

## Memorandum

To: **City of Tualatin – Planning Department**

Copy: **Wil Anderson**  
**Phelan Development Company**

From: **Melissa Webb, PE**

Date: **June 20, 2024**

Subject: **Avery Industrial: Case #AR 22-0003**  
**Architectural Review Board Decision – Request for Extension**



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## Introduction

Phelan Development Company is requesting a one-year extension of the land use decision that became effective July 13, 2022, for the proposed Avery Industrial development, Case No. AR 22-0003. The extension would extend the expiration date to July 13, 2025, with an estimated buildout year of 2026. This memorandum reviews the assumptions in the Transportation Impact Analysis (TIA) that was prepared for the project, provides some supplemental analysis, and concludes that the findings of the TIA are still applicable.

## Transportation Impact Study

The TIA was completed on February 24, 2022. Original assumptions and findings along with changes since the report was completed are outlined below.

### Original Assumptions and Findings

The TIA examined impacts for two industrial buildings totaling approximately 112,500 square feet. The project was approved with one existing full-access driveway on SW Tualatin-Sherwood Road. The construction of the project was targeted for 2023, and an analysis year of 2023 was evaluated to correspond with the expected year of completion.

Traffic forecasts included a background growth rate of two percent per year plus four projects (PGE Integrated Operations Center, Sherwood Industrial Park, Manhasset Industrial, and Tualatin Industrial Park) that were under construction and only partially completed when the traffic count data was collected.

The analysis of the project included a review of safety and operational conditions at the intersection of the existing site access at SW Tualatin-Sherwood Road with the following conclusions:

- Based on a review of the available crash data and crash rates, patterns are consistent with the geometry and traffic control provided at the study intersection. The proposed project is not expected

to change or worsen crash rates. Accordingly, no safety mitigation is recommended per the crash data analysis.

- Preliminary traffic signal warrants are not met at the unsignalized study area intersection under year 2023 buildout conditions.
- The study intersection is currently operating acceptably per Washington County standards and is projected to continue operating acceptably through the 2023 buildout year of the site. Therefore, no operational mitigation is required or recommended.
- The construction of the planned five-lane cross-section on SW Tualatin-Sherwood Road will not adversely affect future operations at the study intersection.

### Changes Since 2022

Since the TIA was completed in 2022, two nearby projects have been proposed that would add traffic to the study area:

- AR 23-0001 - Pacific Cross Building, 18350 SW 126<sup>th</sup> Place – This industrial project will include the construction of an 18,000 square-foot pre-engineered metal building, loading docks, and overhead doors on a 1.8-acre site that is zone Light Manufacturing (ML). A TIA was prepared on February 7, 2023. The report analyzed trip generation and distribution, as well as site access and circulation. The TIA concluded that the added impacts on area transportation facilities were expected to be nominal and that the proposed site plan in conjunction with the existing transportation infrastructure in the site vicinity was capable of safely supporting the proposed development. The ARB decision for this project was issued on May 22, 2023.
- AR 23-0004 - 124<sup>th</sup> Avenue Industrial Building, 19000 SW 124<sup>th</sup> Avenue – This industrial project will include the construction of three buildings totaling 199,170 square feet on a 23.9-acre site zoned General Manufacturing (MG). A TIA was prepared on April 18, 2023. Traffic data was collected in May 2022 and the study examined year 2025 buildout conditions that included the Avery Industrial development as well as others in the background traffic volumes. All intersections were reported to meet jurisdictional standards. The ARB decision for this project was issued on December 13, 2023.

In addition, construction has started on the SW Tualatin-Sherwood Road widening project. This Washington County project will widen SW Tualatin-Sherwood Road to five lanes (two travel lanes in each direction and a center turn lane) with bicycle facilities. Both year 2026 background and buildout scenarios were analyzed assuming a five-lane cross-section on SW Tualatin-Sherwood Road. The project will continue to take access from SW Tualatin-Sherwood Road via an existing shared driveway which allows for all turning movements.

### Operational Analysis

Because the project buildout year has been extended from year 2023 to year 2026, an updated operational analysis has been performed to determine if the conclusions of the traffic study have changed or if they remain valid.



## Revised Forecasts

To provide a conservative estimate of traffic demand, revised forecasts were prepared using the average midweek volumes from traffic count data collected on February 10, 2022. A 2026 buildout forecast was estimated using the following methodology:

- The 2022 traffic count volumes on SW Tualatin-Sherwood Road were grown by a compounded rate of two percent per year for four years to estimate year 2026 background volumes. In-process trips from the two above-mentioned nearby projects were added to the background volumes.
- The trip assignment volumes were added to the background traffic to estimate 2026 buildout volumes.
- The cross-section of SW Tualatin-Sherwood Road was adjusted to include two travel lanes in each direction as well as a center turn lane.

## Updated Operations

With volumes updated to reflect a 2026 buildout condition, the study area intersection is summarized in Table 1. The study intersection is still expected to meet agency performance standards.

**Table 1: Capacity Analysis Summary**

Condition	Performance Threshold	Morning Peak Hour			Evening Peak Hour		
		LOS	Delay (s)	V/C Ratio	LOS	Delay (s)	V/C Ratio
<b>1. Site Access (existing) at SW Tualatin-Sherwood Road</b>							
2023 Buildout TIS	0.99	C	19	0.13	D	30	0.44
Updated 2026 Buildout		B	15	0.14	C	21	0.35

*Table Notes: 2023 buildout capacity analysis assumed the original three-lane cross-section on SW Tualatin-Sherwood Road. The 2026 buildout capacity analysis assumed the updated five-lane cross-section.*

## Updated Preliminary Traffic Signal Warrants

Preliminary traffic signal warrants were examined at the site access intersection to determine whether the installation of a new traffic signal will be warranted at this intersection upon completion of the proposed development.

Traffic signal warrants are not met at this intersection under year 2026 buildout conditions.

## Conclusions

The size of the facility and the access location have not changed since the original TIA that was prepared on February 24, 2022. The buildout year has extended from 2023 to 2026, and two additional projects have been approved or submitted for review since Avery Industrial was approved. This memorandum provides an updated report on operating conditions for the extension application and demonstrates that while the buildout year has been extended and additional projects have been approved in the site vicinity, the conclusions from the original TIA have not changed significantly. Therefore, no supplemental analysis is needed to accommodate the requested extension.



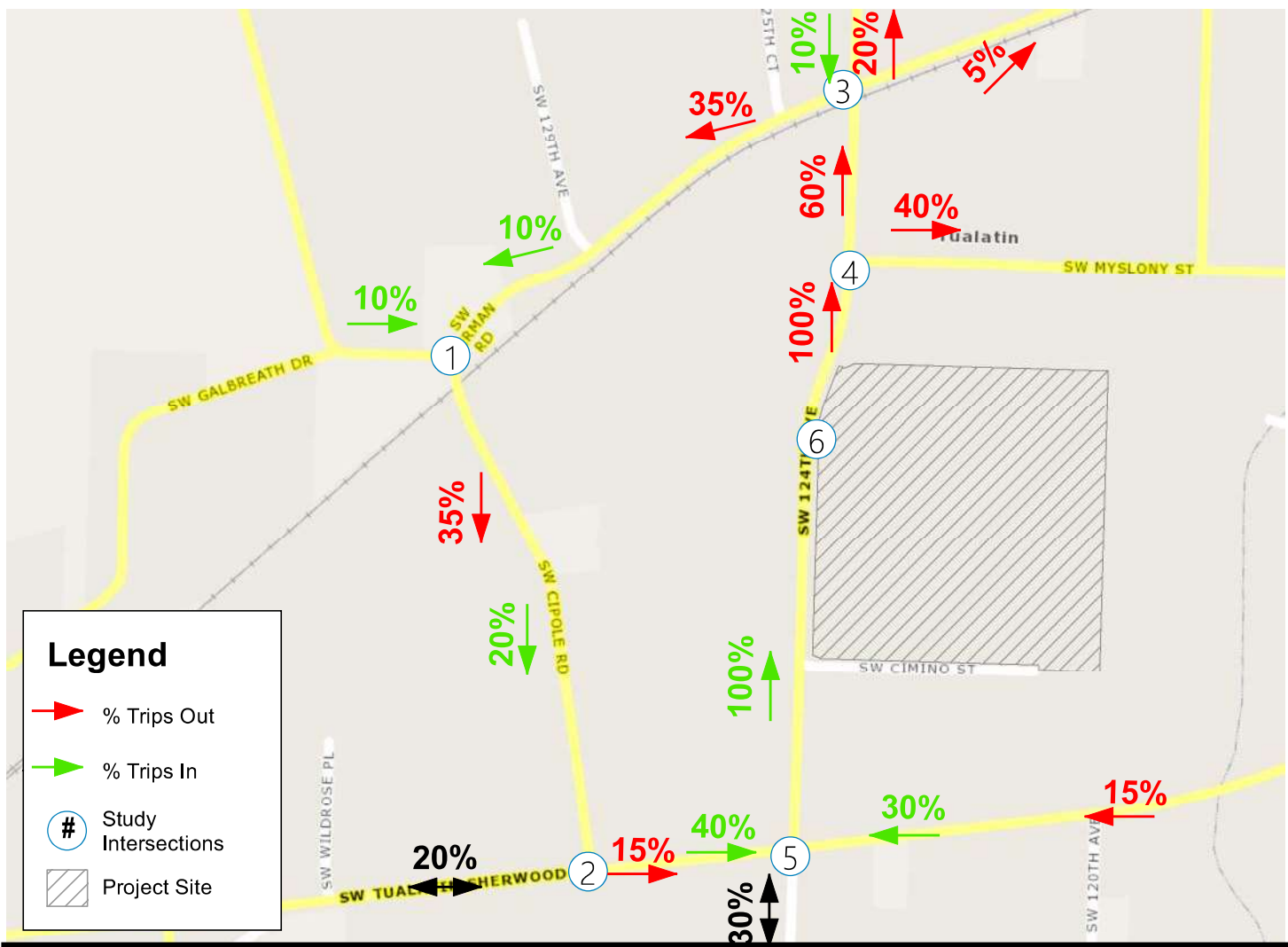
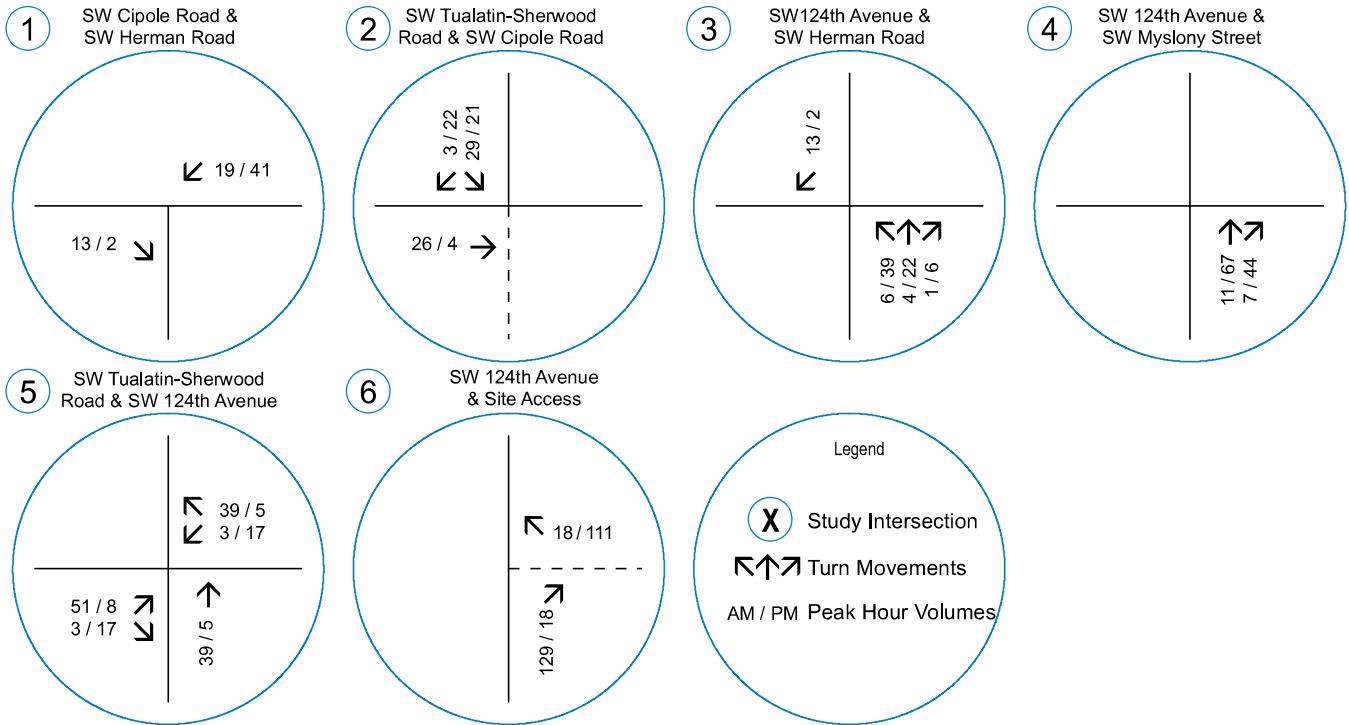
Attachments

Additional In-Process Trips

Synchro Analysis Reports – 2026 Buildout Scenarios

Updated Traffic Signal Warrant Analysis







**Table 1 - Projected Vehicle Trip Ends - Industrial Park**

	AM Peak Hour			PM Peak Hour			Daily Total
	In	Out	Total	In	Out	Total	
18,000 sf Industrial Park	5	1	6	1	5	6	60

Based on ITE data, an 18,000 square foot Industrial Park is projected to generate 10 daily truck trips, representing 20 percent of the daily motor vehicle trips. The truck trips would typically be projected to occur between 7:00 AM and 6:00 PM, with zero to two truck trips during any particular hour of the day. The precise type of trucks that will access the site is currently unknown since the tenants are not known; however, since the area largely serves existing industrial uses and accommodates trucks of all sizes, the site can reasonably accommodate a typical mix of truck types including both single-unit and tractor-trailer truck types.

General Light Industrial Analysis

The daily and peak-hour motor vehicle trip volumes projected based on usage of the proposed facility as a general light industrial facility are detailed in Table 2 below. A detailed trip generation worksheet is also included in the attached technical appendix.

**Table 1 - Projected Vehicle Trip Ends - General Light Industrial**

	AM Peak Hour			PM Peak Hour			Daily Total
	In	Out	Total	In	Out	Total	
18,000 sf Light Industrial	11	2	13	2	10	12	88

Based on ITE data, an 18,000 square foot Light Industrial building is projected to generate 5 daily truck trips, representing 6 percent of the daily motor vehicle trips. Again, the truck trips would typically be projected to occur between 7:00 AM and 6:00 PM, with zero to two truck trips during any particular hour of the day. The precise type of trucks that will access the site is currently unknown since the tenants are not known; however, since the area largely serves existing industrial uses and accommodates trucks of all sizes, the site can reasonably accommodate a typical mix of truck types including both single-unit and tractor-trailer truck types.

Based on the analysis, development of the site with a General Light Industrial use will result in the highest overall trip volumes; however, development with an Industrial Park will result in the highest truck volumes.



### Pedestrian, Bicycle and Transit Trips

In addition to considering motor vehicle trips, the City of Tualatin requests information regarding pedestrian, bicycle, and transit trip ends. For industrial-related uses, the number of pedestrian, bicycle and transit trips is generally low. It is anticipated that the proposed building may generate approximately two to four daily trip ends using these three alternative travel modes. The transportation demands associated with these travel modes are minimal and would not be projected to meaningfully impact the available capacity for these facilities.

### ***TRIP DISTRIBUTION***

Under either development scenario, the distribution of motor vehicle trips is projected to be similar. Based on existing travel patterns in the site vicinity, the locations of major destinations and transportation facilities, and prior studies prepared for industrial development within the immediate site vicinity, it is projected that 20 percent of site trips will travel to and from the southwest on Oregon Highway 99W, 30 percent of site trips will travel to and from the northeast on Oregon Highway 99W, 35 percent of site trips will travel to and from the south on SW 124<sup>th</sup> Avenue, and 15 percent of site trips will travel to and from the east on SW Tualatin Road and SW Leveton Drive.

Typically, walking trips are relatively limited in range, since travel times for longer distances make walking impractical. Accordingly, most walking trips would be projected to travel to and from the nearest residential areas where employees may reside. These are located on the north side of SW Tualatin Road east of SW 124<sup>th</sup> Avenue and along the north side of Highway 99W.

In conjunction with the proposed development, new sidewalks will be constructed along the site frontage on SW 126<sup>th</sup> Place. Existing sidewalks are in place along the east side of SW 126<sup>th</sup> Place extending from the south side of the subject property to SW Leveton Drive, so completion of the new sidewalk along the site frontage will result in a continuous connection to the south. Sidewalks are not provided along SW 126<sup>th</sup> Place north of the subject property; however, the roadway north of the subject property has speed humps in place and functions more as a parking lot access aisle for G.H. McCulloch than a public roadway. Traffic volumes and speeds are very low along this connection. It is anticipated that if and when the G.H. McCulloch site redevelops, continuous sidewalks will be connected along SW 126<sup>th</sup> Avenue between Highway 99W and SW Leveton Drive.

SW 124<sup>th</sup> Avenue and SW Tualatin Road would both be expected to serve pedestrian trips in the site vicinity and have existing sidewalks in place on both sides of the roadway. Oregon Highway 99W also has sidewalks in place on both sides of the roadway east of SW 124<sup>th</sup> Avenue; however, sidewalks are generally not provided west of SW 124<sup>th</sup> Avenue.

HCM 7th TWSC  
 1: SW Tualatin-Sherwood Road & Site Access

06/18/2024

Intersection						
Int Delay, s/veh	0.8					
Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations	↔		↕		↔	↕
Traffic Vol, veh/h	8	25	754	49	97	924
Future Vol, veh/h	8	25	754	49	97	924
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	200	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	27	820	53	105	1004

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1559	436	0	0	873	0
Stage 1	846	-	-	-	-	-
Stage 2	713	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	103	568	-	-	769	-
Stage 1	381	-	-	-	-	-
Stage 2	447	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	89	568	-	-	769	-
Mov Cap-2 Maneuver	215	-	-	-	-	-
Stage 1	381	-	-	-	-	-
Stage 2	385	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s/v	14.71	0	0.99
HCM LOS	B		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SWL	SWT
Capacity (veh/h)	-	-	407	769	-
HCM Lane V/C Ratio	-	-	0.088	0.137	-
HCM Control Delay (s/veh)	-	-	14.7	10.4	-
HCM Lane LOS	-	-	B	B	-
HCM 95th %tile Q(veh)	-	-	0.3	0.5	-



HCM 7th TWSC  
 1: SW Tualatin-Sherwood Road & Site Access

06/18/2024

Intersection						
Int Delay, s/veh	1.2					
Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations	Y		↑↑		Y	↑↑
Traffic Vol, veh/h	30	81	1042	4	9	787
Future Vol, veh/h	30	81	1042	4	9	787
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	200	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	33	88	1133	4	10	855

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1582	568	0	0	1137
Stage 1	1135	-	-	-	-
Stage 2	447	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14
Critical Hdwy Stg 1	5.84	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22
Pot Cap-1 Maneuver	99	466	-	-	610
Stage 1	269	-	-	-	-
Stage 2	611	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	98	466	-	-	610
Mov Cap-2 Maneuver	206	-	-	-	-
Stage 1	269	-	-	-	-
Stage 2	601	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s/v20.79		0	0.12
HCM LOS	C		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SWL	SWT
Capacity (veh/h)	-	-	347	610	-
HCM Lane V/C Ratio	-	-	0.348	0.016	-
HCM Control Delay (s/veh)	-	-	20.8	11	-
HCM Lane LOS	-	-	C	B	-
HCM 95th %tile Q(veh)	-	-	1.5	0	-

# Traffic Signal Warrant Analysis



Project: 21175 - Avery Industrial  
 Date: 6/18/2024  
 Scenario: Year 2026 Buildout Conditions

Major Street:	SW Tualatin-Sherwood Road	Minor Street:	Site Access
Number of Lanes:	2	Number of Lanes:	1
PM Peak Hour Volumes:	1842	PM Peak Hour Volumes:	91

Warrant Used:  
 100 percent of standard warrants used  
 70 percent of standard warrants used due to 85th percentile speed in excess of 40 mph or isolated community with population less than 10,000.

Number of Lanes for Moving Traffic on Each Approach:		ADT on Major St. (total of both approaches)		ADT on Minor St. (higher-volume approach)	
Major St.	Minor St.	100% Warrants	70% Warrants	100% Warrants	70% Warrants
<b>WARRANT 1, CONDITION A</b>					
1	1	8,850	6,200	2,650	1,850
2 or more	1	10,600	7,400	2,650	1,850
2 or more	2 or more	10,600	7,400	3,550	2,500
1	2 or more	8,850	6,200	3,550	2,500
<b>WARRANT 1, CONDITION B</b>					
1	1	13,300	9,300	1,350	950
2 or more	1	15,900	11,100	1,350	950
2 or more	2 or more	15,900	11,100	1,750	1,250
1	2 or more	13,300	9,300	1,750	1,250

Note: ADT volumes assume 8th highest hour is 5.6% of the daily volume

	Approach Volumes	Minimum Volumes	Is Signal Warrant Met?
<b>Warrant 1</b>			
<i>Condition A: Minimum Vehicular Volume</i>			
Major Street	18,420	10,600	
Minor Street*	910	2,650	<b>No</b>
<i>Condition B: Interruption of Continuous Traffic</i>			
Major Street	18,420	15,900	
Minor Street*	910	1,350	<b>No</b>
<i>Combination Warrant</i>			
Major Street	18,420	12,720	
Minor Street*	910	2,120	<b>No</b>

\* Minor street right-turning traffic volumes reduced by 25%