

LEWIS COUNTY PUBLIC WORKS ENGINEERING AND TRAFFIC INVESTIGATION REPORT

IN THE MATTER OF: Evaluation of the existing speed limit on a portion of Buckley Road @ M.P. 0.562 to M.P. 1.006.

REASON FOR INVESTIGATION: Initiated by the County Engineer per a request by a Lewis County Resident.

COUNTY ROAD: Buckley Road (#55510) M.P. 0.562 to M.P. 1.006

TO: Tim Elsea and Road File.

FINDINGS:

a.) Current Speed Limit : [50 MPH]
 85% Prevailing Vehicle Speed: [37.2 MPH]
 Average Daily Traffic: [117.8]

b.) Physical Features:

Buckley road is a Rural Local Access in southern Lewis County north of the City of Toledo. The posted speed limit is 50 mph. This portion of Buckley road is straight and has no undulating grade. The geometrics of the roadway within this .444 mile portion of the road includes no horizontal or vertical curves.

The pavement width is 18' with no shoulders. This portion was resurfaced in 1980 with BST. The end of the county road leads to a private drive maintained by the Department of Fish and Wildlife to access a public boat launch on the Cowlitz River. There are 2 private roads (Helen Ln & Homer Ln) taking direct access off of this portion of the road that serve 17 parcels and 2 residences past the county road portion.

c.) Accident Characteristics: There have been 3 reported accidents along this portion of Buckley Road in the last 18+ years. None of those accidents involved injury, nor were any fatal. Please see the attach Collision Summary.

d.) Remarks / Recommendations:

a. With the analysis of Buckley road along with the USLIMITS2 Speed Zoning Report, it is my recommended that the speed limit on said portion of Buckley road should be reduced from a non-posted 50 mph to 35 mph.

e.) Attachments:

- a. 18+ year Collision Summary from Lewis County Mobility Database
- b. 2015 Buckley road Traffic Study data
- c. Buckley Road GIS map
- d. USLIMITS2 Speed Zoning Report



Tim Elsea P.E.
Lewis County Traffic Engineer

A>B : South
 B>A : North
 MP. : 0.652

Site: Buckley Rd
 Monday, 12/28/2015 11:00 AM -
 Thursday, 12/31/2015 10:15 AM

Volume Grand Totals

Average Hourly Volumes

	A>B	B>A	Combined
12:00 AM	0.3	0.0	0.3
1:00 AM	0.0	0.0	0.0
2:00 AM	0.7	0.7	1.3
3:00 AM	0.0	0.3	0.3
4:00 AM	0.3	1.0	1.3
5:00 AM	0.0	0.7	0.7
6:00 AM	0.3	1.3	1.7
7:00 AM	0.0	2.7	2.7
8:00 AM	0.3	3.7	4.0
9:00 AM	3.3	4.3	7.7
10:00 AM	5.0	7.5	12.5
11:00 AM	2.7	4.3	7.0
12:00 PM	4.3	4.7	9.0
1:00 PM	6.3	3.3	9.7
2:00 PM	6.0	5.7	11.7
3:00 PM	6.7	5.7	12.3
4:00 PM	5.0	1.0	6.0
5:00 PM	4.7	1.7	6.3
6:00 PM	5.3	3.0	8.3
7:00 PM	3.3	1.7	5.0
8:00 PM	2.0	3.3	5.3
9:00 PM	0.7	1.0	1.7
10:00 PM	1.3	1.0	2.3
11:00 PM	0.7	0.0	0.7
Average Daily Traffic (ADT)	59.3	58.5	117.8

Volume Totals

	A>B	B>A	Combined
	173	168	341
	50.7 %	49.3 %	

A>B : South
 B>A : North
 MP : 0.652

Site: Buckley Rd
 Monday, 12/28/2015 11:00 AM -
 Thursday, 12/31/2015 10:00 AM

Classification Grand Totals

Hourly Averages														
Combined														
Interval Start	Total	Motor Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi
12:00 AM	0.3	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1:00 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2:00 AM	1.3	0.0	1.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3:00 AM	0.5	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4:00 AM	1.3	0.0	1.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5:00 AM	0.7	0.0	0.5	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6:00 AM	1.7	0.0	0.7	0.3	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7:00 AM	2.7	0.0	1.5	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8:00 AM	4.0	0.0	2.3	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9:00 AM	7.7	0.0	4.7	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10:00 AM	12.5	0.0	5.0	6.5	0.0	0.5	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0
11:00 AM	7.0	0.0	3.3	3.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12:00 PM	9.0	0.0	6.0	2.3	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1:00 PM	9.7	0.0	6.0	3.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2:00 PM	11.7	0.0	6.0	5.3	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3:00 PM	12.5	0.0	7.7	5.0	0.0	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4:00 PM	6.0	0.0	4.0	1.3	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5:00 PM	6.0	0.0	3.7	1.7	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6:00 PM	8.3	0.0	6.0	1.7	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7:00 PM	5.0	0.0	4.3	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8:00 PM	5.3	0.0	4.7	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9:00 PM	1.7	0.0	1.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10:00 PM	2.3	0.0	2.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11:00 PM	0.7	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Daily Average	117.8	0.0	69.3	38.8	0.0	8.8	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0

Study Grand Totals														
	Total	Motor Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi
Combined	341	0	203	110	0	26	0	0	2	0	0	0	0	0
A>B	173	0	101	57	0	14	0	0	1	0	0	0	0	0
B>A	168	0	102	53	0	12	0	0	1	0	0	0	0	0
		0.0 %	59.5 %	32.3 %	0.0 %	7.6 %	0.0 %	0.0 %	0.6 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
		0.0 %	58.4 %	32.9 %	0.0 %	8.1 %	0.0 %	0.0 %	0.6 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
		0.0 %	60.7 %	31.5 %	0.0 %	7.1 %	0.0 %	0.0 %	0.6 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %

A>B : South
 B>A : North
 MP. : 0.652

Site: Buckley Rd
 Monday, 12/28/2015 11:00 AM -
 Thursday, 12/31/2015 10:00 AM

Speed Grand Totals

mph	Hourly Averages													70 - < 200
	Total	0 - < 15	15 - < 20	20 - < 25	25 - < 30	30 - < 35	35 - < 40	40 - < 45	45 - < 50	50 - < 55	55 - < 60	60 - < 65	65 - < 70	
12:00 AM	0.3	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1:00 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2:00 AM	1.3	0.0	0.3	0.7	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3:00 AM	0.3	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4:00 AM	1.3	0.0	0.3	0.7	0.0	0.3	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0
5:00 AM	0.7	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0
6:00 AM	1.7	0.0	0.0	1.0	0.3	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7:00 AM	2.7	0.0	0.0	1.0	1.0	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8:00 AM	4.0	0.0	0.0	1.0	1.3	1.0	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0
9:00 AM	7.7	0.0	0.0	0.7	3.7	1.0	1.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0
10:00 AM	12.5	0.0	0.0	0.5	5.0	4.5	2.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
11:00 AM	7.0	0.0	0.3	0.7	2.7	1.7	1.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0
12:00 PM	9.0	0.0	0.3	1.7	1.3	2.0	2.3	1.0	0.3	0.0	0.0	0.0	0.0	0.0
1:00 PM	9.7	0.0	1.3	3.0	1.7	2.0	1.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0
2:00 PM	11.7	0.0	0.3	3.7	2.7	2.7	1.7	0.7	0.0	0.0	0.0	0.0	0.0	0.0
3:00 PM	12.3	0.0	1.0	2.3	4.7	3.3	0.7	0.3	0.0	0.0	0.0	0.0	0.0	0.0
4:00 PM	6.0	0.0	1.0	1.3	1.0	0.7	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5:00 PM	6.3	0.3	1.0	1.0	1.7	1.0	0.7	0.7	0.0	0.0	0.0	0.0	0.0	0.0
6:00 PM	8.3	0.0	0.0	2.7	3.7	0.7	0.7	0.0	0.7	0.0	0.3	0.0	0.0	0.0
7:00 PM	5.0	0.0	0.0	0.0	1.7	2.7	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8:00 PM	5.3	0.0	0.0	1.0	2.3	0.3	1.3	0.0	0.3	0.0	0.0	0.0	0.0	0.0
9:00 PM	1.7	0.0	0.3	0.0	1.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10:00 PM	2.3	0.0	0.0	0.7	1.0	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11:00 PM	0.7	0.0	0.0	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Daily Average 117.8 0.3 6.3 23.8 37.3 24.8 17.0 6.2 1.7 0.0 0.3 0.0 0.0 0.0

Average (Mean) 29.6 mph Minimum 14.2 mph Maximum 56.2 mph Pace Range 23.5 - 33.5 mph 191 vehicles (56.0%)

Percentile Speeds (mph) 10% 21.4 15% 22.9 50% 28.5 85% 37.2 90% 38.3

Speeds Exceeded 25 mph 73.3% (250) 35 mph 21.4% (73) 45 mph 1.8% (6) 55 mph 0.3% (1) 65 mph 0.0% (0) 75 mph 0.0% (0)

Study Grand Totals

	Total	0 - < 15	15 - < 20	20 - < 25	25 - < 30	30 - < 35	35 - < 40	40 - < 45	45 - < 50	50 - < 55	55 - < 60	60 - < 65	65 - < 70	70 - < 200
Combined	341	1	19	71	107	70	49	18	5	0	1	0	0	0
		0.3 %	5.6 %	20.8 %	31.4 %	20.5 %	14.4 %	5.3 %	1.5 %	0.0 %	0.3 %	0.0 %	0.0 %	0.0 %
A>B	173	1	11	38	61	32	24	6	0	0	0	0	0	0
		0.6 %	6.4 %	22.0 %	35.3 %	18.5 %	13.9 %	3.5 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
B>A	168	0	8	33	46	38	25	12	5	0	1	0	0	0
		0.0 %	4.8 %	19.6 %	27.4 %	22.6 %	14.9 %	7.1 %	3.0 %	0.0 %	0.6 %	0.0 %	0.0 %	0.0 %

Collision List

55510 BUCKLEY RD		Jur	FEC		
0.687	CLAS Collision	01/26/2010	E041150 - Prop Dam Only	5	9
0.980	Crash	10/02/1998	C40897 - Prop Dam Only	5	9
1.006	CLAS Collision	07/15/2005	1741298 - Prop Dam Only	5	9

USLIMITS2 Speed Zoning Report

Project Name: Buckley Road

Analyst: Ray Shipman

Date: 01-26-2016

Basic Project Information

Project Number: 55510
Route Name: Buckley
State: Washington
County: Lewis County
City: Rural/Other
Route Type: Road Section in Developed Area
Route Status: Existing

Roadway Information

Section Length: .444 mile(s)
Statutory Speed Limit: 50 mph
Adverse Alignment: No
One-Way Street: No
Divided/Undivided: Undivided
Number of Through Lanes: 2
Area Type: Residential-Collector
Number of Driveways: 2
Number of Signals: 0

Crash Data Information

Crash Data Years: 18.83
Crash AADT: 118 veh/day
Total Number of Crashes: 3
Total Number of Injury Crashes: 0
Section Crash Rate: 833 per 100 MVM
Section Injury Crash Rate: 0 per 100 MVM
Crash Rate Average for Similar Roads: 366
Injury Rate Average for Similar Roads: 101

Traffic Information

85th Percentile Speed: 37 mph
50th Percentile Speed: 29 mph
AADT: 118 veh/day
On Street Parking and Usage: Not High
Pedestrian / Bicyclist Activity: Not High

Recommended Speed Limit: 35

Note: The section crash rate of 833 per 100 MVM is more than 30 percent above the average for similar roads (366) but below the critical rate (1327). A comprehensive crash study should be undertaken to identify engineering and traffic control deficiencies and appropriate corrective actions. The speed limit should only be reduced as a last measure after all other treatments have either been tried or ruled out.

