



SR35 (COLUMBIA RIVER CROSSING) TRAFFIC ANALYSIS MEMO

Purpose:

To determine if a third, reversible lane is necessary on the new SR 35 Columbia River Crossing Bridge to accommodate very long term future year (2080) traffic.

Conclusion:

A third, reversible lane will not be needed on the new Columbia River Crossing bridge.

Analysis:

Based on the traffic counts collected for an ODOT study in 2005, historical counts at the Hood River Bridge toll both collected from the Port of Hood River, and historical counts at the SR 14/Hood River Bridge access road intersection sent by WSDOT, it is estimated that an average annual growth rate of 0.8% from 2010 to 2080 would be used to develop 2080 future volumes for the traffic operations model for the Crossing. For a 70-year period, this results in a growth factor of 1.75 which would be used to increase the volumes from 2010 to 2080. Existing (year 2010 or approximation) volumes for the model were developed using traffic counts from the ODOT, WSDOT and the Port of Hood River.

A synchro model has been developed with the 2080 volumes. Two alternatives have been analyzed, one with a two way toll on both Northbound and Southbound direction and the other with a one way toll only in the Southbound direction. The model assumed completion of the current I-84/Exit 64 improvement project.

Below is the Highway Capacity Manual level of service and delay comparison between existing year 2010 and future year 2080 traffic analysis.

Intersection Name	2010		2080 (Both Alternatives)	
	LOS	Delay	LOS	Delay
I-84 EB Ramps Intersection	B	16	C	24
I-84 WB Ramps Intersection	A	9	B	13
Port/Marina Access and Hood River Bridge	B	11	D	41
SR 14 and Hood River Bridge	B	16	C	29

From the results above it is clear that all the intersections operate with LOS D or better in 2080. Based on the SimTraffic simulation, the bridge does not experience any congestion in both the alternatives and a two lane bridge will be able to accommodate the future year traffic. Hence, it can be concluded that a third reversible lane will not be required on the new Hood River Bridge to accommodate future year 2080 traffic.

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