

Island County Concurrency Intersection Analysis

Island sub-RTPO TTAC briefing/workshop
January 12, 2012



What are today's meeting objectives?

Provide TTAC members with CIA project background information.

Brief TTAC members on project findings thus far, including intersection improvements that have been tested.

Discuss additional intersection improvements to be tested (solicit TTAC ideas and recommendations).

Set the course for follow up briefings and avenues for TTAC input.

Why are we doing the Concurrency Intersection Analysis (CIA)?

Island County is the only county in the state required to meet concurrency on Highways of Statewide Significance. Numerous intersections on SR 20 and SR 525 will likely fail to meet level-of-service standards within ten years if there are no improvements.

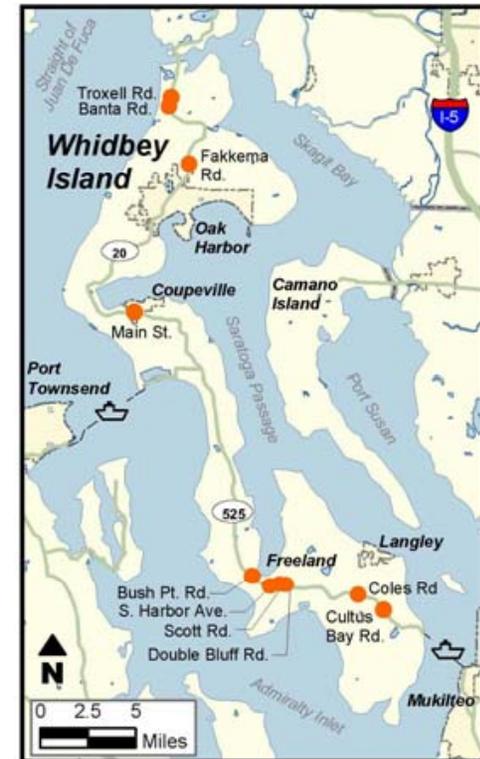
This analysis is needed to support the county and WSDOT in their evaluation of development impacts on the state highways, and to support the county's Transportation Element update, which is scheduled to begin in 2013. This project was included in the region's top 20 list compiled in Fall 2010 for the Washington Transportation Commission, and is consistent with the 2010 regional transportation plan.

Which intersections are we focusing on for our analysis?

Initially, ten intersections were evaluated for current and future LOS.

From our analysis we determined that six intersections will fall below LOS standard by 2020 and a seventh intersection (Scott Rd) falls below the LOS standard by 2035.

Our analysis efforts are now focused on evaluating intersection improvement alternatives for those seven intersections forecasted to fall below the concurrency LOS standard.



Who's involved?

The Island County Concurrency Intersection Analysis is a joint effort of Island County, the Regional Transportation Planning Organization and WSDOT.

List project team members are:

Donna Keeler, Island County, Transportation Planning (360) 678-7959
Connie Bowers, Island County Asst. County Engineer (360) 679-7336
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Gabe Philips, SCOG, Transportation Planner/Modeler (360) 416-6678
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Mike Koidal, WSDOT, Traffic Engineering (360) 757-5985
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Kerri Woehler, WDOT, Planning Manager (360) 757-5981
Dave Chesson, WSDOT Communications (360) 757-5970

What activities are included in the analysis?

Collect existing traffic counts

Intersection traffic growth forecasts for 2020 and 2035

Traffic analysis for existing (2011) and future (2020 and 2035) no-build conditions

Intersection collision analysis

Identify and evaluate potential intersection improvement alternatives

Prepare conceptual intersection improvement layouts and cost estimates

What is the end result?

We will evaluate existing and forecasted future traffic conditions at 10 intersections. We will examine a range of alternatives, including low-cost improvements, and make recommendations to restore acceptable level of service for those intersections that are at, or are expected to fall below, the level of service standard for concurrency. The project will result in a list of priority improvement strategies.

Some specific deliverables are listed below:

Technical memos for each major project task summarizing findings

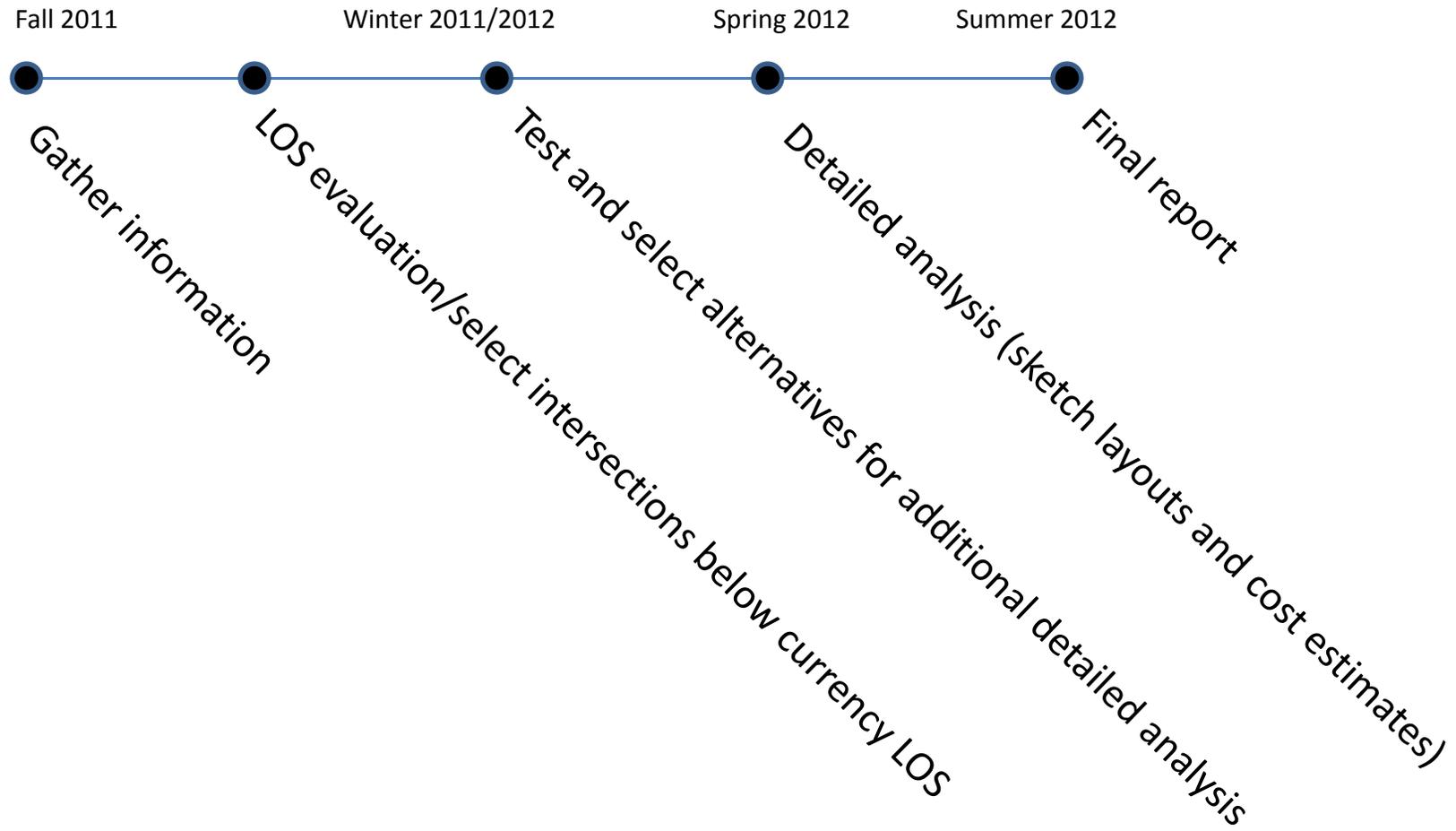
Final report of findings and recommendations

Folio summarizing findings and recommendations

Briefing paper (updated periodically, as needed during and after the project)

Staff and Policy Board briefings

What is our schedule to complete the concurrency intersection analysis?



What have we learned thus far?

The table below is a recap of our no-build traffic analysis. The intersections highlighted in yellow are the focus of our alternatives analysis.

CIA: Intersections falling below Currency LOS Standard in 2020 and 2035

SR	Intersection	Type	SRMP	Concurrency Trigger		2011 no-build		2020 no-build		2035 no-build		Notes
				LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	
20	Troxell Rd/Soundview Ln.	2-way Stop	39.80	E	>35 sec.	E	49.4 sec.	F	81.1 sec.	F	280 sec.	Worst approach: EB from Soundview Ln
20	Banta Rd/Northgate Wy	2-way Stop	39.24	E	>35 sec.	F	287.1 sec.	F	503.5 sec.	F	8340.4 sec.	Worst approach: EB from Banta Rd
20	Fakkema Rd (N. Oak Harbor)	T-intersection 1-way stop	34.50	F	>50 sec.	C	20 sec.	C	23.3 sec.	E	35.2 sec.	Meets LOS std out to 2035
20	Main St. (Coupeville)	Signal	21.83	F	>80 sec.	C	25.4 sec.	C	31 sec.	D	39.5 sec.	Meets LOS std out to 2035
525	Honeymoon Bay Rd/Bush Pt Rd.(Freeland)	2-way Stop	18.92	F	>50 sec.	E	36.6 sec.	F	51.7 sec.	F	132.3 sec.	Worst approach: from Honeymoon Bay Rd
525	S. Harbor Ave. (Freeland)	T-intersection 1-way stop	17.76	F	>50 sec.	E	44.9 sec.	F	73.3 sec.	F	234.3 sec.	Worst approach: SB from Harbor Ave.
525	Scott Rd. (Freeland)	T-intersection 1 way stop	17.26	F	>50 sec.	D	34 sec.	E	45.9 sec.	F	102 sec.	Worst approach: SB from Scott Rd
525	Double Bluff Rd (Freeland Vic)	2-way Stop	16.93	E	>35 sec.	D	30.4 sec.	E	39.9 sec.	F	87 sec.	Worst approach: NB from Double Bluff Rd
525	Coles Rd.	2-way Stop	12.72	E	>35 sec.	C	24.9 sec.	D	29.3 sec.	E	42.4 sec.	Worst approach: NB from Coles Rd
525	Cultus Bay Rd./Langley Rd.	Signal	11.10	E	>55 sec.	B	10 sec.	B	11 sec.	B	13.8 sec.	Meets LOS std out to 2035

What intersection improvement alternatives have we evaluated thus far?

Our evaluation of “low cost” channelization improvements are shown in the table below. Channelization improvements alone will not restore five of the seven study intersections to the adopted concurrency LOS standard long enough to justify the investment.

		LOS Std.	Deficiency			Channelization Improvement	LOS with Chann. Improv.			
			Delay/veh	LOS	Year		Delay/veh	LOS	Year	Comments
Troxell	EB	LOS D (≤ 35 sec)	81.1	F	2020	Separate lane for each movement	54	F	2020	Channelization alone does not address the problem
	WB		76.6	F	2020	Separate lane for each movement	48.9	E	2020	Channelization alone does not address the problem
	NB		No LOS deficiency							
	SB		No LOS deficiency							
Banta	EB	LOS D (≤ 35 sec)	503.5	F	2020	Separate lane for each movement	488.7	F	2020	Channelization alone does not address the problem
	WB		42.2	E	2020	Separate lane for each movement	41.9	E	2020	Channelization alone does not address the problem
	NB		No LOS deficiency							
	SB		No LOS deficiency							
Bush Point	EB	LOS E (≤ 50 sec)	No LOS deficiency							
	WB		51.7	F	2020		44.8	E	2020	Chann improv will fail by 2025 (LOS F, 57 sec delay)
	NB		No LOS deficiency							
	SB		No LOS deficiency							
Harbor	EB	LOS E (≤ 50 sec)	No LOS deficiency							
	WB		No LOS deficiency							
	NB		Driveway							
	SB		73.3	F	2020	Separate lane for each movement	54.7	F	2020	Channelization alone does not address the problem
Scott	EB	LOS E (≤ 50 sec)	No LOS deficiency							
	WB		No LOS deficiency							
	SB		57.3	F	2025	Add receiving lane on SR 525	20.5	C	2035	Receiving lane on SR 525 work well out beyond 2035
Double Bluff	EB	LOS D (≤ 35 sec)	No LOS deficiency							
	WB		No LOS deficiency							
	NB		39.9	E	2020	Add left turn lane	34.1	D	2020	Chan Improv will fail by 2025 (LOS E, 40 sec. delay)
	SB		46.3	E	2035	Separate lane for each movement	42.2	E	2035	Chan improv in 2035 will not address the LOS deficiency
Coles	EB	LOS D (≤ 35 sec)	No LOS deficiency							
	WB		No LOS deficiency							
	NB		37.4	E	2030	Separate lane for each movement	32.2	D	2030	Chan improv is successful until about 2035
	SB		40	E	2035	Add left turn lane	32.9	D	2035	left turn pocket is successful out past 2035

What other alternatives should we evaluate?

Roundabouts

Signals

Restricting turning movements and access

Other (TTAC discussion)

Next steps

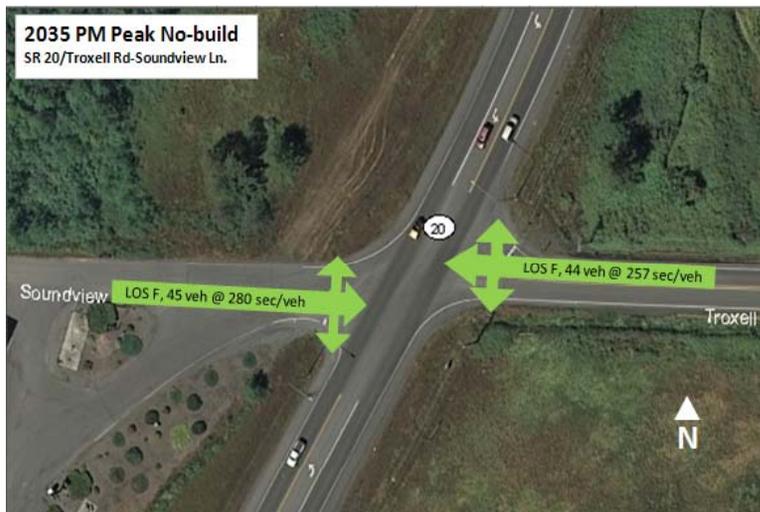
Policy Board briefing in February, 2012

TTAC meeting – present alternatives analysis findings, sketch layouts
and cost estimates in early Spring, 2012

Final report – Summer 2012

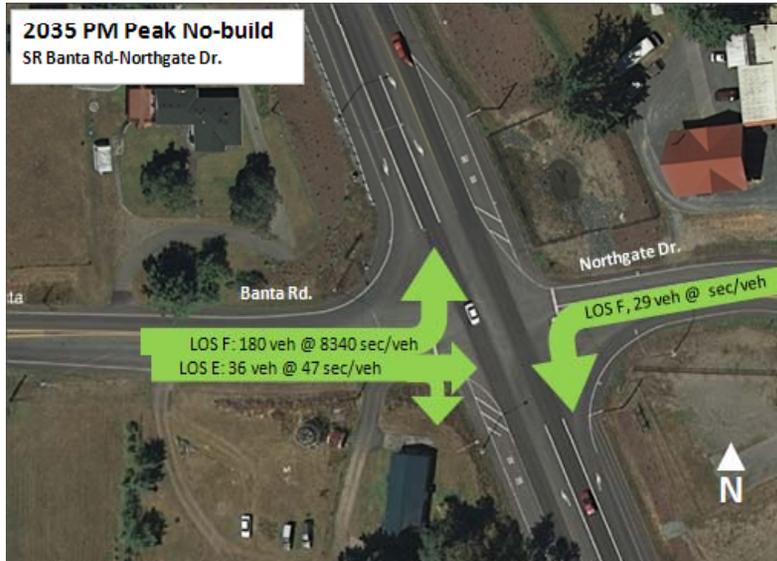
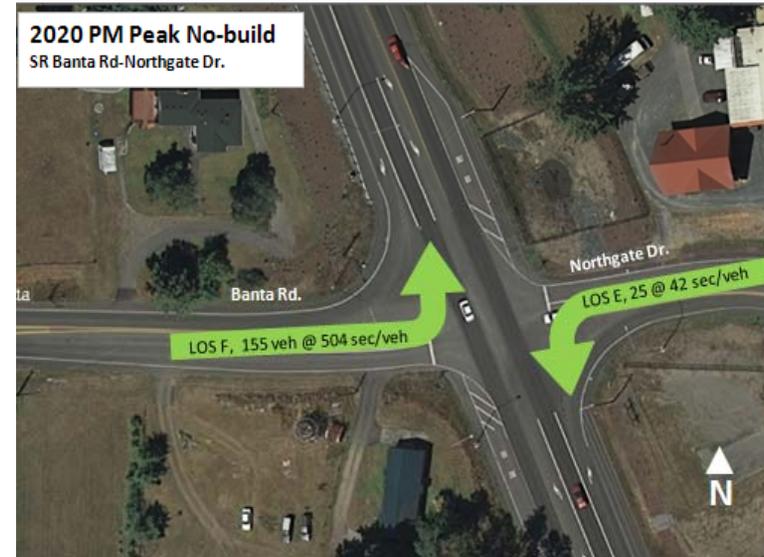
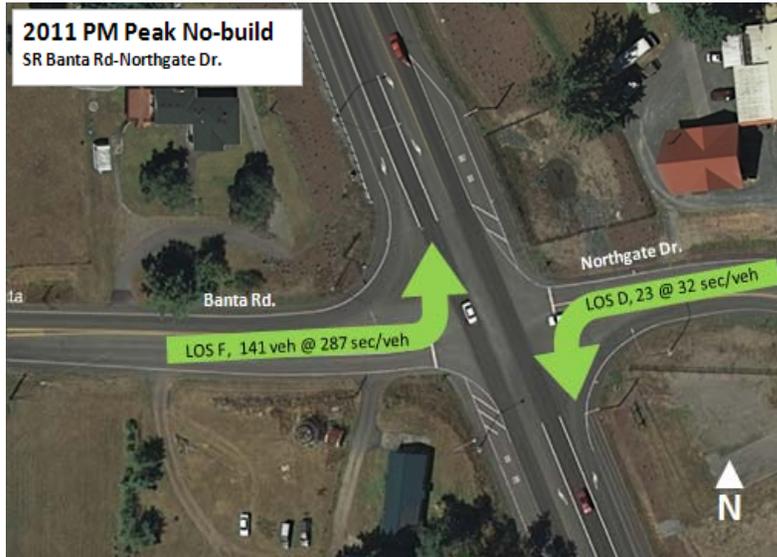
Intersection photos and analysis

SR 20/Troxell Rd-Soundview Ln



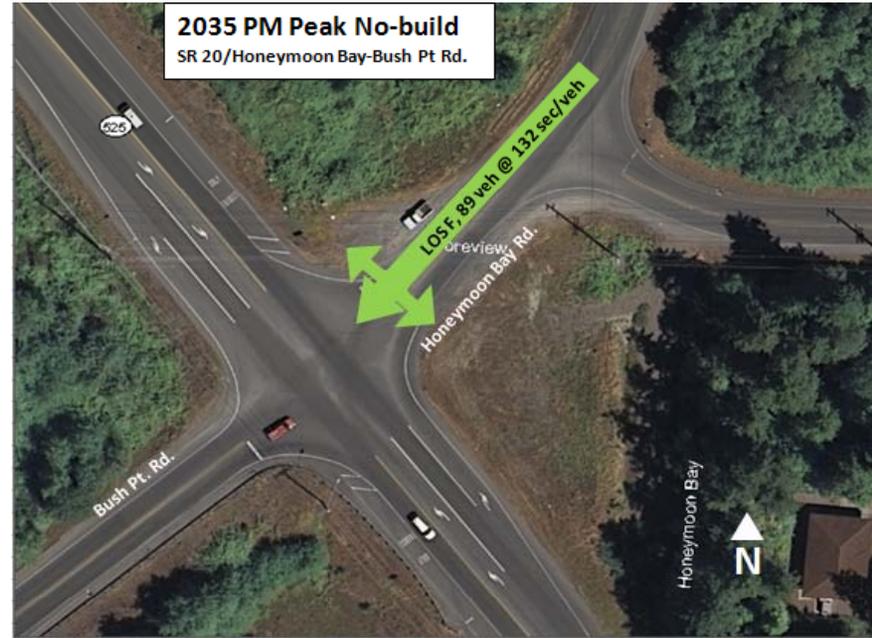
SR	Intersection	Concurrency Trigger		2011 no-build		2020 no-build		2035 no-build	
		LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
20	Troxell Rd/Soundview Ln.	E	>35 sec.	E	49.4 sec.	F	81.1 sec.	F	280 sec.

SR 20/Banta Rd – Northgate Dr



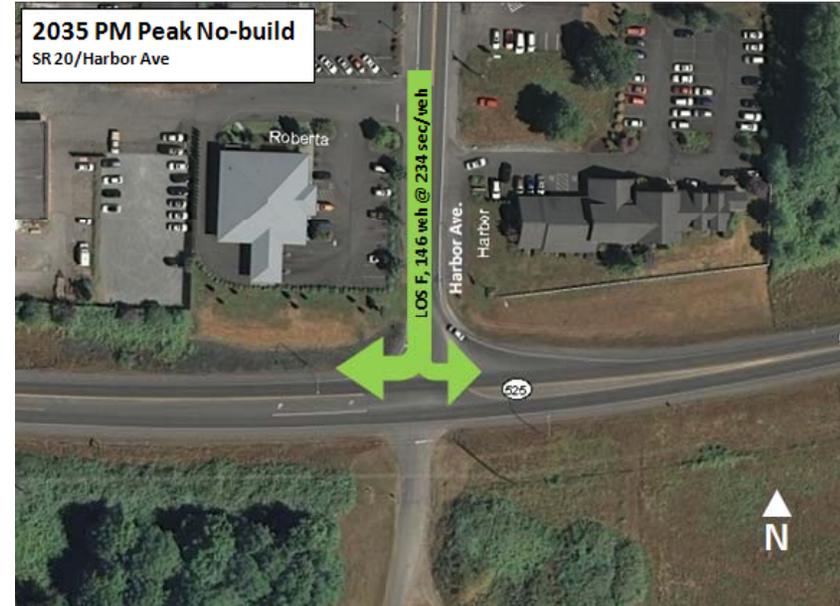
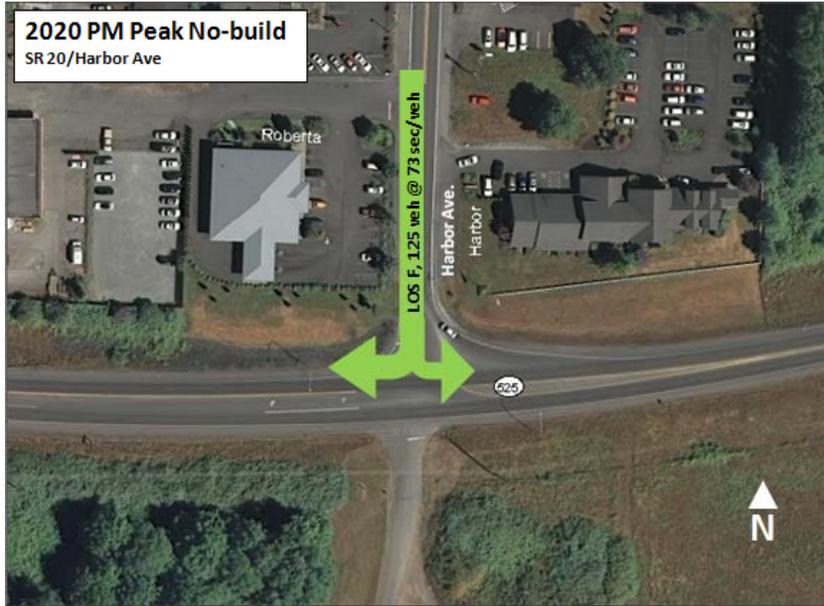
SR	Intersection	Concurrency Trigger		2011 no-build		2020 no-build		2035 no-build	
		LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
20	Banta Rd/Northgate Wy	E	>35 sec.	F	287.1 sec.	F	503.5 sec.	F	8340.4 sec.

SR 525/Bush Pt - Honeymoon Bay Rd



SR	Intersection	Concurrency Trigger		2011 no-build		2020 no-build		2035 no-build	
		LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
525	Honeymoon Bay Rd/Bush Pt Rd.(Freeland)	F	>50 sec.	E	36.6 sec.	F	51.7 sec.	F	132.3 sec.

SR 525/S.Harbor Ave



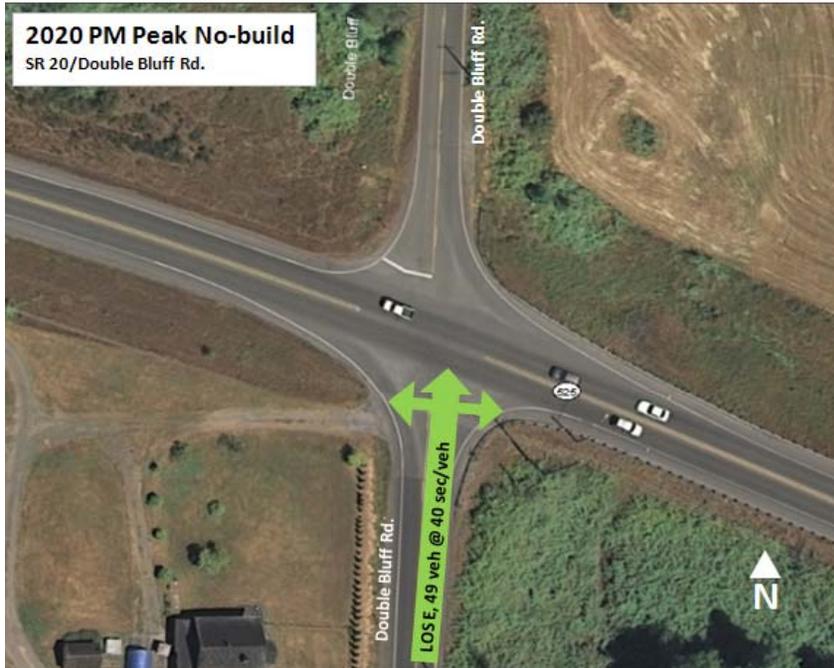
SR	Intersection	Concurrency Trigger		2011 no-build		2020 no-build		2035 no-build	
		LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
525	S. Harbor Ave. (Freeland)	F	>50 sec.	E	44.9 sec.	F	73.3 sec.	F	234.3 sec.

SR 525/Scott Rd



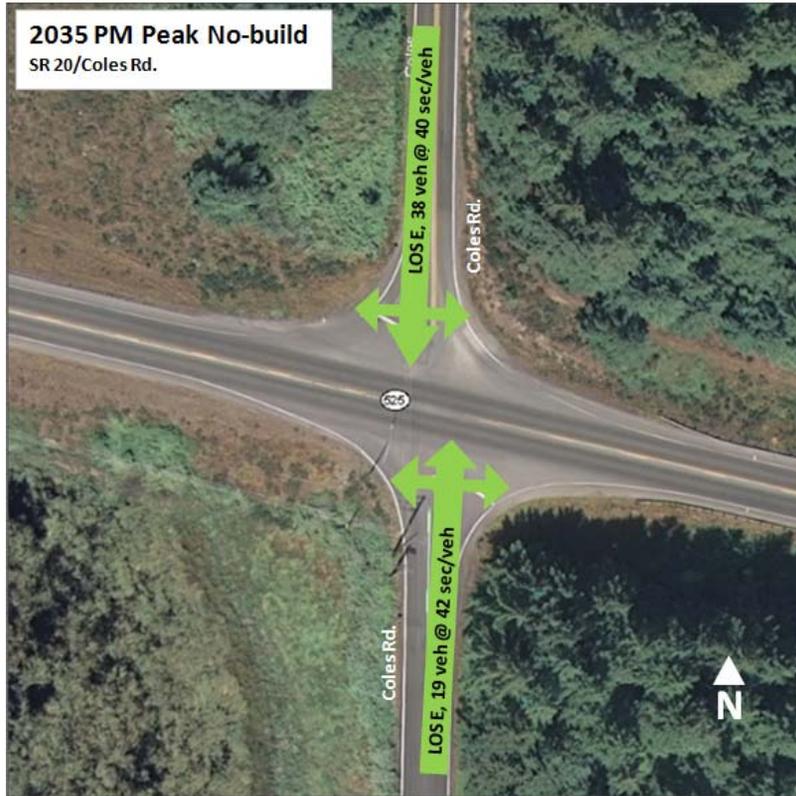
SR	Intersection	Concurrency Trigger		2011 no-build		2020 no-build		2035 no-build	
		LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
525	Scott Rd. (Freeland)	F	>50 sec.	D	34 sec.	E	45.9 sec.	F	102 sec.

SR 525/Double Bluff Rd



SR	Intersection	Concurrency Trigger		2011 no-build		2020 no-build		2035 no-build	
		LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
525	Double Bluff Rd (Freeland Vic)	E	>35 sec.	D	30.4 sec.	E	39.9 sec.	F	87 sec.

SR 525/Coles Rd



SR	Intersection	Concurrency Trigger		2011 no-build		2020 no-build		2035 no-build	
		LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
525	Coles Rd.	E	>35 sec.	C	24.9 sec.	D	29.3 sec.	E	42.4 sec.