



MEMORANDUM

TO: Jon Hutchings, Public Works Director

CC: James P. Karcher, P.E., County Engineer

FROM: Jason Ardt, Engineering Technician III – Traffic

THROUGH: Mike Donahue, P.E., Traffic Engineering Manager

DATE: 6/10/2020

SUBJECT: Marine Drive – Old Marine Dr to Wynn Rd, including Bridge #172 over BNSF Track

Background and Purpose:

A renewed interest in increasing the safety of the Marine Dr corridor has led Whatcom County Public Works (WCPW) to review its response to various requests from both the public and the Whatcom County Bicycle Pedestrian Advisory Committee (BPAC). This memo will address the issues and requests raised.

1. Speed Limit Reduction:

- a. In October of 2019 the BPAC requested that WCPW review the speed limit on Marine Dr, especially in the area of Bridge #172. Whatcom County Ordinance 1987-027 set the speed limit on Marine Dr from 1000 feet east of Locust Road to Hoff Road at 40 MPH. This ordinance was later amended by Whatcom County Ordinance 2017-031 to lower the speed limit on Marine Dr from Bancroft Road to Hoff Road to 30 MPH.
- b. Traffic counts from 2018 on Marine Dr, west of Alderwood Ave (mile post 3.76) were reviewed generating the following data:
 - Average daily traffic (ADT) 6412
 - Average speed 40.5 MPH
 - 85th percentile speed 44.4 MPH (this is the speed at which 85 percent of traffic is travelling at or below and is the engineering standard used by traffic engineers to set speed limits)
 - Vehicle Classification: 6.2% Trucks
- c. A review of collisions received from the Washington State Patrol from 01/01/2016 to 10/01/2019, and covering MP 3.26 (Wynn Rd) to MP 3.70 (Old Marine Dr) showed only 1 collision at MP 3.34, that collision involved a pursuit by the Whatcom County Sheriff's Department of a fleeing vehicle.
Narrative of the collision by the Deputy:
 - Unit one was traveling westbound on Marine Dr. fleeing pursuing WCSO Deputies. Unit one, while driving over a cement bridge, lost control and drove into the southern guardrail. After striking/damaging the guardrail, unit one veered north and struck the curb/sidewalk cement structure on the bridge. Unit one continued west grinding the undercarriage of the vehicle for roughly



thirty feet. Unity one then continued to flee the scene westbound. A short time later, Deputies used a PIT maneuver and were able to stop the vehicle.

- d. Given the lack of collision history, the addition of the Bicycle Warning System to Bridge #172 in 2016, the fact that the roadway is classified as an urban minor arterial with an 85th percentile speed in line with the posted limit, all lead to an engineering conclusion that the speed limit is appropriate for the roadway. The BPAC was then advised that they could pursue a speed limit reduction by petition.
 - e. Further review of collisions revealed that 10 collisions have occurred in this stretch of roadway (MP 3.26 to MP 3.70) from 01/01/2010 to 06/10/2020; however, none have involved bicycles or pedestrians. One rear end collision resulted in a minor injury and none of the other nine collisions resulted in any injuries. (See attached Collision Summary)
2. **Lane separation device to prevent unsafe passing both leading up to the bridge and on the bridge**



- a. Discussed with Jim Karcher on June 4th site meeting with Traffic personnel. These types of systems pose a hazard to bicycles and pedestrians as they tend to force vehicles away from the centerline and encourage the vehicles to encroach on the shoulders of the roadway. They can also be a hindrance to emergency vehicle response. It was determined that this will not be pursued.
3. **Less intrusive edge markers**



- a. Following site meeting with Jim Karcher on June 4th, and review of the Manual on Uniform Traffic Control Devices (MUTCD), the relocation of the Type 3 Object Markers will be considered. Currently Traffic Engineering is following up with Maintenance and Operations and Bridge and Hydraulic Engineering on this.



4. Move freeze indicators out of the shoulder



- a. This request was completed by Chet Zender, Road Crew Leader Maintenance and Operations in early 2020.

5. Schedule more frequent cleanings of the bridge.



- a. Discussed with Jim Karcher on June 4th site meeting with Traffic personnel. Current maintenance schedule for cleanings is adequate and will continue.

6. Provide reflective flags at each end of the bridge for pedestrians and bicyclists.



- a. Discussed with Jim Karcher on June 4th site meeting with Traffic personnel. Given the limited pedestrian traffic over the bridge; the susceptibility of these to



vandalism; the hazard they might pose to trains if thrown onto the tracks; this request will not be pursued.

7. Encourage use of the shoulder on walkway side of the bridge by pedestrians via signage and shoulder improvements

- a. Oct 2019 Response to BPAC request for signage and shoulder improvements:

RCW 46.61.250 directs pedestrians to use sidewalks where provided, in this case on the north side of the bridge. Pedestrians approaching the bridge from the west should already be walking on the north shoulder facing traffic as directed by the law. Since we are only providing a shoulder on the north side of the roadway and not on the south, pedestrians from the east should also be using the north shoulder, per the law. In the past Public Works has used crushed limestone on the north shoulder in order to make this look different and encourage its use by pedestrians. At our most recent traffic meeting (Oct 15, 2019), Joe Rutan committed that Public Works would continue to use crushed limestone on the north shoulder. Maintenance will be working in the area next spring during preparations for the 2020 chipseal season, at that time they will do upkeep to the shoulder including adding more crushed limestone.

- b. Visual inspection reveals that the shoulder was repaired, however with the delay of the 2020 Chipseal season and associated maintenance activities the crushed limestone has yet to be placed. Traffic will follow up with Maintenance and Operation on this.

8. Sharrows on the bridge and approaches



- a. Shared Lane Markings are an approved MUTCD marking per Section 9C.07 and Figure 9C.9, however the guidance states they should not be used on roadways that have a speed limit above 35 MPH. There is an option in Section 9B.06 for the use of Bicycles May Use Full Lane Sign (R4-11) “*may be used on roadways where no bicycle lanes or adjacent shoulders usable by bicyclists are present and where travel lanes are too narrow for bicyclists and motor vehicles to operate side by side.*” Currently WCPW has posted W11-1 Bicycle Warning Signs with a supplemental Share The Road plaques for westbound traffic, 90 feet east of Old Marine Dr. and for eastbound traffic 250 feet west of Wynn Rd. Jim Karcher indicated in the June 4th site meeting with Traffic personnel that this could be pursued if the speed limit is reduced but a Whatcom County standard would need to be adopted.



9. Mark the current unmarked crosswalk at the intersection of Marine Dr/Marine Way/Wynn Rd

- a. Following an October 2019 request from the BPAC on this, WCPW responded as follows: *Nothing is worse for both pedestrians and motorists than making an unsafe situation appear to be safe. This is what marked crosswalks with no traffic control signals do. Pedestrians let their guard down and assume the marked crosswalk areas to be a safe place to cross. Motorists tend to disregard crossings where there are no traffic control signals, even if they are marked. In this case it is better for both to leave the crosswalk unmarked allowing pedestrians to cross legally, when safe to do so.*

10. At grade crossing connecting Marine Way and Old Marine Dr as an alternative to Bridge #172

- a. See attached pictures for crossing location, illegal crossing location, and railroad response.
- b. Community has used a makeshift crossing here for years. Utilities and Transportation Commission (UTC) became aware of this in April of 2020 and investigated. Cal Stocking of the UTC referred to the crossing as “literally a fatality in the making” and the UTC took steps, as required by law, to alert BNSF of the illegal crossing. BNSF responded by removing the neighborhood bridge, erecting new “No Trespassing” signs and adding concrete ecology blocks to close the crossing.
- c. Betty Young, Rail Safety Program Advisor with the UTC responded to Gary Malick on the BPAC on how crossings are added with “In order to construct, close, or make any changes to a public railroad crossing, by law, a railroad or public agency (e.g., city/county, etc.) must file a petition with the UTC and receive approval. By filing a petition, the petitioner alleges that public safety requires the construction, closure, or modification at the crossing, and bears the burden of proof. The respondent to the petition (e.g., if the county is the petitioner, the railroad is the respondent) has options: sign onto the petition in agreement, or disagree with the petition, at which point the matter proceeds through an administrative hearing process before the UTC. This process can take many months to complete – it generally involves briefs by both parties, a public hearing, and an evidentiary hearing before a UTC administrative law judge, etc. The hearings are generally held in the county/city near where the crossing is located. The UTC ultimately makes a decision to approve or deny the petition. When approving a new public crossing, the UTC considers public necessity, convenience, and safety. Current state policy strongly discourages construction of new at-grade highway-railroad crossings unless no other viable alternatives exist, and even in those instances, consideration should be given to closing one or more existing crossings. Support from the railroad for construction of a new at-grade crossing is critical. If approved by UTC, the railroad assumes responsibility for maintaining the new grade crossing including all signal equipment in perpetuity under current state law. Generally, the railroad will not agree to support additional at-grade crossings unless other crossings are closed in exchange. In this case, there is an existing grade-separated crossing (the bridge), which is preferred because it separates vehicle traffic from the train tracks and eliminates vehicle/train conflicts.”



- d. WCPW would like to see what opportunities arise in the future for alternate routes such as the Airport Trail on Port of Bellingham property and development of the Lockwood property by the City of Bellingham Parks Department before committing to applying for an at grade crossing.

11. Replacement of Bridge #172

- a. The bridge is currently not listed on the 6 year Transportation Improvement Program for replacement.
- b. The concrete structure is in relatively good condition but lacks pedestrian and bicycle facilities. Grant opportunities exist for Structurally Deficient bridges but not for replacement of bridges that are structurally sound but fail to meet today's design standards.

12. Cantilevered structure off of the bridge for a bicycle and pedestrian lane

- a. The addition of a structure to the bridge is not fiscally feasible. In addition to cost, there are many potential issues including: the size of the structure would need to be at least 10 feet wide to accommodate both pedestrian and bicycle traffic; would have to meet current American's with Disabilities Act (ADA) requirements for access; there are potential Right-of-Way issues with BNSF; there is a substantial drop off on both sides of the bridge requiring large fill slopes to accommodate increased shoulder width which may not fit within existing Right-of-Way.

13. Removal of bridge curbing/sidewalk to allow use of entire shoulder by bicycles and pedestrians

- a. Traffic will follow up with Bridge and Hydraulic to see if this could be an option
- b. This type of modification might trigger ADA requirements for the entire bridge



Collision Summary

Rd #	MP	Rd Name	Report #	Date	ADT	Sev	# Veh	# Inj	# Fatal	Collision Type	Unit 1 CC	Weather	Light
12790	3.260	MARINE DR	3146013	03/09/2010	3579	1	2	0	0	From same direction - one left turn - one straight	Did Not Grant ROW to Vehicle	Clear or Partly Cloudy	Daylight
12790	3.690	MARINE DR	E181639	07/20/2012	3579	1	2	0	0	Vehicle strikes deer	None	Raining	Daylight
12790	3.700	MARINE DR	E222216	01/18/2013	3579	1	1	0	0	Fixed object	Exceeding Reas. Safe Speed	Fog or Smog or Smoke	Daylight
12790	3.690	MARINE DR	E229004	02/27/2013	3579	1	1	0	0	Fixed object	Improper Passing	Raining	Dark-No Street Lights
12790	3.260	MARINE DR	E293689	12/12/2013	3579	1	2	0	0	Entering at angle	Did Not Grant ROW to Vehicle	Raining	Dark-No Street Lights
12790	3.510	MARINE DR	E423943	05/09/2015	3579	2	2	1	0	From same direction - both going straight - both moving - rear-end	Follow Too Closely	Clear or Partly Cloudy	Daylight
12790	3.260	MARINE DR	E454754	08/20/2015	3579	1	2	0	0	Entering at angle	Did Not Grant ROW to Vehicle	Clear or Partly Cloudy	Daylight
12790	3.700	MARINE DR	E475069	10/16/2015	3579	1	1	0	0	Other object	Driver Not Distracted	Clear or Partly Cloudy	Daylight
12790	3.340	MARINE DR	E781261	03/22/2018	3579	1	1	0	0	Fixed object	Other	Raining	Daylight
12790	3.310	MARINE DR	E951723	08/19/2019	3579	1	1	0	0	Fixed object	Operating Defective Equipment	Clear or Partly Cloudy	Daylight



Marine Dr

Marine Dr

Marine Dr

Marine Dr

Marine Dr

Marine Way

Marine Way

Requested At-Grade Crossing

Marine Way

Old Marine Dr

At Grade Crossing Example



Illegal Crossing Looking West



**PRIVATE
CROSSING
NO TRESPASSING
PERMIT N°**



CROSSING
NO TRESPASSING
PERMIT N^o

Illegal Crossing Bridge



Illegal Crossing Bridge





Tracks and Illegal Crossing Looking North

Tracks and Illegal Crossing Looking South











Marine Dr looking east toward bridge

Bridge #172 Looking West



**Bridge #172 Looking
East**



Railroad response to illegal crossing looking west



NOTICE
THIS IS PRIVATE PROPERTY
TRESPASSERS ARE WARNED TO
KEEP OFF
THE BNSF R.W.Y. CO



**Railroad response to illegal crossing
Looking East**