

OR 99 Corridor Plan

DRAFT Technical Memorandum #4 Future Baseline Conditions Analysis

Prepared for

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4 FUTURE BASELINE CONDITIONS ANALYSIS

This technical memorandum provides a summary of the 2034 Future Baseline (no-build) transportation conditions through the OR 99 corridor. The analysis examines conditions where the transportation system has been improved by projects with likely funding sources and population and employment in the region surrounding the corridor and traffic volumes continue to grow. The long-range regional growth forecasts are consistent with current land use zoning. The analysis identifies anticipated operational deficiencies and serves as the basis for later evaluation to compare concepts that address deficiencies.

4.1 Future Traffic Volume Development

Future Baseline traffic volume forecasts were developed using the regional travel demand forecasting model, which is based on long-range land use assumptions. These forecasts are consistent with the Rogue Valley Metropolitan Planning Organization (RVMPO) Regional Transportation Plan (RTP) through the year 2034. The travel demand forecasting process is briefly described below.

4.1.1 Travel Demand Forecasting Models

The future traffic volumes are developed from travel demand forecasting models. Travel demand models have been in use since the 1950s and employ a market-based approach by considering both transportation supply and travel demand for producing traffic forecasts. The model relies on socioeconomic data (e.g., households and employment) to determine travel demand and system attributes (e.g., roadway capacity, speeds, and distances) to represent the transportation supply. The RVMPO currently uses the EMME computer program for estimating travel demand.

Regional Transportation Plan Model

The travel demand model (named RVMPO v1) for the RTP was developed for a base year of 2002 and a forecast year of 2030. While there are currently newer versions of the travel demand model (RVMPO v2 and RVMPO v3), the v1 model provides the most consistent results for the OR 99 study area.

Traffic forecasts for the study area intersections were developed from the 2002 and 2030 RVMPO v1 forecasting models and the 2010 existing traffic data for the future baseline scenario. The process followed the procedures from ODOT's Analysis Procedures Manual (APM)¹. The forecast year for this corridor study is 2034, which coincides with the RVMPO's 2009-2034 Regional Transportation Plan (RTP); thus, model volumes were extrapolated to 2034.

¹ Analysis Procedures Manual, Oregon Department of Transportation, Transportation Development Division Planning Section, Transportation Planning and Analysis Unit, Salem, Oregon, April, 2006, Section 4.3.

Future Baseline -15% Sensitivity Scenario

As a result of recent fluctuations in the economy, traffic volumes have seen a decline over the past several years, with only a small recovery. Because of this trend, developing traffic volume forecasts based on the existing year counts and the travel demand model forecasts may result in lower volumes than would have been estimated just a few years ago. As such, a second future baseline scenario was evaluated that applies a fifteen percent upward adjustment to the baseline scenario volumes to allow for a sensitivity analysis. This allows for an analysis of operations under the assumption that we experience an economic rebound that results in an increase in traffic volumes, to examine the possibility of other system deficiencies.

4.2 Future Transportation Network

The network used in the forecasts for the OR 99 corridor is a future network that includes projects from the financially-constrained Tier 1 project lists in the RTP, which was approved in March 2009 (amended April 2009). These projects have known funding sources or are likely to be funded in the next 20 years. Table 4-1 summarizes the projects assumed in the baseline scenario analysis. Some of these improvements may not be reflected in the travel demand model because travel mode choices are assumed outside of the traffic volume assignment process. However, this corridor plan examines all modes of travel; thus they are appropriate assumptions that should be included for analysis purposes.

In addition to the Tier 1 RTP project list, a planned project in north Ashland was assumed in the baseline scenario. This project is titled Lithia Springs, and includes development to the southwest of South Valley View Road at OR 99, which would incorporate a south leg to the study intersection.

Table 4-1. RTP Tier 1 Project List for OR 99 Corridor Study area

RTP Project Number	Location	Description
Phoenix		
600	4th St., OR 99 (SB) to OR 99 (NB)	Widen to provide bike lanes
601	4th St., Rose St. to Colver Rd.	Widen to provide bike lanes and sidewalks
603	Rose St., First St. to Fifth St.	Widen to provide bike lanes
605	Bolz Rd., OR 99 to Fern Valley Rd.	Widen to provide bike lanes and sidewalks
611	Colver Rd., First St. to southern UGB limits	Widen to provide bike lanes and sidewalks
614	3rd St., existing terminus to OR 99 (NB)	Construct new street with bike lanes and sidewalks
615	Parking St., OR 99 (NB) to Third St.	Construct new street with bike lanes and sidewalks
Talent		
717	Rapp Rd., R/R X-ing to Wagner Creek Rd.	Rebuild and upgrade to urban major collector standard
722	Rogue River Parkway, OR 99 to Talent Ave.	Construct new street or upgrade existing street to major collector
Jackson County		
857	Bear Creek Greenway Reconstruction	Reconstruct damaged trail segments: Ashland, Talent, Medford
ODOT		
902	I-5: Fern Valley Interchange, Phase 2	Reconstruct interchange; realign, widen connecting roads: replace Bear Creek Bridge
932	OR 99: Rapp Rd to Valley View Paving	Grind/Inlay and Overlay pavement

Source: Amended 2009 RTP Project List (2034)

4.2.1 Turning Movement Volumes

Traffic volumes for the future baseline scenario and the future baseline sensitivity scenario are presented in Figure 4-1 and Figure 4-2, respectively. The detailed volume development worksheets are presented in Appendix A.

4.3 Intersection Operational Results

Traffic operations were evaluated at the 19 corridor intersections. Operations are described in the following sections for the two future baseline scenarios and the detailed analysis worksheets are presented in Appendix B. These findings reflect optimized signal timing plans at all signalized corridor intersections.

4.3.1 Future Baseline

The future baseline analysis intersection results are summarized below in tabular form and compared to the Oregon Highway Plan (OHP) mobility standards. Table 4-2 presents the results of the future baseline traffic operations and Figure 4-3 illustrates the results for all study area movements.

Table 4-2. Future (2034) Baseline Scenario - Design Hour Intersection Operations

Intersection	Critical ¹ Movement	2034 PM Peak Hour			Operational Standards ³	
		V/C Ratio ²	LOS ²	Delay ² (sec.)	OHP	City
Medford Segment						
1. OR 99 @ Garfield Street (Signalized)	Overall	0.65	C	25	0.90	D
2. OR 99 @ Lowry Lane (Signalized)	Overall	0.58	B	15	0.90	D
3. OR 99 @ Bear Creek Corp Drive (Signalized)	Overall	0.46	A	43	0.90	D
4. OR 99 @ South Stage Road (Signalized)	Overall	0.75	C	21	0.90	D
Phoenix Segment						
5. OR 99 @ Fern Valley Road (Signalized)	Overall	0.61	B	22	0.90	0.90
6. OR 99 @ Bolz Road (Signalized)	Overall	0.43	B	12	0.90	0.90
7. SB OR 99 (N Main Street) @ 4th Street	EB T/R	0.59	E	14	0.95	0.95
8. NB OR 99 (Bear Creek Drive) @ 4th Street	EB L	0.31	C	9	0.95	0.95
9. SB OR 99 (N Main Street) @ 1st Street	EB T/R	0.59	E	12	0.95	0.95
10. NB OR 99 (Bear Creek Drive) @ 1st Street	EB L	0.33	A	9	0.95	0.95
11. SB OR 99 (N Main Street) @ Oak Street	EB T/R	0.16	C	9	0.95	0.95
12. NB OR 99 (Bear Creek Drive) @ Oak Street	NB L/T	0.33	A	3	0.95	0.95
Talent Segment						
13. OR 99 @ Colver/Suncrest Road (Signalized)	Overall	0.57	B	12	0.90	N.A.
14. OR 99 @ W Valley View Road (Signalized)	Overall	0.83	D	54	0.90	N.A.
15. OR 99 @ Rapp Road (Signalized)	Overall	0.67	B	17	0.90	N.A.
16. OR 99 @ Arnos Road	EB L/R	0.29	C	13	0.90	N.A.
17. OR 99 @ Creel Road	EB L/R	0.11	C	11	0.90	N.A.
Talent to Ashland Transition						
18. OR 99 @ Talent Avenue/Old Pacific Hwy	EB L/R	0.04	B	7	0.90	N.A.
19. OR 99 @ S Valley View Road (Signalized)	Overall	0.87	D	75	0.80	N.A.

Acronyms: For intersection approaches NB = northbound, SB = southbound, EB = eastbound, and WB = westbound. At the intersection approach L = left-turn movement, T = through movement, and R right-turn movement. Some approaches have shared lanes where two or more travel movements may be permitted as indicated with a slash.

Notes:

1. The critical movement at a signalized intersection is the overall operation of the intersection. The critical movement at an unsignalized intersection is the stopped (or yield) movement with the worst v/c ratio.
2. The v/c ratio and LOS are provided from Synchro HCM Intersection Analysis Reports, while delay and queuing values are from SimTraffic.
3. Mobility standards are drawn from Table 6 of the 1999 OHP and corresponding TSPs. All study area intersections are within the UGB and MPO.

Shaded results indicate where mobility standards are not met

Traffic operations would be acceptable under future baseline conditions throughout the corridor, with one exception. The signalized intersection of OR 99 at S Valley View Road would exceed OHP operational standards with a v/c ratio of 0.87 and an LOS of D. None of the other intersections would fail to meet v/c ratio standards. The worst LOS in the corridor would be E for the stopped side-street movement at two unsignalized intersections.

Table 4-3 presents the 95th percentile queuing estimates for movements that exceed available storage distances. Three signalized intersections are expected to have 95th percentile queues that would exceed the storage bay length or reach/surpass a public access point. On OR 99 at Colver/Suncrest Road, the eastbound left-turn movement is expected to extend beyond the next upstream intersection. The southbound left-turn movement on OR 99 at W Valley View Road is expected to spill out of the left-turn lane more than 66 percent of the time, which will also cause greater queuing for the through movements. OR 99 at S Valley View Road is expected to have significant queuing on the northbound and westbound approaches that will block upstream intersections.

Table 4-3. Future (2034) Baseline Scenario - 95th Percentile Queues Exceeding Available Storage

Intersection	Approach & Movement	95 th Percentile Queue (ft.)	Available Storage (ft.)	Percent Time Blocked ¹
13. OR 99 @ Colver/Suncrest Road (Signalized)	EBL	125	100 ²	
14. OR 99 @ W Valley View Road (Signalized)	SB L	450	325 ³	66%
	SB T/R	875	625 ²	
19. OR 99 @ S Valley View Road (Signalized)	WB L/T/R	1125	900 ²	
	NB T	850	200 ²	25%

Acronyms: For intersection approaches NB = northbound, SB = southbound, EB = eastbound, and WB = westbound. At the intersection approach L = left-turn movement, T = through movement, and R right-turn movement. Some approaches have shared lanes where two or more travel movements may be permitted as indicated with a slash.

Notes:

1. Percent time block reflects the percentage of time when the queue either extends out of a storage bay and interferes with the adjacent through travel lane or extends past the next upstream intersection.
2. Storage distance reflects spacing to the next public access point.
3. Storage distance reflects length of travel lane or turn bay.

4.3.2 Future Baseline – 15% Sensitivity Scenario

The future baseline analysis intersection results are summarized below in tabular form and compared to the Oregon Highway Plan (OHP) mobility standards. Table 4-4 presents the results of the future baseline traffic operations and Figure 4-4 illustrates the results for all study area movements.

Traffic operations would be acceptable under future baseline conditions throughout the corridor, with two exceptions. The signalized intersection of OR 99 at S Valley View Road would exceed OHP operational standards and capacity with a v/c ratio of 1.01 and an LOS of E. Also exceeding OHP operational standards is the signalized intersection of OR 99 at W Valley View Road which would operate at a v/c ratio of 0.93 and an LOS of C. None of the other intersections would fail to meet v/c ratio standards. The worst LOS in the corridor would be F for stopped side-street movements at two unsignalized intersections.

Table 4-4. Future (2034) Baseline Sensitivity Scenario - Design Hour Intersection Operations

Intersection	Critical ¹ Movement	2034 PM Peak Hour			Operational Standards ³	
		V/C Ratio ²	LOS ²	Delay ² (sec.)	OHP	City
Medford Segment						
1. OR 99 @ Garfield Street (Signalized)	Overall	0.75	D	32	0.90	D
2. OR 99 @ Lowry Lane (Signalized)	Overall	0.66	C	18	0.90	D
3. OR 99 @ Bear Creek Corp Drive (Signalized)	Overall	0.55	A	37	0.90	D
4. OR 99 @ South Stage Road (Signalized)	Overall	0.78	C	25	0.90	D
Phoenix Segment						
5. OR 99 @ Fern Valley Road (Signalized)	Overall	0.62	B	14	0.90	0.90
6. OR 99 @ Bolz Road (Signalized)	Overall	0.51	B	12	0.90	0.90
7. SB OR 99 (N Main Street) @ 4th Street	EB T/R	0.73	F	17	0.95	0.95
8. NB OR 99 (Bear Creek Drive) @ 4th Street	EB L	0.42	C	10	0.95	0.95
9. SB OR 99 (N Main Street) @ 1st Street	EB T/R	0.83	F	14	0.95	0.95
10. NB OR 99 (Bear Creek Drive) @ 1st Street	EB L	0.43	C	11	0.95	0.95
11. SB OR 99 (N Main Street) @ Oak Street	EB T/R	0.24	C	10	0.95	0.95
12. NB OR 99 (Bear Creek Drive) @ Oak Street	EB L	0.14	B	8	0.95	0.95
Talent Segment						
13. OR 99 @ Colver/Suncrest Road (Signalized)	Overall	0.63	B	13	0.90	N.A.
14. OR 99 @ W Valley View Road (Signalized)	Overall	0.93	C	26	0.90	N.A.
15. OR 99 @ Rapp Road (Signalized)	Overall	0.76	C	21	0.90	N.A.
16. OR 99 @ Arnos Road	EB L/R	0.39	D	15	0.90	N.A.
17. OR 99 @ Creel Road	EB L/R	0.18	C	12	0.90	N.A.
Talent to Ashland Transition						
18. OR 99 @ Talent Avenue/Old Pacific Hwy	EB L/R	0.03	B	12	0.90	N.A.
19. OR 99 @ S Valley View Road (Signalized)	Overall	1.01	E	258	0.80	N.A.

Acronyms: For intersection approaches NB = northbound, SB = southbound, EB = eastbound, and WB = westbound. At the intersection approach L = left-turn movement, T = through movement, and R right-turn movement. Some approaches have shared lanes where two or more travel movements may be permitted as indicated with a slash.

Notes:

1. The critical movement at a signalized intersection is the overall operation of the intersection. The critical movement at an unsignalized intersection is the stopped (or yield) movement with the worst v/c ratio.
2. The v/c ratio and LOS are provided from Synchro HCM Intersection Analysis Reports, while delay and queuing values are from SimTraffic.
3. Mobility standards are drawn from Table 6 of the 1999 OHP and corresponding TSPs. All study area intersections are within the UGB and MPO.

Shaded results indicate where mobility standards are not met

Table 4-5 summarizes the intersection movements with queues exceeding available storage distances. Five signalized intersections and one unsignalized intersection are expected to have 95th percentile queues that would exceed the storage bay length or reach/surpass a public access point. In addition to the three locations described for the future baseline scenario, three other intersections would have 95th percentile queues that exceed available storage or block upstream intersections. The signalized intersections of OR 99 at Garfield Street, OR 99 at South Stage Road, OR 99 at Colver/Suncrest Road, OR 99 at W Valley View Road, and OR 99 at S Valley

View Road would all have side streets with excess queuing. OR 99 at S Valley View Road would also experience queuing on the mainline in the northbound direction. At the unsignalized intersection of NB OR 99 (Bear Creek Drive) at Oak Street, the eastbound left-turn movement could occasionally extend beyond the limited storage area between the segments of the downtown Phoenix couplet, which could interfere with the southbound through traffic..

Table 4-5. Future (2034) Baseline Sensitivity Scenario - 95th Percentile Queues Exceeding Available Storage

Intersection	Approach & Movement	95 th Percentile Queue (ft.)	Available Storage (ft.)	Percent Time Blocked ¹
1. OR 99 @ Garfield Street (Signalized)	WB L	350	300 ³	
	WB T	850	800 ²	15%
4. OR 99 @ South Stage Road (Signalized)	EB L	150	125 ³	1%
12. NB OR 99 (Bear Creek Drive) @ Oak Street	EB L	75	50 ²	
13. OR 99 @ Colver/Suncrest Road (Signalized)	EBL	125	100 ²	
	EB T/R	125	100 ²	
14. OR 99 @ W Valley View Road (Signalized)	WB L	250	200 ³	6%
19. OR 99 @ S Valley View Road (Signalized)	WB L/T/R	925	900 ²	
	NB T	2450	200 ²	54%
	NB R	225	150 ³	29%

Acronyms: For intersection approaches NB = northbound, SB = southbound, EB = eastbound, and WB = westbound. At the intersection approach L = left-turn movement, T = through movement, and R right-turn movement. Some approaches have shared lanes where two or more travel movements may be permitted as indicated with a slash.

Notes:

1. Percent time block reflects the percentage of time when the queue either extends out of a storage bay and interferes with the adjacent through travel lane or extends past the next upstream intersection.
2. Storage distance reflects spacing to the next public access point.
3. Storage distance reflects length of travel lane or turn bay.

4.3.3 Future Traffic Safety Considerations

The future baseline analysis reveals several long-term traffic safety issues that need consideration. In general, long delays and extensive queues may cause drivers to engage in riskier actions, such as running lights or traveling longer distances in the TWLTL to go around queues, which could result in more turning, angle, and sideswipe collisions. On unsignalized side streets, longer delays may increase the likelihood that drivers would accept shorter gaps in the mainline traffic putting them at risk for turning or angle collisions. Where congestion is expected to worsen, it is safe to assume that current safety concerns would be exacerbated.

The existing conditions analysis identified frequency, severity, rate, and type of reported crashes along the study corridor and at each study intersection for a five-year analysis period (January 1, 2005, and December 31, 2009). The data is summarized in Table 3-6 of the Existing Conditions Memo. There are no segments along the OR 99 study corridor identified in the top 10% of the most recent (2010) Safety Priority Index System (SPIS) rankings within the study area. However, this analysis revealed several mainline intersections and segments with specific crash trends. The areas of concern are primarily focused at:

- Fern Valley Road
- Between Fern Valley Road and South Stage Road
- Between Garfield Avenue and Lowry Lane
- Between Talent Avenue and South Valley View Road
- Garfield Street
- Creel Road

Pedestrian collisions occurred at four locations, two were midblock (between S Stage Road and Fern Valley Road and between Talent Avenue and S Valley View Road) and two were at intersections (Bear Creek Road - NB OR 99 at 4th Street and at Oak Street)

The improvements assumed in the future conditions would not mitigate the frequency or severity of crashes at these locations, except at Fern Valley Road (although not in the segment to the north). Moreover, the crash rates might increase in the future as drivers are provided smaller gaps due to increased traffic volumes.

4.4 Conclusions

Only one intersection, OR 99 and South Valley View Road, is expected to exceed mobility standards by year 2034 within the study area with a v/c ratio of 0.87 for the Future Baseline scenario. This intersection already has a planned RTP project on the Tier 2 list (currently unfunded). Only three Future Baseline scenario intersections are expected to experience queuing in excess of available storage distances and block adjacent lanes or public access points.

With a 15 percent increase in study area traffic, the Future Baseline Sensitivity scenario is expected to have two intersections which exceed mobility standards by year 2034, OR 99 and South Valley View Road and OR 99 at West Valley View Road. The intersection of OR 99 and South Valley View Road would also exceed capacity with a v/c ratio of 1.01, while the intersection of OR 99 at West Valley View Road would operate at a v/c ratio of 0.93. For the Future Baseline Sensitivity scenario six total intersections would experience queuing in excess of available storage distance and block adjacent lanes or public access points, five signalized intersections and one unsignalized intersection.

The Future Baseline scenario would not provide improvements to mitigate the frequency or severity of crashes at several problematic locations, and may generally result in an increased crash rate as drivers are provided smaller gaps due to increased traffic volumes.

Attachments:

Figure 4-1. Future (2034) Baseline Scenario – Design Hour Traffic Volumes

Figure 4-2. Future (2034) Baseline Sensitivity Scenario – Design Hour Traffic Volumes

Figure 4-3. Future (2034) Baseline Scenario – Lane Configurations & Traffic Operations

Figure 4-4. Future (2034) Baseline Sensitivity Scenario – Lane Configurations & Traffic Operations

Appendix A. Future Baseline Traffic Volume Development Worksheets

Appendix B. Traffic Analysis Worksheets



OR 99 @ Garfield Street*	OR 99 @ Lowry Ln	OR 99 @ Bear Creek Corp Dr																																																												
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Legend:

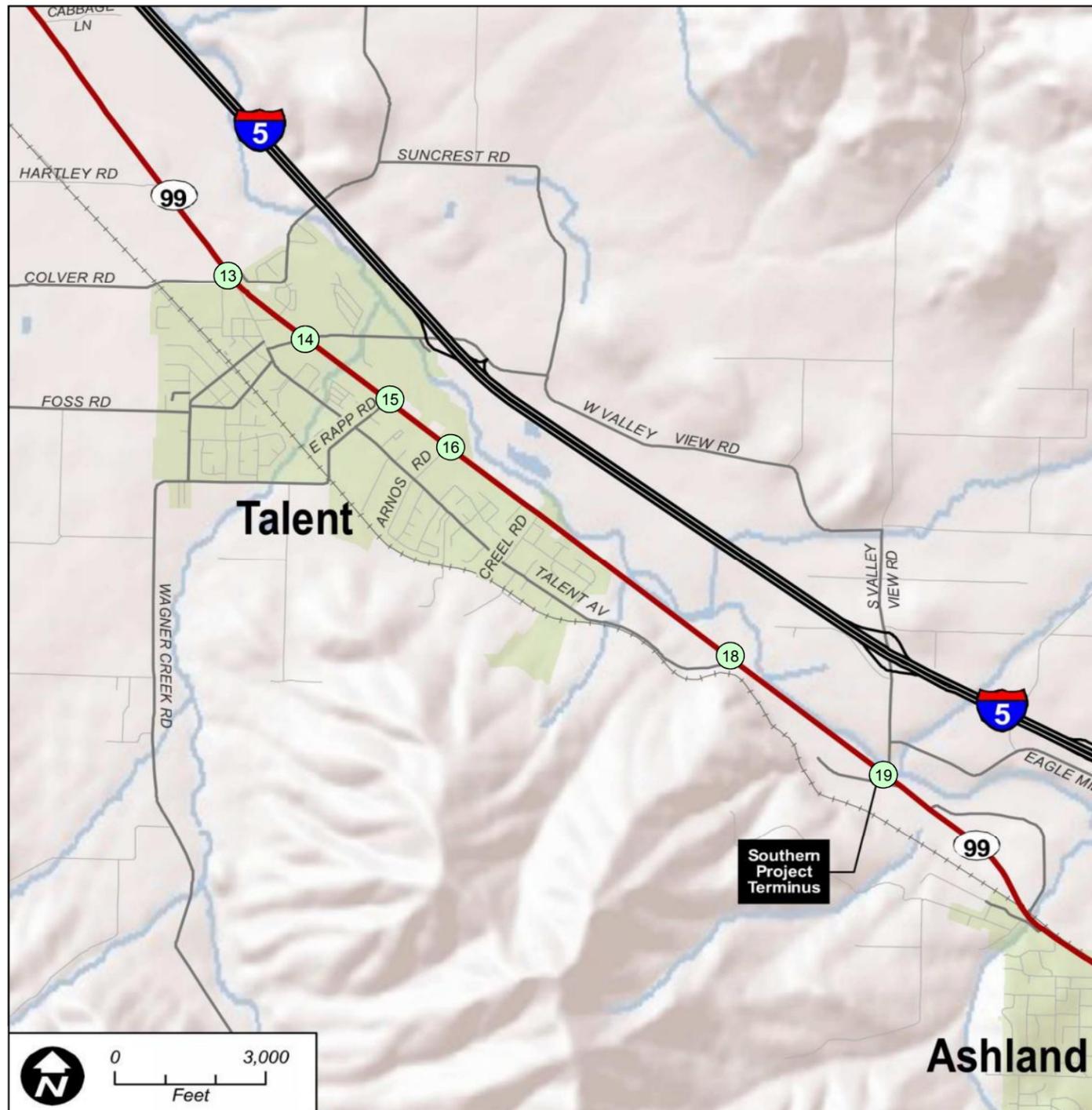
- TEV:** Total Entering Volume
- ###** PM Peak Hour Volume
- Turning Movement
- *** Diagrams show OR 99 as the north and south legs of study intersections throughout

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OR 99 Corridor Plan

Figure 4-1 North

*Future (2034) Baseline Scenario
Turning Movement Volumes
PM Peak Hour*



OR 99 @ Colver/Suncrest Rd*													
13													
<table border="1"> <tr> <td>← 245</td> <td>↓ 445</td> <td>↘ 25</td> </tr> <tr> <td>↑ 200</td> <td>→ 25</td> <td>↙ 105</td> </tr> </table>	← 245	↓ 445	↘ 25	↑ 200	→ 25	↙ 105	<table border="1"> <tr> <td>↖ 10</td> <td>↗ 15</td> <td>↘ 30</td> </tr> <tr> <td>↙ 125</td> <td>↘ 620</td> <td>↗ 15</td> </tr> </table>	↖ 10	↗ 15	↘ 30	↙ 125	↘ 620	↗ 15
← 245	↓ 445	↘ 25											
↑ 200	→ 25	↙ 105											
↖ 10	↗ 15	↘ 30											
↙ 125	↘ 620	↗ 15											
TEV: 1860													

OR 99 @ W Valley View Rd													
14													
<table border="1"> <tr> <td>← 65</td> <td>↓ 335</td> <td>↘ 180</td> </tr> <tr> <td>↑ 45</td> <td>→ 190</td> <td>↙ 50</td> </tr> </table>	← 65	↓ 335	↘ 180	↑ 45	→ 190	↙ 50	<table border="1"> <tr> <td>↖ 195</td> <td>↗ 275</td> <td>↘ 235</td> </tr> <tr> <td>↙ 75</td> <td>↘ 510</td> <td>↗ 250</td> </tr> </table>	↖ 195	↗ 275	↘ 235	↙ 75	↘ 510	↗ 250
← 65	↓ 335	↘ 180											
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TEV: 2405													

OR 99 @ Rapp Rd													
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<table border="1"> <tr> <td>← 175</td> <td>↓ 445</td> <td></td> </tr> <tr> <td>↑ 205</td> <td>→ 135</td> <td></td> </tr> </table>	← 175	↓ 445		↑ 205	→ 135		<table border="1"> <tr> <td>↖</td> <td>↗</td> <td>↘</td> </tr> <tr> <td>↙ 175</td> <td>↘ 630</td> <td>↗</td> </tr> </table>	↖	↗	↘	↙ 175	↘ 630	↗
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↑ 205	→ 135												
↖	↗	↘											
↙ 175	↘ 630	↗											
TEV: 1765													

OR 99 @ Arnos Rd													
16													
<table border="1"> <tr> <td>← 55</td> <td>↓ 525</td> <td></td> </tr> <tr> <td>↑ 50</td> <td>→ 40</td> <td></td> </tr> </table>	← 55	↓ 525		↑ 50	→ 40		<table border="1"> <tr> <td>↖</td> <td>↗</td> <td>↘</td> </tr> <tr> <td>↙ 35</td> <td>↘ 755</td> <td>↗</td> </tr> </table>	↖	↗	↘	↙ 35	↘ 755	↗
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↙ 35	↘ 755	↗											
TEV: 1460													

OR 99 @ Creel Rd													
17													
<table border="1"> <tr> <td>← 35</td> <td>↓ 530</td> <td></td> </tr> <tr> <td>↑ 20</td> <td>→ 15</td> <td></td> </tr> </table>	← 35	↓ 530		↑ 20	→ 15		<table border="1"> <tr> <td>↖</td> <td>↗</td> <td>↘</td> </tr> <tr> <td>↙ 20</td> <td>↘ 770</td> <td>↗</td> </tr> </table>	↖	↗	↘	↙ 20	↘ 770	↗
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TEV: 1390													

OR 99 @ Talent Ave/Old Pacific Hwy													
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<table border="1"> <tr> <td>← 20</td> <td>↓ 525</td> <td></td> </tr> <tr> <td>↑ 0</td> <td>→ 20</td> <td></td> </tr> </table>	← 20	↓ 525		↑ 0	→ 20		<table border="1"> <tr> <td>↖</td> <td>↗</td> <td>↘</td> </tr> <tr> <td>↙ 40</td> <td>↘ 790</td> <td>↗</td> </tr> </table>	↖	↗	↘	↙ 40	↘ 790	↗
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TEV: 1395													

OR 99 @ S Valley View Rd													
19													
<table border="1"> <tr> <td>← 35</td> <td>↓ 430</td> <td>↘ 80</td> </tr> <tr> <td>↑ 30</td> <td>→ 30</td> <td>↙ 40</td> </tr> </table>	← 35	↓ 430	↘ 80	↑ 30	→ 30	↙ 40	<table border="1"> <tr> <td>↖ 80</td> <td>↗ 30</td> <td>↘ 555</td> </tr> <tr> <td>↙ 45</td> <td>↘ 720</td> <td>↗ 540</td> </tr> </table>	↖ 80	↗ 30	↘ 555	↙ 45	↘ 720	↗ 540
← 35	↓ 430	↘ 80											
↑ 30	→ 30	↙ 40											
↖ 80	↗ 30	↘ 555											
↙ 45	↘ 720	↗ 540											
TEV: 2615													

Legend:

- TEV: Total Entering Volume
- ### PM Peak Hour Volume
- Turning Movement
- * Diagrams show OR 99 as the north and south legs of study intersections throughout

OR 99 Corridor Plan

Figure 4-1 South

*Future (2034) Baseline Scenario
Turning Movement Volumes
PM Peak Hour*

DRAFT



OR 99 @ Garfield Street* 1 <table border="1"> <tr> <td>70</td> <td>695</td> <td>215</td> <td>115</td> </tr> <tr> <td>↙</td> <td>↓</td> <td>↘</td> <td>↑</td> </tr> <tr> <td>45</td> <td>485</td> <td>70</td> <td>45</td> </tr> <tr> <td>↘</td> <td>↓</td> <td>↙</td> <td>↑</td> </tr> <tr> <td></td> <td></td> <td></td> <td>415</td> </tr> <tr> <td></td> <td></td> <td></td> <td>485</td> </tr> <tr> <td></td> <td></td> <td></td> <td>635</td> </tr> <tr> <td></td> <td></td> <td></td> <td>490</td> </tr> </table> TEV: 3765	70	695	215	115	↙	↓	↘	↑	45	485	70	45	↘	↓	↙	↑				415				485				635				490	OR 99 @ Lowry Ln 2 <table border="1"> <tr> <td>5</td> <td>1080</td> <td>120</td> <td>130</td> </tr> <tr> <td>↙</td> <td>↓</td> <td>↘</td> <td>↑</td> </tr> <tr> <td>45</td> <td>0</td> <td>40</td> <td>10</td> </tr> <tr> <td>↘</td> <td>↓</td> <td>↙</td> <td>↑</td> </tr> <tr> <td></td> <td></td> <td></td> <td>990</td> </tr> <tr> <td></td> <td></td> <td></td> <td>115</td> </tr> </table> TEV: 2640	5	1080	120	130	↙	↓	↘	↑	45	0	40	10	↘	↓	↙	↑				990				115	OR 99 @ Bear Creek Corp Dr 3 <table border="1"> <tr> <td>25</td> <td>1165</td> <td>30</td> <td>30</td> </tr> <tr> <td>↙</td> <td>↓</td> <td>↘</td> <td>↑</td> </tr> <tr> <td>130</td> <td>5</td> <td>35</td> <td>10</td> </tr> <tr> <td>↘</td> <td>↓</td> <td>↙</td> <td>↑</td> </tr> <tr> <td></td> <td></td> <td></td> <td>955</td> </tr> <tr> <td></td> <td></td> <td></td> <td>20</td> </tr> </table> TEV: 2450	25	1165	30	30	↙	↓	↘	↑	130	5	35	10	↘	↓	↙	↑				955				20
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OR 99 @ South Stage Rd 4 <table border="1"> <tr> <td>275</td> <td>895</td> <td>65</td> <td>60</td> </tr> <tr> <td>↙</td> <td>↓</td> <td>↘</td> <td>↑</td> </tr> <tr> <td>120</td> <td>30</td> <td>235</td> <td>265</td> </tr> <tr> <td>↘</td> <td>↓</td> <td>↙</td> <td>↑</td> </tr> <tr> <td></td> <td></td> <td></td> <td>805</td> </tr> <tr> <td></td> <td></td> <td></td> <td>60</td> </tr> </table> TEV: 2905	275	895	65	60	↙	↓	↘	↑	120	30	235	265	↘	↓	↙	↑				805				60	OR 99 @ Fern Valley Rd 5 <table border="1"> <tr> <td>25</td> <td>1155</td> <td>305</td> <td>50</td> </tr> <tr> <td>↙</td> <td>↓</td> <td>↘</td> <td>↑</td> </tr> <tr> <td>70</td> <td>75</td> <td>25</td> <td>755</td> </tr> <tr> <td>↘</td> <td>↓</td> <td>↙</td> <td>↑</td> </tr> </table> TEV: 2830	25	1155	305	50	↙	↓	↘	↑	70	75	25	755	↘	↓	↙	↑	OR 99 @ Bolz Rd 6 <table border="1"> <tr> <td>75</td> <td>1100</td> <td>430</td> <td></td> </tr> <tr> <td>↙</td> <td>↓</td> <td>↘</td> <td></td> </tr> <tr> <td>5</td> <td>5</td> <td>40</td> <td>15</td> </tr> <tr> <td>↘</td> <td>↓</td> <td>↙</td> <td>↑</td> </tr> <tr> <td></td> <td></td> <td></td> <td>765</td> </tr> <tr> <td></td> <td></td> <td></td> <td>405</td> </tr> </table> TEV: 2840	75	1100	430		↙	↓	↘		5	5	40	15	↘	↓	↙	↑				765				405																
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SB OR 99 (N Main St) @ 4th St 7 <table border="1"> <tr> <td>60</td> <td>1005</td> <td>75</td> <td>30</td> </tr> <tr> <td>↙</td> <td>↓</td> <td>↘</td> <td>↑</td> </tr> <tr> <td>75</td> <td>30</td> <td></td> <td>30</td> </tr> <tr> <td>↘</td> <td>↓</td> <td>↙</td> <td>↑</td> </tr> </table> TEV: 1305	60	1005	75	30	↙	↓	↘	↑	75	30		30	↘	↓	↙	↑	NB OR 99 (Bear Creek Dr) @ 4th St 8 <table border="1"> <tr> <td>150</td> <td>60</td> <td>1035</td> <td></td> </tr> <tr> <td>↘</td> <td>↓</td> <td>↙</td> <td></td> </tr> </table> TEV: 1245	150	60	1035		↘	↓	↙		SB OR 99 (N Main St) @ 1st St 9 <table border="1"> <tr> <td>210</td> <td>820</td> <td>35</td> <td>25</td> </tr> <tr> <td>↙</td> <td>↓</td> <td>↘</td> <td>↑</td> </tr> <tr> <td>140</td> <td>30</td> <td></td> <td>25</td> </tr> <tr> <td>↘</td> <td>↓</td> <td>↙</td> <td>↑</td> </tr> </table> TEV: 1285	210	820	35	25	↙	↓	↘	↑	140	30		25	↘	↓	↙	↑																																								
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NB OR 99 (Bear Creek Dr) @ 1st St 10 <table border="1"> <tr> <td>175</td> <td>50</td> <td>920</td> <td></td> </tr> <tr> <td>↘</td> <td>↓</td> <td>↙</td> <td></td> </tr> </table> TEV: 1145	175	50	920		↘	↓	↙		SB OR 99 (N Main St) @ Oak St 11 <table border="1"> <tr> <td>70</td> <td>790</td> <td>15</td> <td>30</td> </tr> <tr> <td>↙</td> <td>↓</td> <td>↘</td> <td>↑</td> </tr> <tr> <td>45</td> <td>25</td> <td></td> <td>10</td> </tr> <tr> <td>↘</td> <td>↓</td> <td>↙</td> <td>↑</td> </tr> </table> TEV: 985	70	790	15	30	↙	↓	↘	↑	45	25		10	↘	↓	↙	↑	NB OR 99 (Bear Creek Dr) @ Oak St 12 <table border="1"> <tr> <td>60</td> <td>40</td> <td>915</td> <td></td> </tr> <tr> <td>↘</td> <td>↓</td> <td>↙</td> <td></td> </tr> </table> TEV: 1015	60	40	915		↘	↓	↙																																																	
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Legend:

TEV: Total Entering Volume

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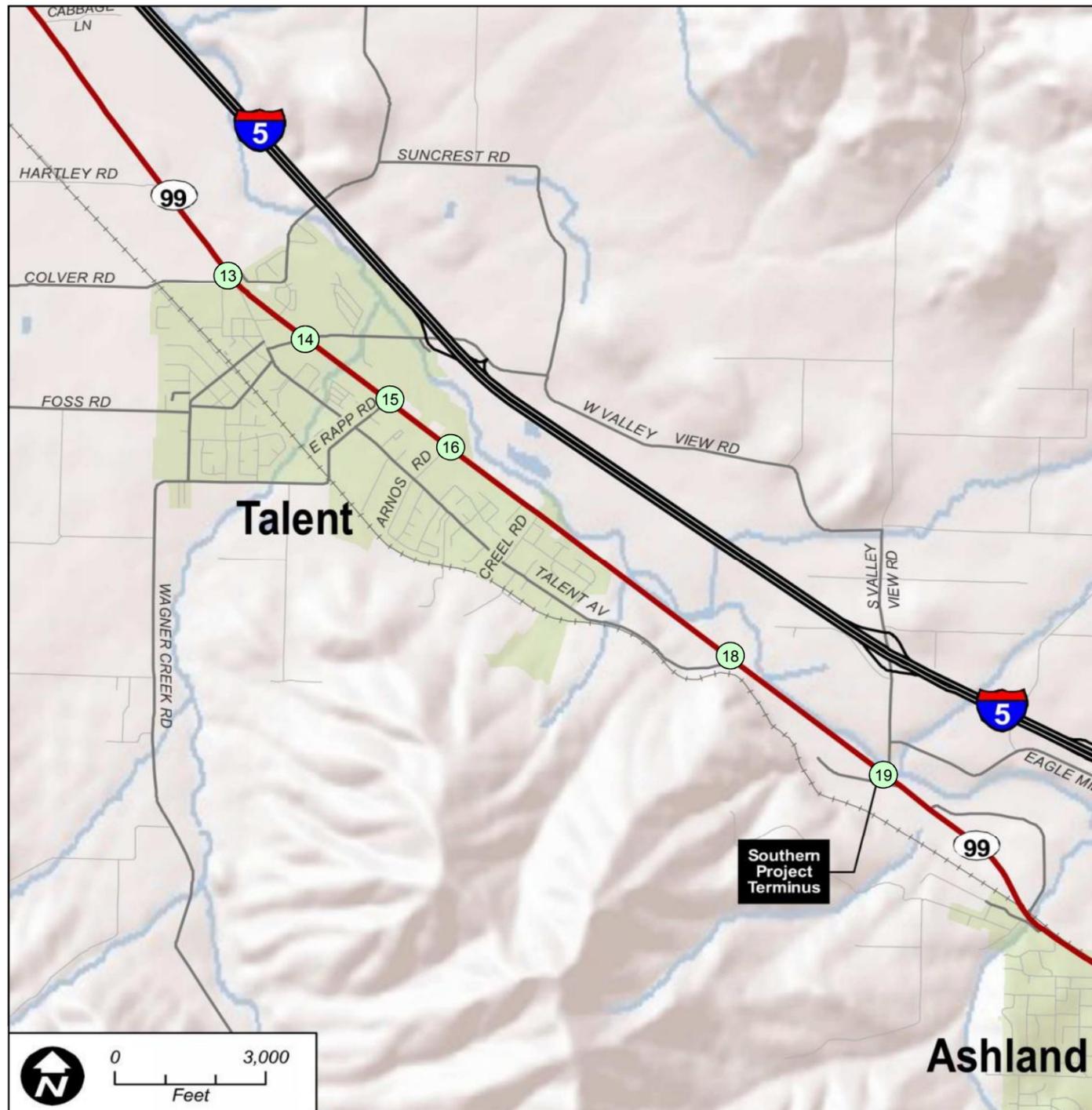
* Diagrams show OR 99 as the north and south legs of study intersections throughout

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OR 99 Corridor Plan

Figure 4-2 North

*Future (2034) Baseline Sensitivity Scenario
Turning Movement Volumes
PM Peak Hour*



OR 99 @ Colver/Suncrest Rd*													
13													
<table border="1"> <tr> <td>← 285</td> <td>↓ 510</td> <td>↘ 30</td> </tr> <tr> <td>↘ 230</td> <td>→ 30</td> <td>↘ 120</td> </tr> </table>	← 285	↓ 510	↘ 30	↘ 230	→ 30	↘ 120	<table border="1"> <tr> <td>↑ 10</td> <td>↓ 15</td> <td>↙ 35</td> </tr> <tr> <td>↙ 140</td> <td>↑ 720</td> <td>↘ 15</td> </tr> </table>	↑ 10	↓ 15	↙ 35	↙ 140	↑ 720	↘ 15
← 285	↓ 510	↘ 30											
↘ 230	→ 30	↘ 120											
↑ 10	↓ 15	↙ 35											
↙ 140	↑ 720	↘ 15											
TEV: 2140													

OR 99 @ W Valley View Rd													
14													
<table border="1"> <tr> <td>← 75</td> <td>↓ 385</td> <td>↘ 205</td> </tr> <tr> <td>↘ 50</td> <td>→ 220</td> <td>↘ 60</td> </tr> </table>	← 75	↓ 385	↘ 205	↘ 50	→ 220	↘ 60	<table border="1"> <tr> <td>↑ 225</td> <td>↓ 315</td> <td>↙ 270</td> </tr> <tr> <td>↙ 85</td> <td>↑ 585</td> <td>↘ 290</td> </tr> </table>	↑ 225	↓ 315	↙ 270	↙ 85	↑ 585	↘ 290
← 75	↓ 385	↘ 205											
↘ 50	→ 220	↘ 60											
↑ 225	↓ 315	↙ 270											
↙ 85	↑ 585	↘ 290											
TEV: 2765													

OR 99 @ Rapp Rd													
15													
<table border="1"> <tr> <td>← 200</td> <td>↓ 515</td> <td></td> </tr> <tr> <td>↘ 235</td> <td>→</td> <td>↘ 155</td> </tr> </table>	← 200	↓ 515		↘ 235	→	↘ 155	<table border="1"> <tr> <td>↑</td> <td>↓</td> <td>↙</td> </tr> <tr> <td>↙ 205</td> <td>↑ 725</td> <td></td> </tr> </table>	↑	↓	↙	↙ 205	↑ 725	
← 200	↓ 515												
↘ 235	→	↘ 155											
↑	↓	↙											
↙ 205	↑ 725												
TEV: 2035													

OR 99 @ Arnos Rd													
16													
<table border="1"> <tr> <td>← 65</td> <td>↓ 605</td> <td></td> </tr> <tr> <td>↘ 60</td> <td>→ 45</td> <td>↘</td> </tr> </table>	← 65	↓ 605		↘ 60	→ 45	↘	<table border="1"> <tr> <td>↑ 40</td> <td>↓ 870</td> <td></td> </tr> <tr> <td>↙</td> <td>↑</td> <td></td> </tr> </table>	↑ 40	↓ 870		↙	↑	
← 65	↓ 605												
↘ 60	→ 45	↘											
↑ 40	↓ 870												
↙	↑												
TEV: 1685													

OR 99 @ Creel Rd													
17													
<table border="1"> <tr> <td>← 40</td> <td>↓ 610</td> <td></td> </tr> <tr> <td>↘ 25</td> <td>→ 15</td> <td>↘</td> </tr> </table>	← 40	↓ 610		↘ 25	→ 15	↘	<table border="1"> <tr> <td>↑ 25</td> <td>↓ 885</td> <td></td> </tr> <tr> <td>↙</td> <td>↑</td> <td></td> </tr> </table>	↑ 25	↓ 885		↙	↑	
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↑ 25	↓ 885												
↙	↑												
TEV: 1600													

OR 99 @ Talent Ave/Old Pacific Hwy													
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<table border="1"> <tr> <td>← 30</td> <td>↓ 605</td> <td></td> </tr> <tr> <td>↘ 0</td> <td>→ 25</td> <td>↘</td> </tr> </table>	← 30	↓ 605		↘ 0	→ 25	↘	<table border="1"> <tr> <td>↑ 40</td> <td>↓ 910</td> <td></td> </tr> <tr> <td>↙</td> <td>↑</td> <td></td> </tr> </table>	↑ 40	↓ 910		↙	↑	
← 30	↓ 605												
↘ 0	→ 25	↘											
↑ 40	↓ 910												
↙	↑												
TEV: 1610													

OR 99 @ S Valley View Rd													
19													
<table border="1"> <tr> <td>← 40</td> <td>↓ 495</td> <td>↘ 90</td> </tr> <tr> <td>↘ 35</td> <td>→ 35</td> <td>↘ 45</td> </tr> </table>	← 40	↓ 495	↘ 90	↘ 35	→ 35	↘ 45	<table border="1"> <tr> <td>↑ 85</td> <td>↓ 35</td> <td>↙ 640</td> </tr> <tr> <td>↙ 50</td> <td>↑ 830</td> <td>↘ 620</td> </tr> </table>	↑ 85	↓ 35	↙ 640	↙ 50	↑ 830	↘ 620
← 40	↓ 495	↘ 90											
↘ 35	→ 35	↘ 45											
↑ 85	↓ 35	↙ 640											
↙ 50	↑ 830	↘ 620											
TEV: 3000													

Legend:

- TEV: Total Entering Volume
- ### PM Peak Hour Volume
- Turning Movement

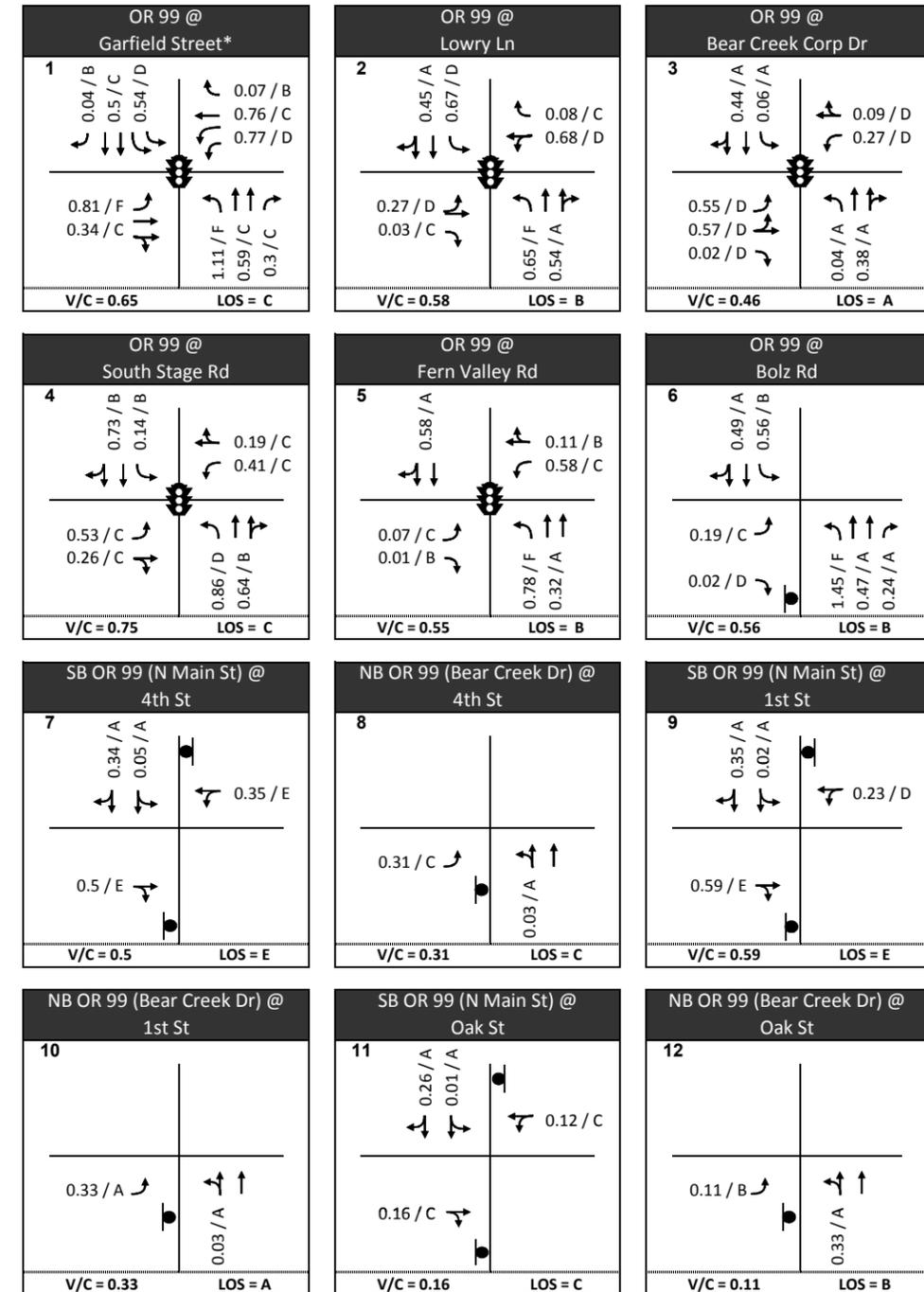
* Diagrams show OR 99 as the north and south legs of study intersections throughout

OR 99 Corridor Plan

Figure 4-2 South

*Future (2034) Baseline Sensitivity Scenario
Turning Movement Volumes
PM Peak Hour*

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Legend:

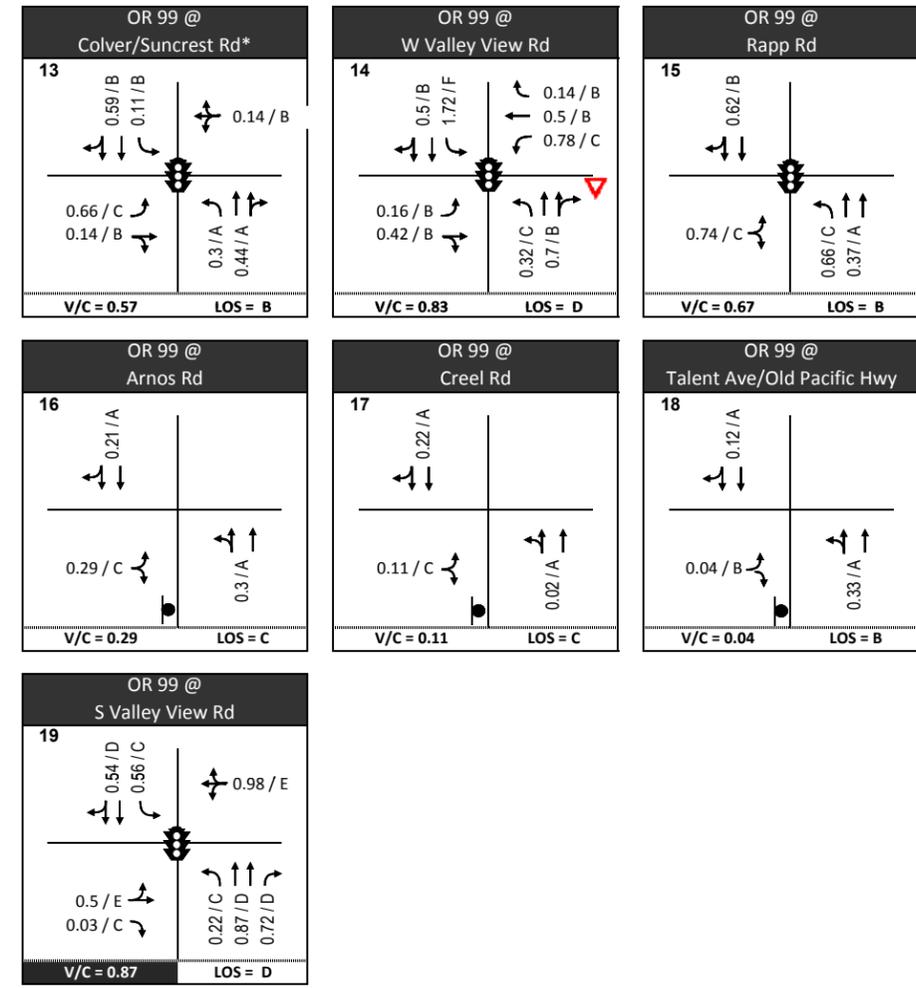
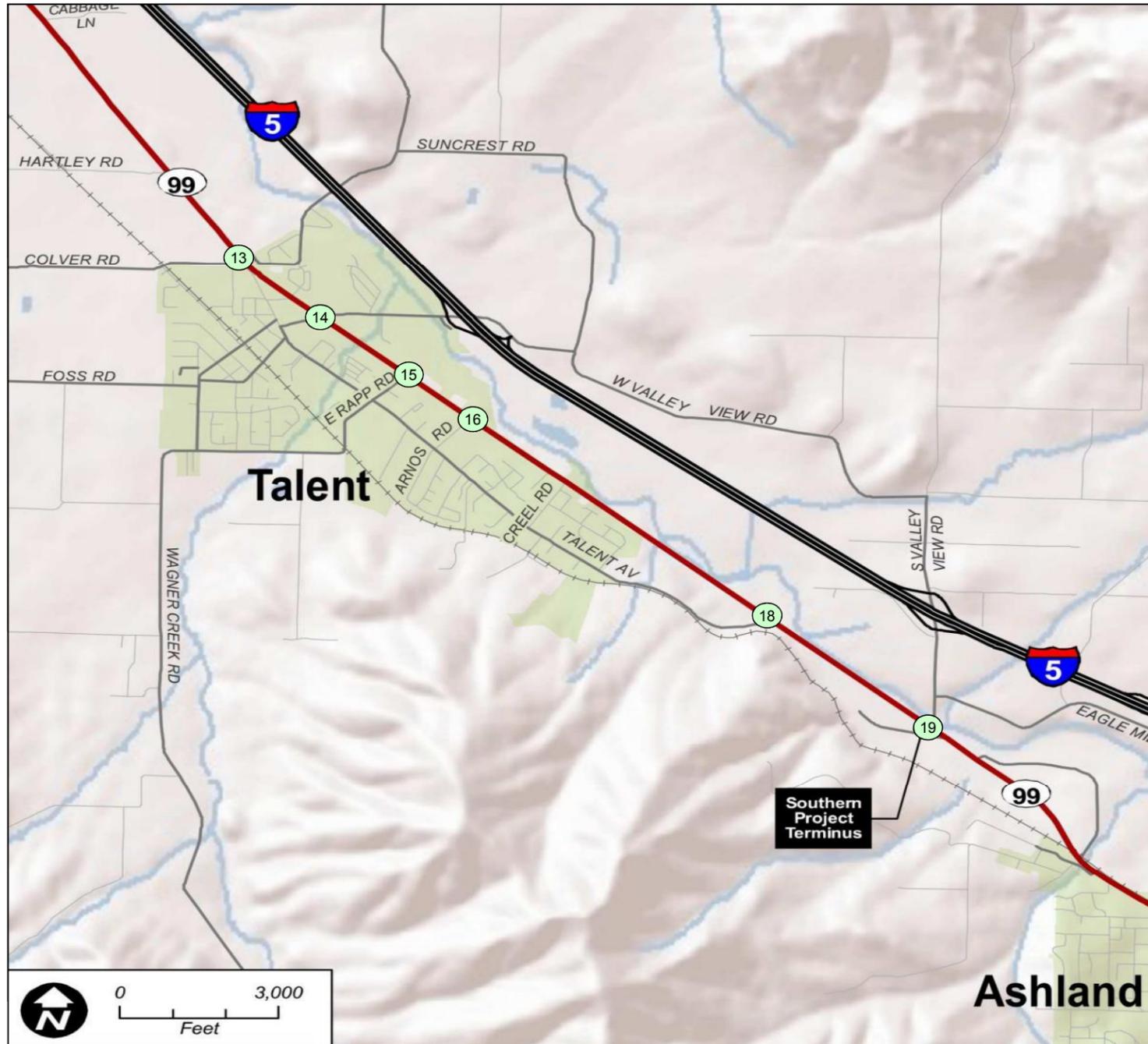
- Traffic Signal
- Stop Sign
- V/C: Volume to Capacity Ratio
- LOS: Level of Service
- Existing Lane Configuration
- * Diagrams show OR 99 as the north and south legs of study intersections

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OR 99 Corridor Plan

Figure 4-3 North

Future (2034) Baseline Scenario
Lane Configurations & Intersection Operations
PM Peak Hour



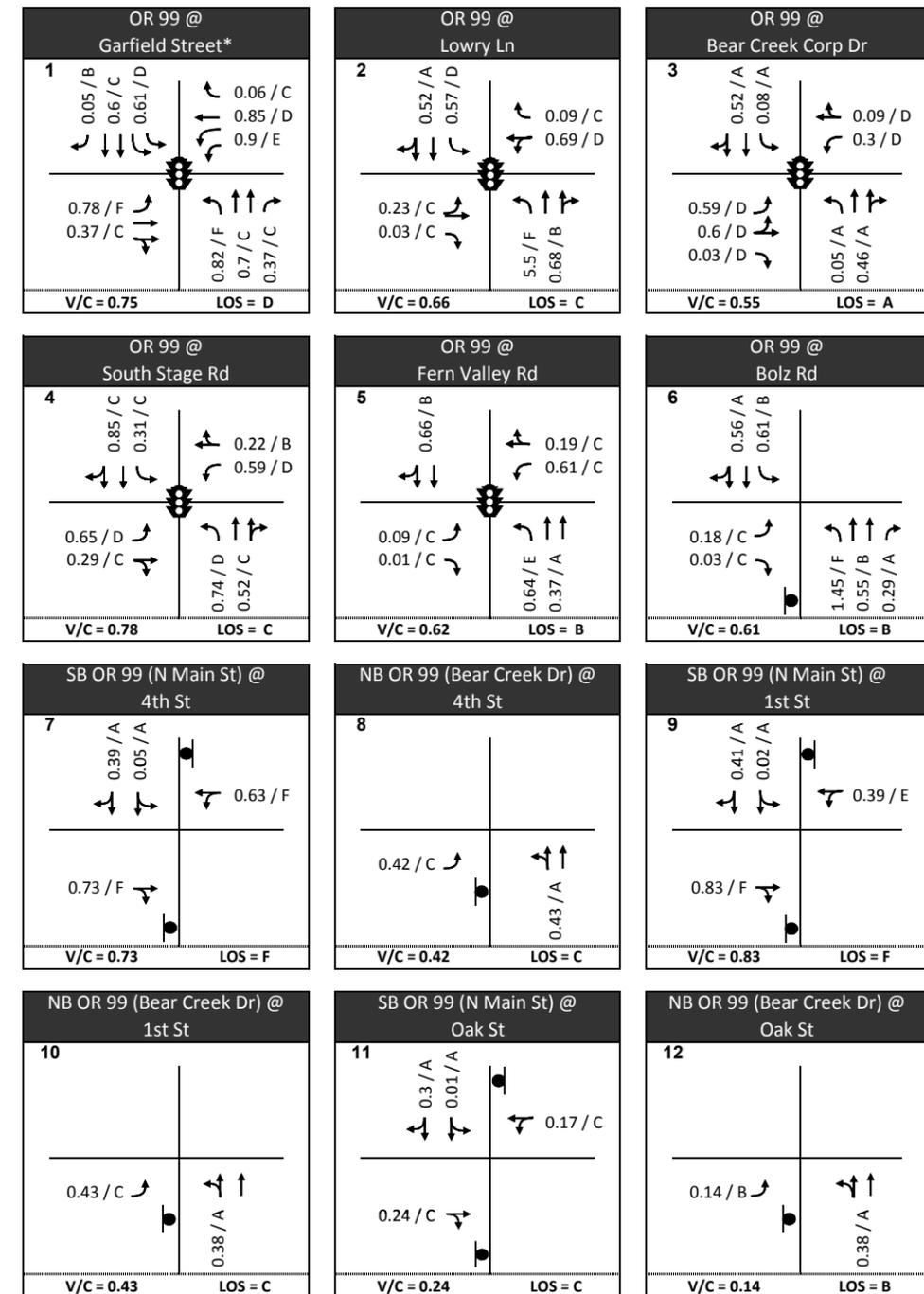
Legend:

- Traffic Signal
- Stop Sign
- V/C: Volume to Capacity Ratio
- LOS: Level of Service
- Existing Lane Configuration
- * Diagrams show OR 99 as the north and south legs of study intersections

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OR 99 Corridor Plan

Figure 4-3 South
*Future (2034) Baseline Scenario
 Lane Configurations & Intersection Operations
 PM Peak Hour*



Legend:

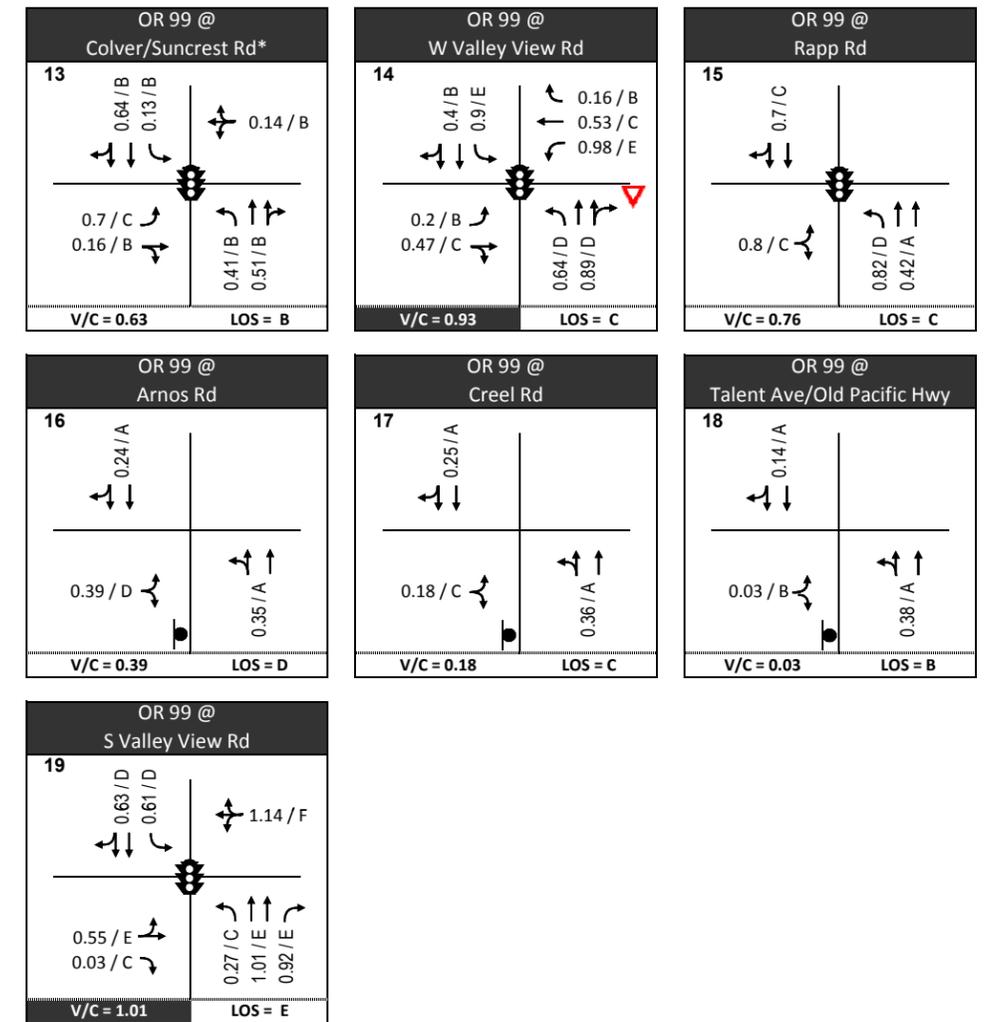
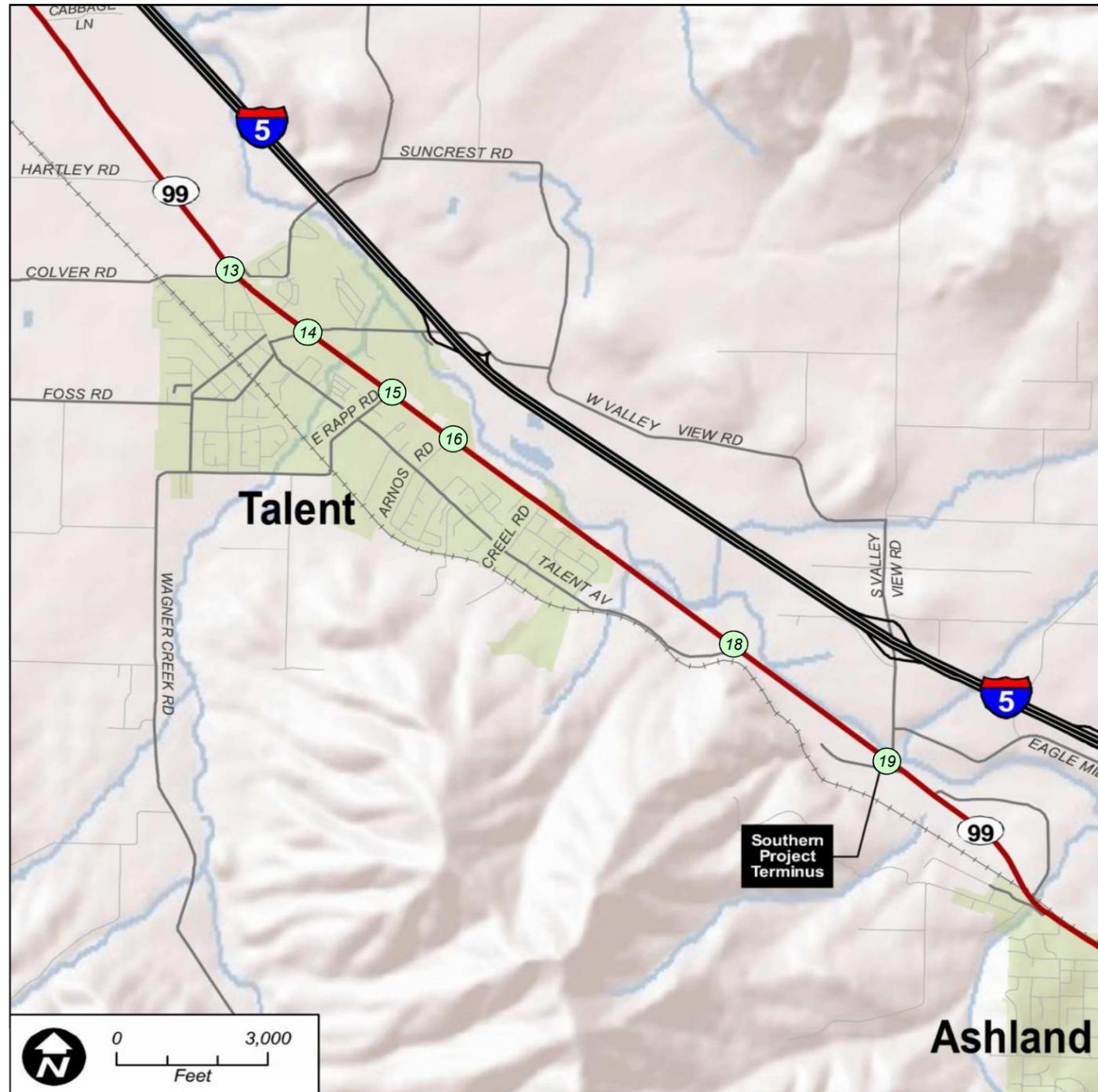
- Traffic Signal
- Stop Sign
- V/C: Volume to Capacity Ratio
- LOS: Level of Service
- Existing Lane Configuration
- * Diagrams show OR 99 as the north and south legs of study intersections

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OR 99 Corridor Plan

Figure 4-4 North

Future (2034) Baseline Sensitivity Scenario
Lane Configurations & Intersection Operations
PM Peak Hour



Legend:

- Traffic Signal
- Stop Sign
- V/C: Volume to Capacity Ratio
- LOS: Level of Service
- Existing Lane Configuration
- * Diagrams show OR 99 as the north and south legs of study intersections

OR 99 Corridor Plan

Figure 4-4 South

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Future (2034) Baseline Sensitivity Scenario
Lane Configurations & Intersection Operations
PM Peak Hour