

# 2013 Skagit County Road Segment & Intersection Concurrency



## INTRODUCTION

Skagit County Code 14.28.110 "Annual Concurrency Assessment" requires that the County Engineer annually produce this report to update the status of County road concurrency. The following is produced to meet said requirement.

## REQUIREMENTS

The concurrency assessment requires that *"the Skagit County Public Works Department, under the direction of the County Engineer, shall evaluate the High Traffic County Road Segments and High Traffic County Road Intersections using a Highway Capacity Manual type method (as selected by the County Engineer) to determine whether these road segments and intersections comply with the level of service standards adopted in the Comprehensive Plan."* These Levels of Service (LOS) are described as follows in Skagit County's Comprehensive Plan.

- 8A-2.1** Level of Service Standards – The Level of Service (LOS) standard for County roads is C. LOS D is acceptable for all road segments that:
- a) *Have Annualized Average Daily Traffic (AADT) greater than 7,000 vehicles; and*
  - b) *Are NOT federally functionally classified as an 09-Local Access Road; and*
  - c) *Are designated as a County Freight and Goods Transportation Systems Route (FGTS).*

The LOS standard for County road intersections is LOS D.

## LEVEL OF SERVICE DATA

### **Road Segments**

As outlined in Skagit County's Transportation Systems Plan (TSP), the methodology used to acquire the LOS of county road segments is outlined in Chapter Six of the TSP.

*"The Skagit County Public Works Traffic Engineering Unit has selected an LOS study volume unit threshold of 7,000 AADT. This threshold is an indicator that a road segment may be approaching the LOS C/D threshold and should be studied in depth."*

Table 1 shows the current County roads that meet the criteria for further study and the current LOS as determined using the Transportation Research Board's Highway Capacity Manual and Highway Capacity Software developed for this use by the University of Florida. Also shown is the projected 5-year LOS. This projected LOS was determined using a 2½ percent yearly growth factor for each road segment. Projects along these roadways that are scheduled to be completed within this 5 year period were not significant enough to include as separate items. As one can see from Table 1, all the criteria for LOS concurrency have been met.



Table 1 – Road Segments

Road #	Road Name	FFC	Truck Rt	Beg MP	End MP	Length	2013 ADT	2014 ADT Estimate	2015 ADT Estimate	2016 ADT Estimate	2017 ADT Estimate	2018 ADT Estimate	2013 LOS	2018 LOS
21200	BOW HILL ROAD	07	T3	0.530	0.800	0.270	7738	7931	8130	8333	8541	8755	C	C
63000	COOK ROAD	07	T2	1.750	1.800	0.050	11979	12278	12585	12900	13223	13553	These two segments are in WSDOT ROW	
63000	COOK ROAD	07	T3	1.800	1.860	0.060	14233	14589	14964	15327	15711	16103		
63000	COOK ROAD	07	T3	1.860	1.890	0.030	10326	10584	10849	11120	11398	11683		
63000	COOK ROAD	07	T3	1.890	1.950	0.060	10326	10584	10849	11120	11398	11683	D	D
63000	COOK ROAD	07	T3	1.950	1.970	0.020	10326	10584	10849	11120	11398	11683		
63000	COOK ROAD	07	T3	1.970	2.191	0.221	11056	11332	11616	11906	12204	12509		
63000	COOK ROAD	07	T3	2.191	3.080	0.889	11056	11332	11616	11906	12204	12509		
63000	COOK ROAD	07	T3	3.080	3.360	0.280	11056	11332	11616	11906	12204	12509		
63000	COOK ROAD	07	T3	3.360	3.820	0.460	11056	11332	11616	11906	12204	12509	D	D
63000	COOK ROAD	07	T3	3.820	4.100	0.280	11056	11332	11616	11906	12204	12509		
63000	COOK ROAD	07	T3	4.100	4.320	0.220	11056	11332	11616	11906	12204	12509		
63000	COOK ROAD	07	T3	4.320	4.600	0.280	11056	11332	11616	11906	12204	12509		
63000	COOK ROAD	07	T3	4.600	4.880	0.280	10863	11135	11413	11698	11991	12290		
63000	COOK ROAD	07	T3	4.880	5.000	0.120	10863	11135	11413	11698	11991	12290		
63000	COOK ROAD	07	T3	5.000	5.080	0.080	10863	11135	11413	11698	11991	12290		
63000	COOK ROAD	07	T3	5.080	5.260	0.180	10863	11135	11413	11698	11991	12290		
63000	COOK ROAD	07	T3	5.260	5.320	0.060	10863	11135	11413	11698	11991	12290		
63000	COOK ROAD	07	T3	5.320	5.390	0.070	10863	11135	11413	11698	11991	12290		
63000	COOK ROAD	16	T3	5.390	5.470	0.080	10863	11135	11413	11698	11991	12290		
63000	COOK ROAD	16	T3	5.470	5.500	0.030	10863	11135	11413	11698	11991	12290		
63000	COOK ROAD	16	T3	5.500	5.510	0.010	10863	11135	11413	11698	11991	12290		
63000	COOK ROAD	16	T3	5.510	5.620	0.110	10863	11135	11413	11698	11991	12290		
40200	FIR ISLAND ROAD	07	T3	0.000	0.410	0.410	9228	9459	9695	9938	10186	10441	C	C
80090	PIONEER HIGHWAY	07	T3	0.000	1.410	1.410	8935	9158	9387	9622	9863	10109		
80090	PIONEER HIGHWAY	07	T3	1.410	1.740	0.330	8408	8618	8834	9054	9281	9513	C	C
80090	PIONEER HIGHWAY	07	T3	1.740	3.158	1.418	8383	8593	8807	9028	9253	9485		

## Road Intersections

### Intersection LOS

As with Road Segment LOS, Intersection LOS methodology is outlined in Chapter Six of the TSP. Intersection LOS, according to the Highway Capacity Manual, cannot be determined at stop controlled intersections. The individual stop-controlled leg LOS can be determined, but the overall intersection LOS cannot be determined. With regard to stop-controlled intersections, the TSP states that Skagit County will perform intersection analysis on;

*“...intersections that may be approaching traffic signal warrants as described in the Manual on Uniform Traffic Control Devices (MUTCD). Signalization is considered as a possible solution to poor side street LOS; however, there have been many other considerations before concluding a traffic signal is required. Overall intersection safety is a major consideration and often results in alternatives to traffic signals such as roundabouts, route changes, additional lanes or new connections. When signalization occurs at an intersection the LOS can be determined as the average control delay to vehicles approaching the intersection.”*

The TSP goes on regarding signalized and unsignalized intersections;

*“Public Works staff will evaluate the LOS of all signalized locations on County Roads. They will also monitor traffic volumes on potential signalized locations to evaluate traffic signal warrants. This procedure will identify side street delay so capital projects may be identified and scoped. If signalization occurs, routes will be added to the list of intersections being monitored for LOS.”*

And further;

*“All existing traffic signalized intersections on County roads are operating at acceptable LOS.”*



Table 2 shows the signalized and unsignalized intersections on which Skagit County is collecting LOS data on a regular basis.

Table 2 – Intersections

Intersection Name	Intersection Type	NB Approach LOS	SB Approach LOS	EB Approach LOS	WB Approach LOS	Overall LOS	Meet MUTCD Signal Warrants?
Cook Road / Old Hwy 99 N	Signalized						Signalized
2013		B	B	A	A	B	
2018 Estimate		B	B	B	B	B	
Fir Island Rd / Pioneer Hwy	Stop Control*	LT		EB LT	EB RT	EB Overall	
2013		A	No Delay	D	B	C	No
2018 Estimate		A	No Delay	E	B	D	

\* Stop Controlled intersections not subject to overall intersection LOS standards - only individual approaches are subject to study

Though the eastbound left turn of Fir Island Road at Pioneer Highway has an LOS of “E” during the peak hour, the intersection does not meet MUTCD warrants for signalization, in part, because this peak hour LOS is not sustained throughout the day. Also, the intersection is immediately adjacent to Fir Island Road’s intersection with Conway Frontage Road and Main Street (Conway) and sufficient storage for signalization is not possible.

However, in October 2013 construction began on a 5-legged roundabout at this location that also incorporates Conway Frontage Road and Main Street. The project is scheduled to be complete in July of 2014. This project will remove said intersection from our study list – as did a similar project for the Best Road / McLean Road intersection in 2009.

### SUMMARY

As of December 31, 2013 all Skagit County road segments and signalized intersections meet the current LOS standards as adopted in the Transportation Systems Plan and Comprehensive Plan of Skagit County. Therefore, all Skagit County road segments and intersections are concurrent.