

ORDINANCE NO. _____

**REMOVAL OF STOP SIGNS ON HARKSELL ROAD AT THE INTERSECTION WITH
WOODLAND ROAD**

WHEREAS, in compliance with RCW 36.32.120 and 46.61.200, it is found necessary and expedient to modify traffic control signs on certain County Roads; and

WHEREAS, the County Engineer has determined through an engineering study that there is currently no justification for the Multi-Way Stop at the intersection of Harksell Road and Woodland Road, as described in the Manual on Uniform Traffic Control Devices Section 2B.07; and

WHEREAS, it has been determined that the Harksell Road - Woodland Road intersection traffic patterns would better function as a standard T-intersection with southbound traffic on Woodland Road stopping and eastbound and westbound traffic having free movements; and

WHEREAS, the County Engineer has agreed that it is necessary to formally modify traffic control signs on Harksell Road at the intersection with Woodland Rd; and

NOW, THEREFORE, BE IT ORDAINED by the Whatcom County Council that stop signs be removed for:

- 1) Westbound traffic on Harksell Road at the intersection with Woodland Road in section 32, Township 40 North, Range 2 East, W.M., and section 5, Township 39 North, Range 2 East, W.M.
- 2) Eastbound traffic on Harksell Road at the intersection with Woodland Road in section 32, Township 40 North, Range 2 East, W.M., and section 5, Township 39 North, Range 2 East, W.M.

BE IT FURTHER ORDAINED, by the Whatcom County Council that the following be removed from the Whatcom County Code Section 10.16.890:

| Road Name | Direction- Stopping | Cross Street |
|--------------------------|--------------------------------|------------------------|
| Harksell Road | Westbound | Woodland Rd |
| Harksell Road | Eastbound | Woodland Rd |

BE IT FURTHER ORDAINED, by the Whatcom County Council that the following be removed from the Whatcom County Code Section 10.16.795:

A stop sign shall be installed southbound on Woodland Road at Harksell Road, ~~and a stop sign shall be installed westbound on Harksell Road at Woodland Road~~, Section 32, Township 40 North, Range 2 East, W.M. (Ord. 99-051; Ord. 84-115 § 18).

1 **BE IT FURTHER ORDAINED**, that the County Engineer is hereby directed to modify
2 the appropriate signs and the Whatcom County Sheriff and the Washington State Patrol be
3 notified by a copy of this ordinance.
4

5
6 **ADOPTED** this ____ day of _____, 2022.
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9
10 ATTEST:

WHATCOM COUNTY COUNCIL
WHATCOM COUNTY, WASHINGTON

11
12
13 _____
14 Dana Brown-Davis, Clerk of the Council

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16
17 APPROVED AS TO FORM:

WHATCOM COUNTY EXECUTIVE
WHATCOM COUNTY, WASHINGTON

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19
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21 Electronically Approved by C. Quinn/JJA 10-31-2022
22 Christopher Quinn,
23 Sr. Deputy Prosecuting Attorney,
24 Civil Division

() Approved () Denied

Date Signed: _____



Woodland Rd/Harksell Rd Intersection Traffic Study

10/24/2022

Vicinity Map



Woodland Rd/Harksell Rd Intersection Map



Background and Roadway Information

Two requests from the public that we examine this intersection are the basis for this study. This study will cover the intersection of Woodland Road (MP 2.02) and Harksell Road (MP 1.39).

Woodland Road is classified as a Rural Local Access for its entire length from Birch Bay Lynden Road to Harksell Road. The characteristics of Woodland Road within the study area are 10-foot BST (chipseal) lanes with 3-foot gravel shoulders.

Harksell Road is classified as an Urban Local Access from Delta Line Road to Enterprise Road. The road characteristics of Harksell Road are 9 to 12-foot BST (chipseal) lanes with 2 to 5-foot gravel shoulders.

Traffic Count Data

Traffic counts were conducted from May 24th through May 30th, 2022 on all 3-legs of the intersection and are shown below. The counts consist of vehicle volumes, speeds, and percent of truck traffic.

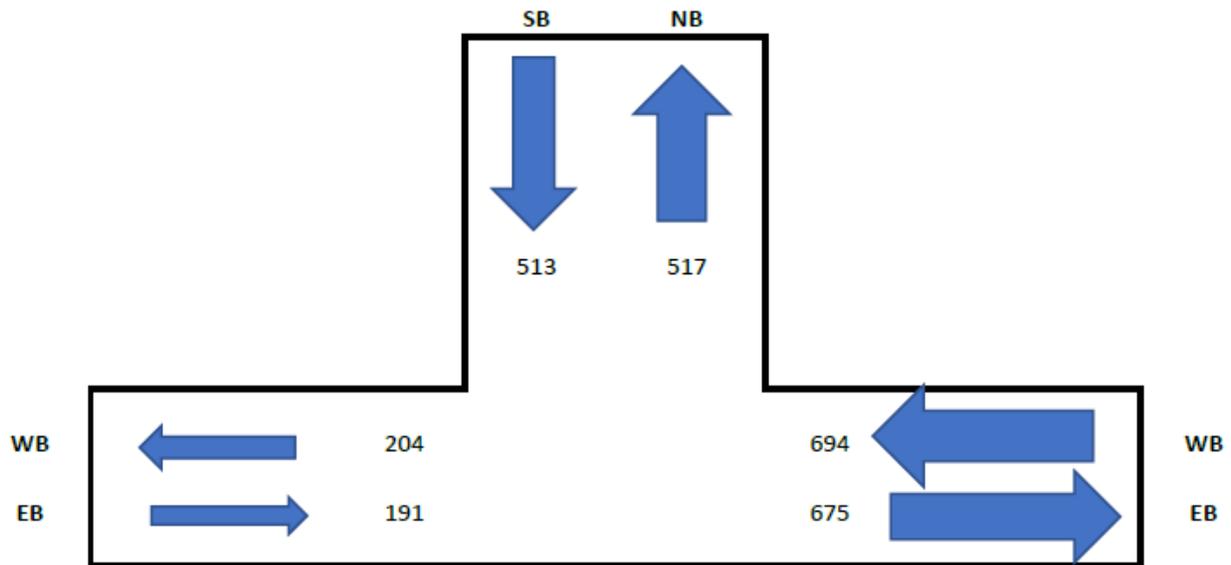
Average Daily Volume (ADT):

1029 ADT (North of intersection)

395 ADT (West of intersection)

1369 ADT (East of intersection)

Traffic Direction and Volume:



Speeds:

| | | |
|-----------------------|------------------------|---|
| North of intersection | Average speed 38.7 MPH | 85 th percentile 44.3 mph (Speed Limit 35 mph) |
| West of intersection | Average speed 34.4 MPH | 85 th percentile 42.3 mph (Speed Limit 35 mph) |
| East of intersection | Average speed 27.7 MPH | 85 th percentile 31.6 mph (Speed Limit 35 mph) |

The 85th percentile speed is widely used by traffic engineers, along with other factors, to set speed limits. It quantifies the speed at which 85 percent of traffic is going at or below.

Truck Traffic:

| | |
|-----------------------|-------|
| North of intersection | 13.4% |
| West of intersection | 13.7% |
| East of intersection | 12.7% |

Collision History

A review showed no collisions at this intersection have been received from the Washington State Patrol in the 5+ years from January 2017 to September 2022.

Signs and Markings

Signs

Southbound Woodland Rd:

W3-1A Stop Ahead Sign – 30"x30"

R1-1 Stop Sign – 30"x30" with R1-4 All-Way Plaque 18"x6"

W1-7 Two Direction Large Arrow 48"x24"

Westbound Harksell Rd:

W3-1A Stop Ahead Sign – 30"x30"

R1-1 Stop Sign – 30"x30" with R1-4 All-Way Plaque 18"x6"

Eastbound Harksell Rd:

W3-1A Stop Ahead Sign – 30"x30"

R1-1 Stop Sign – 30"x30" with R1-4 All-Way Plaque 18"x6" and Street Name Signs for 1900 blk Harksell Rd 36"x9" and 7300 blk Woodland Rd 42"x9"

Markings

No pass markings painted for a minimum of 500 feet on the southbound and westbound legs of the intersection for entering traffic. No pass markings painted for approximately 350 feet on the eastbound leg of the intersection will be extended to 500 feet during the next striping season in 2023.

Sight Distance

The table below summarizes the operational intersection sight distance measured 10 feet and 12 feet from the traveled way, from an eye height of 3.5 feet to an object height of 3.5 feet.

| Sight Distance Woodland Rd/Harksell Rd Intersection | | | |
|---|------------------------------|----------------------|--------------------------------|
| Date | 10/13/2022 | Technician: | JJA |
| Operational Intersection Sight Distance Measured 10 ft and 12 ft from the traveled way | | | |
| Eye Height | 3.5 ft | Object Height | 3.5 ft |
| Direction of Travel (Woodland Rd)/ Direction Looking | Speed Limit (Harksell Rd) | Measured Distance | Intersection Sight Distance |
| SB/East @ 10' | WB 35 MPH | 664 ft | 390 ft |
| SB/West @ 10' | EB 35 MPH | 1700 ft + | 390 ft |
| SB/East @ 12' | WB 35 MPH | 415 ft | 390 ft |
| SB/West @ 12' | EB 35 MPH | 1700 ft + | 390 ft |

Operationally, there is sufficient sight distance for the road users at this location, if east and west bound stop signs are removed.

Warrant Analysis for Multi-Way Stop at Bay Road and Kickerville Road

- A. Where traffic control signals are justified, the multi-way stop is an interim measure that can be installed quickly to control traffic while arrangements are being made for the installation of the traffic control signal.

Traffic control signal justified: NO

- B. Five or more reported crashed in a 12-month period that are susceptible to correction by a multi-way stop installation. Such crashes include right-turn and left-turn collisions as well as right-angle collisions.
- a. A review of collisions from the Washington State Patrol found no collisions at this location in the last 5 plus years. In addition, during the site review it was observed that most vehicles making a turn from westbound to northbound did not stop for the stop sign and many vehicles headed through the intersection eastbound rolled through the stop sign.

Collision warrant met: NO

- C. Minimum Volume:

1. The vehicular volume entering the intersection from the major street approaches (total of both approaches) averages at least 300 vehicles per hour for any 8 hours of an average day; and

Criterion met: NO

2. The combined vehicular, pedestrian, and bicycle volume entering the intersection from the minor street approaches (total of both approaches) averages at least 200 units per hour for the same 8 hours, with an average delay to minor-street vehicular traffic of at least 30 seconds per vehicle during the highest hour; but

Criterion met: NO

3. If the 85th-percentile approach speed of the major-street traffic exceeds 40 mph, the minimum vehicular volume warrants are 70 percent of the values provided in Items 1 and 2.

Criterion met: NO

Minimum Volume Warrant Met: NO

- D. Where no single criterion is satisfied, but where Criteria B, C.1 and C.2 are all satisfied to 80 percent of the minimum values. Criterion C.3 is excluded from this condition.

i. **Criteria B met by 80%: NO**

ii. **Criteria C.1 met by 80%: NO**

iii. **Criteria C.2 met by 80%: NO**

80 Percent Warrant Met: NO

Option:

Other criteria that may be considered in an engineering study include:

- A. The need to control left-turn conflicts

No collisions involved left-turning vehicles from the major road (Harksell Road)

- B. The need to control vehicle/pedestrian conflicts near locations that generate high pedestrian volumes

No conflicts between vehicles and pedestrians at this location

- C. Locations where a road user, after stopping, cannot see conflicting traffic and is not able to negotiate the intersection unless conflicting cross traffic is also required to stop

Sight distance checks were performed on 10/13/2022 by Whatcom County Public Works Traffic Section Staff and exceeded existing intersection sight distance requirements at both 10 feet and 12 feet from the traveled way.

- D. An intersection of two residential neighborhood collector (through) streets of similar design and operation characteristics where multi-way stop control would improve traffic operational characteristics of the intersection.

Harksell Road is an Urban Local Access Road from Delta Line Road to Enterprise Road and Woodland Road is a Rural Local Access Road its entire length, however Woodland Road is not a through road at this intersection. Therefore, traffic operations will actually be improved by the removal of the east and west bound stop signs.

Conclusion

This location would not currently meet any MUTCD warrant for multi-way stop application and additionally MUTCD Section 2A.03 *Standardization of Application* gives the following guidance “Signs should be used only where justified by engineering judgement or studies...”. The current stop signs are not justified by engineering study and the removal of the east and west bound stop signs will improve traffic operations and generally conform to the application of stops at T-intersections throughout Whatcom County. Public Works will put forth an ordinance to the Whatcom County Council to remove the All-Way Stop at this location. When the ordinance is approved, the following will be added and maintained for a minimum of 6 months upon removal of the All-Way Stop:

1. New Traffic Pattern Ahead Signs with flags on each leg of the intersection
2. A Cross Traffic Does Not Stop Plaque will be added beneath the southbound Stop Sign