APPENDIX C

Bonneville MPO Level Service Methodology

Appendix D
Level of Service (LOS) Description and Methodology

The following provides a more descriptive definition of roadway congestion.

a Uncongested Level of Service A, B and C (when the v/c ratio is between 0.60 and 0.70) are those corridors that generally operate in free-flow conditions, where a driver tends to be able to drive without undue delay except for when impeded by stop signs or traffic signals. During peak hours, some delay may be experienced at controlled intersections.

a Approaching Moderate Congestion Level of Service C is generally considered uncongested but due to heavier volumes congestion at the controlled intersections may approach those conditions similar to LOS D. A roadway that has a v/c ratio between 0.70 and 0.75 would fall into this category.

a Moderate Congestion Level of Service D are those corridors where the driver can travel under free flow conditions during the off peak hours, but moderate delays at the controlled intersections during peak hours are expected.

a Congested Level of Service E and F are those corridors where traffic volumes have reached or exceeded capacity and delays during the peak hour may be excessive.

Methodology to Compute Level of Service (LOS)

	A		B		C		D		E		F	
	ADT Range	**V/C Ratio**	**ADT Range**	**V/C Ratio**	**ADT Range**	**V/C Ratio**	**ADT Range**	**V/C Ratio**	**ADT Range**	**V/C Ratio**	**ADT Range**	**V/C Ratio**
Urban Collector												
Two Lanes	< 4,725		4,726 - 6,300		6,301 - 7,875		7,876 - 8,925		8,926 - 10,500		10,501 >	
Three Lanes	<5,850	**< 0.45**	5,851 - 7,800	**0.45 - 0.60**	7,801 - 9,750	**0.60 - 0.75**	9,751 - 11,050	**0.75 - 0.85**	11,051 - 13,000	**0.85 - 1.00**	13001 >	**1.00 >**
Four Lanes	< 9,225		9,226 - 12,300		12,301 - 15,375		15,376 - 17,425		17,426 - 20,500		20,501 >	
Five Lanes	< 11,250		11,251 - 15,000		15,001 - 18,750		18,751 - 21,250		21,251 - 25,000		25,000 >	
Minor Arterial												
Two Lanes	< 5,625		5,626 - 7,500		7,501 - 9,375		9,376 - 10,625		10,626 - 12,500		12,501 >	
Three Lanes	< 7,200	**< 0.45**	7,201 - 9,600	**0.45 - 0.60**	9,601 - 12,000	**0.60 - 0.75**	12,001 - 13,600	**0.75 - 0.85**	13,601 - 16,000	**0.85 - 1.00**	16,001 >	**1.00 >**
Four Lanes	< 11,700		11,701 - 15,600		15,601 - 19,500		19,501 - 22,100		22,101 - 26,000		26,001 >	
Five Lanes	< 13,950		13,951 - 18,600		18,601 - 23,250		23,251 - 26,350		26,351 - 31,000		31,000 >	
Principal Arterial												
Two Lanes	< 6,300		6,301 - 8,400		8,401 - 10,500		10,501 - 12,600		12,601 - 14,000		14,001 >	
Three Lanes	< 8,325		8,326 - 11,100		11,101 - 13,875		13,876 - 16,650		16,651 - 18,500		18501 >	
Four Lanes	< 13,950	**< 0.45**	13,951 - 18,600	**0.45 - 0.60**	18,601 - 23,250	**0.60 - 0.75**	23,251 - 27,900	**0.75 - 0.90**	27,901 - 31,000	**0.90 - 1.00**	31,001 >	**1.00 >**
Five Lanes	< 16,650		16,651 - 22,200		22,201 - 27,750		27,751 - 33,300		33,301 - 37,000		37,001 >	
Six Lanes	< 21,150		21,151 - 28,200		28,201 - 35,250		35,251 - 42,300		42,301 - 47,000		47,001 >	
Seven Lanes	< 25,200		25,201 - 33,600		33,601 - 42,000		42,001 - 50,400		50,401 - 56,000		56,001 >	
Freeway												
Four Lanes	< 29,050	**< 0.35**	29,051 - 45,650	**0.35 - 0.55**	45,651 - 58,100	**0.55 - 0.70**	58,101 - 74,700	**0.70 - 0.90**	74,701 - 83,000	**0.90 - 1.00**	83,001 >	**1.00 >**
Six Lanes	< 43,400		43,401 - 68,200		68,201 - 86,800		86,801 - 111,600		111,601 - 124,000		124,001 >	

Level of Service (LOS) is computed by comparing the average daily traffic (ADT) volume with the estimated capacity of the roadway. The capacity is determined by a roadways function and number of lanes and is identified as the upper limit volume of the LOS E ADT Range. For example a two-lane urban collector which has an ADT of 8,500 trips would be compared with the capacity of 10,500. The results would identify that the roadway operated at a LOS D falling within a range of 7,876 to 8,925 with a volume to capacity ratio (v/c ratio) of 0.81 (8,500/10,500 = 0.81).