

**Engineering and Traffic Investigation – Speed Limit
SR 531 / Arlington Vicinity
MP 6.89 to MP 8.60
September 2013**

Background

The speed limit is presently 35 mph west of MP 6.89 where it changes to 50 mph. The speed limit changes to 35mph again at MP 8.60. A signal was installed at Walmart / 43rd Ave NE at MP 7.12 on April 7, 2009.

Proposed Action

It has been proposed to revise the existing 50 mph zone MP 6.89 to MP 8.60 to 35 mph, resulting in continuous 35 mph zone.

Speed Field Study

Speed studies were conducted in March and August of 2013. Below is a summary of the most recent results.

Date	Location	Direction	85th Percentile Speed (mph)	10 mph Pace Range (mph)
3/5/2013	6.84	EB	39	32 - 41
3/5/2013	6.84	WB	39	31 - 40
3/5/2013	7.35	EB	42	35 - 44
3/5/2013	7.35	WB	41	34 - 43
8/8/2013	7.9	EB	44	34 - 43
8/8/2013	7.9	WB	45	37 - 46
8/8/2013	8.31	EB	46	37 - 46
8/8/2013	8.31	WB	43	32 - 41

85th Percentile Speed: measured speed at which 85 out of 100 vehicles travel at or below
10 mph Pace Range: the 10 mph range of speed that the most vehicles are traveling at

Collision Analysis

Evaluated period is from the beginning of January, 2011 through the end of June, 2013: Total 115 collisions. The majority of collisions occurred during weekdays between noon and 6:00 pm. There were 43 collisions at the 4 signalized intersections of which there were 24 rear ends/side swipes and 5 angle collisions. Between the intersections there were 72 collisions, 80% of which were rear ends. The collision rate is 3.02 which is above the statewide average of 2.73.

Other Considerations

2008 to 2011 Average Daily Traffic Volume (ADT) ranges from 22,000 to 24,000 east and west of 43rd Ave NE; 16,000 to 17,000 west of 67th Ave NE; and 11,000 to 12,000 east of 67th Ave NE, which is at MP 8.59.

Truck Percentage - No Truck percentages are available within study limits.

Roadway Characteristics

West of and through the 43rd Ave intersection is a newly constructed 5 lane section. The remainder is 2 lanes with left turn channelization only at intersections. Traffic signals are at each intersection, approximately ½ mile apart. The signal at 43rd Ave is tied into WSDOT's central system and has a camera. The signals at 51st Ave NE, 59th Ave NE, and 67th Ave NE are not connected to the central system.

For the most part, shoulder widths are between 1 and 5 feet. A good portion of this stretch has telephone poles in close proximity to the highway.

Roadside Development and Lighting

Commercial development is clustered around the intersections, on the south side of the highway up to 59th Ave NE vicinity, and on the north side in the vicinity of 67th Ave NE. There is an athletic club and school facility driveway at MP 7.32 that generates significant turning traffic.

There is an airport and significant industrial properties north of the highway from the vicinity of 59th Ave NE to the vicinity of 67th Ave NE with access via the two

signalized intersections. There is significant residential development east of 67th Ave NE, through the existing 35 mph zone.

The roadway is illuminated on the north side only to milepost 7.21 after which there is some illumination at intersections and off-road at most businesses. The signals at 51st Ave NE and 59th Ave NE are span wire.

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