

## TECHNICAL MEMORANDUM

**TO:** Joe Broadhurst  
**FROM:** Gwen Shaw  
William Farley, PE  
**DATE:** October 16, 2015  
**SUBJECT:** *OR 99W & SW Meinecke Road Property  
Zone Change Memorandum*



EXPIRES 12/31/15



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This memorandum examines trip generation for a proposed zone change for the property fronting the west side of SW Meinecke Road and the south side of SW Pacific Highway (OR 99W). The property will be rezoned from GC (*General Commercial*) to MDRL (*Medium Density Residential Low*) in order to accommodate residential development on the property. Oregon's Transportation Planning Rule (TPR) will also be addressed.

### ***Project & Location Description***

The property proposed for rezoning comprises Tax Lots 8200 and 7300 as shown on Washington County Tax Maps 2S131BA and AB. The site fronts SW Meinecke Road to the east, SW Parkway Court to the south and SW Pacific Highway to the north. In 2009, the site owner proposed and was approved for the development of the "Parkway Plaza," made up of four commercial lots: three buildings totaling 11,800 square feet and one coffee drive through totaling 480 square feet. The owner is now proposing to rezone the area to allow residential uses. Lancaster Engineering conducted the Transportation Impact Study for the prior proposed Parkway Plaza development in 2009.

SW Pacific Highway (OR 99W) operates under the jurisdiction of ODOT and is classified as a Statewide Highway. In the project study area, it is generally a four-lane facility (two through lanes in each direction) separated by a large center median and has a designated speed of 45 mph. The highway has paved shoulders along both sides of the highway.

SW Meinecke Road is under the jurisdiction of the City of Sherwood and is classified as a Collector roadway in the vicinity of the site. It is a two-lane facility with a single travel lane in each direction and a posted speed of 25 mph. A raised curb center median extends from SW Pacific Highway to SW Dewey Drive in front of the site. Bicycle lanes are present along both sides of the roadway fronting the site, and sidewalks are also in place along both sides of the roadway.

The intersection of OR 99W at SW Meinecke Road is a four-legged intersection controlled by an actuated traffic signal. The northeast-bound and southwest-bound approaches on OR 99W each have a dedicated left-turn lane served by protected phasing, two through lanes, and a channelized right-turn slip-lane. The northbound and southbound approaches on SW Meinecke Road each have a dedi-



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cated left-turn lane served with permissive phasing, a through lane, and a channelized right-turn slip-lane.

The intersection of SW Meinecke Road at SW Parkway Court is a three-legged intersection controlled by a STOP sign on the eastbound SW Parkway Court approach. Only right-in and right-out turn maneuvers are allowed to and from SW Parkway Court due to the previously mentioned raised curb median dividing SW Meinecke Road. SW Parkway Court is a short cul-de-sac street along the west side of SW Meinecke Road that will be used primarily for access to the proposed residential development.

### ***Trip Generation***

To evaluate the potential traffic impacts that could result from the proposed zone change, the reasonable worst-case development scenarios under the current zoning and proposed zoning designations were examined. To estimate the trips that could be generated by the proposed zone change, trip rates from the *TRIP GENERATION MANUAL*, Ninth Edition, published by the Institute of Transportation Engineers (ITE), were used.

The subject property has a gross area of 53,982 square feet. The reasonable worst-case development scenario for the current zone (GC) was estimated based on the allowed uses under the city's zoning code, assuming a maximum reasonable commercial building footprint of 25 percent of the gross area of the site. A combination of trip rates for land-use code 820, *Shopping Center* and 934, *Fast Food Restaurant with Drive-Through Window* were used. Up to 5,000 square feet of the building area was assumed to be associated with the fast food use(s), and the remainder of the site was assumed to be developed with various retail uses that fit the shopping center land use description. Between the two uses, the trip generation calculations show that a total of 121 trips could be generated during the morning peak hour, 103 trips during the evening peak hour, and 1,478 total trips on a typical weekday.

For both land uses, a pass-by trip reduction was taken from the total trip estimates in accordance with ITE's recommended practice. This adjustment accounts for pass-by trips that patronize the site while driving by on an adjacent roadway, returning to their original direction of travel. Such trips do not add traffic to the adjacent roadways since they would have traveled past the site even if they had not stopped.

For the proposed zoning, the City of Sherwood zoning code calls for a density of 5.6 to 8 dwelling units per acre. The subject property is 1.24 acres total, which can accommodate up to 9 dwelling units. Trip rates for land-use code 210, *Single-Family Detached Housing*, were used to estimate the trips generated under the proposed zoning. The trip generation calculations show that the reasonable worst-case development scenario under the proposed zoning will generate up to 7 trips during the morning peak hour, 9 trips during the evening peak hour, and 86 daily trips.



This change in zoning would decrease the trip generation potential of the property under the reasonable worst case development scenarios by 110 trips during the morning peak hour and 78 trips during the evening peak hour. A decrease of 1,444 daily trips would be anticipated.

A summary of the trip generation calculations for each of the zoning scenarios and the planned development is shown in the following table. Detailed trip generation calculations are included in the appendix to this memorandum.

	<b>Trip Generation Summary</b>							
	Size (sf)	Morning Peak Hour			Evening Peak Hour			Weekday
		In	Out	Total	In	Out	Total	Total
<b>Existing Zoning (GC)</b>								
Shopping Center	8,500	5	3	8	15	17	32	362
Pass-By Trips		-1	-1	-2	-5	-5	-10	-124
Fast-Food with Drive-Through	5,000	116	111	227	85	78	163	2480
Pass-By Trips		-56	-56	-112	-41	-41	-82	-1240
<b>Total</b>	<b>13,500</b>	<b>64</b>	<b>57</b>	<b>121</b>	<b>54</b>	<b>49</b>	<b>103</b>	<b>1478</b>
<b>Proposed Zoning (MDRL)</b>								
Single-Family Dwelling	9 Units	2	5	7	6	3	9	86
<b>Net Impact from Zone Change</b>		<b>-62</b>	<b>-52</b>	<b>-114</b>	<b>-48</b>	<b>-46</b>	<b>-94</b>	<b>-1392</b>

***Transportation Planning Rule***

The Transportation Planning Rule (TPR) is in place to ensure that the transportation system is capable of supporting possible increases in traffic intensity that could result from changes to adopted plans and land use regulations. The applicable elements of the TPR are each quoted directly in *italics*, with a response directly following.

**660-012-0060**

*(1) If an amendment to a functional plan, an acknowledged comprehensive plan, or a land use regulation (including a zoning map) would significantly affect an existing or planned transportation facility, then the local government must put in place measures as provided in section (2) of this rule, unless the amendment is allowed under section (3), (9) or (10) of this rule. A plan or land use regulation amendment significantly affects a transportation facility if it would:*

*(a) Change the functional classification of an existing or planned transportation facility (exclusive of correction of map errors in an adopted plan);*



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- (b) Change standards implementing a functional classification system; or*
- (c) Result in any of the effects listed in paragraphs (A) through (C) of this subsection based on projected conditions measured at the end of the planning period identified in the adopted TSP. As part of evaluating projected conditions, the amount of traffic projected to be generated within the area of the amendment may be reduced if the amendment includes an enforceable, ongoing requirement that would demonstrably limit traffic generation, including, but not limited to, transportation demand management. This reduction may diminish or completely eliminate the significant effect of the amendment.*
  - (A) Types or levels of travel or access that are inconsistent with the functional classification of an existing or planned transportation facility;*
  - (B) Degrade the performance of an existing or planned transportation facility such that it would not meet the performance standards identified in the TSP or comprehensive plan; or*
  - (C) Degrade the performance of an existing or planned transportation facility that is otherwise projected to not meet the performance standards identified in the TSP or comprehensive plan.*

In the case of this report, subsections (A) and (B) are not triggered, since the proposed zone change will not impact or alter the functional classification of any existing or planned facility and the proposal does not include a change to any functional classification standards.

As demonstrated in the previous section, the net increase in trips generated by the potential worst-case development allowed as a result of the change in zoning will result in a reduction to the possible trip generation of the subject property. Accordingly, subsection (C) is also not triggered and the Transportation Planning Rule is satisfied. No mitigations are necessary or recommended in conjunction with the proposed zone change.



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***Conclusions***

The proposed zone change from GC to MDRL of the property located at SW Pacific Highway (OR 99W) and SW Meinecke Road in Sherwood, Oregon is projected to result in a net decrease in site trips under the reasonable worst case development scenario. Accordingly the zone change will not cause any detrimental impacts to the nearby transportation network. The zone change will not affect existing or planned transportation facilities as defined under Oregon's Transportation Planning Rule. Based on the analysis, no mitigations are necessary or recommended in conjunction with the proposed zone change.

## APPENDIX



## TRIP GENERATION CALCULATIONS

*Land Use:* Shopping Center  
*Land Use Code:* 820  
*Variable:* 1,000 Sq Ft Gross Leasable Area  
*Variable Value:* 8.5

### AM PEAK HOUR

*Trip Rate:* 0.96

	Enter	Exit	Total
Directional Distribution	62%	38%	
Trip Ends	<b>5</b>	<b>3</b>	<b>8</b>

### PM PEAK HOUR

*Trip Rate:* 3.71

	Enter	Exit	Total
Directional Distribution	48%	52%	
Trip Ends	<b>15</b>	<b>17</b>	<b>32</b>

### WEEKDAY

*Trip Rate:* 42.7

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	<b>181</b>	<b>181</b>	<b>362</b>

### SATURDAY

*Trip Rate:* 49.97

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	<b>212</b>	<b>212</b>	<b>424</b>



## TRIP GENERATION CALCULATIONS

*Land Use:* Fast Food Restaurant with Drive-Through Window  
*Land Use Code:* 934  
*Variable:* 1000 Sq Ft Gross Floor Area  
*Variable Quantity:* 5

### AM PEAK HOUR

*Trip Rate:* 45.42

	Enter	Exit	Total
Directional Distribution	51%	49%	
Trip Ends	<b>116</b>	<b>111</b>	<b>227</b>

### PM PEAK HOUR

*Trip Rate:* 32.65

	Enter	Exit	Total
Directional Distribution	52%	48%	
Trip Ends	<b>85</b>	<b>78</b>	<b>163</b>

### WEEKDAY

*Trip Rate:* 496.12

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	<b>1,240</b>	<b>1,240</b>	<b>2,480</b>

### SATURDAY

*Trip Rate:* 722.03

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	<b>1805</b>	<b>1805</b>	<b>3,610</b>



## TRIP GENERATION CALCULATIONS

*Land Use:* Single-Family Detached Housing  
*Land Use Code:* 210  
*Variable:* Dwelling Units  
*Variable Value:* 9

### AM PEAK HOUR

*Trip Rate:* 0.75

	Enter	Exit	Total
Directional Distribution	25%	75%	
Trip Ends	2	5	7

### PM PEAK HOUR

*Trip Rate:* 1.00

	Enter	Exit	Total
Directional Distribution	63%	37%	
Trip Ends	6	3	9

### WEEKDAY

*Trip Rate:* 9.52

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	43	43	86

### SATURDAY

*Trip Rate:* 9.91

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	45	45	90