as Figures 2-3 and 2-4, due to concerns about protected fish species and impacts to agriculture.

Community-Held Values

Public participation greatly contributed to an understanding of community-held values about how the cities of Newberg and Dundee envision their futures (see Chapter 7, Public and Agency Involvement). The project team reported what was learned about community-held values to the POST. Also, the parallel development of the Dundee TSP provided insights into the Dundee community's attitudes regarding the alternatives. Two of the Southern Build Alternatives (3E and 3F) were dropped for several reasons, including community livability. Alternatives 3E and 3F showed the most potential for housing displacements and impacts to parks and historic properties, as well as other factors. As a result, they were dropped from additional analysis. Alternatives 4A and 4B bisected residential neighborhoods in northern Newberg and required extensive cut and fills on hillsides above Dundee, resulting in negative environmental and safety impacts.

This information contributed to several POST recommendations, including:

- Withdrawing the Transportation Management Alternative (Alternative 1), the Regional Bypass Alternatives (2A and 2B), four of the Southern Build Alternatives (3A, 3B, 3E, and 3F) and two Northern Bypass Alternatives (4A and 4B).
- Modifying two other Southern Build Alternatives (3C and 3D) to include an interchange between Newberg and Dundee.
- Modifying the remaining Northern Bypass Alternative, which became Alternative 4C.
- Adding alternatives 3G, 3H, 3I and 3J – variations of the Southern Build Alternative.

The Alternatives Considered But Withdrawn section of this chapter provides details about how issues of transportation performance, regulatory issues and community-held values contributed to having several alternatives withdrawn from further consideration.

NO BUILD

The No Build assumes no action would be taken to construct project elements identified as part of Modified 3J or the other Build Alternatives described below. The No Build only includes those transportation projects in state and local plans where funding has been committed. The No Build assumes that development will occur according to city and county comprehensive plans, except that there would be no state highway bypass of Oregon 99W around Newberg and Dundee. State projects incorporated into the No Build are:

- Improvements to the intersection of Oregon 219 and Wilsonville Road in southeast Newberg, scheduled for construction beginning in 2006.

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- Replacement of the bridge where Oregon 240 crosses Chehalem Creek northwest of Newberg. This project has been completed.
 - A connector between I-5 and Oregon 99W in the vicinity of Sherwood, currently in planning stages.

Local projects incorporated into the No Build include the following:

- Re-stripe Haworth Avenue in east Newberg to provide a left turn lane and a through/right turn lane at its intersection with Springbrook Road, and re-stripe crosswalks in the intersection. The project has been completed.
- Construct a two-lane arterial that runs east-west through northern Newberg. This project has not been completed.

LDEIS BUILD ALTERNATIVES

The LDEIS evaluated eight Build Alternatives. These alternatives are 3C, 3D, 3G, 3H, 3I, 3J, 3K (the Southern Build Alternatives), and 4C (the Northern Build Alternative). All alternatives are generally located between the Rex Hill area east of Newberg at Oregon 99W mile post 20.08 and the area west of Dundee where Oregon 99W intersects with Oregon 18 at Oregon 18 mile post 51.84. The Southern Build Alternatives take travelers to the south of Newberg and Dundee. The Northern Build Alternative heads north of Newberg, but then follows the same route as the Southern Build Alternatives after heading south and crossing Oregon 99W between Newberg and Dundee. An important difference among the alternatives is the location of accesses to the Bypass.

Figure 2-1 A illustrates the location of each of the Build Alternatives. Each of the Build Alternatives includes the following:

- *A four-lane bypass “Expressway.”*
Expressways¹⁴ as defined in the 1999 Oregon Highway Plan (OHP) provide for high-speed, high-volume travel between cities with minimal interruptions. A secondary function is to provide for long-distance, intra-urban travel in metropolitan areas. In urban areas, expressway speeds are moderate to high. In rural areas, expressway speeds are high. This facility would also serve as a statewide freight highway.
- *A median.*
A landscaped median or median barrier will be located between the travel lanes, and shoulders will be constructed on both sides of the travel lanes.
- *Bicycle access.*
Bicycles are permitted to travel on the shoulders of highway facilities in Oregon. In addition, enhanced bicycle facilities may be provided either as part of the roadway cross-section or as a separate, parallel facility. This issue will be addressed as part of the Tier 2 study and other associated multimodal studies.
- *Access to the Bypass restricted to interchanges.*
Access to the Bypass is restricted to interchanges with the exception of Alternative 3I, which has two at-grade intersections. No direct access to the Bypass will be permitted from private properties. The Bypass will be grade-separated. Major county and city roads will be rerouted under or over the Bypass. Other local streets, crossed by the Bypass, will be rerouted around or away from the Bypass or stopped at the Bypass.

¹⁴ OHP at p. 42, Action 1.A2.

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- *Bridges crossing larger fish-bearing streams.*
Bridges will be used to cross larger fish-bearing streams. Smaller drainages might be crossed using fish-passable culverts.
 - *Toll roads.*
“Tolling” might be included as part of the Bypass. The need and feasibility for tolls will be evaluated, if appropriate, during Tier 2. The travel demand impacts due to tolling and the size and location of tolling facilities are unknown at this time.
 - *Improvements needed to meet OHP access management standards.*
Improvements needed to meet OHP access management standards will be constructed, including road realignments and private driveway consolidations or relocations.
 - *A typical operating speed of 55 miles per hour.*
The Bypass will have a typical operating speed of 55 miles per hour, except for Alternative 3I, which operates at a lower speed around two at-grade intersections in Newberg. The Southern Build Alternatives share a common alignment in southern and eastern Newberg. They differ as to whether an interchange or an overpass is built at Oregon 219 where the interchange at the western terminus of the project is located. Key components of the Build Alternatives are presented in Table 2-1. The following is a description of each Build Alternative included in the LDEIS.

Alternative 3C

This alternative includes three interchanges and extends for about 11 miles along the south sides of Newberg and Dundee. At the west end, the existing intersection between Oregon 99W and Oregon 18 is closed. Oregon 18 continues as a four-lane road oriented northeast along the railroad tracks for approximately 2.2 miles to a new interchange between the Bypass and existing Oregon 99W. The number of lanes on Oregon 99W remains unchanged. Between Newberg and Dundee, the Bypass borders the east boundary of Dundee to Oregon 99W, where another interchange is located, and is oriented east-west to Newberg. Alternative 3C crosses Oregon 219 rather than providing an interchange. An interchange located east of Newberg offers full-directional movements, both east and west along Oregon 99W.

Alternative 3D

This alternative also includes three interchanges and extends for about 11 miles along the south sides of Newberg and Dundee. However, the interchange at the west end of the project is located close to Dayton, near the existing intersection between Oregon 99W and Oregon 18. This interchange is directional, in that it does not provide for movements from eastbound Oregon 18 to westbound Oregon 99W or from eastbound Oregon 99W to westbound Oregon 18. Like Alternative 3C, the Bypass borders the east boundary of Dundee to Oregon 99W, where another interchange is located, and is oriented east-west to Newberg. Alternative 3D crosses Oregon 219 rather than providing an interchange. The interchange located east of Newberg offers full-directional movements, both east and west along Oregon 99W.

Alternative 3G

Alternative 3G has four interchanges and extends for about 11 miles. It resembles Alternative 3C from the west end until approaching Oregon 219 in Newberg, where an interchange is constructed instead of an overcrossing. The interchange east of Newberg does not offer full-directional movements and therefore is a smaller footprint than Alternatives 3C and 3D.

Table 2-1 Components of Bypass Build Alternatives

Alternative	West End Terminus at Oregon 18 MP 51.84	Between Dayton & Dundee	Between Newberg & Dundee	Crossing of Oregon 219	East End Terminus at Oregon 99W MP 20.08	Other Features
Southern Options						
3C	No interchange; street connection to Oregon 18	South Dundee Interchange	East Dundee Interchange	Overpass	East Newberg Interchange (Full-movement)	
3D	Dayton Interchange (Directional)	No interchange	East Dundee Interchange	Overpass	East Newberg Interchange (Full-movement)	
3G	No interchange; street connection to Oregon 18	South Dundee Interchange	East Dundee Interchange	Interchange	East Newberg Interchange (Directional)	
3H	Dayton Interchange (Directional)	No interchange	East Dundee Interchange	Interchange	East Newberg Interchange (Directional)	
3I	Dayton Interchange (Directional)	No interchange	East Dundee Interchange	Interchange	East Newberg Interchange (Directional)	Lower speed and two intersections in Newberg
3J	No interchange; street connection to Oregon 18	South Dundee Interchange	East Dundee Interchange	Interchange	East Newberg Interchange (Directional)	
Modified 3J	Dayton Interchange (Directional)	No interchange	East Dundee Interchange; minimize housing impacts	Interchange	East Newberg Interchange (Directional)	Adjusted corridor to minimize agricultural, housing, Section 4(f), and traffic impacts
3K	Dayton Interchange (Directional)	No interchange	No interchange	Overpass	East Newberg Interchange (Full-movement)	
Northern Option						
4C	No interchange; street connection to Oregon 18	South Dundee Interchange	East Dundee Interchange	Underpass	East Newberg Interchange (Full-movement)	

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Alternative 3H

Alternative 3H has four interchanges and extends for about 11 miles. Its features are the same as those in Alternative 3G, except it has an interchange closer to Dayton than to Dundee.

Alternative 3I

Alternative 3I has four interchanges and the same physical characteristics as Alternative 3G, except that, to decrease the speed of the facility, two at-grade intersections are provided in Newberg. One is between Oregon 99W and Oregon 219, and the other is west of Oregon 219 in a location feasible for riverfront access. Between the easternmost interchange on Oregon 99W and just west of Oregon 219, the speed is 45 mph. From west of Oregon 219 to the western city limits of Newberg, the speed is lowered to 35 mph. West of that point, the planned speed is 55 mph. The two at-grade intersections have traffic signals to accommodate safe and efficient crossings for motorists, pedestrians, and bicyclists.

Alternative 3J

Alternative 3J has four interchanges and the same physical characteristics as Alternative 3G except for the area between Dundee and Newberg. It extends for about 10 miles. The alignment avoids rural residential housing impacts by crossing agricultural property. An interchange is provided between Newberg and Dundee, connecting to an arterial that links with Oregon 99W. No access is provided from the arterial to abutting properties. However, connections to city streets are allowed. A structure is provided over the railroad tracks and over Oregon 99W.

Alternative 3K

Alternative 3K includes both a Bypass and the widening of segments of Oregon 99W. While the Bypass facility is similar to Alternative 3J, this alternative includes interchanges only at its east and west ends. The interchange east of Newberg provides full-directional movements, both east and west along Oregon 99W. The west interchange is near Dayton. Alternative 3K widens Oregon 99W through Dundee to two lanes in each direction plus a continuous center left turn lane (five lanes total), shoulders, bike lanes and sidewalks. Along Oregon 99W from Dundee to the Dayton interchange, two-lane segments are widened to four lanes, with a median, shoulders and bike lanes.

Alternative 4C

Alternative 4C includes three interchanges and extends for about 12 miles. The existing intersection between Oregon 99W and Oregon 18 is closed. Oregon 18 continues as a four-lane road oriented northeast along the railroad tracks for approximately 2.2 miles to a new interchange (South Dundee Interchange) between the Bypass and existing Oregon 99W. The number of lanes on Oregon 99W remains unchanged. The route turns north along the eastern side of Dundee, and then skirts around the north side of Newberg before reconnecting with Oregon 99W.

The Bypass crosses under Oregon 219 near the north edge of Newberg. Due to the hills along the north side of Newberg, potential cut and fill slopes are more extensive than with the Southern Build Alternatives. Consequently a portion of Alternative 4C has a corridor width of 410 feet (125 meters) to accommodate the necessary cut and fill.

PREFERRED ALTERNATIVE

The Preferred Alternative, Modified 3J, is a combination of Alternative 3J and elements from other Build Alternatives analyzed in the LDEIS under Alternatives 3D, 3H, 3K and 3J. Modified 3J is based on Alternative 3J, and was proposed in response to direction from the POST, agency stakeholders, and the public to further minimize impacts to resources in the Alternative 3J corridor, including avoiding EFU (agricultural) land and operations at the East Newberg Interchange, aligning the Bypass in south Newberg

to avoid low income, Hispanic, and minority housing, and prohibiting access along the East Dundee Interchange connector road between the interchange with Oregon 99W and the Bypass. The process and reasoning used to select Alternative 3J and modify it, resulting in Modified 3J as the Preferred Alternative, are presented in summary below.

Decision Making and Refinement Process

The POST based its recommendations for the Preferred Alternative on data requested during an extensive public process. During the process, ODOT made it clear that if POST recommendations moved forward or were implemented, it was ODOT's and FHWA's decision to do so. The POST forwarded the Preferred Alternative during their meeting on January 22, 2003. The POST's recommendation used a unanimously approved POST Decision-Making Protocol. The POST Decision-Making Protocol is based on seven project objectives, 18 evaluation criteria, and 104 evaluation measures that demonstrate how the evaluation criteria are accomplished. The project objectives, evaluation criteria, and evaluation measures are described in detail in Appendix G. Prior to making their recommendation, the POST conducted a meeting with a public comment period and ODOT and the Project Management Team (PMT) presented the following items:

- Other alternatives as requested during the public comment period for the LDEIS (Bell Road Alternative, Alternative 5A and 5B, Newberg and Dundee Boulevard/Couplet Alternative).¹⁵
- Evaluation measure results. These were developed by the project team and stakeholder groups and summarized in a “measles” chart showing the estimated high, medium, and low environmental impacts of different alternatives as assessed against the evaluation criteria.
- PMT's recommendation to the POST.
- Review and evaluation of the No Build.

Following extensive discussion, the POST recommended Alternative 3J, with modification to reduce impacts. After further discussion and clarification, ODOT agreed to follow the POST's recommendation.

Based on the review of the evaluation measures, review of stakeholder comments, and their discussion, the POST stated the following reasons for recommending 3J over the other Build Alternatives:

- Has the fewest impacts to Dundee by eliminating the need for five lanes through Dundee.
- Connects to two major freight highways (Oregon 219 and Oregon 18).
- Has a smaller impact to rural residential-zoned area.
- Responds to public comment (LDEIS comments show most support for Alternative 3J).
- Scores second best in providing the most traffic relief for Oregon 99W.
- Recaptures character of downtown Dundee and Newberg by substantially reducing traffic through the downtown area. Pedestrian environment would be improved.
- Includes Oregon 219 interchange, which provides the following benefits.
 - Reduces truck traffic in downtown Newberg.
 - Provides highway-to-highway connections for the traveling public.
 - Allows access to I-5 through Marion County.
 - Maximizes return on public investment.

¹⁵ An analysis of these alternatives can be found in Finding of Fact and Statement of Reasons in Support of Exceptions to Goals 3, 11, and 14, p. 61.

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- Acceptable to a broad range of stakeholders, including Marion County. Marion County found the Southern Build Alternatives, and in particular, Alternative 3J, more acceptable than the Regional Bypass due to fewer impacts in Marion County.

In making their recommendation, the POST also directed project staff to address five specific issues. The issues, and how ODOT addressed them, leading to the development of Modified 3J, are listed below.

- Look for ways to reduce impacts to agricultural/EFU land and operations. Agricultural/EFU land could be better avoided while allowing an interchange between Newberg and Dundee.
After further study, the project engineers were able to substantially reduce impacts to agriculture/EFU land as requested by the POST by adjusting the location of the East Dundee Interchange connector road. Project engineers developed two additional options for the connector road. The PMT reviewed these options with the POST and ODOT moved ahead with replacing the connector road included in 3J with the one included in Modified 3J.
- Align the Bypass in south Newberg to minimize impacts to low income, Hispanic, and minority housing. Continue outreach efforts to keep these groups informed of the process as location.
Project engineers shifted the alignment of 3J south to avoid Scott Leavitt Park, as well as housing in southern Newberg. The resulting alignment is that included in Modified 3J. Further research indicated that the remaining corridor does not include a high concentration of Hispanic and minority housing. ODOT will also develop and implement a detailed outreach and relocation plan in Tier 2 of the project.
- Prohibit access along the East Dundee Interchange connector road between the interchange with Oregon 99W and the Bypass.
Project engineers prepared the connector road included in Modified 3J to show that the alternative prohibits access along this connector road.
- Design the Bypass to provide good access to the Newberg and Dundee riverfront areas (e.g., at College and River streets and through undeveloped East Dundee).
ODOT will address this issue in the Tier 2 study.
- Consider ways to reduce potential traffic impacts to Wilsonville Road.
ODOT will address this issue in the Tier 2 study.

In addition to these recommendations by the POST, ODOT made additional modifications to the alternative based on resource constraints and public input subsequent to the publication of the LDEIS. These modifications were made without creating new significant impacts. The modifications included:

- To avoid direct impacts to Scott Leavitt Park, a potential 4(f) resource, project team engineers shifted the Bypass corridor for Modified 3J to the south in the southern area of Newberg. This shift did not create any significant impacts.
- To accommodate access for the new Providence hospital and to avoid impacts to the historic resource located north of the corridor on Oregon 99W, project team engineers moved the Newberg interchange to the east.
- To respond to stakeholder concerns about resources in the proximity of the Dayton Interchange, project team engineers decreased the footprint of the interchange to minimize resource impacts, without creating negative implications to the interchange.

Figure 2-1 B shows the Modified 3J corridor and highlights the segments discussed above.

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Description of Modified 3J/Preferred Alternative

As stated above, modifications to reduce impacts were made to Alternative 3J, with the end result being the Preferred Alternative, Modified 3J.

Modified 3J is a Bypass corridor located along the south sides of Newberg and Dundee. The corridor is at least 330 feet wide, and at some parts reaches or exceeds 400 feet in width. The actual Bypass facility would probably require approximately 60 percent of the corridor width, or between 180 and 250 feet. The width allows for flexibility during Tier 2. Interchange footprints on the corridor also allow additional corridor space to account for variations in interchange design. Modified 3J extends for approximately 11 miles from its eastern terminus east of Newberg in the Rex Hill area at Oregon 99W milepost 20.08 to its western terminus where Oregon 99W intersects with Oregon 18 (McDougal Corner) west of Dundee at Oregon 18 milepost 51.84.

Modified 3J includes the following interchanges:

- *Dayton Interchange* – The Dayton Interchange is located at the junction of Oregon 99W and Oregon 18 and represents the western terminus of the Bypass. This interchange is a directional interchange providing free-flow connections westbound onto Oregon 99W and Oregon 18 and eastbound from those highways onto the Bypass. However, the interchange will not provide movements between eastbound Oregon 18 to westbound Oregon 99W, nor from eastbound Oregon 99W to westbound Oregon 18. The interchange replaces the existing Oregon 18/Oregon 99W intersection at McDougal Corner. This represents the western terminus of the Bypass, and replaces the South Dundee Interchange shown in Alternative 3J. The Dayton Interchange was analyzed in the LDEIS as part of Alternatives 3D, 3H, and 3K.
- *East Dundee Interchange* – The East Dundee Interchange is located between Dundee and Newberg and will offer full turning movements. A connector road links the Bypass interchange and Oregon 99W. The connector road will not have any intermediate access points between the Bypass and its intersection with Oregon 99W. The connector road intersection with Oregon 99W includes a grade separation across both Oregon 99W and the parallel railroad tracks. The East Dundee Interchange was analyzed in the LDEIS as part of Alternative 3J.
- *Oregon 219 Interchange* – The Oregon 219 Interchange is located in south Newberg along Oregon 219. This interchange is located inside Newberg's UGB and offers full turning movements. The Oregon 219 Interchange was analyzed in the LDEIS as part of Alternatives 3H, 3I, and 3J.
- *East Newberg Interchange* – The East Newberg Interchange is located southwest of Rex Hill and represents the eastern terminus of the Bypass. Like the Dayton Interchange, the East Newberg Interchange is a directional interchange, providing free-flow connections from the Bypass onto Oregon 99W eastbound and from Oregon 99W westbound onto the Bypass. The interchange does not provide movements from eastbound Oregon 99W to the westbound Bypass, nor from the eastbound Bypass to westbound Oregon 99W. This Interchange was analyzed in the LDEIS as part of Alternatives 3G, 3H, 3I, and 3J.

Modified 3J also includes the following features:

- *A four-lane bypass “Expressway.”*
Expressways¹⁶ as defined in the 1999 Oregon Highway Plan (OHP) provide for high-speed, high-volume travel between cities with minimal interruptions. A secondary function is to provide for long-distance, intra-urban travel in metropolitan areas. In urban areas, expressway speeds are

¹⁶ OHP at p. 42, Action 1.A2.

moderate to high. In rural areas, expressway speeds are high. This facility would also serve as a statewide freight highway.

- *A median.*

A landscaped median or median barrier will be located between the travel lanes, and shoulders will be constructed on both sides of the travel lanes.
- *Bicycle access.*

Bicycles are permitted to travel on the shoulders of highway facilities in Oregon. In addition, enhanced bicycle facilities may be provided either as part of the roadway cross-section or as a separate, parallel facility. This issue will be addressed as part of the Tier 2 study and other associated multimodal studies.
- *Access to the Bypass restricted to interchanges.*

Access to the Bypass is restricted to interchanges with the exception of Alternative 3I, which has two at-grade intersections. No direct access to the Bypass will be permitted from private properties. The Bypass will be grade-separated. Major county and city roads will be rerouted under or over the Bypass. Other local streets crossed by the Bypass will be rerouted around or away from the Bypass or stopped at the Bypass.
- *Bridges crossing larger fish-bearing streams.*

Bridges will be used to cross larger fish-bearing streams. Smaller drainages might be crossed using fish-passable culverts.
- *Toll roads.*

“Tolling” might be included as part of the Bypass. The need and feasibility for tolls will be evaluated, if appropriate, during Tier 2. The travel demand impacts due to tolling and the size and location of tolling facilities are unknown at this time.
- *Improvements needed to meet OHP access management standards.*

Improvements needed to meet OHP access management standards will be constructed, including road realignments and private driveway consolidations or relocations.
- *A typical operating speed of 55 miles per hour.*

The Bypass will have a typical operating speed of 55 miles per hour, except for Alternative 3I, which operates at a lower speed around two at-grade intersections in Newberg.

In addition, Modified 3J includes possible improvements to Oregon 99W and local street systems. The Bypass facility may result in the need for improvements to the surrounding transportation network. These improvements will be complementary to the Bypass and will be addressed in the Tier 2 analysis. The proposed improvements implemented during Bypass construction, regardless of the alternative selected, are as follows:

Improvements to Oregon 99W

- Consider the addition of left and/or right turning lanes at key Oregon 99W intersections throughout the project area and a northbound through lane at the Springbrook Road/Oregon 99W intersection.
- Manage access to Oregon 99W by consolidating and/or relocating private driveways and by providing local street connections where feasible.
- Integrate the Bypass with the local street system to maintain connectivity within and among communities.
- Investigate interim improvements to Oregon 99W in Dundee to relieve congestion.

-
- Investigate the possibility of providing appropriate Intelligent Transportation System (ITS)¹⁷ measures on Oregon 99W.

Improvements to Local Street System

- Investigate alternatives for connectivity of local street system. Options could include improving, building and/or interconnecting existing local or collector roadways within and between Newberg and Dundee to provide options to Oregon 99W for local trips.
- Provide pedestrian and bicycle facilities, including bicycle and pedestrian links to park-and-ride lots and adequate pedestrian and bicycle crossings along the Bypass. Employ traffic calming measures as appropriate.

INTERCHANGE AREA MANAGEMENT PLANS

Consistent with OHP requirements, ODOT will prepare Interchange Area Management Plans (IAMPs) for each of the four proposed interchanges included in Modified 3J. A primary purpose of the IAMPs is to protect the function of the Bypass and its associated interchanges to accommodate long-distance through traffic and regional trips with either an origin or a destination outside of the project area. The other purpose of the IAMPs is to plan local land uses and street connections in the vicinity of the interchange. ODOT will develop the IAMPs during Tier 2 of the Bypass project in partnership with Yamhill County, the affected cities and property owners.

The cities of Newberg, Dundee and Dayton and Yamhill County approved Interchange Overlay Districts as an interim land use tool that may be refined, revised, or replaced as IAMPs are adopted for each of the four proposed interchanges as required by the OHP. The Interchange Overlay Districts permit development in accordance with the existing zoning, but prohibit zone changes and UGB changes for three years. The Interchange Overlay Districts apply to unincorporated lands within approximately ¼ mile inside UGBs to ½ mile outside UGBs of the end of the ramps to the four interchanges.

COST OF BUILD ALTERNATIVES

ODOT developed preliminary cost estimates for the different Build Alternatives to create a general understanding of comparative costs between alternatives. The cost estimates included in the LDEIS were based on a written description of the Build Alternatives and unit cost factors, without preliminary engineering or specific design elements. They are intended for planning purposes only, and are only some of the factors used in the decision-making process. Other factors include environmental impacts and community and stakeholder preferences. The cost estimate for each Build Alternative was calculated by multiplying the length of the alternative by a per-mile cost and adding it to the cost of the interchanges and right of way specific to that Build Alternative. The mainline per-mile costs were based on previous detailed cost estimates for new construction of four-lane roadways. Costs for each type of interchange were calculated based on quantities for that interchange multiplied by unit costs from previous ODOT projects. A per-interchange cost was then assigned to each type of interchange. Right of way cost estimates were calculated for each of the Build Alternatives and included in the total cost. Specific design elements, such as putting part of the roadway below existing ground level, which would likely result in higher cost, were not included in the estimates.

¹⁷ ITS is defined as the application of advanced communications, information processing, control and electronics technology to improve the safety and operation of the existing transportation system. ITS is intended to work in conjunction with the existing transportation system to improve its performance for both key operating agencies, such as state, city, and county departments of transportation, as well as for system users, including commuters, transit users, tourists, freight concerns, and others.

Modified 3J was recommended by the POST after the public hearings in the fall of 2002. In the spring of 2003 a cost estimate was prepared for Modified 3J using the same methodology developed for the other LDEIS Build Alternatives. This cost estimate is also shown in Table 2-2.

Table 2-2 Planning Level Cost of Build Alternatives (millions of dollars)

Highway Segment	Dollar Year	3C	3D	3G	3H	3I	3J	3K	4C	Modified 3J
LDEIS Estimate (2002)	2002	\$187	\$215	\$206	\$234	\$198	\$194	\$218	\$190	
Updated Engineering Cost Estimate for Modified 3J (2003)	2002									\$222

In the fall of 2003, following the selection of Modified 3J, the Parkway Committee requested that ODOT prepare a concept phasing plan for the preferred alternative. The objective of the concept phasing plan was to gain a better understanding of the logical phasing elements of the Bypass in the event that adequate funding to build the entire project was not available. It also built a consensus among the affected jurisdictions on which segments of the roadway would be built first. In response to this request, ODOT developed the three-phase concept that appears in Figure 2-2. Phase 1 would be built first, followed by Phase 2 and Phase 3. This concept phasing plan was subsequently endorsed by the Parkway Committee.

An estimate was prepared in January of 2004 and presented to the POST. The updated cost estimate of Modified 3J, in 2004 dollars, is approximately \$311 million, of which approximately \$41 million is for right of way acquisition. This cost estimate assumes each phase will be built independently. The total cost and the cost of each segment is shown in Table 2-3. The estimated cost of Modified 3J also accounts for construction engineering, labor, materials, and a 20 percent contingency. Note that this is still a planning level estimate and that design options can change future estimates. The right of way costs were prorated per mile of entire project at \$4.1 million/mile. No special weight was applied to segments of the Bypass going through more urbanized areas. The concept phasing plan for the preferred alternative is presented as a possible construction sequence for the entire project. The environmental impacts of the concept phasing plan are not addressed in this document. Detailed cost estimates will be prepared during Tier 2, based on specific preliminary engineering alternatives. Project phasing may also be explored during Tier 2.

Table 2-3 Preferred Alternative 3J Planning Level Cost by Phase

Phase	Design & Construction Costs	Right of Way Costs	Total
Phase 1 - Dayton to E. Dundee Interchange			
With connector road to Oregon 99W	\$137 Million	\$23 Million	\$160 Million
Phase 2 – E. Dundee Interchange to Oregon 219			
With full build of Oregon 219 Interchange	\$74 Million	\$10 Million	\$84 Million
Phase 3 – Oregon 219 to Oregon 99W			
With full build of E. Newberg Interchange	\$59 Million	\$8 Million	\$67 Million
Total Project Cost	\$270 Million	\$41 Million	\$311 Million

Notes:

Full build includes four lanes and a median.

Costs are preliminary and subject to change.

Cost calculations based on 20% contingency and using ODOT 2003 average bid prices.

Phase 2 right of way costs could be greater than shown in urbanized areas.

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ALTERNATIVES CONSIDERED BUT WITHDRAWN

This section describes alternatives considered for the Bypass but withdrawn.

Alternative 1: Transportation Management

The POST dropped Alternative 1 as a stand-alone alternative and incorporated the Transportation Management components into the remaining Build Alternatives. Alternative 1 focused on enhancing and upgrading existing transportation facilities without a bypass, as described below. The description of the alternative, as considered by the POST, is quoted from the 1997 Alternatives Analysis report because of interest in the alternative and because it differs substantially from other Build Alternatives.

Purpose

The Transportation Management components of this MAP provide a number of travel options and transportation improvements in the Oregon 99W corridor at lower costs than the other “build” alternatives. This MAP incorporates a number of relatively small, mutually supportive projects to improve the operational efficiency and reliability of the corridor’s transportation supply (Transportation System Management), and to modify or reduce travel demand [Transportation Demand Management (TDM)]. The components initially include a high level of express bus service that would be transitioned to interurban passenger rail service as the demand required. The expected period of implementation is shown in parentheses for each component.

Key Elements

Transportation System Management:

- Introduce a moderate level and transition to a high level of express bus service between the Yamhill County cities along the Oregon 99W/18 corridor and the Portland metropolitan area, with commute-period service every 15 minutes. Provide off-peak and weekend service hourly between 6 a.m. and 12 a.m. (Short- to mid-term)
- Provide transit “stations” with park-and-ride facilities located approximately every two to four miles along Oregon 99W and 18 in Yamhill County in a manner compatible with the future operation of interurban rail, where feasible. (Short-term)
- Improve the local Yamhill County bus system to feed express bus transit “stations.” (Short-term)
- Provide special features to reduce express bus delays, such as bypass lanes, traffic signal priority, and direct ramps. (Mid-term)
- Provide grade-separated crossings where the railroad tracks cross highways and major roadways, i.e., Oregon 18 at McDougal Corner, Oregon 99W in downtown Newberg, and Tualatin-Sherwood Road in Sherwood. (Long-term and beyond)
- Consider mid-day express bus service. (Long-term)
- Between Newberg’s southern and Dundee’s northern city limits, upgrade Oregon 99W to current design standards for four through-traffic lanes. (Mid- to long-term)
- Provide four through-traffic lanes on Oregon 99W throughout Dundee’s city limits by acquiring right of way and widening the highway. (Short-term)
- Between Dundee’s southern city limits and Oregon 18, upgrade Oregon 99W to current design standards and provide four through-travel lanes. (Mid-term)

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- In Newberg, install a raised-center median along Oregon 99W between River Street and Newberg's eastern UGB, with median breaks for left turns at River Street, Villa Road, Sitka Avenue, Elliot Road, Deborah Street, Springbrook Street, and Brutscher Street. (Mid-term)
 - Add left and/or right turning lanes at key Oregon 99W intersections throughout the project limits. (Short- to mid-term)
 - Manage access by consolidating and/or relocating private driveways along Oregon 99W, and provide local street connections, where feasible. (Short- to mid-term)
 - Construct new and/or interconnect existing east-west local or collector roadways within and between Newberg and Dundee, e.g., Dayton Avenue on the south side of Oregon 99W. (Short- to mid-term)
 - Incorporate bicycle travel and/or bicycle lanes as a part of all highway widening improvements, and provide sidewalks when improving the highway within city limits. (Continuous)
 - Build bicycle and pedestrian links to express bus stations. (Short- to mid-term)
 - Construct bicycle and pedestrian facilities included in local TSPs, including those recommended along state highways in Yamhill County's TSP. (Continuous)
 - Employ traffic calming measures, as appropriate. (Mid-term)
 - Incorporate Intelligent Transportation System (ITS) components, including enhanced highway incident management, improved traveler information, and state-of the art traffic signal systems on Oregon 99W. (Continuous)

Transportation Demand Management:

- Institute TDM strategies consisting of regional carpool matching program, regional vanpool program, formation of transportation management agencies, construction of additional park-and-ride lots, and employee telecommuting. (Continuous)
- Institute TDM strategies consisting of alternative mode services, such as dial-a-ride, shuttle services to shopping centers, jitney services, employer shuttles to transit service, and bikes on transit. (Continuous)
- Encourage compressed work weeks, guaranteed ride home programs, restricted parking at major employment centers, cashed-out parking, and high-occupancy vehicle (HOV) preferential parking at major employment and shopping centers. (Continuous)
- Land use elements:
 - Encourage neighborhood medium density mixed-use nodes coordinated with transit, bicycle, and pedestrian modes. (Continuous)
 - Locate bus stations and associated park-and-ride lots to be compatible with rail station development. (Continuous)
 - Locate transit stations such that traffic operations on Oregon 99W are not substantially worsened by the transit-related traffic. (Continuous)
 - Encourage and concentrate appropriate mixed-use development at transit station sites (e.g., multi-family residential, offices, commercial, and retail uses). (Continuous)
 - Discourage large-scale retail development along the Oregon 99W corridor. (Continuous)
- For downtown Newberg and Dundee: (Continuous)
 - Encourage pedestrian and bicycle improvements.
 - Encourage adequate off-street parking and truck loading areas.

- Discourage increased density or uses that generate substantial amounts of traffic.
- Consider system development charges to support local transportation improvements necessitated by land development. (Short-term)

The POST dropped Alternative 1 from further consideration in April 2001 because:

1. Alternative 1 failed to meet the minimum transportation performance threshold. The alternative failed despite an assumption that this alternative would reduce daily traffic by 4 percent and peak period traffic by 10 percent. The assumed traffic reductions are greater than either Portland or Eugene have achieved. Both Eugene and Portland have made major commitments to provide for alternative modes of transportation.

The POST adopted a minimum transportation threshold in the form of a volume-to-capacity ratio of 0.75 for Oregon 99W inside the Newberg and Dundee urban growth boundaries. This ratio matches the OHP standards for urban statewide highways. Forecast year 2025 average daily traffic on the Oregon 99W couplet in Newberg under Alternative 1 is 54,500 vehicles. That results in a volume to capacity ratio of about 0.90. To reach the minimum transportation threshold set by the POST, the average daily traffic on the Newberg couplet would need to be reduced by an additional 9,500 vehicles.

The average daily traffic forecast for Alternative 1 in Dundee was 45,500 vehicles. That is only 1,500 fewer vehicles than with the No Build – a ratio of 1.25.

Under Alternative 1, the ratios in both cities were well above the acceptable threshold. Table 2-4 shows the relationship among numbers of highway lanes, highway type, traffic volumes and volume-to-capacity ratios. This table was presented to the POST when it considered and dropped Alternative 1.

Table 2-4 Volume and Capacity Relationships to Roadway Lane Needs

Facility Type and Size	Acceptable Daily Volume Threshold (vehicles per day)	
	Statewide Facility ¹	District Facility ²
Urban Facilities		
2-3 Lanes	<11,250	<12,750
4-5 Lanes	<30,000	34,000
6-7 Lanes	<45,000	<51,000
Rural Facilities		
2 Lanes	<7,000	<8,000
4 Lanes	<15,400	<17,600
Freeway Facilities		
2 Lanes	<24,500	<26,250
4 Lanes	<56,000	<60,000

¹ For urban statewide highways, the maximum volume-to-capacity threshold (v/c) is 0.75; on rural statewide highways and statewide freeways, the maximum v/c is 0.70.

² For urban district highways, the maximum v/c threshold is 0.85; on rural district highways, the maximum v/c is 0.80. For district freeways, the maximum v/c is 0.75.

Note: Volume-to-capacity ratio is the measure of the adequacy of the road capacity to the volume or amount of traffic. This ratio is then used to determine the quality of service.

For Alternative 1 to achieve the project’s minimum transportation threshold of a 0.75 volume-to-capacity ratio, the following construction would also be needed:

- Widen Oregon 99W to four lanes in each direction from Newberg’s east UGB to the downtown couplet.

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- Widen the downtown couplet in Newberg to four lanes in each direction from the current three.
 - Widen Oregon 99W through Dundee to three travel lanes in each direction plus a turn lane, for a total of seven lanes.

The POST rejected this extensive widening of Oregon 99W in 1997. With these changes, the resulting project would no longer be a “transportation management” alternative.

2. Alternative 1 would fail to meet five of the seven elements described in the project’s purpose and need statement, as listed in Chapter 1.

- Improve the efficiency and modal options of the transportation system for all its users. As described above, traffic volumes on Oregon 99W would substantially exceed capacity, so the alternative would fail to improve efficiency for motor vehicles. A volume-to-capacity ratio of up to 1.25 also would impair the efficiency of express bus service using Oregon 99W.
- Improve the movement of through traffic. In 2025, the volume-to-capacity ratios inside the Newberg and Dundee urban growth boundaries would range from 1.25 to 1.40, indicating very heavy congestion. Analysis of this alternative conducted in 1997 showed congestion on Oregon 99W lasting six hours on weekdays and nine hours on weekends.
- Enhance and protect the public health and safety of travelers and of communities that transportation facilities traverse. Alternative 1 would fail to protect the public health and safety of the communities of Newberg and Dundee because the traffic congestion would create an unfriendly environment for pedestrians and bicyclists, as well as increase air pollution levels. Under current congested traffic conditions, accident rates are 14 percent higher than for similar statewide routes in Oregon. The average daily traffic on Oregon 99W today is 40,000 vehicles on the Newberg couplet (both directions) and 32,000 vehicles in Dundee. By 2025, volumes would be 54,500 and 45,500, respectively, under Alternative 1. These volumes are only 3 percent lower than the forecasted volumes under the No Build, well within the margin of error of the forecasts.
- Contribute to the improvement of the economy, social fabric and overall livability along the Oregon 99W corridor in the Newberg–Dundee area and in the broader area (such as the central coast) that relies on the regional roadway system. Alternative 1 would erode the social fabric and overall livability along Oregon 99W in the Newberg-Dundee area. As indicated above, traffic volumes on Oregon 99W through the downtown areas of Newberg and Dundee under Alternative 1 would be similar to volumes under the No Build. This would have a substantial negative impact. Much of the congestion would be caused by the high percentage of through traffic. High volumes would create a barrier to movement within the community and adversely impact the environment along the highway for cross-town travel, pedestrian movement, shopping, outdoor dining, etc. High traffic volumes on Oregon 99W would hinder the regional movement of goods and services, thus adversely affecting social and economic conditions in the area.
- Satisfy applicable federal, state and local plans, policies and regulations. Alternative 1 would fail to meet state and local plans and policies. The volume-to-capacity ratio under Alternative 1 would exceed 1.25, which is well above the applicable volume-to-capacity ratio of no more than 0.75 found in the OHP. In addition, Alternative 1 is inconsistent with the Newberg comprehensive plan, which calls for a Bypass “along a Southern alignment,” and with the Dundee comprehensive plan, which expresses a preference for a Bypass around Newberg and Dundee.

3. Alternative 1 would require widening of Oregon 99W to seven lanes in Dundee. The wider roadway would displace houses and businesses downtown.

Alternatives 2A and 2B: Regional Bypass Alternatives

The Regional Bypass Alternatives would relieve congestion on Oregon 99W in Newberg and Dundee by connecting a new highway from Oregon 99W in Yamhill County to I-5 near Donald in Marion County. The POST considered two versions of the Regional Bypass in 2001. Alternative 2A would have linked with Oregon 99W at an interchange southwest of Dundee, and Alternative 2B would have connected at the Oregon 99W/Oregon 18 junction. Both alternatives provided for new interchanges with Oregon 219 and I-5. They incorporated transportation management and land use elements, and required a new bridge over the Willamette River south of Dundee. In addition, they included two more traffic lanes on Oregon 99W in Dundee (total of five lanes) and widening as needed to provide four lanes on Oregon 99W from Dundee to the junction of Oregon 99W and Oregon 18.

In June 2001, the POST dropped Alternatives 2A and 2B from further consideration. The POST based this decision on the substantial problems associated with the Regional Bypass Alternatives, including their likely inability to comply with state and federal regulations. The POST's reasoning considered:

- Adverse wetland impacts (30 percent to 50 percent higher than other alternatives).
- Farmland impacts (a displacement of 499 to 563 acres plus indirect impacts on farm operations) were higher than all other alternatives, and more than twice as high as one of the alternatives in the southern corridor (Alternative 3C).
- Resource impacts made it unlikely the alternatives would meet the requirements of the Clean Water Act and Oregon Statewide Planning Goals.
- Marion County officially declared its intention to withhold approval of comprehensive plan amendments necessary for construction of any Regional Bypass.
- Construction of additional facilities would have been required for a Regional Bypass to function adequately. These included widening Oregon 219 between the Bypass and Newberg (including the bridge across the Willamette River), widening I-5 north to Wilsonville, and widening I-5 bridges across the Willamette River.
- The Regional Bypass would not reduce congestion as effectively as other alternatives; therefore, Oregon 99W would need to be widened through Dundee.
- Growth-inducing impacts would likely have affected Northern Marion County (including St. Paul) more than with other alternatives.
- The Regional Bypass Alternatives would have had the highest cost of all the alternatives under consideration.
- Participants at the project's second summit rated Regional Bypass Alternatives as the least likely to receive the needed approvals.

Alternatives 3A, 3B, 3E and 3F: Southern Build Alternatives

Alternatives 3A and 3B have many similarities, as do Alternatives 3E and 3F; therefore, the discussions below are grouped accordingly.

Alternatives 3A and 3B

These alternatives have a unique alignment between Newberg and Dundee and were labeled "direct route." With the exception of a segment between Newberg and Dundee, Alternative 3A resembled Alternative 3C, and Alternative 3B resembled 3D. However, compared to Alternatives 3C and 3D, the segment unique to Alternatives 3A and 3B would cause higher impacts to agriculture. Also, endangered fish stream buffers for Alternatives 3A and 3B were estimated at 7 acres compared to 4 acres of potential

impact associated with Alternatives 3C and 3D. Therefore, the POST eliminated Alternatives 3A and 3B from further consideration in October 2001. Alternatives 3C and 3D are still under consideration.

Alternatives 3E and 3F

Alternatives 3E and 3F were “mini-bypass” concepts. Both alternatives had the same alignment, except that 3F was defined as a slower-speed facility with three at-grade intersections in Newberg.

These two options included an interchange east of Newberg and a Bypass location similar to Alternatives 3C and 3D, except that the Bypass would be shortened to end at an interchange with Oregon 99W east of Dundee. Oregon 99W would have been reconstructed as a one-way couplet through Dundee with three lanes in each direction. The alternative would require Oregon 99W to have four lanes from Dundee to the Oregon 99W/Oregon 18 junction. In addition, these alternatives included a new interchange at the Oregon 99W/Oregon 18 junction. Alternative 3F would have required reconstructing Oregon 99W through east Newberg to a seven-lane urban arterial because the Bypass would not attract as much traffic from Oregon 99W.

In June 2001, the POST eliminated Southern Build Alternatives 3E and 3F for several reasons, including community livability. Participants in the project’s second summit ranked these alternatives as the second and third most flawed for “reasons other than regulatory.” Participants at a subsequent public symposium ranked these alternatives as third and fourth most flawed (following the Northern Bypass alternatives).

Alternatives 3E and 3F showed the most potential for home displacements except for Alternative 4B (the mini-bypass concept studied for the Northern Bypass). Alternatives 3E and 3F also showed higher impacts to parks and historic properties than other Southern Build Alternatives. These impacts, coupled with the continuation of high traffic volumes downtown, were perceived as having a negative impact on Dundee’s livability. Alternative 3F would necessitate widening Oregon 99W to seven lanes from Rex Hill to Newberg’s couplet. Livability in Newberg would be adversely affected by widening Oregon 99W to seven lanes from the Bypass interchange to the downtown couplet, with both direct (from the widening) and indirect (from the additional traffic) impacts. Additionally, the other four Southern Build Alternatives outperformed Alternatives 3E and 3F in protection of agricultural land.

Alternatives 4A and 4B: Northern Bypass Alternatives

Unlike the current Northern Bypass Alternative route under consideration (4C), both of these alternatives included a corridor that bisected residential neighborhoods in northern Newberg.

Alternative 4A

Alternative 4A included a bypass of both Newberg and Dundee and an interchange with Oregon 99W east of Newberg. It terminated at an interchange with Oregon 99W west of Dundee. The alternative also connected to Oregon 99W east of Dundee via a new interchange. The Bypass would have had extensive grades around Dundee, it would have required reconstructing Oregon 99W within the Dundee UGB to a five-lane urban arterial, and it would have also required that the section from Dundee to the Oregon 99W/Oregon 18 junction be upgraded to a four-lane divided highway over its entire length. Alternative 4A also would have required a new interchange at the junction of Oregon 99W/Oregon 18.

The POST dropped Alternative 4A in June 2001. Reasons included the substantial fragmentation of existing Newberg neighborhoods created by the Bypass, impacts on Dundee’s well and spring water sources, and adverse visual and safety impacts caused by cuts and fills on the hillsides above Dundee. Also, reductions in resource impacts did not offset neighborhood fragmentation throughout the north side of Newberg. The Northern Bypass Alternative had fewer impacts than the Southern Build Alternatives in acres of stream buffers, but had greater impacts to wetlands, length of streams impacted, parks and historical site impacts. Steep topography would lead to potential safety problems and discourage some drivers from using the Bypass, causing more drivers to remain on Oregon 99W under this alternative than

under the Southern Build Alternatives. Participants in the project's second summit and public symposium did not consider Alternative 4A to be the most viable traffic solution.

Alternative 4B

Through Newberg, Alternative 4B contained the same elements as Alternative 4A, but it included a "mini-bypass," similar to alternatives 3E and 3F, that terminated east of Dundee. Oregon 99W would be reconstructed as a one-way couplet through Dundee with three lanes in each direction. Oregon 99W from Dundee to the Oregon 99W/Oregon 18 junction would need to have four lanes. In addition, this alternative included a new interchange at the Oregon 99W/Oregon 18 junction.

The POST dropped Alternative 4B in June 2001. Alternative 4B would have caused substantial fragmentation of Newberg neighborhoods. Also, the alternative's couplet through Dundee was perceived as having an adverse effect on Dundee's livability. Resource impacts were not sufficiently reduced to offset the neighborhood fragmentation and livability issues.

Participants in the project's second summit ranked Alternative 4B as "most flawed" on issues other than regulatory. Participants in the subsequent public symposium ranked Alternative 4B as overall "most flawed."

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