

MEMORANDUM

To: Jessica J Bennett, PE, City of Bellingham
From: Brad Lincoln, PE *BL*
Project: Shintar Development
Subject: Access Analysis
Date: March 29, 2022

The Shintar Development is proposed to include 12 townhouse units and one 4-plex building with 6 townhouse units in two separate areas of a parcel located along the south side of Mahogany Avenue, west of Northwest Drive. A site vicinity map is included in Figure 1.



Figure 1: Site Vicinity Map

The Shintar Development only has frontage along Mahogany Avenue and Northwest Drive. Both of these roadways are classified as arterials. The site is proposed to have one access to Mahogany Avenue to serve the 12 townhouse units and one access to Northwest Drive for the 4 multifamily and 6 townhouse units. There is not connectivity between the two areas due to critical areas and topography in the middle of the site.

Bellingham Municipal Code Evaluation

Bellingham Municipal Code (BMC) 13.52 has various sections that apply to access, number of accesses, and access locations. In general, the BMC identifies that a site should only have one access to an arterial. However, there are reasons for a variance identified in the BMC. The most applicable section is BMC 13.52.120, which identifies that a variance for arterial access may be granted if a traffic study shows the variance is feasible and meets the intent of the chapter. Typically, a jurisdiction limits access to arterials to minimize impacts of turning vehicles since arterials are typically higher volumes roadways with higher speeds.

Variance Request

A variance request is being made according to BMC 13.52.120 to allow for the two distinct development areas to have separate access to Mahogany Avenue and Northwest Drive. This variance is justified since the two areas of the Shintar Development are anticipated to generate a low number of trips and the existing roadway sections along Mahogany Avenue and Northwest Drive provide left-turn channelization. The area of the Shintar Development along Mahogany Avenue is proposed to include 12 townhouse units. These units are anticipated to generate 86 total daily trips with 7 weekday PM peak-hour trips. Existing PM Peak-hour counts were collected along Mahogany Avenue at Arctic Avenue and Northwest Drive. The peak-hour counts show approximately total 250 PM peak-hour trips along the Mahogany Avenue frontage.

The area of the Shintar Development along Northwest Drive is proposed to include 4 multifamily units with 6 townhouse units. These units are anticipated to generate 70 total daily trips with 5 weekday PM peak-hour trips. The PM peak-hour counts show approximately 500 PM peak-hour trips along the Northwest Drive frontage.

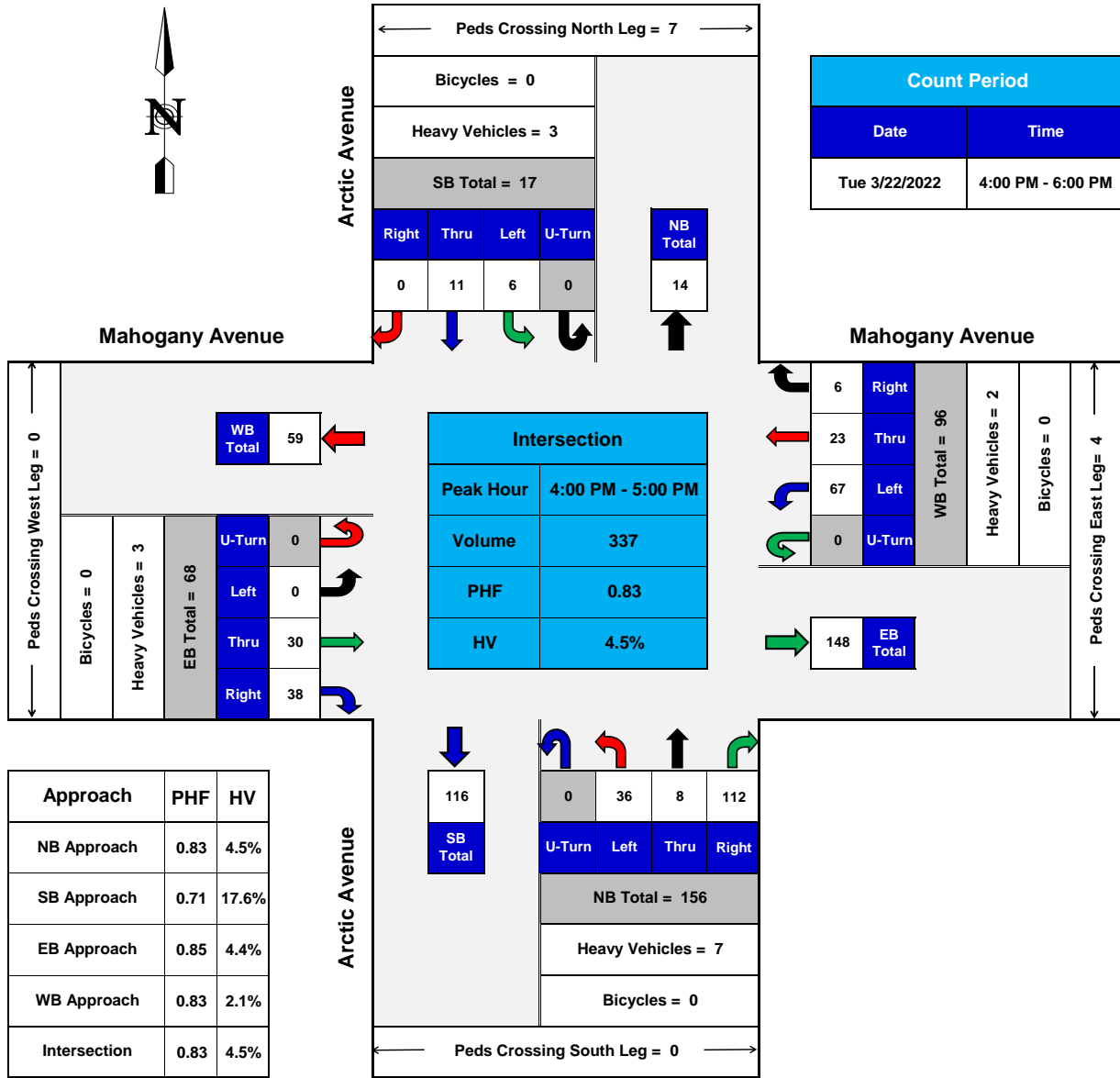
Mahogany Avenue and Northwest Drive both include center left-turn lanes along the frontage of the Shintar Development. These lanes will provide left-turn channelization for vehicles entering the site. This will help the operations of the roadway by removing the left-turning vehicles from the through lane. The limited number of trips generated by the Shintar Development, approximately 1 vehicle every 8 to 9 minutes at the Mahogany Avenue access and 1 vehicle every 12 minutes at the Northwest Drive access, the existing left-turn channelization, and the relatively low peak-hour volumes along the frontage should minimize the impacts of the proposed accesses to Mahogany Avenue and Northwest Drive. Additionally, both accesses are anticipated to have adequate sight distance in each direction.

The intent of the access guidelines, including the number of accesses, which roadways are utilized for access, and where the access is located, is to reduce the impacts of the access on the public roadway and to promote safe operations of the roadway and access. The proposed access scenario for the Shintar Development, including one access to Mahogany Avenue and one access to Northwest Drive, should be approved for the following reasons:

- There are not other feasible access locations or options for shared access due to the critical areas and topography on the site
- Each access is anticipated to service a limited number of vehicles
 - Approximately 86 daily trips at the Mahogany Avenue access
 - Approximately 70 daily trips at the Northwest Drive access
- Existing left-turn channelization at both access locations
- Relatively low volumes along Mahogany Avenue and Northwest Drive
- Both accesses are anticipated to have adequate sight distance

Attachments

Mahogany Avenue @ Arctic Avenue Bellingham, WA

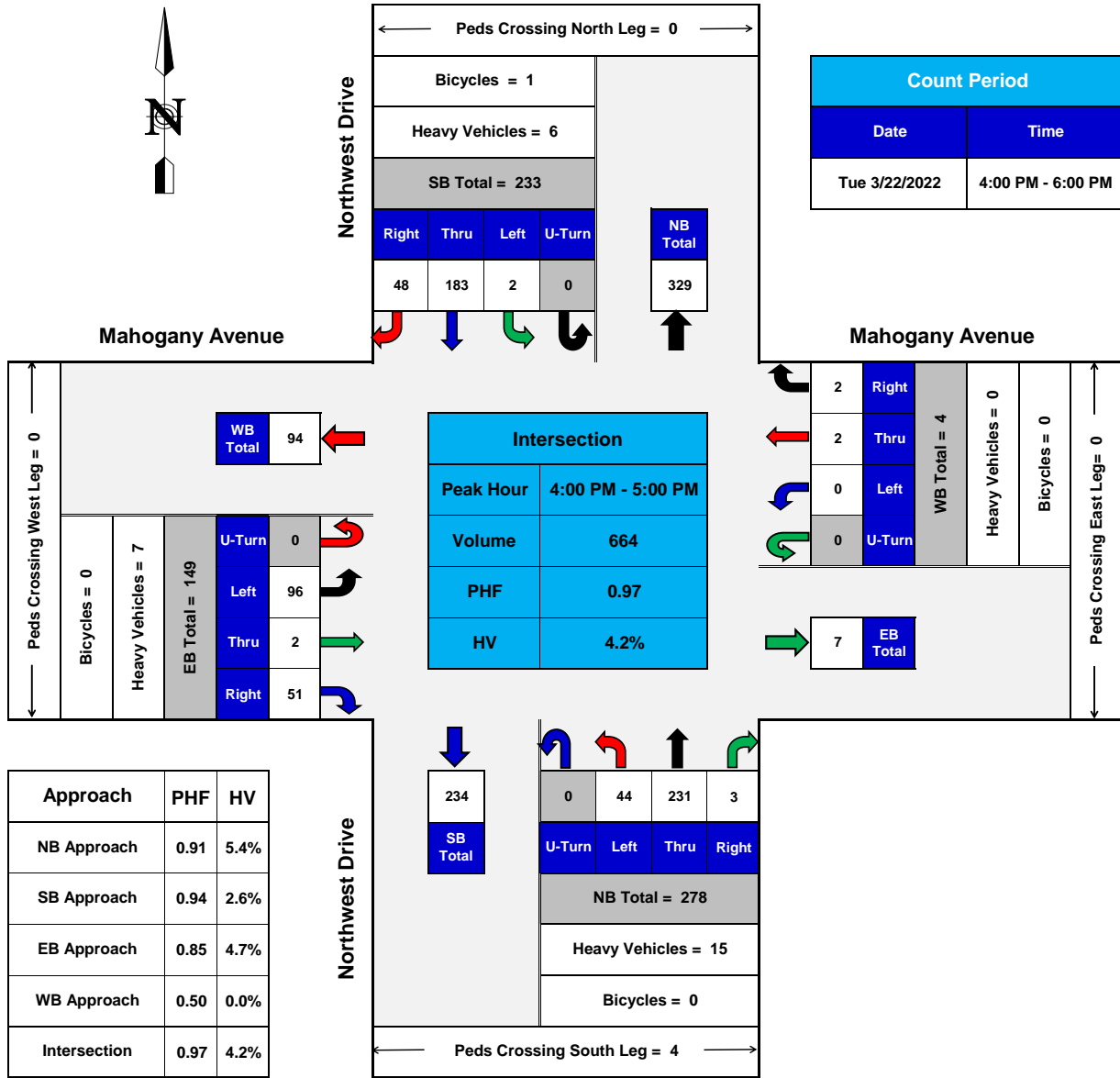


PHF = Peak Hour Factor
HV = Heavy Vehicles

TURNING MOVEMENTS DIAGRAM PEAK HOUR SUMMARY



Mahogany Avenue @ Northwest Drive Bellingham, WA



PHF = Peak Hour Factor
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