County Transportation Needs, Challenges and Successes

- Clallam County's only east west, county spanning arterial is US 101. We believe that US 101 operational efficiency and safety are of paramount importance to the economic health and safety of county residents.
- Traffic volumes on US 101 have increased to the point where all unsignalized county road intersections with US 101 are failing to meet level of service standards (LOS).
- Clallam County believes that addition of new signalized intersections on US 101 to solve county road LOS and safety problems would lead to a rapid deterioration of the operational efficiency of US 101.

County Transportation Needs, Challenges and Successes

- Since “at grade” county road intersections with US 101 no longer operate efficiently and safely, Clallam County has committed to funding construction of new grade separated intersections with US 101.
- Two examples of the County’s commitment to upgrade its connections to US 101 between Port Angeles and Sequim are the Deer Park Intersection Improvement Project and the McDonald Creek Underpass Improvement Project.
- The City of Sequim has also made it a major transportation priority to push for the completion of the additional on-ramp and off-ramp at Simdar’s Road Intersection with US 101.

County Transportation Needs, Challenges and Successes

- Local Agency willingness to fund projects that directly benefit the operational efficiency and safety of state and federal highways should be encouraged and receive special consideration in grant fund rating criteria.
- Fatal accidents are a rare occurrence in rural counties and safety projects that correct fatality causes should always be considered in grant ranking for rural locations regardless of the time frame in which they occur.
- The Transportation Commission should consider phasing out some grant programs and replacing them with direct pass through allocations based on population.

County Transportation Needs, Challenges and Successes

- The Transportation Commission should exam the ever increasing number of required steps a project has to go through to get to approval and streamline the project approval process.
- The Transportation Commission should study and make recommendations to the governor and legislature regarding the issue of “Joint and Several Liability” in Washington State as it can heavily impact county and city transportation funding to pay for injury judgements when a jury decides that even a minor allocation of agency responsibility is involved.

DEER PARK SAFETY IMPROVEMENT PROJECT

DEER PARK AND BUCHANAN ROAD INTERSECTIONS

Unique Project Features

- A rural county is heavily funding and constructing a major intersection improvement on a major state highway.
- The County decided that it could not wait until this intersection moved up on state or federal funding lists.
- The project takes advantage of an existing rest stop on the north side of US 101 and existing state owned property to the south side of US 101 to bring project costs down.

WHY ARE THESE SAFETY IMPROVEMENTS NEEDED

- 1 Fatal Pedestrian Accident in 2001
- 3 Fatality Accident in 2005, 1 Fatality accident in 2007
- More than 56 Total Accidents in last 7 Years
- Intersection Level of Service Failures at Peak Hour
- Traffic Growth on US 101 Leads to Fewer Traffic Gaps
- Traffic Growth on Deer Park and Buchanan must be accommodated in a Safe Manner
- Future Growth will Greatly Increase the Cost of Addressing the Safety Problems at a Later Date

Level of Service is a Measure of Time Spent Waiting at an Intersection for a Safe Gap in Traffic

Table 2. Level of Service Criteria

LOS	Signalized Intersection Control Delay/Vehicle	Unsignalized Intersection Control Delay/Vehicle	Expected Delays
A	< 10.0 seconds	< 10.0 seconds	Little or no delay
B	10.1 to 20.0 seconds	10.1 to 15.0 seconds	Short traffic delays
C	20.1 to 35.0 seconds	15.1 to 25.0 seconds	Average traffic delays
D	35.1 to 55.0 seconds	25.1 to 35.0 seconds	Long traffic delays
E	55.1 to 80.0 seconds	35.1 to 50.0 seconds	Very long traffic delays
F	> 80.0 seconds	> 50.0 seconds	Extreme [(1)]

[(1)] When demand volume exceeds the capacity of the movement, extreme delays will be encountered with queuing, which may cause severe congestion affecting other traffic movements in the intersection.

SOURCE: 2000 Highway Capacity Manual (TRB SR 209, 2000) *(TRB 2000)*

Level of Service
Buchanan and Deer Park Intersections

Intersection/Approach	LOS Standard	Control Type	2008 Existing		2011 No Build		2028 No Build	
			LOS	Delay	LOS	Delay	LOS	Delay
US 101 and Buchanan Drive								
Eastbound Left-turn	D	Yield	B	12.8	B	14.2	F	78.8
Southbound	D	Stop	F	349.3	F	839.8	F	9999
US 101 and Deer Park Road								
Westbound Left-turn	D	Yield	B	12.9	B	13.7	C	22.3
Northbound	D	Stop	F	559.9	F	7786.4	F	7792.4

Deer Park/Buchanan Accidents

County Hires David Evans and Associates to Develop Full Range of Overpass Alternatives

- The primary objective of the David Evans Study is to develop conceptual level designs for an overpass/underpass near Deer Park Road.
- Provide cost estimates of the alternatives.
- The level of work completed under this study would allow the County to determine if moving on to final project design is feasible.
- Coordinate with the Washington State Department of Transportation (WSDOT) to get WSDOT approval to move the project forward to a full design stage.

Development of Alternatives

- Approximately 20 alternatives were developed

- Alternatives ran the full gambit from a stop light to a roundabout to various forms of overpasses and ramps.

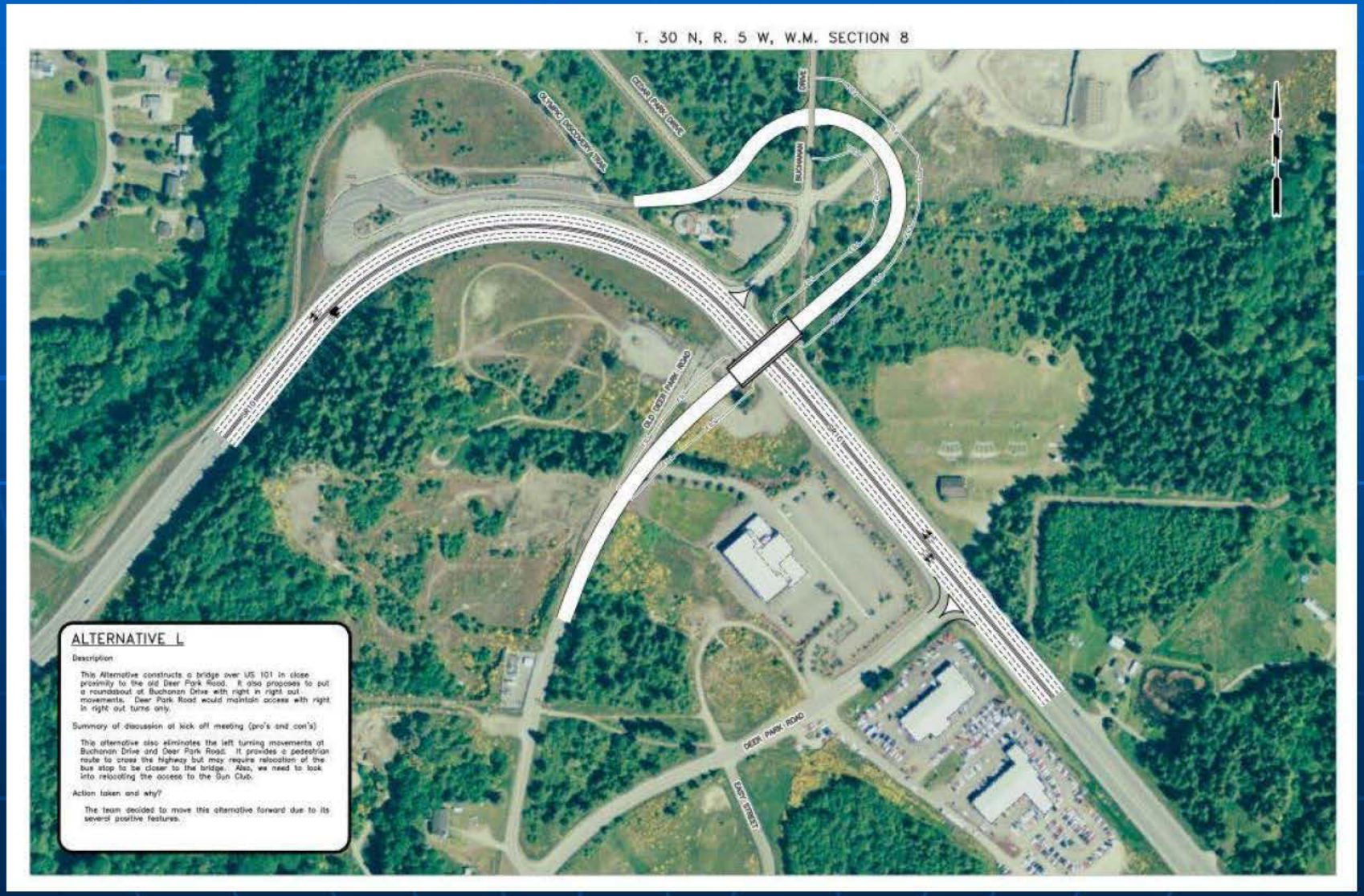
Alternative Selection Matrix

ALTERNATIVES	Evaluation Criteria: Traffic Safety (80 PTS)	Traffic Capacity (40 PTS)	Cost (50 PTS)	Environmental Impact (30 PTS)	WSDOT Coordination and Interest (30 PTS)	Constructability (20 PTS)	Compatibility With Development (70 PTS)	Impact on Adjacent Properties (110 PTS)	Total Points (430 points Total)	Project Ranking
No Action	0	20	50	0	0	20	50	0	140	
1 Alternative C Overpass Existing US 101, all ramps, roundabt	60	40	20	30	30	20	50	0	250	
2 Alternative F Reroute Buch. to Deer Park, overpass w ramps	60	40	10	30	30	10	60	0	240	
3 Alternative G Overpass existing US 101, full diamond intercng	60	40	20	30	30	20	50	60	310	
4 Alternative H Overpass realigned US 101, full ramps, DP open	80	40	10	30	30	20	70	80	360	#4
5 Alternative I Overpass realigned US 101 in gravel pit	80	40	30	30	30	20	70	60	360	#3
6 Alternative Ia Overpass Existing US 101 in Gateway	60	40	30	30	30	20	70	20	300	
7 Alternative J Overpass, westbnd median on/off ramp, round.	60	40	10	30	30	20	70	50	310	
8 Alternative K Overpass, west and east median on/off ramp, ro.	60	40	20	30	30	10	70	50	310	
9 Alternative L Overpass, westbound Buch. Offramp, roundabout	60	40	30	30	30	20	70	90	370	#1
10 Alternative M Overpass through the DP Gateway Center	60	40	50	30	30	20	70	60	360	#2

Initial Alternative Selection

- The result of the Alternative Selection Matrix review was that Alternative L was the top rated alternative.
- Alternative M was also highly rated and used less private land.

Alternative L
Overpass through Gun Club/Gravel Pit



Alternative M
Overpass through WSDOT Properties

Real World Problems

- Unfortunately, both alternative L and M ran aground based on landowner unwillingness to sell.
- This led the County to develop Alternative "V", a County Road underpass of US 101 which seems to meet the needs of the key property sellers, allowing the project to move forward without condemnation

ALTERNATE V – COUNTY ROAD UNDERPASS OF US101

UNDERPASS CONCEPT

Level of Service Problems Corrected by Implementing Improved Alternative L or V

Table 7. Intersection Level of Service – The Improved Alternative L

Intersection	LOS Standard	2028 PM Peak Hour	
		Initial Alternative L	Improved Alternative L
		LOS (Delay)	LOS (Delay)
US 101 and Buchanan Drive	D	F (477.0)	N/A*
US 101 and Deer Park Road	D	E (40.0)	N/A*
Old Deer Park Road Extension and Buchanan Drive	D	C (19.9)	C (19.9)
Old Deer Park Road and Deer Park Road	D	D (27.7)	C (16.4)
1st Drive and Deer Park Road	D	C (19.2)	C (19.2)

LOS – Level of Service
Delay – Average Control Delay (seconds)
*Rechannelize as free right-turn; no delay occurred.

Funding

- This project is projected to cost $7,500,000.
- Almost half that amount was brought to the project in state and federal funding formerly allocated to a rest stop in Sequim that the city decided it no longer needed.
- The remaining funding is a combination of County STP funding and Real Estate Excise Tax funding.

Project Timeline

- The project is in survey and design
- Construction was expected to occur in 2011.
- Construction will begin in 2013